

## PRESSURE POINT

# Food Fault Lines

Hans Herren

The roots of the present food crisis can be traced to the consumption patterns of wealthy people.

For the past several decades, policy-makers have taken food security for granted. Indeed, neither policy-makers nor consumers have seriously questioned whether it has been wise to keep the global food-production system largely in the hands of corporate agribusiness and under the sway of the free market. The system's failings have been masked by its ability to provide food relatively cheaply to growing urban populations that are increasingly disconnected from their rural roots. Yet, the mask is no longer securely in place.

The recent spike in global food prices, triggered by numerous factors, has startled virtually everyone. Drought, historic increases in oil prices, a growing appetite for ethanol both in the USA and Europe, the falling dollar and chronic problems in the global agricultural system have led to grain shortages. These factors, in turn, have driven food prices to record highs.

Grain shortfalls and price spikes should serve as a wake-up call for the growing number of relatively well-off people whose consumption patterns have helped to provoke the food crisis. Wealthier people, on average, consume 4,000 calories per day per person, compared with 2,400 calories in sub-Saharan Africa. Equally striking is the fact that people living in the wealthy countries of the Organization for Economic Co-operation and Development (OECD) consume more than twice as much protein (125 grammes per person per day) as people living in sub-Saharan Africa (60 grammes per person per day).

The eating habits of wealthier consumers, combined with the complex market chains that provide their food, not only contribute to food insecurity but also degrade farmland, driving up energy costs and exacerbating the climate-change problem.

Even wealthier consumers must now face the reality that food does not appear miraculously on supermarket shelves. Farmers, especially those who are poor, have always known this. Protectionist trade policies and corporate-controlled food marketing have meant that prices rarely

reflect the true cost of growing food.

Calls for quick fixes to the current food crisis, such as applications of biotechnology, have attracted considerable attention. As *The New York Times* reported in April 2008: "Soaring food prices and global grain shortages are bringing new pressures on governments, food companies and consumers to relax their long-standing resistance to genetically modified (GM) crops".

Is this a reasonable solution or just a diversion from more fundamental factors? GM crops do not produce more food than conventional crops. Indeed, they might only perpetuate an unsustainable energy-intensive agricultural system. Put another way, biotechnology by itself will not solve the world's food crises; it represents an inadequate technological response to a socio-economic problem.

What is needed, instead, is a holistic reconfiguration of the way food is produced, bought and sold.

Global investments in agricultural research led to enormous gains in productivity from the 1960s to the 1990s. Since then, however, funding for research has declined in developed countries. It has increased in Brazil, India and China, but has decreased in Africa, where it is most needed. Productivity gains, moreover, have come from intensive use of petroleum-based fertilizers and pesticides.

The impact of these productivity gains on people, the environment and the climate is only now becoming apparent. That is because food prices have consistently failed to reflect the environmental and health costs of food production. Recent dramatic increases in food prices, however, are not due to environmental or health factors. Rather, speculation, higher input costs and other factors are responsible.

Climate change, rising demand, skyrocketing oil prices and the increased use of bioenergy have tripled the price of rice worldwide this year. Problems in cultivation and increases in demand for other cereal crops have also been factors. Drought has curbed global wheat output, and

ethanol production has driven up maize prices.

Yet, the fundamental cause of the food crisis is that the prevailing production system has reached — even exceeded — its limits. The system has persistently damaged the soils and polluted the waters that it depends on. This, in turn, has taken a toll on agricultural ecosystems. A more sustainable and diverse system is needed because today's intensive production system is failing us, just as rising demand is exerting more pressure on the system than ever before. The key to finding a more sustainable production system lies in pursuing a research agenda focusing on strategies to maintain, and even increase, yields in sustainable ways. The current intensive agricultural system falls far short of this goal. We cannot afford to allow such an inefficient system to continue.

The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), initiated by the World Bank and other international organizations, highlighted the need for governments to invest more in sustainable, 'pro-poor' agricultural research. The 400 scientists who participated in the IAASTD, for which I served as the co-chair, also noted that as hunger and poverty go hand-in-hand, trade agreements and subsidy regimes must be revised to favour farmers in developing countries. As the report also made clear, solutions to issues of hunger, poverty, nutrition, health and the environment must address root causes, and not just symptoms, as has often been the case in the past.

The world's growing population and declining natural resource base make promoting sustainable agriculture a considerable challenge. To overcome this, science must serve the needs of people, and in particular the poor and the hungry, who have long borne the brunt of a failed agricultural production system that is now showing signs of failing us all. ■

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