



Monthly Bulletin
on Genetic Engineering
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Biosafety Concerns

1. Sheep death: False claims of Bt toxin test

<http://www.thehindu.com/thehindu/seta/2008/08/07/stories/2008080750041700.htm>

Limited studies: The IVRI had conducted limited studies on goats and rats that were fed on Bt cotton leftovers.

“The facility for detection and estimation of Bt toxin is presently not available with us,” notes the diagnostic report dated March 3, 2008 of the Indian Veterinary Research Institute (IVRI), Izatnagar, U.P. And by stating its inability to test for Bt toxin, the institute has confirmed the worst fears about how genetically modified crops are tested for biosafety in the country.

IVRI is one of the main institutes for testing samples to know the possible cause of death in sheep. It is also required to test tissue samples of dead sheep sent by NGOs. The story of the institute coming out in the open about its inability to test Bt toxin started last year. It started when hundreds of sheep started dying in 2007 in two districts of Andhra Pradesh after grazing in Bt cotton fields.

Results awaited

The IAVI had conducted limited studies on goats and rats that were fed on Bt cotton leftovers. Though no untoward clinical effects were seen, the “histopathological studies in laboratory rats are under process,” it noted in its letter to the GEAC in June last year. The minutes of the 78th meeting of GEAC (held in June 2007) also make a mention of this.

The minutes of the 82nd GEAC meeting held on January 11 this year noted: “analytical reports received from the IVRI Izatnagar and Department of Animal Husbandry, Hyderabad, have confirmed that sheep death in AP cannot be attributed to Bt cotton.”

Death confirmation

While the minutes of the January, 2008 meeting note that a representative of the State Department of Agriculture, Andhra Pradesh, had confirmed the cause of death in the sub-committee meeting held the same day, it is silent on how the IVRI confirmed the findings.

In February, Dr. Sagari R. Ramdas, Director of Anthra, Secunderabad, under the Right To Information (RTI) Act required IVRI to share any reports and analytical studies on domestic animals grazing/feeding on Bt cotton plants. He also wanted the institute to share the reports sent to the GEAC.

No information

The IVRI’s reply of February 25 did not help the GEAC cause. It noted that “Animal Nutrition Division has conducted no experiment on grazing or feeding of Bt plants.” It also noted that “no information on these aspects has been provided to the Genetic Engineering Approval Committee by the Animal Nutrition Division. And to make sure that no other Department of IVRI had sent any reports, Dr. Ramdas of Anthra, under the RTI Act required the GEAC to provide copies of reports submitted to it by the AP Animal Husbandry Department and the IVRI.

The reports provided by the GEAC make a mockery of biosafety testing. It provided Dr. Ramdas in March this year nothing but the June 2007 letter from IVRI to the GEAC wherein IVRI had stated that the “histopathological studies in laboratory rats are under process.” No mention is made of any histopathological studies being conducted on goats fed with cotton leftovers! And the letter from the AP Animal Husbandry Department clearly stated that “the results of gossypol and Bt protein analysis are awaited.”

And there is no document to prove, as the minutes of 82nd meeting of GEAC in January claim that the Animal Husbandry Department had indeed confirmed in the sub-committee meeting that the cause of death cannot be attributed to Bt cotton!

It may be recalled that it was based on these same documents, which were provided to Dr. P.M. Bhargava, the Supreme Court nominee to the GEAC that the minutes of the 83rd meeting of GEAC in April this year noted "... sheep death might be due to high content of nitrares/nitrites... and not that of Bt toxin."

In March this year, three sheep fell ill and one died in Medak district, AP. "I sent the plant samples and sheep samples after a post mortem as per the IVRI requirements," said Dr. Ramdas. "And I specifically requested them to test for presence or absence of Bt protein in the samples." The plant samples were tested for nitrites/nitrates and alkaloids and the sheep samples were tested for heavy metals, nitrite/nitrate, alkaloids etc. The samples have been tested for everything but Bt protein!

The post mortem results obtained by Dr. Ramdas through another RTI finally helped reveal the institute's inability to detect and estimate Bt toxin in the samples. Is there at least a slim chance that the facility at IVRI to detect and estimate Bt toxin, which is "presently" not available, was indeed in place earlier?

"We have the facility to test for Bt toxin. The samples sent [by Anthra] were not proper," Prof. R.S. Chauhan, Joint Director of IVRI told this Correspondent.

This contradicts the institute's response to Anthra. Dr. Chauhan could not provide a convincing answer. And if the samples were not proper, it is not known how IVRI tested for other parameters.

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2. GM crops' biosafety testing procedure questioned

<http://www.thehindu.com/2008/06/25/stories/2008062555961400.htm>

Chennai: The way in which the Genetic Engineering and Approval Committee (GEAC) has gone about approving field trials of genetically modified crops, as also the final approval for commercial cultivation, has been questioned by P.M. Bhargava, the former Director of the Hyderabad-based Centre for Cellular and Molecular Biology.

Dr. Bhargava who was appointed a special invitee to the GEAC in February this year at the instance of the Supreme Court to bring about more transparency has been very critical of the regulatory body's rationale for accepting the results of biosafety studies generated by the applicants.

The minutes of the GEAC meeting held on May 28 has taken note of his disapproval of the way the committee has been relying on the data generated by the applicant and hence its usefulness. However, it has defended itself by noting that accepting the data provided by applicants, as in the case of pharmaceutical companies, is a common practice. The minutes note that "... it will be unfair to mistrust the samples and data generated by the applicant, without any basis."

"The clinical trial data [for a drug] is not generated by one lab. And the trials are almost always multicentric [conducted in many locations]. All the procedures of the trials are so well documented and the preclinical trials [toxicity testing done on animals prior to starting the trials in humans] can be replicated by anyone," stressed Dr. Bhargava. "All these don't happen in the case of GM safety testing."

But the biggest difference is that most of the human clinical trials for testing drugs are double blinded. This makes sure that neither the person conducting the trial nor the volunteers will know if he has been given a drug or a placebo. And the volunteer recruitment is done by the centres conducting the trials.

This does not happen in the case of GM testing. None of the tests done were double blinded. The samples were provided by the companies. "Do the institutes conducting the tests have the facility to check if samples provided by the companies are indeed genetically modified samples and not non-GM ones," he asked.

Despite the numerous checks and balances to ensure human clinical trials are conducted and reported correctly, the number of instances where the pharmaceutical companies engage in misconduct are aplenty.

Many measures have been taken to make the conduct of clinical trials more transparent, thus giving less scope for any malpractice. The pharmaceutical companies based in the U.S. are now required to make clinical trial results available in the government database. "So what happens when no such monitoring mechanisms exists for testing GM crops," he asked.

"There is a great need for a central, dedicated institute for collecting and conducting all GM related safety tests," he said. "The institutions where the tests were done have not been set up for looking at the safety of GM crops." There is a pressing need for such an institute as there are more GM food crops lined up for testing.

If the procedure for approving drugs is strict, the basis for approving GM crops should be stringent, as food is consumed by animals and a large number of people, when compared with drugs. And unlike drugs, GM crops cannot be recalled from the market once they are produced.

"See what happened with hyacinth plants and parthenium weeds," he said. "There is a world of difference between drugs and GM crops."

3. GM panel, SC observer spar over making findings public

http://timesofindia.indiatimes.com/Developmental_Issues/GM_panel_SC_observer_spar_over_making_findings_public/articleshow/3254534.cms

NEW DELHI: The apex body regulating use and tests of genetically modified products and crops in the country has run into controversy with the Supreme Court appointed observer, Pushpa Mitra Bhargava accusing it of trying to muzzle his dissenting voice.

Bhargava, had gone on record before the media as well as within GEAC meetings, claiming that no GMO has been released in India (or anywhere else) or open field trials permitted, after doing a proper risk assessment.

But taking umbrage against Bhargava speaking out to the media, the committee, stacked with government officials and some industry representatives, noted that the observer should be mindful of "confidentiality in the functioning and deliberations of the Statutory Committees of the government...(what) the public is entitled to know is the combined wisdom and decisions of the committee and not the individual views expressed in the meetings", in its meeting on July 9, in the absence of the SC observer. The minutes of the GEAC meetings are regularly drawn up by the environment ministry and shared through its website.

In a letter to the committee, Bhargava has now hit back saying: “This is surely an authoritarian (and not a democratic) view of a meeting. The public, I strongly believe, has a right to know about unresolved dissensions in a meeting. Even Supreme Court judgments have a dissenting note.”

GEAC in its meeting had accused Bhargava of flipping in his stance, favouring GM crop trials within the meetings and on other forums, but speaking against the trials to media.

Bhargava in the strongly worded letter hinted at serious problems within the agency and wrote: “GEAC should not exhibit double standards by approving products of certain companies and not of others.”

In Bhargava’s absence, GEAC had commented that, “Bhargava should understand the gravity of the situation and should avoid giving distorted views on the regulatory process.”

Bhargava, in his letter, criticized GEAC on several counts, including faulty permissions for testing BT Cotton and its toxicity for animals. He has also claimed that the committee was not following the laid down procedure in allowing field trials in different states, giving permissions merely on the basis of panchayats’ agreeing and not asking for states’ approvals.

The GEAC on its part has accused Bhargava of favouring NGOs and their contentions over science, which Bhargava has claimed are false accusations and demanded that the agency put up all its data in public domain to clear doubts.

Field trials of GE crops

4. El Ela Farm to test-grow genetically modified brinjals?

<http://oheraldo.in/pagedetails.asp?nid=8386&cid=2>

Goa may soon become a testing ground for genetically modified vegetables, as the 88th meeting of the Genetic Engineering Approval Committee has recently approved a multi-location research trial (MLRT) on BT Brinjal hybrids containing the cry 1 Ac gene at the State-run Ela Farm during summer-monsoon 2008.

A private Indian player — the Jalna-based Maharashtra Hybrid Seed Company (Mahyco) — had offered the gene ‘event’ embedded in its genetically modified (GM) brinjal to the Tamil Nadu Agricultural University (TNAU), Coimbatore, and the University of Agricultural Sciences, Dharwad, in 2006. These State agriculture universities (SAUs) were to use Mahyco’s material for backcrossing with their already developed brinjal varieties.

Mahyco sourced the cry 1 Ac gene construct for its BT brinjal mainly from Monsanto, the United States life sciences multinational that has a 26 per cent stake in the company. The transfer was facilitated through the USAID-funded and Cornell University-managed Agricultural Biotechnology Support Project II.

The company says it will not charge any royalty for trial runs, but only commercial sales made by the universities. This sounds like a clever move of avoiding direct research costs, and reaping huge royalties from using the State infrastructure to market its GM seeds. Whether a one-time lumpsum payment was also negotiated for the deal has not been revealed. Mahyco has been accused of conducting field trials of GM modified crops without informing farmers. Greenpeace-India and the Centre for Sustainable Agriculture (CSA) had protested field trials of GM BT trials on okra (ladies’ fingers) and brinjal, on fields in Andhra Pradesh. The CSA said the farmer did not even know that a BT trial of GM brinjal was being carried on his field.

His family — and probably others in the area — unknowingly consumed the yet-to-be-tested BT brinjals, without knowing about their properties or side effects.

No GM brinjal has been released for an advanced stage of field trials in open conditions anywhere in the world, and that this is the first time the GEAC could be giving permission for large scale group open trials for a food crop in India – a country that has repeatedly proven itself incapable of regulating GM technology, and has allowed contamination as a routine affair.

Proliferation of illegal BT Cotton in the country is proof of the serious irreversible lapses that could happen at the trial stage. Vegetables, more than other food items, go through very little processing and are directly consumed after cooking, and therefore require great caution in decision-making,” says expert Nethra Putti.

It seems almost impossible to keep GM and non GM streams separate. Pollen travels, and if the trial of BT brinjal was to happen in Goa, it is very likely that local varieties may get contaminated.

More than two-thirds of conventional crops in the US are contaminated with genetically modified material, says a report on the Global Policy Forum: ‘Revealed: Shocking New Evidence of the dangers of GM crops’. An announcement in August 2006 that an unapproved variety of GM rice had been found at low levels in US long-grain rice sent shock waves through the food industry.

GeneWatch, UK, and Greenpeace run an online register of GM contamination incidents, recording 132 incidents that have arisen at every stage of development, from the laboratory, to the field, to the plate.

Claims that the GM seeds increase profitability are dubious. The spate of suicides by cotton farmers has not reduced – in fact it has increased – despite BT Cotton being planted in most parts of the country.

A CSA study compared 120 BT cotton fields with 123 non-BT cotton varieties. It showed that the cost of cultivation per acre for BT cotton was 67 per cent higher, while net income or profitability was 37 per cent lower for BT Cotton compared to other varieties.

The Andhra Pradesh Coalition in Defence of Diversity (APCDD) and South Against Genetic Engineering (SAGE) have said that BT Cotton should be banned in India: “What are we going to lose, except for saving royalty of billions of rupees that Monsanto collects for its BT gene?” they charged.

In 2006, the Monopolies and Restrictive Trade Practices Commission (MRTPC) held that seed companies, particularly Monsanto, Mahyco and Biotec Ltd, were adopting restrictive trade practices and imposing an unreasonable royalty of Rs 900 per 450 grams of BT cotton seed (Monsanto’s BT Cotton seeds were being sold for Rs1, 600 per 450 grams).

In several places, farmers have been driven to drastic action, forcibly halting GM crop experiments. In 2006, the Tamil Nadu Organic Farming Movement uprooted crops of Mahyco’s trial fields near Coimbatore, and planted Bio-Hazard signposts to demarcate the 20-acre trial field stretch.

In the long run, GM crops threaten biodiversity and put the control of agriculture in the hands of massive corporations. Clearly, the best thing is to keep the GM seeds out. Then why is the Goa government's agriculture farm taking them in?

GE & Alternatives

5. Indian farmers shun GM for organic solutions

<http://www.guardian.co.uk/environment/2008/jul/30/gmcrops.india>

Genetically modified cotton was to be the saviour of India's farmers, but ill-health and financial worries are fuelling a backlash

"My family was one of the first to stop using pesticides," says Sattermma, a lively Indian woman in her mid-40s, confidently talking to a group of visiting farmers. "Three years ago, we realised we were spending over half our income on chemicals. It was too much. We were getting into debt and the pesticides were making us ill." Sattermma is in the village of Lakshminayak Thanda in Warangal district of Andhra Pradesh. The visitors are keen to know how she and other villagers are progressing after their decision to stop using pesticides and Bt cotton, the genetically modified variety manufactured by US biotechnology firm Monsanto.

In the late 1980s, under pressure from the International Monetary Fund, India had opened up its strongly protected economy and encouraged its farmers to switch to modern farming, with its hybrid seeds, fertilisers and pesticides.

At first, cotton farmers did well. But then problems arose. The hybrid cotton proved susceptible to pests and diseases, and it was not uncommon for farmers to spray their fields up to 30 times in a single season. Production costs went through the roof and farmers got trapped in debt. They became desperate for a technical fix, and Bt cotton seemed to be the answer.

In its first year of sales, Mahyco-Monsanto sold its entire stock of Bt cotton. According to the company, the area in India under Bt cotton rose from 3.1m acres in 2005 to 14.4m acres in 2007. According to Sekhar Natarajan, regional leader of Monsanto India, Bt cotton yielded 700kg-900kg per acre, compared with 300kg-400kg an acre with conventional seeds.

However, some say that what has been happening on the ground has been very different from the official success story. Scientists Abdul Qayum and Kiran Sakhari assessed Bt cotton's performance in the first three years and found that, despite claims by the company, farmers were not achieving big yields.

There have been other, more alarming problems. In her chat with the visiting farmers, Sattermma says she had seen several of her neighbour's goats die after spending all day grazing on post-harvest Bt cotton plants. Such a story could be dismissed as anecdotal, if it were not backed up by more solid evidence. In 2006, more than 1,800 sheep died in similar circumstances in other villages in Warangal district. The symptoms and post-mortem findings suggested that they had died from severe toxicity. Hundreds of agricultural workers had also developed allergic symptoms when exposed to Bt cotton.

Safety investigation

One might have expected such reports to have led to a thorough investigation into the safety of Bt cotton but, according to the US-based Institute for Responsible Technology, this has never happened. Again, Monsanto contests this account. According to Natarajan, Bt cotton was exhaustively tested for six to eight years before it was authorised for release and there were no reports of adverse impacts on the health of humans or animals.

Less controversial is the financial risk that Bt cotton, along with other hybrids, brings to small farmers. Farmers have traditionally saved seeds from one harvest to another, but this is not possible with hybrids, as they lose vitality. So farmers purchase on credit from middlemen a package of hybrid seed, fertiliser and pesticide, paying back the loan once the crop is harvested. The problems start when a farmer loses a crop through bad weather. Unable to repay, they can easily get caught in a debt trap. Problems were serious before Bt cotton but have got worse because Bt cotton seed is expensive.

Despite these problems, the Indian government believes that cotton has proved a success. In 2006, India overtook the US to become the world's second largest cotton producer (after China). The biotechnology industry is taking the credit, though some farmers are reporting new problems, saying Bt cotton is highly susceptible to wilt. On one occasion a Mahyco-Monsanto representative was taken hostage by irate farmers demanding compensation. More difficulties could lie ahead: a recent study by the Nagpur-based Central Institute for Cotton Research showed that the main cotton pest, bollworms, is becoming resistant to Bt cotton.

Many farmers, like Sattemma, have not followed the debate around Bt cotton. She says it was practical considerations that led to the change in farming. "It was the 15 women in our village's self-help group who got things going," she says. "We were worried about the health of our children. We got the men on our side by showing them that they would save money." Sattemma points to a chart on the wall of a nearby house, on which, with the help of a non-governmental organisation, they have recorded side-by-side the expenses of growing cotton with and without pesticides. Non-pesticide management (NPM), as the system is called, is clearly more profitable, not because yields are higher but because expenditure is so much lower.

In Yenabavi, about 30 miles away, the farmers have gone further, becoming organic and declaring their village GMO-free. Their conversion also began with dissatisfaction with pesticides, this time because they didn't work. They were helped by a visiting Organic Agronomist, who showed how to set up Solar powered light traps etc to overcome pests.

GE Globally

Prince's statement

6. GM AN ABSOLUTE DISASTER, WARNS CHARLES

http://news.bbc.co.uk/2/hi/uk_news/7557644.stm

Companies developing genetically modified crops risk creating the biggest environmental disaster "of all time", Prince Charles has warned.

GM crops were damaging Earth's soil and were an experiment "gone seriously wrong", he told the Daily Telegraph.

A future reliance on corporations to mass-produce food would drive millions of farmers off their land, he said.

The government said it welcomed all voices in the "important" debate over the future potential role of GM crops. However, Dr Julian Little, chairman of the Agricultural Biotechnology Council, said he was "disappointed" by the Prince's comments because "they do not seem to be based on any solid evidence".

"Our experience from over 10 years of GM cultivation shows that GM technology has been found to deliver real environmental and economic benefits," he said.

Mr Little added: "At a time when demand for food and fuel is rising and in the face of growing environmental challenges, we need to find ways to feed an ever-increasing global population."

BBC royal correspondent Nicholas Witchell said the Prince's "robust" comments were "likely to rankle with the government", which has given the go-ahead to a number of GM crop trials in the UK since 2000.

"Even for a prince who's a long-established champion of organic farming and critic of GM crops, these are comments which verge on the extreme," our correspondent said.

Prince Charles told the newspaper that huge multi-national corporations involved in developing GM foods were conducting a "gigantic experiment with nature and the whole of humanity which has gone seriously wrong".

Relying on "gigantic corporations" for food would end in "absolute disaster", he warned. "That would be the absolute destruction of everything... and the classic way of ensuring there is no food in the future."

What should be being debated was "food security not food production", he said. He said GM developers might think they would be successful by having "one form of clever genetic engineering after another", but he believed "that will be guaranteed to cause the biggest disaster environmentally of all time".

Prince Charles, who has an organic farm on his Highgrove estate in Gloucestershire, said relying on big corporations for the mass production of food would not only threaten future food supplies but also force smaller producers out of business.

"If they think this is the way to go, we will end up with millions of small farmers all over the world being driven off their land into unsustainable, unmanageable, degraded and dysfunctional conurbations of unmentionable awfulness," he said.

The prince also told the Telegraph he hoped to see more family-run co-operative farms, with producers working with nature and not against it. The Prince's comments come at a time of rising world food prices and food shortages. The biotech industry says that GM technology can help combat world hunger and poverty by delivering higher yields from crops and also reduce the use of pesticides. 'Untenable' In June, Environment Minister Phil Woolas said the government was ready to argue for a greater role for the technology.

But green groups and aid agencies have doubts about GM technology's effectiveness in tackling world hunger and have concerns about the long-term environmental impact.

Responding to the prince's comments, a spokeswoman for the Department for Environment, Food and Rural Affairs said: "Safety will always be our top priority on this issue."

Anti-monarchy Campaign group Republic said: "Prince Charles is quickly making his position as heir to the throne untenable with his meddling in politics."

"If they think this is the way to go we will end up with millions of small farmers all over the world being driven off their land".

Prince Charles

7. Oil, genetics and the end of cheap food

The Guardian, August 19 2008

<http://www.guardian.co.uk:80/theguardian/2008/aug/19/5>

You put your finger on the main cause of rising food prices and shortages (Millions could starve as fertiliser prices soar, says UN, August 13). The input costs for non-organic, hi-tech farming have increased dramatically because artificial fertiliser prices increase with oil prices. The "cheap" food of the last 50 years has been based on our incredibly wasteful use of oil. Industrial agriculture involves turning oil into food because oil and natural gas are used to get nitrogen out of the air and into a sack of artificial fertiliser. All current GM crops are just as oil-dependent as any other non-organic farming system, which is one of the reasons why Prince Charles was right to criticise them so strongly. Future food security depend on us using renewable, solar-powered, organic techniques to produce food, and scientific research shows that worldwide organic farming could produce slightly more food than we currently have. GM crops have the added disadvantage of introducing completely new risks into the environment without any benefits of increased yield.

Peter Melchett
Policy director, Soil Association

Kevin Nolan's letter (August 14) is a typical outburst from a physicist who cannot cope with the realities of life, with whose complexities biology grapples. If the commercial realities of GM pose problems, it is a result of thinking of his sort, which says the world must be inherently simple, because that's all I can cope with. GM is excellent if it does not have to accommodate the complexities of climate and the seasons, and is not presented as a commercial take-it-or-leave-it set of options, formulated by businessmen and biochemists who have the same cause-effect mentality as Kevin Nolan.

Julian Vincent
Biologist, engineer, University of Bath

8. Peruvian Government suspends production of GMOs

The government of Peru suspended the production of transgenic crops in the country. The Peruvian Minister of the Environment, Antonio Brack, introduced legislation regulating the generation of genetically modified organisms, quoting risks to health and to biodiversity.

Minister Brack announced that rural producers and organizations of civil society have the right to enforce their manifestations in regards to risks of GMOs. "The country must take a position of utmost caution over genetically modified organisms," he said.

The Peruvian Minister of the Environment is also assessing the position of the 35,000 Peruvian organic producers who criticize GMO production and caution that their crops would be threatened by GM contamination.

GM & Trade

9. Crackdown on Monsanto Seeds

Germany Tightens Restrictions on Genetically Modified Corn
<http://www.spiegel.de/international/business/0,1518,481952,00.html>

*The German government has imposed stricter regulations on the food company Monsanto regarding the sale of genetically modified corn seeds. The new rules are tantamount to an outright ban.

Genetically modified (GM) crops have long been controversial in Germany, where organic agriculture is booming. Now the cultivation of GM corn has been effectively banned by the government, according to media reports.

The cultivation of genetically modified crops has been controversial all over Europe, with anti-GM activists going as far as ripping up crops. The German Agriculture Minister Horst Seehofer has up until now justified the cultivation of GM crops in Germany by arguing they are allowed under European Union regulations.

10. Fishing in troubled waters- Monsanto raises the price of its corn seed \$100 a bag

<http://www.opednews.com/articles/During-a-world-food-crisis-by-Linn-Cohen-Cole-080723-548.html>

After "successful" buying spree on the seed companies, see how Monsanto showing its true colours by increasing its seed prices-

The Organization for Competitive Markets (OCM) says Monsanto's market power is driving up seed prices and devastating farmers and their communities. OCM sent a letter explaining the economic implications of Monsanto's seed prices on rural communities to 23 state attorneys general today. The organization continues to encourage several state attorneys general to expand their antitrust investigation into Monsanto's suspected anticompetitive practices in the U.S. seed industry.

"Monsanto's market power has been quietly accruing over several years and has now begun materially impacting price," said Keith Mudd, OCM's board president. "**The lack of competition**

and innovation in the marketplace has reduced farmers' choices and enabled Monsanto to raise prices unencumbered.

"A \$100 price increase is a tremendous drain on rural America," said Fred Stokes, OCM's executive director." How can we let companies get away with this?"

OCM is a nonprofit organization working for open and competitive markets and fair trade for American food producers, consumers and rural communities

Research Articles & Publications

11. Agrobacterium & Morgellons Disease, A GM Connection?

by Dr. Mae-Wan Ho and Prof. Joe Cummins

<http://globalresearch.ca/index.php?context=va&aid=9891>

A popular Geneticist cum author on GM related articles and books viz., "Genetic Engineering Dream or Nightmare?" "Living with the Fluid Genome" etc is back with her Preliminary findings suggesting a link between Morgellons Disease and Agrobacterium, a soil bacterium extensively manipulated and used in making GM crops; has genetic engineering created a new epidemic?

Ho is the director of the The Institute of Science in Society, an [interest group](#) that campaigns against the (mis)use of [biotechnology](#).

A [fully illustrated and referenced version](#) is posted on ISIS members' website: report@isis.org.uk

The Center for Disease Control (CDC) in the United States announced the launch of an investigation on 'Morgellons Disease' in January 2008 [1], after receiving thousands of complaints from people with this bewildering condition, which it describes as follows [2]: "Persons who suffer from this unexplained skin condition report a range of cutaneous (skin) symptoms including crawling, biting and stinging sensations; granules, threads, fibers, or black speck-like materials on or beneath the skin, and/or skin lesions (e.g., rashes or sores). In addition to skin manifestations, some sufferers also report fatigue, mental confusion, short term memory loss, joint pain, and changes in visions."

12. "Barren Spring"

Author Claire Hope Cummings dishes the dirt on genetically modified food

By Bonnie Azab Powell
Grist, 1 August 2008

<http://www.grist.org/feature/2008/08/01/>

One of the most encouraging things about the sustainable-food movement is how effortlessly it crosses traditional political-party, religious, ethnic, and other lines. The right to good, clean, and fair food, to borrow Slow Food's shorthand, seems to unite people who'd never otherwise find themselves chatting at the same party: Home schoolers and dreadlocked hippies, libertarian DIYers and heartland moms.

But there are little pockets of polarization where brawls can break out. One of them is the so-called elitism of such food. The biggest hot-button issue by far, though, is that of transgenic crops. The food movement's Christian wing opposes it for religious reasons, the Berkeley brigade for dogmatic ones, the moms out of health fears. Those with science or technology

backgrounds, however, tend to see genetically modified organisms as just another tool in the how-we-are-going-to-feed-the-world toolbox — and tend to get pretty impatient with those who fear them.

In her new book, *Uncertain Peril: Genetic Engineering and the Future of Seeds*, Claire Hope Cummings marches through the middle of these often reflexive con and pro positions in search of a more nuanced big-picture view. An environmental lawyer for 20 years, including four spent with the USDA, Cummings now reports regularly on agriculture and the environment. She has also farmed in California and in Vietnam. These experiences inform her book, which chronicles how transgenic seeds came to market; how their corporate backing has affected farmers, biodiversity, and agricultural sovereignty; and what their unfettered spread may mean for humankind.

It's not a happy picture. Just as Rachel Carson opened *Silent Spring* with the allegory of a town that woke up to find all the birds gone silent, Cummings said she considered starting *Uncertain Peril* with a scene in which everyone goes out to check their spring gardens, only to find that nothing has grown. Recently Cummings stopped by my house in Oakland, Calif., (yes, on the Berkeley border) for a chat conducted at her usual breakneck pace.

question-1 What motivated you to write this argument against the use of genetic technologies in agriculture?

Answer- Because GMOs [genetically modified organisms] don't seem like an immediate personal threat, their risks to our health and the environment are fairly subtle. They're real; they're just not the kind you see on the evening news. There's a lot of information about those risks already available. I wrote the book because I'm very concerned with the political and moral aspects of the technology. As a public-interest lawyer I was appalled to learn how this was invented and imposed on us. We were never given a choice. There's a whole matrix of control involved, from the biological level — the way they are engineered — to the social level, how they are being imposed on people and nature.

question- Let's start with the biological. Why do you call genetic technology the "defining moral issue of our time"?

Answer- Because it dismantles the basic integrity of the natural world. It's so shortsighted. We don't know enough about the biological world to know what we're doing, and we haven't agreed on an ethical framework for these technologies.

Question But isn't the technology itself morally neutral?

Answer- Like all tools, technology simply extends the hand of man. But we forget that that hand is connected to the head and the heart. So how it is manipulated is part of the technology. We can talk about science as a set of different tools of inquiry, that can be a little less value-laden, but technology is never anything but a tool that is connected to a value.

Genetically modifying a plant severs its relationship to its evolutionary course, and inserts into it, by force — using a gene gun or bacteria — some human idea of what the plant should do. The technology is limited both by its violent nature and our imagination. We're rearranging the molecular structure of these plants because we think we know how this plant should be used. Why, instead of breeding plants with traditional methods and relying on the plant's own carefully created system for say, drought resistance, would you use a much more expensive, unpredictable process like genetic engineering? Because of patents. So you can own it. I mean, given all these great tools, what did Monsanto come up with? Herbicide-resistant soybeans to sell more of its chemicals. Most GMOs are plants that don't die when sprayed

with a lethal herbicide, or ones that exude insecticide. That's Monsanto's idea of how to use nature to make money. The point of GMOs is control over seeds for profit.

Question Which brings us to the social-control aspect.

Answer Yes, the ownership issue. For example, Monsanto owns so much of the world's cotton seed supply now that cotton farmers cannot get conventional [non-GM] seed. It is simply not offered. [Editorial note: Cummings later clarified that while non-GMO conventional seeds may be listed in catalogs, farmers are telling her that when they go to buy it, only GMO seeds are available.] Monsanto also tells farmers they can't save seeds, reuse them, or even study them. This is the time-honored heart of agriculture. Seeds have always adapted themselves to a specific place and climate. Now, just when we need more food, more adaptability, and natural diversity, millions of dollars' worth of seeds are being thrown away because of biotech industry contracts.

Question So this is really about who controls our food supply?

Answer Yes. Is food going to be something the public maintains at the center of our personal and political decision-making, or will we just continue to hand it over to either private corporations (which have a completely different set of interests in mind) or to the government (which is now aligned with these private interests)? That's what we have now. How are we doing so far? I'd say the sorry state of public health and the environment shows our food system is not healthy.

When Abraham Lincoln created the U.S. Department of Agriculture, he called it "the People's Department." The USDA used to send seeds out free every year to gardeners and farmers all over America. The democratic underpinnings of our food system have been dismantled.

Question Talk to me about the tripod you write about, of "people, plants, and place."

Answer That's my favorite way of discussing what we need to return to, what we need to build a productive agriculture on. True productivity, fertility, and health are based on those three things, and all of them are under huge duress right now. We have to go back to understanding that productivity is more of an ecological question and more whole-farm based, looking at the whole farm, the soil. It's about biodiversity and even the larger human community in and around that farm.

Question What can we do?

Answer- We can save seeds. It doesn't matter which ones. Calendula is a really pretty, very hardy flower, very generous with its seeds — so easy to save. Have fun and plant stuff. Kids like to see things grow; radishes are easy kid plants. There are so many easy ways to honor our relationship with plants. It's sort of like a prayer. You may not want to be a priest, rabbi, or the Dalai Lama, but you can have a simple daily prayer of caring for a plant through its entire cycle, and participate in the generosity and integrity of the natural world by growing food and sharing it. It's a practical spirituality that keeps us grounded in place and community, while giving us the enormous privilege of assisting in the regenerative capacity of the earth.

What it comes down to is whether or not we are going to be allowed to feed ourselves and make informed choices about how we do that — to live in our biological and social reality, which is that people, plants, and place were meant to be working together.

Freelance writer Bonnie Azab Powell is the founder of the Ethicurean food-politics group blog, the deputy editor of Edible San Francisco, and the bossy mistress of the Clark Summit Farm Meat CSA.

13. An interview of MR. JEFFERY SMITH, author of *Seeds of Deception* & *Genetic Roulette*

Dr. Jeffery Bland is a nutritional biochemist and registered clinical laboratory director, a former professor of biochemistry at the University of Puget Sound, and a previous Director of Nutritional Research at the Linus Pauling Institute of Science and Medicine. The interview was recorded as part of Dr. Bland's Functional Medicine Update (FMU), a well-respected audio journal now in its 26th year of publication.

Jeffrey Smith, the executive director of the Institute for Responsible Technology, is a leading spokesperson on the health dangers of Genetically Modified Organisms (GMOs) and an international best-selling author of *Seeds of Deception* and *Genetic Roulette: The Documented Health Risks of Genetically Modified Foods*. Dr. Bland and Mr. Smith have a detailed discussion about current practices related to genetically engineered crops and worldwide instances of immune-system response and concern.

Clinician/Researcher

Jeffrey M. Smith

Author, *Genetic Roulette: The Documented Health Risks of Genetically Engineered Foods* www.seedsofdeception.com

www.responsibletechnology.org

www.geneticroulette.com

Jeff Smith's first book *Seeds of Deception: Exposing Industry and Government Lies about the Safety of Genetically Engineered Foods*. Jeff Smith's book really talks about more than just nutrition. It talks about the whole nature of information, about the whole nature of truth and discovery and full disclosure. It talks about the freedom of information and access of citizens to enough information to make informed choices, which doesn't seem to have been the case as it relates to this extraordinary topic of genetically engineered foods.

Recently, Jeff Smith has authored an updated and more definitive book that was just published and it is absolutely fantastic; it is called *Genetic Roulette: The Documented Health Risk of Genetically Engineered Foods*. This book deals extraordinarily important area of applying molecular biology and genetic engineering to the food supply.

For full interview please use the link below,

<http://www.seedsofdeception.com/utility/showArticle/?objectID=1722>

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.