NO TO GM VEG THIS TIME, BUT MAYBE NOT NEXT

What's behind that Indian aubergine?

India's environment minister imposed a moratorium on a GM aubergine already approved by the government. Yet New Delhi has already agreed a deal with the US that will intensify pressures on Indian agriculture

BY MIRA KAMDAR

Everything seemed ready for the commercial launch of the world's first genetically modified (GM) aubergine, the Bt *brinjal*, in India. On 16 October 2009 the government's Genetic Engineering Approval Committee gave it the green light. Then, unexpectedly, this February environment minister Jairam Ramesh decided to impose a moratorium. Yet it is not certain that India, one of the world's largest producers of GM cotton, is rejecting GM foods.

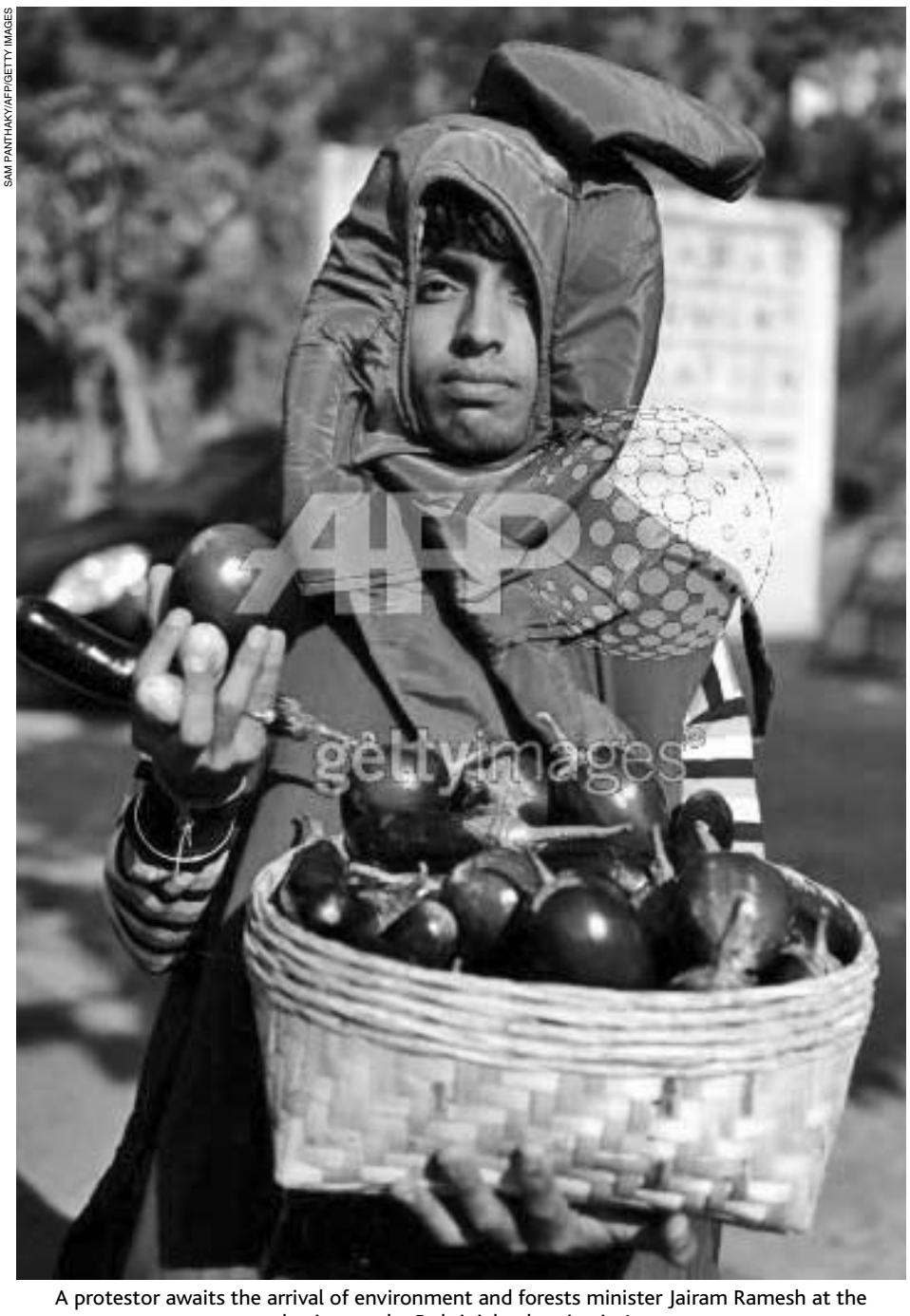
The moratorium does mean that Indian civil society has won a victory. The campaign against the GM aubergine recalls Gandhi's mobilisation of the people against British rule, under the banner of *swadeshi* (national self-sufficiency). The vegetable was seen as an attack by a foreign power on India's genetic heritage and food sovereignty. Ten states forbade the cultivation of any GM foods, which they are allowed to do under India's federal regime. Against such strong opposition, Ramesh felt it best to delay commercialisation.

Although this is not a complete defeat for the pro-GM lobby, it is a major blow to Maharashtra Hybrid Seeds Company Ltd (Mahyco), which developed the aubergine on behalf of US-based multinational Monsanto, and also to the US government. The US has made the acceptance of genetically modified organisms (GMOs) marketed by Monsanto an integral part of its foreign economic policy. According to the US government, which has close links with biotechnology companies, only GMOs can solve the problems of water shortages and global warming, and ensure world food security. There is a risk of a huge rise in malnutrition in India; after a poor monsoon in 2009, it plans to import three million tonnes of rice (it is the world's second-largest consumer after China), and four million tonnes of pulses in 2010.

On the morning Ramesh decided against the aubergine, the issue of MON810 sweetcorn, also developed by Monsanto, came before the European Commission again. The EC's president Manuel Barroso is determined to push through approval for the cultivation of MON810 in the European Union as fast as possible.

India's delay does not mean that it has chosen another path: it is likely to become not only the world's leading consumer but also the leading creator and commercial developer of GM plants. The Bt aubergine (so called because it incorporates a gene from the bacterium *Bacillus thuringiensis*) is the first GM vegetable designed for human consumption but will not be the last.

SAM PANTHAKY/AFP/GETTY IMAGES



A protestor awaits the arrival of environment and forests minister Jairam Ramesh at the consultation on the Bt brinjal aubergine in January

A NEW PARTNERSHIP

Following the success of its Bt cotton, now cultivated throughout India thanks to intensive marketing, Mahyco is preparing to introduce a range of GM agricultural products with support from the US government, provided through the US Agency for International Development. USAID promotes the cultivation of GM foods in developing countries, and entrusts this task to American agrifood multinationals and their subsidiaries. The Bt aubergine was developed under USAID's Agricultural Biotechnology Support Project (ABSP) (1); bananas, peanuts, papayas, tomatoes and rice are to follow.

USAID's strategy never varies: its ideal model is a public-private partnership combining research carried out at universities with rapid commercialisation. For the Bt aubergine, Mahyco teamed up with Tamil Nadu Agricultural University (a participant in the ABSP project) in India and Cornell University in the US (2). Participants in the ABSP include US and foreign universities, genetic engineering companies such as Monsanto and Mahyco, Nunhems Seeds (Bayer) and the Indian agrifood consulting firm Sathguru Management Consultants, which on its own site lists as "business partners" the US Department of Agriculture (USDA), USAID, Cornell University and the ABSP. The line between private and public interests is becoming blurred.

This has not happened by chance. While all eyes were focused on the nuclear agreement that the US and India have been negotiating since 2005, the parties had actually concluded another agreement, whose consequences are potentially just as important: the India-US Knowledge Initiative on Agricultural Education, Teaching, Research, Service, and Commercial Linkages (AKI). In a joint declaration signed by Prime Minister Manmohan Singh and President George W Bush on 18 July 2005, India and the US recalled "the active participation of [American universities] in helping lay the foundation of an agricultural education and research system in India" and "resolve[ed] to initiate a new … partnership" (3). The US's private-sector representatives on the AKI's board are the agrifood giants Monsanto and Archer Daniels Midland and the leading mass retailer Walmart.

The AKI fully satisfies the ambitions of India, which dreams both of feeding its growing population and of transforming itself into a knowledge society, putting Indian companies and the Indian economy into the first division. India is applying to its agricultural sector the same model for the outsourcing of business services (accounting, after-sales service with call centres, computing) that has driven its economic growth. India, though a member of the World Trade Organisation, still refuses to liberalise its agricultural sector fully, within the framework of the Doha round. But this is only an apparent contradiction. It is trying to protect the interests of its major conglomerates.

The agricultural problem has a unique place in Indian consciousness: food shortages put the newly independent India in the humiliating position of having to beg for aid from the US, which was overflowing with cereals (4). To hold back the tide of communism in independent former colonies, Hubert Humphrey, senator for Minnesota, proposed using America's agricultural sector as a tool of foreign economic policy and replacing traditional foods in those countries with a diet based on American products. He explained that it was a matter of educating the palates of children, especially through school lunches. Already, Japanese children had come to like the taste of bread while Yugoslav children had come to prefer the taste of American powdered milk to that of fresh milk. In India, children "would put [their] finger into the butter oil and taste it, and say with a very loving sound in [their] voice, 'America'" (5).

INDIA'S HEAVY PRICE

Soon after, the Green Revolution was launched with US support via the Ford and Rockefeller foundations. It saved India from famine but without managing to fully liberalise its agricultural market even when the country was opened up to foreign investment in 1991 or after the strategic rapprochement with the US under the Bush administration. The Green Revolution boosted cereal production from 70m tonnes in 1954 to 202m tonnes today, but India paid a heavy price: underground aquifers have dried up, water tables have fallen, farmland has become salinated, farmers have fallen into debt (more than 100,000 have committed suicide in a decade), and there are high cancer rates among farm workers. There have also been serious political and social repercussions. Many believe the Green Revolution was a major factor in the separatist revolt that erupted in the Punjab in the 1980s and led to the assassination of prime minister Indira Gandhi by her Sikh bodyguards in 1984.

Now 40% of the world's malnourished children live in India. Agricultural output is threatened by the impact of climate change on the monsoon, by an alarming shortage of water and by urban and industrial expansion encroaching on farmland. Without a considerable increase in its rate of agricultural growth (currently 2%, when the world average is set to reach 7% this year), India will not be able to feed its people and will not attain its economic growth target (8-9%). The AKI is intended to bring in a huge volume of investment as well as technology transfers and industrial-agricultural infrastructure. These gifts will cost the US little as the right to turn the knowledge into commercial products will remain the property of the multinationals.

"The US wants to increase [its] agricultural trade with India. There are mutual gains to be made in this field, but they are tied in part at least to India's agricultural sector transformation," said the US ambassador, David C Mulford (6). The transformation will begin in Indian and US universities. Indian scholars will be invited to study at institutions in the US after which they will move back and forth between academia and the agrifood giants, as has been common practice in the US for decades. After a time earning high salaries in the private sector, they may go on to become senior officials at India's agriculture ministry, responsible for regulating the GM products created by their former employers.

The career of Michael Taylor is a perfect illustration of this revolving door. After a spell at the US Food and Drug Administration, he served as a vice president at Monsanto, rejoining the FDA just after it approved the commercial use of recombinant bovine growth hormone (rBgh), manufactured by the multinational. Later, he taught at George Washington University, educating corporate executives from overseas, including Indian nationals, who later returned to their own countries. The creation of an organic vegetable patch in the White House grounds has had a significant, though as yet only symbolic, impact; the relationship between the FDA and the agrifood sector remains strong. And now Taylor has moved back to the FDA as an adviser to the new administration (7).

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The US strategy in India is to reduce the role of the public sector. India has unique advantages: poor farmers who are unlikely to ask difficult questions about GM, a vast area of farmland, a huge potential market and senior government officials whose enthusiasm for technological solutions is matched by their panic at the prospect of famine and dependence on outside aid. But US multinationals are not alone in fantasising about the opportunities in the privatisation of Indian agriculture. The European groups Syngenta, Bayer CropScience, Carrefour and Tesco and the Indian groups Tata, Bharti, Reliance and Mahindra are also in the game.

ADVANCES IN NUTRITION

The Tata group has established a trust on the US model in partnership with Cornell University, where its chairman Ratan Tata studied. In 2008, the Trust gave Cornell an endowment of $50m: half to be used to establish the Tata-Cornell initiative in agriculture and nutrition, with the mission of contributing to advances in nutrition and agriculture for India, the other half to fund scholarships to attract research students from India. Rallis, India's leading agrochemical company and a member of the Tata group, "has decided to foray into the seeds business in a big way" and into GM cotton (8).

According to the US, India can become self-sufficient in food production by the use of biotechnology in food crops (9). Is it as simple as that? The report of the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), published in April 2008, claims at least 400 scientific experts doubt it. The report is alarmed by the current system of agricultural production: "For many years, agricultural science focused on delivering component technologies to increase farm-level productivity where the market and institutional arrangements put in place by the state were the primary drivers of the adoption of new technologies. The general model has been to continuously innovate, reduce farm gate prices and externalise costs" (10). Impressive production results have been achieved at the expense of social equity, of the ability of local communities to master knowledge and of the environment, which has reached the limits of its absorption. The report has serious reservations over purely technological solutions and questions the usefulness of GM crops, emphasising their potential dangers. It is not surprising that the US disagrees with its conclusions.

The present global crisis does not make India less receptive to US persuasion. At the November 2009 summit of the World Economic Forum, held in India, it was clear that its leaders are more enthusiastic than ever about public-private partnerships. They called on foreign investors to join in, promising further liberalisation of India's economy.

Barack Obama's promise of real change in US foreign policy should have included agriculture but Secretary of State Hillary Clinton endorses the old line, and the appointment of Rajiv Shah (formerly of USDA and the Gates Foundation) as head of USAID will lead to even greater emphasis on genetic engineering in the "development" of poorer countries.

Yet agrifood giants, led by Monsanto, had not expected the opposition to the GM aubergine. Before deciding to impose the moratorium, Jairam Ramesh held many public meetings. He listened to all the arguments, including those of the small farmers (who are most at risk), and the debates were widely broadcast by the media. On 9 February, he spoke of the need for transparency, careful thought and prudence in making choices: "When there is no clear consensus within the scientific community itself, when there is so much opposition from the state governments, when responsible civil society organisations… have raised many serious questions that have not been answered satisfactorily, when the public sentiment is negative… and when there is no over-riding urgency to introduce [the Bt *brinjal*] here, then it is my duty to adopt a cautious, precautionary principle-based approach" (11).

TRANSLATED BY CHARLES GOULDEN

(1) See www.absp2.cornell.edu
(2) B V Mahalakshmi, "Cornell Researchers get Nod for Bt Brinjal Trials", *Financial Express*, 25 September 2007; www.financialexpress.com/news
(3) See http://dare.nic.in/usa.htm (Indian Ministry of Agriculture) and http://www.fas.usda.gov/ICD/india_knowl_init/factsheet.asp (US Department of Agriculture).
(4) In 1960, 92% of US economic aid to India was food aid.
(5) Hubert H Humphrey, "Food and Fiber as a Force for Freedom", report to the US Senate Committee on Agriculture and Forestry, 21 April 1958; http://bulk.resource.org/gao.gov/83-480/000042EC.pdf
(6) Speech at the 2nd annual conference on "Indo-US Economic Cooperation: Developing a Strategy for Closer Partnership", New Delhi, 6 March 2007.
(7) Jeffrey Smith, "Obama's Team Includes Dangerous Biotech 'Yes Men'", *Huffington Post*, 30 November 2008; www.huffingtonpost.com
(8) Yassir A Pitawala, "Rallis Plans Foray into Seeds Business", *Financial Chronicle*, Bombay, 16 March 2009.
(9) Sourav Mishra and Abhishek Shankar, "GM Crops can Meet India's Food, Biofuel Needs", *Reuters India*, 25 February 2008; http://in.reuters.com/article/businessNews
(10) Executive Summary of the Synthesis Report of IAASTD, 15 April 2008; www.agassessment.org/docs/SR_Exec_Sum_280508_English.htm
(11) Statement by Jairam Ramesh, minister for environment and forests regarding his decision on the Bt *brinjal*, 9 February 2010; http://pib.nic.in/release/release.asp?relid=57727

INVESTMENT IN EXPORT-ONLY FOOD AND BIOFUELS

Great African land grab

African politicians and local traditional leaders are signing away their peoples' rights to land to outside nations and corporations. As a result, family farming land is being exploited to produce food and profit for elsewhere

BY JOAN BAXTER

Potential investors in Sierra Leone gathered in the Queen Elizabeth II Conference Centre in London in November for an event organised by the African Governance Initiative, a charity sponsored by Tony Blair, Britain's former prime minister. He was there, encouraging the participants to invest agriculturally in Sierra Leone, which "has millions of hectares of arable land" (1). He seems not to have noticed that a few million Sierra Leoneans live and depend on much of that land.

A new scramble for Africa is on, and those wanting to take control are foreign banks, investment funds, corporations, countries and billionaires who want to set up gargantuan industrial farms to produce crops for food and agrofuel – for export, and for profit. Foreign direct investment in agriculture is the boardroom euphemism for the new land grab, and those promoting the grab spin it as a win-win situation.

Among these promoters are the World Bank's International Finance Corporation (IFC) (2) and the International Fund for Agricultural Development (IFAD), institutions which fall under the UN. Even the UN Food and Agriculture Organisation (FAO) now backs this approach, despite an initial blip when its director, Jacques Diouf, let slip that he saw the land grab as a form of neo-colonialism.

There are many examples of the horse-trading that operates in Africa. China is said to have leased 2.8m hectares in the Democratic Republic of Congo (DRC) for the world's largest oil palm plantation. Philippe Heilberg, CEO of the New York-based investment fund Jarch Capital and former commodities trader for the giant American Insurance Group, has leased between 400,000 and 1m hectares in southern Sudan from the warlord Paulino Matip (3). The DRC's president has offered South African commercial farmers 10m hectares in his small country with its precious, threatened rainforest.

Last November 50 large Saudi companies, led by an Ethiopian-born Saudi, Mohammed Ali al-Amoudi, held a forum in Ethiopia looking at land in east Africa for export agriculture (4). The Indian Sai Ramakrishna Karuturi, striving to outdo agribusiness behemoth Cargill, claims to be the world's largest land bank owner, with much of its holdings in Ethiopia (5). And just as Ethiopia is begging the world for food aid for 6.2 million people whose crops have failed because of drought, the country has already leased over 600,000 hectares of its land, and is offering three million more to investors for large-scale plantation and for-export agriculture.

ENABLING CLIMATE FOR BUSINESS

Acquiescent African leaders are falling over each other to woo disaster capitalists. Many are starry-eyed with the idea that by transforming their countries into giant agribusinesses they will solve food and unemployment problems. The IFC supports them in this endeavour. To help them create an enabling climate for business it has set up One Stop Shops across Africa, investment promotion agencies that are there to protect investors from taxes and from legislation that might protect workers, human rights, the environment and African sovereignty.

The investors and African governments often claim that the land being acquired is unused, under-used or just fallow. Such justifications are oblivious to the importance of fallow systems that replenish soils and protect landscapes and waterways. These unused woodlands and bush provide local people with a wealth of resources (food, fibre, spices, oils, condiments and medicinal products).

The International Food Policy Research Institute estimates that in the past two years at least 20m hectares of land, mostly in Africa, have been purchased or leased, for between 30 and 100 years, in 30 countries. The international NGO Grain tries to catalogue the deals, but notes they are often secret and happen so fast that it is difficult to monitor them.

Many are hammered out behind closed doors at the highest levels, often with the connivance of traditional rulers and chiefs. These figures, who are supposed to be custodians of the land, can often be persuaded to sign off on a deal in exchange for a small gift or a low-paying job as a labourer on the investors' plantation.

Some grabs, particularly by land-strapped or cash-rich Gulf states and Asian countries, are intended as offshore farms to ensure food security. Others are for agrofuel production, from food crops (sugarcane, palm oil, cassava and maize) or non-food crops such as jatropha, a plant called green gold because of the diesel-like oil it produces. And all this is happening in African countries struggling for food security in the face of dwindling water supplies and land degradation caused by climate change.

The land grab may help drive climate change itself. Smallholder systems that produce most of the continent's food are extremely bio-diverse, usually with tree crops that can help protect against climate change. But these are under threat from the giant industrial agribusinesses and the monocultures they promote.

LIKE GOLD, ONLY BETTER

The land rush is also being impelled by the global food crisis. However, the world's one billion hungry are not victims of a shortage of food but of affordable food, since prices spiralled in 2008. This spiral was driven partly by wild speculation caused by European and North American interest in the use of agrofuels in vehicles. The mania for agrofuels, perhaps not a realistic way to combat climate change, is also behind some of the mania for African land on which to produce the agrofuels. The global financial crisis is also behind the mania for farmland, as the financiers, investment houses and banks that brought about the crash of September 2008 now seek secure places to get great returns on their capital. Land, said an analyst, is an asset "like gold, only better" (6).

The UN special rapporteur on the Right to Food, Olivier De Schutter, has expressed his regret that African presidents and governments are signing deals without bringing them before parliament. He notes that they are competing with each other rather than working together to establish regional criteria that would require investors to commit to developing local infrastructure and to leave at least half of any food produced in that country. "When food becomes scarce, the investor needs a weak state that does not force him to abide by any rules," says Heilberg (7).

African civil society groups continue to try to make their voices heard. Copagen, a coalition of African coalitions of scientists and farmer associations working to defend seed and food sovereignty, now views land grabbing as its priority issue. On 17 October 2009, 27 civil society groups in Africa signed a letter calling on African leaders to stop supporting land grabs and other elements of industrial farming they view as a threat to Africa's family farmers. So far, there is no sign that the leaders have heeded any of these calls.

A number of agricultural land-grabbing operations are still only at the project phase. But projects are meant to be completed. And unchecked land grabbing carries with it the seeds of conflict, environmental disaster, political and social chaos, and hunger on an unprecedented scale. At the World Summit on Food Security in Rome last November, the FAO issued a paper stating that, together with Unctad (the United Nations Conference on Trade and Development), IFAD and the World Bank, they are working on a "voluntary code of conduct" for these "international investment agreements". They suggest that international guidelines might promote responsible agriculture investments to the benefit of all.

But the last things Africa needs are voluntary codes and guidelines that might promote corporate social responsibility. Solutions do exist. There are microcredits for local processing and value adding; construction of roads to allow smallholder family farmers to get their produce to markets; training to rejuvenate their agro-biodiverse farming systems; an end to dumped produce that undermines their work; food storage and processing that would assure them local markets for their produce. Such genuine investment in Africa's farmers and its own food chain would lead to genuine sustainable development.

ORIGINAL TEXT IN ENGLISH

(1) "Sierra Leone open for business", *Awoko Newspaper*, 23 November 2009.
(2) In 2009 IFC reported that it invested a record $2bn across the agribusiness supply chain, up 42% over the previous year. IFC. July 2009; HYPERLINK "http://www.ifc.org/ifcext/agribusiness.nsf/Content/Features_AgriInve" www.ifc.org/ifcext/agribusiness.nsf/Content/Features_AgriInvestments+Hit+record
(3) Daniel Shepard and Anuradha Mittal, *The Great Land Grab: Rush for world's farmland threatens food security for the poor*, The Oakland Institute, Oakland Ca, 2009.
(4) Wudineh Zenebe, "Al-Amoudi's efforts to initiate Saudi agro investment", *Addis Fortune*, 29 November 2009.
(5) Asha Rai, "The constant gardener", *The Times of India*, 26 September 2009.
(6) Chris Mayer, "This asset is like gold, only better", *DailyWealth*, 4 October 2009; http://www.stockhouse.com/Columnists/2009/Oct/4/This-asset-is-like-gold,-only-better
(7) Knaup, Horand and von Mittselstaedt, "Foreign investors snap up African farmland", *Der Spiegel*, 31 July 2009.

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