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Building food security: living in the past or reinventing the future?

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Introduction

The World Food Summit held in Rome in June 2008 is one of a number of recent events that has drawn international attention to the crisis in agriculture and food systems. This crisis is powerfully demonstrated in the simultaneous increase in both rates of hunger and obesity.¹ Despite the Millennium Development Goal to halve rates of hunger by 2015, it is likely the number of hungry people could increase from 862 million to 1.2 billion by 2025.² Escalating food prices are exacerbating global food insecurity, and in recent months citizens from over 40 countries have hit the streets to protest these price rises. World food prices continue to rise as motor vehicles increase their appetite for grains and other staple food crops for conversion to bio-fuels. This crisis in agriculture and food security is predicted to worsen as a result of climate change, and people living in countries of the South are likely to be amongst those most severely affected in the short term.

Such dire circumstances have pushed agriculture and food security to the centre stage of recent international policy debates. Despite this, in a disappointing end to the high profile international forum, the World Food Summit concluded by advocating for 'more of the same' policy solutions, including 'techno-fixes' such as genetic engineering, and on-going trade liberalisation.

Ironically, sustained support for high-tech and so-called 'free trade' policies over the last 50 years is at the heart of the current global food crisis. Rather than regurgitating simple techno-fix solutions and damaging policy approaches, there is an urgent need to develop new pathways for addressing the challenges associated with hunger, poverty and food insecurity. These new pathways need to address the structural, political and economic inequities that plague international agriculture and food systems. This will create an environment in which alternative agricultures and secure food futures can flourish.

Unfair rules of the game

The current crisis in food security is the result of long-term inequitable global agri-food policies. To borrow from George Orwell's *Animal Farm*, while the rhetoric of global agri-food politics promises that all food producers and food-producing countries will prosper, the reality is that some countries prosper far more than others. Global agri-food policies

benefit a minority of actors – primarily a few farmers in the North, traders, seed companies, food manufacturers and retailers. Most others are left significantly disadvantaged. So what are the conditions that have led to this inequality?

In recent decades global agri-food systems have been driven by policies of trade liberalisation and structural adjustment. These policies promised to establish the conditions for free trade by reducing the trade barriers between countries, de-regulating trade environments, and stimulating international investment in national infrastructure and projects. The liberalisation cheer squad – including the World Bank, the International Monetary Fund and the World Trade Organisation – argue that free trade opens up international markets, providing equal opportunities for all stakeholders to engage. The reality, however, is that free trade has produced exceptionally inequitable outcomes, especially for farmers in the South.

So-called 'free trade' has forced farmers in the South to open their markets to the rest of the world, exposing them to competition from highly subsidised farmers from the United States and the European Union. In the US, for example, to cover the difference between local and world market prices, the government invests over \$US23 billion in farm subsidies each year, including subsidies to farmers' incomes, as well as price supports and deficiency payments.³ Not surprisingly, subsidised agricultural crops dominate international markets, excluding Southern farmers from participation in international trade.

Subsidised crops not only distort the international market, they also impact domestic markets in countries of the South, with further crippling effects for Southern farmers. Subsidised agricultural products have flooded Southern markets, with up to 80 percent of all European exports now destined for African, Caribbean and Pacific countries. By swamping local markets, subsidised food imports make it virtually impossible for farmers to sell their produce in their own local markets. Powerfully demonstrating this, the consumption of locally grown rice in Ghana has dropped from 80 to just 20 percent between 1998 and 2003, as the market has been flooded by cheap imports of subsidised rice.⁴

Similarly, Southern farmers are losing both their international and domestic market share as traditional cash crops (such as sugar), are replaced by high-tech substitutes from other parts of the world (including sugar beets grown

and manufactured in the US, as well as the production of synthetic sweeteners in laboratories in Europe).⁵ At the same time, the buying power of global food companies discriminates against smallholder farmers, who are forced to sell their cash crops, including coffee, cotton, tea and oil palm, at very low prices dictated by their buyers.

It is obvious – despite the promises of free trade – that smallholder farmers in the South carry a disproportionate level of burden associated with this policy stance. This political and economic disadvantage is evidenced in the on-going reduction in incomes for farmers in the South. A recent United Nations report, for example, found that African smallholder farmers have experienced a 50 percent reduction – equivalent to \$155 per annum – in household incomes.⁶ This increase in the level of poverty is intimately tied to the structural inequities that characterise global agri-food politics. Dismantling these structural inequities of ‘free trade’ will be an important step towards addressing poverty, and building global food security.

A techno-revolution offers no lasting solutions

The 2008 World Food Summit concluded with little critique of the economic and political structures that underpin global agri-food systems.⁷ Nor did it offer new policy approaches for addressing the growing and complex challenge of global food security. Rather, the World Food Summit – along with Bill Gates, the Rockefeller Foundation and others – advocated a simple techno-fix solution. This argument is far from new. During the 1950s, proponents of the ‘Green Revolution’ promised that new hybrid seed varieties would increase rates of agricultural production and, consequently, feed the world.⁸ Over fifty years later this argument is being wheeled out again, this time pinning hopes for a techno-fix solution on genetic engineering and nanotechnology. The techno-fix approach didn’t work in the 1950s, and it won’t work today.

The reality is that producing more food will not, by default, ensure equitable food distribution and access. In fact, global rates of food production are arguably already adequate to meet the world’s appetite. In terms of grain alone, global production totalled a record 2.3 billion tonnes in 2007, representing a four percent increase from the previous year.⁹

While productivity rates of grain and other cereals continue to increase, people are eating less than half of this production. The majority of the world’s grain supply is destined for animal feed, and more recently for use as bio-fuels. At the same time, vast quantities of food are wasted: In the United Kingdom alone, a recent Cabinet report found that a third of all purchased food was thrown away, amounting to 6.7 million tonnes of domestic food waste each year.¹⁰

Advocates of genetic engineering argue that genetically modified crops will not only result in more food, but better food. With promises that genetically engineered food crops contain high nutritional value, can withstand drought, or tolerate high doses of herbicides and other chemicals, advocates present genetic engineering as a magic wand.

However, even if genetic engineering can deliver on these promises – an issue yet to be decided – the costs associated with genetic engineering render it out of reach for most Southern farmers. Genetic engineering also locks farmers into buying seeds (and other inputs, including chemicals and equipment), rather than saving seeds each year.

There is a mounting body of evidence related to the limits of techno-fix approaches for achieving food security. In South Africa, farmers have been growing genetically engineered varieties of cotton, maize and soya beans since the mid 1990s. And despite the promises of increased food production and food security of these genetically engineered crops, people remain hungry. In addition to this, rises in local food prices are placing further pressures on families already unable to meet their basic food needs.¹¹

With this in mind, the argument that high-tech agriculture will deliver food security is increasingly difficult to swallow. In his recent book ‘Starved for Science: How Biotechnology is Being Kept Out of Africa’, Robert Paarlberg argues in favour of biotechnology as a solution to food security problems, and points to issues of access as limiting its ability to succeed. Paarlberg claims African farmers remain poor and hungry primarily as a result of limited access to scientific innovations, including genetic engineering, rather than a failure of these innovations themselves. It is worth noting that Paarlberg is also a member of the Biotechnology Advisory Council to the Chief Executive Officer of Monsanto – a company that controls at least 90 percent of genetically engineered crops globally, and who have established South Africa as a base for experimentation with non-approved genetically engineered crops.¹² Clearly, greater and better production – promised alongside the introduction of genetically modified crops – does not ensure equal access to food for the world’s population.

Organic farming offers an alternative

In contrast to the high-tech future advocated by Paarlberg and others, organic agriculture offers an alternative future for smallholder farmers in the South. Organic agriculture not only offers environmental and social advantages for smallholder farmers, but seeks to challenge some of the structural inequalities that characterise international trade.

Firstly, organic farming offers environmental benefits not only on farms, but also for surrounding environments. Organic farmers in Kenya, for example, have introduced tree planting, the use of nitrogen fixing and cover crops, as well as terraces and other soil conservation strategies in the process of converting to organic farming.¹³ These farmers are observing a number of environmental benefits associated with the uptake of these practices, including increased soil fertility and water holding capacity in the soil, as well as increased plant, insect and bird diversity.¹⁴

Organic certification also creates new economic and social opportunities for smallholder farmers. In Lira, a community severely marginalised as a result of the long-standing conflict in northern Uganda, organic cotton farmers receive price premiums of 19 percent above world



cotton prices.¹⁵ While in Tanzania, organic coffee growers report a 50 percent price premium.¹⁶ In addition to the benefit of price premiums, organic certification also enables farmers to establish secure international buyers for their organic produce.¹⁷ While smallholder farmers in the South are securing international markets for their organic produce – and gaining numerous economic and social benefits – it is unlikely genetically engineered crops would provide such market security. In contrast, smallholders that cultivate genetically engineered crops are likely to face trade restrictions and consumer opposition to their genetically modified products.¹⁸

In addition to these social and environmental benefits, organic farming provides opportunities to counteract some of the social and economic inequities resulting from international trade. Firstly, organic certification standards provide clear rules that exclude child labour, whilst making provisions to ensure gender equity, as well as consideration of a range of health and safety issues. These social justice challenges have plagued conventional international trade. While Paarlberg¹⁹ (and others) have argued that African organic farms rely on the exploitation of child labour, there is evidence that suggests otherwise. In reality, organic certification standards are able to ensure that in those circumstances where children do participate in household and farm work – a common occurrence, given the household is the organising unit of production in Africa – that this does not interfere with their education or general well being.²⁰

Secondly, the development of Group Organic Certification (GOC) schemes provides new opportunities for smallholder farmers to participate in trade, and on terms that are specific to smallholders' needs. Smallholder farmers are often excluded from international trade; they have only small quantities of produce, they are unable to afford the cost of organic certification, and have little bargaining power compared to larger farmers, wholesalers and retailers. GOC represents a strategy to overcome these limitations. The GOC system represents a way forward for smallholders, and many state that it has "changed their lives".²¹ For some of the 4,000 organic coffee growers living in Sipi Falls in Uganda, GOC has also provided them with training in organic farming methods, and has led them to adopt a range of new farming techniques (including terracing on slopes to minimise erosion, tree planting to provide shade for coffee plants and timber, the addition of new crop varieties to fix nitrogen into the soil, and the addition of manure and compost). The introduction of these new farming methods has also increased coffee production for some farmers.²² As seen in this example, GOC has significant potential to improve the social and financial situation of smallholder farmers in countries of the South.

Appropriate visions for food security

Technological innovations – including genetic engineering – do not hold the key to building a food-secure future. In contrast, techno-fix solutions are short-sighted, and likely to exacerbate the structural power inequalities that are at the heart of poverty and food insecurity. By advocating techno-fix solutions, the 2008 World Food Summit offered limited strategies for addressing these social, economic and political inequities. Without addressing these structural inequities, there is little hope for ensuring global food security. With this in mind, international policy debates must reorient their attention towards the broader issues that result in and exacerbate poverty and food insecurity. This will involve expanding the debate, and thinking more creatively and critically, about a diversity of topics, including free trade and trade liberalisation, fair trade and food sovereignty.

This paper has argued that the uptake of organic farming can contribute towards re-thinking global agri-food politics, and in so doing, offer an opportunity to transform the social, economic and political foundations of agriculture and food trade. Specifically, Group Organic Certification systems integrate social justice and fair trade issues within organic standards. Such systems simultaneously present a strategy to re-build some of the inequitable social and economic relationships that continue to exist between smallholder farmers in the South and wholesalers and retailers in the North. In addition, organic farming offers environmental benefits for smallholder farmers, a solid grounding for building a food-secure future. Organic farming on its own may not be a solution to global food security challenges, however it does offer an opportunity to re-think contemporary approaches to food security, and will form part of the complex web of policy and farming strategies necessary in achieving global food security.

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