

# INSTABILITY AND GLOBAL FOOD SUPPLIES

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World food prices are at an all-time high. The world's population is growing and is expected to increase by 2 billion people over the next 40 years. Riots in Tunisia, triggered in part by food prices, set off a remarkable chain of events that resulted in the downfall of governments in Egypt and Tunisia, a NATO operation in Libya, and instability in several other countries. Will the face of hunger be the face of insecurity?

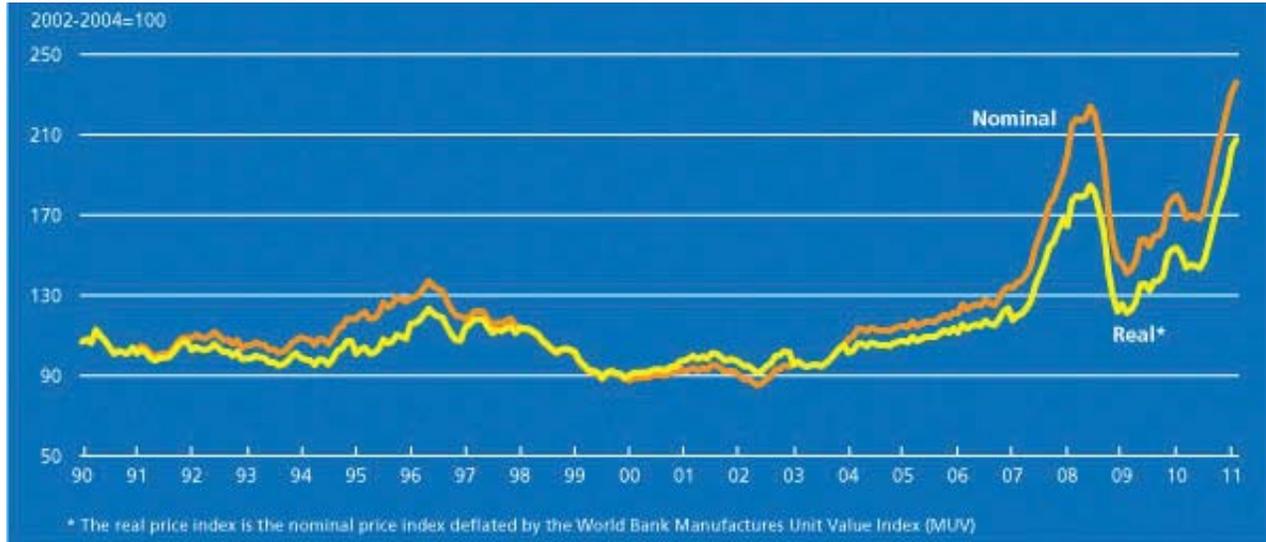
Malthusian warnings about food supply have not been realized. The world did not run out of food as the global population rose through the twentieth century; the earth did not reach the limits of growth. However, it was not simply a turn of events or good luck that allowed food production to increase to meet a growing global population. Rather, it was a remarkable blend of science and personal dedication, by Norman Borlaug and others, that created a set of technologies and enabling environments that produced the dramatic increase in food productivity that has fed the world for so long.

As food prices have risen—to a new, all-time high in 2011—it is clear that, although we are not inevitably destined for instability as a result of declining food stocks, without serious commitment and focus we will be hard-pressed to manage the dramatic increase in food production that will be needed to meet global demand.

The United Nations Development Program estimates that world population will grow from 7 billion today to more than 9 billion in 2050. Some researchers, however, believe that figure is too conservative and that at current rates of growth the population may be even larger by then. This demographic pressure is daunting, especially when people are living longer than ever. Add to this the demands of rising numbers of people joining the middle class in emerging countries, especially China and India.

As they earn more, people spend more money on luxuries, including better food—more protein, sugar, and fat. And while a pound of grain is a pound of grain, producing a pound of chicken requires

## FAO FOOD PRICE INDEX



Source: Food and Agriculture Organization (FAO), *Food Price Index*. Representing 55 commodity quotations in points based off the baseline of 2002–2004.

three pounds of grain; a pound of beef, up to 15 pounds. As consumers turn to higher-value foods, the demand for milk, yogurt, pork, beef, and chicken will grow rather than decline.

The impact on water supplies from this increasing demand is especially stark. Globally, 70 percent of water resources are dedicated to agriculture and irrigation. In water-scarce Yemen, 95 percent of water is used for agriculture—and a key economic activity is production of a narcotic plant, qat, that not only absorbs massive amounts

of water but also diverts land and resources away from more productive farming.

In 2008, 40 countries experienced riots and protests because of high food prices. Those outbreaks were significant in number and in type. Prior to then, food shortages tended to occur in rural areas, around crop failures, or as the result of poor government decisions. It was a shock when the problem appeared in cities—where food was available in stores but at prices so high that many could not afford to buy it.

## Will the face of hunger be the face of insecurity?

The concern was not only about overall food supplies, but also about what happens when people in densely crowded urban areas are unable to purchase food. The answer then was riots, from Italy to Egypt to the very serious situation in Haiti where the government was overturned. In Tunisia in 2011, riots erupted again—not solely because of food prices, but rising food prices were yet another factor that was disrupting lives and creating uncertainty about the future.

Food supplies will continue to be strained, and prices will continue to be volatile over the next year. Some in wealthier countries encourage a vegetarian diet or suggest reducing consumption of meat to reduce the overall demand for food and ease pressure on supplies. Suppressing demand is not the answer, however. Agriculture is fundamentally a market-driven activity. High prices signal to producers the need to increase production; and to researchers and scientists, they signal a financial return for the enormous cost of developing new varieties of seeds and machinery.

The real answer is to find ways to improve production and access to food globally. Increasing strategic public support for research on key staple crops, from corn to soybeans to cassava to legumes, will ensure that crops will grow in abundance and that plants will be bred to withstand the strains of the rising temperatures, droughts, and volatile weather patterns that will disrupt food supplies far into the future.

Food security—for all people—means that there will be enough food for people to be well-nourished, productive citizens. Focusing on a strategic, public agenda for research and planning to manage price volatility for the long term must be a priority. ■