Can beggars be choosers?

Fackson Banda AllAfrica.com, 17 Aug 04. Via Agnet. From AgBioView, 19 Aug 04 (shortened)
http://allafrica.com/stories/200408170844.html .

The policy dilemma confronting Zambia over whether or not to accept GM maize, offered as food aid by the US, has thrown up urgent questions over th e way, and the extent to which, debate over the issue has been allowed in the count ry. When the government rejected the US offer in August, many commentators described the move as a bold step ai med at asserting the coun try's national pride. But with the UN World Food Programme (WFP) estimating that nearly 3 million people faced starvation in Zambia, the rejection was seen by some Western observers as unreasonable, the UK Financial Times newspaper called it "absurd". Now, following strong international pressure, a re-think is in the offing.

It is not as if there has been no public discussi on about GMOs. On 12 Aug the government organised a public debate in order to gauge the scientific evidence and other views. The debate highlighted deep divisions among Zambian scien tists on the benefits of biotec hnology. The government voiced 2 concerns: initially, it highlighted the possibility of ill-health resulting from consumption of GM food. It later added an economic concern, saying GM crops may end up contaminating local non-GM crops and endanger Zambian agricultural exports to Europe, which maintain strict guidelines on GMOs. These discussions were held against a backdrop of little media coverage of GMOs. According to one media content analysis, only 4 ne wspaper articles appeared on th e issue throughout 2000. Almost all covered biotechnology in a general way, with little local contextualisation.

Focus group discussions organised by Panos in 2001, in conjunction with the Zambia National Farmers' Union (ZNFU), showed that farmers too we re divided on the issue. While most small-scale farmers wanted more information on the subject, commercial farmer s were opposed to GMOs, citing as their main reason the possibility of losing Euro pean markets for their existing non-GM exports. The EU accounts for 53% of Zambian exports, most ly made up of processed and refined foods, primary agricultural commodities and floricultural, horticultural, animal and leather products. Largely based on this trade-related rationale, ZNFU wa s among those organisations that welcomed the government's rejection of the US food consignmen t, others include the Or ganic Farming Association and the Jesuit Centre for Theological Reflection.

The scientific case for rejection is led by Dr Mwananyanda Mbikus ita-Lewanika of the National Institute for Scientific and Industrial Research. He says there is compelling evidence that GMOs would have a negative impact on the local breeds such as millet, sorghum and traditional maize, with the possibility of causing an ecological problem that would affect farming. Dr Lewanika says that the government would do well to err on the side of caution by invoking the 'precautionary principle' clause of the Cartagena Protocol on Biosafety, arguing that his fears are borne out by a peer-reviewed study that showed GM plants to have had adverse ecological effects on Mexican local maize varieties. (Ed: See the European Manifesto in this issue for an alternative assessment)

According to the precautionary princi ple, even if there is no clear sci entific evidence that a seed type is dangerous, the government can de cide to take the precaution of refusing it, if there is likelihood that it might be harmful. Quoting research projects from around th e world focusing on potential ill effects, such as toxi city, resistance to an tibiotics, allergies, loss of bi odiversity, and resistance to pesticides, Dr Lewanika builds a case for reje cting GMOs. Dr Lewanika lays down 2 basic preconditions for allowing GMOs into the country. Firstly, he says, there is a need to develop a national biosafety framework to regulate biotechnology and GMOs. Second, the government must build the capacity to detect and monitor GMO substances in foodstuffs coming into Zambia.

Alongside this dominant position has emerged a pro-GMO perspectiv e. The proponents are largely drawn from a pool of University of Zambia (UNZA) scientists. Foremost among these are Dr Luke Mumba, dean of the School of Na tural Sciences, and Dr Fastone Go

conditions. In drought-prone Zambia, says Dr Mumba, hardy, GM maize would be a useful contribution to ensuring food security. "Given th e importance people place on the food they eat," adds Dr Mumba, "policies regarding GM crops will have to be based on an open and honest debate involving a wide cross-section of society". But Dr Mumba and Dr Goma have complained of having been left out of the planning committee for the national debate held in August. Both suggest that, if indeed it is true that GM maize might contaminate local crop varieties, the GM maize grain should be milled so as to ensure that it is consumed by the starving masses without there being the possibility of storing any of it for the next farming season. The position is shared by ZNFU.

Although most of the debate has been confined to scientific polemics, there has been some ideological-nationalistic opposition to GMOs. Led largely by Women for Change's executive director, Emily Sikazwe, this argument suggests that the US government, pressured by huge seed transnational corporations, has an interest in estab lishing future markets on the African continent for its GM food exports. Sikazwe says the US is not willing to offer non-GM maize in place of GM food aid.

What is clear from the debate so far, though, is the absence of the voices of the most affected people in rural areas. Bishop Peter Ndhlovu, the head of the Bible Gospel Church in Africa who has visited hunger-stricken vill ages, says: "The food crisis in rura l Zambia is more grave than can be imagined from an urban perspect ive." This echoes many concerns that the debate has been so urban-centred and elite-based that it has largely ig nored the concerns and urgent needs of the rural poor.

The emphasis on scientific eviden ce as a basis for policy-making has rendered the 'public debate' elitist. Those who are not schooled in science have largely been on the sidelines, apart from some vocal civil society organisations. While there is obviously a desire to learn more about the 'science' of GMOs, there is increasingly a political-economic movement that seeks to highlight the issue of unequal power relations between rich and poor nations as well as the role of multinational corporations in perpetuating research and developm ent that may seek to 'scientifically' justify GM food. It is also clear that there is a general lack of information about GMOs, especially among rural populations, including small-scale farmers.

There are signs that the governme nt has actively marginalised the voices of those who would support GMOs. This trend is also evident in the largely one-sided way the media have covered the issue in Zambia, favouring those opposed to introd ucing GM technology into the country. The policy dilemma confronting Zambia over whether or not to accept GM maize, offered as food aid by the US, has thrown up urgent questions over the way, and the extent to which, debate over the issue has been allowed in the country.

National Academy of Sciences report on the safety of biotech foods

Global Biotech Science News, 30 Jul 04

A new report is available from the National Ac ademy of Sciences' (NAS) Institute of Medicine (IOM),"Safety of Genetically Engineered Foods: Approaches to Asse ssing Unintended Health Effects." The report was prepared by the Nation al Research Council's Co mmittee, and focused on identifying and assessing potential unintended e ffects of biotech foods on human health. The committee stated that whether possibl e compositional changes result in unintended health effects is dependent upon the nature of the substances al tered and the biological consequences of the compounds.

The committee found that food safety assessments sh ould be based on the resulting food product and not the method used to make the product. The committee also noted "to date, no adverse health effects attributed to genetic engineering ha ve been documented in th e human population." A number of pre- and post-market safety approaches were recommended by the committee to guide the assessment process.

More information on the report is available at: http://www.nap.edu/catalog/10977.html
A brief of the report is available at: http://www.nap.edu/html/ge_foods/ge-foods-reportbrief.pdf

Institute of Food Science & Technology updated biotech position statement

Global Biotech Science News, 30 Jul 04. http://www.ifst.org/hottop10.htm

The Institute of Food Science & Technology (IFST), through its Public Affairs and Technical and Legislative Committees authorized an Information Statement on 27 Jul 04 on GM and Food. According to IFST, "GM has the potential to offer very significant improvements in the quantity, quality and acceptability of the world's food supply. Food scientists and technologists can support the responsible introduction of GM techniques provided that issues of product safety, environmental concerns, information and ethics are satisfactorily addressed. IFST considers that they are being addressed, and need even more intensively to continue to be addressed. Only in this way may the benefits that this technology can confer become available, not least to help feed the world's escalating population in the coming decades."

A fungus in the New York Times

Thomas R. DeGregori. Professor of Economics. University of Houston. From Bernedebate 22 Aug 04

Letter to the editor: In his column on language in the Sunday New York Times, William Grimes praises the virtues of huitlacoche, "a fungus that grows on maize" and "ranks as a delicacy in Mexico, where cooks use it to impart a rich, mushroomy flavour to food." True though this may be, Grimes ignores or is unaware of the dangers that huitlacoche poses to pregnant women, particularly poor women who may not have a choice of what to eat.

Huitlacoche is a fumonisin, a carcinogenic mycotoxin produced by the fungus called fusarium ear rot. It inhibits the utilization of folic acid, lack of which in pregnant women often results in infants with spina bifida and, less commonly, acephalous infants. This was very likely the cause of the 30 acephalous infants born in the lower Rio Grande valley in 1990-1991. A recent article in the Journal of Nutrition has studied occurrences of the condition worldwide, including those in Texas, and makes the risk very clear.

In his praise for Chez Panisse, Grime demonstrates an identification with the food police wh

suffering this fusarium infestation. However, I do not think this difficult situation should pass without additional comment. Fusarium, a fungus, produces the mycotoxin called fumonisin. Under food safety guidelines from the UK Food Safety Agency and the US Food and Drug Administration, fumonisin in wheat, or in any crop, can quickly make the crop unusable for human food. Moreover, as attested by the US FDA guidel ines for fumonisin in animal feed, fumonisin can also quickly make the crop unacceptable for animal consumption. Hence, the Essex County farmers are at risk of their crop being completely unmarketable.

Transgenic wheat, i.e. Bt wheat (wheat with Bacillus thuringiensis) should greatly reduce the risk of fusarium infestation. Scientific studies from Argentina, France, Italy, Spain, Turkey and the US States have clearly established that Bt corn has a many-fold lesser risk of fumonism contamination than non-Bt maize. Bt maize has in-built protecti on from fumonisin contamination because fusarium gains access to the crop most often through insect bites. Bt maize has much better insect control and suffers many fewer insect bites. Bt wheat sh ould have the same in-built protection from fumonisin contamination. If so, Bt wheat would protect animal health, human health and the economic markets of farmers. Situ ations such as that being expe rienced by Essex County farmers should help us realize the significant benefits that agricultural biotechnology provides to consumers, animals, and farmers in our society.

European Biotech Manifest o: Science fights back!

ABIC No. 4 | 04_04. www.abic2004.org . 9 Aug 04 (shortened).
http://www.abic2004.org/download /ABIC2004_newsletter_no4.pdf

Botanist, ecologist, and unabashed biotech booster Klaus Ammann is putting together a draft proposal for a "European Biotech Ma nifesto" to be published at the close of ABIC 2004. Designed to provide a framework for helping the general pu blic understand the benefits and risks of biotechnology, Ammann's draft will be submitted to ABIC delegates at this year's ABIC conference in Cologne, from 12-15 Sept. Participants will be asked to hammer out a final version.

Professor Klaus Ammann of Bern's botanical ga rden, has dedicated his career to protecting biodiversity, assessing the risks associated with genetically en gineered crops, and promoting informed public debate about biotechnology issues. In addition to his duties in Bern, Ammann chairs the European Group of Plant Specia lists for the World Conservation Union and sits on Switzerland's governmental biosafety committee. As a researcher, he conc entrated on plant systematics and evolution. Ammann answers questions about the ethics of risk assessment, the need for proactive discourse, and the dangers of letti ng "eco-Stalinists" hijack inte lligent debate. For example:

How do you handle opponents?
To begin with, you avoid the hypo critical charade of engaging in discourse with eco-Stalinists, because they're only pretending to engage you. Stick to oppone nts with whom you share a true concern for the environment, and ignore those seduced by some w oolly Rainbow Warrior aesthetic.

That sounds like a broa dside on Greenpeace.
It is. I should mention that I worked with Gr eenpeace in the early 90s, and the organization I worked with never would have indulged in pseudo-science or intentional deceit, the way today's Greenpeace does. As far as I know, the Brent Spar was the only time they admitted to intentional deceit. That's why so many good peop le refuse to work with them now.

Before we explore that, which groups would you engage in dialogue with?
The WWF and the World Conservati on Union (IUCN) oppose biot echnology, but they are open minded. You can talk to them, and you can learn fr om them, just as you can talk to and perhaps disagree with, but also learn from, many organic farmers, and, to a much lesser degree, also Friends of Earth, among others.

How has Greenpeace lied regarding biotechnology?
Let's start with golden rice, which creates more vi tamins than standard rice does. This is a major breakthrough, because 500 000 children die every ye ar from vitamin defici ency, and their primary staple is rice. Well, Greenpeace derides it as "mock rice" - as if it's made from cardboard or something, and they insist on maintaining the lie that you have to eat 9KG of it to gain any benefits, when you only need a fraction of that amount (250-300g) to avoid de ficiency syndromes.

Then there's Mexico, where land races of maize have been introg ressed by Bt genes. Greenpeace says the land races are threatened by transgenetic maize, but that's a joke. The land races are threatened by massive subsidized American imports, which are destroying the local market. In Mexico City, I asked what was wrong with land races having transgenes in them which protect against insects. Nobody was able to give a negative answer. You ta lk to farmers down there, and farmers everywhere, and they always want to hear about ways of enhancing land races. We should help them achieve that, not just with technolo gy, but with collaborative breeding programmes. Europe also has a responsi bility there, because our subsidies are just as devastating as America's, but it's not a biotech i ssue; it's a trade issue.

UK expert backs GM foods

Food Week (ABIX Abstracts), 6 Aug 04. From Ag BioView, 10 Aug 04

A UK food institute is supportive of the next genera tion of GM foods. Accord ing to Ralph Blanchfield, of the Institute of Food Science & Technology, "food problems of the future will not be solved without GM", in light of the 30 000 deaths per day globally from diet deficiency illnesses. Blanchfield says that the first generation of GM foods was mainly for the benefit of food producers. He believes that the advancement has been ma rred by the negative portrayal in the media. Blanchfield adds that for the next generation of GM foods to succeed, it had to address consumer needs.

UK food makers prepare for new food allergen rules

Food Navigator, 17 Aug 04

While universally welcomed by food manufacturers, retailers and consumer allergy groups alike, one aspect of the new European direct ive on food allergen labelling has proved unpopular and is now slated for amendment, the labelling of allergen de rivatives. And although food makers are unlikely to change their ingredients sources when the new rules enter into force, they may opt for alternatives if the derivative has an equivalent ingredient that would not require an allergen listing, writes Lindsey Partos.

In an effort to help the growing number of consumer s with allergies to identify ingredients they need to avoid, last year Europe cleared a new di rective - 2003/89/EC (amend ing Directive 2000/13/EC) - that requires food manufacturers to list 12 potentia lly allergic ingredients, and their derivatives. The new rules, to enter into force in late Novemb er this year, apply to ce reals containing gluten, fish, crustaceans, eggs, peanuts, soy, milk and da iry products, nuts, celery, mustard, sesame seed, and sulphites.

“Non-allergenic derivatives should not have to be labelled. Refined soya oil, for example, is not allergenic and labelling it as a food allergen will not be preferential for the food manufacturer,” Michael Hunt, manager of food law and labelling at the UK industry bo dy, the Food and Drink Federation tells FoodNavigator.com. Not preferential because the allergen wary consumer will avoid the product believing it really contains a potentially harmful ingredient when in fact it is innocuous. And marking lost sales for both the manufacturer and retailer. “Allergy consumer groups in the UK agreed with us that the labelling of non-allergen ic derivatives would only confuse consumers,” added Hunt. As such, the European food industry and consumer groups have succeeded in their aim for an amendment to the ‘Annex IIIa’ listing (the list of the 12 ingredients an d products thereof affected by the directive). The food industry and implicated parties have until the 25 Aug to demonstrate to the European Commission the non-allergenicity of allergen derivatives. “By the end of the year Brussels should have come up with a provisional list, and in 3 years time this will finally be confirmed,” explained Hunt.

According to the FDF representative food makers are unlikely to look to source alternative ingredients for their formulations because for the most part, the ingredients are listed already. “The list of ingredients to which the new directive applies is enormous, and it would be a never-ending task to replace all the ingredients. In addi tion, if a manufacturer uses milk protein, they are not going to swap for another source, because the ingredient is already, anyway, labelled on the food product. The company has no need to look for an alternative ingredient.”

The only circumstance when a manufacturer might want to replace an ingredient in a food or beverage formulation is if the derivative is considered an allergen, and the maker has no desire to label the food product as such, simply because of the derivative. If an alternative exists, they are likely to source it and avoid needless labelling that could deter a consumer purchase. According to European allergy associations 8% of children and 3% of adults are affected in Europe by food allergies or food intolerance, with new allergens emerging on a regular basis. Figures that initially pushed Brussels to come up with a new food code for the consumer.

In addition to the labelling of specific food allergens, the new directive puts an end to the '25% rule', whereby individual ingredients of a compound ingredient make up less than 25% of the finished product currently do not have to be listed. “Many companies have already stopped using the 25% rule and for some time have labelled compound ingredients, so they are prepared this aspect of the new rules,” commented Hunt. The '25%' rule, introduced into Community legislation more than 20 years ago in order to avoid inordinately long lists of ingredients, was based on the principle that the consumer knows the composition of compound ingredients and can therefore deduce, for example, that jam added to biscuits is prepared with fruit and sugar. Since this time, food production has become more and more complex, and people eat a lot more processed foods.

Over the past few years, consumers have repeatedly expressed the wish to be better informed about the foodstuffs they purchase, and specifically about their composition, even if full ingredient labelling will inevitably make ingredient lists longer. Recent food safety scares have clearly reinforced this need for information. Under the new rules, with the exception of certain minor derogations relating to compound ingredients made up of less than 2% of the finished products, all ingredients will need to be listed. The derogations, which will not apply to the listed allergens, or to additives, are as follows: compound ingredients whose composition is defined in EU law (for example, jam and chocolate) need not list their ingredients. Herbs and spices used in mixtures, need not be listed individually and ingredients will not have to be listed in descending order by ingoing weight. The presence of similar or ‘mutually substitutable ingredients’ could be indicated by use of "contains....and/or..."

The rules enter into force on 25 Nov this year, and for which, says Hunt, the UK food industry is ready for compliance. Food manufacturers and retailers have one full year to get used to and comply with the law, but from 25 Nov 05 all products sold on the market that are not in full compliance of the directive will be prohibited. Those labelled prior to this date may be sold while stocks last.

Full details of the new directive can be accessed on the European Commission website.

GE vaccine fights allergies

Liz Brown, Betterhumans, 9 Aug 04. From AgBioView 10 Aug 04
http://www.betterhumans.com/News/news.aspx?articleID=2004-08-09-4

Genetically engineered pollen allergens have safely spurred an immune reaction that can fight allergies. An allergy vaccine derived from genetically engineered birch pollen has proven effective in human subjects, showing that genetic engineering can be used to produce hypoallergenic therapies for treating many common allergies.

Seasonal allergies affect a quarter of the population in industrialized countries. Scientists have blamed the prevalence of allergies in developed countries on an overactive immune system, possibly caused by a more sanitary way of life. Current treatments for allergies include exposing patients to natural allergens. This frequently causes side-effects, however, such as inducing an allergic reaction. To overcome this problem, Rudolf Valenta of Austria's Medical University of Vienna and colleagues used genetic engineering to create a hypoallergenic vaccine from birch pollen. They then successfully tested it in human subjects. "These results could possibly lead to the development of more effective vaccines for the treatment of the most common forms of allergy and even for prophylactic vaccination," say the researchers.

To create their vaccine, the researchers focused on the major birch pollen allergen, Betv1, genetically altering it to have 100-fold reduced allergenic activity. They gave the vaccine or a placebo to 124 birch pollen-allergic people, giving 8 injections of increasing dosages in 1 to 2 weekly intervals as a pre-seasonal treatment.

After reaching a maximum dose, the vaccine was given in 4 weekly intervals until flowering season. Valenta and colleagues found that people given the vaccine had an increase in immunoglobulin (IgG) antibodies, which inhibit allergic reactions. Naturally derived vaccines frequently fail to create the same response. The researchers believe that their findings support the creation of other hypoallergenic vaccines using genetic engineering technology. The research is reported in the Proceedings of the National Academy of Sciences.

ICRISAT sets field trials for GM groundnut

CropBiotech Net, 20 Aug 04 (shortened)

The International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) has identified resistant lines for GM groundnut and is ready for open field trials by July or Aug 2005. In addition, pigeonpea transgenics are currently under contained field trials for testing of promising lines. ICRISAT scientist Dr. Kiran Sharma said that this will be repeated in 2005 under contained trials to be followed by an open field trial in 2006.
(Contact Kiran Sharma at k.sharma@icrisat.org for more information).

In related developments, Dr. William Dar, ICRISAT director general, said that a large number of cultivars have been released from the breeding material/ germplasm supplied by ICRISAT. These cultivars contribute significantly to the increased productivity and sustainability of agricultural development in India and other countries. Dar mentioned that 11 varieties were released in India from the basic germplasm supplied from ICRISAT. These include sorghum, pigeonpea, pearl millet, small millets, and chickpea. In India alone, of the 70 pearl millet hybrids in cultivation, 60 were developed on breeding material supplied by ICRISAT.
Dar's PowerPoint presentation on "Access to germplasm: ICRISAT's experience in India" can be viewed at http://www.isaaa.org/kc.

Green modified bilge

Andrew Bolt, Herald-Sun, 13 Aug 04. Via Vivian Moses. Via AgBioView, 13 Aug 04.

We will marvel one day at how we let ourselves be so spooked by green lies on GM crops. And we will ask how those lies were believed so religiously that the Brack s Government (Australia) last year banned GM food crops out of nothing more than superstition. Greenpeace has for years tried to stop farmers using GM cotton, claiming it would mean "increased pesticide use", cause "resistant superbugs" and "harm beneficial insects". But last week we learned Greenpeace was wildly wrong, yet again. Its scaremongering was exposed this time by a University of Sydney study which found that one popular GM cotton, designed to be tolerant to the weedkiller glysophate, was much kinder to the environment than "natural" cotton.

Farmers no longer had to use harsher herbicides before planting, and could just wait and spray their GM cotton with glysophate when they needed to, sometending to use far fewer, and gentler, chemicals. "The field results confirm that it is possible to achieve both economic and environmental benefits from the use of this GM crop," professors Angus Crossan and Ivan Kennedy declared. Great news for Australia, the world's third biggest cotton exporter. But, wait, there's more. A week earlier, a study by the CSIRO concluded that the other main GM cotton, resistant to the cotton bollweevil, allowed farmers to cut pesticide use by about 80%, saving cash. "But I think the argument that's most important is that the environment has been benefiting right from the start, with much reduced pesticides," study author Dr Gary Fitt said. Great for insects, great for the environment, great for farmers. But Greenpeace hates it, claiming Mother Earth has damned this meddling with nature. What makes those earth gods so dangerously unreasonable? And why do our politicians try to placate them?

"To this day, no health problem, whether it is a question of toxicity or allergens, can be specifically attributed to a GMO on the market."

Agence Francaise de Securite Sanitaire des Ailments (AFSSA), Aug 2004

Blue Rose quest leaves breeders . . . Purple
Eric D. Tytell, Tribune Newspapers: Los Angeles; 17 Aug 04. Via AgBioView 2004 (shortened)

Roses are red, violets are blue. Bu t what if roses were blue? Florists might stand to make a lot of green. Modern biochemists and gene ticists are now closing in on a prize that has obsessed rose lovers for centuries, the creation of the true bl ue rose. The flower does not exist in nature, and despite centuries of effort, no breeder has manage d to even come close. They have called many roses blue: Blue Girl, Bl eu Magenta, Blue Moon.

They are purple. The only way to cr eate the elusive and unnatural colour blue is by manipulating the genetic code of the rose, and millions of dollars ar e being spent on the effort by genetic engineering companies. The prize is a hefty piec e of the $25-billion global cut-fl ower market, which hasn't seen a major twist in roses since the introduction of yellow around the turn of the last century. But beyond the monetary prospects, flower lovers are alread y fantasizing about what new emotional dimensions blue would bring to the rose.

"You think of blue as the ocean and sky, which are very powerful elements," said Amulka Kitamura, a designer at the Flower Box in Santa Monica. "I think it would be stunning." The problem is that blue pigment does not exist in roses. No amount of breeding will bring it to life. "We're trying to attain the apparently unattainable," said Frank Co wlishaw, an amateur rose breeder in Derbyshire, England, who has spent 25 years trying to tease the colour from nature through careful breeding.

Many flower pigments have the same basic chemical structure, a molecule called an anthocyanin. Extra chemical decorations, calle d hydroxyl groups, determine the colour. One extra hydroxyl group makes a dark brick red, 2 is a light pinkish red, an d 3 is blue. Roses do not have a gene that allows them to add the third hydroxyl group. Which is why Florigene, formed in 1986 to develop GM flowers, decided to start with ca rnations. For some reason, carnations seem easier to manipulate genetically than roses. After ab out $18 million and 4 years of work, Florigene scientists managed to create the Moondust carnation. Th ey began selling them in 1996. "The y are selling quite well for us," said Ken Young, a spokesman for 1-800-Flower s.com. The trouble is, they are purple.

Florigene was taken over by Suntory, the Japanese beverage company, in 2003. The company aimed to produce blue roses using the "blue gene " from petunias. "But th e petunia gene did not work at all in roses," said Yoshikazu Tanaka, the di rector of Suntory's blue rose effort. After trying genes from several flowers, Tanaka 's group eventually settled on th e blue gene from pansies. Roses seem to understand pansy DNA best. Finally, in a triumphant news conference on 30 June, Suntory announced it had produced "a synonym for the impossi ble"- the blue rose. Well, sort of. It's purple. "The flower is a nice colour, bu t not sky blue," Tanaka admitted.

Meanwhile, serendipity arrived in a beaker full of bacteria at Vanderbilt University. In 1999, biochemists Fred Guengerich an d Elizabeth Gillam were studying a group of enzymes called cytochrome P450s, which help the body to deacti vate and eliminate toxins. To produce a large quantity of one particular form of the enzyme, they pulled a gene out of humans and inserted it into bacteria, a standard procedure in their lab. "My st udents noticed some of their bacterial cultures were turning blue," said Gillam, who is now at the University of Queensland, Australia. After some thought, though, the researchers had a good guess of what they were seeing in digo, the same pigment that makes blue jeans blue.

They surmised that the bacteria took an amino acid called tryptophan and converted it into a compound called indole. The new P450 enzyme chan ged the indole into indi go. Using indigo would avoid many of the problems Suntory and Florigene ran into using their anthocyanin-based blue pigment. They have a long way to go, though. "In our initial attempts," Guengerich said, "the gene didn't know whether to turn the st em, the thorns or the flower blue." "It was just quite bizarre," said Lisa Notley, who worked as a rese arch assistant with Gi llam. They worked on the blue rose for 5 years, but never produced viable blue flowers or persuaded a company to invest in their discovery. Without funding, they turned to other research.

The blue rose has not been kind to its pursuers. DNA Plant Technology in Oakland, which also tried to discover a viable blue gene, closed its research and developm ent wing in 2002. Japan's Kirin Brewery, another competitor in the quest, is now more interested in developing disease-resistant plants. Even with a truly blue rose, there are still many hurdles. "Just because it's a blue rose does

not guarantee success," said Terril Nell, president of the Society of American Florists. The flower must hold up during shipment, last a long time in the vase and have a good fragrance. Suntory and Florigene are continuing to tweak the rose genome. In 2 to 4 years, they hope to be selling blue roses, not purple.

Single regulator - A welcome idea in India

Financial Express (India), 14 Aug 04. Via AgBioView 17 Aug 04.
http://www.financialexpress.com/fe_full_story.php?content_id=65882

The Indian government's decision to replace regulatory agencies in the biotechnology sector with a single regulatory body is welcome. Even if the Science and Technology minister Kapil Sibal's target date of Jan 05 for setting up the body seems overly ambitious. India's experience with the existing model has been far from satisfactory. Multiple agencies, embroiled in turf wars and entrenched in red tape, have spectacularly managed to retard commercialisation of transgenic technology in this country. Approval for the first strain of Bt cotton in the country, for instance, came after 4 long years. And the going's been mighty slow ever since. A single biotech regulator, maybe even one directly accountable to Parliament, will help cut through the red tape, streamline decision-making and eliminate the ad hocism evident until now.

There will, of course, be the temptation to view a single window clearance mechanism as a sell-out to the pro-GM lobby. That would be unfortunate. It is no one's case that the biotech sector (specifically, transgenic applications) should be outside the purview of regulation. In fact, given that GM technology is relevant for processed foods, pharmaceuticals as well as foodgrain, there is a strong warrant for caution. But there is little reason to believe that multiple agencies are in any way more effective when it comes to regulation as evidenced by the thriving black market for spurious Bt cotton seeds in Gujarat, Punjab and Andhra Pradesh.

Let's also not forget that a regulator's performance is also a function of policy. Therefore, the need for a rational, commonsensical approach to regulation cannot be overemphasised. For instance, reinventing the wheel every time a cotton hybrid is to be modified by Bt is ridiculous. But going through the entire regulatory process while seeking approval for say, a different crop altogether, makes sense. Government thus should begin by appointing competent individuals with specialised domain knowledge as regulators.

Rules and procedures will then be based on sound science than fear-mongering and lobbying by business. They need to enforce existing regulations. As also take decisions in a transparent manner, and put out all relevant information in the public domain. Provide the consumers of this technology, be they farmers or grocery shoppers, the tools to make an informed choice. Thereafter, let the market decide the fate of a GM product.

French protesters trash biotech maize field

MARSAT, France, 14 Aug 04. AgBioView 18 Aug 04 (shortened)

Several hundred protesters trashed a field of GM maize, despite the presence of about 100 pro-biotech militants and almost as many police. After a long face-off in which the 2 sides traded insults and occasional blows, and gendarmes attemped to keep them apart, the protests pushed down a fence and trampled a 1.5-hectare (3.7-acre) area where the GM maize was growing, yelling, "no, no no to GMO." The protesters included Gilles Lemaire, national secretary of the Green party, and Gerard Leras, the party's regional chief.

One of the protesters was punched in the face and was seen bleeding, an AFP reporter said, and 2 protesters were detained by police. About 500 people took part in the demonstration according to organizers, but police put the figure at 300. Last month, a group of self-styled Green vigilantes led by Jose Bove, the French farmers union activist who shot to prominence after he helped demolish a partly built McDonald's fast food restaurant in 1999, vowed to destroy all GM crops in France. The government has approved tests of GM crops in 15 regions.

The Skeptic: French "Frankenfood" farce could be ending

Matthew Curtin, Dow Jones International News, 26 Jul 04 (c) 2004 Dow Jones & Company, Inc. (shortened)

It was another one of those farcical events for which France is often unfairly lampooned. Several hundred anti-globalization activists intent on pr otecting us all from the supposed menace of GM crops trampled over patch of transgenic maize being grown in a field in southwest France. The protesters stomped about under th e watchful gaze of the police, whose efforts to prevent the destruction of private property, the field's owned by Pioneer Hi-Bred, went only as far as photographing the miscreants fo r possible future prosecution.

All these GMO-related antics would be funnier if it weren't for the fact that French and other European politicians have been keen in the past to pander to the anti-GMO lobby, delaying the introduction of new crops which are no more than the result of a more-a dvanced form of plant breeding that, over the centuries, has steadily help ed feed more and more people round the globe. One promise, of course, is that the bounty can be brought to the many mi llions who, despite the progress, remain undernourished throughout the world.

In that light, the latest study published by the French government agency responsible for food security is a timely contribution to a saner deba te in Europe. The Agence Francaise de Securite Sanitaire des Aliments enjoys a high standing in Fr ance, not least for its effo rts that helped ensure France was relatively untouched by BSE and escaped contagion from the British foot-and-mouth outbreak a couple of years ago.

The report, carried out by a 20-strong panel of ex perts, finds that the environmental and health risks posed by GM cotton, maize, sugarbeet, and rice are small, if not negligible, while the benefits, particularly in the reduction of the amount of pest icides farmers have to use, are significant, in terms of protecting the environmen t and people from toxins or grow ing crops more cheaply. At the same, AFSSA acknowledges that some benefits, partic ularly that of vitamin-enhanced "golden rice," aren't yet clear.

But AFSSA is adamant that real an d potential benefits of GMOs have clearly been identified. But the risks aren't, and can't be, because "to this day, no health problem, whether it's a question of toxicity or allergens, can be specifically attributed to a GMO on the market." For politicians in France, and elsewhere, seeking to prioritize policy and what to spend taxpayers' money on, that sort of verdict should help focus the minds on what they should be worrying about, and it ain't GMOs.

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Rival groups in GM controversy clash in French maize field

Alex Duval Smith. 17 Aug 04 The Independent. COPYRIGHT © THE INDEPENDENT
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A new front has opened up in the controversy over GMOs in food with th e surprise emergence in France of a group of radical rural campaigners claiming to be in favour of open-field experiments. In a maize field near Marsat in the Puy-de-Dôme at th e weekend, gendarmes intervened after the anti-globalisation campaigner José Bové and 500 of his supporters came to blows with a new group describing itself as "volunteer farmers an d researchers in favour of GMO tests".

The clash came amid growing signs that the French authorities are wavering in their opposition to open-field tests of GM crops, th e seeds of which are developed in laboratories to be resistant to certain pests or to herbicides. In recent weeks ev en the conservative French wine-growing industry has announced it wishes to keep an open mind over the possibl e benefits of GMOs.

The weekend clash, which resulted in 2 arrests, was the first physical confrontat ion between the 2 camps. France, where anti-GMO campaigners tr ample experimental crops most weekends, has become Europe's main battleground over the i ssue, but police rarely intervene and most confrontations have been confined to courtrooms . Mr Bové has called on his supporters, known as "the volunteer reapers", to step up their campaign of civil di sobedience before a European Commission decision on the issue. The commission, which in May for the first time authorised the

planting of a GM maize seed manufactured by the Swiss company Syngenta, is divided and must decide by November whether to authorise the US chemical giant Monsanto to sell its transgenic NK603 maize in the EU.

Mr Bové's "volunteer reapers" said yesterday that the emergence of a group campaigning in favour of open-field tests was an attempt by the GMO industry to give a "grassroots flavour" to its efforts to win over public opinion. The Green MP Moisette Crosnier said: "80% of Europeans are against GMOs in their food and 75% of French people are opposed to open-field experiments. We have to keep up the pressure on the government and remind it of the will of the people.'' So far only 21 open-field GMO tests have been authorised on 48 plots totalling 7.3 hectares. However, the "volunteer reapers" have strong grassroots support and have convinced 3 000 French mayors to ban GMO tests in their area. One mayor, in Bax, Haute-Garonne, is facing court action by the prefect of his département who wants to overrule him. Last year, Mr Bové served 6 weeks in prison for destroying GM crops and he is due to be interviewed by police next week over an incident in Haute-Garonne.

The "volunteer farmers and researchers in favour of GMOs" are led by Pierre Pagesse, a farmer and the managing director of the French biotechnology firm Biogemma. He says he launched his group because the "continuing destruction of crops is playing into the hands of France's competitors". He said: "At this rate European farming will fall behind. To have sustainable agriculture you first of all need to sustain the farmers." Mr Pagesse is president of Limagrain, a leading European seed company of which Biogemma is the research arm.

Despite popular opposition to GMOs, the farming industry and French scientists are increasingly arguing that the phenomenon is unstoppable. The agriculture ministry has begun a process of public consultation by internet and a report by the French foods ecurity agency, AFSSA, last month claimed that GM maize and cotton, as well as beetroot and rice, showed health benefits.

Swiss cabinet rejects GM crop moratorium initiative

Swissinfo, 18 Aug 04 http://www.swissinfo.org/ From AgBioView 19 Aug 04

The government has come out against a proposal calling for a five-year moratorium on GM crops in Switzerland. It said such a move would damage Switzerland's standing in the field of agricultural research as well as its trade relations with other countries. Put forward by a coalition of environmental groups, consumers and farmers, the people's initiative calls for a ban on the farming of GM crops for use in food, and the importing of GM seeds and fodder. Supporters collected almost 121 000 signatures – 100 000 are needed for a people's initiative, in just 7 months last year, after parliament voted to reject a moratorium on GM crops.

But on 18 Aug, the cabinet said that a law on genetics that came into effect in January this year adequately protected humans, animals and the environment against abuses. It said that the law had already set out a procedure authorizing the import and distribution of GMOs. It added that the legislation was precautionary and aimed at protecting non-GM agriculture. Added to this, said the government, was the fact that the procedure for allowing GM plants in the country was likely to take several years.

Ministers also said that the initiative went too far and could damage Switzerland as a place of scientific development, even if research was not directly targeted by the moratorium. In a statement, they said that scientists could be tempted to conduct their work elsewhere if the future of GM crops remained uncertain in Switzerland. Another point for the government was that if the country accepted a moratorium on imports, this could have a damaging effect on its trade relations and Switzerland could stand accused of violating international treaties.

> "Food problems of the future will not be solved without GM".
>
> Ralph Blanchfield, Insititute of Food Science and Technology, UK

Claims GM sugarcane safe

ABC.net, 4 Aug 04. From AgBioView 4 Aug 04.

BSES (Bureau of Sugar Experiment Stations) Bundaberg, in south-east Queensland, says GM sugarcane is safe because it cannot contaminat e other farms. The University of Queensland has lodged an application for a field trial of GM sugar, and the Australian Democrats has raised concern that may affect the industry's clean and green image. Palmina Bonaventura from BSES Bundaberg says sugarcane does not seed. "The way it is propagated means that the genes cannot be transferred into the environment," she said. "Sugarcane will not just pop up wherever it wants as it does not seed." She says GM suga rcane could be the industry's saving grace by offering farmers new uses for cane such as bioplastics or vaccines.

Ms Bonaventura says GM trials are strictly monito red. "We have got rules, we have got regulatory bodies that govern how GM crops are produced an d what happens with the GM crop when it is finished, how it is disposed of, how the land that tturregulatory