



INSTITUTE FOR FOOD AND DEVELOPMENT POLICY

398 - 60TH STREET, OAKLAND, CA 94618 + PHONE: (510) 654-4400 + FAX: (510) 654-4551 + www.foodfirst.org

Ending Injustices That Cause Hunger and Environmental Destruction

Policy Brief No. 16

The World Food Crisis

What's behind it and
What we can do about it

by **Eric Holt-Giménez, Ph.D.**

October 2008

For copies, contact Food First Books
(510) 654-4400 ext. 232 or visit our
webstore at www.foodfirst.org

About the Author

Eric Holt-Giménez, Ph.D. is a Social Scientist and Executive Director of Food First/Institute for Food and Development Policy in Oakland, California USA (www.foodfirst.org).

Acknowledgements

With special thanks to Food First researchers, Annie Shattuck, Rick Jonasse, Karla Peña, Ellen Tyler, Amanda El Khoury, Heidi Connor, Julianna Mandel, Meera Velu, Mihir Mankad, Jasmine Tilly, and Dori Stone.

TABLE OF CONTENTS

“A Silent Tsunami”	1
The Root Causes	4
The Green Revolution	5
Structural Adjustment Programs	5
Regional Free-Trade Agreements and the World Trade Organization	5
Northern Subsidies to Agriculture	6
World Food Aid	6
The U.S.: Growing the Crisis at Home	7
Solving the Food Crisis—Fixing the Food System	13
Endnotes	16

“A Silent Tsunami” The World Food Program’s description of the global food crisis raises the specter of a natural disaster surging over an unaware populace that is helpless in the face of massive destruction. With billions of people at risk of hunger, the current food crisis is certainly massive and destructive. But the reasons so many people have limited access to food are anything but “natural.” On the contrary, decades of skewed agricultural policies, inequitable trade, and unsustainable development have thrown the world’s food systems into a volatile, boom and bust cycle and widened the gap between affluence and poverty. Though hunger is coming in waves, not everyone will “drown” in famine. In fact, the world’s recurrent food crises are making a handful of investors and multinational corporations very rich—even as they devastate the poor and put the rest of the planet at severe environmental and economic risk. The surge of so-called food “riots” not only in poor countries like Haiti, but in resource-rich countries like Brazil—and even in the industrialized nations of Europe and the United States—reflects the fact that people are not just hungry, they are *rebellious* against a dangerous and unjust global food system.

The food crisis is anything but silent, and—as long as we are aware of its true causes—we are not helpless.

The World Bank, the World Trade Organization, the World Food Program, the Millennium Challenge, The Alliance for a Green Revolution in Africa, the U.S. Department of Agriculture, and industrial giants like Yara Fertilizer, Cargill, Archer Daniels Midland, Syngenta, DuPont and Monsanto, carefully avoid addressing the root causes of the food crisis. The “solutions” they prescribe are rooted in the same policies and technologies that created the problem in the first place: increased food aid, de-regulated global trade in agricultural commodities, and more technological and genetic fixes. These measures only strengthen the corporate status quo controlling the world’s food. For this reason, thus far, there has been little official leadership in the face of the crisis. Nor has there been any informed public debate about the real reasons the numbers of hungry people are growing, or what we can do about it. The future of our food—and fuel—systems are being decided *de facto* by unregulated global markets, financial speculators, and global monopolies.

For decades, family farmers and communities around the world have resisted the destruction of their native seeds. They have worked hard to diversify their crops, protect their soil, conserve their water and forests, and establish local gardens, markets, businesses and community-based food systems. There are tens of thousands of highly-productive, equitable and sustainable alternatives to the present industrial practices and corporate monopolies holding the world’s food hostage, and literally millions of people working to advance these alternatives in this time of need. What is missing is the political will on the part of government, industry and finance to support these alternatives.

The food crisis is affecting over three billion people—half the world’s population. The trigger for the present crisis was food price inflation. The World Bank reported that global food prices rose 83% over the last three years and the FAO cited a 45% increase in their world food price index over just nine months.¹ The Economist’s food price index stands at its highest point since it was originally formulated in 1845.² As of March 2008, average world wheat prices were 130% above their level a year earlier, soy prices were 87% higher,

rice had climbed 74%, and maize was up 31%.³ While grain prices have come down slightly, food prices are still high, and because low-income and poor families are faced with higher fuel and housing costs, they are still unable to buy sufficient food.

The crisis of food price inflation is simply the most recent tip of a slow-moving iceberg. While food rebellions across the globe have only recently made headlines, governments have been promising to end hunger for over 30 years:

Hunger's Timeline

- **1974—500 million hungry people in the developing world.** The World Food Conference pledges to eradicate child hunger in 10 years.
- **1996—830 million hungry people.** The World Food Summit pledges to reduce the number of hungry people by half by 2015.
 - **12% of the U.S. population is hungry.** U.S. Farm Bill increases food nutrition programs (Food Stamps, Women and Children in need,) and food banks augment donations of government surplus with local and industry-donated food.
- **2000 Millennium Summit—**World leaders pledge to reduce extreme poverty and hunger by half by 2015.
- **2002—850 million hungry people.** The World Food Summit+5 admits to poor progress on the Millennium Development goals.
- **2008—862 million hungry people.** The FAO High-Level Conference on World Food Security announces that instead of reducing the ranks of the hungry to 400 million, hunger has increased.¹ The World Bank re-calculates its projections for extreme poverty upwards from 1 billion to 1.4 billion.² Over 3 billion people live on less than \$2 a day.
 - **12% of the U.S. population is still hungry.** Despite \$60 billion yearly in government food nutrition programs and the explosion of over 70,000 food banks and emergency food programs across the nation, one in six children in the U.S. go hungry each month and 35 million people cannot ensure minimum daily caloric requirements.³

¹ De Schutter, O. (2008). Building Resilience: A human rights framework for world food and nutrition security. *Promotion and protection of all Human Rights, Civil, Political, Economic, Social and Cultural Rights, Including the Right to Development*. H. R. Council. Geneva, United Nations, p. 43.

² Reuters. 2008. World Bank Finds More People Live in Steep Poverty. *The New York Times*, August 27, 2008.

³ Winne, Mark. 2008. *High Food Prices - Just Another Bad Day in the Foodline*. Food Bank Speech, May 15, 2008, Seattle, WA. <http://www.markwinne.com/52/> [October 2, 2008].

The food crisis appeared to explode overnight, reinforcing fears that there are just too many people in the world. But according to the FAO, there were record grain harvests in 2007. There is more than enough food in the world to feed everyone. In fact, over the last 20 years, world food production has risen steadily at over 2% a year, while the rate of global population growth has dropped to 1.14% a year.⁴ Population is not outstripping food supply.

People are simply too poor to buy the food that is available. “We’re seeing more people hungry and at greater numbers than before,” said World Hunger Program’s executive director Josette Sheeran, “There is food on the shelves but people are priced out of the market.”⁵

Clearly, global hunger was a growing problem even before the media picked up on the present food crisis. However, the U.S. government, the international aid institutions and the mainstream media were not calling it a “global crisis.” This is because food prices were still on a steady, 30-year downward trend. Development institutions promised that eventually, as the promised benefits from globalization trickled down, the poor would be able to buy the food they lacked.

Not until the dramatic displacement of food crops by fuel crops began in 2006 did the FAO begin to warn of impending food shortages. But in the winter of 2007, instead of shortages, *food price inflation* exploded on world markets—in spite of that year’s record harvests. As a result, the number of hungry people jumped dramatically to 982 million in just one year.⁶ In the United States, 50 million people (nearly a sixth of the national population) classified as “near poor” now risk food insecurity.⁷ The rebellions that quickly spread across the globe took place not in areas where war or displacement made food unavailable, but where available food was too expensive for the poor.

The dramatic reversal of the global trend in cheap food quickly became known as the “global food crisis.” The proximate causes are known:

- **Poor weather:** Back-to-back droughts in major wheat-producing countries in 2005-06. Climate change will continue to impact food production in unpredictable ways;
- **Low grain reserves:** National grain reserve systems were dismantled in the late 1990s. Because nations now depend on the global market for their grains, global reserves are down from 115 to 54 days worldwide.⁸ This provokes price volatility;
- **High oil prices:** Increasing twofold over the last year, they pushed up prices of fertilizers (3X) and transport (2X) in the food system;
- **Increasing meat consumption worldwide:** The result of explosive growth in industrial feedlots. Apart from high consumption in the industrial north, there has been a doubling of meat production and consumption in developing countries—mostly from grain-fed feedlots that displace small producers and consume 7 pounds of grain for every pound of meat produced;
- **Agrofuels:** The diversion of 5% of the world’s cereals to agrofuels has increased grain prices. The U.S. Department of Agriculture claims that agrofuels are responsible for anywhere from 5 to 20 percent of grain price increases.⁹ The International Food Policy Research Institute (IFPRI) has put it at 30%.¹⁰ A leaked World Bank report claimed it was 75%;¹¹

- **Speculation:** Deregulation and poor oversight have contributed to the speculative bubbles in the futures markets. Following the sub-prime mortgage meltdown, investors searched for places to put their money. When they saw food prices going up, they poured investments into commodity futures, pumping up the price of grains and worsening food price inflation.

The Root Causes The food crisis is merely a symptom of a food system in crisis. Bad weather, high oil prices, agrofuels and speculation are only proximate causes of a deeper, systemic problem. The *root cause* of the crisis is a global food system that is highly vulnerable to economic and environmental shock. This vulnerability springs from the risks, inequities and externalities inherent in food systems that are dominated by a global *industrial agri-foods complex*. Built over the past half century—largely with public funds for grain subsidies, foreign aid, and international agricultural development—the industrial agri-foods complex is made up of multinational grain traders, giant seed, chemical and fertilizer corporations, processors and global supermarket chains.

The Global South had yearly trade surpluses in agricultural goods of US\$1 billion 40 years

The Population Factor

The Sub Saharan African population has grown from 230 million in 1961 to 673 million in 2000—a 292% increase over 39 years.¹ Domestic food production has not kept pace. Agricultural exports have fallen and imports are up ten fold. Why? Poor soils, poor seeds, and poor people are the stock answers. These explanations do not look at why African family farmers have to farm poor soils, why their access to seeds is limited, or why so many people on such a resource-rich continent are poor. Through its structural adjustment policies, the World Bank and the IMF pressured African countries to abandon small farm agriculture, which was seen by these institutions as unproductive. Development policies pushed people to the cities where they were to provide labor to manufacture and industry. African industrial agriculture would produce export crops (e.g., coffee, cacao, cotton) to pay off their foreign debt, and Africans would use revenues from industry to import their food. The Bank insisted that this development strategy would result in increased family incomes and economic security, thus leading to lower population growth rates. This strategy failed miserably. The urban population increased seven-fold, swelling from 18 to 33 percent of the population. Millions of poor and unemployed workers crowded into the cities—with two-thirds of them living in slums.² The manufacturing and industrial sector did not “take off” in African countries; the percent of the GDP coming from industry was 30% in 1961 and 32% in 2000.³ In the countryside, as plantations for agro-exports expanded, food production plummeted and poverty grew. Within the rural population, density increased by 180 percent as more farmers were crowded onto smaller plots. While the rest of the developing world lowered the amount of export earnings they spent on food imports from 42 to 24%, African countries increased the share they spent on food imports from 42% to 54%.⁴ The industrial transition did not slow population growth because it actually *increased* poverty and insecurity in both rural and urban areas. This rise in population was not the cause of hunger, *per se*, but the result of poverty—brought on by the programmed destruction of African food systems.

¹ World Resource Institute. 2007. http://earthtrends.wri.org/searchable_db/index.php?theme=8 [October 1, 2008].

² Ibid.

³ Ibid.

⁴ FAO 2004. http://www.commerce.uct.ac.za/Research_Units/DPRU/DPRU-Conference2004/Papers/Foreign_Aid_and_Population_Growth_Leonid_Azarnert.pdf

ago. By 2001, after three “Development Decades” and the expansion of the industrial agri-foods complex, southern countries were importing \$11 billion a year in food.¹² Immediately following de-colonization in the 1960s, Africa exported \$1.3 billion a year worth of food. Today African countries must import 25% of their food.¹³ The rise of food deficits in the global South mirrors the rise of food surpluses and market expansion of the industrial North.

The destruction of Southern food systems occurred through a series of Northern economic development projects:

The Green Revolution (1960-90) was a campaign led by the international agricultural research centers that aimed to modernize farming in the developing world. Impressive gains in national productivity were accompanied by the steady monopolization of seed and input markets by Northern corporations. The highly celebrated Asian and Mexican “miracles” masked the loss of 90% of agrobiodiversity, the massive reduction of water tables, salinization and erosion of soils, and the displacement of millions of peasants to fragile hillsides, shrinking forests and urban slums. Excluding China, the Green Revolution increased food per capita by 11%. However, the number of hungry people also increased by 11%.¹⁴

Structural Adjustment Programs (SAPs) of the 1980s-90s imposed by the World Bank and the International Monetary Fund (IMF) followed, dismantling marketing boards, eliminating price guarantees, closing entire research and extension systems, breaking down tariffs, and deregulating agricultural markets. Southern countries were flooded with subsidized grain from the U.S. and Europe that was sold at prices far below the costs of production. This destroyed national agricultural markets and tied Southern food security to global markets dominated by rich Northern countries.

Regional Free Trade Agreements and the World Trade Organization

“The idea that developing countries should feed themselves is an anachronism from a bygone era. They could better ensure their food security by relying on US agricultural products, which are available, in most cases at lower cost.”

US Agriculture Secretary John Block, 1986

The rules of the World Trade Organization (WTO) cemented the policies of the SAPs in international treaties that overrode national laws. WTO rules, like the Agreement on Trade-Related Aspects of Intellectual Property Rights and the General Agreement on Trade in Services, further consolidated Northern control over Southern agricultural economies. The Global South was forced to strip away genuine protections for smallholders and local producers to open its markets to Northern goods while Northern markets remained largely protected through a combination of both tariff and non-tariff barriers. Regional free trade agreements such as NAFTA and CAFTA, pushed through by the north, continued trade liberalization, forcing Southern farmers out of business and making countries of the South dependent on Northern food imports.

Northern Subsidies to Agriculture amount to \$US 1 billion per day. This figure is six times the annual development assistance from northern countries to the Global South.¹⁵ Fully one quarter of the value of agricultural production in the U.S. comes from subsidies. In the European Union this figure is a bloated 40 percent.¹⁶

World Food Aid in 2007 reached its lowest level since 1961 (5.9 million tonnes), precisely when more people than ever are going hungry. Why? Because when prices are high—and food is unavailable to the poor—food aid *decreases*. When prices are low—and food is abundant—food aid *increases*.

Sound backwards? This is because food aid responds to grain prices on the international market—not to the food needs of poor countries. When the price of cereals is low, northern countries and transnational grain companies seek to sell their commodities through food aid programs. When the price is high, they prefer to sell their grains on the international market. When more people suffer from hunger, less food aid arrives. Global food aid is dominated by U.S. food aid, whose objective since 1954 has been to “lay the basis for a permanent expansion of our exports of agricultural products with lasting benefits to ourselves and peoples of other lands.”¹⁷

Apart from other geopolitical goals, food aid functions as a sponge to absorb commodity surpluses in the North and dispose of it at prices below the cost of production in the South. Food aid is monopolized by four companies that control 84% of the transport and delivery. Further, 50 to 90% of global food aid is conditioned on bilateral trade agreements. USAID, for example, forces recipient countries to accept genetically modified grains.¹⁸ In 2007, 99.3% of U.S. food aid was “in-kind,” that is, food procured in the U.S. and shipped to recipient countries (rather than provisions of cash or coupons for purchasing food closer to recipients).¹⁹

The crippling of food systems in the global South opened up entire continents to the expansion of industrial agri-foods from the North. This expansion devastated local agrobiodiversity and emptied the countryside of valuable natural and human resources. But as long as cheap, subsidized grain from the industrial north kept flowing, the industrial agri-foods complex grew, consolidating control of the world’s food systems in the hands of fewer and fewer grain, seed, chemical and petroleum companies. Today three companies, Archer Daniels Midland (ADM), Cargill and Bunge control 90% of the world’s grain trade.²⁰ Chemical giant Monsanto controls one-fifth of seed production while Bayer Crop Science, Syngenta, and BASF control half of the total agro-chemical market.²¹

Given the rise of monopoly power in the food system, it should come as no surprise that when the world food crisis exploded, ADM’s profits increased by 38%, Cargill’s profits by 128%, and Mosaic Fertilizer (a Cargill subsidiary) by a whopping 1615%!²²

Contrary to conventional wisdom, big livestock production and packaging industries are also benefiting. The world’s largest producer and exporter of beef, JBS S.A has seen a 475.4% revenue increase since 2007.²³ (This is also a function of monopoly expansion. In March 2008 JBS acquired U.S. companies National Beef, Smithfield Beef and Australian Tasman.²⁴)

The U.S.: Growing the Crisis at Home

Retail prices of food increased four percent last year, according to the Consumer Price Index. The USDA claims prices are expected to increase another three to four percentage points throughout 2008, the steepest increase in 17 years.²⁵ Many of the 35 million food insecure people in the U.S. live in “food deserts” and must travel long distances to buy fresh food. Because both fuel and food prices are going up, these people are most affected by the crisis, and may be joined by millions of others living at or near the poverty level. The food crisis is worsening. While it has not been addressed by politicians or the presidential candidates, the triple whammy of a declining economy and food and energy inflation are squeezing the poor and the middle class alike. Over 28 million people—a national record—have been driven into the national food stamp program.²⁶

The Grocery Bill Higher commodity prices, specifically for corn, wheat, milk, and soy beans, coupled with rising energy costs, are the main reason food prices are rising faster than normal rates. A dozen eggs cost 50 cents more than last year, a loaf of bread 20 cents more. Most small retailers operate on a slim margin of 1-3% and cannot absorb these cost increases; as a result costs are being passed onto consumers, as farm profits fall due to rising input costs.²⁷ However, because they make their money on high volume and low margins—and because they can source directly from producers—larger chains and big box stores have posted sizable profits with the food crisis. Safeway’s 2007 annual report showed a 15.7% increase in net income between 2006 and 2007. This even bests U.K.-based Tesco, a recent, high-power arrival on the U.S. market, whose profits rose by a record 11.8% per cent last year. Other major retailers, such as Wal-Mart, also say that food sales are driving their profit increases.²⁸

Food Banks: Canaries in the Mineshaft Prices are up, but just how bad is the U.S. food crisis? The recent trends in the nation’s food banks are a good indicator: there is less food available, it is more expensive, and the lines outside the food banks are growing.

Federal support for food banks began during the food crisis of the 1970s as an emergency anti-poverty measure to close what was thought to be a temporary food security gap. In the 1980s, despite a downturn in the economy, the Reagan administration cut support for social safety nets, pushing poor people into the street and forcing food banks to turn to the private sector for donations. Food banks fought hunger by collecting unwanted food from distributors and individual households. Religious institutions, nonprofits, and an army of volunteers set up soup kitchens and food pantries, giving rise to the emergency food movement. Between 1980 and 1982, the Salvation Army’s food pantry’s demand increased 400 percent.²⁹

As the number of hungry people in the U.S. has grown, food banks have increasingly taken up the slack where government food stamps and federal school and nutrition programs leave off. Today, the nation’s largest food bank, Feeding America, (formerly Second Harvest) distributes two billion pounds of food annually to 200 national food banks.

A survey done by Feeding America in 2008 revealed that 99% of food banks have witnessed a significant increase in the number of people served since last year. Though the demand for food has increased, food stocks are down. USDA surplus has declined by \$200 million and local food donations are down nationally about 9%. (The USDA distributes surplus when stocks are high or commodity prices fall below a certain level. Like international food aid, they respond to the needs of the grain market first, tending to decrease distribution when food is most needed and increase it when it is less needed...) The Food Bank Association of New York state reports that USDA commodities are down 60% this year, a decline of 67 million pounds of food. Because many food banks across the nation rely heavily on government surplus, the decline in USDA bonus commodities has pressured them to find alternative suppliers and sources of food. Many food banks are making substitutions for traditional sources of protein and dairy, and others are reorganizing their operating structures.³⁰

The California Association of Food Banks asserts that food banks are at the “beginning of a crisis.”³¹ The concerns of food banks in California are not isolated; strain and worry resound throughout the food bank community as they cope with the food crisis. Food Banks are also suffering due to decreased monetary donations from middle-class Americans who are tightening their belts in response to the national financial crunch, as well as decreased food donations from food corporations due to the emergence of lucrative “secondary markets” like Big Lots, Dollar Tree, and Grocery Outlet.

The U.S. Farm Bill Food crises and farm crises are never far apart. In the 1970s, the government had been managing grain supply and market fluctuations by maintaining national reserves and paying farmers to idle their land. But when oil shortages and inflation pushed up food prices—provoking widespread hunger abroad—then U.S. Secretary of Agriculture Earl Butz told U.S. farmers to save the world from hunger by planting “fence row to fence row” and putting their entire harvest on the market. Policies that curbed overproduction and protected farmers from price swings were replaced by ones that encouraged maximum production and low prices.

When it turned out the hungry people of the world were too poor to buy all the food U.S. farmers produced, prices fell. Secretary Butz then told farmers to “get big or get out.” The result was widespread bankruptcy and the painful exodus of over half of our farming families from the countryside. The average farm size went from 200 to 400 acres, reflecting a steady agrarian shift to mega-farms. Large-scale corporate and non-family farms now control 75% of agricultural production.³²

Beginning in 1985, federal farm programs weakened and eventually removed the minimum price for grain, replacing it with a system of loans and subsidies that cheapened grain. True to its word, over the next two decades, the government paid out billions of dollars to maintain surpluses of cheap grain promoted by corporate grain traders. Cheap grain became the bulwark not only of the feedlot explosion, but of U.S. foreign policy as well. This policy was later incorporated into the rules of the WTO that prevented developing countries from raising tariffs to protect their agriculture from cheap foreign imports.

But membership in the WTO also required the U.S. to drop its farm subsidies. The 1996 Farm Bill called for a phase-out by 2001. The so-called “Freedom to Farm” Act abandoned our national grain reserves and gutted the positive, New Deal aspects of the U.S. Farm Bill (like price floors to rural economies, conservation and diversified livestock programs). Counting on unimpeded exports, U.S. farmers borrowed heavily to crank up production—too quickly, as it turned out. When global grain prices crashed, the government responded with billions of dollars in “emergency payments” that they claimed were “not technically” subsidies. In 2002 corn and wheat exports from the United States were priced at 13 and 43 percent below the cost of production. It is no surprise that these “non-subsidies” became the foundation of the 2002 Farm Bill.

The main beneficiaries of these policies were large farms, multinational grain traders including Cargill and Archer Daniels Midland, the feedlot industries (e.g., Tyson and Smithfield) and chemical-seed companies including Monsanto, DuPont, and Syngenta.

The 2008 US Farm (and Food) Bill (Also known as the Food, Conservation and Energy Act) weighs in at \$307 billion over five years. On the food side, 68% of the Bill is for the Supplemental Nutrition Assistance Program.³³ Thanks to tireless efforts by a broad coalition of consumers and family farmers, there is also \$100 million a year in new funds to be split between programs that rebuild local food systems, increase access to healthy food in underserved communities and support organic, beginning and minority farmers.³⁴

Unfortunately, the Farm bill also includes \$74 billion of the same commodity programs that benefit mega-farms and corporate agribusiness and undermine public health, the environment, and farming communities worldwide:

- \$12.6 Billion in commodity programs with \$8.7 billion in direct payments regardless of grower’s need;³⁵
- \$300 million a year for agrofuel programs that will continue to push up grain prices and consolidate monopoly power in the hands of grain and fuel companies (*ibid*).

The Agrofuels Boom

U.S. policymakers turned up the heat on the agrofuels boom by setting ambitious targets in the nation’s Renewable Fuels Standards (RFS) as legislated in the *Energy Independence and Security Act* signed into law in December 2007. The Act mandates the consumption of 36 billion gallons of agrofuels annually by 2022—a five-fold increase over present levels. Despite massive increases in U.S. ethanol production, the RFS targets far exceed the current capacity for fuel crop production. Of the mandate, less than half—15 billion gallons—will come from corn ethanol. Achieving this volume will require 45 million acres—nearly 50% of the country’s current corn acreage. Even if all of the U.S.’s 90 million-acre corn crop were converted to ethanol, just 12-16% of our gasoline would be replaced—barely enough for current ten percent ethanol blends (E-10), much less the 98% blends suggested in the Energy Bill.

(See: “When Renewable Isn’t Sustainable: Agrofuels and the Inconvenient Truths Behind the 2007 U.S. Energy Independence and Security Act,” by Eric Holt-Giménez and Isabella Kenfield, Food First Policy Brief No 13, March 2008, http://www.foodfirst.org/files/pdf/PB13_Agrofuels-WhenRenewableIsntSustainable.pdf [October 2, 2008].

According to Kathy Ozer, Director of the National Family Farm Coalition (NFFC):

“The Farm Bill retained direct payments that farmers will receive regardless of the price of the commodity. That is the type of payment that is WTO legal. As the Farm Bill failed to reinstate any way to stabilize prices, the subsidy payments will continue to benefit the largest growers and those who plant major commodities when prices collapse... We need to fix the food system and the way farmers get paid for their production, and not force farmers to be dependent on taxpayers to compensate for low and unstable prices.”

Are farmers benefiting? While the food crisis sent grain prices on the global market skyrocketing, farmers growing the grain won't see much of this windfall for long. Why? As Iowa farmer George Naylor of the NFFC puts it,

“Farmers don't export—Archer Daniels Midland and Cargill do. The corporate commodity groups... scheme to keep in place a broken U.S. subsidy system that allows U.S. farmers to be paid below the cost of production and agribusiness to dump cheap commodities into overseas markets... with no benefit to U.S. Farmers.”

The spectacular increase in the price of corn (from \$2 to as high as \$8 a bushel) was quickly followed by an increase in the price of farm inputs. Profit margins are rapidly thinning for both conventional and organic farmers. In general, farmers report that their costs are increasing faster than prices for their goods. Farmers receive less than 20 cents of the food dollar, out of which they must pay for production costs that have increased by 45% since 2002. The prices of most fertilizers have tripled over the past 18 months. Urea, the most common nitrogen fertilizer, has risen in price from an average of US \$281 per ton in January 2007 to \$402 in January 2008, and then to \$815 in August—an increase of 300%.³⁶ Diesel prices to farmers have increased 40% over the last two years.³⁷

Agrofuel—specifically corn-based ethanol—was once considered a good way to add value to corn in order to improve farm incomes. Unfortunately, the farmer-owned cooperatives that initially ensured returns to farmers are quickly being taken over by industry. According to the Renewable Fuels Association (RFA) the ethanol industry's lobbying group, of 134 operational ethanol processing plants in the U.S., 49 are presently farmer-owned associations, accounting for 28% of the nation's total capacity. However, this is rapidly changing. Out of a total of 77 plants now under construction, 88% are owned by large corporations. When completed, the farmer-owned percentage of total plant capacity will fall to less than 20% (note: RFA and the USDA were recently accused of underreporting the number of ethanol plants under construction, so the degree of corporate control may actually be higher.)³⁸ Just five corporations control roughly 47% of all ethanol production in the U.S. ADM and POET, the two largest corporate ethanol producers, control 33.7% of all ethanol production. The top 10 producers together control an estimated 70%.³⁹ Because of the economies of scale of its plants, and the fact that it can dominate the grain market in both food and fuel crops, ADM is emerging as the hegemonic player in the U.S. While other ethanol companies are struggling with shrinking margins due to high corn prices, ADM has strengthened its market share, as well as its profits.⁴⁰

Organic farmers are also reporting an increase in their input costs (organic fertilizer, seeds, and plastics used for irrigation,) and general costs such as electricity and water. Many organic milk producers can no longer find organic feed grains. Some small-scale producers selling at farmers' markets have seen an increase in customers and in the short run, Community Supported Agriculture (CSA) farmers appear to be better off (because their consumers help shoulder production costs), but this could shift due to anxiety over next year's crop or the overall economy. In the Midwest and the South this year's crisis is compounded by flooding and hurricanes, forcing re-planting and a decrease in crops to farmers' markets and local distribution. Because of the high volatility of prices, the NFFC warns that we are "one drought away from \$10 dollar (a bushel) corn." Because of the market's high volatility, we are also a bust away from \$2 a bushel corn, which would be just as devastating.

Food, Finance and Speculation: Bailing our way out of crises? ⁴¹

"The current financial crisis might be mitigated by going to the Federal Reserve Bank and the U.S. government to tap capital reserves. But what happens if we have a devastating drought or other natural or man-made disaster which results in a food crisis in the U.S.? There are no food reserves! The United States has a Federal Reserve Bank for money, and a Strategic Petroleum Reserve for oil, but absolutely no federal reserve for grain and other emergency foodstuffs."

Larry Matlack, American Agricultural Movement ⁴²

The American economy is in the worst shape we've seen since the Great Depression. The federal government is investing billions of dollars in taxpayer money to bail out Wall Street. Both the food crisis and the financial crisis are rooted in similar policies that have fed on each other for years. Free market reforms worldwide, championed by the U.S., eroded support for local agriculture and led to massive consolidation in the agriculture industry. In the same period, deregulation in the financial services industry allowed banks to "cross over" their investments—small banks that traditionally held mortgages were allowed to invest in other areas of the economy. Large banks quickly swallowed up small banks. Between 1980 and 1998 alone there were over 8,000 bank mergers in the US, accounting for over \$2.4 trillion in assets.⁴³ As banking became more centralized, loans to small businesses, including farms, became harder to come by, which in combination with falling prices and expensive chemical and seed packages left many farmers to "get big or get out."⁴⁴ Commodities traders increasingly invested in other financial services, large traders moved into futures markets, and some banks began to trade in financial instruments, including commodities, in order to protect their loans.⁴⁵ Some financial services companies, like Goldman Sachs, even became importers of physical goods, while traditional agribusinesses, like Cargill, now have investment banking arms that deal in everything from real estate and corporate securities to IT technology.⁴⁶

Deregulation and consolidation both make markets extremely vulnerable to shock. When the sub-prime mortgage crisis hit in 2007, investors began to scramble for safe places to put their investments. At least some of the rampant food price inflation that began at the beginning of 2008 was caused by exactly that scramble—a combination of investing in agricultural commodities and oil, which drove up the price of food and farm inputs.⁴⁷ Looking for safer investments, traders that may or may not be in businesses related to food at all put their money into commodities futures. This kind of speculative trading that is exacerbating the food crisis was not possible on this scale until financial services deregulation in the 1980's.⁴⁸

This system of deregulation has caught our economy and our food system in a negative feedback loop. Less regulation breeds more consolidation and less stability in both agricultural and financial markets. The irony is that because markets and investments are now so intertwined, we are facing a breakdown in the world's food and financial systems at the same time.

The Wall Street bailouts may or may not stabilize financial markets in the short run, but they will do nothing to address the root causes of the current crisis, nor will they stave off the next one. A real solution must include measures to stabilize both food and financial markets. We need strong oversight on large traders and financial services, and increased support to local economies, small farmers, local banks, and small borrowers. Most of all, we need a dramatic departure from the free-market fundamentalism that brought us this mess.

Solving the Food Crisis—Fixing the Food System

The official prescriptions for solving the world food crisis call for more of the same policies that caused the crisis in the first place: e.g., more subsidies, greater reliance on food aid, more free trade and more Green Revolutions (now read: *gene revolutions*). Expecting the institutions that built the current food system to solve the food crisis is like asking an arsonist to put out a forest fire. More corporate welfare, more free trade and more technological “fixes” are good news for an industrial agri-foods complex seeking to prolong windfall profits and further consolidate monopoly power, but it will do nothing to restructure our environmentally vulnerable and economically inequitable global food system.

To solve the food crisis we need to fix the food system. This entails re-regulating the market, reducing the oligopolistic power of the agri-foods corporations, and building agroecologically resilient family agriculture. We need to make food affordable by turning the food system into an engine for local economic development in both rural and urban areas. These tasks are not mutually exclusive—we don’t have to wait to fix the food system before making food affordable, marketing fair or farming viable. In fact, the three need to work in concert, complementing each other.

Localize Food Power!

1) Support domestic food production internationally based on social, ecological and economic justice and the human right to healthy food. We need to renegotiate Free Trade Agreements and remove agriculture from the WTO. The World Food Program should purchase food locally at fair prices and distribute food to those in need; such practices would avoid “dumping” of cheap grains and feed more people.⁴⁹ In the U.S., food policy councils can localize and rationalize local food systems. Safety nets for low-income people should be improved to ensure adequate access to fresh, healthy food. Food banks should be supported to source fresh, healthy food from local farmers and through state-level commodity programs. Support independent community-based food businesses at home and abroad.

2) Stabilize and guarantee fair prices to farmers, workers and consumers by re-establishing floor prices and publicly-owned national grain reserves at home and abroad. In the words of the NFFC:

[We need] a long-term vision for preserving our food security and food sovereignty—much more than simply answering agribusiness’s pleas for cheap commodities. A prudent reserves policy that stabilizes commodity prices would reduce controversial farm subsidy payments by ensuring prices do not collapse... [this will] benefit consumers and farmers instead of leaving our fates to the whims and dictates of unstable, global markets.⁵⁰

Create living wages and demand full workers rights for farmworkers, food processing workers and food service workers so that everyone can afford healthy food.

3) Halt agrofuels expansion. Suspend international agrofuels trade and investment. Maintain current tariffs on all agrofuels imports to the U.S. to curb expansion of agrofuels imports that threaten the food supplies of developing countries, as well as the dwindling reserves of the world's biodiversity. Halt any expansion of government- supported biofuels programs and immediately revise all renewable fuels mandates, tax incentives and other subsidies. Any support for domestic production of bioenergy must ensure: communities' rights to local food and renewable energy; a significant net life-cycle reduction of greenhouse gases; local ownership of bio-refineries by farmers and other community members; fair prices for farmers and a living wage and humane treatment of farm workers and other laborers; incentives for regional and ecologically appropriate feedstocks that enhance biodiversity; and a substantial improvement in environmental quality and the maintenance of existing conservation programs.

The call for an agrofuels moratorium in Europe has forced European Commission officials to acknowledge the dangers of agrofuels expansion, leading to a re-evaluation of Europe's own agrofuels mandates. A coalition of progressive environmental and social justice groups in the U.S. recently launched a global call for a U.S. Moratorium on agrofuels (See: <http://ga3.org/campaign/agrofuelsmoratorium>). Pressure from these calls can be used to roll back the agrofuels juggernaut.

4) Re-regulate finance sector investment in food commodities Institutional investors have poured hundreds of billions of dollars into the commodities futures markets, driving up food and energy prices to historically high levels. Even though prices have dropped in recent weeks, regulatory loopholes still remain ready to introduce extreme market volatility, political instability, and much human suffering. To lower international food prices and protect our social interests, the Commodities Futures Trading Commission must use its authority to curb excessive speculation in commodities futures and re-establish strict position limits on speculators, (which were successful until removed by the Commodity Futures Modernization Act of 2000). We must regulate and bring transparency to all trading. We can also remove damaging speculative influence on commodity prices by prohibiting participation in commodities markets by those who do not produce, manufacture, or take physical delivery of the commodities. We must create a solidarity economy that puts compassion and care for one another ahead of short-term profits, in the U.S. and around the world.

5) Promote a return to smallholder farming On a pound-per-acre basis, extensive research shows that small family farms are more productive than large-scale industrial farms.⁵¹ And they use less oil, especially if food is traded locally or sub-regionally. Further, because 75% of the world's poor are small farmers, investing in smallholder agriculture will address both poverty and hunger. According to Henry Saragih, Coordinator of the international farmer and peasant federation Via Campesina:

Rebuilding national food economies will require immediate and long- term political commitments from governments. An absolute priority has to be given to domestic food production in order to decrease dependency on the international market. Peasants and small farmers should be encouraged through better prices

for their farm products and stable markets to produce food for themselves and their communities. Landless families from rural and urban areas have to get access to land, seeds and water to produce their own food. This means increased investment in peasant and farmer-based food production for domestic markets.⁵²

6) Support Agroecological and locally-based approaches to food production and food system management. The International Assessment of Agricultural Science and Technology (IAASTD) recently released the results of an exhaustive four-year international consultation with over 400 scientists. The IAASTD calls for an overhaul of agriculture dominated by multinational companies and governed by unfair trade rules. The report warns against relying on genetic engineered “fixes” for food production and emphasizes the importance of locally-based, agroecological approaches to farming. The key advantage—aside from its positive environmental impact—is that while creating a market surplus, it provides both food and income to the world’s poor.⁵³ Contrary to conventional wisdom, agroecological farms, growing throughout the world, are highly productive and—according to a path-breaking study from the University of Michigan—can easily provide us with all the food we need.⁵⁴ As industrialized farming and free trade regimes fail us, these approaches will be the keys for building resilience back into a dysfunctional global food system.

7) Food Sovereignty: Democratize the Food System! Food sovereignty is the right of all people to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. At the heart of these concepts is the belief that we need to democratize our food system in order to ensure equity and sustainability. The democratization of our food systems requires a social change in the way we manage food. We must reduce the political influence of the industrial agri-foods complex and strengthen antitrust laws and enforcement. These changes will require both changes in practices and in legislation in order to establish a regulatory context for sustainable and equitable food systems. These changes also depend on the degree of political will on the part of business, our legislators, and our communities. Political will results from social pressure from informed social movements. These movements already exist, and are gaining strength in the face of the food crisis. Join and support organizations campaigning for fair food system policies; write letters and make calls to your elected officials, and ask questions of presidential and congressional candidates about hunger and poverty in the US and abroad and what they intend to do.

Together we can fix the food system and solve the food crisis once and for all.

Endnotes

- ¹ “Food Price Surge Could Mean ‘7 Lost Years’ in Poverty Fight, Zoellick Says.” *The World Bank News & Broadcast*. April 11, 2008 issue. <http://go.worldbank.org/U8PAI82X20> [October 1, 2008]; and “Urgent Measures Required to Reduce the Impact of High Food Prices on the Poor UN Agency Chiefs Highlight Role of Agro-Industries.” *FAO Newsroom*, April 9, 2008. <http://www.fao.org/newsroom/en/news/2008/1000823/index.html> [October 2, 2008].
- ² The Economist Print Edition. 2007. Cheap No More. *The Economist*, December 6, 2007, p. 81.
- ³ “The Cost of Food: Facts and Figures: Explore the facts and figures behind the rising price of food across the globe.” *BBC News*. [April 8, 2008].
- ⁴ <http://www.census.gov/ipc/www/img/worldgr.gif> and <http://faostat.fao.org/site/339/default.aspx>
- ⁵ Geoffrey Lean. 2008. “Rising Prices Threaten Millions with Starvation, Despite Bumper Crops. *The Independent*. [March 2, 2008].
- ⁶ USDA. 2008. Food Security Assessment, 2007. *Agriculture and Trade Reports*. Washington, D.C., United States Department of Agriculture.
- ⁷ <http://www.census.gov/hhes/www/poverty/histpov/hstpov6.xls> [September 23, 2008]
- ⁸ Gary, Bill. 2008. “Global Grain Shortage of Historic Proportions Ahead.” *Commodity Information Systems*. <http://bereagardens.blogspot.com/2008/04/global-grain-shortage-of-historic.html> [September 29, 2008].
- ⁹ “Borenstein, Seth. 2008. “Scientists advise halt to biofuels,” *SF Chronicle/AP*, April 30, 2008.
- ¹⁰ <http://www.ifpri.cgiar.org/pubs/books/ar2007/ar07essay01.pdf> [September 23, 2008].
- ¹¹ <http://www.guardian.co.uk/environment/2008/jul/03/biofuels.renewableenergy> [September 23, 2008]
- ¹² FAO. 2004. The State of Agricultural Commodities Markets. <http://www.fao.org/docrep/007/y5419e/y5419e00.htm> [October 1, 2008].
- ¹³ “The Development of African Agriculture,” http://www.africangreenrevolution.com/cgi-bin/african_green_rev/printer_friendly.cgi?file=/en/african_agriculture/development/index.html [October 1, 2008].
- ¹⁴ Frances Moore Lappé, Joseph Collins, and Peter Rosset with Luis Esparza, 1998. *World Hunger: Twelve Myths*, Oakland: Food First Books and New York: Grove Press.
- ¹⁵ FAO. 2002. World Food Summit: Five years later. *Food and Agriculture Organization of the United Nations*. <http://www.fao.org/worldfoodsummit/sideevents/papers/WEF-en.htm> [September 29, 2008].
- ¹⁶ Oxfam International. 2002. *Rigged Rules and Double Standards*. Oxford: Oxfam International, p. 112. Data from the Oxfam International study was published before the food crisis. Because subsidies are countercyclical, responding to prices, total subsidies are likely to be lower in times of high global food prices, but could return to these levels when markets stabilize. At the present moment there are no solid estimates of total subsidies. USDA agricultural subsidies were approximately 8% of total US agricultural output last year, though USDA payments alone are only part of the total picture of US support to agriculture.
- ¹⁷ USAID. http://www.usaid.gov/our_work/humanitarian_assistance/ffp/50th/history.html [October 1, 2008].
- ¹⁸ Barret, Christopher B. and Daniel G. Maxwell. 2005. *Food Aid After Fifty Years: Recasting its role*. New York: Routledge, p. 314.
- ¹⁹ *2007 Food Aid Flows*. Food Aid Monitor, International Food Aid Information System Policy, Planning and Strategy Division, Office of the Executive Director, World Food Programme: Rome. http://www.wfp.org/interfais/2008/pdf_2008/Food_Aid_Flows%202007_FINAL.pdf [October 1, 2008].
- ²⁰ O’ Driscoll, P. 2005. “Part of the Problem: Trade, Transnational Corporation and Hunger.” *Center*

Focus (Issue # 166, March 2005), Center of Concern.

<http://www.globalpolicy.org/soecon/tncs/2005/03problem.pdf> [September 23, 2008].

²¹ UNCTAD Secretariat. 2006. *Tracking the Trend Towards Market Concentration: The Case of the Agricultural Input Industry*. Geneva: United Nations Commission on Trade Agriculture and Development. http://www.unctad.org/en/docs/ditccom200516_en.pdf [October 2, 2008].

²² Profit increase is calculated from the net earnings of the fiscal year 2006-2008 and can be retrieved from the companies financial statements published on their website. (Ex. ADM 1.3 (2006) -1.8 (2008) / 1.3 (2006) = .38 = 38% increase profit.

²³ JBS. 2008. "Consolidated Results for the Second Quarter of 2008." JBS S.A..

http://www.mzweb.com.br/jbs/web/arquivos/JBS_PR_20080818_eng.pdf [September 23, 2008].

²⁴ Grassley, C. E. (2008). "Concentration of Agriculture, An examination of JBS/SWIFT

Acquisitions." Senator Chuck Grassley of Iowa.

http://grassley.senate.gov/news/Article.cfm?customel_dataPageID_1502=13864 [September 23, 2008]. Senator Charles E. Grassley, R-Iowa expressed the following concern in May 2008 about the horizontal integration in agriculture, "JBS is the world's largest beef packer and the third largest beef processor in the United States. National Beef Packing and Smithfield Beef Group are the fourth and fifth largest beef processors in the nation. If this transaction were to be approved, JBS would control approximately 32 percent of the beef processing market share, killing far more animals than Cargill Meat Solutions or Tyson Foods".

²⁵ Ephraim Leibtag. 2008. "Summary of Recent Retail Food Price Research and Trends."

<http://www.fmi.org/docs/media/summary.pdf> [October 1, 2008].

²⁶ Winne, Mark. 2008. "Leading the Charge, Leading the Change," from a keynote address given to the Northwest Harvest Food Bank Annual Meeting in Seattle, Washington - May 15, 2008.

<http://www.markwinne.com/food-bank-speech-may-15-2008-seattle-wa/> [October 1, 2008].

²⁷ Dave Henley, Telephone Interview. California Association of Grocers. June 30, 2008.

²⁸ Grain. 2008. "Making a Killing from Hunger: We need to overturn food policy, now!" Against the Grain, April 2008, www.grain.org/articles/?id=39 [October 1, 2008].

²⁹ Winne, Mark. 2008. *Closing the Food Gap: Resetting the Table in the Land of Plenty*. Boston: Beacon Press.

³⁰ Fraser, Ross. Media Relations Manger, Telephone Interview, Second Harvest, June 30, 2008.

³¹ California Association of Food Banks, "International Food Crisis: Food Bank Clients in Peril." June, 2008.

³² Hoppe, Robert A, Penni Korb, Erik J. O'Donoghue and, David E. Banker. (2007). *Structure and Finances of U.S Farms: Family Farm Report 2007 Edition*. U.S. Department of Agriculture: Economic Research Service, June 2007. <http://www.ers.usda.gov/publications/eib24/eib24fm.pdf> [September 23, 2008].

³³ Murphy, Sophia and Steve Suppan. 2008. The 2008 Farm Bill and the Doha Agenda. *Institute for Agriculture and Trade Policy*. <http://www.iatp.org/iatp/commentaries.cfm?refID=103103> [September 24, 2008].

³⁴ Sustainable Agriculture Coalition. 2008. Final Outcome of "Snapshot" of SAC's 2008 Farm Bill Policy Platform. *Sustainable Agriculture Coalition*.

http://www.sustainableagriculturecoalition.org/ActionCenter/FarmBill08Snapshot_Memo.pdf [September 26, 2008].

³⁵ Posey, Lee. 2008. Agriculture, Environment & Energy Federal Update: 2008 Farm Bill Report. *National Conference on State Legislatures*.

<http://www.ncsl.org/standcomm/scagee/AEEFederalUpdate2008FarmBillReport.htm> [September 25, 2008].

³⁶ IFDC. 2008. High Fertilizer Prices, Shortages Cause Worldwide Social Unrest: Fertilizer Riots, Black Marketing, Looting, Violence Reported in Asia, Africa. *IFDC Focus on Fertilizers and Food Security*. <http://www.ifdc.org/focusonfertilizer7.html> [October 2, 2008].

- ³⁷ Energy Information Administration. 2008. Diesel Fuel Prices: What Consumers Should Know. *Energy Information Administration Brochures*, Brochure #:DOE/EIA-X045. <http://www.eia.doe.gov/bookshelf/brochures/diesel/> [October 2, 2008].
- ³⁸ Barrionuevo, Alexei. 2007. Rise in Ethanol Raises Concerns About Corn as a Food. *The New York Times*, January 5, 2007. <http://query.nytimes.com/gst/fullpage.html?res=9A06E7DC1430F936A35752C0A9619C8B63&sec=&spoon> [October 1, 2008].
- ³⁹ Hasan, Hamza. 2007. Overview of U.S. Ethanol Market. *Food First Fact Sheet*. <http://www.foodfirst.org/en/node/1723> [October 2, 2008].
- ⁴⁰ Birger, Jon. 2008. The ethanol bust: The ethanol boom is running out of gas as corn prices spike. *Fortune*, February 28, 2008. <http://money.cnn.com/2008/02/27/magazines/fortune/ethanol.fortune/?postversi> [June 3, 2008]. “The days of cheap corn are over, and the industry's new, lower profit margins clearly favor ethanol leader Archer Daniels Midland... over all the smaller producers like Verasun, privately-held Poet Energy and the many, many farmer-owned ethanol cooperatives. ADM's massive 200 million-gallon-a-year ethanol plants simply have better economies of scale than their 50-million-gallon-a-year rivals. And the fact some of ADM's big plants run on coal instead of natural gas makes ADM's cost advantage that much greater.”
- ⁴¹ Shattuck, Annie. 2008. The Financial Crisis and the Food Crisis: Two Sides of the Same Coin. *Food First Blog* September 24, 2008. <http://www.foodfirst.org/en/node/2252> [October 2, 2008].
- ⁴² Matlack, Larry. 2008. The U.S. Food System Was Also Deregulated in the 1990s and the Stakes are Much Higher than the Current Economic Meltdown. *Food First Issues*. <http://www.foodfirst.org/en/node/2253> [October 2, 2008].
- ⁴³ Rhoades, Stephen A. 2000. “Bank Mergers and Banking Structure in the United States, 1980-98.” *Staff Study 174*. Board of Governors of the Federal Reserve System.
- ⁴⁴ De Windt, Claudia S., Isis Marquez, Rodrigo Martinez, Oscar Ceville, and Xiaohang Liu. 2008. “Liberalization of Financial Services Under NAFTA and its Effect on the Environmental Performance of the Agricultural Sector in Mexico.” presentation at the Fourth North American Symposium on Trade and the Environment. Organization of American States. Phoenix, Arizona, USA.
- ⁴⁵ *Ibid*
- ⁴⁶ Cargill Corporation. 2008. Investment. http://www.cargill.com/products/risk/ps_investment.htm [October 2, 2008].
- ⁴⁷ Gordon, Gretchen. 2008. Food Crisis in the Age of Unregulated Global Markets. *Food First Issues*. <http://www.foodfirst.org/en/node/2099> [October 2, 2008].
- ⁴⁸ Moberg, David. 2008. Let Them Eat Free Markets: How deregulation fuels the global food crisis. *In These Times*. <http://www.inthesetimes.com/article/3801/> [October 1, 2008].
- ⁴⁹ Holt-Giménez, Eric and Loren Peabody. 2008. From Food Rebellions to Food Sovereignty: Urgent Call to Fix a Broken Food System. *Food First Backgrounder*, Spring 2008 14(1). <http://www.foodfirst.org/en/node/2199> [October 1, 2008].
- ⁵⁰ National Family Farm Coalition. 2008. Joint Letter to Congress In Support of Reserves (4.28.08). *National Family Farm Coalition Website*. <http://www.nffc.net/Pressroom/Letters/08.04.28%20Congress%20-%20Reserves.pdf> [October 2, 2008].
- ⁵¹ Rosset, Peter Ph.D. 1999. On the Benefits of Small Farms. *Food First Backgrounder* Winter 1999, Vol. 6, no. 4 and The Multiple Functions and Benefits of Small Farm Agriculture In the Context of Global Trade Negotiations. *Food First Policy Brief* #4, September 1999.

⁵² Saragih, Henry. 2008. Via Campesina proposal to Solve Food Crisis: Strengthening peasant and farmer-based food production: Open Letter to Mr. Jacques Diouf Secretary General of the Food and Agriculture Organization (FAO), Mr. Yasuo Fukuda, Prime Minister of Japan, President of the G8, Mr. John W. Ashe, Permanent UN representative, Antigua and Barbuda's Permanent and Chairman of the Group of 77. *Food First Issues: Food Sovereignty as a Human Right*. <http://www.foodfirst.org/en/node/2109> [October 2, 2008].

⁵³ Ishii-Eiteman, Marcia, et al, "New Era for Agriculture" Food First Backgrounder, Vol. 14, no. 2, Summer, 2008, <http://www.foodfirst.org/files/pdf/bkg%20summer%202008.pdf>

⁵⁴ C. Badgley, J. K. Moghtader, E. Quintero, E. Zakem, M. J. Chappell, K. R. Avilés Vázquez, A. Samulon, and I. Perfecto. 2007. "Organic agriculture and the global food supply." *Renewable Agriculture and Food Systems*, Vol. 22, Issue 2, pp. 86-108.