

Seedling

Biodiversity, Rights and Livelihood



July 2008





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GRAIN is an international non-profit organisation which promotes the sustainable management and use of agricultural biodiversity based on people's control over genetic resources and local knowledge. To find out more about GRAIN, visit www.grain.org.

Seedling

Seedling is GRAIN's quarterly magazine, published in January, April, July and October. It provides background articles, news, interviews and much more on the issues GRAIN is working on. *Seedling* is available free both in paper format and on GRAIN's *Seedling* website (www.grain.org/seedling). To receive *Seedling* in paper format or to inform us of a change of address, please contact GRAIN at the address or email above.

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Printed on 80% recycled paper
Deposito Legal No. B-25.166.92, Spain
ISSN: 1002-5154

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Photo by GRAIN
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Photo by GRAIN

In this issue...

One of the few benefits of the current food crisis is that it is focusing attention on the way food reaches some of the most disadvantaged people in the world. As we show in our editorial, much of the blame for the remarkable increase in food prices over the last year can be attributed to speculators fleeing the collapse in the US mortgage market. By February and March this year big funds were investing about US\$1 billion a day in commodities markets. Just to be clear, these funds were not buying or selling physical commodities but betting on future price movements in these markets.

All this activity has driven up prices, causing a “disconnect” or a “divorce” between the value of a futures contract and the actual supply of the real commodity. Although world stocks of some commodities, such as wheat, are low, the supplies of other commodities, such as cotton, are at an all-time high. Yet the price of almost all traded commodities has surged. It is a bubble that is bound to burst, but meanwhile it is leading to a 40 per cent increase in the food bills that developing countries face this year. For the poor in countries such as Haiti, Eritrea and Burundi, which are heavily dependent on food imports, this is having a catastrophic impact. But for multinational food traders, such as Cargill and Archer Daniel Midland, it is a chance to clock up extraordinary profits. It is a graphic illustration of the huge – and increasing – disparity of wealth in the modern world.

Such moments of crisis offer a chance for change. It is for this reason that a fierce battle is currently being fought. On the one hand, multinational biotechnology corporations, with the support of the US government, are taking advantage of the crisis to launch a huge offensive to promote hybrids and genetically modified organisms (GMOs). Providing no evidence to support their case, they claim that only farming carried out with their sophisticated products can provide the food needed to feed the world. As our article on hybrid rice demonstrates, the corporations are even using the crisis to relaunch products that are widely seen not to have lived up to the expectations created around them when they were first put on the market. On the other hand, organisations of small-scale farmers, fisherfolk and indigenous people are saying that the current crisis has shown how dangerous it is for

countries to allow multinational corporations and speculators to take control of their food supply. The way forward, they say, is sustainable food systems, based on indigenous knowledge and controlled by local farmers.

However that battle is resolved, Professor Tim Lang, a leading food specialist in the UK, believes that far-reaching change is coming to the way we produce and market food because of new environmental and energy constraints, the “new fundamentals”, as he calls them. In his interview with us, he says that “it looks likely that we might be sleep-walking into a world in which blood flows, metaphorically and at times actually, due to mistakes over food policy.” He wishes to avoid this outcome, if at all possible, but he has no doubt on which side he stands, if the crunch comes: “Ultimately, we have to side with food democracy over food control.”

While this tussle is being fought in the full glare of the world’s media, other highly significant changes are attracting much less attention. One example is the way US and EU corporations are cleverly twisting food safety regulations to promote their products in foreign markets and to protect their domestic markets. As our ground-breaking article shows, corporations are having to develop new strategies now that the advance of free market capitalism means that they can no longer use tariffs and quotas to keep out competitors.

In this issue we also have two other stories that you are unlikely to encounter elsewhere. One concerns the arrival of the highly pathogenic H5N1 variety of avian flu into the West African country of Benin. Lessons should have been learnt from earlier outbreaks in other countries but sadly they were not. The other story is an account of the way farmers in Andhra Pradesh in southern India are building an ecological and sustainable model of farming that allows them to restore the fertility of their soils and to break free of the control of the middlemen who used to sell them on credit *Bt* cotton seeds, chemical fertilisers and pesticides. For a country where some 150,000 farmers have committed suicide over the last decade, this initiative lights a beacon of hope.

The editor



While there has been widespread reporting of the riots that have broken out around the world as a result of the global food crisis, little attention has been paid to the way forward. The solution is a radical shift in power away from the international financial institutions and global development agencies, so that small-scale farmers, still responsible for most food consumed throughout the world, set agricultural policy. Three interrelated issues need to be tackled: land, markets and farming itself.

Getting out of the food crisis

GRAIN



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In March 2008, the United Nations Food and Agriculture Organisation (FAO) and other international agencies began talking openly about a global food crisis. As with many such crises, they were a little late. Food prices – especially for cereals, but also for dairy and meat – had been rising throughout 2007, markedly out of step with people’s incomes. People had coped by changing their eating habits, which included cutting back on meals, and had taken to the streets to demand government action. By early 2008 grain prices were surging and riots had broken out in nearly 40 countries, instilling fear among the world’s political elites.

A few months have now passed since the global food crisis was put on the world agenda. The causes of the problem have been identified and more or less understood.¹ Yet the food crisis is still unfolding. Prices are still very high, a whole class of “new poor” has emerged, governments are scrambling to find or manage grain supplies, and the eruption

of another major setback could provoke a really dramatic world crisis.

Everyone agrees that something needs to be done but there is vast disagreement as to what this implies. The policy priests at the World Bank, the World Trade Organisation and the International Monetary Fund, the corporate boards of directors and, indeed, most governments and their teams of advisers want us to continue on the course of industrialising agriculture and liberalising trade and investment, even though this recipe just promises more of the same in the future. Social movements and others who have been fighting the injustices of today’s capitalist model see things differently. For them, it is now time to break with the past, to mobilise around a new, creative vision that will bring not only short-term remedies, but also the kind of profound change that will actually get us out of this food crisis – and, indeed, the unending series of crises (climate change, environmental destruction, poverty, conflicts over land and water,

¹ See, for example, GRAIN’s contribution, “Making a killing from hunger”, *Against the grain*, April 2008, www.grain.org/articles/?id=39



migration, and so on) that neoliberal globalisation generates.

Radical transformation required

Many people are becoming aware that no solution is possible unless we open the doors to a real shift in power. The policymakers, scientists and investors who have led us into the current mess cannot be relied upon to get us out of it. They have created a profound double vacuum: a policy void and a market sham. The policy void is palpable. Instead of generating bright ideas to build a more sustainable and equitable food system, those in power seem capable of only knee-jerk responses that amount to more of the same: more trade liberalisation, more fertilisers, more GMOs and more debt to make it all possible. The very notion of, say, rewriting the rules of the finance system or clamping down on speculators are taboo topics. Even the food self-sufficiency policies being adopted in some developing countries, in themselves a very good idea, often repeat failed Green Revolution strategies.

More disturbing, the political and business elites don't want to face the fact that, whether you are a working-class homeowner in the US or a mother queuing for rice in the Philippines, confidence in the market has been shattered. Farmers in Thailand are stupefied. Last year they were getting Bht10,000 (US\$308) per tonne of rice delivered to the mills. Today they're paid Bht9,600 (US\$296), even though the price of rice to the consumers has tripled!² The US dollar (still a global currency for food trade) has plunged, while the price of oil (on which industrial food production depends) has gone through the roof. As a consequence, governments have started taking food out of the market, as they simply don't trust the way food is being valued any more. The government of Malaysia, for instance, has announced that it will bilaterally swap palm oil for rice with any nation willing to make the deal, while several other countries have banned the export of food.³

Against this backdrop of bankrupt ideas and systems, there is no other credible way forward than to rebuild from the bottom up. That means inverting the power structure: small farmers, still responsible for most food produced, should be the ones setting agricultural policy, rather than the WTO, the IMF, the World Bank or governments. Peasant organisations and their allies have clear, viable ideas about how to organise production and services and how to run markets and even regional and international trade. Ditto for labour unions and the urban poor, who have an important role



Policeman patrols a street after food riots, Cote d'Ivoire

to play in defining food policy. Many groups, such as the National Farmers' Union in Canada, the Confédération Paysanne in France, ROPPA in West Africa, Monlar in Sri Lanka and the MST in Brazil, have issued strong calls to revamp agricultural policy and markets. International organisations, such as Via Campesina and the International Union of Food Workers, are also ready to play a role.

Points for urgent action

Three interrelated issues need to be tackled to get us out of the food crisis: **land, markets and farming** itself.

Access to **land** by peasant farmers is clearly central. With the surge in commodity prices and the new market for agrofuels, land speculation and land grabbing are occurring on a horrific scale. In many parts of the world, governments and corporations are installing plantation agriculture, displacing peasants and local food production in the process. Indeed, the model of export-led agriculture and import dependency at the root of today's crisis is going into overdrive, destroying the very systems of food production that we need to get out of our present dilemma.

The situation is becoming even more critical as land grabbing is going global and becoming official. According to some sources, Japan has acquired 12 million hectares of land in South-east Asia, China and Latin America to produce food for export to Japan, which would mean that Japan's overseas croplands are now three times the size of its mainland!⁴ The Libyan government has leased 200,000 hectares of cropland in Ukraine to meet

² "Chiang Rai farmers protest", *The Nation*, Bangkok, 15 May 2008, <http://tinyurl.com/5lmfh4>

³ Leo Lewis, "Food crisis forces Malaysia into barter: palm oil for rice", *The Times*, London, 14 May 2008, <http://tinyurl.com/5hfsro>
Already, about one-third of the world's tradable rice has been taken out of the market. See "Nigeria: Food crisis, not just rice", *Vanguard*, Lagos, 14 May 2008, <http://tinyurl.com/3hpzrq>

⁴ "Food crisis looming over Korea", *Chosun Ilbo*, Seoul, 4 March 2008, <http://tinyurl.com/486q53>

Adapting to the rice crisis...

The rising price of rice on the world market is forcing poor families all over the world to change their diets. "My children are used to eating rice all year round, but that's very difficult now", said Antoine Beli, a cocoa farmer near the port of San Pedro in the West African country of **Côte d'Ivoire**.¹ Cocoa prices are good this year but the price of rice has risen far more steeply. Antoine and his wife have gone back to a more traditional diet, including foutou (a mixture of crushed manioc and boiled plantain) and stewed agouti. "I can't ask my children to change just like that, but if they start eating foutou, yam and plantain once a week, they will start to like it", he said.

Côte d'Ivoire was a net exporter of rice in the 1970s, but trade liberalisation changed that. Today this country of 18 million people imports more than half the rice it consumes. As well as changing their diet, some farmers are going back to planting rice. In the village of Gogokro, not from the official capital, Yamoussouko, women can be seen bent double, rhythmically plucking rice seeds from khaki sacks and plunging them into muddy water. "We are not stopping cultivating cocoa", said elderly farmer Augustin Kouakou. "We will do both, because that way it will cost less to eat."

Meanwhile in **Singapore**,² where the staple food has long been rice, people are beginning to eat more potatoes. This is scarcely surprising because potato prices have remained stable while rice prices have shot up 30-40 per cent since the beginning of 2008. Even so, there is a lot of ground to be made up. In 2007 rice consumption was almost ten times that of potatoes. Some consumers, like Dinah Villamin, are reluctant to change. "Rice is an important part of the Asian diet and I must have it at every meal", she commented.

Why hasn't the potato been affected by the price frenzy? One important factor is that, unlike rice, potatoes rot quickly and are susceptible to disease. As a result, only 5 per cent of world production is traded internationally, so potato prices have not been affected by speculation.

- 1 Account taken from Ange Aboa, "Food prices change life for Ivorian cocoa farmers", Reuters, 7 May 2008.
- 2 Based on Huang Lijie, "Potato as a substitute for rice", *The Strait Times*, 11 May 2008.



4

5 "Food crisis turns banks into field hunters", *Sabah*, Turkey, 15 May 2008, <http://tinyurl.com/5y28co>
Simeon Kerr and Farhan Bokhari, "UAE investors buy Pakistan farmland", *Financial Times*, London, 11 May 2008, <http://tinyurl.com/4kmurd>

6 Jamil Anderlini, "China eyes overseas land in food push", *Financial Times*, 8 May 2008.

7 Alison Fitzgerald, Jason Gale and Helen Murphy, "World Bank 'destroyed basic grains' in Honduras", *Bloomberg*, 14 May 2008, <http://tinyurl.com/43m8d2>

8 GRAIN, "Making a killing from hunger", *Against the grain*, April 2008, www.grain.org/articles/?id=39

9 See, for example, Geoffrey Lean, "Multinationals make billions in profit out of growing global food crisis", *Independent on Sunday*, London, 4 May.

its own food import needs, and the United Arab Emirates is buying large landholdings in Pakistan with Islamabad's support.⁵ Last year the Philippine government signed a series of deals with Beijing to allow Chinese corporations to lease land for rice and maize production for export to China, triggering a huge national outcry, from Filipino peasant organisations right up to the Catholic Church. Chinese corporations have also been acquiring rights to productive farmland across Africa and in other parts of the world. The Beijing government is about to make the buying of land overseas to produce food for export to China a central and official government policy.⁶

Land has, of course, always been a central demand from social movements, particularly for peasants, fisherfolk, rural workers and indigenous peoples. Agrarian reform tops the list of measures urgently needed to put an end to the growing plague of rural poverty and to empower people to feed themselves and their communities, reversing the

explosion of urban slums that is so central to this food crisis. It is high time that the proposals from the peasant organisations are taken seriously and implemented.

Another major issue in dire need of attention is how to deal with the **market**. For decades, neo-liberal trade liberalisation and structural adjustment policies have been imposed on poor countries by the World Bank and the IMF. These policy prescriptions were reinforced with the establishment of the WTO in the mid-1990s and, more recently, through a barrage of bilateral free trade and investment agreements. Together with a series of other measures, they have led to the ruthless dismantling of tariffs and other tools that developing countries had created to protect local agricultural production. These countries have been forced to open their markets to global agribusiness and subsidised food exported from rich countries. In that process, fertile lands have been diverted away from serving local food markets to producing

global commodities or off-season and high-value crops for western supermarkets, turning many poor countries into net importers of food.

One of the more obscene aspects of the food crisis is the spectacular profits that the market has allowed big agribusiness and speculators to make from it. Contrary to the impression conveyed by some media, few farmers are seeing any benefits from the price hikes. We have already quoted the example of Thai farmers now getting less for their rice while consumers pay three times more. Farmers in Honduras, once the bread basket of Central America, can't afford to buy seed or fertiliser any more, as prices for these inputs have soared.⁷ Corporations, on the other hand, are making record profits at every link in the food chain – from fertilisers and seeds to transport and trading. Earlier this year, GRAIN documented the 2007 profit increases of the major food and fertiliser corporations.⁸ In the first quarter of 2008, while many hungry people were further cutting back on the amount of food they eat, the major food and fertiliser companies were reporting even more spectacular profit increases.⁹

At the same time, massive speculation is occurring. According to a leading commodities broker, the amount of speculative money in commodities futures has risen from US\$5 billion in 2000 to US\$175 billion in 2007.¹⁰ Half the wheat now traded on the Chicago commodities exchange is controlled by investment funds.¹¹ At the Agricultural Futures Exchange of Thailand, speculation on rice has, within one year, tripled the average number of contracts traded daily on the exchange, with hedge funds and other speculators now representing up to half of the daily contracts being traded.¹² All of this speculative activity from pension funds, hedge funds and the like, plus the shifting of commodity trade from formal exchange markets to direct over-the-counter deals, is sending prices soaring. Such a bubble is inherently unstable and bound to burst, with unpredictable results. With few exceptions, governments and international agencies are hardly talking about this part of the food crisis equation, let alone doing anything effective to deal with it.

In contrast, trade unions and farmers' organisations have been vigorously calling for proper regulation and controls, particularly since producers and consumers are the groups most affected by it all. Calls by social movements for food sovereignty invariably include urgent proposals for priority to be given to local and regional markets and for measures to be taken to reduce the dominance of international markets and the corporations controlling them. Other proposed measures



Photo: G Tadamki

Food market, Deido, Douala, Cameroon

include suspending, if not dismantling, the WTO Agreement on Agriculture, taxing agribusiness corporations to improve the distribution of resources and establishing national strategic reserves. This would allow governments to manage supply more efficiently, to encourage competition, to inhibit the formation of monopolies, to carry out formal investigations into speculation on the commodity markets and then to take measures to control it, and so on.¹³ There are many options, if we truly want to change things.

Then there is the issue of **farming** itself. The food crisis has galvanised the voices of the old Green Revolution into calling for more of the same top-down packages of seeds, fertiliser and agrochemicals. Since the main reason why the food crisis is hurting so many people is their inability to pay today's high prices, simply boosting production is not necessarily going to resolve anything, especially if this means driving up the costs of production. The high-yielding varieties of staple foods that the Consultative Group on International Agricultural

10 Figures compiled by commodities brokerage Gresham Investment Management, as reported in *The Globe and Mail*, Toronto, 25 April 2008. This is money that big funds spend, not on buying or selling the physical commodity, but on betting on price movements. Even so, they help to determine prices, so they affect the prices paid by those purchasing the physical commodity.

11 Paul Waldie, "Why grocery bills are set to soar," *The Globe and Mail*, 24 April 2008.

12 "Rice contract volume rises with speculators moving in", *Bangkok Post*, 7 May 2008. <http://tinyurl.com/4wusmw>

13 See, among others, IUF, "Fuelling hunger", Geneva, 28 April 2008, <http://tinyurl.com/3pfvwb> or National Family Farm Coalition, "Family farmers respond to the food crisis", *The Nation*, New York, 28 April 2008, <http://tinyurl.com/3wx566>





Anti-GM protest, Delhi, India

Photo: GRAIN

more productive than industrial farming, and that they are more sustainable.¹⁴ If they are properly supported, such local farming systems, based on indigenous knowledge, focused on maintaining healthy, fertile soil, and organised around a broad use of locally available biodiversity, show us ways out of the food crisis. To build on these, one has to stop relying on the experts of the World Bank and the CGIAR and start talking instead to local communities. One needs not only to build new strategies and to collaborate with different players, but also to put an end to the criminalisation of diversity so that farmers can freely access, develop and exchange seeds and experiences. It means, too, that governments stop promoting agribusiness and export markets, and start protecting and celebrating the skills, knowledge and capacities of their own people.

Time to mobilise

It is clear that those of us outside governments and the corporate sector need to come together as never before to build new solidarities and fronts of action both to address the immediate problems of the food crisis and to build long-term solutions. If we don't work together to facilitate a power shift that puts first the needs of the rural and urban poor, we will definitely get more "business as usual". Reorienting our agricultures and food systems to make them more just, more ecological and truly effective in feeding people is no easy task, but surely we all have a part to play. Rather than wait or look for ready-made solutions, we need to create those better systems now, collectively.

Research (CGIAR), the FAO and most agricultural ministries are so enthusiastic about require more petroleum-based fertilisers and other chemicals, all of which have undergone huge price increases that effectively put them out of the reach of many farmers. In any case, chemical fertilisers are one of the main sources of the greenhouse gases produced by agriculture. Throwing even more of them at already exhausted soils, as many Green Revolutionaries are now advocating, would merely push the world deeper into climate chaos and further destroy the life of the soils.

Here again, there is a vast array of solid proposals and experiences for moving towards farming methods that are productive, non-petroleum based, and under the control of small farmers. Scientific studies have shown that these methods can be



Photo: bengarland

Newly built organic compost beds on a farm in Maquipucuna Reserve, Ecuador

¹⁴ See, for example: www.farmingsolutions.org/ <http://www.grain.org/gd/> <http://tinyurl.com/46h5lv>



Despite the fanfare about soaring yields, hybrid rice has not been a successful crop. Three decades of subsidies and research have failed to bring it into mass production, except in China. But now, with the world facing a serious rice crisis, hybrid rice is back on the agenda. It is being strongly pushed as the only way of boosting rice production. The consequences of a large-scale shift from conventional rice to corporate-friendly hybrids would be devastating not only for small farmers but also for future world rice production.

The food crisis and the hybrid rice surge

GRAIN

Hybrid rice has not been a success in the Philippines. The few studies of it have painted a bleak picture.¹ Official statistics from 2003 for one town in Isabela Province in the north-west of the country show that for every hectare of hybrid rice that yielded above the national average for conventional inbred varieties, currently 4.2 million tonnes, seven hectares of the same variety yielded well below it. More recently, in 2007, the World Bank concluded that the Philippines' hybrid rice programmes had not produced "much net social benefit", noting a farmer drop-out rate of 50–99 per cent.² The Bank said that the conventional varieties were more "socially profitable" than the hybrids.

One might expect corporations, faced with such setbacks, to have quietly abandoned hybrid rice. But it has become clear that, far from losing interest in its development, they have been quietly moving forward. The explanation for this is simple: the potential profits from the technology are huge. Hybrid rice seeds cannot be saved from the harvest, so farmers have to buy new seed every

year. And hybrid rice seeds are supplied almost exclusively by private seed companies. Indeed, the whole logic behind hybrids is to make profits for corporations. In this sense, hybrid rice is the key to building a corporate-controlled market for rice. This is something that corporations have achieved for crops like maize, but not yet for rice.

In May 2008 the Philippines Department of Agriculture signed an agreement with the International Rice Research Institute (IRRI) to boost rice productivity and achieve rice self-sufficiency in the country by 2010.³ A cornerstone of this programme is a US\$216-million project for the production and distribution of subsidised hybrid and certified seeds (which comes out of the budget of the government's larger FIELDS initiative⁴). The target is to triple the number of hectares under hybrid rice cultivation to 900,000 ha by the 2009–10 season.⁵

"We find this difficult to understand, given the poor performance of the hybrid rice programme and the many issues that have been raised against it over the years", said Centro Saka executive director

1 See GRAIN, "Fiasco in the field – an update on hybrid rice in Asia", Briefing, March 2005. grain.org/briefings/?id=190

2 See GRAIN, "Philippines: World Bank condemns hybrid rice", Hybrid Rice Blog, 28 August 2007. <http://www.grain.org/hybridrice/?lid=190>

3 International Rice Research Institute (IRRI), "Rice Solutions", 15 May 2008. <http://tinyurl.com/622pyg>

4 FIELDS stands for Fertiliser, Irrigation, Education and training for farmers and fisher folk, Loans, Dryers and other post-harvest facilities, and Seeds of the high-yielding, hybrid varieties.

5 See Inquirer.net, "Taking steps to ease RP, global food shortage", 28 April 2008. <http://tinyurl.com/5u796r>



Omi Royandoyan and National Rice Farmers' Council president Jimmy Tadeo.⁶ "The package is no different from those that have turned us into the world's biggest rice importer. By subsidising hybrid rice, we are subsidising big seed companies like SL-Agritech, Bayer and Monsanto, when we should be using that money to support our own rice farmers. FIELDS will actually make us dependent on private companies that are not accountable to the public", they added.⁷

Seductive promises

The main beneficiary of the various hybrid rice schemes that the Philippines has pursued over the past decade is SL Agritech,⁸ owned by Filipino-Chinese businessman Henry Lim. In 2006, SL Agritech supplied 65 per cent of the hybrid rice seeds purchased through the country's hybrid rice programme – earning the company over US\$4 million, according to some farmers' organisations. Lim argues that farmers can become millionaires by converting to hybrid rice. "Better earnings will allow rice farmers to expand their areas and also become millionaires", he told the *Manila Times*.⁹

With the current rice crisis, the stakes are now much higher for the government's rice policy. Choosing to press ahead with IRRI on a hybrid rice programme that has so far failed is a huge gamble. But it is one that other governments are also being persuaded to take. Indonesia, for instance, says it will spend US\$651 million this year to provide farmers with rice seeds, including high-yielding hybrid varieties, to boost production.¹⁰ Last year the government launched a programme to distribute 2,000 tonnes of free hybrid rice seed to farmers to be planted in more than 135,000 ha of prime rice land, even though local studies had not found that hybrid rice increased production. The pilot programme produced disastrous results for participating farmers.¹¹

This renewed drive for hybrid rice is being pushed by China, which is using the crop as a way to develop its own multinational seed corporations. Much of the hybrid rice seed sold in Asia is imported from Chinese companies. Indonesia, Bangladesh, Pakistan and Burma all import most of their hybrid rice seeds from China. Vietnam has invested heavily in developing a national hybrid rice seed industry, but it too currently imports most of its hybrid rice seeds from China.

China has some advantages: its seed companies have access to the varieties developed over decades by China's public breeding programmes; it has the right climatic conditions for these seeds; and it

has the cheap labour needed to make production economical. The giant multinational seed companies, such as Syngenta and Bayer, are thus ramping up their investments in the Chinese seed industry, even though, under Chinese law, they are restricted to a 49 per cent stake. In 2007 the world's fourth largest seed company, Vilmorin/Limagrain of France, took a 46.5 per cent stake in China's largest hybrid rice seed company, Yuan Longping Hi-tech Agriculture.¹²

But for China, the hybrid rice gambit is not just about seeds. The Chinese government is interested in expanding its control over rice production beyond its borders, both to secure national rice supplies and to feed the growing teams of Chinese labourers working for national companies on mining, oil and infrastructure projects around the world. Beijing is currently considering a proposal drafted by the Ministry of Agriculture to make supporting offshore land acquisition by Chinese agribusiness a central government policy.¹³

Burma is one country that has been a focus for the outsourcing of hybrid rice production by Chinese business, with the support of the military junta. In an August 2007 exposé of the hybrid rice programme in northern Burma, near the Chinese border, freelance journalist Clifford McCoy described how four consecutive years of poor harvests with Chinese hybrid rice varieties had driven many ethnic minority farmers into heavy debt or out of rice farming altogether. "After successive bad harvests and lacking the funds to service their debts, many farmers have been forced to sell their land, in many instances to the same Chinese business people who sold them the seeds, fertilisers and pesticides", says Clifford.¹⁴ "Farmers who cannot afford to pay off their debts incurred from the now higher costs of growing [hybrid] rice often end up selling their land to the same Chinese companies that sell the farming inputs. The companies then frequently turn the land into commercial rice farms."

Africa offensive

Similar scenarios are played out much further from China's borders. On 30 April 2008, France's TF1 television news reported on a Chinese effort to outsource rice production to Africa. The new report investigated a 10,000-ha project in Cameroon, managed by a Chinese company, which, through an agreement with the Cameroonian government, is producing rice for export to China.¹⁵ During the 2006 Africa–China Summit, China agreed to establish ten agricultural centres on the African continent, and delegations of Chinese rice experts

6 Inquirer.net, "Saying no to hybrid FIELDS of rice", 1 May 2008.
<http://tinyurl.com/5wsqrq>

7 Inquirer.net, "Hybrid crops a poor solution to rice crisis", 29 April 2008.
<http://tinyurl.com/55bl73>

8 GRAIN, "Philippines: Who's really benefiting from hybrid rice subsidies?", Hybrid Rice blog, 19 April 2007.

9 "Rice farmers can be millionaires, says executive", *Manila Times*, 14 April 2008.
<http://tinyurl.com/639tx5>

10 "Indonesia to triple rice seed budget to lift output", Reuters, 26 April 2008.
<http://tinyurl.com/6ndmh3>

11 GRAIN, "Indonesia: More hype than hope on hybrid rice", Hybrid Rice blog.
<http://www.grain.org/hybridrice/?lid=196>

12 GRAIN, "China: Vilmorin lays claim to top hybrid rice seed company", Hybrid Rice blog, 20 August 2008.
<http://www.grain.org/hybridrice/?lid=187>

13 "China eyes overseas land in food push", *Financial Times*, 8 May 2008.
<http://tinyurl.com/5ujnl6>

14 GRAIN, "Burma: seedlings of evil", Hybrid Rice blog, 27 August 2007.
<http://www.grain.org/hybridrice/?lid=189>

15 <http://tinyurl.com/5l7xsn>



and businessmen have already been in Guinea, Sierra Leone, and Mozambique to begin projects for the production of Chinese hybrid rice varieties.¹⁶

This year China's Chongqing Seed Corp announced that it had selected 300 ha of land for production of its hybrid rice in Tanzania, beginning next year. The company says that it will contract out production to local farmers and export the harvest to China. Chongqing began similar projects in Nigeria and Laos a couple years ago, but it already plans to shelve the Laos project. "The system there doesn't have any leverage over farmers, so labour is not very efficient. But we can't send Chinese workers to plant there", the company's deputy general manager, Huang Zhonglun, told Reuters.¹⁷ "They charge a lot for land rent, and there's no irrigation infrastructure, so we have to rely on the rainy season." Other hybrid rice ventures by Chinese companies include Suntime International's 5,000-ha project in Cuba¹⁸ and a 1,050-ha project in Mexico.¹⁹ The China Daily reports that a company from Heilongjiang has a 42,000-ha hybrid rice project in the far east of Russia.²⁰

Some Chinese officials are questioning the wisdom of this outsourcing policy. "It is not realistic to grow grains overseas, particularly in Africa or South America", says Xie Guoli, deputy director of the agricultural trade promotion centre at the Ministry of Agriculture. "With so many people starving in Africa, can we really ship the grains back to China?"²¹ But China is not alone in its outsourcing ambitions. On 11 May 2008, the *Financial Times* reported that the United Arab Emirates (UAE) government and other private entities had bought a large area of land – 800,000 ha – in Pakistan, primarily to produce wheat and rice to be exported to the UAE.²²


Vietnam is also beginning to look to Africa for the outsourcing of rice production in order to make up for the 500,000 ha of rice lands it has lost since 2001 to urbanisation and industrial development. A team of Vietnamese scientists led by Professor Vo Tong Xuan, rector of An Giang University, has been in Sierra Leone since at least 2007 to test the productivity of 50 Vietnamese varieties. Later this year, 20 Vietnamese farmers from the Mekong delta will go to Sierra Leone to train local farmers in Vietnamese rice farming techniques. According to the website of the Government of Sierra Leone, 300,000–1,000,000 ha have been reserved for this "co-operation" project with Vietnam.²³ Xuan, who is also senior adviser to one of Vietnam's leading rice companies, Minh Cat Tan, says that, under the project, a stock company will be set up that will seek to replicate the model in other countries.²⁴ He

says that Vietnam expects to become Sierra Leone's main supplier of rice seed in the future.²⁵

The battle ahead

There are, of course, still large rice-growing areas of the world where hybrid varieties are not cultivated and where farmers will strongly resist their introduction. The big questions have already been defined in the battle that lies ahead about how the rice crisis will be tackled. Which seed will be supplied and by whom? How much seed is going to be imported? Will the seeds be traditional, or hybrids, or, even more controversially, GMOs? It is clear that corporations are taking advantage of all the current talk about the need to get "quality" seed to farmers, so that they can increase production to fend off the growing food crisis, as an opportunity to push their products. And they are making headway. An indication of this came in November 2007 when IRRI, which runs the only significant public hybrid rice breeding programme outside China, announced the formation of its Hybrid Rice Research and Development Consortium.²⁶ The Consortium will bring together private seed companies to bid for exclusive rights to IRRI's hybrid lines. The stage is thus set for a few multinational seed companies to take control of the global hybrid rice seed supply, just as they have with most of the world's other major crops.

With the food crisis and this renewed push for hybrid rice, the world is moving to an entirely new situation where large parts of its rice land will be planted with seeds sold by private seed companies and, in many cases, imported from zones of cheap hybrid rice seed production, notably China and India. And this shift to hybrid rice seeds is facilitating a shift to corporate farming, with companies either pursuing vertically integrated contract production or taking direct control over land and farming, with the collusion of governments.²⁷

One lesson that should be learned from this crisis is that dependence breeds disaster. Those countries suffering most from the current rice crisis are those that abandoned local production and became dependent on imports. Today, hundreds of millions struggle to get enough to eat because they cannot pay the price for basic staples that the global market imposes on them. Meanwhile the corporations that control the global food system are reaping record profits. With the food crisis providing a golden opportunity for the companies to push hybrid rice, dependency will be created at an even more fundamental level: that of the seed. It is a recipe for another food crisis: one based not on access to food, but on access to the means to produce food. 

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17 "China overseas food push not realistic", Reuters, 9 May 2008. <http://tinyurl.com/67elgk>

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19 "China to lease overseas farmland to solve food problems", People's Daily online, 25 May 2004. <http://tinyurl.com/6qxcw8>

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25 Forum for Agricultural Research in Africa, "Food's Failed Estates", 29 February 2008. <http://tinyurl.com/6rjbjk>

26 GRAIN, "IRRI Inc.", Against the Grain, November 2007. www.grain.org/articles/?id=33

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The food emergency and food myths

Why Bush is wrong to blame Indians for the rise in food prices



VANDANA SHIVA

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United States President George W. Bush has a new analysis of the global rise in food prices. At an interactive session in the US state of Missouri on the economy, Bush argued that prosperity in countries like India had triggered increased demand for better nutrition. “There are 350 million people in India who are classified as middle-class. That’s bigger than America. Their middle class is larger than our entire population. And when you start getting wealthy, you start demanding better nutrition and better food so demand is high and that causes the price to go up.”

The myth that Bush is propagating is that of growth. It is being repeatedly stated that the rise in the price of food is due to “surging demand” in emerging economies like China and India. The argument is that, since the economies of China and India have grown, their people have become richer and are eating more, and this increased demand is leading to a price rise. This story might succeed in diverting US political debate away from the role of US agribusiness in the current food crisis, both through speculation and through the hijacking of food into biofuels, and in presenting economic globalisation as having benefited Indians, but the truth is that President Bush’s statement is false on many counts.

First, while the Indian economy has grown, the majority of Indians have become poorer because they have lost their land and livelihoods as a result of globalisation. Most Indians are, in fact, eating less today than a decade ago, before the era of globalisation and trade liberalisation. Per capita availability of food has declined from 177 kilograms per person per year (485 grams per day) in 1991 to 152 kg per person per year (419 g per day) today. Economic growth has gone hand in hand with growth in hunger. One million children in India die every year for lack of food.

Secondly, nutrition has deteriorated, even for the middle classes, from how it was before globalisation. The poor are worse off because their food and livelihoods have been destroyed. The middle classes are worse off because they are eating less healthily, as junk food and processed food enter India through globalisation. India is now at the epicentre of the problems of both malnutrition of the poor, who do not get enough food, and malnutrition of the rich, whose diets are being degraded. India has today not only the world’s largest number of hungry children but also the world’s largest number of diabetics.

India is perceived as an economic superpower with 9 per cent growth. Yet because this growth is based on a large-scale takeover of the land of tribals and peasants and large-scale destruction of the



livelihoods of millions in agriculture, textiles and small-scale industry, poverty has grown.

In the past Indian farmers had seed security because 80 per cent of seed was farmers' own seed, and 20 per cent came from the public sector seed farms. Globalisation has forced India to allow biotech giants such as Monsanto into the seed market. And Monsanto's growth comes at the cost of farmers' lives. More than 150,000 have committed suicide as they have got trapped in debt created by high cost, non-renewable, unreliable seed.

Indian farmers had market security. While producing the diverse crops they ate, they also used to grow rice and wheat for the national food security system, which, while paying the farmers a remunerative price, also provided the poor with affordable food through the Public Distribution System (PDS). Globalisation has destroyed the security of both the producers and the poor by integrating the local and domestic food economy into the speculative global commodity trade controlled by agribusiness.

Force-feeding is not free trade

While Indians are eating less, India is buying much more soya and wheat on the international market. These imports have been forced on India by US agribusiness, aided by the pressure of WTO rules and the US government. Such imports were not necessary before, because India was self-sufficient in wheat and edible oils.

The new food imports are the not the result of "demand" from India, but of the imposition of bad food. In 1998 India imported soya, even though we had adequate edible oils. With the US product benefiting from subsidies of nearly US\$200 per tonne, these imports amounted to dumping. Millions of India's coconut, mustard, sesame, linseed and groundnut farmers lost their market, their incomes and their livelihoods. And India's healthy edible oils were replaced by unhealthy, genetically engineered soya oil and palm oil – industrial oils that have not been eaten in any traditional culture.

In 2005 India imported wheat as part of the US-India agreement on agriculture, even though India produced 74 million tonnes of wheat and did not need more. These imports are designed to destroy domestic production to create markets for US agribusiness. This is force-feeding, not free trade. The US wheat was declared unfit to eat, but the US arm-twisted India to dilute its health standards. Destruction of domestic production

worldwide can only result in food scarcity and food insecurity. When food gets into the hands of global agribusiness, which makes profits through price fixing and speculation, a food emergency is inevitable.

We are seeing the serious consequences of the forced integration of the world's food systems into a global commodity market through access rules of "free trade" controlled by agribusiness. The perturbations this is causing in local food systems are serious. Production everywhere is getting destabilised by speculative trade, creating both an absolute decline in local food production capacity and a relative decline in the entitlement of the poor, because of rising food prices.

The absolute decline in food production arises from three factors. First, the transformation of ecological biodiverse systems to chemical monocultures that produce more commodities but less food for the household and for local economies. Second, the shift from food crops to cash crops for export. Third, the vulnerabilities created by climate change, to which industrial farming and globalised food systems make a significant contribution.

Food security requires a strengthening of local and domestic food economies, the defence of rural livelihoods and small farmers, and the reining in of the global grain giants and their price fixing. We need anti-trust action against the agribusiness corporations which are at the heart of the current food crisis.

GMOs are a problem for food security, not a solution

There is increasing reference to new seeds and GMOs as a solution to the food crisis. GMOs, however, are part of the cause of the food crisis. *Bt* cotton has destroyed food production in India and has pushed farmers to suicide. Cotton used to be grown as an intercrop with food crops. Now it is a monoculture. With high production costs and low prices for their crops, farmers are trapped in both debt and hunger. GMOs do not, in any case, produce more food. There are only two traits commercialised in twenty years – herbicide resistant crops, and *Bt* toxin crops. Neither is a trait to improve yield. In fact, research shows a yield drag in GM crops. In India we see high risks of crop failure, with average yields of *Bt* cotton at 300–400 kg/acre, not the 1,500 kg/acre advertised by Monsanto.

It is a myth that industrial, chemical agriculture produces more food. Industrial monocultures



produce more commodities, not more food. This is good for Cargill, ADM and Conagra. It is bad for farmers, the poor and the planet.

Food sovereignty is the answer to the food emergency

The current food emergency is a result of half a century of farming unsustainably, and one and a half decades of trading unfairly in food. The United Nations called an emergency meeting in early June 2008 to address the food emergency. Even the World Bank felt the need for an urgent response. Will the response intensify unsustainability and injustice, or will the global community use the crisis to advance sustainability, justice and fairness?

There are already signs that global agribusiness, which has created the crisis both historically and currently, will use it to increase its stranglehold on the world food system. Reducing import duties has been one response of governments to deal with rising food prices. But lowering import duties encourages the destruction of domestic markets and domestic production, thus aggravating the agrarian crisis, pushing more farmers into poverty and leading to an overall decline in food production. The crisis of rising food prices is a direct result of countries being forced by the World Bank, the WTO and regional

and bilateral agreements to import food from US agribusiness that they did not need. Mexico was forced to import maize. India has been forced to import soya oil and wheat.

The World Bank's call for contributions to the World Food Programme to increase by US\$500 million and President Bush's request to Congress to add US\$770 million to the country's food aid could become another subsidy to Cargill and ADM if the additional money is not accompanied by the creation of fair markets for farmers at local and regional levels. Emergency food aid cannot correct the distortions, unfairness or unsustainability of the food system as it is currently organised. Both trade rules and the paradigm of food production need to be changed.

The globalised system under corporate control is a recipe for food disasters and famines. Either we stop the damage through food democracy and rebuild food sovereignty by strengthening local economies and sustainable agriculture, or the corporate powers that have created the emergency will use it to deepen and expand their profits and control, while billions are condemned to starvation and death. And while people suffer, the corporations' close allies, such as Bush, will continue to put a false spin on the causes of the food crisis.

China not to blame

GRAIN

Vandana Shiva argues forcefully that Indians are not eating better and, despite what President Bush says, the food crisis cannot be blamed on their "better nutrition" and "better food". But it is also true that a small elite in both India and China are eating more meat. As Vandana Shiva points out, much of this meat is being consumed in the form of junk food and is thus less healthy, but could this additional demand nonetheless be contributing to the food crisis?

Daryll Ray, an investigator at the University of Tennessee, shows that this is not the case with respect to China. In a recent policy article, he looked at meat consumption in China.¹ Beef consumption indeed rose from 1.1 million tonnes in 1990 to 7.4 million tonnes in 2007. However, China supplied this additional demand with additional domestic production, even achieving a small surplus, which it exported. The same with pork: consumption increased from 23 million tonnes to 45 million tonnes, but once again domestic production met the demand. It is almost the same with poultry: chicken consumption rose from 2.4 million tonnes to 11.5 million tonnes, with domestic production satisfying all the increased demand until 2007, when a small quantity (124,000 tonnes) was imported.

What about rice? Did China import a lot, thus causing scarcity elsewhere? Again the answer is "no". Consumption rose from 124 million tonnes in 1990 to 134 million tonnes in 1999, but domestic production met the additional demand and provided a surplus, which was exported. And maize for animal feed? Yet again, China covers its own consumption and is an important exporter. Daryll Ray concludes: "The data do not support the often-stated implication that the sharp increase in grain prices is attributable to the Chinese diet change."

So what does lie behind the food crisis? University lecturer Alejandro Nadal, commenting on Daryll Ray's figures in an article in the Mexican newspaper *La Jornada*, has no doubts: "Today conglomerates like Archer Daniel Matthews, Cargill, Bunge, Monsanto and Syngenta have so much control over markets and infrastructure that they can manage stocks, invest in grain futures and manipulate prices on a world scale so that they can obtain huge profits. But neither the WTO or the FAO are interested in tackling this problem."²

1 <http://agpolicy.org/weekcol/408.html>

2 Alejandro Nadal, "Precios de alimentos: adiós al factor China", *La Jornada*, 11 June 2008, <http://tinyurl.com/5lr3k8>



Professor of Food Policy at City University in London, Timothy Lang is a leading authority on food. He has written extensively on issues such as food security, food inequalities, nutrition and the tension between food democracy and food control. The steep rise in the price of basic food commodities on the world market this year came as no surprise to him, for he has been warning for some time that the world is “sleepwalking into a crisis”.

Tim Lang



So, Professor Lang, is the crisis you predicted finally upon us?

Well, there is quite a lively debate about that. Some analysts say that the world is currently only experiencing a “blip” and that the rise in prices is temporary. Once the crisis has passed, the long term decline in commodity prices will continue. Indeed, history seems to be on the side of “blip” theorists. If you look at US wheat prices from 1860 to 2000, there were occasional “blips”, when prices rose sharply in response to a short-term crisis of one kind or another (during the First and Second World Wars, and in the early 1970s). But once those crises were over, prices resumed their long-term decline. “Blip” theorists say that this is what will happen now.

So are you a “blip” theorist?

No. Despite the historic trends, I think we are entering a new era. Even if food commodity prices decline somewhat over the next couple of years, which may happen if supply recovers, I think we are entering new policy territory which requires new thinking, policy frameworks and probably institutional responses. I am one who supports the theory which we call the “new fundamentals”. Let me explain. Only superficially is the current situation reminiscent of the 1970s, when famines in Sudan and Bangladesh, plus oil price rises and early environmental warnings, created fears that the world wouldn’t be able to feed itself. At that time, the “Green Revolution” with hybrid techniques of plant breeding was already emerging to rescue the production-focused approach. Major commodities – wheat, rice, potatoes – were transformed by plant genetics, funded by such sources as the Rockefeller Foundation and oil money. With that experience,

blip theorists argue that Genetic Modification will do today what the green revolution did decades ago. I doubt it. I think the extent and depth of what has to be addressed today cannot be saved by technical fixes such as GM.

What are these features that are under threat?

Let me list them – there are eight:

- **Energy.** Oil has hit US\$126 a barrel. Some 95 per cent of food products are oil-dependent, and gains in agricultural productivity rely on fertilisers and mechanisation. The first rush to biofuels as a substitute for oil is now looking thin. If land goes to biofuels, that’s less land for food. The OECD calculated that the USA, Canada and the European Union would need to switch between 30 per cent and 70 per cent of their current crops to biofuels to provide just 10 per cent of their transport fuel needs. That simply isn’t possible.
- **World food commodity prices.** They are rocketing and this is not just due to speculation, though that doesn’t help. Buffer stocks are at their lowest level for decades. Per capita availability has faltered since the 1980s. The UN Food and Agriculture Organisation estimates that imported foodstuffs exceeded US\$ 400 billion in 2007, 5 per cent above the 2006 record. Most of this increase is due to rising prices of imported coarse grains and vegetable oils – the commodity groups which feature most heavily in biofuel production. FAO forecasts these to rise by 13 per cent in 2008, difficult for rich country importers but dire for developing countries.
- **World population.** It is rising rapidly, reaching 6.6 billion in 2007. It is expected to reach 9.1

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billion by 2050. Urbanisation appears unstoppable: in 1961 one billion people lived in towns; by 1986 it was two billion; by 2003 three billion; and by 2018 it is projected to be four billion and by 2030 five billion. The Reverend Thomas Malthus – who warned way back in 1798 that, while populations can grow geometrically, food supply can only increase arithmetically – might have been wrong in the past, but today the scale of the population's growth and its food requirements are unprecedented. I am not a neo-Malthusian, but the sheer number of mouths we have to feed requires drastic action – whether by changing diets (which the West ought to do) or by farming differently remains to be seen.

- **Labour.** This problem is linked to the previous one: if urbanisation is inexorable, who will be the rural labour force? The inexorable drift from the land is understandable. Often the life is hard, the rewards are thin, and the insecurity is unacceptable. Public policy centres on the big farmers as the route to produce the massive surpluses needed, yet the reality is that most farmers are smallholders. It's they who need a New Deal. They have to be part of the solution. If oil is no longer able to substitute for labour – which is what mechanisation meant – does this mean in an oil-depleted world that we will have to go back to centring on human labour on the land? With what skills? What rewards?

- **Land.** Available productive land depends on sea levels, drainage and investment. Optimists propose that the world could bring into use about 12 per cent more land than is currently under cultivation. This might well be so, but marginal lands tend to be less productive and more expensive to use. Climate change will alter land use patterns considerably. Meanwhile rich developed countries like the UK treat land too cavalierly. A recent UK study showed that consumers use food as though they have six times as much land and sea available to them as they in fact do. Our "efficient" food system is actually using other people's land. It's our wealth which allows that, in a kind of market-based neo-colonialism. To add insult to injury, we now know that, after 60 years of scientific farming and technological advance, UK consumers still waste about a quarter of all food produced. Seen historically, this means one "old" form of waste (spoilage on farm and in store) has been replaced by another (waste in homes, ending up in landfill).

- **Water.** Globally, of all drinkable fresh water, households use 10 per cent, industry 20 per cent and agriculture 70 per cent. Today 92 per cent of humanity has a relative sufficiency of drinkable

water, but by 2025 this will be 62 per cent. The notion of how much water it takes to produce an item is likely to become as important as the amount of greenhouse gas emissions it causes. To produce one kilo of grain-fed beef requires 15 cubic metres of water. One kilo of cereals needs between 0.4 and 3 cubic metres. Many of us, alarmed about the importance of water, have been pushing for the auditing of food supply chains for their "embedded water". Labelling foods for their water might help, but the key thing is to reduce profligate water use, since all forecasts see big water crises ahead. The UK is water-rich, but if we are importing others' water, where is the social justice? A 250 ml glass of beer uses 75 litres of water; a glass of apple juice takes 190; a 150-gram hamburger takes 2,400. Without knowing it, food trade transfers water across borders. As Fred Pearce showed in his excellent book on this,* the equivalent of 20 Nile rivers already move annually from developing to developed countries.

- **Climate change.** This threat is already high on the agenda. The Stern Report on Climate Change found agriculture responsible for 14 per cent of greenhouse gas emissions. Of agriculture's emissions, fertilisers were responsible for 38 per cent. Livestock was the second greatest source of agriculture-related emissions, accounting for 31 per cent. Stern has recently gone on record as saying that he thinks he underestimated the costs of not acting to prevent climate change. Altering food systems therefore has to be at the front of any action list. Carrying on as "normal" is not an option, unless we want to make the crisis hit harder later.

- **Nutrition transition.** This is the phrase used to describe what happens when people become more affluent, the process now happening in many developing countries. The cost to healthcare becomes a fiscal drag. Consumers change their diets, eating more sugars, soft drinks, meat and dairy. This, in turn, is associated with a shift in disease patterns. The WHO is alarmed about the evidence of a rise in diet-related ill-health from chronic diseases such as heart disease, cancer, diabetes and obesity. This has arisen while we still have a very serious problem of malnutrition in many developing countries.

While, each of these eight fundamentals on its own poses a serious challenge to world food capacity, the truth is that they are linked and collectively pose immense policy challenges. This realisation is dawning on policy analysts (but not yet on politicians who are locked into old ways

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B Benny Haerlin

C Carlos Correa

D David Quist

E Johnson Ekpere

F Francisca Rodriguez

G German Velez

H Hope Shand

I Ibrahim Ouedraogo

J Jack Kloppenburg



of thinking such as “leave it to market forces” or “leave it to retailers” or “aid and some more market access will free things up”). The new challenges are our generation’s test: will we reshape or fudge how humanity feeds itself? It’s our post-Malthusian moment. Should humans stop treating the planet as a limitless resource? Definitely yes. Can we do this and go on consuming more? That depends on whether or not we can develop a way of consuming which treads more lightly on the earth; so the answer is: “it is not clear yet”. The solutions all depend on whether we want more of the same diet and lifestyle or are prepared to change.

Is the world still sleepwalking into a crisis or has it woken up?

I’m afraid that I still feel the sleepwalking metaphor is right. Sure, there’s much talk at present but it’s quite superficial actually. There is a generalised assumption that the problems are affecting only the developing world. The debate is almost being framed at the moment as if it’s begging-bowl time. But I don’t see the issue being primarily about suffering in Malawi or riots in Mexico. What I and my colleagues here think is that the problems that are manifest in the developing world are largely the result of decisions taken in the developed world. I think much more attention needs to be given to what policy-makers in the rich countries, the over-consuming countries, are doing in response to the food crisis. We need to see them responding to the eight fundamentals that I outlined above. It means beginning to acknowledge the elephant in the policy room: we are driving the problem. At the moment, the discourse implies that outside forces are destabilising western markets. They’d be alright if only matters could return to “normal”. Actually, “normality” is not acceptable.

So what should policy-makers do?

They face a fundamental choice. One way forward is to carry on intensifying the food system, as per the model of the last 70 years. Carry on with the system that people like me call “productionism”, where the goal is to produce more and more food, making it more affordable. This made sense in the 1940s but not today. Yet productionism – the search for a technical fix – is the dominant position, the “normality” yearned for. Low oil and food prices meant more domestic spending on the consumer nirvana. But just as the architects of productionism persuaded policy-makers of the time that science and investment could raise output and resolve the crisis of underconsumption, so today we need to work on policy-makers to realise that we have co-existence of under-, over- and mal-consumption. Food’s environmental footprint means we have

go back to the drawing board and start thinking about what a sustainable food system would look like. We’ve got to design it around what the earth can deliver and what human bodies need. That’s difficult. We haven’t yet reached agreement about what a “sustainable diet” is – one that is good for the earth and good for physiological health. But the broad outlines are becoming clearer.

The two perspectives give you very different impression of the global food system. From a “productionist” point of view it is remarkably successful. The shops are full. There are 26,000 items on supermarket shelves in developed countries. But from a sustainable development perspective, the food system appears to be taking us toward planetary collapse. We have policy schizophrenia: belief on the one hand that it’s a total success and on the other a total failure. In a way, both perspectives are right: output has risen but at a terrible cost.

So where do we go from here?

We’ve got to develop a new set of guidelines, a world of “omni standards” that take the new fundamentals into account. “Omni standards” is a terrible phrase and I apologise for it, but it encapsulates what I mean. We’ve got to have new criteria that take into account all the new concerns – sustainability, water shortage, climate change, obesity, malnutrition and so on. It means thinking through things like: What about the end of oil? What are criteria for optimum land use? In an urbanised world, how can farming systems be responsive? What is a healthy and sustainable food system?

It seems that change is inevitable, whether we like it or not. Do you think we can manage this change or will it come through violent disruptions?

I used to think, until about five years ago, that an orderly transition was possible. I now wonder if we’ve missed the moment. I hope not. But events are now determining the room for manoeuvre. It’s more likely now that shock will change things. As a rationalist, I want that least. Shocks are messy with dire consequences. But certainly, it looks likely that we might be sleep-walking into a world in which blood flows, metaphorically and at times actually, due to mistakes over food policy. All of us need to raise our voices and our game to prevent those mistakes going unnoticed. Ultimately we have to side with food democracy over food control.

* Fred Pearce, *When the Rivers Run Dry*, Eden Project Books, 368 pp., ISBN 978-1903919583

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A highly pathogenic variety of the H5N1 type of avian flu was first reported in the West African country of Benin in December 2007. Even though this type of flu has been known for more than four years, the authorities in Benin, rather than learning from others' experiences, have repeated many of their mistakes: they have dealt with the outbreaks secretly; they have blamed wild birds, with no supporting evidence; they have failed to ban the import of poultry. Worse still, they are refusing to pay compensation and thus causing huge economic problems for thousands of small farmers who have lost their livelihoods.

Mismanaging avian flu in Benin



PATRICE SAGBO

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On 4 December 2007, Roger Dovonou, Benin's Minister for Agriculture, Livestock Farming and Fishing, went on television to announce the discovery of two suspected outbreaks of avian flu in the south of the country – one in the municipality of Adjara, about fifteen kilometres from Porto-Novo, and the other in the town of Akpakpa in Cotonou. Later that month, tests carried out by an Italian laboratory confirmed the authorities' suspicions. The disease was identified as a highly pathogenic strain of the avian flu virus type A (H5N1), first found in South Korea and since then identified in numerous outbreaks in several countries in Asia, Europe and Africa. H5N1 has caused several hundred human deaths worldwide.

Soon after the outbreaks were discovered in Benin, some 300 birds were slaughtered. The authorities

then took measures to restrict the movement of poultry between Porto-Novo and Cotonou but, somewhat perplexingly, not to other localities in Benin. As a result, avian flu spread to towns and villages in Ouémé department (where Porto-Novo is located). Without explaining what was going on, the authorities began to seize and destroy poultry. It was only after an angry crowd of several hundred poultry sellers from Cotonou and Ouémé started banging drums and expressing their discontent on local television channels that the Director of Livestock Farming, Dr Christophe Monsia, finally confirmed on 11 January 2008 that there had been four outbreaks of avian flu in Ouémé.

The action taken by the authorities was clearly inappropriate. It was unrealistic to expect the local population to collaborate with the authorities if they did not know what was going on. People were understandably angry. As one poultry seller

put it: “We have never had a disease called bird flu in our midst before. We know nothing about this disease and yet they come and point their weapons in our chests to threaten us and then take away our cages and hens, which we took out loans to buy.”¹ Moreover, the people sent to destroy poultry in the villages showed a puzzling lack of professionalism, moving from farm to farm with jute bags on their backs filled with possibly infected birds. In doing so, they could well have been spreading the virus, and therefore represented a danger to themselves and to all the communities they travelled through.

Sources of contamination

As in other countries, it has been suggested that migratory birds play an important role in the transmission of avian flu. But no evidence has been produced to support this hypothesis. There has been no declared outbreak of avian flu in Europe since the end of August 2006, and no cases of avian flu have been detected in Senegal, which is the destination of millions of migratory birds from Europe. In reality, the cases of avian flu identified in Africa to date have been found on modern or relatively modern farms raising imported turkeys, broilers, laying hens, and so on. Moreover, these imported birds are kept in batteries throughout their lives and have no contact with local poultry populations. This has not prevented local poultry from being demonised as potential reservoirs of the virus and thousands of local birds being slaughtered, to the great despair of the villagers who farm them. It is clear that local birds are not, in fact, responsible for transmitting avian flu, but have nevertheless been blamed.

Indeed, local birds are a protection against disease, as was expressed well by Irene Hoffmann, chief of the animal production service at the UN Food and Agriculture Organisation (FAO): “Genetic diversity is an insurance against future threats such as famine, drought and epidemics. The existing animal gene pool may contain valuable but unknown resources that could be very useful for future food security and agricultural development. Maintaining animal genetic diversity allows farmers to select stocks or develop new breeds in response to environmental change, diseases and changing consumer demands”, she said.²

Moreover, the Benin authorities have themselves appeared to suggest that imported poultry, rather than wild birds, were the cause of the outbreaks. In his television address on 11 January, Dr Christophe Monsia said: “Experience has shown that most countries that have suffered from avian flu across

Africa have done so as a result of commercial movements.... The pace of the disease is in line with the movement of poultry.” If this is the case, the government should have banned all poultry imports, even from countries that claimed not to be infected with avian flu. This is because, given the practice of re-exporting imported poultry from infected countries to non-infected countries by changing the outer packaging, the list of infected and non-infected countries can no longer be relied upon.

The story of the contamination of Nigeria by the H5N1 virus is illustrative. The virus broke out in 2003 in the Netherlands, from where a Nigerian bird farm was importing cargoes of eggs for hatching. Despite the honesty of the Dutch authorities, who informed their Nigerian partners of the outbreak, this farm continued to import eggs for hatching, completely infringing accepted industry practice. It should be noted that the farm belonged to Nigeria’s Minister of Sport at the time.³ Moreover, in what appears to have been a deliberate attempt to muddy the waters, no records were kept. As a result, the disease spread to other industrial farms. As soon as the outbreak occurred, Benin, which adjoins Nigeria, should have taken strict measures to control its borders with its neighbour. Today, this Nigerian minister is sitting on his fortune, having contaminated Nigeria and Africa, whilst Africans continue to mourn their dead birds, and the local poultry industry across the continent faces economic ruin.

The Benin authorities, meanwhile, not only failed to ban, but actually promoted imported poultry, while carrying out a large-scale cull of local birds, despite all the precious resources these birds contain in terms of African genetic heritage. A public tasting of imported poultry and its by-products was organised amid great ceremony at the Palais des Congrès in Cotonou, in order to persuade the population to purchase and consume these products. The event was supported by the Ministry of Agriculture, Livestock Farming and Fishing and, indeed, by the whole government, and was widely covered by the media (with a report at least five minutes long on the national television channel). Makeshift cages and sheds, filled with imported laying birds, young cockerels and turkeys, have been set up throughout Benin while the cull of local birds continues. Yet nothing is known about whether or not these imported birds are infected with avian flu.

Throughout the process, the opinions of farmers and local poultry breeders were completely



1 In conversation with the author.

2 FAO, ‘Loss of domestic animal breeds alarming,’ Rome, 31 March 2004.

3 According to Chief Olatundé Badmus, National President of the Poultry Association of Nigeria (PAN), as reported in *The Punch*, Lagos, 15 February 2006. <http://www.punchng.com/>

4 Testimony gathered by the author during a protest staged by poultry farmers and poultry traders in Cotonou in January 2008.

disregarded. While many of these farmers may be illiterate, they are very far from stupid, as is clearly demonstrated by some of their comments:⁴

Eugénie: “I’ve heard that every country that suffers from avian flu is entitled to the sum of three billion CFA francs (US\$7 million) and that each of these countries has already received an advance of 800,000 francs (US\$1,900). This is the money they are currently using to destroy us, while modern farms with imported laying birds and meat birds are protected. They even organise grand tasting ceremonies for imported birds to encourage people to consume them in massive numbers. But we know very well that it is these imported hens and chickens that are bringing avian flu into our country. As far as I’m concerned it’s a huge conspiracy not just against us, but also against local birds. It’s a policy based on double standards. We will never accept it.”

Dansou: “Three days ago, I was coming home and a group of armed men blocked my way because I had some local birds on me. They asked where I had come from with the birds and told me to give them to them. So I told them quite seriously and very firmly that one of them would die that day if they tried to take my hens from me because I am willing and able to defend myself. That was when they decided to let me go.”

Atima: “A team from SOGEMA (Society for the Management of Autonomous Markets), accompanied by police officers, invaded our poultry sales outlets at the international market in Dantokpa, to take our birds from us and kill them. These are grave times and we are being driven into a corner so that they can destroy us. What country are we living in? We must react as soon as possible.”

Yaotcha: “In Adjarra, where they said they found avian flu, there were barely 50 birds in a little farm of imported day-old chicks. We will go and meet these killers of local birds. The village chiefs have lined their pockets with this business, and so have the mayors. They’ve been given money to destroy our birds, our income-generating activity, our economy and our lives, while we had nothing to do with the arrival of avian flu in our country. We demand compensation.”

Destruction without compensation

Despite the demands of local farmers such as Yaotcha, the Benin authorities are paying no compensation for culled birds. As well as being

unjust, such an attitude is counter-productive, in that it discourages farmers from reporting outbreaks. Joseph Domenech, Chief Veterinary Officer with the FAO in Nigeria, said in 2006: “African farmers should be offered economic incentives to ensure that they report any suspected cases of avian flu immediately and to discourage them from rushing to get their birds on to the market. The country causing grave concern at the moment is Niger, which borders the region of Nigeria that is affected by avian flu, and where two million vulnerable people already suffer from hunger. The highly pathogenic avian flu virus represents a very grave threat for animal health in West Africa. If it were to be an epizootic disease [an epidemic outbreak of disease in an animal population that might extend to humans] that spreads beyond the borders of Nigeria, it would have catastrophic effects on the means of existence and food security of several million people.”⁵

Furthermore, this question caught the attention of donors during an international conference on avian flu in Bamako in Mali. Donors from ten countries, the European Commission, the World Bank and the African Development Bank made a commitment to donate US\$500 million to combat avian flu and prepare for the possibility of a human pandemic in 2007. More than 100 countries and international organisations were represented at the conference. The three-day meeting offered experts an opportunity to exchange information about the disease, and the ministerial delegates the chance to define joint strategies in respect of funding programmes to combat it.

Mr Christopher Delgado, an expert from the World Bank leading the inter-agency commission, made the following comments at the meeting:

“Our greatest concern is with the poor owners of small poultry farms. The idea of a mass slaughter of small farmers’ poultry is obscene. Bird production has become an important source of protein in developing countries. This activity has been growing at a rate of 5.9 per cent per year, compared with grain production, which has grown by only 0.4 per cent. In the absence of well-developed compensation programmes, it is the small farmers who run the risk of being wiped out.

“The compensation programmes need to be implemented rapidly. Experience has shown that in the event of an epidemic of avian flu, the birds must be slaughtered within 72 hours; otherwise the fight against the spread of the

⁵ Bulletin Veille Grippe Aviaire, no. 15.
<http://sist-emer.net/>

⁶ Bulletin Veille Grippe Aviaire, no. 57.
<http://sist-emer.net/>



disease becomes more difficult and more costly. Farmers must be compensated immediately to prevent them opposing the destruction of their sole means of subsistence.”⁶

It is only to be regretted that these comments were not translated into local languages and distributed to the farmers. Furthermore, the international community, through the World Bank, has earmarked a further US\$400 million for the same cause in 2008.

Structure of avian flu management

The management of avian flu is, of course, a technical matter. But that is no reason for saying that only the Department of Livestock Farming should be involved in the handling of the outbreaks, particularly as flu is a zoonosis, that is, a disease of animals that is transmissible to humans, and for this reason also a public health issue. Managing it requires the creation of a crisis committee, made up of several ministries and other bodies and institutions with dynamic operational units, each given clearly defined tasks. This is what is needed to fight the disease in a concrete, effective and transparent way. Otherwise, Benin runs the risk of repeating the mistakes it made with swine fever: even though programmes worth millions of CFA francs were set up to combat it, swine fever continues to destroy the pig population. Above all, we need clear policies, for it takes a brave farmer to continue to work in an area where the rules of the game are confused.

What is urgently needed is a well-thought-out, structured communications plan to create a relationship of trust between the authorities and the grassroots population. It should involve the

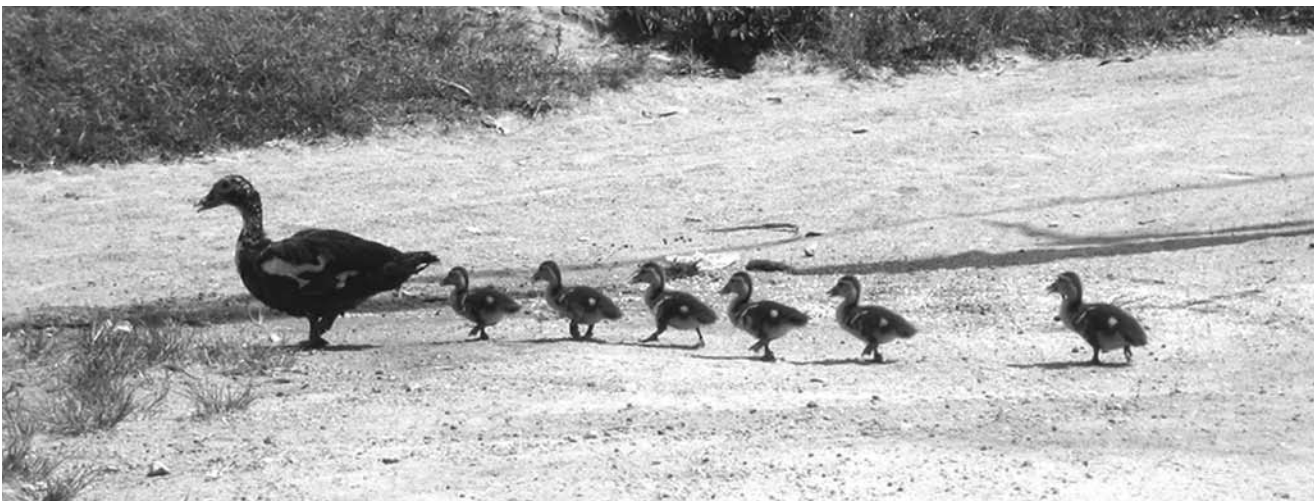
supply of transparent, continuous, non-exclusive information to provide reassurance that the public authorities will manage the situation in the interests of everyone involved, whatever their social class or employment. Poultry farmers should be encouraged to participate in an open decision-making process so that they will become more likely to support the various measures needed to manage the avian flu crisis effectively. Messages must as far as possible be translated into the target national languages and disseminated via the most appropriate channels.

As yet, local poultry sellers have not been given information on avian flu and do not even know what it is. As one commented: “They have killed all our birds and driven us into economic ruin. We have not been given any information whatsoever. They seize our birds with guns everywhere to intimidate us. What do these people want to do to us?”⁷ It is clear that one day all this discontent could explode.

Conclusion

The way avian flu is being managed in Benin is a cause of great concern and raises questions about the competence of the authorities in charge. Veterinary medicine is, after all, a science. As this is the case, it should be possible to justify any action taken by the authorities on technical and scientific grounds. Yet we cannot continue to behave like laymen, blindly exterminating animals, without first carrying out a serious screening process to identify whether or not they are infected. We urgently need to trace the origin of all poultry on contaminated farms in order to track accurately the progress of the disease. We must put an end to our old practice of trying to improvise our way out of a crisis.

⁷ Personal conversation with the author.



In Benin, as elsewhere, Avian flu is being blamed on wild or backyard birds

As the push toward neoliberalism advances, and quantitative measures to protect local markets, such as tariffs and quotas, disappear, industrial powers are turning to qualitative measures such as food safety regulations to further skew trade in their favour. In the food safety arena, both the US and the EU are pressing their standards on other countries. For Washington, even though its own food safety system is widely criticised as too lax, this means getting countries to accept GMOs and US meat safety inspections. For Brussels, whose food safety standards have a much better reputation, it means imposing high standards on countries that cannot meet them. Bilateral free trade agreements (FTAs) have become a tool of choice to push through the changes.

Food safety

Rigging the game

GRAIN



20

1 "US-Korea Understanding on Agricultural Biotechnology", March 2007. <http://tinyurl.com/4h34m2>

2 Soybean oil and soy sauce are deemed exempt from mandatory labelling requirements because their production processes are said to remove the GM proteins.

3 "Fears about GMOs", editorial, *Korea Times*, Seoul, 1 May 2008. <http://tinyurl.com/4nv8wz>

4 Monsanto comments to USTR on US-Thailand FTA, 8 April 2004. <http://tinyurl.com/3h58d6>

South Korea is one country that has recently been hit hard by the US strategy of using food safety policies to assert US corporate control where it can. In March 2007, a secret bilateral deal on genetically modified organisms (GMOs) was signed on the sidelines of the final round of US-Korea FTA negotiations.¹ This agreement considerably weakens Korea's scope to regulate the inflow of GMOs from the United States (see Box 1). Not surprisingly, it was immediately welcomed by the Washington-based Biotechnology Industry Organisation, which was probably the only group that had been consulted on the deal.

With the ink on the GM deal barely dry, transgenic crops from the US began to appear in Korea's food supply. Until then, Korea's GM laws, particularly the rules on labelling, had essentially shut GM imports out of the country, except for some used in animal feed, soybean oil and soy sauce.² But in late April 2008, just five months after Korea started

implementing the UN Biosafety Protocol, four local cornstarch manufacturers began to import GM maize, saying that they had no other option as the price of non-modified maize had risen astronomically on the world market. Amid protests from consumers, they said that they expected to purchase 1.2 million tonnes from the US during the year.³

Korea is not the first country to cede its sovereign right to set its own policy on biotech foods under bilateral pressure from the US. India and China both backed down from GM import restrictions after bilateral "discussions" with the US. Thailand pulled back from strict GM labelling legislation in 2004 when the US warned that the legislation would affect their FTA negotiations. After that, US companies pressed the US Trade Representative to use the proposed FTA with Thailand to get the Thais to authorise field testing of GMOs.⁴ A similar process has been under way in Malaysia where, as a prerequisite for the proposed US-Malaysia FTA,

Box 1: What the US–Korea GMO agreement does

1) It obliges Korea to restrict its risk assessment of imported GM products for food, feed or processing to their “intended” use. This means that the US companies providing the GM products will not be held liable for any “unintended” use of the material. This is precisely how Mexico’s indigenous maize crop got contaminated: by local farmers sowing US maize kernels that were “intended” for cooking. And that, too, was because of a free trade agreement (NAFTA) forcing open the Mexican market to US farm products.

2) It obliges Korea to refrain from testing “stacked traits” (GMOs with multiple transgenes) in a shipment of, say, GM seeds, if the traits have been individually cleared for use in the US. A large proportion – 35 per cent as of February 2008 – of applications for GM imports to Korea is precisely for “stacked trait” food and feed material.

3) It commits Korea to act on its GM labelling laws in a “predictable” manner. This means that Seoul must involve Washington in some way before announcing changes in policy. This is similar to the transparency clause of most US FTAs, under which partner countries must inform Washington of policy developments before deciding upon them.

4) It provides a frame for Korea’s implementation of the UN Biosafety Protocol (which the US refuses to sign) towards GM products from the US. As the result of an amendment pushed by Mexico on behalf of the NAFTA states, the Biosafety Protocol expressly rules now that its documentation requirements do not apply to trade between Parties and non-Parties that occurs within the scope of bilateral, multilateral or regional agreements or arrangements. This means that the Protocol’s documentation requirements for the entry of GM products will not apply to trade between Korea and the US.

US lobby groups have tried pushing the Malaysian government to abandon plans for mandatory labelling of GM products.⁵

However, GMOs are just one part of a larger corporate food safety agenda that is being advanced through behind-the-door bilateral channels. The strategy is codified in terms like “science-based”, “equivalence” and “harmonisation”. But what it really amounts to is economic and cultural imperialism. This is very clear in the case of Korea.

Into the corporate meat grinder

Like many countries around the world, the South Korean government imposed a complete ban on US beef imports in 2003, when a case of BSE (bovine spongiform encephalopathy, or mad cow disease) was detected in a cow in the US. The US beef industry was angry, as Korea was their third largest overseas market. In 2006, US trade officials forced the Korean government to agree to partially re-open its market to US beef as a precondition to the US–Korea FTA talks.

Ever since then, the US has pushed hard to regain valuable beef export markets in Korea and elsewhere through a twin process of setting up its own BSE inspection system, and then getting the rest of the world to accept this system as safe. Given that the US tests only 1 per cent of its cattle each year for BSE, Korea and other countries are highly sceptical of the efficacy of the US scheme.⁶ So the US looked for leverage elsewhere and found

it at the World Organisation for Animal Health (OIE), the international standard-setting body for animal health recognised by the World Trade Organisation. The Bush administration got the OIE to declare US beef trustworthy (see Box 2).

The OIE ruling did not oblige Korea to change its own regulations. But because the issue was so closely linked to the FTA, which at that point was about to be signed, Seoul gave in and reopened its markets to US beef. It did, however, add an important qualification: imported beef must be free of “specified risk material” for BSE, such as bone fragments. US beef corporations, it seems, find it difficult to comply with this fairly basic requirement. The first three shipments of US beef to Korea following the re-opening of the Korean market were rejected because of bone fragments.⁷ And in June 2007 Seoul decided to suspend all export permits to US suppliers because two shipments of beef products, originating from Cargill and Tyson, were exported to Korea without the necessary quarantine certificates.⁸ But rather than take steps to meet Korean standards, the US beef industry, backed by lawmakers in Washington for whom there will simply be no FTA without the full opening of the Korean market to US beef, insisted that Korea change its criteria and let in all US beef, bone fragments and all.

Social uproar

On 18 April 2008, with the FTA signed but still awaiting ratification by both countries’ parliaments, newly elected South Korean president Lee Myung-

5 Letter from the Biotechnology Industry Organisation to the US Trade Representative on the US–Malaysia FTA negotiations, dated 12 May 2006. <http://tinyurl.com/4xhym8> AMCHAM Malaysia/US Chamber of Commerce, Public Submission for the Proposed US–Malaysia Free Trade Agreement (USMFTA), 19 May 2006. <http://tinyurl.com/3n7s6h>

6 Food and Water Watch, “Food safety consequences of factory farms”, fact sheet, Washington DC, March 2007. <http://tinyurl.com/4mveol>

7 As well as bone fragments, the third shipment of meat also contained traces of dioxin exceeding approved levels.

8 “South Korea blocks US beef”, Associated Press, 5 June 2007.



Bak flew to Camp David to meet George Bush. On the sidelines, Korea's agriculture representative accepted the most detailed demands yet from the US government in order to resolve the beef blockages and clear the way for the FTA: a six-page set of beef importation requirements that basically secure everything the US wants, and more.⁹

The beef protocol opens the Korean market to virtually all forms of US beef and vastly reduces the controls and remedies that the Korean government can invoke in case of suspected problems. Coupled with a revision of US domestic rules on what should not be fed to farm animals (the so-called "enhanced feed ban"), which the protocol is bound to, the package deal seriously lowers food safety standards for Korean consumers.¹⁰ The head of R-CALF, a US cattlemen's advocacy group, describes the supply side bluntly: "This feed ban remains the weakest out of all the countries that are working to control BSE. The US is removing only two of the high-risk tissues", namely tonsils and eyes, from the cows' food supply.¹¹ Since BSE is spread by feeding cows the by-products of other (infected) cows, many contend that the US is really doing little to control the disease – and forcing Korea to accept the risks.

The beef protocol has caused turmoil in Korea, as Koreans simply don't want to be forced to

take these risks.¹² Nightly protests, some of them mobilising more than 100,000 people, have rocked the cities, and unionists are planning physically to stop the unloading of any US beef shipment. In a vain attempt to calm spirits, the two governments signed a further letter by which Washington affirms Seoul's right to stop imports of US beef – but only if a case of BSE is confirmed by the US. Suspected outbreaks shall not be reason to stop trade flows. While the Lee government squirms between the demands of Koreans to renegotiate the whole deal and the US's refusal to do so, the bottom line is that the US government is forcing another country to drop its precautions against possible health risks from a food industry plagued with them.

Beyond Korea

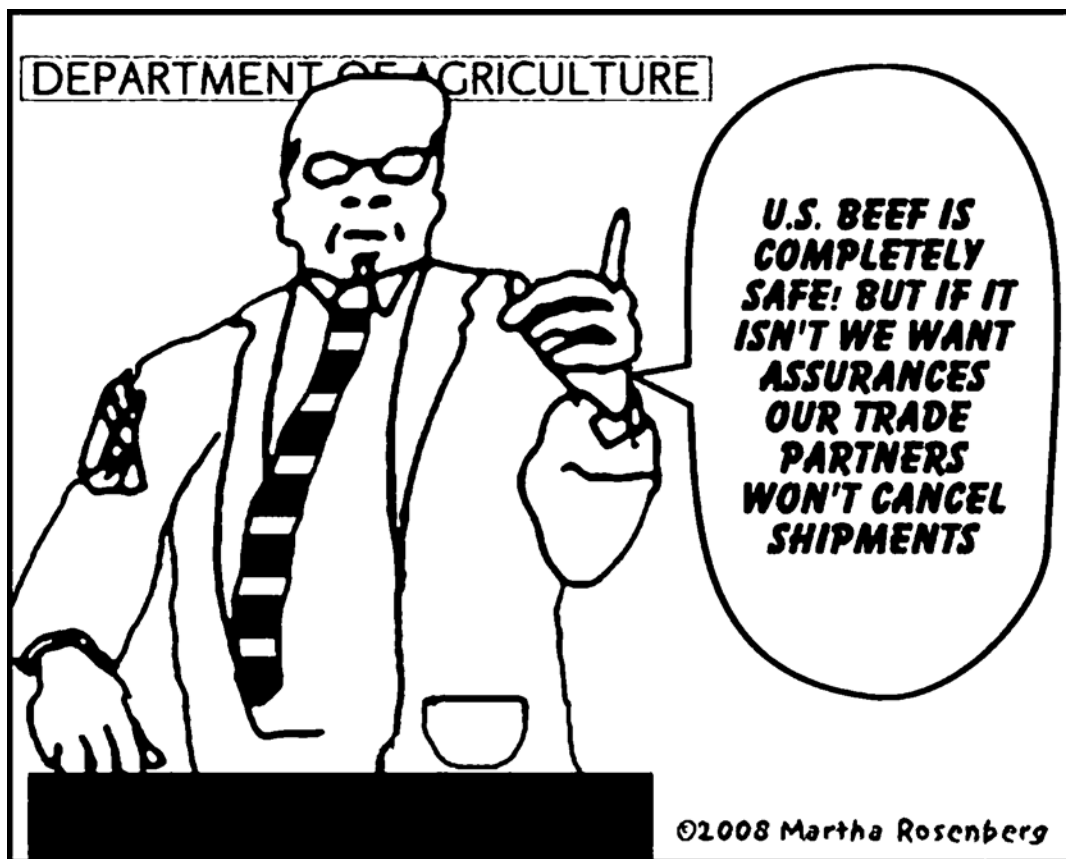
The Korean experience is not unique. A number of other countries have already succumbed to pressure and signed away their right to define their own food safety regulations for US meat imports, with respect not only to BSE but also to a range of food safety and animal health problems that afflict the US meat industry. As US meat corporations see it, the "market access" they expect from US FTAs is a twin process – requiring the removal of not only tariffs but also sanitary and phytosanitary (SPS) restrictions. US poultry companies have been particularly adamant on this point. Exports

9 US-Korea Beef Protocol (2008). <http://tinyurl.com/49u28v>

10 The scope of the US-Korea protocol is determined by the US feed ban, for the protocol states that once the enhanced feed ban is made public, Korea will import beef (except for the agreed few risk materials) from US cattle of any age rather than 30 months or younger. (Cattle older than 30 months are more prone to BSE infection.) The revised feed ban was published in the US Federal Register on 25 April 2008, one week after the protocol was signed: <http://tinyurl.com/3pm33s> It's uncanny that while the feed ban won't be implemented in the US for one year, as there is a 12-month period for the industry to adjust, it has immediate effect for Korea.

11 See Mateusz Perkowski, "FDA's new animal feed rules will hurt livestock-related industries", Capital Press, 29 April 2008. <http://tinyurl.com/57dnp3>

12 According to the latest polls, over 75 per cent of South Koreans are unwilling to buy US beef and over 80 per cent want the protocol renegotiated.



Cartoon by Martha Rosenberg



Box 2: What matters are the rules, not the disease

The US strategy at the OIE has been to change the guidelines covering trade from countries with BSE, so that a country's status is not based on the presence of BSE but on a "scientific risk assessment" of the safeguards that a country adopts to keep BSE out of exports. The US took a first step in this direction in 2003 by creating a new status of "minimal risk" within its own regulations for countries exporting beef to the US. It then successfully pushed for a resolution at the OIE, adopted in 2006, whereby the five original categories for classifying a country were abolished and three new categories – "negligible BSE risk", "controlled BSE risk" and "undetermined BSE risk" – were adopted. At the same time, it was decided that the OIE, which previously ruled only on a country's claim to be BSE-free, could now rule on whether or not a country should be considered a "controlled risk". If a country gains this classification, it can then more easily restart exports.

At its General Session in Paris in May 2007, with Korean protesters outside in the streets, the OIE issued its first list of "controlled risk" countries, with the US, not surprisingly, qualifying for entry. The US immediately took advantage of this ruling. "We will use this international validation to urge our trading partners to reopen export markets to the full spectrum of US cattle and beef products", Mike Johanns, US Secretary of Agriculture, declared. "We will use every means available to us to ensure that countries rapidly take steps to align their requirements with international standards."¹

1 Statement by the US Secretary of Agriculture, Mike Johanns, regarding US classification by OIE, 22 May 2007.

are important for them because domestic demand is largely for white meat, so they have a very large – and growing – surplus of dark meat, mainly chicken leg quarters. Exports are currently worth around US\$5 billion a year.¹³ But few countries will accept US chicken parts, owing to the level of hormones and antibiotic residues they contain, and reluctance to allow local chicken farmers to be driven out of business by imported chicken parts, which are sold at such ridiculously low prices that the scheme really amounts to dumping. So US poultry corporations, such as Tyson and Cargill, are banking on FTA processes to provide additional leverage to prise open these markets.

The US FTA with Morocco set an early precedent. Morocco drastically reduced tariffs and then agreed to accept export certificates from US inspectors "as the means for certifying compliance with standards on hormones, antibiotics, and other residues" for beef and poultry.¹⁴ Soon after, as part of the US–Panama FTA negotiations, Panama agreed to recognise the "equivalence" of US meat inspections and the US beef grading system and to allow in all US beef exports consistent with OIE standards.

The US–Central America FTA brought another important victory for US poultry corporations. Central America's poultry companies, which have traditionally been protected by tariff barriers, are strong, with powerful political connections. The US said it was concerned that the dismantling of the tariffs, agreed under the FTA, would spark "a movement among Central American poultry producers to block entry of US poultry and

products through the use of sanitary technical barriers."¹⁵ El Salvador, Honduras and Costa Rica have long taken a tough line on salmonella in imports, which means, in effect, banning imports of raw poultry from the US, where the bacterium is rife. To the annoyance of the US poultry industry, Honduras also has strict import regulations on avian flu. In the past, Central American countries have been able to ignore US complaints that these measures are "arbitrary" and "unscientific" because they have been self-sufficient in poultry. But the FTA negotiations changed the dynamic. By way of a parallel working group on sanitary standards, the US is able to force through such "difficult changes" and get all countries to agree to "recognise the equivalence of the US food safety and inspection system".¹⁶

In other countries, US meat corporations have used FTAs to achieve even more spectacular victories. The US–Peru FTA is a case in point. Sara Lilygren, Vice President for Federal Government Relations for Tyson Foods, called it "the best market access arrangements for poultry ever negotiated in a free trade agreement".¹⁷ Tyson and other US poultry corporations won not only tariff-free market access for chicken leg quarters, but also a specific commitment from Peru to accept the US system for determining a country's disease status. Even more remarkably, Peru agreed to adopt US sanitary standards for inspecting facilities for slaughtering and processing poultry.

What this means is that Peru and other countries that have signed similar agreements will allow the

13 USDA Economic Research Unit, "US Poultry Outlook Report – April 2007", US Department of Agriculture, Washington DC. <http://tinyurl.com/4pco2h>

14 US Trade Representative, "US–Morocco Free Trade Agreement Agriculture Provisions", USTR, Washington DC, 7 June 2004.

15 USDA, "Guatemala: Poultry and Products, Production and Consumption", GAIN Report, 30 August 2006. <http://tinyurl.com/3uhkc2>

16 US Embassy in Nicaragua, "Nicaragua: Country Commercial Guide, Chapter 5". <http://tinyurl.com/4sn4st>

17 Testimony Before the Full Committee of the House Committee on Ways and Means, 12 July 2006. <http://tinyurl.com/3oxe47>



Box 3: EU chicken ban

People may not be aware of it, but the European Union has banned US chicken imports since 1997, because of the US practice of sluicing chickens in chlorine before they're shipped out of the country. Instead of requiring too many hygiene controls, which are said to be expensive for the industry, US authorities simply mandate that chicken carcasses get nuked in chlorine before they are packed for overseas. Brussels is under tremendous bilateral pressure from Washington to lift this ban. "The United States can do what they want at home but European consumers have other demands", French Agriculture Minister Michel Barnier recently said to defend the ban. "They want checks all along the production chain and not a brutal disinfection at the end."

[Source: "EU farm ministers balk at moves to permit importation of chlorine-treated US poultry", *International Trade Daily*, BNA, 20 May 2008.]

18 Cargill Meats Central America.
<http://tinyurl.com/3vhejw>

19 USDA, "Eligible Foreign Meat and Poultry Establishments".
<http://tinyurl.com/4cewnv>
Mexico is approved to export only processed poultry products slaughtered under Federal inspection in the United States or in a country eligible to export slaughtered poultry to the United States.

20 "EU 'strongly committed' to Mediterranean agriculture", *Food Navigator Europe*, 8 December 2006.
<http://tinyurl.com/429ers>

21 Veena Jha, South Asia chapter of "Environmental regulation and food safety: Studies of protection and protectionism", IDRC, Ottawa, 2005.
<http://tinyurl.com/4y4524>

22 Arun S., "Govt asks EU to lift 'paranoid' health-related trade barriers", *Financial Express*, 10 May 2008.
<http://tinyurl.com/4qzs8>

23 Until recently, the EU-Chile FTA was the only instance where the EU brought its own animal welfare criteria into another country's sanitary norms as a condition for bilateral trade. Animal welfare now appears in the draft EU-Central America FTA, which may mean that it is becoming a regular demand on foreign partners, since the EU is currently negotiating a rash of new FTAs.

24 Centre for Disease Control, Washington DC.
<http://tinyurl.com/4fr7vx>
These statistics refers only to reported cases.

25 Compiled from USDA food recall statistics:
<http://tinyurl.com/4ddxxm>
One April 2008 recall involved over 400,000 pounds of frozen cattle heads with tonsils intact. Tonsils are a vector of BSE.

dumping of poor quality US meat into their markets. The impacts will be immediate and brutal for their local industries, especially for the small producers. Big US poultry companies are already using their new market access to buy up local producers and to integrate them directly into their transnational production chains, as Cargill did recently with the take-over of two important poultry companies in Honduras and Nicaragua.¹⁸ A few local companies may survive by consolidating and expanding their operations internationally. The Multi Inversiones poultry group of Guatemala, for instance, has expanded into neighbouring countries and into Brazil. But it is extremely unlikely that the such companies will be able to use the FTA to establish themselves in the US market. While FTAs may in theory give local poultry producers some access to US markets, the US inspection system tends in practice to block out all but the biggest. Only three poultry plants in Chile and two in Costa Rica are certified for export to the US. El Salvador, Honduras, Guatemala and Morocco have none at all. Poultry factories in Mexico – which is a large poultry producer, with an FTA with the US, sitting next door to the US market – can get approval to export processed poultry products to the US only if they are slaughtered under federal inspection *in the United States!*¹⁹

The European Union is even harsher in its requirements. With beef exports from its biggest supplier, Brazil, the EU not only requires the certification of slaughterhouses but also of farms. As of February 2008, only 106 farms in all of Brazil were authorised to export beef to the EU, which means that only Brazil's largest beef companies will have access to Europe's high-value market. Or take India. The Indian government is eagerly trying to negotiate an FTA with the European Union in order to boost its access to EU consumers. Yet Europe plays an extremely hard line on food safety. First, as a general rule, it maintains that its food safety standards are "non-negotiable", even in an

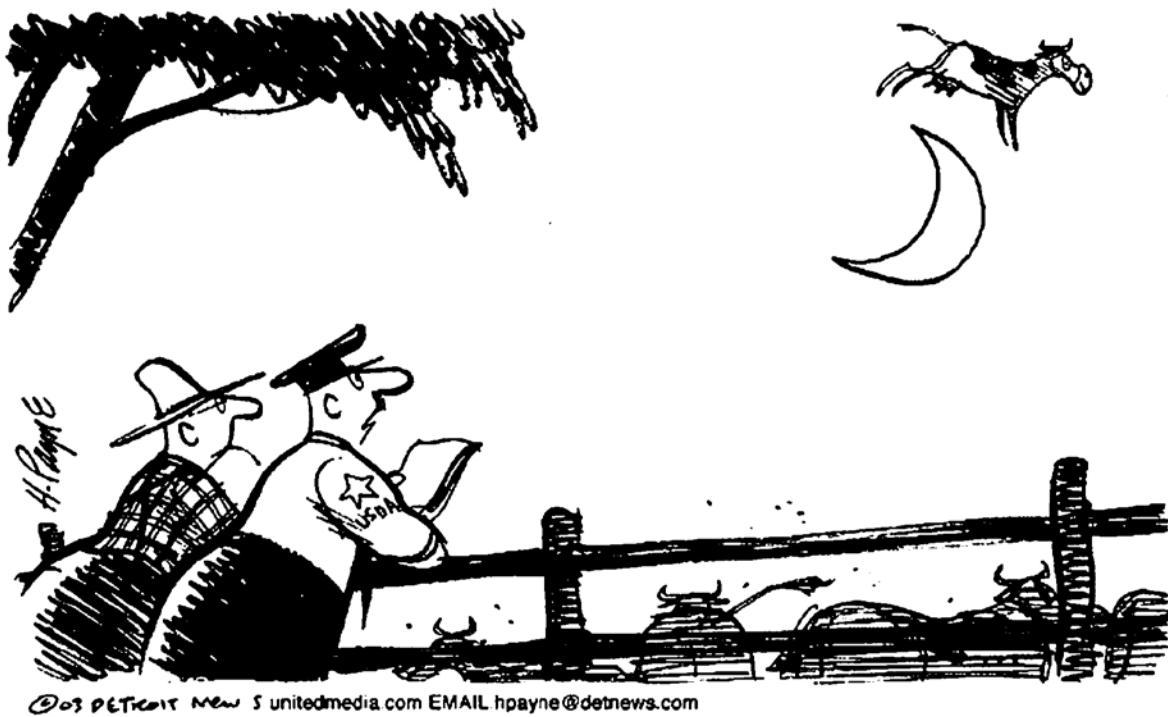
FTA "negotiation".²⁰ Second, it makes demands on foreign food producers and processors that border on the absurd. Ten years ago, the EU banned all fish products from India on grounds that its import requirements were not being met. These included washing the ceilings of the fish packing units with potable water!²¹ This in a country where some 40 per cent of the people lack access to potable water. Delhi calls this level of food safety standard "paranoia", but it will have a tough time getting its way.²² The EU is also starting to ratchet up its demands for animal welfare in food production through its FTAs.²³

Safety for whom?

The hypocrisy of this all is amazing. Each year, 76 million Americans – one in four – go down with food poisoning, and 5,000 die from it.²⁴ Over the last year alone, some 200 million pounds of beef have been recalled from the US food supply because it was unsafe.²⁵ In May 2008, the Bush administration aggressively – and illegally, some say – reversed a court decision that had allowed Creekstone Farms, a US meat packer that wants to market its products as BSE-free, to test all its animals for mad cow disease. Washington argues that such tests create "false assurances", but its real concern is to protect Big Beef from having to carry out such controls.²⁶ (And here's where it gets more complex. By the end of 2008, when the paperwork is done, the US beef packing industry is going to be dominated by one Brazilian firm, JBS. The cows will still be slaughtered in the US, but the command centre will be in São Paulo, making it less straightforward to talk about "US beef".)

In fact, many US and European food and retail corporations tacitly admit that governments' so-called "science-based" standards are inadequate. McDonald's and other fast-food chains enforce their own private inspection programmes for their meat suppliers. And major retailers, such as Wal-Mart





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"YUP. DEFINITELY MAD COW DISEASE."

Cartoon by H. Payne, Detroit News

and Costco, have their own private certification regimes, requiring distributors, processors, and even farmers to comply with detailed, onerous standards – starting with the choice of seeds that farmers sow (e.g., must conform with UPOV!).²⁷ The use of private standards to control what happens from the farm to the supermarket shelf is rising so forcefully, with Europeans taking the lead in imposing their norms as the international norms, that governments around the world are having a hard time juggling their public responsibilities (to protect public health) with the private agendas (food standards) at the heart of this system.²⁸

Just as the global food crisis has shown that the very notion of food security has been hijacked by a model that exists to make money, not to feed people, so too do today's food safety skirmishes show us that the industrial food system has nothing to do with health. Food safety should be about health and culture. And it should allow for diversity – from production to consumption, with space for citizens' concerns to be respected. Instead, we're being pushed into more and more uniformity about what constitutes safe food and acceptable risks. That uniformity, whether they call it harmonisation or integration, is driven primarily by the needs of global agribusiness and food retailers. The empty standards of the US, where regulations are tailored to suit corporate

lobbies, are a clear and present danger. But even in the case of the EU, with its economic agenda more discreetly hidden, the undercurrent of imperialism is disturbing. Tomorrow it may be so with rising food industry powers such as Brazil.

The challenge this poses for people's movements is truly important. Food safety rules have to be brought back into the realm of local concerns and needs, not those of the global food industry.

GOING FURTHER

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26 Sam Hananel, "Government asks court to block wider testing for mad cow", Associated Press, 9 May 2008.
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<http://tinyurl.com/34lh9m>
 UPOV protection, a kind of patent for plants, forms part of the EurepGAP, now GlobalGAP, standards. See <http://tinyurl.com/3n55b5>

28 In 2007, EurepGAP – the European private standards on Good Agricultural Practices for the production of food – became GlobalGAP. Developing countries are now benchmarking and setting their food production standards in reference to GlobalGAP.



Polish farmers defy EU bureaucracy

GRAIN

In June 2003 a large majority of Poles enthusiastically voted in a referendum to join the European Union. The 'yes' vote even had the support of the then Pope, Polish-born John Paul II. Most people refused to listen to the warnings of a small group of activists, who predicted that EU membership would spell doom for the country's 1.5 million small farmers. But today, four years after Poland joined the EU, many of the fears expressed at the time are proving justified.

"Just as we warned, EU bureaucracy is beginning to destroy our way of farming", says Jadwiga Łopata, founder of the International Coalition to Protect the Polish Countryside (ICPPC). "We still have 1.5 million farms, more than any other European country. Most of our farms are tiny by European standards – about 7 hectares – and they play a huge role in protecting our biodiversity, as well as providing us with fantastic food. Most farms are mixed. Our farmers both plant crops and rear animals – one or two cows, a few goats, a few pigs and some chickens. And now they are facing more and more problems with EU bureaucracy. Polish farmers are finding that the practices they adopted hundreds of years ago are now illegal. It's become a nightmare."

So what sort of practice has been banned? "When I was a child, I drank milk that farmers had hand-milked from their cows. I can't remember anyone ever getting ill as a result. But now it's illegal to milk by



Photo: Jadwiga Łopata, ICPPC

One-horse plough, Poland

hand and sell it. And the local dairy, which used to buy the farmers' milk, has been closed down for failing to comply with the EU's sanitary and hygiene regulations. Our village used to have 100 cows; now there are only two." So are farmers being forced out of business? "Not yet, but many are changing the way they farm in order to survive. They are becoming less diverse. For instance, if you get rid of your animals and just cultivate fruit trees, the bureaucracy isn't so bad. But we're losing

a lot of biodiversity as a result. It's very visible."

Julian Rose, a British organic farmer who now also farms the small area of land that forms part of the ICPPC's headquarters, says he knows what the Polish farmers are going through. "I went through it myself when EU regulations were being enforced in the United Kingdom. You have to have stainless steel walls and concrete floors in your cowsheds. You have to have eartags and passports for your cattle. You



"GMO-Free", but for how long?

Poland is the only country in the EU that has imposed an outright ban on GMOs. In 2004 the ICPPC began to lobby local authorities to declare their regions "GMO-free". They argued that such a ban would help trade and tourism. One by one the 16 voivodeships or provinces not only agreed to a local GMO ban but lobbied the central government to have the ban turned into a national law. Rather to the amazement of the activists, the then Prime Minister, Jaroslaw Kaczynski, agreed. In April 2006 the Polish parliament adopted a law on seeds and plant protection that introduced a total ban on both the trade in, and cultivation of, GMO seeds on Polish territory.

But the ban is under threat. On 31 January 2008 European Union regulators began proceedings against Poland at Europe's highest court, the European Court of Justice, alleging that the ban had "no scientific justification". If the court finds against Poland, the country will face a hefty fine. At the same time, Monsanto, which was reportedly caught off guard by the Polish decision, is lobbying hard to get the ban lifted. "Every week or so a delegation arrives from the US authorities or from Monsanto", says Jadwiga Łopata. "The pressure is huge. Our current Prime Minister, Donald Tusk, is beginning to wobble. And we see Poland's stance as crucial. If Poland gives in, the corporations will have a much better chance of getting GMOs accepted throughout the EU."

have to conform to rigid bureaucracy or face heavy fines. I fought it like blazes at the time and just about survived. But I know how destructive the process is to the quality of food and the quality of life. My job, as President of ICPPC, is to warn the Polish farmers: 'Don't follow us; keep your traditions alive and you will come out ahead in the end'."

Even before joining the EU, Poland had undergone rapid economic change, stemming from the collapse of the Soviet Union. The economy was opened up to market forces, and multinationals snapped up cheap assets. One of the corporations to move in was Smithfield, the US meat processing giant, which in 1999 bought up Animex, Poland's largest meat processor. Since then Smithfield has set up a dozen huge pig farms, often buying up bankrupt state farms. Intensively feeding its tens of thousands of pigs with genetically modified soya meal imported from North and South America, Smithfield has been able to produce pork more cheaply than the local farmers. Indeed, since 2004 the price of pork has dropped 30 per cent, causing additional problems for local farmers. Although consumers have been shocked by reports of the overcrowded conditions in which the pigs are reared, many are still purchasing the cheap pork products.

Smithfield's products are sold in supermarkets, another innovation for Polish consumers. "When we were under Communist rule, we heard about supermarkets and we were fascinated by the idea of them", says Jadwiga Łopata. "The food looked so good and it seemed cheap. When supermarkets finally arrived, after the collapse of communism,

people at first flocked to them. About 90 per cent of the food came from Western countries. It looked attractive as it was so well packaged. But quite soon people found that the food didn't taste as good as it looked and actually was often quite awful. So some people have gone back to buying local food, but a lot of people still buy in supermarkets because the food is so cheap there."

Julian Rose thinks it tragically ironic that Polish farmers, who survived first the German invasion during the Second World War and then the collectivisation of agriculture under the Soviet Union, are now threatened with annihilation by the European Union. Few Poles expected the current problems. After 77 per cent of the Polish population voted to join the EU in 2004, the European Commission announced with satisfaction: "A great, proud nation is turning the page of a tragic century and freely takes the seat that should have belonged to it right from the start of the process of European integration." A new era was dawning, the Poles were told, and they bought into the dream.

But the new dawn has ended, at least for farmers, who still constitute about one-fifth of the workforce. So what should they do? Jadwiga Łopata and Julian Rose don't hesitate to respond: "We must organise at the grassroots level and resist. We must ignore the EU regulations and continue to support a way of life that has been going on for centuries. If enough country folk do this, they won't be able to stop us." So isn't it possible to get the EU to change? "I used to think that we could get the EU to accept radical reforms", said Julian Rose, "but I don't

believe that now. It's a waste of time and energy. In the longer term change will come. Monocultural chemical farming is doomed." "Our mixed way of farming is the future", added Jadwiga Łopata; "our farmers don't destroy biodiversity, and they're not dependent on oil".

"Farmers were beginning to replace their workhorses with 35-horsepower tractors, but now, with the price of diesel rising so quickly, they're having second thoughts", continued Julian Rose. "And don't forget, horses are sustainable, as they reproduce. Not something tractors do! In many ways, the hike in oil prices is good news, in so far as it means that people are beginning to go back to the time-tested, sustainable ways of farming. It's not a case of opposing new technology, which can help us a lot by providing new forms of renewable energy and better implements. It's a question of combining the best from the past with the best that the modern world has to offer."

As if 12 hours a day campaigning to support local farmers and keep GMOs out of Poland (see Box) was not enough, Jadwiga Łopata and Julian Rose are embarking on a regional campaign to raise awareness among farmers of the importance of saving their native seeds and developing "living seed banks". They consider it crucial that this tradition is maintained at a time when both corporations and EU seed processors and regulators are acquiring unprecedented control over the food chain. "We see it as a basic community concern all over the world. How can there be food security without home-grown seeds?" asks Jadwiga Łopata.



Saying "no" to chemical farming in India

GRAIN

"My conversion to chemical-free farming began about ten years ago", said Malliah, a farmer from Yenabavi village in Warangal district in Andhra Pradesh. "I had an infestation of red-headed hairy caterpillars. I used all kinds of pesticides and couldn't get rid of them. I was getting desperate, as the caterpillars were spreading all over my cotton crop and castor beans." An agronomist from

the Centre for World Solidarity (CWS), an Indian voluntary organisation, was visiting the village, and showed him how to set up solar-powered light traps. He put several of these traps on his land and they were "100 per cent effective".

Buoyed by this success, Malliah gradually developed other natural ways of controlling pests. He and other villagers started to go out early in the morning and

late at night to study the life cycle of the pests so that they would learn when was the best moment to deal with them. With the help of the Centre for Sustainable Agriculture (CSA), they began to use seeds from the neem tree, a native species used for centuries to control pests. They began to grind the neem seeds, put them in water to soak overnight and then spray the liquid on their crops. The neem treatment disrupts the development and

reproduction of harmful insects without harming the birds and beneficial insects that provide natural pest control.¹ Similar plant-based formulations were also developed.

They moved on to other techniques. They started planting “trap crops” of sorghum, marigold and castor around their fields to attract pests away from their crops. They applied a mixture of cow dung and urine to combat leafhoppers and aphids. They started summer ploughing to disrupt the life cycle of bollworms and other pests. To increase soil fertility, they began producing green manure, tank silt and vermicompost. Encouraged by what they were achieving, Malliah and some other farmers went a step further in 2003 and stopped spraying or using chemicals of any kind, including fertilisers, on their land. With the support of the CSA and other organisations, they adopted completely organic farming. More recently still, they declared their village both organic and GMO-free. There are now 50 organic and GMO-free villages in Andhra Pradesh. They form part of the GM-Free India coalition, which brings together farmers’ organisations, agricultural activists, NGOs, consumer groups and women’s federations from over 15 states in India. Since 2006 they have been working together as an informal network to hold an informed debate on GM and to create alternatives.

Malliah himself has become an advocate of organic farming and visits other villages to encourage them to follow his

example. He doesn’t pretend that organic farming is easy. Making and applying natural fertilisers and managing pests is hard work, he says. Farmers can also face a drop in yields in the first year of non-chemical farming, either because the soil needs time to recover or because the farmers have not yet mastered the new techniques. But the compensations are huge. Putting an end to chemical farming frees the villagers from the grip of middlemen, who sell the villagers on credit a “package” of hybrid seeds, fertilisers and insecticides, supplied by corporations such as Bayer, Syngenta, Dupont and Monsanto. The villagers are then forced to sell their crop to the middlemen in order to pay back their loan.

As Malliah explains, credit is very risky for small-scale farmers. “A few years ago we had a severe hail storm”, he said. “It destroyed everyone’s crop. But all I lost was the work I had done. I just had to pick myself up and press on. Some neighbouring farmers had bought their chemical pesticides and fertilisers on credit. They lost their crop, just like me, but they had the added burden of debt, and no way to pay back the money.” All too often this initial unpayable debt is the first step in a process of debt entrapment that drives the farmers to despair.

There are other problems with chemical farming. Pesticides are often applied in excessive concentrations. Some farmers are illiterate and cannot read the instructions. Others increase the dose to try and deal with pests that have developed resistance. Farmers in Lakshminayak Thanda, another village in Warangal district, have started farming without the use of chemical pesticides (which is often, as in the case of Yenabavi, the first step towards organic farming). Sattermma, president of the women’s self-help group, said that her family used to grow *Bt* cotton (Monsanto’s GM cotton), “I was never happy with *Bt* cotton. Some goats in the village died after grazing on a *Bt* cotton field after the harvest”, she said. “Then there were the pesticides. We at home used to feel ill because of the pesticides. We’ve all been feeling so much better since we stopped using them. We also spend much less on medical care. Altogether I’m feeling much happier now.”

Very often farmers obtained high yields in their first year of growing *Bt* cotton, the result of applying chemicals on fields



Photo: GRAIN

Malliah, a farmer in the organic village of Yenabavi, Andhra Pradesh

that still contained a great deal of natural fertility. This obscured the fact that they had begun a process that was degrading their soils. The chemical-dependent crops soon became less resistant to disease and unseasonal weather. Malliah gave an example. “Last year we had a three-month drought. Most of my crops survived whereas those of farmers using chemicals died.”

Pesticide-free farming is spreading in the region, partly because in the medium term it brings farmers a larger and more reliable income. In Lakshminayak Thanda they have a regularly updated chart in the centre of the village in which they compare the income of cotton farmers who have given up the use of chemical pesticides, compared with that of farmers using them. Farmers not using pesticides are practising NPM (non-pesticide management). As can be seen in the photograph, the two kinds of farmers had comparable yields for cotton last harvest (520.2 kg for the NPM farmer, compared with 522.5 kg for the farmer using chemical pesticides), but the net income of the NPM farmer was considerably higher (3,512.60 rupees compared with 2,861.50 rupees), because his costs were much lower.

Andhra Pradesh is the pesticide capital of the world. In the 1970s and 1980s the state government encouraged farmers to adopt high-yielding varieties (HYVs) of cotton, telling them that industrial-scale production would save them time



Photo: GRAIN

*Sattermma, a farmers’ leader in Lakshminayak Thanda, Warangal district, Andhra Pradesh, where villagers have abandoned *Bt* cotton*

COTTON CROP ECONOMICS			
2007-08 (Rain fed) Comparative Analysis			
Sl. No.	Particulars	NPM	Non-NPM
1.	Total Expenditure	6371=20	7066=00
2.	Cost of Pesticides	456=00	1040=00
3.	Yield (in Kgs)	520.2 Kg	522.5 Kg
4.	Total Income	9883=80	9927=50
5.	Net Income	3512=60	2861=50
6.	Expenditure for 1kg. Yield	12=58	13.67
7.	Pesticide Cost 1kg. Yield	0.88	1.99

Photo: GRAIN

Comparative analysis of yields, income and expenditure involved in using chemical pesticides (right) and natural pesticide methods (left), taped to a wall in the village of Lakshminayak Thanda, Warangal district, Andhra Pradesh

and bring them much greater wealth. Over half of pesticides used globally are applied to cotton.² By 2004 the state was in the midst of an agrarian emergency. By then, thousands of farmers had taken their lives – some of the 150,000 indebted farmers who committed suicide in India between 1997 and 2005.³ The deaths are an extreme symptom of much wider rural distress. For every farmer who kills him- or herself, countless others faced morale-sapping despair. A survey carried out in Andhra Pradesh in 2004 and covering scores of rural households across many districts showed that all had very high levels of debt.⁴ Almost every household had been forced to sell cattle or land or both in the previous few years. Although a severe drought had made the situation worse, it was clear that the move from food crops to cash crops made the farmers much more vulnerable than they had been in the past.

Although many of the problems persist today and the suicides are continuing,

an alternative is arising. Already 1,897 villages have adopted NPM – an area totalling about 700,000 acres. Raghuvendra Reddy, Andhra Pradesh's minister for agriculture, has become a supporter. The plan is within a few years to have 2.5 million acres (about 1 million hectares) under community-managed sustainable agriculture. The long-term goal is even more ambitious – 10 million acres (about 4 million hectares), which is 45 per cent of the cultivable land in the state. Such rapid progress may not be possible, for it takes time to wean farmers off chemical inputs and to develop the labour-intensive alternatives. Already some corporations are trying to sell farmers commercially produced organic fertilisers and pesticides, which would defeat one of the key objectives, which is to increase the farmers' self-sufficiency and to extricate them from the debt trap.

Even so, there is hope that real progress will be made. A strong network of women's self-help groups is managing

the programme, with support from the government and a network of NGOs. It is heartening to see that many, like Malliah and Sattemma, are so sure that they are on the right course that they are going from village to village to talk about their experiences.

1 Gerald Marten and Donna Glee Williams, "Getting Clean: Recovering from Pesticide Addiction", *The Ecologist*, December 2006.

2 Rhea Gaia, "Return to Organic Cotton & Avoid the Bt Cotton Trap", ISIS press release, 5 January 2006. <http://www.i-sis.org.uk/ROC.php>

3 P. Sainath, "Farm suicides rising, most intense in 4 states", *The Hindu*, 12 November 2007, <http://tinyurl.com/43pya9>
The figure of 150,000 farm suicides is recognised by the compiler of the statistic, Professor K. Nagaraj, to be a "serious underestimate".

4 P Sainath, "When Farmers Die", *India Together*, June 2004, <http://tinyurl.com/4hzva4>



Whose coast is it? *Resisting Coastal Invasion/52 mins/Director: K.P. Sasi*

film review by GRAIN

What is important for many fishing communities is not just that the sea continues to have fish, but that they continue to inhabit the strip of land along the coastline so that they can have access to the sea. It is said that two-thirds of the human population live in coastal areas. Yet in some parts of Asia, private interests are driving fishing communities away, often with government backing. This is the case in India. In his latest documentary work, "Resisting Coastal Invasion", Indian film-maker K.P. Sasi turns his lens on coastal communities in the southern Indian state of Kerala. The film is premised on the central question: who has the rights to the coast in this era of globalisation and privatisation?

In exploring the many facets of the complex struggles of coastal communities in Kerala, K.P. Sasi focuses on the importance of the Coastal Regulation Zone (CRZ) on local lives and livelihoods. Local people had hoped that the CRZ,¹ which forms part of the only environmental legislation in India, would protect the interests of small fishers in the coastal areas. But the zone has been a disappointment, as it has been poorly implemented and widely violated, but now worse could follow with the proposed replacement of the CRZ with a Coastal Management Zone (CMZ) scheme. The CMZ, it is feared, will exclusively favour industry and construction at the expense of small fisherfolk.

The film exposes many violations of the CRZ, looking at them with varying levels of detail. Aquaculture, primarily shrimp farming, which contaminates sea water, is mentioned. There is a fuller account of a titanium factory (Travancore Titanium Products Limited) that throws its waste in the sea, causing a serious decline in the fish catch and compromising public health. Local residents claim that there is now widespread leukemia, skin diseases, and eyesight and bronchial problems in the community as a result of the factory's operations. Even more thoroughly examined is organised sand mining controlled by a mafia that reportedly works hand in glove with political parties, and which reportedly uses physical violence to silence anyone who questions their operations.



Hauling in the morning's meagre catch near Thiruvananthapuram, Kerala

Photo: GRAIN

The film's emphasis on sand mining reflects the immense problem that it creates. Some recount how coconut trees are uprooted and roads disappear as they get "eaten up" by the sea owing to sand mining. Olive Ridley turtles and rare species of mangrove are disappearing. Drinking water has been affected. According to some residents, the coastal strip used to stretch several kilometres inland, so groundwater was protected from seawater seepage. But now all the wells have salty water. To cap it all, the fishing communities are losing their livelihoods. Most fishing in Kerala is land-based seashore fishing. This has come to a standstill as the coastline shifts. Seawater flooding has become a regular occurrence after the removal of sand from a tourist village. In the state capital, Thiruvananthapuram, between 100 and 500 bags of sand, loaded on to an outrigger boat, are reportedly removed daily. In Valiaveli, sand covering about 175,000 square metres, to a depth of 4 metres, has reportedly been removed.

Even though the CRZ was never properly implemented, some activists say that industrial interests saw it as serious barrier and were constantly campaigning to weaken it. The film claims that it has so far undergone 19 alterations, each of which has authorised additional activities within the regulated zone. More recently, however, industrialists have been pressing for it to be scrapped altogether. In a report submitted to the central government in 2005, the M.S. Swaminathan Committee recommends that CRZ be replaced with Coastal Management Zone (CMZ). The report envisages an integrated management plan covering the coast and coastal waters to 12 nautical miles (22 km) out. Many view this report

as a roadmap for further opening up India's coast to an influx of private and commercial interests.

The film follows the activities of the Kerala Independent Fishworkers' Federation, which says that, if the CMZ is implemented, it will create a number of problems for them. First of all, it will enable sand miners to extend their activities to 12 nautical miles out to sea. Worse still, the fishing communities will lose housing rights, as they will not get titles to their land. Their customary access to the waters and the adjacent lands is thus in jeopardy. When interviewed in the film, Swaminathan (formerly director general of the International Rice Research Institute in the Philippines) distances himself from the central government's decision, repeatedly downplaying his committee's role. "It's only a report we submitted", and "It's the government who will decide what to do with it", he says. The Kerala fisherfolk know exactly what to do with it. The film includes footage of a protest in front of the fisheries ministry office, where fisherfolk burned the Swaminathan report to show their indignation.

The film, despite its slow pace, tells a moving story of the interests of the small being sacrificed for the benefit of the big few. More importantly, it shows that the small are fighting back. Although set solely in India, the film captures very well one of the realities of globalisation: the marginalisation of small fishers for the benefit of commercial interests.

¹ <http://tinyurl.com/52cghw>

To order the film, visit <http://www.visualsearch.org>

To learn more about the struggles of the Kerala fishers, visit <http://keralafishworkers.org/>



GM seeds dig in

The seeds of some genetically modified crops appear to remain in the earth for at least a decade. Researchers at Sweden's Lund University and Denmark's Technical University have found transgenic plants growing in a field planted with GM rapeseed more than ten years ago. Although measures were taken in the years following the trial to remove 'volunteers', 15 out of 38 sample seedlings tested positive for the genetically modified trait of herbicide tolerance ten years after the trial had ended.

"Finding volunteers like this, despite labour intensive control for ten years, supports previous suggestions that volunteer oilseed rape needs to be carefully managed in order for non-GM crops to be planted after GM crops ... I think for oilseed rape we may have to be aware that there will always be some contamination and therefore we may need labelling to tell the consumer," said lead researcher Tina D'Hertefeldt.¹

1 *Biology Letters*, 23 January 2008.

Peak glyphosate

First peak oil, now peak glyphosate. The price of glyphosate – traded by Monsanto under the name of Roundup – has been rocketing. Even though Monsanto's patent on glyphosate ended in 2000, the company still produces 60 per cent of the world's supply. Roundup has contributed mightily to Monsanto's record profits. In the second fiscal quarter of this year, the company's sales of glyphosate and other herbicides soared by 85 per cent, compared with the same period a year ago.

Demand for glyphosate has been growing but that may not be the main reason for the increase in price. In a bizarre twist of chemical fate, phosphorus, which, along with potassium and nitrate, is one of the three main components of chemical fertilisers, is also a critical ingredient in glyphosate. In other words, the same chemical used to make some plants grow is also employed to kill off others. And now some scientists think that reserves of phosphate rock, a non-renewable resource, will run out within the next 40 to 50 years.¹

And there's more. Transforming rock phosphate into the elemental phosphorus, which, in turn, is processed into the

phosphorus trichloride required for glyphosate production, not only causes a lot of pollution but also consumes a great deal of energy. According to testimony by a Monsanto employee at a US government hearing a few years ago in Soda Springs, Idaho, electricity accounts for 30–45 per cent of the production costs of glyphosate. So difficult times ahead for Monsanto's RR soya.

1 Andrew Leonard, "Peak weed-killer?", *How the World Works*, 8 April 2008. <http://tinyurl.com/5q5se6>

Crisis management

Over the last few weeks the world's largest agrochemical and seed companies and their allies in industry and academia have been appearing frequently on television and radio to tell us that they – and they alone – have the solution to the interlinked problems of the food crisis and climate chaos. According to them, the way forward, as you might have guessed, is to purchase seeds (and the support package of fertilisers, pesticides and so on) for a whole range of new crops that these companies are helpfully preparing for the world's farmers.

The world's top ten corporations already control 57 per cent of commercial seed sales. Now, they are taking out hundreds of patents all over the world on crop genes that are linked to environmental stress.¹ New deals are being cooked up. For instance, Monsanto, the world's largest seed company, and BASF, the largest chemical firm, have entered into a US\$1.5-billion partnership to engineer stress-tolerant plants.

Few dispute that climate change will cause huge problems for farmers. A study by the International Rice Research Institute (IRRI) shows that for every increase of one degree Celsius in night-time temperatures rice yields decline by 10 per cent. What the corporations ignore, of course, is the part played by the industrial farming methods that they promote in creating global warming and the food crisis in the first place. To intensify such methods will make big profits for the corporations, and both of these problems that bit worse.

1 ETC group, "Patenting the 'Climate Genes' ... and Capturing the Climate Agenda", *Communiqué* 99, May/June 2008. <http://tinyurl.com/5k5wtp>

GM crops not the answer

Given the barrage of pro-GM propaganda over the last few months, it is no bad thing to remind ourselves that GMOs have never been shown to obtain higher yields than conventional crops and have often performed worse.¹

Studies from 1999 to 2007 consistently show Monsanto's Roundup-Ready (RR) GM soya to have 4–12 per cent lower yields than conventional varieties. Moreover, RR soya performs particularly poorly under drought conditions, when it suffers 25 per cent higher losses than conventional varieties. There has been a significant trend of yield increases in maize during the biotech era, but again GM varieties have not performed better than conventional varieties. A rigorous, independent study conducted in the US under controlled conditions demonstrated that *Bt* maize yielded anything from 12 per cent less to the same as similar conventional varieties.

The crop around which there has been most controversy has been *Bt* cotton. Despite the hype around the "wonder crop", an investigation by GRAIN last year revealed no consistent pattern of increased yields for *Bt* cotton compared with conventional varieties.² Moreover, the cultivating *Bt* cotton made farmers much more susceptible to contracting crippling debts.

The biotechnology companies say that it is not fair to judge them on yields, because they didn't develop the first generation of GMOs to increase productivity. But GMOs also failed to deliver the promised reduction in pesticides outlay, which was the main reason for their invention. Although pesticide expenditure often declined in the early years, it bounced back to its former level – or even higher – as farmers sought to deal with new, resistant 'super weeds'. GMOs' main achievement so far, it seems, is to have made life easier for some big farmers, along with providing big profits for the corporations.

1 Emma Hockridge, "GM crops are not the answer to world hunger", *China Dialogue*, 21 May 2008. <http://tinyurl.com/57domd>

2 GRAIN, "*Bt* cotton: the facts behind the hype", *Seedling*, January 2007. <http://www.grain.org/seedling/?id=457>



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GRAIN's latest publications

Getting out of the food crisis

GRAIN, *Seedling* editorial, July 2008

Published in this issue of *Seedling* and online at:
<http://www.grain.org/foodcrisis/>

Making a killing from hunger – We need to overturn food policy, now!

GRAIN, *Against the grain*, April 2008

<http://www.grain.org/articles/?id=39>

The world food crisis is hurting a lot of people, but global agribusiness firms, traders and speculators are raking in huge profits. The fundamental cause of today's food crisis is neoliberal globalisation itself, which has transformed food from a source of livelihood security into a mere commodity to be gambled away, even at the cost of widespread hunger among the world's poorest people. This *Against the grain* is available in English, French and Spanish.

The food crisis and the hybrid rice surge

GRAIN, *Hybrid rice blog*, 12 May 2008

<http://www.grain.org/hybridrice/?lid=202>

With the world in a major rice crisis, hybrid rice is being presented as the logical solution to boost national production the world over. The consequences of such a sudden, large-scale shift from conventional rice to corporate-friendly hybrids would be devastating for small farmers – and for the future of world rice production. This is an expanded version of the article published on page 6 of this issue of *Seedling*.

Philippines and beyond: rice crisis – reaping the “fruit” of market capitalism

GRAIN, *Hybrid rice blog*, 22 April 2008

<http://www.grain.org/hybridrice/?lid=201>

As the whole agricultural system is becoming privatised, rice production has become dependent on private seed and agrochemical companies, currency fluctuations, fertiliser price spikes, and oil price increases, making rice a highly vulnerable traded good. But the governments of the Philippines and Indonesia continue to push the very same mantras of neo-liberalism and green revolution technologies.

The FAO and Terra Preta

From 3 to 5 June the FAO held a summit on the food crisis. This meeting was originally planned to discuss agriculture and global warming but, due to recent developments, the food crisis took centre stage. Parallel to this, the IPC for food sovereignty organised a forum on the same topic called Terra Preta. The forum, which lasted for four days, brought together some 150 participants from all over the world, including representatives from social movements, farmers and NGOs. GRAIN was involved in a number of initiatives and in supporting the Terra Preta forum, which held regular discussions and news conferences. Although promises were made to provide record amounts of money for small farmers, the summit was a failure in that its main message was to encourage the use of more pesticides, more fertiliser, more free trade – exactly the recipe that caused the food crisis in the first place. Terra Preta: <http://tinyurl.com/64fkjk>

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Documents and links on the extraordinary events around recent food prices. (<http://www.grain.org/go/foodcrisis>)

(Disponible en español | Disponible en français)

GRAIN publications

GRAIN, *Getting out of the food crisis*, *New from GRAIN*, May 2008, <http://www.grain.org/nfg/?id=577>

GRAIN, *Making a killing from hunger*, *Against the grain*, April 2008, <http://www.grain.org/articles/?id=39> (Es, Fr, 한국어)

GRAIN, *The food crisis and the hybrid rice surge*, *Hybrid rice blog*, 12 May 2008, <http://www.grain.org/hybridrice/?lid=202>

GRAIN, *Philippines and beyond: rice crisis – reaping the 'fruit' of market capitalism*, *Hybrid rice blog*, 22 April 2008, <http://www.grain.org/hybridrice>

Resources

- Food crisis
- Agrofuels (biofuels)
- Bird flu
- Hybrid rice blog
- Bt cotton page
- Biodiversity rights legislation (BRL)
- BIO-IPR
- Bilateral deals with TRIPS plus
- FAO
- **Multimedia** - photos |

The GRAIN website offers much more information on the food crisis, and other issues that GRAIN is working on: <http://www.grain.org/>



