

Food Insecurity in Sub-Saharan Africa

By Amy Rademacher

For almost half a century, Sub-Saharan Africa (SSA) has been struggling, in one form or another, with food insecurity. This ongoing condition has been caused by a number of factors including distribution obstacles, global climate change, a lack of successful local agriculture, and an inability or disinterest to act by local officials. The situation has been further complicated by an inefficient and disorganized international response to the crisis. Although most would agree that each of these factors carries at least some validity, there is far less international consensus on the best remedy to the crisis. Does the answer to African food insecurity lie within scientific and supply-based solutions? This would require a reliance on global market forces and genetically modified (GM) crops to feed the hungry. Or will success be more attainable through a combination of methods such as weather prediction, climate change solutions, and foreign monetary aid? By examining the successes and failures in food aid policy, can the global community create a plan that will truly end hunger in SSA in years to come?

Ever since food aid to Africa began in the late 1950s, the crisis has been characterized as a supply issue. A lack of successful and widespread agriculture in SSA led to the failure of local governments to provide enough food for their populations. In reaction, Western governments and aid organizations have sought to provide foreign food aid to SSA, in the form of imported crops from wealthy and developed countries worldwide. Commonly held conceptions of the crisis as a “shortage” dictated these reactions. In more recent years, these tactics have been repeatedly implemented, and have expanded to include support for new and improved technologies to advance agriculture and food supply systems within Africa. These methods include the exportation of better farming equipment, the use of more pesticides and herbicides, and the widespread use of GM seeds used to grow crops in large quantities.

Supply-based solutions to food insecurity such as these may have been acceptable in the early years of the aid movement, yet presently there is a global push for more comprehensive solutions to deal with the modern pressures compounding the situation. No longer can the plight of Africa be based simply on the idea of a “shortage.” The problem is not a lack of food but an inability on the part of both local and international actors to distribute food where it is most needed in a timely and cost effective manor. Furthermore, recent stresses like climate change and economic crises are adding more pressure to an already complicated situation. The global community needs to think outside the supply-based box and find a solution that will combine innovative modern methods to solve the many problems that contribute to food insecurity. To achieve this goal we need to answer the following three questions: Which solutions have been successful in the past? Which ones have failed? And what combination could be the most successful in the future?

As stated above, the solution of simply unilaterally providing more food to SSA is becoming outdated, as it fails to meet the challenges created by ever-changing economic and environmental factors. Providing food aid in the form of subsidized GM crops from the United States and other developed countries has proven unsuccessful in the twenty-first century. As the costs of international transportation grow each year, shipping massive quantities of food has become cost prohibitive. Then, when food arrives in Africa, aid groups in conflict zones struggle to deliver the food at all in the face of uncooperative governments. A complicated string of international aid

agencies and other actors has fractured the aid movement and produced a weak and uncoordinated effort. In recent years, controversy over the safety of GM crops has encouraged some African countries to reject aid of this nature, creating tension among food donors and recipient countries. In addition to this, suggestions to implement factory farming have run up against objections from farmers, who wish to rely on traditional methods of agriculture.

In response to these conditions, new and alternative concepts have been proposed, in order to change the way aid is provided. These initiatives have fostered a more preventative response to ending the food crisis. Western countries, as well as large aid organizations, have supported the consolidation of food aid efforts. In the hope of delivering aid in the most efficient ways possible, policy makers have begun to look for ways to share responsibilities, cut down on transportation costs, and be less wasteful in spending. In order to do so, there has been a movement toward supporting SSA with monetary aid, with less emphasis on crop importation. This monetary relief generally comes in the form of development loans and microfinance lending. Also, stronger support is being given to local and regional agriculture, replacing the use of large factory farms that concentrate their efforts on exportation of crops. These steps would hopefully allow SSA to further develop, creating infrastructure and institutions that would provide food, as well as economic growth for the region overall.

Of these alternative conceptions, one of the most progressive is a push for answers to climate change. Changes in rainfall, annual temperatures, soil quality, and weather patterns have greatly affected the SSA region and have compounded recent food challenges. Many support broad-based solutions combating climate change to effectively prevent further problems before they arise. Scientists have also introduced climate prediction models that would help farmers and policy makers determine weather patterns in advance. With technology like this, a level of preparedness for drought, heavy rainfall, or other potentially disastrous conditions could be preemptively reached. This could improve rural farming on the continent and prevent massive crop loss that has characterized farming in SSA for generations. Working together, government agencies, aid organizations, and scientists could potentially alleviate harmful conditions before they reached a level of crisis.

It is unacceptable in the twenty-first century for citizens of SSA to be dying of hunger or for entire SSA communities to suffer due to climate change and food insecurity. With an enormous array of resources, both scientific and monetary, the developed world has the ability to solve the crisis of food insecurity. The question today is how to best and most effectively implement the wide array of resources and solutions available. It is detrimental and foolish to believe that such a complicated scenario, with so many contributing factors and causes, could have only one solution. To tackle food insecurity, relief efforts must be informed by the facts on the ground, which support the need for multilateral solutions. The crisis is not merely a supply issue, but caused by many different factors, all of which require separate approaches. This makes the importance of cooperation among aid groups and governments all the more crucial.

Food aid in the form of GM crops and factory farming has not only become expensive and ineffective, but it also ignores compounding environmental and economic situations that need to be dealt with differently. To benefit farming and increase local food supplies in SSA, the global community must take significant steps to stop climate change. In the meantime, scientific methods from developed countries should be implemented to alleviate climate stress. In addition, the

international community needs to understand that the economic impact of globalization on SSA is directly tied to food insecurity. Severely lagging behind most other areas of the world, SSA struggles with a lack of infrastructure, institutions, and access to global markets. Access to these types of resources would greatly improve the ability of SSA countries to begin providing food for their own people, ending their reliance on foreign aid. To enable this, relief should be given more routinely in the form of development funding, as well as foreign support for democratic institutions and educational programs. These kinds of aid efforts have the potential to greatly improve the economic, political, and social institutions within SSA, allowing Africans to play a larger role in solving the food crisis.

Above all, those concerned for the plight of SSA must focus on freeing it from a reliance on foreign aid and relief assistance. Support for local and regional farming, climate prediction methods, financial aid for development and infrastructure, and a more united aid initiative would lead SSA towards sustainable and reliable food sources and a more secure future. But more importantly, these solutions would lead to less dependency on foreign food aid and greater reliance on solutions from within SSA. The establishment of properly functioning economic and political structures would help lead countries to food security, as well as help to improve the overall wellbeing of the people of SSA.

Annotations

Akande, Tunji, Goran Djurfeldt, Hans Holmen, and Aida C. Isinika. 2005. "Conclusions and a Look Ahead." In *The African Food Crisis*. Edited by G. Djurfeldt, Hans Holmen, Magnus Jirstrom, and Rolf Larsson. Cambridge: CABI Publishing.

Annotation: This concluding chapter serves to outline implications the authors' work could have on policies in the future. The researchers of the study try to determine how relevant the Asian Green Revolution could be to the current situation in Africa. This work articulates the answers found. The chapter is set up in an interesting way, where the authors posit seven questions to various Swedish and African scholars and then publish their answers to conclude the volume. The questions include relevant topics such as markets, economies, states and small farmers and have interesting results. Yet, being a complicated study of almost three hundred pages, an actual conclusion of the work would have been helpful, especially for those unfamiliar with the topic.

Alexandratos, Nikos. 2005. "Countries with Rapid Population Growth and Resource Constraints: Issues of Food, Agriculture, and Development." *Population and Development Review* 31 (2): 237-58.

Annotation: This article's main focus is on the world's projected population growth within the next forty years. It questions whether the potential exists for developing and poor countries around the world to utilize their own agricultural resources to sustain their populations. The author focuses on the nineteen nations of the world that are projected to have the highest population increase. He concludes that almost all of these states have the capacity to expand their agricultural sectors to accomplish self-sustainability. Yet he leaves open-ended the questions of whether they will be able to do so and how they should proceed. This piece is well

organized, with an abundance of charts and graphs for reference points. Yet, further research could have been done into other factors that influence food stability. The conclusion could also have been more developed.

Andrews, Colin and M. Flores. 2008. "Vulnerability to Hunger: Improving Food Crisis Responses in Fragile States." *UNU Wider*, 24.

Annotation: This in-depth piece, co-authored by Andrews and Flores for the United Nations University, approaches the questions of prevention and response to vulnerability and hunger in a calculated and compelling manor. They propose that prevention and response mechanisms need to be improved so that policy makers worldwide can better aid victims of the global food crisis. Their main suggestion is the implementation of the newly formed Integrated Food Security Phase Classification (IPC) to extenuate the varying types of crisis on regional and national levels, stressing both short-term and long-term goals as crucial. This paper serves as both a good summery of the IPC for those who are unfamiliar with it, as well as a critique of both the IPC and reactions to food inequities by global powers.

Archer, Emma, Elijah Mukhala, Sue Wilker, Maxx Dille, and Kennedy Masamvu. 2007. "Sustaining Agricultural Production and Food Security in Southern Africa: an Improved Role for Climate Prediction?" *Climate Change* 2007 (83): 287-300.

Annotation: This working paper was prepared by several authors for the International Research Institute for Climate Prediction at Columbia University and utilizes data from 2003-2004. Focusing on Southern Africa, the article examines the role of climate change on food security. The authors specifically target the use of climate change prediction to alleviate the worst effects of global warming. They meticulously critique existing climate information systems, and conclude with a number of enlightening recommendations for improvement in the future. Short and to the point, the research is easily understood; a wide range of audiences could use the data effectively.

Barrett, Christopher B, and Daniel G. Maxwell. 2005. Food Aid After Fifty Years: Recasting Its Role. Edited by P. Mosely. Oxford: Routledge.

Annotation: Written fifty years after some of the first food aid was delivered to needy people in developing countries, the authors of this book attempt to provide a working critique on the use of food aid, the system in which it is distributed, and the policies that guide it. Critical of the way that food aid has been used and managed since its inception as a form of humanitarian assistance, this detailed study makes a case for a total overhaul of the food aid system, yet they strongly believe in the concepts defining food assistance. Effort is made to dispel what they feel are myths about this type of aid, and then practical solutions are given to enable a more effective role for food aid globally. Insightful, as well as hopeful, this study gives a positive outlook on what the future could hold.

Bennett, Elizabeth L., Eric Blencown, et al. 2007. "Hunting for Consensus: Reconciling Bushmeat Harvest, Conservation, and Development Policy in West and Central Africa." *Conservation Biology* 21 (3): 884-887.

Annotation: Written by a large group of authors, this short and concise piece aims to answer questions surrounding Africa's "bushmeat" problem. Neatly arranged, the article begins with a brief explanation of bushmeat and the problems that surround it. Encompassing many different types of African wildlife used for subsistence, bushmeat is important for local food production, as well as for supplying jobs and income to many Africans. The authors discuss the threat of urban development for bushmeat and the fight of conservationists to preserve the land, the animals and the subsistence way of survival. They conclude that this problem needs to be tackled both nationally and internationally in order to alleviate the African food crisis. Incredibly short, this piece is informative, but should be used as a supplemental piece to a more developed work on the subject.

Bharwani, Sukaina, Mike Bithell, Thomas E. Downing, et al. 2005. "Multi-Agent Modeling of Climate Outlooks and Food Security on a Community Garden Scheme in Limpopo, South Africa." *Philosophical Transactions: Biological Sciences* 360 (1463): 2183-2194.

Annotation: The authors of this journal article took part in research on climate change and food security in the city of Limpopo, South Africa. Their main goal was to look at the effects of climate predictions on crop yield and food prevalence for farmers in the region. They also wanted to find out how seasonal adjustments by the population could help them in dealing with the long-term effects of global warming. To do this, they engage in several in-depth case studies on poor, as well as more secure farmers and households and their use of seasonal weather prediction methods. The conclusions of the study maintain that vulnerability and adaptation are important to African farmers, as well as to crop production and the food crisis. The more commonly weather prediction techniques are utilized, the better populations will be able to adapt to climate change.

Bonfiglioli, Angelo. 2007. *Food and the Poor: How Can Democratic Local Governments Reduce Food Insecurity in Africa?* New York, NY: United Nations Capital Development Fund.

Annotation: Noting that much of the literature on the food crisis in Africa focuses on policy and aid on the international level, this book sets out to add something different to the discussion. Focused on economic and political situations within Africa, the author stresses the profound importance of democratic local governments could have on food security, and in turn healthy development throughout the continent. Neatly organized in a chronological manner, the book discusses how sustainable local economies, supported by democracy, would lead to African countries being less dependent on foreign aid, and more dependent on themselves. The conclusion leaves the reader with suggestions on how to promote democracy at local levels, in hopes that the future will bring both agricultural and political stability to the region.

Collier, Paul. 2008. "The Politics of Hunger." *Foreign Affairs* 87 (6): 1-8.

Annotation: Written by the Director of the Center for the Study of African Economies at Oxford University, this article discusses the jump in global food prices since 2005 and the global food shortage. Coming from a Westernized, economic vantage point, Collier stresses three important ways the world's politicians can and must solve this crisis. By instituting policies to expand large commercial farms, end GMO crop banning and do away with US subsidies on ethanol, global leaders could provide African leaders with the food to feed their populations. He concludes that Westerners have a romantic view of local agriculture and need to kick this habit in exchange for the total industrialization of food production. This piece reads with an overtone of arrogance. The author has a narrow scope while looking at this complicated set of problems and focuses too extensively on global economic solutions, discussing other points of view with an obvious sarcasm.

Djurfeldt, Goran, Hans Holmen, Magnus Jirstrom, and Rolf Larsson. 2005. "African Food Crisis: The Relevance of Asian Experiences." In The African Food Crisis. Edited by G. Djurfeldt, Hans Holmen, Magnus Jirstrom, and Rolf Larsson. Cambridge: CABI Publishing.

Annotation: This is a section of a larger work that serves as an introduction to the study that will be subsequently laid out in later chapters. The introduction is used to briefly describe the authors' purpose, which is to investigate Asia's Green Revolution and to understand why a similar kind of revolution is not working in Africa to alleviate their food crisis. The section provides an essential background on what the Green Revolution was, as well as informing the reader about both African and Asian agriculture. The authors assert that in their study they attempt to redefine the Green Revolution in less pessimistic terms than it has historically been portrayed in. Included in this section are also lists of policy implications the authors believe their study could help generate in the future.

Global Health Watch. 2005. "Part D: The Wider Health Context: Food." In Global Health Watch: 2005-2006. Edited by T. P. H. Movement. New York, NY: Zed Books.

Annotation: This chapter was pulled from a world health report done concerning the years 2005 through 2006. It begins with a brief and helpful overview of global hunger statistics. The piece then focuses mainly on how globalization, GMO crops, multinational ownership of food production and distribution, liberalization of agriculture and subsidies have all turned food into a commodity. Hard hitting and honest, Global Health Watch provides a compelling argument, backed by charts and staggering statistics, on how food insecurity is being created by all of these factors. The conclusion is drawn that food cannot be viewed as a commodity and in order to restore food security, as well as global nutrition, multilateral collective standards need to be set and the food debate needs to be reframed in environmental and public health terms.

Gregory, P. J., J. S. I. Ingram, and M. Brklacich. 2005. "Climate Change and Food Security." *Philosophical Transactions: Biological Sciences* 360 (1463): 2139-48.

Annotation: This short, but comprehensive journal article is focused on the adverse effects of global climate change on food security worldwide. Looking closely at a number of case studies

from different parts of the world, it takes into consideration the fact that different regions are being affected in completely different ways by climate change. This differentiation in struggles with climate change and food shortages provide a difficult set of circumstances for governments and populations, creating situations that can not be solved with uniform solutions. The authors support the idea of adaptation to climate change to lessen the vulnerability of populations and their food supplies. Also, there is a strong emphasis on contributing to sustainability and support of long-term change for suffering peoples. A well-articulated and informative article, this would be useful to further debate on the solutions of climate change and food supplies.

Gressel, Jonathan, Abdelhaq Hanafi, Graham Head, et al. 2004. "Major Heretofore Intractable Biotic Constraints to African Food Security that may be Amenable to Novel Biotechnological Solutions." *Crop Protection* 23: 661-689.

Annotation: This article, written by a group of scientists, professors, and members of the biotech business community addresses the plague of weeds and disease-carrying pests on African crop production. The authors contend that these problems are far more detrimental to food security than the international community has given them credit for and that they have not been addressed by traditional agricultural techniques. It is suggested that the solution to these problems are within the field of biotechnology. The majority of this article gives detailed scientific analysis of individual weeds and insects and biotechnology's impact on them. This piece is not advisable for beginners who want to read about the African food crisis for the first time, yet would serve well those who are more well versed within the biotech field.

Haile, Menghestab M. 2005. "Weather Patterns, Food security and Humanitarian Response in Sub-Saharan Africa." *Transactions Biological Sciences* 360 (1463): 2169-82.

Annotation: Haile, of the renowned aid organization. the World Food Program (WFP), wrote this compelling piece to address rainfall totals and weather patterns and their impact on African food supplies. Coming from a unique and interesting perspective the author supports the use of technology and weather prediction to help humanitarian response to sub-Saharan food problems. By utilizing research on weather patterns, it is suggested that humanitarian organizations like WFP could predict crisis creating weather patterns in advance and preemptively prepare for disasters before they strike. Many of the worst weather patterns affect rural populations and it is concluded that this kind of study could help the response to weather-induced food crises in vulnerable areas. This significantly scientific piece is easily accessible to those with no scientific background and is a great source for anyone interested in improving humanitarian food aid, no matter what your expertise.

Heidhues, Franz, Achi Atsain, Hezron Nyangito, Martine Oadilla, Gerard Gheresi, and Jean-Charles Le Vallee. 2004. "Development Strategies and Food and Nutrition Security in Africa: An Assessment." Edited by IFPRI-EXEC.

Annotation: This short piece is actually an executive summery of the Food Security Report on Africa. It starts with an extremely helpful history of Africa's food crisis since the end of colonial

occupation in most countries. From there, it moves on to discuss the role that Africa plays in its own development plans and the importance of this aspect. African countries need to feel that they are responsible for their own futures, not just relying on US and European aid. The conclusion of the summary is a push for more micro-level solutions to the food crisis. The report stresses that each African country struggles with its own economic, political and social woes and therefore different food problems. In turn, these countries need to be treated as separate entities and solutions must come from within the countries, as well as from without.

Holmen, Hans. 2005. "The State and Agricultural Intensification in Sub-Saharan Africa." In The African Food Crisis. Edited by Goran Djurfeldt, Hans Holmen, Magnus Jirstrom, and Rolf Larsson. Cambridge: CABI Publishing.

Annotation: The author of this piece attempts to study the food crisis in SSA by looking at six specific countries, their agricultural history, and how this kind of micro-level analysis can effectively support positive macro-level policies. Throughout the paper there is an emphasis on the connections between the state, the market and local smallholders of farmland. The author gives good historical background for this material, beginning with a discussion of the state of affairs in Africa since decolonization in the 1970s. Chronologically, he follows trends in each country through the Structural Adjustment period of the 1980s until the present. The conclusions drawn are that Africa has a huge unmet potential in agriculture, and given the change through real market opportunities, they could flourish for themselves. Critical of the West and its dumping of subsidized food on Africa, the article makes some eye-opening reflections.

_____. 2006. "Myths about Agriculture, Obstacles to Solving the African Food Crisis." *The European Journal of Development Research* 18 (3): 453-480.

Annotation: The article's main purpose is to dispel what the author feels are common misconceptions, or myths, about the African food crisis. In an extremely organized paper, he lists nine problems with how the food crisis is viewed by the Western, mainly liberal, world. Focusing extensively on large scale and GMO agriculture, the author supports these methods and ridicules more localized and pre-industrialized methods for solving the crisis, viewing them as over-romanticized Western ideals. Although the opinions expressed are well supported, the article is far from being balanced and comes across as condescending, finding that any solutions that do not coincide with the author's are merely supported by these common myths.

House of Representatives. 2002. Committee on International Relations. "The Developing Food Security Crisis in Southern Africa." Second Session. June 13.

Annotation: This hearing before Congress addresses the "developing" food crisis in Southern Africa. Bringing in experts from the World Food Program, as well as from World Vision United States, and the United Nations, the hearing maps out the human causes of the crisis and how to alleviate them. Congress questions the guest speakers on what their strategy plans are for the future in order to achieve this. There is some discussion about specific areas, like Zimbabwe,

where the blame for food shortages is squarely placed on cruel and inept governments, overlooking the role the United States plays in this crisis. Surprisingly out of touch, this hearing seems too little too late. The "developing" food crisis is decades old. This is a crisis that has been addressed poorly by the United States for years and Congress should be looking to past failures in policy to create progressive new plans for the future.

House of Representatives. 2003. Committee on Science. "Plant Biotechnology Research and Development in Africa: Challenges and Opportunities." First Session. June 12.

Annotation: This hearing was held to discuss the usefulness of biotechnology and genetically modified organisms within the context of the African food crisis. Members of Congress also wanted to assess the challenges that would be faced, and what opportunities existed in the use of these processes to aid African countries. The inquiry clearly supports the use of these technologies through groups like the Rockefeller Foundation and Monsanto. These groups, along with organizations like USAID are cited throughout the hearing, and jointly with Congress, are pushing for the answer to food insecurity to come from large investment in science and biotechnologies. The hearing document lacks questions concerning the causes of the food crisis, as well as failing to address what African countries and governments could do locally to help themselves.

House of Representatives. 2006. Committee on International Relations. "The World Hunger Crisis." Second Session. May 25.

Annotation: This hearing, which convened in mid-2006, addresses the US role in food aid throughout the world, with a concentration on sub-Saharan Africa. It begins with a general review of the hard facts about hunger, as well as statistics on what the US contributes to countries like Sudan every year. It then outlines the need for suffering countries to help themselves in providing proper food allocation and distribution. The hearing then allows statements and questions by individual House members, as well as a statement by Oxfam. Oxfam makes some recommendations to the committee on how the US can improve its aid role. The hearing does not adequately address the root causes of hunger around the globe and illustrates a lack of understanding of these causes. It also focuses more on US financial contributions than it does on what the true accomplishments have been in ending hunger.

House of Representatives. 2007. Committee on Foreign Affairs. "Food Insecurity in Africa: The Impact of Agricultural Development." First Session. July 18.

Annotation: Trying to form a well-rounded plan to help Africa with its food crisis, this hearing looks particularly at the impact that agricultural development could have on the continent. Members of Congress discuss a push for more development to go hand in hand with the already substantial amount of food the United States sends to developing countries in SSA. Food insecurity will begin to be compounded by climate change and a lack of water resources so it is put forward that development is more crucial now to stave off the worse effects of these trends in the future. It is stressed that crop aid should not be lessened, but that Africa needs more than

just food from the United States, it needs economic and political help as well, in hopes that it might be able to stand on its own someday soon.

House of Representatives. 2007. Committee on Foreign Affairs. "International Food Aid Programs: Options to Enhance Effectiveness." First Session. May 24.

Annotation: This 2007 hearing before Congress strives to improve the role that the United States plays when it is involved in delivering food aid to Africa. The main goal is to discuss strategies for improving and enhancing the aid programs that are already in place, while still providing for the best interests of American taxpayers and American farmers. The hearing includes written statements by individuals from food aid groups such as CARE, the Maritime Food Aid Coalition and Bread for the World, lending some credibility to the proceedings. Their statements serve to further inform the concerns of the Members of Congress who address the hearing committee and provide a realistic framework for the situation on the ground.

House of Representatives. 2007. Government Accountability Organization. "Foreign Assistance: Various Challenges Limit the Efficiency and Effectiveness of US Food Aid." May 24.

Annotation: This hearing was based on findings by the Government Accountability Office (GAO) that the amount of revenue the United States is spending on food aid has steadily been increasing since 2002, yet the tonnage of food actually being delivered to receiving countries has been steadily decreasing. With a detailed summary, the GAO provides a plethora of reasons that this trend is occurring, most importantly citing poor distribution and transportation choices on the part of the United States Agency for International Development (USAID), the United States Department of Agriculture (USDA), and the Department of Transportation (DOA). Recommendations to each agency, including more efficient ways of purchasing, transporting and delivering aid are made by the GAO in hopes of reversing the current trend.

Huntingford, Chris, F. Hugo Lambert, John H. C. Gash, Christopher M. Taylor, and Andrew J. Challinor. 2005. "Aspects of Climate Change Prediction Relevant to Crop Productivity." *Philosophical Transactions: Biological Sciences* 360 (1463): 1999-2009.

Annotation: Solely focused on how rising global food prices are affecting Africa, this piece offers a great discussion on the causes of the problems, current situations, and long-term solutions. The piece begins with a thorough look at how and why small farmers and rural poor are the hardest hit by the world's food situation. Next, they discuss the current economic and social situations that prevail in Africa due to these problems. Finally, they conclude by discussing both short-term, and more importantly, long-term solutions to the food crisis. Stressing that the risk of food insecurity affects Africa more than any other region, this piece is short, but gives great background on the crisis. This would be a perfect article to use as a springboard to more in-depth research on the topic.

Independent Evaluation Group. 2007. World Bank Assistance to Agriculture in Sub-Saharan Africa. Washington, DC: The International Bank for Reconstruction and Development.

Annotation: This book is a compilation of the research done by an independent group to evaluate the World Bank (WB) and its policies on agriculture in Africa. The WB has recently shifted its focal point on the fight against food insecurity in Africa, concentrating more extensively on agricultural growth, and this study serves as a critique of both the positive and negative aspects of this shift. The Group finds that WB efforts in recent decades reveal that it has spent far too much of its investment power on agriculture. Being the leading lender of foreign capital, it is suggested that the Bank steps up its attention on agriculture and invest more wisely within Africa in the future. For those who know little about the food crisis in SSA, this book would be very helpful in building a background of knowledge, with an extensive appendix following policy recommendations.

Jones, Monty P., and Sidi Sanyang. 2008. "Multiple Pressures of Soaring Food Prices and Food Security in Africa." *Current Science* 95 (3): 1317.

Annotation: This highly scientific piece discusses the impact of surface temperature change due to global warming on certain vulnerable parts of Africa. The main topic discussed in the body of the paper is African crop yields and the ways in which they will be negatively affected by climate changes. A detailed analysis is done of both rainfall totals and temperature projections, forecasting the next few decades. The conclusion is that climate change will most definitely have a negative effect on African crop yields, yet it is stated very clearly that there is a wide range of predictions on exactly how much. Containing a substantial amount of data, this piece is dense. Yet it is a good source of statistics on present and future climate and weather conditions in Africa, and provides clear correlating arguments to the problems behind food supplies.

Kidan, Weldeghaber, Materne Maetz, and Phillippe Dardel. 2006. "Food Security and Agricultural Development in Sub-Saharan Africa- Building a Case for More Public Support." In *Policy Assistance*. Rome: Food and Agriculture Organization of the United Nations.

Annotation: This report, compiled by the Food and Agriculture Organization (FAO) of the United Nations (UN), assesses empirical situations in Africa to draw attention to the need for agricultural investment to aid in Africa's food crisis. Aimed at policy makers and ministers within Africa, as well as at partners investing from the international community, the report aims to prove the importance of local agriculture to Sub-Saharan Africa's success. Citing conflict and inappropriate macro-level policy as catalysts for food insecurity, the authors take extensive steps to prove that local agriculture is the answer. Outlining background, opportunities, drawbacks, and helpful case studies, the report concludes with recommendations for the future. With an appendix full of charts, graphs and an extensive bibliography, this report would be helpful to anyone interested in SSA.

Lawson, Max. 2008. "Credibility Crunch: Food, Poverty, and Climate change: An Agenda for Rich-Country Leaders." *Oxfam Briefing Paper*. 2-39.

Annotation: This article was written in 2008 by a staff member of Oxfam International and has two main goals. First, it was written specifically to address the leaders of the G8 Summit that would be meeting to discuss global concerns. Next, it was written as an informative briefing paper to provide an outline on some of the major problems facing developing and poor countries around the world. The main focus of the paper is that no man, woman, or child needs to be hungry or poor in 2008. The body of the paper covers many issues, including food insecurity, poverty levels, and global warming, and tries to provide policy bases, goals and solutions to solve them. Incredibly comprehensive, this piece serves as a great overview of world issues, as well as offers practical advice to average people and world leaders to try and move world affairs in a more positive direction.

Melito, Thomas. 2008. "Food Insecurity Persists in Sub-Saharan Africa despite Efforts to Halve Hunger by 2015." Washington, DC: United States Government Accountability Office.

Annotation: This report discusses the pledge of more than 180 world leaders in 1996 to reduce the world's undernourished peoples by 2015. This goal seems to be even further out of reach in 2008 than it was in 1996 when it was proposed. The report analyzes why undernourishment is so pervasive throughout the world and then makes recommendations to USAID to try and meet the 2015 goal. Its recommendations include more cooperation with host governments, as well as issuing yearly progress reports on their work. USAID's reaction to these recommendations is mixed. Attached to the summary of the report is the PowerPoint presentation used to present it to Congress, which provides a more in-depth and helpful guide for readers.

Misselhorn, Alison A. 2005. "What Drives Food Insecurity in Southern Africa? A Meta-analysis of Household Economy Studies." *Global Environmental Change* 15 (1): 33-43.

Annotation: This article focuses on the highly overlooked influence of localized and cultural aspects on African food insecurity. Food insecurity in African countries is often characterized as a problem with production and global distribution, seemingly taking the problem out of the hands of Africans. Yet, this article concludes that the problem lies also in people's access to food at local levels. With an in-depth study of households in several different regions, the author hopes to complement macro level analysis and policy with compelling coverage of the causes of poverty and food insecurity at the micro level. A helpful study, this piece includes individual Africans in the study of their food supply issues.

Mumba, L.E. 2007. "Food Aid Crisis and Communication about GM Foods: Experience from Southern Africa." In *The Public, The Media, and Agricultural Biotechnology*. Edited by D. J. Brossard, J. Shanahan, T.C. Nesbitt. Cambridge: CABI.

Annotation: This chapter focuses on food crisis scenarios in Zambia but, as stated by the author, is applicable to many of the surrounding sub-Saharan countries. The section takes a detailed look at the rejection of food aid by Zambia, from countries like the United States, due the crops being genetically modified. The author discusses the debate between the United States and the European Union over GM crop use in food aid supplies, as well as how GM crops are being

portrayed by the media in countries that require assistance. A well-balanced piece, the author comes to an insightful conclusion somewhere in the middle of those on the pro-GM side of the debate and those for the ban of GM crops altogether. The author respects a country's request of GM-free seeds and traditionally raised crops, but objects to these requests when GM products are the only alternative to a starving population.

Naylor, Rosamond, and Walter Falcon. 2006. "Our Daily Bread." *Boston Review* 33 (5): 13-18.

Annotation: Focusing on the food crisis facing much of the developing world, the article looks at the need for public investment. First the author briefly discusses some of the well-known causes and dilemmas of world food distributions. He touches on the growth of corn and other traditional food crops for use as fuel, the effects of global climate change, and the pressure on the food supply exerted by newly affluent Asian countries. Disheartened by the overabundance of misguided private sector funds, the author believes that solution to the food crisis lies somewhere else. With a boost in African agriculture, as well as large public sector funding, then and only then does he believe we will see real progress.

Naylor, Rosamond. 2008. "The Global Food Crisis Exposes the Fragility of Sub-Saharan Economic Progress." *Boston Review* 33 (3): 15.

Annotation: This brief opinion piece appearing in the *Boston Review* echoes many scholarly pieces on the subject of the global food crisis, global warming and sub-Saharan Africa. The author begins by laying out some current facts about African economics, giving compelling and detailed statistics. Then, he begins to focus on what he feels defines the tragedy of the African continent: its fragility due to the global food crisis. Naylor lists three development points that are crucial to healthy African development. Finally, he concludes with the stance that Africa will only be able to turn its situation around on a large scale when its people are able to eat. Clear and to the point, this op-ed piece is a great supplement to more detail works.

Parry, Martin, Cynthia Rosenzweig, and Matthew Livermo. 2005. "Climate Change, Global Good Supply and Risk of Hunger." *Philosophical Transactions: Biological Sciences* 360 (1463): 2125-38.

Annotation: This paper is based on the three authors' research in the field of global warming in which they analyze its impact on rainfall, crop stability and at-risk populations in places like Africa. The research is analyzed at three different stages, focusing on varying carbon dioxide outputs and their effects on climate change. The authors then scientifically assess these effects with detailed charts and provide a thorough analysis on what they believe is the area most at risk, Africa. Following a comprehensive conclusion, the paper ends with a list of helpful sources that could further clarify the outlined research.

Rose, Donald, and Karen E. Charlton. 2001. "Prevalence of Household Food Poverty in South Africa: Results from a Large, Nationally Representative Survey." *Public Health Nutrition* 5 (3): 383-389.

Annotation: The main goal of this paper is to develop an objective tool to measure food insecurity in Africa. The authors feel that the analysis up until most recently has been based on a Western view of the world, and has been subjectively administered by those who live in countries with no real understanding of food insecurity. Their project concentrates solely on South Africa and analyses what the authors call “food poverty” within several thousand households, all with different socioeconomic constraints. They stress the importance of “in-country” monitoring to be able to address the food crisis correctly. Findings tie the plight of food poverty most closely with household per capita incomes, pointing to larger economic implications and not just a food “shortage.”

Shaw, John. 2002. “The Dimensions of Food Aid in Sub-Saharan Africa.” In Renewing Development in Sub-Saharan Africa. Edited by D. Belshaw and Ian Livingstone. London: Routledge.

Annotation: This article attempts to outline the reasons for and importance of food aid in development in sub-Saharan Africa. It begins with a good overview of the key components of food aid and food insecurity in Africa historically. Included are statistics and charts about what food is given through food aid, who receives this aid, what present trends are internationally, and what the future of the African food crisis will require from donors. What follows is a detailed list of issues facing the food aid community, policy lessons learned in past experiences and a discussion of the tangible links that development has to aid. His conclusions are strongly based in what Africa will require in years to come. Sighting the disarray and disagreement surrounding how to deal with aid to Africa, he suggests an international conference be held so donor countries can arrive at some kind of workable consensus.

Sikod, Fondo. 2008. “Conflicts and Implications for Poverty and Food Security Policies in Africa.” In The Roots of African Conflicts. Edited by A. Nhema, and Paul Tiyambe Zeleza. Oxford: James Currey, Ltd.

Annotation: This paper discussed conflict and crisis in Africa and its extenuating effects on food security on the continent. Well-organized and insightful, the paper is divided into sections, first addressing the roots of conflict, then discussing the effects that conflict have on agriculture, local economies, food aid and food availability. The crux of the author’s argument is that conflict breeds poverty and that, in turn, poverty breeds food insecurity. The paper also includes a critical analysis of how food aid can actually contribute to food insecurity, as well as hamper the healthy development of local African societies. Succinctly concluded, the author determines that food supply and security issues will continue until the time when properly functioning institutions are established to quell conflict in Africa.

Tambwe, Nyumbaiza. 2006. “Urban Agriculture as a Global Economic Activity with Special Reference to the City of Lubumbashi in the Democratic Republic of Congo (DRC).” *African and Asian Studies* 5 (2): 193-213.

Annotation: This paper, written by a PhD student at the University of Witwatersrand in Johannesburg, tackles the intriguing subject of urban agriculture. Specifically focused on the city of Lubumbashi in the Democratic Republic of Congo, the author attempts to assess if the increase in city dwellers participating in farming and gardening is due to necessity or an ability to make money. Beginning with a review of what urban agriculture entails, then discussing the push and pull factors that influence Africans to participate in urban farming, he concludes that this kind of activity is due both in part to survival, as well as being economically viable. The subject matter within this paper is interesting and informative, yet could be far more developed and leads to more questions than answers. Hopefully, it will spur on further study within this field of research.

Tenenbaum, David J. 2008. "Food vs. Fuel: Diversion of Crops Could Cause More Hunger." *Environmental Health Perspectives* 116 (6): 254-7.

Annotation: Appearing in the publication *Environmental Health Perspectives*, this article takes a strong stand against the biofuels industry, which is producing corn for fuel, while the world is in a state of food crisis. The author lays out a well-defined history leading up to the biofuels boom just a few years ago. He then gives a summary of how the choice to use food as fuel has adversely affected developing nations and their agricultural integrity. He ends with a compelling perspective of what the world market, as well as poor countries, will look like if biofuels persist within the global economy. In all, this piece has a strong opinion about the use of biofuels, yet is balanced in its critique of why world hunger exists and does not go too far in blaming everything on the biofuels industry.

Tudge, Colin. 2005. "What Matters More than Anything Else is Agriculture." *New Statesman* 134 (4748): 20-21.

Annotation: This article provides an alternative view to the food problem in Africa. Most scholarly work supports large agri-business and genetically modified farming practices in Africa to provide for millions of people on the continent. Yet this piece proposes that the continent go in the very opposite direction. Clearly explained, the author supports small-scale farming and agriculture throughout Africa. He refutes commonly held ideas that African land is arid and cannot support agriculture with facts about previous practices in farming before industrialization. He also supports the notion that farming will not only create food security, but also create jobs for millions of those who are not working presently. He concludes that the answer to African hunger is to support agriculture, and then tackle other issues after people can feed themselves. This essay serves as a good counterargument to much of the solution based literature on the global food crisis.

Vandenbosch, Tom, Tutui Nanok, Peter Taylor, and Eric Tollens. 2007. "Policies for Enhancing Food Security through Relevant Basic Education." In EU Development Policy and Poverty Reduction: Enhancing Effectiveness. Edited by W. Hout. Hampshire: Ashgate Publishing Limited.

Annotation: The research in this chapter concentrates on the crucial, and often overlooked, link between food insecurity, poverty and educational deprivation. Examined here is how the quality and relevance of the education provided to developing communities could make a much larger difference than the quantity of years attended. This well-explained and organized research shows the many positive effects this kind of educational approach to food security would have. In conclusion, the authors offer a number of helpful policy recommendations including better teacher training, better supplies and equipment on the ground, more relevant skill sets that would be applicable to agricultural communities and more monitoring within these areas. Most poignantly, the authors support the funding of education as a supplement to food aid, and suggest the donors take this into consideration.

Verdin, James, Chris Funk, Gabriel Senay, and Richard Choularton. 2005. "Climate Science and Famine Early Warning." *Philosophical Transactions: Biological Sciences* 360 (1463): 2155-68.

Annotation: The authors of this journal article believe that climate monitoring and forecasting are absolutely crucial technologies for the prevention of famine, the staving off of climate change, and the tackling of the effects of global warming. The article is clearly laid out, providing background on the scientific ideas presented. It discusses flood and drought monitoring in Africa generally. Then, it discusses Ethiopia, providing a detailed case study of the country and its food security issues. With helpful charts and graphs and a comprehensive final reference list, this piece provides a good overview as well as a detailed case study on the benefits of climate monitoring for the continent of Africa.

Walker, David J., Rick J. Hodges, Tiago Wandschneider. 2007. "Local and Regional Food Aid Procurement: Development Impact and Implications for Future Policy." In EU Development Policy and Poverty Reduction: Enhancing Effectiveness. Edited by W. Hout. Hampshire: Ashgate Publishing Limited.

Annotation: This selection discussed the practice of local and regional procurement of food aid. The study, done by the European Union, attempts to find out if the commonly held notion that obtaining food aid via local developing markets is inherently good for the communities involved. Through their research, the authors find that this topic is severely under researched, and that it is in fact almost impossible to find literature on the subject. Starting basically from scratch, they research two specific countries, Uganda and Ethiopia, and how local food procurement has affected them in the last several years. Findings are hopeful and show that investment in these food systems provide more stability, variety of grain, employment, and increased farmer income in these countries. Bureaucratic restraint is cited as most detrimental to these positive affect.

Weil, David N. 2008. "Is It Africa's Turn? 'Rapid Population Growth Raises the Stakes for African Governments.'" *Boston Review* 33 (3): 16-17.

Annotation: This short opinion piece discusses the almost certain population growth in Africa over the next several decades. The main argument is that this population growth could spell disaster for Africa if it is not handled correctly. Yet, the author posits some interesting solutions.

He feels that African food shortages and low agricultural yields are manmade. With an increase in fertilizer and better producing seeds, Africans could support their current populations, as well as further growth. He also supports the growth of urban areas and feels that with the right support and infrastructure, cities and rural areas could support each other. Although this population growth looks like it will be a severe test for African governments, if the right steps are taken, the author believes that the continent could emerge as a leader among developing areas.

Wiggins, Steve. 2002. "Smallholder Farming in Africa: Stasis and Dynamics." In Renewing Development in Sub-Saharan Africa. Edited by D. Belshaw, Ian Livingstone. London: Routledge.

Annotation: The author's main argument in this piece is that the African food and agricultural crisis, especially in rural areas, has been misconceived and mishandled. He sets out to dispel a number of misconceptions. First, that the rural food crisis has been exaggerated and misunderstood. Second, that agricultural diversity depends on market access and demand, not supply issues. Third, he argues that smallholder farming in Africa is too dynamic to be viewed through one lens; and forth, that reducing poverty as a solution to the food crisis is an inadequate solution for most Africans. The author sites micro studies to support his controversial views and concludes that policy must be driven by specific and differing cases throughout the continent and not by large, yet isolated, events of starvation.