



Monthly Bulletin
on Genetic Engineering
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Contents

G E National News

1. **Lure of Cash Crops!**
2. **Science Adulterated!**
3. **To B(t) or Not To B(t)**
4. **Bt contaminating organic cotton**
5. **Playing for profit!**
6. **Sage News**

G E Global

7. **GM Soy Linked to Sterility, Infant Mortality**
8. **What Happens within U.S.!**
9. **What Happens Outside U.S.!**
10. **GM Cotton Bites Dust in Colombia!**
11. **Misleading Figures!**

G E National News

1. Lure of Cash Crops!

<http://www.scidev.net/en/news/farmers-prefer-to-use-gm-seeds-for-cash-crops-survey-finds.html>

[NEW DELHI] India's first survey of farmers' and consumers' views on genetically modified (GM) crops indicates farmers are more willing to use GM seeds for cash crops rather than food crops.

Conducted by Delhi-based non-governmental organisation (NGO) Gene Campaign and the University of Hyderabad, the survey covered more than 4,000 farmers and 2,500 consumers across five states.

The findings, released last week (1 April), revealed that around 40 per cent of the farmers surveyed were willing to grow cash crops with GM seeds, but 80 per cent of them said they would not cultivate food crops from seeds containing a poison to control pests. The response was consistent across big and small farmers and those educated or uneducated.

Farmers valued soil fertility and biodiversity, and were unwilling to sacrifice these for benefits offered by technologies such as better pest and weed control, said Gene Campaign's Suman Sahai, who led the survey. Farmers also trusted the government and seed traders more than NGOs.

The survey revealed low awareness among urban consumers of GM foods.

2. Science Adulterated!

<http://www.combatlaw.org/?p=258>

The inconclusive nature of Bt toxin in cotton and its impact on animals continue to haunt as there has been a persistent reluctance amongst the scientific establishment to respond, investigate and research into the problem. Dr Sagari R Ramdas exposes the mainstream scientific community which has time and again failed to provide any hard evidence to support its claims of safety of GM technology that has already devastated India's biggest commercial crop – cotton

The clearance for the commercialisation of Bt brinjal has been stalled, providing a small window and space

to push for "accountable science" within a country where for decades "science" and "scientists" have been deified, and excluded/protected from any processes of democratic interrogation.

The proponents of the GM technology accuse all those who question it as being "anti-science", and "anti-development", which is increasingly equated with being "anti-national". **"The confidence of the scientific community has been undermined" scream newspaper headlines because of the recent decision to impose a moratorium on Bt brinjal, as also at the audacity of citizens historically on the margins – dalit women farmers, shepherds, adivasis, students and other riff-raff "non-scientific" consumers, to question the authority of the scientist fraternity.** However, the decision on the Bt food crop is a temporary and possibly a mere cosmetic respite and the State's long-term political commitment to nurture an utterly impenetrable and non-accountable system of science in the public domain is crystal clear with their intention to table the Biotechnology Regulatory Authority Bill, 2009 (BRAB, 2009) in the current parliament session.

3. To B(t) or Not To B(t)

<http://www.hardnewsmedia.com/2010/03/3509>

Gigantic, greedy and powerful multinational companies are using muscle and media power to push through genetically modified food products, backed by parasitic lobbies in India peddling unscientific evidence. Will Jairam Ramesh succumb to this profit cartel?

Delhi - Those opposed to GM-food may be happy to see how Union Environment Minister Jairam Ramesh stopped Bt brinjal's commercial release after public consultations. However, the way the Biotechnology Regulatory Authority of India (BRAI) draft bill is taking shape, with its draconian clauses to thwart any anti-GM voices, it wouldn't be too surprising if we are found chewing Bt vegetables in the near future, without even knowing it! Quite like the civilian nuclear deal with the United States that went through all kinds of legislative and political convulsions before it was passed in Parliament, the clearance of Bt brinjal is expected to test similar frontiers of Indo-US strategic partnership - this time in the realm of agriculture.

Despite the minister's assurance that the period of six months would be used for getting scientific opinion and a better appreciation of this ticklish issue, there are core issues that must be dealt with before the country faces the same challenge again - to B(t) or not to B(t)?

4. Bt contaminating organic cotton

ABOUT 200 farmers affiliated to the Vidarbha Organic Farmers' Association (VOFA) in Yavatmal district of Maharashtra did not apply for certification of their cotton produce this year. "Their samples tested positive for Bt contamination," said Ram Kalaspurkar, secretary of the association that has about 400 members who grow organic cotton, mostly for export.

Many of those who have lost their certification were in A category; farmers who get organic certification for three continuous years are classified under this category.

The source of contamination is farms that took to producing Bt cotton eight or nine years ago. Some of this cotton has found its way into Europe. A report published in *Financial Times* said leading European retailers and brands, such as H&M, C&A and Tchibo, were unknowingly selling organic cotton clothing that had genetically modified cotton that harmed brands. The cotton was traced to India; tests in Europe showed 30 per cent samples contained Bt cotton. **India accounts for about half the global supply of organic cotton. The finding is likely to hit India's cotton exports.**

5. Playing for profit!

"Strangely, Monsanto is denouncing its own product."

A new controversy that has arisen about Bt cotton in Gujarat has exposed how commercial considerations can influence claims about the efficacy of genetically modified (GM) seed varieties. Generally companies that develop and market GM seeds champion the strengths and merits of the

seeds and defend them fiercely. But Monsanto, the multinational company that has developed the Bt cotton variety Bollgard, has now made a public announcement that the pink bollworm pest it was supposed to resist had developed immunity to the killer gene in the GM seed. The company says this has been observed in four districts in Gujarat. Interestingly, the Central Institute for Cotton Research, a government body, has denied the company's claim and stated that it is not based on observations for a period long enough to form a conclusion and that faulty testing methodologies had been used to arrive at it. The situation is strange because a company is finding fault with its own product and a government agency is defending that product.

But the mystery is solved when it is realised that the company is trying to discourage the use of the Bollgard variety which does not yield big profits because of competition and low prices. Instead it is trying to promote a second generation variety that is sold at a high price and which has no great competition. It is all right for a company to promote its latest product. But it is wrong to denounce an earlier product of its own, on the basis of unsubstantiated findings, just to promote its business and increase profits. Monsanto's announcement on the Bollgard variety's failure creates confusion because the various claims about GM seeds, including their ability to resist pests, are still fiercely contested. Its claim adds strength to the criticism about GM seeds.

That also shows that the multinational companies which do research on transgenic crops and develop seeds misrepresent data for the sake of better business. It strongly underlines the need for independent assessment and verification of their claims. GM technology is important for the development of agriculture. But there is the need for transparency about the scientific findings. **More indigenous research in the public sector, which is not driven by commercial motives, will help in the development of a variety of GM products and in better evaluation of the claims made by private companies. The public and the farmers should go by the findings of such reliable research.**

Source: editorial of Deccan Herald of March 18th

6. Sage News

GM Opposition day In Andhra Pradesh

Over 130 farmers and shepherds from different villages gathered in Warangal city, the headquarters of Warangal District in Andhra Pradesh, and pledged not to sow GM crops on their farms. The event took place on 19th April 2010. Farmers who gathered to protest the introduction and large scale spread of GM crops through corporate manipulation, raised slogans against corporate control over the seed sector in India. Shepherds who have witnessed the deaths of their small ruminants grazing on Bt cotton stalks narrated their bitter experiences with the Bt cotton. Farmers who grew Bt cotton and experienced the damage to succeeding crops like

chilly and tomato also shared their grief with their fellow farmers. The event was organized by the South Against Genetic Engineering, Andhra Pradesh Coalition in Defence of Diversity, and Deccan Development Society in collaboration with Warangal based NGOs (SSS, SEED, MARI, and PSS). In Medak, another district of Andhra Pradesh, over 200 women farmer leaders representing over 60 villages, took out an Anti GE rally singing freshly composed anti GE songs, carrying placards opposing Genetic Engineering and shouting slogans.

Apart from these many farmers participated in rallies and protest meets led by the different organisations are given in the table given below in different parts of Andhra Pradesh. The table below shows the places where the protests were held as well as the number of the participants

District	No. of organizations	Date	No. of farmers
Warangal	Sarvodaya Youth Organization	12 th April'10	75 farmers
Chittoor	SAHANIVASA	14 th April'10	80 farmers
Medak	SWARD	16 th April'10	75 farmers
Nalgonda	PILUPU	16 th April'10	60 farmers
Vizag	Sarada Valley Development Samithi	17 th April'10	150 farmer
Nalgonda	PEACE	17 th April'10	70 farmers
Medak	Deccan Development Society	23 th April'10	200 farmers

Anti GM day in Koppal, Karnataka

A group of farmers and media friends, in collaboration with SAGE – Karnataka, organized a meeting in Koppal on 11 April 2010. SAGE/ICRA participated in the meeting and shared the Bt cotton experiences, documented by the bi-monthly magazine Sahaja Saguvali in the Bellary District of Karnataka. As part of the anti GMO campaign,, literature on GM products, written in Kannada, was distributed. Two films, made by DDS, were also screened to mark the occasion. Koppal friends have decided to spread the campaign wide. They have planned to organize meetings in several villages during the last week of May in which SAGE/ICRA is also taking part.

Students Workshop

Apart from these DDS in collaboration with Pragathi Seva Samithi did Students workshop on 17th April. There was a district level workshop conducted for students (plus 2 level science) on Safe food. 180 students attended this workshop along with their parents, who were around 50 in number. All these students were dropouts of school at one stage and belonging to Agriculture labourers or small farmers.

An introduction to the subject by explaining what is GE & Bt, the basic science about it and the current scenario of the GE in country including the BRAI. A film on Bt cotton-3 year fraud was shown so that they could relate the things to their families.

The key points that gathered responses by the students were as follows:

1. Apart from the regular education we should also know about the happenings in the society, particularly coming from Agriculture family I feel I should get to know how & what kind of crops do good or harm to my family. With this lecture & film I came to know why my family doesn't get good profits even we sow Bt. I came to know about the ill effects of it on Soil fertility, germination of next crops after monocropping Bt, allergies, & cattle deaths.
2. Bt is making women and poor farmers to commit suicide.
3. Bt is harmful to soil and cattle. it makes people prone to allergies, we know these before also as we have seen the reports in newspapers, but now came to know why from the lecture. We didn't knew that it itself could be completely made up of poison.

GE Global

7. GM Soy Linked to Sterility, Infant Mortality

http://www.huffingtonpost.com/jeffrey-smith/genetically-modified-soy_b_544575.html

"This study was just routine," said Russian biologist Alexey V. Surov, in what could end up as the understatement of this century. Surov and his colleagues set out to discover if Monsanto's genetically modified (GM) soy, grown on 91% of US soybean fields, leads to problems in growth or reproduction. **What he discovered may uproot a multi-billion dollar industry.**

After feeding hamsters for two years over three generations, those on the GM diet, and especially the group on the maximum GM soy diet, showed devastating results. By the third generation, most GM soy-fed hamsters lost the ability to have babies. They also suffered slower growth, and a high mortality rate among the pups.

And if this isn't shocking enough, some in the third generation even had hair growing inside their mouths—a phenomenon rarely seen, but apparently more prevalent among hamsters eating GM soy.

The study, jointly conducted by Surov's Institute of Ecology and Evolution of the Russian Academy of Sciences and the National Association for Gene Security, is expected to be published in three months (July 2010)—so the technical details will have to wait. But Surov sketched out the basic set up for me in an email.

In Haryana, India, a team of investigating veterinarians report that buffalo consuming GM cottonseed suffer from infertility, as well as frequent abortions, premature deliveries, and prolapsed uteruses. Many adult and young buffalo have also died mysteriously.

Denial, Attack and Canceled Follow-up

Scientists who discover adverse findings from GMOs are regularly attacked, ridiculed, denied funding, and even fired. When Irina Ermakova, who works with the Russian National Academy of Sciences, reported the high infant mortality among GM soy

fed offspring, for example, she appealed to the scientific community to repeat and verify her preliminary results. She also sought additional funds to analyze preserved organs. **Instead, she was attacked and vilified. Samples were stolen from her lab, papers were burnt on her desk, and she said that her boss, under pressure from his boss, told her to stop doing any more GMO research. No one has yet repeated Ermakova's simple, inexpensive studies.**

In an attempt to offer her sympathy, one of her colleagues suggested that maybe the GM soy will solve the over population problem!,,,

Alexey Surov says, "We have no right to use GMOs until we understand the possible adverse effects, not only to ourselves but to future generations as well. We definitely need fully detailed studies to clarify this. Any type of contamination has to be tested before we consume it, and GMO is just one of them."

8. What Happens within U.S.!

<http://www.ipsnews.net/news.asp?idnews=51193>

WASHINGTON - The U.S. Supreme Court will hear arguments Tuesday in its first-ever case involving genetically modified crops. The decision in this case may have a significant impact on both the future of genetically modified foods and government oversight of that and other environmental issues.

The case, Monsanto Co. v. Geertson Seed Farms, revolves around an herbicide-resistant alfalfa, the planting of which has been banned in the U.S. since a federal court prohibited the multinational Monsanto from selling the seeds in 2007.

That decision found that the U.S. Department of Agriculture did not do a thorough enough study of the impacts the GM alfalfa would have on human health and the environment and ordered the agency to do another environmental impact statement (EIS) review.

Though a draft was released in December, "there is no anticipated date" for the final EIS, Suzanne Bond, a spokeswoman with the USDA division charged with

regulating GM organisms - the Animal and Plant Health Inspection Service (APHIS) - told IPS.

The law under which organic farmers were allowed to challenge USDA's oversight of the GM alfalfa, the National Environmental Policy Act (NEPA), is what may suffer the most from the court's eventual decision, which is expected in June at the earliest. The law "requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions", said Bond.

It is also a key legal tool for environmental groups seeking to challenge those agencies' decisions. The vulnerability of NEPA is a key reason so many such groups have joined the plaintiffs by filing amicus briefs against Monsanto in this case.

The Centre for Biological Diversity, one of those groups, does not normally get involved in GM issues, said the Centre's Noah Greenwald, but this case "has broad implications for how governments do environmental analysis and when they need to prepare impact statements".

"The broader implications are why we got in this," he told IPS.

Doug Gurian-Sherman, who wrote several expert opinions for the earlier cases in lower courts and is a senior scientist at the food and environment programme of the Union of Concerned Scientists, which has also filed an amicus brief, pointed to the need for the type of citizen oversight of the government's own oversight that is granted by statutes like NEPA.

"The big issue here is how much deference should be given to a regulatory agency and its expertise in doing its job versus how much access or deference should be given to the public in having the ability to challenge the agency in court," he said.

"The issue here then becomes how amenable is the Supreme Court going to be in terms of allowing citizens to bring suit against an agency that is not doing its job, and that I think is the gist of what this decision may be," he added.

But the legal implications are only half the story. Also implicated, at least potentially, is the future of GM crops in the U.S. and elsewhere.

In the original court case, organic farmers argued that the genes of the GM alfalfa would be carried to neighbouring - potentially miles away - non-GM

alfalfa by the bees that pollinate the crop and that genetic contamination would hurt their ability to market their alfalfa under the label "organic". This would also preclude them from exporting to countries that prohibit GM crops.

"Consumers may not accept products cross-contaminated with genetically-engineered components and you can test for those and testing is done pretty routinely and therefore the market could reject the contaminated organic crops," explained Gurian-Sherman.

9. What Happens Outside U.S.!

<http://thehill.com/opinion/op-ed/93907-genetically-modified-crops-are-not-the-answer>

The Senate is considering a bill that would overhaul the way Americans deliver foreign aid. With more people going hungry than ever before, the bill's attention to global hunger could not come at a better time. The Global Food Security Act would streamline the aid process and focus on long-term agricultural development. **But something has gone awry inside the bill. A closer look reveals that its otherwise commendable focus may be seriously undermined by a new clause lobbied for by one of America's largest seed and chemical companies.**

This bill includes a mandate that we spend foreign aid dollars developing genetically modified (GM) crops. No other kind of agricultural technology is mentioned. Unsurprisingly, Monsanto has lobbied more frequently on this bill than any other entity.

The trouble with a mandate for GM crops is this: it won't work. A recent report by the Union of Concerned Scientists demonstrates that GM crops don't increase crop yields. USAID has already spent millions of taxpayer dollars developing GM crops over the past two decades, without a single success story to show for it, and plenty of failures. A recent, highly touted partnership between USAID and Monsanto to develop a virus-resistant sweet potato in Kenya failed to deliver anything useful for farmers. After 14 years and \$6 million, local varieties vastly outperformed their genetically modified cousins in field trials. Another 10-year USAID project for GM eggplant in India recently met with such outcry - from scientists and Indian farmers alike - that the government put a moratorium on its release. Growing insect resistance to genetically modified cotton and corn shows that the technology is already failing

farmers and will continue to fail over the long term. Sadly, today's GM obsession

shows every indication of duplicating the first ill-fated "Green Revolution" that trapped millions of farmers on a pesticide treadmill while devastating the functioning of the ecosystems on which we depend.

Fortunately, we have alternatives. Improved farming practices, conventional breeding and agro-ecological techniques deliver far better results, without the risks and high input costs that accompany GM seeds. A 2008 study by the United Nations Conference on Trade and Development found that "organic agriculture can be more conducive to food security in Africa than most conventional production systems, and ... is more likely to be sustainable in the long term." Even the chief agricultural scientist of Punjab - a home of the Green Revolution - argues that Indian farmers should farm organically.

Meanwhile, the World Bank and UN agencies have completed the most comprehensive analysis of world agriculture to date: the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD). This four-year study — by more than 400 scientists and development experts from 80 countries and approved by 58 governments — found that reliance on resource-extractive industrial agriculture is risky and unsustainable, particularly in the face of worsening climate, energy and water crises. It noted that expensive, quick fixes - including GM crops - fail to address the complex challenges that farmers face, and often exacerbate already bad conditions. Instead, the IAASTD highlighted the need to build more resilience into our food systems by increasing investments in agro-ecological sciences, small-scale biodiverse farming methods and farmer-led participatory breeding programs.

The success of ecological agriculture rests not only in its immediate outcomes of better and more reliable performance, but also in its ability to address the underlying cause of hunger: poverty. Congress could learn from the thousands of Kenyan farmers who have obtained bumper crops and higher household income through the ecological pest management system known as "push-pull." By planting a variety of grasses in and around their cornfields, these farmers have suppressed insect pest and weed populations, reduced input costs, doubled or tripled their corn harvest, increased forage for livestock, supplied their families and local markets, paid off debts and set aside money to pay for school, medicines and other needs. No amount of gene-splicing (or lobbying or advertising) by Monsanto

has ever accomplished this much for an African family.

This requires strengthening local food economies, increasing small-scale farmers' control of seed and land, and - importantly - breaking up corporate monopolies in agriculture and establishing fairer regional and global trade arrangements.

If Congress is serious about addressing world hunger, they should take their lead from the most comprehensive science and from farmers on the ground — not from Monsanto lobbyists.

Herren is co-chairman of the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) and president of the Millennium Institute and BioVision. Ishii-Eiteman is a lead author of the UN-sponsored IAASTD Global Report.

10. GM Cotton Bites Dust in Colombia!

<http://americas.irc-online.org/am/6726#2>

GM cotton has been a failure in Colombia

Genetically modified (GM) cotton from the American biotechnology company Monsanto has been a failure in Colombia, announced the organization Grupo Semillas (<http://www.semillas.org.co/>). Last March, the Colombian Agricultural Institute (ICA) imposed a fine on Monsanto due to the poor performance of its GM cotton, which caused losses among cotton growers in the 2008/2009 season.

"Seven years after having released the seeds of GM cotton commercially, their failure is evident," declared the Colombian organization in an article circulated by the Network for a Latin America Free of Genetically Modified Organisms (Red por una America Latina Libre de Transgénicos).

"They did not live up to promises of being more productive, nor of reducing the use of pesticides and herbicides, nor the lowering of production costs, nor the generation of greater profits for growers. Monsanto presented GMO technology as the redemption of the cotton industry; in reality it has helped take growers to the bottom of an abyss, especially the small and medium cotton-growers of Cordoba and Tolima, who in the 2008-2009 harvest had enormous losses."

Civil society was not unprepared for this news. In August 2007 the participants of the Latin American Scientific Conference of Agroecology, celebrated that month in Antioquía, Colombia, wrote an open letter to the Colombian government rejecting the approval of GM crops in the country.

In the letter, they stated that, “In Colombia, genetically modified corn and cotton will create genetic crosses with native species that will cause genetic degradation or ‘superweeds’ in the productive agricultural ecosystems; in the same way, cultural tradition, historically the facilitator of national food security, will be vulnerable and ruined by the irresponsible policies of the Colombian state, which measures agricultural activity in terms of productivity and increases social inequality in the Colombian rural sector, forgetting their commitment to national sovereignty starting with food as a fundamental human right.”

The signatories were emphatic in condemning supposed educational activities sponsored by the state, believing that they were nothing more than propaganda.

“We reject the conferences that have been developing to misinform public and institutional opinion about the risks of the introduction of GM crops in the Colombian countryside. In these events, so-called ‘biosafety workshops,’ they claim that GM crops will help resolve the problem of hunger in the country and that their effects on biodiversity are minimal; not recognizing that historically the rural communities have been responsible for providing food to humanity from diverse agricultural production systems and through practices that guaranteed a certain measure of productive sustainability, similarly denying the disastrous effects caused by the introduction of these GMOs at an experimental level in other Latin American countries.”

Now, following the failure that had been correctly forecast, Grupo Semillas looks toward the challenges of the future: “The small agriculturalists, peasants, and indigenous are those who have learned lessons from this crisis; they have understood that these GM seeds are not adequate, and in addition annihilate, their productive systems; therefore they are developing multiple strategies to face them. Now the challenge that the growers face is to confront the threats to biodiversity and food security generated by the GM corn seeds that the ICA authorized for cultivation throughout the country in 2007. But today there are even more growers who want to defend our native seeds and do not want

GM seeds to enter their territories, their systems of production, and their food.”

11. Misleading Figures!

<http://www.guardian.co.uk/environment/2010/apr/19/soil-association-food-production-increases>

*The Soil Association says the suggested increase in food production is closer to 70%, rather than the UN’s projected 100%

A declaration that global food production needs to double to feed the world by the middle of this century provoked shock when it was announced by the UN food chief. It has since become a founding pillar of food policy, cited by leading British politicians and government scientists, farming leaders and some of the world’s biggest agricultural companies.

But the source of the now infamous statistic did not actually say that, claims a new report by the Soil Association, the UK’s leading organic group.

The study, entitled “The big fat lie about doubling food production”, traced the original source of the doubling claim back to a report published by the UN’s Food and Agriculture Organisation in 2006.

However, using the FAO’s own figures, the Soil Association says the forecast increase needed in production would be closer to 70% by 2050.

The FAO itself also warns that the figures are distorted by using food prices: because meat and dairy products are worth more per weight, a small increase in volume appears as a significantly bigger increase in “production” measured in US dollars.

The differences between the report and the claims has arisen because politicians and others have used calculations from 2000, which are now a decade out of date, and then rounded them up, said the Soil Association, which is worried that the doubling figure is being used to push unsustainable industrial-scale farming.

“In abusing the figures government ministers and others are trying to exclude the possibility of us producing food in a way that would be good for the planet and good for our health,” said Peter Melchett, the association’s policy director.

The report also questions assumptions made in the FAO report concerning, among other things, high levels of food waste and billions more people eating

western-style diets that are high in meat and dairy products, which have been linked to obesity, diabetes and other health problems.

“Instead of assuming a ghastly starvation and obesity vision of the future, what we need is food systems which feed everyone a healthy and decent diet,” added Melchett.

The Soil Association study follows criticisms last summer [June 2009] by MPs on the Environment Food and Rural Affairs select committee, who warned that the forecasts were “projections rather than targets”, and should be used to draw attention to other policies issues such as population growth, diet and waste. In its response in October 2009, the government revealed that by recalculating the figures to begin from 2005-7, food production demand growth would be lower - up to about 70% by 2050. “The difference between 100% and 70% is not trivial: it is more than the food production of the whole American continent,” added the government. “So claims around food production needing to increase 50-100% need to be treated with care.”

Despite the government’s partial back-down, however, the doubling figure and that for a 50% increase by 2030, continue to be used by senior figures. Since October the old figures have been quoted by the Conservative farming manifesto; the government chief scientist Professor John Beddington; former chief scientist Sir David King, who was advocating a “more open minded approach” to GM foods; and Peter Kendall, the president of the National Farmers Union in the UK. The doubling figure was also quoted at a conference in February

by an executive at agri-chemical company Syngenta, according to an article in *Farmers Weekly*; and appears on the website of Monsanto, the global GM giant.

The purpose of the Soil Association report was to draw attention to the misleading use of the figures, said Melchett. “We can start to have a more sensible and open discussion about food and what farming systems are going to be possible in 2030 or 2050 when oil has started to run out and is very much more expensive, and how could greenhouse gases be lower,” he added.

A major international report in 2008 by hundreds of scientists and other experts, commissioned by the FAO and the World Bank, also advocated a more varied response to feeding a growing population, including diversification of farms and diets, more conservation schemes on farms, reforming subsidies which encouraged unsustainable agriculture, and promoting more healthy diets. The report, under an organisation called the International Assessment of Agricultural Knowledge, Science and Technology for Development, was signed off by 58 countries including the UK, though the US, Australia and Canada only accepted part of the findings.

The FAO report, *World Agriculture towards 2030/2050* says world food production growth would be principally driven by rising populations, and trends towards eating more calories and more meat and dairy products, especially in developing countries. As a result, the FAO forecast an average 1.5% a year growth in agricultural production by value from

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 Orissa. 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.