

# THE FORGOTTEN CRISIS

HOW HIGH FOOD PRICES  
HAVE IMPOVERISHED  
MILLIONS AND  
THREATENED GOVERNMENTS

AUSTIN BLAIR SIADAK

Austin Siadak is currently a junior at Tufts University majoring in International Relations with a focus on Global Conflict, Cooperation and Justice. He has been involved in many activities through the Institute for Global Leadership at Tufts, including the Institute's Synaptic Scholars Program and the 2007-2008 EPIIC Colloquium on Global Poverty and Inequality. In May 2008, Austin investigated the effects of the global food crisis on the poor as a final EPIIC research project.

### Author's Note

This essay was originally submitted in May of last year as a final research project for the 2007–2008 EPIIC Colloquium on Global Poverty and Inequality and was updated in late August, slated for publication in *Discourse*. Just weeks later, however, Lehman Brothers went bankrupt, marking the beginning of what has subsequently turned into a global financial crisis on a scale not seen for decades, perhaps ever. This crisis has wrought massive change across a multitude of regions, sectors and disciplines in past months, turning previously accepted practices into laughable follies and forcing all of us to rethink what we know about our modern world and how it works. It should thus come as no surprise that some of the information and situations explained in the following pages have changed since September – I must admit that when I was approached to update the piece for this semester I thought much of what I had written would be inapplicable or outdated under current circumstances. Despite these fears, I found that the current financial crisis has added more problems and difficulties to the food crisis than it has removed. Yes, some of the data has changed and the international environment is undoubtedly different now, but I have opted to leave the essay largely untouched to provide a clear understanding of one of the largest untold stories of the past few years that fails to disappear despite shifting international attention. Aware of the need for up-to-date information, I have added a short addendum describing the current state of the global food crisis.

### Introduction

On April 21, 2008, Jacques Edouard Alexis was ousted from his position as Haitian Prime Minister following numerous violent clashes between United Nations troops and protestors calling for his removal.<sup>1</sup> To anyone familiar with Haitian history and politics, such an event might not seem extraordinary, given the frequent government overthrows, deadly insecurity, and near constant fighting that have plagued the country for the past few decades. What is extraordinary, however, was the cause of the deadly protests: food. Rising food prices had caused the costs of basic staples to run so high – pasta and rice prices had doubled in the past few months – that many poor, urban Haitians were reduced to buying and consuming “pica” – cookies made from salt, vegetable shortening, and dirt.<sup>2</sup> No wonder Haitians had rioted; they could afford nothing more than dirt, and some could not even afford that.

Unfortunately, this episode in Haiti is merely one of the many examples of how skyrocketing food prices have swept the globe and created havoc in the past year. For decades, the world benefited from cheap food, permitting hundreds of millions to move out of poverty and the global middle class to boom.<sup>3</sup> Now, however, that has all changed. From Cameroon to China, Pakistan to the Philippines, the fast rising costs of basic foodstuffs have made riots commonplace and left governments caught off guard in their attempts to stabilize prices, feed their people, and avoid both humanitarian and political catastrophes. Worse, hundreds of millions of impoverished peoples face the threat of malnutrition or starvation

because they simply cannot afford to buy enough food, and it is very likely that global poverty reduction efforts may halt or even be reversed. Moreover, this is not just a problem confined to poor and developing states, as even the United States and European countries have seen large increases in the costs of their food, putting pressure on their populations and economies as well. The simple fact is that the world currently faces a truly *global* food crisis. Perhaps the most frightening aspect is that many experts predict this current wave of high prices to last for years to come, with the potential to leave lasting devastation in its wake.

Though the era of cheap food is over, many pressing questions remain. What caused the sudden jumps in prices? Who will be the most affected? How long will these new prices last? Who, if anyone, is benefiting from the current food crisis? And perhaps most importantly, what can be done right now to prevent humanitarian emergencies and to stabilize prices at an affordable rate for the majority of the world's consumers? This article will attempt to shed light on these questions, in addition to others, by providing an overview of the current global food crisis, what causes led to its existence, what repercussions are likely both in the short and long term, and some of the ways in which the peoples and governments of the world can best address this burgeoning disaster.

### Cheap No More<sup>4</sup>

Before delving into the causes and long term implications of the global food crisis, it is important to understand the complex series of events that comprise the current predicament, including how much food prices have changed, what some of the most immediate effects have been, who is being affected the most, and who is profiting.

First, some history is in order. Until the past few years, food prices around the world had been extremely cheap for decades. Owing in large part to the Green Revolution that took place in the years after World War II, in which the use of improved technologies such as pesticides, advanced irrigation projects and synthetic fertilizers was widely increased in developing countries, global food output

increased dramatically. For example, the global cereal output alone doubled between 1961 and 1985.<sup>5</sup> Though oil crises and high inflation in the 1970s briefly caused food prices to shoot up, ever increasing production, technological innovation, increases in global crop acreage, market liberalization, and dropping oil prices sent food prices tumbling again in the last two decades of the century. For example, wheat prices topped \$25 a bushel in the mid-1970s but had dropped to only \$3 a bushel in 2000, adjusted for inflation.<sup>6</sup> This is not to say that food shortages, famine, and starvation were nonexistent during this period, but the overwhelming result was a worldwide boon for consumers who had access to both an increased amount and variety of foods. This included tens of millions of poor families who could attain better nutrition at a lower cost, greatly helping to reduce global poverty. However, at the same time, low prices meant that many farmers around the globe faced tougher times and often received less for their crops than did their parents in previous generations, increasing rural poverty in some areas.<sup>7</sup> Still, as the world rode the wave of cheap food into the new millennium, few predicted that large price changes would occur any time soon, much less to the degree that they did.<sup>8</sup>

Increases in the price of food over the past few years have not just been large, they have been astronomical. From 2005 to 2008, world food prices as a whole rose by 80 percent.<sup>9</sup> While this figure alone is alarming, hidden within it are much more recent and much larger price changes in some of the world's most important food crops. Foods made from cereal crops such as rice, wheat, or maize (corn) are consumed by nearly everyone on the planet, and for the world's poorest people these crops signify the large majority of their diet.<sup>10</sup> Thus, one can imagine how problematic it was when, in 2007 alone, wheat prices rose by 77 percent and rice prices rose by 16 percent. Even more worrisome were the massive jumps in the first few months of 2008, with rice prices in April rising 141 percent above their highest 2007 levels.<sup>11</sup> It is not just the price of cereals that has shot up either. Dairy prices have risen by nearly a third since the beginning of 2007, and oils and fats (used extensively for cooking around the world) are up 98 percent from March of 2007.<sup>12</sup> Though prices have dipped a bit since April and May of 2008, such increases are still unprecedented, and as one grain trader

For those living on \$2 a day, it means cutting out meat from their diets and removing children from school. For those on \$1 a day, it means removing meat and vegetables and eating only cereals. And for those living on 50 cents a day, in Sheeran's words, "it means total disaster."

tellingly puts it, "Anyone who tells you they've seen something like this is a liar."<sup>13</sup>

The most obvious effect of these price increases, and likely the worst, has been the drastic increase in the percentage of income that must be spent on food. While all consumers have had to pay more for food in the past year, the effects of increased spending are extremely unequal depending on one's income and location. A few more dollars for certain products may not make much of a difference to consumers in developed states, but it is often the difference between life and death for poorer populations who already pay heavily (comparatively) for more meager rations. Americans, for example, on average only spend about ten percent of household income on food. While increasing food prices may force these consumers to buy cheaper products or reduce spending in other sectors, they generally have the fortunate ability simply to shift where they spend their disposable income and continue their daily routines with little change.<sup>14</sup> Of course, this is not true for all, and many Americans are now finding it harder to make paychecks stretch far enough to cover high living costs and rising inflation, but very few face risks of starvation or severe malnutrition.

The same cannot be said for the world's poor. Because they already use a significant portion of their income to pay for food and have little disposable income, high food prices cause the poor to consume less nutritious foods and to reduce their overall food intake, leading to serious dietary and health problems. The International Food Policy Research Institute (IFPRI), a leading consulting and policy advising organization, notes that in general, "At the household level, the poor spend about 50 to 60 percent of their overall budget on food. For a five-person household living on US\$1 per person per day, a 50 percent increase in food prices removes up to US\$1.50 from their US\$5 budget, and growing energy costs also add to their adjustment burden."<sup>15</sup> It is no wonder then that the price increases noted above, which far exceed rates of 50 percent, pose threats not just to diets and nutrition but to overall purchasing power as well, reducing the ability of the poor to afford sanitation, education, and healthcare. Moreover, because the poor generally buy primary products rather than processed foods (buying a kilo of maize rather than a box of Corn Flakes, for example) they are much more acutely affected by even small price increases.<sup>16</sup> Specifically, says Josette Sheeran, who runs the United Nations' World Food Programme (WFP), the impact

of the rise in food prices on the global middle classes has meant a shift away from medical care and certain non-essential items such as clothing. For those living on \$2 a day, it means cutting out meat from their diets and removing children from school. For those on \$1 a day, it means removing meat and vegetables and eating only cereals. And for those living on 50 cents a day, in Sheeran's words, "it means total disaster."<sup>17</sup> Thus, for the poorest of the poor, recent price increases pose serious threats to food security as well as dietary and overall health, with numerous negative effects in the short and long term. Worse, the World Bank estimated earlier this year that an additional 100 million people are likely to be pushed into poverty and face food insecurity as a direct result of the food crisis.<sup>18</sup>

As if this were not bad enough for the world's most destitute, the international agencies responsible for feeding and helping them now face problems of titanic magnitudes as they try to cope with dramatic price increases. For organizations providing food assistance, rising prices have translated into enormous budget shortfalls. The WFP, responsible for feeding nearly 90 million people worldwide, first sounded the alarms in late March by saying that it needed \$500 million in emergency funding before May 1 or it would have to start cutting rations, and then raised its initial estimate to over \$750 million by late April.<sup>19,20</sup> Additionally, the United States Agency for International Development (USAID), which is responsible for dispersing a large portion of federal foreign assistance, said in April that its commodity expenses had increased by 41 percent in the previous six months, creating budgetary pressures in some areas.<sup>21</sup> Though the WFP has since received sufficient funding to avoid any imminent catastrophes, and recently announced a new \$1.2 billion assistance package to 62 countries, it will need continued increases in funding to deal with high food costs in the long term.<sup>22</sup> Likewise, unless other development agencies receive more funding immediately and can establish larger budget inflows in the long term, multiple humanitarian disasters could be in store for the future.

Just as the effects of high food prices differ at the household level, some countries have been hit harder than others. In general, developed countries have seen lower price increases than developing countries and net food exporters have been better off than net food importers. While some politicians in developed states such as those in the European Union or United States have begun to clamor for more attention on the issue of high food prices, they have not experienced anything even remotely resembling what is happening in other countries across the globe. For example, food prices in the United States are only expected to increase by four to five percent in 2008, Americans have a much larger variety of food types to substitute for expensive products, and even the greatest price increases in popular foods such as milk and white bread have been a (relatively) modest 23 and 16 percent respectively.<sup>23</sup> Needless to say, such events seem miniscule when compared to what has happened in Haiti or Cameroon, where violent protests over food and fuel costs in February 2008 led to the deaths of at least 40 people.<sup>24</sup> In Egypt, a doubling of staple food prices in recent months earlier this year led to protests that resulted in the shooting of a young boy.<sup>25</sup> Similarly, large price increases and disorderly events have occurred in the Philippines, Mozambique, Pakistan, and Indonesia, among others. Overall, net food exporters such as the United States and Australia have gained the most from terms of trade

improvements, while net importers such as most African and some south Asian states, as well as many non-oil producing Middle Eastern countries have faced larger budget deficits.<sup>26</sup> The interesting, and telling, point is that those places that have been the most affected, and where the most violent reactions have been, are all poor or developing countries that have low per capita incomes, depend heavily on imported food, and/or lack the governmental capacity to contend with volatile price swings. The global food crisis threatens not only the health of the world's poorest people, but also of the world's poorest governments, as will be discussed later.

Not surprisingly, jumps in global food prices have elicited a host of governmental reactions around the globe, especially in those states that have been hit hardest. In order to placate nervous consumers and ensure sufficient domestic food stockpiles, numerous developing countries have imposed price controls, prohibited exports of certain crops, or increased subsidies. In India, the government has effectively banned exports of all non-basmati rice, as well as the export of milk powder products; China has banned all rice and maize exports and increased subsidies to farmers; the Philippines government has even made rice hoarding punishable by death. In addition, Vietnam recently reduced rice exports by a fifth, Bolivia banned export of soy oil to numerous South American states, and Ethiopia banned the export of major cereal crops. Other countries, such as Morocco and Nigeria, have reduced tariffs and other restrictions on imports in an attempt to lower the price of imported food as much as possible.<sup>27-28</sup> Some states have shown strong initiative in tackling the crisis responsibly by increasing cash transfer programs for their citizens and expanding social safety nets, but so far such important actions have not been scaled up to the level necessary to stop many of the poor from slipping through the cracks.<sup>29</sup>

International organizations have also responded loudly, if stopping short of taking all the necessary steps to stem the crisis. Following the lead of organizations such as the WFP that began calling for greater attention months ago, UN Secretary General Ban Ki-moon released a statement in April 2008 saying that the United Nations and World Bank would jointly establish a task force to address the

problems created by the food crisis, especially concerning its effects on impoverished regions and peoples.<sup>30</sup> World Bank President Robert Zoellick termed the plan a "New Deal for Global Food Policy."<sup>31</sup> Both men emphatically encouraged states to provide the nearly \$1 billion in emergency relief spending that organizations such as the WFP needed immediately to continue operations, with Ban stating, "Without full funding of these emergency requirements, we risk again the specter of widespread hunger, malnutrition, and social unrest on an unprecedented scale." Zoellick and Ban also discouraged the widespread use of export bans because they "encourage hoarding, drive up prices and hurt the poorest people around the world who are struggling to feed themselves."<sup>32</sup> Since then, at least two major international meetings have taken place to discuss the crisis, most prominently the UN "Conference on World Food Security: Challenges of Climate Change and Bio-energy" held in June 2008 in Rome. At this meeting, Ban called for a 50 percent increase in global food output by 2030 and, together with other development heads, voiced the need for a "second green revolution."<sup>33</sup> While these high level summits have notably called for a refocusing of attention on small farmers in developing countries, governments have stuck hard to their differing national interests and little consensus has been made on important issues, including the essential task of delineating which actors will be responsible for the implementation of proposed policy actions.<sup>34</sup>

Reponses have come more slowly in the United States and Europe, but governments in both have expressed strong desires to help stop the current crisis. Largely because gains in food prices have been more gradual and moderate in the U.S. than in most other nations around the world, there has been little public backlash over the issue and few politicians have made much of it. Still, action has begun to be taken as the costs of the global food crisis have started to filter into the American economy in tangible ways, and multiple U.S. Senate hearings have been called to address the issue both in the United States and around the rest of the world as well.<sup>35</sup> Last April, President Bush freed up over \$200 million in food aid and called on Congress to approve an extra \$770 million dollars in food aid and related measures in order to "[send] a clear message to the

world that America will lead the fight against hunger for years to come."<sup>36</sup> Across the pond, state and European Union government officials have agreed that they must help in financing solutions to the current crisis and in establishing greater global food security, yet EU politicians appear apprehensive to seriously consider restructuring policies such as the multi-billion dollar Common Agricultural Policy (CAP) that supplies enormous food subsidies to European farmers and, while perhaps not directly causing current problems, certainly does not aid in their solutions.<sup>37</sup>

Despite the destructive effects that high food prices have caused throughout the world, there are some actors who may not mind if solutions take time to gestate. In any crisis there are both losers and winners, and the easiest winners to see in the current crisis are farmers in developed countries. While their counterparts in poor nations face problems in procuring basic food items for their families, cannot pay the rising costs of yield-increasing fertilizers, must sell at lower prices because they can not store their harvests, and generally lack advanced agricultural technologies, farmers in developed countries are experiencing the greatest boom their sector has seen in decades. As farmer Erwin Johnson of Charles City, Iowa told the *Washington Post*, "This is a fantastic time to be farming. I'm 65, but I can't quit now."<sup>38</sup> His enthusiasm is understandable: for his corn, Johnson currently receives more than twice as much as he did just a couple of years ago.<sup>39</sup> With corn, wheat, soybeans, alfalfa, and most other crops fetching prices double or triple what they did just a few years ago, many farmers in rich countries have seen their incomes increase by twofold or more and can afford the more expensive fertilizer costs and modest gains in food prices.

Though farmers are those benefiting most visibly, they are not the only ones winning and are not even those profiting most. Others like Erwin Johnson currently sell their crops for top dollar, but they will not actually see the money until their next harvest. The reason? Most farmers have already sold their crops from last year's harvest and at last year's prices, meaning that they are not gaining much at this moment while prices shoot higher. Those who appear to be winning the most from the global food crisis are the commodities traders who buy the crops from farmers and

sell them on the global market, as well as firms that provide farming equipment and financial speculators betting on future global food prices. The two largest global food traders, Cargill Incorporated and Archer Daniels Midland Company (ADM), reported 2007 profits up a combined 103 percent from the year before, and food giant The Monsanto Company saw profits in the third quarter more than double. Deere and Company, famous for its tractors, experienced a 55 percent rise in profit in the same time period, and The Mosaic Company, one of the world's largest fertilizer manufacturers, increased its third quarter net income nearly 12 fold.<sup>40</sup> Concerning speculation, the *International Herald Tribune* reported in April that "On the Chicago CME Group market, which deals in some 25 agricultural commodities...the volume of contracts has increased by 20 percent since the start of the year and now has reached the level of a million contracts a day. This will soon exceed the rate of growth reached in all of 2007."<sup>41</sup> Of course, not every one of these contracts will bring a profit for their owners, but a large number will, and at such high trading volume, some will make a fortune.

In sum, cheap food prices, which prevailed for the past few decades, have become a thing of the past as food prices for the world's most popular crops doubled, tripled, and even quadrupled in the past six to 12 months. Those left worst off by these price jumps are the world's poor, who already have trouble buying enough food for their families and simply cannot keep up with enormous rises in food prices. Expensive food has pushed the majority of the more than one billion living on less than \$1 a day deeper into poverty, while welcoming tens of millions more into that category. Those in developed countries also feel the pinch, but they have many more options than do the poor and have not been as harshly affected. Developing countries have been hit hardest, cementing the fact that this is a crisis that most affects both poor people and poor countries, and have responded with a variety of drastic measures to keep food at home or import it more cheaply from abroad. Both international organizations and developed countries recognize their responsibility in bringing the situation under control and have demonstrated a desire to help prevent possible disasters, but have failed to take necessary steps toward fixing long term problems. In the meantime, farmers in

*The Economist* notes, “what is most remarkable about the present [food crisis] is that record prices are being achieved at a time not of scarcity but of abundance. ... [T]his year's total cereals crop will be 1.66 billion tonnes, the largest on record and 89m tonnes more than last year's harvest, another bumper crop.”

developed countries, as well as financial speculators and commodity traders, are profiting nicely. That is the current state of the global food crisis. The real question though is how it will be solved. Before that can be addressed, however, another question must first be must answered: what caused the crisis?

#### Not Your Grandfather's Food Crisis

One of the most interesting aspects of the current food crisis is how different its causes are from those of traditional episodes of starvation and famine. In the past, food shortages largely occurred in relatively concentrated areas, usually as a result of drought, crop failure, population pressures, or war. While some of these have played a role in creating current problems, there exist other factors that make this new crisis very different. Not only has it spread globally, it is a product of global events, helped by the globalization and liberalization of food markets worldwide. Moreover, the current crisis is happening not at a time of global crop failure and dwindling supply, but rather one of record harvests. Four factors in particular have been most prominently cited as the principle causes of the current crisis: Weather-related crop failures possibly due to advancing climate change, a steady upward pressure on demand as a result of larger incomes in developing countries, high oil and fertilizer prices, and increased production of biofuels.

The recent rise in food prices would be easy to understand if it were simply a matter of crop failures and food shortages. This is how famines have played out throughout history, from the Irish Potato Famine to many supply disruptions in poor countries around the world. As predictions and realizations about changing weather patterns due to climate change worsen, it also would not be a large surprise if rising temperatures and drought were to destroy crops and ruin harvests around the globe. Some say it has even begun to happen: In Australia, one of the world's largest producers and exporters of grain, the wheat crop has failed for two years in a row and prospects do not look good for the coming harvest.<sup>42</sup> Moreover, global wheat supply has been outpaced by demand for seven of the last eight years.<sup>43</sup> Perhaps high food prices are just a product of crop failures and food shortages.

However, while some crops have failed around the world, this argument fails to hold for a number of reasons. First, as *The Economist* notes, “what is most remarkable about the present [food crisis] is that record prices are being achieved at a time not of scarcity but of abundance. ... [T]his year's total cereals crop will be 1.66 billion tonnes, the largest on record and 89m tonnes more than last year's harvest, another bumper crop.”<sup>44</sup> Though some isolated failed harvests exist, it does not change the fact that global food production is at an all time high. Moreover, even if crops fail in one area, the globalization of the food market makes

it possible, in theory, to import needed grains or staple crops. Thus, Australia's woes will not make it unable to feed its people, though it may cost more to do so.

The more fundamental problem, rather, has been where the current supply of food is being directed. Some countries are net producers and exporters of food, while others consistently import large percentages of their food supply, and in the past year many of the net exporters have attempted to keep prices down within their own borders by limiting the export of certain crops. Such events have happened in nearly all major food commodities markets, most notably in the rice market, and over 30 countries world wide currently have some form of export ban in place.<sup>45</sup> Unfortunately, this creates an extremely distorted market where supplies do not flow to areas where demand is the highest, creating severe shortages and raising food prices for those countries not fortunate enough to be net producers themselves. Thus, though supply problems may have been behind many famous famines and food crises, and a string of current supply shortages in certain places around the world certainly do not help bring prices down, they are not the major cause of the current crisis. Rather, the fact that prices have risen so dramatically even at a time of bumper crops can only signify one thing: an enormous increase in demand.

It is simple economics: when the demand for a good increases, so does its price. Globally, the demand for food is growing at an enormous rate and is one of the main drivers behind higher prices. Unprecedented economic growth in many developing countries has increased the purchasing power of their consumers, translating into a huge rise in demand for non-staple foods that were once unattainable, such as beef. *The New York Times* reports, “As the newly urbanized and newly affluent seek more protein and more calories, a phenomenon called ‘diet globalization’ is playing out around the world. Demand is growing for pork in Russia, beef in Indonesia and dairy products in Mexico. Rice is giving way to noodles, home-cooked food to fast food.”<sup>46</sup> In China, where growth has been phenomenal and over 300 million people have been brought out of poverty in recent decades, the average consumption of meat per capita in 1980 was only 20 kilograms. Today it is 55 kilograms. Given that growing cattle takes an extraordinary amount

of both grain and water—150 to 250 gallons of water to produce a pound of wheat, and seven to nine pounds of wheat to produce one pound of beef—the demand increase in China alone takes an enormous toll on the world's resources.<sup>47</sup> And it is not just meat that is becoming more common. As one Nigerian explains, bread in his country (which often uses expensive imported grain in production) is no longer a delicacy, but a staple: “The moment you develop a taste, you are hooked.”<sup>48</sup> When one sees events such as those in China and Nigeria play out across the world, greatly increasing world demand, high global food prices become much easier to understand.

However, the global increase in demand for non-staple foods has been a slow and steady process playing out over decades, and a simple supply/demand explanation alone cannot account for the rapid price increases seen in the past few months. Enter our third culprit: high oil prices. It is no secret that oil prices have skyrocketed to new highs in 2008, reaching \$116.27 per barrel for light crude as of August 27th (down from highs near \$150 per barrel earlier in the summer) from less than \$30 a barrel in 2002 and less than \$65 a barrel in 2006.<sup>49</sup> High fuel prices, in turn, raise the price of food in two major ways. First, higher oil prices mean higher transportation and energy costs, which translate into higher food prices because most food grown around the world travels at least some distance from producer to consumer, many times crossing international borders en route, and any method of transportation from truck, to rail, to boat, or plane requires oil. For example, when a shipping company has to pay more for fuel to ship a boatload of wheat from the U.S. to Nigeria, it cannot absorb all of the costs itself and must pass them on to the consumer in the form of higher prices. In addition, most farmers in developed countries rely heavily on large tractors to plant and bring in their harvests, and high fuel costs add to the costs of producing their food as well. In other areas of the supply chain, such as storage facilities and local distribution, higher energy prices across the board lead to more expensive food.

Second, the gross majority of fertilizers used by all farmers in developed countries and many of the farmers in developing countries are petroleum based, meaning that their prices increase with the price of oil. In addition, between

1996 and 2008, there was a 36 percent global increase in the demand for fertilizers and a 56 percent increase in developing countries alone, largely due to an increase in crop production to fill the growing food demand around the world. However, fertilizer producers have not kept up, leading to large shortages of fertilizer on the global market. This growing gap between supply and demand, combined with an increase in the price of oil used to make fertilizers, has caused the price of some fertilizers to triple and the price of nearly all types to rise significantly.<sup>50</sup> This presents an enormous cost increase to farmers whose crops depend on these fertilizers, and just as shipping firms must pass on the cost of transportation to consumers, so too must farmers pass on the rising costs of fertilizers in the form of higher food prices. In the face of expensive fertilizers, some farmers have begun to replace chemical based fertilizers with traditional methods such as pig manure, but such techniques result in reduced crop yields and only increase the growing difference between global food supply and demand.

The final factor mentioned as one of the main causes of the current crisis is the recent increase in the demand for biofuels, such as ethanol and biodiesel. It may at first appear paradoxical that an outcome of the well-intentioned global environmental movement could negatively affect the world's poor, but a closer look at the current production of biofuels makes it clear. Recall that the current food crisis does not stem from a traditional supply shortage, but rather

IN 2008, FOR  
EXAMPLE, BETWEEN  
ONE-FIFTH AND  
ONE-QUARTER OF  
THE U.S. CORN  
CROP WENT TOWARD  
ETHANOL PRODUCTION.

a problem of where the current supply is being directed. The basic problem with biofuels is that they increase these supply disruptions, diverting a large percentage of certain crops toward fuel production and away from hungry mouths. In 2008, for example, between one-fifth and one-quarter of the U.S. corn crop went toward ethanol production, resulting in a wide range of negative cascading effects.<sup>51</sup> First, and most plainly, there is less corn to go around, causing the price of corn and all corn-based products to increase dramatically. For example, corn is a popular ingredient of animal feed, and high corn prices have in turn raised the price of meat.<sup>52</sup> Second, farmers know there is a huge demand for corn and have substituted it for other food crops, such as wheat or soybeans, reducing the supply of these crops and pushing up their market prices as well. Third, it results in a further linking of fuel and food prices: Because biofuels are oil's major substitute, their price is inherently tied to the price of oil. Therefore, when oil prices increase, so do biofuel prices, leading to an increased willingness of farmers to supply the corn and other crops used in making biofuels, and raising corn prices as well as the price of many other grains and crops.<sup>53</sup> In addition, high grain prices greatly increase the value of land, leading in some places to harmful deforestation as previously forested areas are cleared to make room for corn, soy, or other crops. While biofuels proponents discount claims that they have had much of a negative impact on food prices, a recent study by the IFPRI estimated that, by injecting a huge new demand increase into the global market and taking more grains away from food production between 2000 and 2007, biofuels were responsible for a 30 percent increase in the price of grains as a whole.<sup>54</sup>

Though each of the preceding explanations plays a large role in raising food prices, there are a few more fundamental, if less often reported, factors at play. The first concerns global reserves and stockpiles of grains and other staple crops. While global food supply is at record levels, stockpiles are not. As a result of increasing market liberalization over the past few decades, "... the once-common practice of hoarding grains to protect against the kind of shortfall the world is seeing now seemed more and more archaic," reports the *Washington Post*.<sup>55</sup> The effect was a global reduction in grain reserves that did not seem to pose much of a problem, and

made food even cheaper. Now, however, as demand greatly outstrips supply, governments around the world have dipped into their reserves to fill the gap, running their stockpiles of staple crops down to record lows in attempts to feed their people and keep the price of food from shooting even higher. One commodity analysis firm reports that global grain reserves have fallen from an average of 114.7 days of use in 1990-2000 to only 56.7 days of use last year.<sup>56</sup> These actions subsequently resulted in higher food prices as market traders and speculators began to realize that some governments would not be able to feed their populations, or would have to pay dearly in order to do so, and raised their bets on food futures, in turn raising current prices.

Trading and speculation appear to be another major cause of the current crisis in their own right. In the past, before trading of commodities reached the levels that it has today, if a government were to run down its reserves it could still keep the price of food under control because food prices were not determined at the global level. Today however, this is nearly impossible due to the globalized nature of the food market. A large majority of the world's crops are bought and sold at major commodities markets in Chicago, Minneapolis, and Kansas City, and world prices are determined in the pits as brokers buy and sell spot and future exchanges of wheat, maize, soybeans, and all kinds of foods. Government purchases also play a large role in determining price.<sup>57</sup>

When food prices began to rise last summer, speculators and traders dove headfirst into the action. Due to the downturn of the stock market following the growing mortgage crisis in the United States, many investors were looking for a new place to invest and threw hundreds of millions of dollars into grains futures. Many say that this caused a quick rise in the price of grains and a subsequent increase in the price of food, though others are wary of this explanation and say that increased speculation is just as much a symptom of the current crisis as it is a cause.<sup>58</sup> Still, says David King, Secretary-General of the International Federation of Agricultural Producers, "Even if it is difficult to gauge the real impact of this financial speculation, it has certainly played a role in influencing trading prices."<sup>59</sup> William Pfaff of the *International Herald Tribune* notes that

"Speculative purchases have no other purpose than to make money for the speculators, who hold their contracts to drive up current prices with the intention not of selling the commodities on the real future market, but of unloading their holdings onto an artificially inflated market, at the expense of the ultimate consumer."<sup>60</sup> It is important to realize, though, that future contracts in the food market themselves are not a bad thing, as they have "classically" been the means by which a limited number of traders stabilized future commodity prices and enabled farmers to finance themselves through future sales.<sup>61</sup> What is worrisome is that more and more untraditional "non-commercial" speculators, traders, and hedge funds have come to see the food market as a place first and foremost to make a profit. Regardless of speculation's role in causing high prices, there are new fears that it is causing prices to lie about current supply and demand, creating the possibility of a growing agricultural bubble that could prove disastrous for both farmers and consumers.<sup>62</sup> In the end, most involved in the market admit that, at the very least, without this recent influx of speculation prices would be lower than they are today.<sup>63</sup>

Another extremely important cause is the rash string of export bans and other actions that some governments took last year and in the beginning of this year in their early attempts to stem the rise in food prices. Near the end of 2007, with global food prices rising, speculation sending futures ever higher, and food riots beginning to flare up across the world, many governments started placing orders in the commodities market for enormous quantities of food. The weak dollar made the U.S. market appear enticing, and as the *Washington Post* reports, "They put in orders on U.S. grain exchanges two to three times larger than normal...[leading] major domestic U.S. mills to jump into the fray with their own massive orders, fearing that there would soon be no wheat left at any price."<sup>64</sup> These runs on global harvests caused speculators to bet futures higher and sent the price of staple foods upward. In addition, the institution of export bans and other methods of food hoarding by government around the globe caused prices to accelerate quickly early this year. The reason is that these actions contribute to supply misdirection and create market distortions by artificially reducing the supply of tradable food

and increasing market volatility, causing prices to rise and speculators to bet up futures prices.

Finally, the devaluation of the dollar in recent years caused food prices to rise as well. Because many international exchanges of grains and other crops are denominated in U.S. dollars, even if food prices had remained unchanged over the past few years in terms of other currencies their market price would still have risen. However, prices across the board have not stayed steady during this time period, adding to the price increases due to devaluation alone. The IFPRI estimated earlier this year that the role played by the dropping value of the dollar alone could amount to anywhere between a 15 and 27 percent increase in the rise of food prices in the past two years.<sup>65</sup>

To summarize, the current food crisis was not caused just by one or two factors, but by a confluence of events that combined to send food prices through the roof. Though traditional food shortages often arise out of supply shortages, the current crisis has been caused by a large supply that has simply not kept up with an even larger demand. The global increase in demand for resource intensive foods over the past few decades has put a large strain on food production, but its slow nature means that it alone cannot explain the rapid increase in prices. Rather, this swift price jump came from a combination of high transportation and fertilizer costs due to rising oil prices, as well as a shift of some crops away from food production to satisfy a new demand in the market for biofuels and ethanol. In addition, as demand outpaced supply and prices moved upward countries depleted their grain reserves, leading commodities traders and speculators to bet prices even higher. The final push was caused by export bans and grain hoarding around the world, as well as a run on American grain markets in the end of 2007 and beginning of 2008 as governments feared a looming shortage and attempted to buy as much grain as possible. Viewing these actions, speculators and traders further increased their predictions for food futures, resulting in unprecedented global food prices at the end of April and into early summer.

An interesting point that these causes make clear is that they are almost all a by-product of the linking of the global

food chain that has occurred in the past decades. From field to shelf the world's food now runs through multiple countries and exchanges numerous hands. Farmers in one country grow food for hungry mouths in another, selling it to large commodity traders who in turn place it in global exchange markets where prices are largely determined by traders and speculators. Policies in one country, such as strict control of oil supply by Middle Eastern states or export bans of certain crops in developing countries, can have far reaching effects on the food security of the rest of the world, and even well intentioned policies such as U.S. ethanol mandates can produce a host of negative effects. Theoretically, the benefit of such a system is that even when problems do develop, such as the current crisis, the participation of numerous nations will hopefully create more avenues for success; if one country fails to produce enough food for its people, the global market should allow it to easily avoid massive starvation by purchasing abroad. However, if countries fail to work together it means a worsening of the crisis as they fight between each other over a commodity more precious than any other. Given this situation, what does the future hold in the short and medium term concerning the global food crisis, and how can it best be resolved?

#### What Is In Store?

While it is difficult to predict what will happen in the coming months and years, especially given the varied nature of both the causes and effects of the current crisis, there are a number of short and medium term effects that are quite likely. The first, and most important, is that high food prices are here to stay for quite some time. We can understand this just by looking back at the four most widely cited causes of the crisis: Prices could most easily go down if global supply were to quickly catch up with and surpass global demand, if demand were to drop enough for the current supply to suffice, if oil and fertilizer prices dropped significantly, or if biofuels demands decreased dramatically. None of these scenarios is going to play out anytime soon. Let's look at each in turn.

Greatly increasing global food supply would be one of the best ways to counter the current food crisis, as it would

cause prices and speculation to rapidly drop and avoid multiple humanitarian catastrophes. Unfortunately, this will not happen quickly because supply can only go up by bringing more land under cultivation or increasing yields, neither of which can have an effect in the short run. Concerning the first, one of the upsides of high prices is that they give incentives to farmers to plant new crops and produce at an all-out pace, which will eventually increase supply. Still, even when farmers decide to produce more wheat, corn, or soy, it usually takes a year or more for their decisions to come to fruition as fields need to be sown, crops planted, and harvests collected.<sup>66</sup> Thus, in economic terms food supply is rather "sticky," and a ten percent increase in prices generally only leads to a one to two percent increase in supply, according to the IFPRI.<sup>67</sup> Additionally, though there is a lot of unused land around the world which could be brought into agricultural production, as *The Economist* states, "much of the new land is in remote parts of Brazil, Russia, Kazakhstan, the Congo and Sudan: it would require big investments in roads and other infrastructure, which could take decades – and would often lead to the clearing of precious forest."<sup>68</sup> Lastly, bringing new land under cultivation will become more and more difficult as rapid urbanization continues to sweep the globe, burying valuable land underneath parking lots and apartment buildings.

Increasing yields in the short term is also problematic. Ideally, a farmer who wants to get more bang for his buck could simply plant new and improved seed varieties for the next year's harvest, but this is only possible if research and development have been going into new seeds and crops. Unfortunately, as the last century drew to a close, low food prices and the lack of any significant supply shortages since the 1970s caused governments and companies to relax investment in the development of new crops. This was especially prevalent in the developing world where many governments seem to have thought their agricultural problems fixed after the Green Revolution. The result is a world that currently lacks any significantly improved staple crop seeds, and developing them could take anywhere from ten to 15 years, says Bob Zeigler of the International Rice Research Institute (IRRI) in the Philippines.<sup>69</sup> Increasing investments in machinery and fertilizers can help in the

meantime, but they alone will not be able to dramatically improve yields or supply in the next few months or even the next few years.

What about the demand side of the equation? It is extremely unlikely that global food demand will decrease in the short term given its constant upward pressure for decades. Global population growth shows no signs of slowing any time soon, and the great majority of those born in the next few decades will be born in poor and developing states where diets are changing the most.<sup>70</sup> Reduced economic growth worldwide could possibly do the trick, and it certainly seems that the global economy is currently entering a downturn, but many nations have still been prospering as of late and it would take a multitude of catastrophic events for all developing countries to stop growing (moreover, while lower growth rates would reduce food demand they would also usher in a host of other economic and social problems that the world certainly does not want to see). Thus, it seems certain that even more global citizens will demand better diets in the future and that we are still on the upward slope of the curve. As Daniel W. Basse of the agricultural consultancy firm AgResource Company ominously told the *New York Times* in April, "Everyone wants to eat like an American on this globe. But if they do, we're going to need another two or three globes to grow it all."<sup>71</sup>

High oil prices are also likely to continue for the foreseeable future, keeping transportation and fertilizer costs high as well. There has not been a significant reduction in oil prices, which would need to happen for transportation to become cheaper, since the 1990s and worries about peak oil and dwindling supply will probably send the price even higher. Fertilizer prices will hopefully drop somewhat in the next few years as more production sites are created (there are currently 50 under construction worldwide) and as supply catches up with demand.<sup>72</sup> Still, this will take years, and even when they are finished problems will remain. The use of chemical fertilizers greatly boosts crop yields but often leads to pollution in the form nitrogen runoff, creating "dead sea" zones that kill off local marine wildlife and ecosystems. Despite these negative side-effects they still, however, present humanity's best chance of keeping yields high and avoiding large supply problems, argues Norman

Borlaug, a leading scientist behind the Green Revolution and 1970 Nobel Peace Prize winner: “Without chemical fertilizer, forget it. The game is over.”<sup>73</sup>

It is too early right now to determine exactly what the future holds for biofuels production and mandates in the United States and the rest of the world, but it appears that they are here to stay as well. On the one hand there was fierce support for the introduction of the mandates into last year’s U.S. energy bill, and on the other there are increasing realizations that ethanol may actually be harming the world more than it helps. Even Secretary of State Condoleezza Rice recently noted the possible negative effects of biofuels on global food prices, but the Bush administration is still standing strong behind its current policy for the time being.<sup>74</sup> The world would benefit from a reduction in biofuels mandates, as will be explained later, but high oil prices will continue to make “sustainable” fuels such as ethanol appear as relatively easy and cheap solutions. At the very least, any change in current policy will not come immediately and it will take time for the political opposition to biofuels to be built, especially so soon after many in Washington felt hard pressed to put ethanol mandates into law.<sup>75</sup>

The other factors do not offer much hope either. Global grain reserves are only going to increase if supply runs higher than demand or if governments decide to stockpile and not distribute what they buy. We have already seen that the first option will not happen soon, and though some governments have begun to hoard food within their own borders it is unlikely that they will choose not to give it to their citizens for fear of social unrest and violent uprisings. Unfortunately, continued low reserves will probably keep speculators active for the time being. Speculation itself is not likely to stop any time soon, bar a large scale intervention by government authorities around the world to reign in some of the more egregious actors. Even this is improbable in the short term given the gap between the political capital necessary for such action and the lack of a widespread call for intervention. Lastly, governments around the world interested in keeping the peace at home are likely to continue buying large amounts of food at a time from exporters as well as instituting export bans and other harmful measures.

Though these actions worsen the problem at the global level, governments do not want to be left without enough food for their people and care more about the immediate effects of the crisis at home than those felt around the rest of the world. There is some hope that an appreciating dollar could bring prices down somewhat, but its value would have to rise quite a bit to have any sort of large effect on global prices. All in all, these factors will combine to keep food prices very high in 2008 and 2009, and prices for most crops will remain above 2004 levels until at least 2015.<sup>76</sup>

High food prices will also continue to be unequal in their effects on the world’s population. The poor are undoubtedly those who face the greatest risks, but high prices will not affect all poor people in the same way. Those most at risk will continue to be the absolute poor who rely on international or state handouts, because higher food prices for them truly mean the difference between life and death. Severe malnutrition will be stark realities for many of these people, of whom there are hundreds of millions on the planet. Beyond the ultra-poor, the major divides both at the national and household levels will be between net sellers and net buyers of food, as well as between rural and urban populations. Overall, net sellers and exporters will benefit more than buyers and importers because they receive higher prices for their products and at the national level do not have to buy food at high international prices. This may be good news for a large rice exporter like Thailand, but is a nightmare for extremely poor net importers such as Indonesia or Niger.<sup>77,78</sup> Urban populations will tend to be worse off because they do not produce their own food and are thus net food buyers, though this effect could be somewhat mitigated by higher incomes in urban areas. One must be careful, however, in not supposing that all rural populations and farmers will benefit from the current crisis. While the World Bank reports that over 80 percent of the three billion people living in rural areas in developing countries are involved in farming in some capacity, and thus might be expected to benefit from high food prices, in reality most of these farmers own very small plots of land and are not net sellers of food. Even for those who are, the size of price jumps often outweighs increases in prices they receive for their crops due to imperfect information flows and other market externalities.<sup>79</sup> One must

also be careful not to think that all poor countries will face similar problems due to urban poverty, because some have much larger urban populations than others – the urban poor constitute half of all poor people in Bolivia, while less than a tenth in Vietnam and Cambodia.<sup>80</sup> Overall, though, those places likely to suffer the most are poor countries that are both net importers of food and have large numbers of urban poor. The effects of the crisis are likely to be smaller on poor populations who rely heavily on local food crops, such as potatoes in the Andes or teff in Ethiopia, rather than those traded internationally because their price and supply are not determined at the global level.<sup>81</sup>

Development programs and plans for poverty reduction around the world will also face immense difficulties as high food prices affect the health and purchasing power of the world’s poor. As already noted, the estimated 100 million people worldwide that have been pushed into poverty due to increased food prices significantly negates many of the gains made in poverty reduction in recent decades. Moreover, according to a recent IFPRI report, “the poor... [get] the vast majority of their caloric intake from staple crops and [consume] very little in the way of... [foods] which are rich in essential micronutrients... [As] prices continue to rise, the poor will experience a worsening of dietary quality...and the very poor will also experience decreased caloric intake.”<sup>82</sup> One large fear is the effects that deteriorating diets will have on pregnant women, their offspring, and preschool aged children, all of who need proper nutrition to avoid severe health problems in the short and long term.<sup>83</sup>

Furthermore, the problems will spread beyond just malnutrition and starvation. Due to decreased purchasing power, some poor will remove their children from school in order to work, especially girls, taking from future generations one of their best hopes for escaping poverty. Others may prioritize food above other extremely important areas, such as proper healthcare and immunizations, increasing levels of debilitating diseases in developing countries. Even worse, in order to buy any food at all, many of the world’s poor are selling everything they have, including their tools, livestock, and other assets, meaning that recovery, when it comes, will be much more difficult.<sup>84</sup> Development in any field, be it education, health, economics, or politics, will simply not happen if people are not healthy and getting enough food to eat, and thus no development program will remain untouched by the current crisis. To take one prominent example, it may be fair to say that the current food crisis will be the final nail in the coffin of achieving the UN’s Millennium Development Goals, the first of which alone (to cut in half the percentage of those suffering from hunger and extreme poverty between 1990 and 2015) looks dimmer and dimmer as the effects of the food crisis become more clear.

Another likely problem is that insecurity and unrest will increase in weak and developing states as food prices fail to go down and their citizens become more desperate. Already food riots have spread throughout the world as prices exceed people’s ability to pay, seen in the examples of Haiti, Cameroon, and Egypt mentioned earlier. The reason poor states are most likely to experience increased rioting and state insecurity is due to a variety of factors. The main problem is that they contain more poor people who are having the

hardest time dealing with high food prices. Thus, theirs is the daunting task of avoiding starvation and providing food for those who simply cannot afford enough, in addition to dealing with the negative health and developmental effects of malnutrition and decreased purchasing power among the poor. In comparison, developed states need not worry much about such matters. Furthermore, poor states often lack the institutional and governmental capability to solve these severe problems, and it is probable that at least some will be unable to satisfy their citizens' demands for cheaper food. In these states the likely result will be greater social discontent because, quite frankly, when people cannot eat they get angry. Given that many poor countries also lack strong traditions of non-violent dispute resolution or have recently experienced conflicts, and combined with the fact that the majority of the world's poor have no idea of why prices have risen so much recently and often see the state as the cause of their problems, violent clashes appear in store for some poor and weak states.

The above effects will be magnified by the fact that increasing food costs will create budgetary problems for many poor states, even if they do not face large security threats. *The Economist* reported earlier this year that developing countries will pay \$50 billion to import cereals alone in 2008, up ten percent from last year. Though a few hundred million is not a big concern to most developed states, it can be a large percentage of most developing countries' budgets. Mauritania, for example, imports 70 percent of the food that its people eat, costing over ten percent of total GDP, and its import expenditures are expected to rise by tens of millions of dollars over the costs of just a few years ago.<sup>85</sup> Costs are rising in other areas as well. In India the government's fertilizer subsidies which cost only \$4 billion in 2004-2005 are expected to run up to \$22 billion this year, an increase of over 400 percent.<sup>86</sup> The problem for these poor countries is that they must try to provide enough food for their people or face significant public backlash, and as the costs of feeding their populations continue to rise many may have to make hard decisions about shifting funds away from other government projects, such as investments in infrastructure, transportation, or education. One example can be seen in how many poor states, such as Egypt and Pakistan, are currently trying to avoid violence and insecurity by increasing food handouts, subsidies, and other social protection programs.<sup>87</sup> While these policies depress prices and quell problems in the short term, they can only last so long before cutting into the budgets of other projects. If other solutions are not found soon such actions could have a variety of negative consequences further down the road as vital sectors of societies and economies do not get the attention they need.

One possible effect that has not materialized strongly yet, but shows signs of happening, is an increase in negative perceptions of market liberalization across the globe. Despite the beneficial effects that globalization has had for the global economy in the past few decades, attitudes toward globalization have been increasingly negative in recent years in many developed and developing countries, and it will be very difficult for the proponents of liberalization to argue that the globalization of the food market did not play a large role in facilitating the current crisis.<sup>88</sup> While most newspaper articles and analyses of the crisis originally just touched on the first four factors mentioned earlier as causes of the

**Insecurity and conflict may become more likely in poor states without the resources to feed their people or the authority to police them, and many poor countries will face budgetary problems due to high food costs.**

crisis, more and more are beginning to mention the possible roll of speculation in raising prices.<sup>89</sup> Many governments and politicians are also voicing louder concern, such as when French Agriculture Minister Michel Barnier stated in April that "We must not leave the vital issue of feeding people to the mercy of market laws and international speculation," and warned against "too much trust in the free market."<sup>90</sup> In developing countries too, as governments try to shift the blame for rising prices away from themselves and towards other factors, liberalization and globalization could become easy prey. It would be unfortunate and shortsighted, though, if a large increase in protectionist attitudes and policies were to come from the world's current food problems, as they often raise prices and rarely have wide reaching benefits.

Though not guaranteed, a whole range of other effects is possible as well. Migration could increase dramatically in areas of the globe where countries that do not have enough food border those that do. One example is already playing out on the Mauritania-Mali border where thousands of Mauritanian men have crossed over to find jobs and food for their starving families back home.<sup>91</sup> This example demonstrates plainly how perceived differences in job and food opportunities do not have to be very large for migration to occur, as both countries are extremely poor. Another possible effect that has received almost no attention is the impact of higher food costs on small and local businesses in poor countries.<sup>92</sup> Employers with just a few employees are likely to find it increasingly difficult to pay their staff as food and energy costs rise, which could spell disaster for the millions of such operations around the globe. One huge question this raises is how the global food crisis is going to affect the ability of tens of millions of micro-credit borrowers in poor states to repay their loans as food prices shoot up, and what effects this may have on the global micro-credit industry. It is possible that loans could help the poor pay for food that they would currently be unable to purchase, helping to mitigate would-be disasters. It is equally likely, though, that many poor people, having borrowed to purchase food, may find themselves unable to pay back loans, causing default rates to increase dramatically and push millions deeper into poverty.

In review, high food prices will remain for many years as global supply slowly catches up with demand. On the supply side, farmers around the world will begin to plant more, more land will be brought into cultivation, and new technologies will be employed, but none of these will make large differences for a few years at the very least. Global demand will increase as the populations of developing countries grow, high oil prices will keep transportation costs expensive, and fertilizer prices will remain high in the short run until current supply shortages are balanced out. Biofuels subsidies are also likely to continue for the time being, which will help keep grain prices high, and it will not help that grain reserves are unlikely to increase at a global level, that market speculation shows no signs of slowing, or that many developing countries with weak bureaucracies see easy relief in deleterious export bans and price controls. In addition, the absolute poor will continue to be the most affected by the crisis, and net food importers and buyers will face large problems while net exporters and sellers gain at both the macroeconomic and household levels. Development programs the world over are likely to experience difficulties as the food crisis filters into their work. Insecurity and conflict may become more likely in poor states without the resources to feed their people or the authority to police them, and many poor countries will face budgetary problems due to high food costs. Protectionist attitudes and policies may become more popular if liberalization and speculation are seen as the major causes of the current crisis, and migration could increase around the world as people move in search of cheaper food. A final worry that must be studied more is the effect of the food crisis on popular micro-credit businesses.

#### How to Fix the Food Crisis

It should be obvious by now just how large of a problem the global food crisis is. Given its magnitude, it should also be obvious that solving it will not be a quick fix. The goal at this point is to stabilize current prices and work to bring them back down to reasonable levels in coming months and years, in addition to restructuring international food markets and financing efforts to increase global food supply. The global nature of the problem will require international cooperation among governments and a concerted political will to make fundamental changes in global food policy. Changes are also necessary at the personal level as the world comes to grips with the fact that not all humans will be able to eat like Americans, including Americans themselves. I will not try to explain all the possible solutions that should be enacted to fix the food crisis, but will touch on some of the most important and necessary.

First and foremost, the world's rich governments and those countries benefiting from the current crisis must provide the emergency funding needed by humanitarian organizations and poor country governments. The United States should be commended for pledging nearly \$1 billion towards alleviating the food crisis, but rhetoric alone will solve nothing. The U.S. and European governments need to stop *saying* that they will provide money and actually start *giving* it to the organizations that need it. Along these lines, Saudi Arabia recently gave the WFP half a *billion* dollars in emergency funding, and the World Bank

will be doubling agricultural lending to Africa this year to over \$800 million.<sup>93</sup> These are the types of actions that are needed to ensure that humanitarian crises will be avoided in the coming months. In addition, as the IFPRI notes, humanitarian agencies are usually good at responding to natural disasters and short term emergencies, but they will need to reform their policies to act more decisively against slow onset disasters like the current one.<sup>94</sup>

Second, harmful biofuels subsidies and mandates should be reexamined and removed both in the United States and Europe due to their negative effects both on the environment and global food prices. Proponents of biofuels say that they are necessary both to improve energy independence and protect the environment. However, given the current ways in which they are produced, neither of these supposed effects is happening. As Indian economist Swaminathan S. Anklesaria Aiyar explains, "Ironically, even if the US and Europe meet their biofuel targets, these will meet only six percent of their transport fuel needs. So, mandated biofuel use cannot give the West independence from Middle East oil supplies."<sup>95</sup> Moreover, a recent study released in the respected journal *Science* found that biofuels production actually creates *more* greenhouse gas emissions than gasoline production – doubling the emissions of gasoline production over 30 years from corn-based ethanol and increasing them 50 percent for biofuels made from switch-grass.<sup>96</sup> Given these facts, and the previously demonstrated ways in which biofuels push up the price of grain, mandates for these supposedly "clean fuels" should either be shifted to only come from waste sources or be scrapped altogether. Doing so could bring up to a twenty percent decrease in the price of maize and a ten percent decrease in the price of wheat, according to the IFPRI.<sup>97</sup>

Third, developing countries must reduce or remove their growing number of export bans and price controls. It is understandable that these countries wish to ensure food security for their citizens, and want to keep food prices down because many of their people are poor and cannot afford expensive food. But export bans and price controls are simply not the best way to achieve this goal. As already mentioned, when a number of countries restrict their grain exports it artificially reduces global supply and needlessly

raises food prices for other countries and consumers who may be even worse off. It could even end up hurting the countries that institute the bans if they need to buy food internationally in the future and will face higher costs due to their own actions.<sup>98</sup> The global food market will work much more effectively if all countries increase their integration instead of further isolating themselves. Price controls are a problem because they artificially depress prices and remove the incentives for farmers to grow more to satisfy raging demand. Though consumers are happy because of cheaper food, failing to increase supply will cause prices to remain high in the long run and will not benefit the billions who depend on small scale farming in developing countries.<sup>99</sup> In addition, blanket price controls benefit both those who need help paying for food as well as those who do not, creating wasteful economic distortions.

Instead, policies should include increasing social protection programs, expanding healthcare, and reducing import restraints. In terms of subsidies, it is better to subsidize poor peoples' incomes rather than food prices because doing so allows states to not only improve incentives for farmers to grow more food and thereby increase rural incomes, but also avoids paying for cheaper food for the rich, all while still allowing the poor to afford food.<sup>100</sup> Also, a wide variety of food and cash transfer programs already exist in many developing countries and these need to be scaled up to deal with the current crisis. In particular, "[they] should target the poorest people, with a focus on early childhood nutrition, regions in distress, school feeding with take-home rations, and food and cash for work," according to a recent IFPRI report.<sup>101</sup> Healthcare and nutrition programs must also be expanded, especially for at-risk groups such as pregnant mothers and young children in order to avoid harmful long term effects of malnutrition. National governments should work to better coordinate funding with humanitarian agencies and implementation with NGOs in this area. Getting rid of import tariffs and restrictions would help by reducing the price of imported food and thereby lowering the costs passed on to consumers. However, any astute reader would be correct to ask how any government could increase social protection programs while reducing tariff revenue, especially in poor states that lack large budgets and efficient bureaucracies. The answer

is that these options may require reducing subsidies or expenses in other areas and will not be viable everywhere, because providing income subsidies necessitates a competent civil service that many poor countries lack. Where they are not possible, any price controls should be short-term and directed at certain foods more popular among the poor.<sup>102</sup> Even where such programs are used, any increased food or cash subsidies must be temporary and localized to ensure that consumers do not come to depend on them and to reduce market distortions.<sup>103</sup> Lastly, it is important to note that countries that do not already have social protection programs to scale up will not be able to create them fast enough to do much for the current crisis, and these are the places that will need the most donor assistance in the short term.<sup>104</sup>

Fourth, developed countries must make large changes in their food policies as well. As bad as the current crisis is, it presents an amazing period of opportunity to fix many of the deep-seated problems in the global food market. As the *Washington Post* explains, though trade in food has been globalized and liberalized to a significant degree in recent decades,

-  
 “[it] never became the kind of well-honed machine that has made the price of manufactured goods such as personal computers and flat-screen TVs increasingly similar worldwide. With food, significant subsidies and other barriers meant to protect farmers...have distorted the real price of food globally, economists say, preventing the market from normal price adjustments as global demand has climbed.”<sup>105</sup>  
 -

While developed countries continued protecting their farmers, a wide range of developing states following recommendations of the “Washington Consensus” in the 1990s reduced price fixing policies and slowed investment in agricultural production, leaving them vulnerable to events like the current crisis.<sup>106</sup> Now, however, as prices head constantly upward and countries around the globe feel the pinch it appears as if there may be enough support and political will to make serious changes in global food trade and policy to fix these imbalances.

**The time is ripe to remove or significantly reduce agricultural subsidies to make the global food market more competitive and more just.**

Developed countries, predominantly the United States and European nations, should take the current opportunity of high crop prices to remove many of their disastrous agricultural subsidies. The United States currently doles out billions of dollars a year to farmers, and through its Common Agricultural Policy (CAP) the European Union spends over 40 percent of its budget on agricultural subsidies. In addition, the EU has enormously high import tariffs that restrict agricultural imports from many developing countries.<sup>107</sup> Unfortunately these policies result in artificially high incentives to produce in high-cost developed countries, who are often net food exporters as a result, making food imports for poorer countries more expensive during shortages and also making developing country exports less competitive in developed markets.<sup>108</sup> This puts poor farmers in these countries at a disadvantage and discourages growth and development. Now that farmers in developed countries are receiving the highest prices they have seen in decades and will not face severe hardships if subsidies are thrown out, the time is ripe to remove or significantly reduce agricultural subsidies to make the global food market more competitive and more just. These issues should be addressed as part of a larger goal of completing the current Doha round of trade talks.

Fifth, it is also clear that something should be done concerning rampant market volatility and speculation. Decreasing protectionist policies in both developed and developing countries should help remove distortions that are prone to cause wild market swings, but it is less clear as to what exactly should be done to reduce the negative effects of speculation. In addition to causing global food prices to rise faster than they might otherwise, extensive speculation on grain futures leaves many farmers less certain about their contracts and more vulnerable to large losses. Some farmers who have lost faith in traditional organizations such as the Chicago Board of Trade to provide financial security have started to enter into contracts with private financial firms, which provide them with more security but also make tallying the total market supply more difficult, a factor that could make prices even more volatile. While many blame rocky markets on the huge investments in commodities from hedge funds, and see limiting their involvement as a possible solution, hedge fund capital adds liquidity to the market and should theoretically make prices less volatile.<sup>109</sup> For the time being no one knows exactly how to deal with speculation problems and figuring out the nuts and bolts is a complex and often boring task. Some key steps should include increasing market transparency, monitoring speculative capital, and getting a collective agreement from major grain producers to pool a medium-sized international grain reserve that could be used to calm markets and lower prices when they greatly exceed those that markets fundamentals would dictate.<sup>110</sup>

Sixth, and perhaps most important from a long term perspective, there must be significant short, medium and long term investment increases in agricultural development and small farmers in developing countries. Most global development agencies have shifted their focus away from agriculture in recent decades, instead focusing on more popular and visible issues such as HIV/AIDS, malaria, or armed conflicts, but there are a number of reasons why they should begin to invest heavily again in agricultural programs. Moreover, there are many reasons why they should work to create a future global food market

supplied to a large extent by the hundreds of millions of small farmers in developing countries. (It is useful here to quote a recent *Economist* article at length):

-

“First, it would reduce poverty: three-quarters of those making do on \$1 a day live in the countryside and depend on the health of smallholder farming. Next, it might help the environment: those smallholders manage a disproportionate share of the world’s water and vegetation cover, so raising their productivity on existing land would be environmentally friendlier than cutting down the rainforest. And it should be efficient: in terms of returns on investment, it would be easier to boost grain yields in Africa from two tonnes per hectare to four than it would be to raise yields in Europe from eight tonnes to ten. The opportunities are greater and the law of diminishing returns has not set in.”<sup>111</sup>

-

In addition, it could possibly reduce harmful urbanization by making rural life in poor countries more profitable and encouraging many slum dwellers to migrate back to the countryside, relieving deadly pressure on many growing “megacities” around the world.

Achieving this goal is much easier said than done, but there are concrete actions that should be taken in the short and long term. In the early stages, small farmers need increased access to seeds, fertilizers, and credit, and they should at least temporarily be guaranteed minimum prices for their products in order to incentivize increased production. In the past, these combined policies have been shown to vastly increase agricultural output in a variety of settings. While distribution of necessary inputs may need to be subsidized in some areas, the goal should be to also include the private sector from the outset and gradually shift to more sustainable market based programs.<sup>112</sup> A new \$1.7 billion project by the UN’s Food and Agriculture Organization to distribute seeds to farmers in developing countries is one example that should help greatly, but national governments and other branches of the UN will need to work together to maximize these and other funds.<sup>113</sup> In addition, banking and finance actors, especially micro-credit loans, will need to play an important role and should be adequately included into the organization of projects.

Further down the road other important long term investments need to be made. One hugely important sector is irrigation. As advancing climate change and growing populations stretch already strained water supplies even further, irrigation will have to both expand and become more effective, requiring billions of dollars in funding. In addition, more agricultural research and development in everything from seeds, to fertilizers, to storage mechanisms, to myriad other areas is desperately needed in order to achieve desired production increases, and will likely require sums reaching into the billions as well. This is an area where developed countries and aid organizations will need to play a large role because few developing states have the capabilities necessary for this type and scale of work. New productivity boosting innovations will also need to be employed as they arise, though affordability must always be considered because small farmers in poor countries will never be able to afford \$500,000 combines or other expensive technologies. Many

prominent figures have called for the use of genetically modified foods to play a large role in reshaping global agriculture, but it is still too early to determine whether they would have overall beneficial or harmful effects and they cannot be counted on alone. In the end it is necessary to keep in mind that because of the diversity of situations that different countries face the goal must not be to create a one-size-fits-all set of actions. Rather, local ownership of the process should and must be encouraged, though with a great deal of outside help.

As such, much of the investment in all of these projects will have to come from developing country governments themselves and they should plan to budget large levels of funds for agricultural projects that focus on the long term. Of course, aid organizations and developed states should provide large sums as well, as poor states lack the sufficient capital to achieve success alone and lower food prices are in the interests of all. Importantly, private sector finance should not be forgotten, as it can often exceed the levels and duration of available public funding. But increased agricultural development funds will not accomplish much if workers are sick or incapacitated, if roads, electricity, and communication access remain in deplorable conditions, or if farmers don’t know the best techniques and have nowhere to store their crops once they have been harvested. Thus, large rural and urban investments will have to also be made in areas such as health, education communications, transportation, and infrastructure, in addition to those normally associated with agricultural and farming.<sup>114</sup>

### Conclusion

Regardless of which options governments and international agencies take to counter the current crisis, for many people it may be too little too late. After decades of cheap food, high prices have ripped the seams of poverty and inequality ever wider across the globe, leaving hundreds of millions at risk of malnutrition or starvation and rolling back many of the recent gains made in poverty reduction. Even for the global middle classes who do not face mortal danger, the food crisis means a significant change in lifestyle that will push many back into poverty while hampering the efforts of those working to combat such outcomes. In both cause and effect the current crisis is global in every sense of the word, and it will require coordinated international effort and political will to solve. Moreover, this will not be a short-lived problem that simply fades away after a few months; it will take many years to fix global supply imbalances and thus any solutions need long term attention. Merely increasing food aid, while necessary, will not change the many systemic flaws that helped cause high prices, and without significant reform the current system will only further widen the gap between the global rich and poor, at both the local and national levels. If catastrophe is to be avoided much change will need to occur in the countries that house the world’s poorest and most vulnerable people, from removing protectionist barriers to investing in poor farmers. Additionally, however, developed countries must take greater responsibility for the agricultural subsidies, market speculation, and misguided policies within their own borders that reduce supply, raise prices,

While the world watches with rapt attention as the global financial crisis unfolds it seems to have quickly forgotten the food crisis, despite the fact that the two are intertwined in complex ways.

and worsen the problem at the global level. The food crisis has already caused significant damage around the world and will assuredly create greater problems in the years to come, yet there is hope that it may be the impetus needed to create a more equitable and just global food system. However, to achieve this goal the myriad actors involved, from national governments, to the United Nations, to numerous other international organizations and major food producers, must come to agreement soon on how to move from mere ideas to implementation. If they don't we will be left with, in the words of one expert, "a lot of great intentions, but few results."<sup>115</sup> The world's poor certainly deserve better than that.

#### Addendum

Since September a lot has changed. The onset of the global financial crisis has dampened some aspects of the food crisis, such as high fuel and food prices, while worsening others, such as lower personal incomes, unemployment, and agricultural protectionism. Unfortunately for the poor this new crisis has only compounded their overall problems. As of December 2008 the prices of most major cereal crops had dropped 30-40 percent from their peak highs of last year and nearly all food prices have gone down significantly.<sup>116</sup> This has largely been due to a steep decrease in the price of fuel since the middle of 2008 – a barrel of oil that was selling for over \$140 last May cost less than \$40 in late February – that has subsequently reduced the costs of food production and transportation.<sup>117</sup> Despite this good news many problems remain. Prices for crops such as maize and wheat remain well above the levels of three or four years ago, meaning that they are still a significant burden for many of the world's poor.<sup>118</sup> For more developed countries, a recent report by the Institute for Agricultural and Trade Policy states that "The fall in commodity prices since July has not yet been transmitted to supermarket prices and it is unlikely that there will be a corresponding food retail price decrease in 2009."<sup>119</sup> Moreover, fuel prices will eventually rise again, bringing the costs of food up with them. As the head of the UN's Food and Agricultural Organization stated late last year, "The reduction in food prices should not be interpreted as the end of the food crisis."<sup>120</sup>

Additionally, the distribution of price decreases and their effect has been unequal. "In many countries the international price change is not quickly passed on to the domestic markets," says Joachim von Braun, noting that prices in most African countries are still well above traditional level.<sup>121</sup> This is often due to differing local conditions, such as natural time delays between purchase and delivery, the quality of supply routes and distribution programs, varying levels of import and export tariffs, and corruption. Cheaper prices have been great news for net food importing countries but have had a negative effect on net food exporters. In regions affected by conflict or political and economic instability – the very places that need cheap food the most – prices remain high: in Haiti the price of rice was double the global market value last fall and overall food prices in Afghanistan and Palestine were still 40 percent above 2007 levels in December.<sup>122</sup>

But food prices aren't the only important factor to consider. Capital investments in agriculture are vital for supply growth, increasing stockpiles and food security, yet in the face of the financial crisis these investments are at risk of setbacks. Small farmers are unlikely to get loans for investments due to reduced bank lending and many governments face immense macroeconomic and budgetary problems that will stymie efforts to improve agricultural growth.<sup>123</sup> Poor countries will undoubtedly fare worst, even though they are the ones who need to increase investment and productivity the most. In the meantime, many farmers rich and poor, big and small are cutting back on planting due to decreasing food prices and pessimistic economic outlooks for the future.<sup>124</sup> Such actions will only exacerbate supply shortages. Global food demand could drop somewhat as the financial crisis drives incomes down and unemployment up but population growth promises to keep upward pressure in place. As such, the supply-demand imbalance and supply distribution will continue to be significant problems. At the same time, speculation in food markets continues to run high, due in part to the fact that investors wary of other poor-performing sectors have pumped more money into commodities futures. Protectionist agricultural policies remain a popular tool for governments around the world, especially as the financial crisis has spread further and deeper, with China enacting a range of new exports tariffs on fertilizer in the fall. For their part, developed countries still show no hint of reducing their own inflated agricultural subsidies and the European Union has faced recent criticism for reinstating some dairy and poultry subsidies.<sup>125</sup>

Some substantive progress has been made at the international level in combating the food crisis but more must be done. Following the Rome Summit in May 2008 the World Bank's Global Food Crisis Response Program (GFRP) "put half a billion dollars on the ground...with about 60 percent of the amount in the form of seeds and fertilizer, including 250,000 tons of fertilizer and 1,500 tons of seed for 2.4 million small farms in the Kyrgyz Republic, Tajikistan, Somalia, Niger, Ethiopia and Togo at crucial times of the agriculture calendar."<sup>126</sup> Other funds have been used to support the budgets of countries who have removed food taxes and tariffs and to extend safety net programs for children and pregnant women.<sup>127</sup> Despite these actions only twenty percent of billions of dollars committed in Rome have been dispersed.<sup>128</sup> In January another high-level conference on the food crisis was held in Madrid, where over one hundred countries promised further

monetary aid and commitment to promoting small farmers and agricultural productivity in developing countries. However, some participants noted that “no substantial discussion took place” and there was ‘no real confrontation of the problem’ of the current model of agricultural production.”<sup>129</sup> Thus, solutions to the problems of high food prices, unequal food distribution, protectionism, and long-term supply, demand and productivity issues remain elusive.

We are not out of the woods yet. While the world watches with rapt attention as the global financial crisis unfolds it seems to have quickly forgotten the food crisis, despite the fact that the two are intertwined in complex ways. Commodity prices have dropped significantly since last year’s highs, thanks in no small part to a global financial meltdown, but this new crisis has created gravely serious troubles that continue to threaten the availability and price of food around the globe. From the Ukraine to the United States, Chile to China economic slowdowns have pushed tens of millions out of work and reduced incomes, in the majority of cases outweighing any benefit offered by cheaper food. Investments in agriculture are being cut, despite the long-term negative effects this will cause, and protectionism will continue to disrupt food distribution and keep prices unnecessarily high. Many commitments and immense sums have been promised to deal with the global food crisis, but few governments seem willing to disperse these funds as global financial problems grow ever larger. While the current financial crisis must be addressed effectively, it would be a disastrous mistake to forget about the food crisis. At this point significant dilemmas will remain even after the major problems have been addressed; for example the effects of poor nutrition, especially among children, will continue to reverberate long after the crisis has ended.<sup>130</sup> Unfortunately, my final words written ten months ago still apply today: governmental and international actors need to delineate responsibilities and begin acting on their promises. Intentions are certainly great, but results thus far have been anything but.

/ END

## Notes

- 1 “Haitian prime minister ousted over high food prices.”
- 2 Ibid.
- 3 “Cheap no more.”
- 4 “Cheap no more.”
- 5 Conway, Chapter 4.
- 6 Streifeld, David. “In Price and Supply.”
- 7 Ibid.
- 8 “Cheap no more.”
- 9 Faiola, Anthony. “The New Economics of Hunger.”
- 10 von Braun, Joachim. “Rising Food Prices: What Should Be Done?”
- 11 “The new face of hunger.”
- 12 “World Food Situation.”
- 13 Streifeld, David. “In Price and Supply.”
- 14 Black, Jane. “Clipping, Scrimping, Saving.”
- 15 von Braun, Joachim. “Rising Food Prices: What Should Be Done?”
- 16 Teslik, Lee Hudson. “Backgrounder: Food Prices.”
- 17 “The new face of hunger.”
- 18 Ibid.
- 19 Wilkinson, Tracy. “World Food Programme issues ‘emergency appeal’ for funds.”
- 20 “Food Price Crisis Imperils 100 Million in Poor Countries, Zoellick Says.”
- 21 Walt, Vivienne. “The World’s Growing Food-Price Crisis.”
- 22 “WFP: Cash roll-out to help hunger spots.”
- 23 Black, Jane. “Clipping, Scrimping, Saving.”
- 24 Anti-government rioting spreads in Cameroon.”
- 25 “Egyptian boy dies from wounds sustained in Mahalla riots.”
- 26 “The cost of food: Facts and figures.”
- 27 Bradsher, Keith. “Vietnam and India move to limit rice exports.”
- 28 von Braun, Joachim. “Rising Food Prices: What Should Be Done?”
- 29 von Braun, Joachim, et al. “High Food Prices: The Who, What, and How of Proposed Policy Actions.”
- 30 “UN and World Bank say to tackle crisis.”
- 31 “Food Price Crisis Imperils 100 Million in Poor Countries, Zoellick Says.”
- 32 “UN and World Bank say to tackle crisis.”
- 33 “The world food summit.”
- 34 von Braun, Joachim. “Food Summit: Some Progress But More Needs to be Done.”
- 35 Tate, Deborah. “US Senate Panel Considers Response to Global Food Crisis.”
- 36 “Bush proposes \$700 million for world food crisis.”
- 37 Jagger, Suzy and David Charter. “Food crisis: rationing introduced in bid to protect rice supplies.”
- 38 Mufson, Steven. “Siphoning Off Corn to Fuel Our Cars.”
- 39 Ibid.
- 40 “Making a killing from hunger.” and Kesmodel, David and Lauren Etter and Aaron O. Patrick. “Grain companies’ profits soar as global food crisis mounts.”
- 41 Pfaff, William. “Speculators and soaring food prices.”
- 42 “Cheap no more.”
- 43 Streifeld, David. “In Price and Supply.”
- 44 “Cheap no more.”
- 45 Teslik, Lee Hudson. “Backgrounder: Food Prices.”
- 46 Streifeld, David. “A Global Need for Grain the Farmers Can’t Fill.”
- 47 “The cost of food: Facts and figures.”
- 48 Streifeld, David. “A Global Need for Grain That Farmers Can’t Fill.”
- 49 Mouawad, Jad. “Oil Price Rise Fails to Open Tap.” and “Oil Rises as Consumer Confidence Gains.”
- 50 Bradsher, Keith and Andrew Martin. “Shortages threaten farmers’ key tool: fertilizer.”
- 51 Mufson, Steven. “Siphoning Off Corn to Fuel Our Cars.”
- 52 Ibid.
- 53 Ibid.
- 54 von Braun, Joachim. “Biofuels, International Food Prices, and the Poor.”

- 55 Faiola, Anthony. “The New Economics of Hunger.”
- 56 Gary, Bill. “Global Grain Shortage of Historic Proportions Ahead.”
- 57 Faiola, Anthony. “The New Economics of Hunger.”
- 58 Young, John E. “Speculation and World Food Markets.”
- 59 Ibid.
- 60 Pfaff, William. “Speculators and soaring food prices.”
- 61 Ibid.
- 62 Young, John E. “Speculation and World Food Markets.”
- 63 Faiola, Anthony. “The New Economics of Hunger.”
- 64 Ibid.
- 65 Minot, Nicholas. “The Food Crisis and its Implications for Agricultural Development.”
- 66 “Cheap no more.”
- 67 von Braun, Joachim. “Rising Food Prices: What Should Be Done?”
- 68 “Cheap no more.”
- 69 “The new face of hunger.”
- 70 Rice, p13.
- 71 Streifeld, David. “A Global Need for Grain That Farmers Can’t Fill.”
- 72 Bradsher, Keith and Andrew Martin. “Shortages threaten farmers’ key tool: fertilizer.”
- 73 Ibid.
- 74 Eggen, Dan. “U.S. Scrambles to Address International Food Crisis.”
- 75 Mufson, Steven. “Siphoning Off Corn to Fuel Our Cars.”
- 76 “Higher food prices here to stay: World Bank.”
- 77 “The cost of food: Facts and figures.”
- 78 “Cheap no more.”
- 79 Ibid.
- 80 Ibid.
- 81 Ibid.
- 82 von Braun, Joachim, et al. “High Food Prices: The Who, What, and How of Proposed Policy Actions.”
- 83 Ibid.
- 84 “The new face of hunger.”
- 85 Faiola, Anthony. “Where Every Meal Is a Sacrifice.” and “Mauritania at a glance.”
- 86 Bradsher, Keith and Andrew Martin. “Shortages threaten farmers’ key tool: fertilizer.”
- 87 Food prices and protest.”
- 88 “World Publics Welcome Global Trade – But Not Immigration.”
- 89 Pfaff, William. “Speculators and soaring food prices.”
- 90 Faiola, Anthony. “The New Economics of Hunger.”
- 91 Faiola, Anthony. “Where Every Meal Is a Sacrifice.”
- 92 Ibid.
- 93 “How to Feed the World.” and “The world food summit.”
- 94 von Braun, Joachim, et al. “High Food Prices: The Who, What, and How of Proposed Policy Actions.”
- 95 “How Will Rising Food Prices Impact the World?”
- 96 Searchinger, Timothy et al. “Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land Use Change.”
- 97 von Braun, Joachim, et al. “High Food Prices: The Who, What, and How of Proposed Policy Actions.”
- 98 “UN and World Bank say to tackle crisis.”
- 99 “Cheap no more.”
- 100 Ibid.
- 101 von Braun, Joachim, et al. “High Food Prices: The Who, What, and How of Proposed Policy Actions.”
- 102 “Cheap no more.”
- 103 “The politics of rising food prices in Africa.”
- 104 von Braun, Joachim. “Rising Food Prices: What Should Be Done?”
- 105 Faiola, Anthony. “The New Economics of Hunger.”
- 106 Faiola, Anthony. “Where Every Meal Is a Sacrifice.”
- 107 Hamm, Steve. “Solutions from a hunger crisis.”
- 108 Collier, p160 and Ibid.

- 109 Henriques, Diana B. "Price Volatility Adds to Worry on U.S. Farms." [110 von Braun, Joachim, et al. "High Food Prices: The Who, What, and How of Proposed Policy Actions."](#)
- 111 "The new face of hunger."
- 112 von Braun, Joachim, et al. "High Food Prices: The Who, What, and How of Proposed Policy Actions."
- 113 "UN to set up task force on food crisis."
- 114 von Braun, Joachim. "Rising Food Prices: What Should Be Done?"
- 115 von Braun, Joachim. "Food Summit: Some Progress But More Needs to be Done."
- 116 von Braun, Joachim. "Food and Financial Crises: Implications for Agriculture and the Poor."
- 117 "Oil prices end week on the down side."
- 118 von Braun, Joachim. "Food and Financial Crises: Implications for Agriculture and the Poor."
- 119 Suppan, Steve. "Betting Against Food Security: Futures Market Speculation."
- 120 Borrell, Brendan. "Back from the Brink: Global Financial Meltdown Relieves Food Crisis."
- 121 Biello, David. "Has the Food Crisis Abated?"
- 122 Ibid.
- 123 von Braun, Joachim. "Food and Financial Crises: Implications for Agriculture and the Poor."
- 124 Cha, Ariana Eunjung and Stephanie McCrummen. "Financial Meltdown Worsens Food Crisis."
- 125 Ibid, and "Madrid Agriculture Meeting Tackles 'Forgotten' Food Crisis."
- 126 "Food Security Focus of Madrid Meeting."
- 127 Ibid.
- 128 "Madrid Agriculture Meeting Tackles 'Forgotten' Food Crisis."
- 129 Ibid.
- 130 von Braun, Joachim. "Food and Financial Crises: Implications for Agriculture and the Poor."

#### Works Referenced

- "Agflation: The real costs of rising food prices." [Reuters.com](#), 29 Apr 2008. <<http://www.reuters.com/news/globalcoverage/agflation>>.
- "Anti-government rioting spreads in Cameroon." [International Herald Tribune.com](#), 27 Feb 2008. 27 Apr 2008. <<http://www.ihf.com/articles/2008/02/27/africa/27cameroon.php>>.
- Arends, Brent. "Load Up the Pantry." [Wall Street Journal.com](#), 21 Apr 2008. 28 Apr 2008. <<http://online.wsj.com/article/SB12088151227532621.html>>.
- Biello, David. "Has the Food Crisis Abated?" [Scientific American.com](#), 15 Dec 2008. 25 Feb 2009. <<http://www.sciam.com/article.cfm?id=has-the-food-crisis-abated>>.
- Black, Jane. "Clipping, Scrimping, Saving." [Washington Post.com](#), 1 May 2008. 1 May 2008. <<http://www.washingtonpost.com/wp-dyn/content/article/2008/04/30/AR20080430043003435.html>>.
- Borrell, Brendan. "Back from the Brink: Global Financial Meltdown Relieves Food Crisis." [Scientific American.com](#), 9 Dec 2008. 25 Feb 2009. <<http://www.sciam.com/article.cfm?id=from-finances-to-food-crisis>>.
- Bradsher, Keith. "Vietnam and India move to limit rice exports." [International Herald Tribune.com](#), 29 Mar 2008. 31 Apr 2008. <<http://www.ihf.com/articles/2008/03/28/business/ric.php>>.
- Bradsher, Keith and Andrew Martin. "Shortages threaten farmers' key tool: fertilizer." [International Herald Tribune.com](#), 30 Apr 2008. 1 May 2008. <<http://www.ihf.com/articles/2008/04/30/business/30fertilizer.php>>.
- "Bush proposes \$700 million for world food crisis." [Reuters.com](#), 1 May 2008. 1 May 2008. <<http://www.reuters.com/article/GCA-Agflation/idUSN0154468120080501>>.
- Cha, Ariana Eunjung and Stephanie McCrummen. "Financial Meltdown Worsens Food Crisis." [Washington Post.com](#), 26 Oct 2008. 27 Feb 2009. <<http://www.washingtonpost.com/wp-dyn/content/article/2008/10/25/AR200810250>

2293.html>.

- "Cheap no more." [Economist.com](#), 6 Dec 2007. 26 Apr 2008. <[http://www.economist.com/displaystory.cfm?story\\_id=10250420](http://www.economist.com/displaystory.cfm?story_id=10250420)>.
- Collier, Paul. *The Bottom Billion: Why the Poorest Countries Are Failing and What Can Be Done About It*. Oxford: Oxford University Press, 2007.
- Conway, Gordon. *The Doubly Green Revolution*. Ithaca: Cornell University Press, 1998.
- Eggen, Dan. "U.S. Scrambles to Address International Food Crisis." [Washington Post.com](#), 26 Apr 2008. 28 Apr 2008. <<http://www.washingtonpost.com/wp-dyn/content/article/2008/04/25/AR2008042503278.html?hpid=topnews>>.
- "Egyptian boy dies from wounds sustained in Mahallat riots." [International Herald Tribune.com](#), 8 Apr 2008. 26 Apr 2008. <<http://www.ihf.com/articles/ap/2008/04/08/africa/ME-GEN-Egypt-Protest-Death.php>>.
- Faiola, Anthony. "Where Every Meal Is a Sacrifice." [Washington Post.com](#), 28 Apr 2008. 28 Apr 2008. <<http://www.washingtonpost.com/wp-dyn/content/story/2008/04/27/ST2008042702198.html>>.
- Faiola, Anthony. "The New Economics of Hunger." [Washington Post.com](#), 27 Apr 2008. 27 Apr 2008. <<http://www.washingtonpost.com/wp-dyn/content/story/2008/04/26/ST2008042602333.html>>.
- "Food for thought." [Economist.com](#), 27 Mar 2008. 3 May 2008. <[http://www.economist.com/world/international/displaystory.cfm?story\\_id=10925518](http://www.economist.com/world/international/displaystory.cfm?story_id=10925518)>.
- "Food Price Crisis Imperils 100 Million in Poor Countries, Zoellick Says." [World Bank.org](#), 14 Apr 2008. 31 Apr 2008. <<http://www.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:21729143~pagePK:64257043~piPK:437376~theSitePK:460700,html>>.
- "Food prices and protest." [Economist.com](#), 8 May 2008. 28 Apr 2008. <[http://www.economist.com/world/international/displaystory.cfm?story\\_id=11332931](http://www.economist.com/world/international/displaystory.cfm?story_id=11332931)>.
- "Food prices could spark protectionism in Africa: IMF." [Reuters.com](#), 17 Apr 2008. 4 May 2008. <<http://www.reuters.com/article/idUSL1786734820080417>>.
- "Food prices rising across the world." [CNN.com](#), 25 Mar 2008. 29 Apr 2008. <<http://www.cnn.com/2008/WORLD/americas/03/24/food.ap/>>.
- "Food Security Focus of Madrid Meeting." [World Bank.org](#), 23 Jan 2009. 25 Feb 2009. <<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:2204328~pagePK:64257043~piPK:437376~theSitePK:460700,html>>.
- Fuller, Thomas. "5 Asian Nations Are Weighing a Rice Cartel." [New York Times.com](#), 1 May 2008. 1 May 2008. <<http://www.nytimes.com/2008/05/01/business/worldbusiness/01cartel.html?ex=121050600&en=53ba1ab928d80ca1&ei=5070&emc=eta1>>.
- Fuller, Thomas. "Soaring Food Prices Imperil Meals for Poor in Cambodia." [New York Times.com](#), 30 Apr 2008. 1 May 2008. <[http://www.nytimes.com/2008/04/30/world/asia/30cambodia.html?\\_r=1&ref=world&oref=slogin](http://www.nytimes.com/2008/04/30/world/asia/30cambodia.html?_r=1&ref=world&oref=slogin)>.
- Gary, Bill. "Global Grain Shortage of Historic Proportions Ahead." [Commodity Information Systems, Inc.](#) 1 May 2008. <<http://www.mmdnews.com/global-grain-shortage-of-historic-proportions-ahead-1257-2.html>>.
- "Haitian prime minister ousted over high food prices." [CNN.com](#), 21 Apr 2008. 28 Apr 2008. <<http://www.cnn.com/2008/WORLD/americas/04/12/haiti.ap/>>.
- Hamm, Steve. "Solutions from a hunger crisis." [Businessweek.com](#), 1 May 2008. 1 May 2008. <[http://www.businessweek.com/magazine/content/08\\_19/b4083026413508.htm](http://www.businessweek.com/magazine/content/08_19/b4083026413508.htm)>.
- Henriques, Diana B. "Price Volatility Adds to Worry on U.S. Farms." [New York Times.com](#), 22 Apr 2008. 2 May 2008. <<http://www.nytimes.com/2008/04/22/business/22commodity.html?ref=world>>.
- "Higher food prices here to stay: World Bank." [Reuters.com](#), 9 Apr 2008. 30 Apr 2008. <<http://www.reuters.com/article/topNews/idUSWA0092920080409?feedType=RSS&feedName=topNews>>.
- "How Will Rising Food Prices Impact the World?" [Newsweek and Washington Post](#), 30 Apr 2008. <[http://newsweek.washingtonpost.com/postglobal/2008/04/how\\_will\\_rising\\_food\\_prices\\_im/](http://newsweek.washingtonpost.com/postglobal/2008/04/how_will_rising_food_prices_im/)>.
- "How to Feed the World." [Newsweek.com](#), 19 May 2008. 27 Aug 2008. <<http://www.newsweek.com/id/136360/page/1>>.
- Jagger, Suzy and David Charter. "Food crisis: rationing introduced in bid to

- protect rice supplies." [TimesOnline](#), 24 Apr 2008. 29 Apr 2008. <[http://business.timesonline.co.uk/tol/business/industry\\_sectors/retailing/article3803738.ece](http://business.timesonline.co.uk/tol/business/industry_sectors/retailing/article3803738.ece)>.
- Kesmodel, David and Lauren Etter and Aaron O. Patrick. "Grain companies' profits soar as global food crisis mounts." [TucsonCitizen.com](#), 30 Apr 2008. 1 May 2008. <<http://www.tucsoncitizen.com/daily/breakingnews/83971.php>>.
- Kingsbury, Kathleen. "After the Oil Crisis, a Food Crisis?" [Time.com](#), 16 Nov 2007. 28 Apr 2008. <<http://www.time.com/time/business/article/0,8599,1684910,00.html?iid=sphere-inline-sidebar>>.
- "Madrid Agriculture Meeting Tackles 'Forgotten' Food Crisis." [International Centre for Trade and Sustainable Development](#), 6 Feb 2009. 27 Feb 2009. <<http://ictsd.net/1/news/biores/40099/>>.
- "Making a killing from hunger." [Grain.org](#), 1 May 2008. <<http://www.grain.org/articles/?id=39>>.
- "Mauritania at a glance." [World Bank](#), 28 Sep 2007. 28 Aug 2008. <[http://devdata.worldbank.org/AAG/mrt\\_aag.pdf](http://devdata.worldbank.org/AAG/mrt_aag.pdf)>.
- Minot, Nicholas. "The Food Crisis and its Implications for Agricultural Development." [House Committee on Agriculture](#), Testimony presented to Subcommittee on Specialty Crops, Rural Development, and Foreign Agriculture, 16 Jul 2008. 27 Aug 2008. <<http://agriculture.house.gov/testimony/110/h80716/Minot.pdf>>.
- Morgan, Dan. "Emptying the Breadbasket." [Washington Post.com](#), 29 Apr 2008. 29 Apr 2008. <<http://www.washingtonpost.com/wp-dyn/content/article/2008/04/28/AR2008042802509.html?hpid=hp-news>>.
- Mouawad, Jad. "Oil Price Rise Fails to Open Tap." [New York Times.com](#), 29 Apr 2008. 9 May 2008. <<http://www.nytimes.com/2008/04/29/business/worldbusiness/29oil.html?ref=todayspaper>>.
- Mufson, Steven. "Siphoning Off Corn to Fuel Our Cars." [Washington Post.com](#), 30 Apr 2008. 30 Apr 2008. <<http://www.washingtonpost.com/wp-dyn/content/article/2008/04/29/AR2008042903092.html>>.
- "Oil prices end the week on the down side." [MSNBC.com](#), 27 Feb 2009. 27 Feb 2009. <<http://www.msnbc.msn.com/id/12400801/>>.
- "Oil Rises as Consumer Confidence Gains." [New York Times.com](#), 26 Aug 2008. 27 Aug 2008. <<http://www.nytimes.com/2008/08/27/business/27stox.html?scp=3&sq=oil&st=oil&st=oil>>.
- Pfaff, William. "Speculators and soaring food prices." [International Herald Tribune.com](#), 16 Apr 2008. 30 Apr 2008. <<http://www.ihf.com/articles/2008/04/16/opinion/edpfaff.php>>.
- Rice, Susan. "The Tangled Web: The Poverty-Insecurity Nexus." [Too Poor for Peace? Global Poverty, Conflict, and Security in the 21st Century](#). Eds. Lael Brainard and Derek Collier. Washington: Brookings Institution Press: 2007.
- Searchinger, Timothy et al. "Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land Use Change." [ScienceMag.org](#), 7 Feb 2008. 3 May 2008. <<http://www.sciencemag.org/cgi/content/abstr/1151861v1?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&fulltext=Searchinger&searchid=&FIRSTINDEX=0&resourcetype=HWCIT>>.
- Streitfeld, David. "A Global Need for Grain That Farmers Can't Fill." [New York Times.com](#), 9 Mar 2008. 26 Apr 2008. <<http://www.nytimes.com/2008/03/09/business/worldbusiness/09crop.html?scp=3&sq=streitfeld&st=nyt>>.
- Streitfeld, David. "In Price and Supply, What is the Unstable Staple." [New York Times.com](#), 13 Feb 2008. 30 Apr 2008. <[http://www.nytimes.com/2008/03/09/business/worldbusiness/09crop.html?\\_r=1&scp=3&sq=streitfeld&st=nyt&oref=slogin](http://www.nytimes.com/2008/03/09/business/worldbusiness/09crop.html?_r=1&scp=3&sq=streitfeld&st=nyt&oref=slogin)>.
- Suppan, Steve. "Betting Against Food Security: Futures Market Speculation." [Institute for Agriculture and Trade Policy](#), Jan 2009. 26 Feb 2009. <<http://www.iatp.org/iatp/publications.cfm?refid=105065>>.
- Tate, Deborah. "US Senate Panel Considers Response to Global Food Crisis." [Voice of America.com](#), 14 May 2008. 26 Aug 2008. <<http://www.voanews.com/english/archive/2008-05/2008-05-14-v0a62.cfm>>.
- Teslik, Lee Hudson. "Background: Food Prices." [New York Times.com](#), 30 Jun 2008. 26 Aug 2008. <[http://www.nytimes.com/cfr/world/slot1\\_2008030.html?ref=world](http://www.nytimes.com/cfr/world/slot1_2008030.html?ref=world)>.
- "The cost of food: Facts and figures." [BBC.com](#), 8 Apr 2008. 26 Apr 2008. <[http://news.bbc.co.uk/2/hi/in\\_depth/7284196.stm](http://news.bbc.co.uk/2/hi/in_depth/7284196.stm)>.

- "The Global Grain Bubble." [CSMonitor.com](#), 18 Jan 2008. 2 May 2008. <<http://www.csmonitor.com/2008/0118/p08s01-comv.html>>.
- "The new face of hunger." [Economist.com](#), 17 Apr 2008. 29 Apr 2008. <[http://www.economist.com/world/international/displaystory.cfm?story\\_id=11049284](http://www.economist.com/world/international/displaystory.cfm?story_id=11049284)>.
- "The politics of fast rising food prices in Africa." [The Nigerian Tribune](#), 14 May 2008. 27 Aug 2008. <<http://www.tribune.com.ng/14052008/biznes.html>>.
- "The world food summit." [Economist.com](#), 5 Jun 2008. 26 Aug 2008. <[http://www.economist.com/world/international/displaystory.cfm?story\\_id=11502285](http://www.economist.com/world/international/displaystory.cfm?story_id=11502285)>.
- "Too Many Babies?" [Economist.com](#), 24 Apr 2008. 28 Apr 2008. <[http://www.economist.com/world/asia/displaystory.cfm?story\\_id=11090635](http://www.economist.com/world/asia/displaystory.cfm?story_id=11090635)>.
- "U.N. officials blame market speculation for recent food price jump." [International Herald Tribune.com](#), 28 Apr 2008. 30 Apr 2008. <<http://www.ihf.com/articles/ap/2008/04/28/news/UN-Food-Crisis.php>>.
- "UN and World Bank say to tackle crisis." [Reuters.com](#), 29 Apr 2008. 31 Apr 2008. <<http://www.reuters.com/article/topNews/idUSL2971907120080429pAgeNumber=1&virtualBrandChannel=0>>.
- "UN to set up task force on food crisis." [International Herald Tribune.com](#), 29 Apr 2008. 30 Apr 2008. <<http://www.ihf.com/articles/2008/04/29/europe/30food.php>>.
- von Braun, Joachim. "Biofuels, International Food Prices, and the Poor." [International Food Policy Research Institute.org](#), 12 June 2008. 27 Apr 2008. <<http://www.ifpri.org/pubs/testimony/vonbraun20080612.asp>>.
- von Braun, Joachim. "Food and Financial Crises: Implications for Agriculture and the Poor." [International Food Policy Research Institute.org](#), Dec 2008. 26 Feb 2009. <<http://www.ifpri.org/pubs/fpr/przoal.asp>>.
- von Braun, Joachim. "Food Summit: Some Progress But More Needs to be Done." [International Food Policy Research Institute.org](#), 6 June 2008. 26 Aug 2008. <<http://www.ifpri.org/pressrel/2008/20080606.asp>>.
- von Braun, Joachim, et al. "High Food Prices: The What, Who, and How of Proposed Policy Actions." [International Food Policy Research Institute.org](#), May 2008. 26 Aug 2008. <<http://www.ifpri.org/PUBS/ib/FoodPricesPolicyAction.pdf>>.
- von Braun, Joachim. "Rising Food Prices: What Should Be Done?" [International Food Policy Research Institute.org](#), April 2008. 28 Apr 2008. <<http://www.ifpri.org/pubs/bp/bp001.asp>>.
- Walt, Vivienne. "The World's Growing Food-Price Crisis." [Time.com](#), 27 Feb 2008. 28 Apr 2008. <<http://www.time.com/time/world/article/0,8599,1717572,00.html>>.
- Wallace, Bruce. "Price of rice takes toll in Asian slums." [Boston.com](#), 27 Apr 2008. 27 Apr 2008. <[http://www.boston.com/news/world/asia/articles/2008/04/27/price\\_of\\_rice\\_takes\\_toll\\_in\\_asian\\_slums/?p1=email\\_to\\_a\\_friend](http://www.boston.com/news/world/asia/articles/2008/04/27/price_of_rice_takes_toll_in_asian_slums/?p1=email_to_a_friend)>.
- Wilkinson, Tracy. "World Food Programme issues 'emergency appeal' for funds." [Los Angeles Times.com](#), 25 Mar 2008. 30 Apr 2008. <<http://www.latimes.com/news/nationworld/world/la-ig-food25mar25.1,7719765.story?track=rss>>.
- "WFP: Cash roll-out to help hunger spots." [World Food Programme.org](#), 12 Aug 2008. 26 Aug 2008. <<http://www.wfp.org/english/?Key=2899&ModuleID=137>>.
- "WFP says high food prices a silent tsunami, affecting every continent." [World Food Programme.org](#), 22 Apr 2008. 27 Apr 2008. <<http://www.wfp.org/english/?ModuleID=137&Key=2820>>.
- "What Global Food Prices Mean for WFP." [World Food Programme.org](#), 20 Mar 2008. 25 Apr 2008. <<http://www.wfp.org/english/?ModuleID=137&Key=2797>>.
- "Why the era of cheap food is over." [CSMonitor.com](#), 31 Dec 2007. 30 Apr 2008. <<http://www.csmonitor.com/2007/1231/p13s01-wogi.html>>.
- "World Food Situation: Food Prices Indices." [Food and Agriculture Organization of the United Nations](#), April 2008. 29 Apr 2008. <<http://www.fao.org/worldfoodsituation/FoodPricesIndex>>.
- "World Publics Welcome Global Trade – But Not Immigration." [Pew Global Attitudes Project](#), 4 Oct 2007. 3 May 2008. <<http://pewresearch.org/pubs/607/global-trade-immigration>>.
- Young, John E. "Speculation and World Food Markets." [International Food Policy Research Institute.com](#), IFPRI Forum, July 2008. 27 Aug 2008. <<http://www.ifpri.org/PUBS/newletters/IFPRIForum/iff2.pdf>>.