The Politics of Hunger

How Illusion and Greed Fan the Food Crisis

Paul Collier

After many years of stability, world food prices have jumped 83 percent since 2005—prompting warnings of a food crisis throughout much of the world earlier this year. In the United States and Europe, the increase in food prices is already yesterday’s news; consumers in the developed world now have more pressing concerns, such as the rising price of energy and the falling price of houses. But in the developing world, a food shock of this magnitude is a major political event. To the typical household in poor countries, food is the equivalent of energy in the United States, and people expect their government to do something when prices rise. Already, there have been food riots in some 30 countries; in Haiti, they brought down the prime minister. And for some consumers in the world’s poorest countries, the true anguish of high food prices is only just beginning. If global food prices remain high, the consequences will be grim both ethically and politically.

Politicians and policymakers do, in fact, have it in their power to bring food prices down. But so far, their responses have been less than encouraging: beggar-thy-neighbor restrictions, pressure for yet larger farm subsidies, and a retreat into romanticism. In the first case, neighbors have been beggared by the imposition of export restrictions by the governments of food-exporting countries. This has had the immaculately

Paul Collier is Professor of Economics and Director of the Center for the Study of African Economies at Oxford University and the author of The Bottom Billion: Why the Poorest Countries Are Failing and What Can Be Done About It.
dysfunctional consequence of further elevating world prices while reducing the incentives for the key producers to invest in the agricultural sector. In the second case, the subsidy hunters have, unsurprisingly, turned the crisis into an opportunity; for example, Michel Barnier, the French agricultural minister, took it as a chance to urge the European Commission to reverse its incipient subsidy-slashing reforms of the Common Agricultural Policy. And finally, the romantics have portrayed the food crisis as demonstrating the failure of scientific commercial agriculture, which they have long found distasteful. In its place they advocate the return to organic small-scale farming—counting on abandoned technologies to feed a prospective world population of nine billion.

The real challenge is not the technical difficulty of returning the world to cheap food but the political difficulty of confronting the lobbying interests and illusions on which current policies rest. Feeding the world will involve three politically challenging steps. First, contrary to the romantics, the world needs more commercial agriculture, not less. The Brazilian model of high-productivity large farms could readily be extended to areas where land is underused. Second, and again contrary to the romantics, the world needs more science: the European ban and the consequential African ban on genetically modified (GM) crops are slowing the pace of agricultural productivity growth in the face of accelerating growth in demand. Ending such restrictions could be part of a deal, a mutual de-escalation of folly, that would achieve the third step: in return for Europe’s lifting its self-damaging ban on GM products, the United States should lift its self-damaging subsidies supporting domestic biofuel.

**SUPPLY-SIDE SOLUTIONS**

Typically, in trying to find a solution to a problem, people look to its causes—or, yet more fatuously, to its “root” cause. But there need be no logical connection between the cause of a problem and appropriate or even just feasible solutions to it. Such is the case with the food crisis. The root cause of high food prices is the spectacular economic growth of Asia. Asia accounts for half the world’s population, and because its people are still poor, they devote much of their budgets to food. As
Asian incomes rise, the world demand for food increases. And not only are Asians eating more, but they are also eating better: carbohydrates are being replaced by protein. And because it takes six kilograms of grain to produce one kilogram of beef, the switch to a protein-heavy diet further drives up demand for grain.

The two key parameters in shaping demand are income elasticity and price elasticity. The income elasticity of demand for food is generally around 0.5, meaning that if income rises by, say, 20 percent, the demand for food rises by 10 percent. (The price elasticity of demand for food is only around 0.1: that is, people simply have to eat, and they do not eat much less in response to higher prices.) Thus, if the supply of food were fixed, in order to choke off an increase in demand of 10 percent after a 20 percent rise in income, the price of food would need to double. In other words, modest increases in global income will drive prices up alarmingly unless matched by increases in supply.

In recent years, the increase in demand resulting from gradually increasing incomes in Asia has instead been matched with several supply shocks, such as the prolonged drought in Australia. These shocks will only become more common with the climatic volatility that accompanies climate change. Accordingly, against a backdrop of relentlessly rising demand, supply will fluctuate more sharply as well.

Because food looms so large in the budgets of the poor, high world food prices have a severely regressive effect in their toll. Still, by no means are all of the world’s poor adversely affected by expensive food. Most poor people who are farmers are largely self-sufficient. They may buy and sell food, but the rural markets in which they trade are often not well integrated into global markets and so are largely detached from the surge in prices. Where poor farmers are integrated into global markets, they are likely to benefit. But even the good news for farmers needs to be qualified. Although most poor farmers will gain most of the time, they will lose precisely when they are hardest hit: when their crops fail. The World Food Program is designed to act as the supplier of last resort to such localities. Yet its budget, set in dollars rather than bushels, buys much less when food prices surge. Paradoxically, then, the world’s insurance program against localized famine is itself acutely vulnerable to global food shortages. Thus, high global food prices are good news for farmers but only in good times.
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The unambiguous losers when it comes to high food prices are the urban poor. Most of the developing world’s large cities are ports, and, barring government controls, the price of their food is set on the global market. Crowded in slums, the urban poor cannot grow their own food; they have no choice but to buy it. Being poor, they would inevitably be squeezed by an increase in prices, but by a cruel implication of the laws of necessity, poor people spend a far larger proportion of their budgets on food, typically around a half, in contrast to only around a tenth for high-income groups. (Hungry slum dwellers are unlikely to accept their fate quietly. For centuries, sudden hunger in slums has provoked the same response: riots. This is the classic political base for populist politics, such as Peronism in Argentina, and the food crisis may provoke its ugly resurgence.)

At the end of the food chain comes the real crunch: among the urban poor, those most likely to go hungry are children. If young children remain malnourished for more than two years, the consequence is stunted growth—and stunted growth is not merely a physical condition. Stunted people are not just shorter than they would have been; their mental potential is impaired as well. Stunted growth is irreversible. It lasts a lifetime, and indeed, some studies find that it is passed down through the generations. And so although high food prices are yesterday’s news in most of the developed world, if they remain high for the next few years, their consequences will be tomorrow’s nightmare for the developing world.

In short, global food prices must be brought down, and they must be brought down fast, because their adverse consequences are so persistent. The question is how. There is nothing to be done about the root cause of the crisis—the increasing demand for food. The solution must come from dramatically increasing world food supply. That supply has been growing for decades, more than keeping up with population growth, but it now must be accelerated, with production increasing much more rapidly than it has in recent decades. This must happen in the short term, to bring prices down from today’s levels, and in the medium and long terms, since any immediate increase in supply will soon be overtaken by increased demand.

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Fortunately, policymakers have the power to do all of this: by changing regulation, they can quickly generate an increase in supply; by encouraging organizational changes, they can raise the growth of production in the medium term; and by encouraging innovations in technology, they can sustain this higher growth indefinitely. But currently, each of these steps is blocked by a giant of romantic populism: all three must be confronted and slain.

The First Giant of Romantic Populism

The first giant that must be slain is the middle- and upper-class love affair with peasant agriculture. With the near-total urbanization of these classes in both the United States and Europe, rural simplicity has acquired a strange allure. Peasant life is prized as organic in both its literal and its metaphoric sense. (Prince Charles is one of its leading apostles.) In its literal sense, organic agricultural production is now a premium product, a luxury brand. (Indeed, Prince Charles has his own such brand, Duchy Originals.) In its metaphoric sense, it represents the antithesis of the large, hierarchical, pressured organizations in which the middle classes now work. (Prince Charles has built a model peasant village, in traditional architectural style.) Peasants, like pandas, are to be preserved.

But distressingly, peasants, like pandas, show little inclination to reproduce themselves. Given the chance, peasants seek local wage jobs, and their offspring head to the cities. This is because at low-income levels, rural bliss is precarious, isolated, and tedious. The peasant life forces millions of ordinary people into the role of entrepreneur, a role for which most are ill suited. In successful economies, entrepreneurship is a minority pursuit; most people opt for wage employment so that others can have the worry and grind of running a business. And reluctant peasants are right: their mode of production is ill suited to modern agricultural production, in which scale is helpful. In modern agriculture, technology is fast-evolving, investment is lumpy, the private provision of transportation infrastructure is necessary to counter the lack of its public provision, consumer food fashions are fast-changing and best met by integrated marketing chains, and regulatory standards are rising toward the holy grail of the traceability of produce back to its source.
Far from being the answer to global poverty, organic self-sufficiency is a luxury lifestyle. It is appropriate for burnt-out investment bankers, not for hungry families.

Large organizations are better suited to cope with investment, marketing chains, and regulation. Yet for years, global development agencies have been leery of commercial agriculture, basing their agricultural strategies instead on raising peasant production. This neglect is all the more striking given the standard account of how economic development started in Europe: the English enclosure movement, which was enabled by legislative changes, is commonly supposed to have launched development by permitting large farms that could achieve higher productivity. Although current research qualifies the conventional account, reducing the estimates of productivity gains to the range of 10–20 percent, to ignore commercial agriculture as a force for rural development and enhanced food supply is surely ideological.

Innovation, especially, is hard to generate through peasant farming. Innovators create benefits for the local economy, and to the extent that these benefits are not fully captured by the innovators, innovation will be too slow. Large organizations can internalize the effects that in peasant agriculture are localized externalities—that is, benefits of actions that are not reflected in costs or profits—and so not adequately taken into account in decision-making. In the European agricultural revolution, innovations occurred on small farms as well as large, and today many peasant farmers, especially those who are better off and better educated, are keen to innovate. But agricultural innovation is highly sensitive to local conditions, especially in Africa, where the soils are complex and variable. One solution is to have an extensive network of publicly funded research stations with advisers who reach out to small farmers. But in Africa, this model has largely broken down, an instance of more widespread malfunctioning of the public sector. In eighteenth-century Great Britain, the innovations in small-holder agriculture were often led by networks among the gentry, who corresponded with one another on the consequences of agricultural experimentation. But such processes are far from automatic (they did not occur, for example, in continental Europe). Commercial agriculture is the best way of making innovation quicker and easier.
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Over time, African peasant agriculture has fallen further and further behind the advancing commercial productivity frontier, and based on present trends, the region's food imports are projected to double over the next quarter century. Indeed, even with prices as high as they currently are, the United Nations Food and Agriculture Organization is worried that African peasants are likely to reduce production because they cannot afford the increased cost of fertilizer inputs. There are partial solutions to such problems through subsidies and credit schemes, but it should be noted that large-scale commercial agriculture simply does not face this particular problem: if output prices rise by more than input prices, production will be expanded.

A model of successful commercial agriculture is, indeed, staring the world in the face. In Brazil, large, technologically sophisticated agricultural companies have demonstrated how successfully food can be mass-produced. To give one remarkable example, the time between harvesting one crop and planting the next—the downtime for land—has been reduced to an astounding 30 minutes. Some have criticized the Brazilian model for displacing peoples and destroying rain forest, which has indeed happened in places where commercialism has gone unregulated. But in much of the poor world, the land is not primal forest; it is just badly farmed. Another benefit of the Brazilian model is that it can bring innovation to small farmers as well. In the “out-growing,” or “contract farming,” model, small farmers supply a central business. Depending on the details of crop production, sometimes this can be more efficient than wage employment.

There are many areas of the world that have good land that could be used far more productively if properly managed by large companies. Indeed, large companies, some of them Brazilian, are queuing up to manage those lands. Yet over the past 40 years, African governments have worked to scale back large commercial agriculture. At the heart of the matter is a reluctance to let land rights be marketable, and the source of this reluctance is probably the lack of economic dynamism in Africa's cities. As a result, land is still the all-important asset (there has been little investment in others). In more successful economies,
land has become a minor asset, and thus the rights of ownership, although initially assigned based on political considerations, are simply extensions of the rights over other assets; as a result, they can be acquired commercially. A further consequence of a lack of urban dynamism is that jobs are scarce, and so the prospect of mass landlessness evokes political fears: the poor are safer on the land, where they are less able to cause trouble.

Commercial agriculture is not perfect. Global agribusiness is probably overly concentrated, and a sudden switch to an unregulated land market would probably have ugly consequences. But allowing commercial organizations to replace peasant agriculture gradually would raise global food supply in the medium term.

THE WAR ON SCIENCE

The second giant of romantic populism is the European fear of scientific agriculture. This has been manipulated by the agricultural lobby in Europe into yet another form of protectionism: the ban on GM crops. GM crops were introduced globally in 1996 and already are grown on around ten percent of the world’s crop area, some 300 million acres. But due to the ban, virtually none of this is in Europe or Africa.

Robert Paarlberg, of Wellesley College, brilliantly anatomizes the politics of the ban in his new book, Starved for Science. After their creation, GM foods, already so disastrously named, were described as “Frankenfoods”—sounding like a scientific experiment on consumers. Just as problematic was the fact that genetic modification had grown out of research conducted by American corporations and so provoked predictable and deep-seated hostility from the European left. Although Monsanto, the main innovator in GM-seed technology, has undertaken never to market a seed that is incapable of reproducing itself, skeptics propagated a widespread belief that farmers will be trapped into annual purchases of “terminator” seeds from a monopoly supplier. Thus were laid the political foundations for a winning coalition: onto the base of national agricultural protectionism was added the anti-Americanism of the left and the paranoia of health-conscious consumers who, in the wake of the mad cow disease outbreak in the United Kingdom in the 1990s, no longer trusted their governments’ assurances. In the 12 years since the ban was introduced, in 1996, the scientific case for
lifting it has become progressively more robust, but the political coalition against GM foods has only expanded.

The GM-crop ban has had three adverse effects. Most obviously, it has retarded productivity growth in European agriculture. Prior to 1996, grain yields in Europe tracked those in the United States. Since 1996, they have fallen behind by 1–2 percent a year. European grain production could be increased by around 15 percent were the ban lifted. Europe is a major cereal producer, so this is a large loss. More subtly, because Europe is out of the market for GM-crop technology, the pace of research has slowed. GM-crop research takes a very long time to come to fruition, and its core benefit, the permanent reduction in food prices, cannot fully be captured through patents. Hence, there is a strong case for supplementing private research with public money. European governments should be funding this research, but instead research is entirely reliant on the private sector. And since private money for research depends on the prospect of sales, the European ban has also reduced private research.

However, the worst consequence of the European GM-crop ban is that it has terrified African governments into themselves banning GM crops, the only exception being South Africa. They fear that if they chose to grow GM crops, they would be permanently shut out of European markets. Now, because most of Africa has banned GM crops, there has been no market for discoveries pertinent to the crops that Africa grows, and so little research—which in turn has led to the critique that GM crops are irrelevant for Africa.

Africa cannot afford this self-denial; it needs all the help it can possibly get from genetic modification. For the past four decades, African agricultural productivity per acre has stagnated; raising production has depended on expanding the area under cultivation. But with Africa's population still growing rapidly, this option is running out, especially in light of global warming. Climate forecasts suggest that in the coming years, most of Africa will get hotter, the semiarid parts will get drier, and rainfall variability on the continent will increase, leading to more droughts. It seems likely that in southern Africa, the staple food, maize, will at some point become nonviable. Whereas for other regions the challenge of climate change is primarily about mitigating carbon emissions, in Africa it is primarily about agricultural adaptation.
It has become commonplace to say that Africa needs a green revolution. Unfortunately, the reality is that the green revolution in the twentieth century was based on chemical fertilizers, and even when fertilizer was cheap, Africa did not adopt it. With the rise in fertilizer costs, as a byproduct of high-energy prices, any African green revolution will perform not be chemical. To counter the effects of Africa’s rising population and deteriorating climate, African agriculture needs a biological revolution. This is what GM crops offer, if only sufficient money is put into research. There has as yet been little work on the crops of key importance to the region, such as cassava and yams. GM-crop research is still in its infancy, still on the first generation: single-gene transfer. A gene that gives one crop an advantage is identified, isolated, and added to another crop. But even this stage offers the credible prospect of vital gains. In a new scientific review, Jennifer Thomson, of the Department of Molecular and Cell Biology at the University of Cape Town, considers the potential of GM technology for Africa. Maize, she reports, can be made more drought-resistant, buying Africa time in the struggle against climatic deterioration. Grain can be made radically more resistant to fungi, reducing the need for chemicals and cutting losses due to storage. For example, stem borer beetles cause storage losses in the range of 15–40 percent of the African maize crop; a new GM variety is resistant.

It is important to recognize that genetic modification, like commercialization, is not a magic fix for African agriculture: there is no such fix. But without it, the task of keeping Africa’s food production abreast of its population growth looks daunting. Although Africa’s coastal cities can be fed from global supplies, the vast African interior cannot be fed in this way other than in emergencies. Lifting the ban on GM crops, both in Africa and in Europe, is the policy that could hold down global food prices in the long term.

The final giant of romantic populism is the American fantasy that the United States can escape dependence on Arab oil by growing its own fuel—making ethanol or other biofuels, largely from corn. There is a good case for growing fuel. But there is not a good case for generating
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it from American grain: the conversion of grain into ethanol uses almost as much energy as it produces. This has not stopped the American agricultural lobby from gouging out grotesquely inefficient subsidies from the government; as a result, around a third of American grain has rapidly been diverted into energy. This switch demonstrates both the superb responsiveness of the market to price signals and the shameful power of subsidy-hunting lobbying groups. If the United States wants to run off of agrofuel instead of oil, then Brazilian sugar cane is the answer; it is a far more efficient source of energy than American grain. The killer evidence of political capture is the response of the U.S. government to this potential lifeline: it has actually restricted imports of Brazilian ethanol to protect American production. The sane goal of reducing dependence on Arab oil has been sacrificed to the self-serving goal of pumping yet more tax dollars into American agriculture.

Inevitably, the huge loss of grain for food caused by its diversion into ethanol has had an impact on world grain prices. Just how large an impact is controversial. An initial claim by the Bush administration was that it had raised prices by only three percent, but a study by the World Bank suggests that the effect has been much larger. If the subsidy were lifted, there would probably be a swift impact on prices: not only would the supply of grain for food increase, but the change would shift speculative expectations. This is the policy that could bring prices down in the short term.

STRIKING A DEAL

The three policies—expanding large commercial farms, ending the gm-crop ban, and doing away with the U.S. subsidies on ethanol—fit together both economically and politically. Lifting the ethanol subsidies would probably puncture the present ballooning of prices. The expansion of commercial farms could, over the next decade, raise world output by a further few percentage points. Both measures would buy the time needed for gm crops to deliver on their potential (the time between starting research and the mass application of its results is around 15 years). Moreover, the expansion of commercial farming in Africa would encourage global gm-crop research on Africa-suited crops, and innovations would find a ready market not so sensitive

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to political interference. It would also facilitate the localized adaptation of new varieties. It is not by chance that the only African country in which gm crops have not been banned is South Africa, where the organization of agriculture is predominantly commercial.

Politically, the three policies are also complementary. Homegrown energy, keeping out “Frankenfoods,” and preserving the peasant way of life are all classic populist programs: they sound instantly appealing but actually do harm. They must be countered by messages of equal potency.

One such message concerns the scope for international reciprocity. Although Americans are attracted to homegrown fuel, they are infuriated by the European ban on gm crops. They see the ban for what it is: a standard piece of anti-American protectionism. Europeans, for their part, cling to the illusory comfort of the ban on high-tech crops, but they are infuriated by the American subsidies on ethanol. They see the subsidies for what they are: a greedy deflection from the core task of reducing U.S. energy profligacy. Over the past half century, the United States and Europe have learned how to cooperate. The General Agreement on Tariffs and Trade was fundamentally a deal between the United States and Europe that virtually eliminated tariffs on manufactured goods. Nato is a partnership in security. The Organization for Economic Cooperation and Development is a partnership in economic governance. Compared to the difficulties of reaching agreement in these areas, the difficulties of reaching a deal on the mutual de-escalation of recent environmental follies is scarcely daunting: the United States would agree to scrap its ethanol subsidies in return for Europe's lifting the ban on gm crops. Each side can find this deal infuriating and yet attractive. It should be politically feasible to present this to voters as better than the status quo.

How might the romantic hostility toward commercial and scientific agriculture be countered politically? The answer is to educate the vast community of concern for the poorest countries on the bitter realities of the food crisis. In both the United States and Europe, millions of decent citizens are appalled by global hunger. Each time a famine makes it to television screens, the popular response is overwhelming, and there is a large overlap between the constituency that responds to such crises and the constituency attracted by the idea of preserving organic
peasant lifestyles. The cohabitation of these concerns needs to be challenged. Many people will need to agonize over their priorities. Some will decide that the vision articulated by Prince Charles is the more important one: a historical lifestyle must be preserved regardless of the consequences. But however attractive that vision, these people must come face-to-face with the prospect of mass malnutrition and stunted children and realize that the vital matter for public policy is to increase food supplies. Commercial agriculture may be irredeemably unromantic, but if it fills the stomachs of the poor, then it should be encouraged.

American environmentalists will also need to do some painful rethinking. The people most attracted to achieving energy self-sufficiency through the production of ethanol are potentially the constituency that could save the United States from its ruinous energy policies. The United States indeed needs to reduce its dependence on imported oil, but growing corn for biofuel is not the answer. Americans are quite simply too profligate when it comes to their use of energy; Europeans, themselves pretty profligate, use only half the energy per capita and yet sustain a high-income lifestyle. The U.S. tax system needs to be shifted from burdening work to discouraging energy consumption.

The mark of a good politician is the ability to guide citizens away from populism. Unless countered, populism will block the policies needed to address the food crisis. For the citizens of the United States and Europe, the continuation of high food prices will be an inconvenience, but not sufficiently so to slay the three giants on which the current strain of romantic populism rests. Properly informed, many citizens will rethink their priorities, but politicians will need to deliver these messages and forge new alliances. If food prices are not brought down fast and then kept down, slum children will go hungry, and their future lives will be impaired. Shattering a few romantic illusions is a small price to pay.