

Laura Peterson
Millard North High School
Omaha, Nebraska

Agricultural Conditions of Malawi, Africa

2009 marks the 30th anniversary of the founding of the Food and Agriculture Organization (FAO) and of the first annual World Food Day on October 16, 1979. The aim of World Food Day, according to the United Nations General Assembly, is to “heighten public awareness of the world food problem and strengthen solidarity in the struggle against hunger, malnutrition, and poverty” (“World”). In the Resolution, the UN also notes that “food is a requisite for human survival and well-being and a fundamental human necessity” (“United”). Although issues of poverty and food security have been discussed for well over three decades, there has not been enough progress made in their resolution for the topic of world health to be put on the backburner of global debate.

Initiatives like the World Food Day have helped to increase global awareness of world poverty, yet there is still a lack of action being taken to actually reduce poverty and food insecurity. Researchers have compiled countless maps and charts to depict the enduring severity of world hunger and the content of these studies include a set of commonly accepted statistics. Some of these studies show that: over 3 billion people live on less than \$2 per day; every year 15 million children die of hunger; in Asia, Africa, and Latin America, over 500 million people are living in “absolute poverty;” and finally, every 3.6 seconds, someone dies from hunger (“Goal”). These numbers are amazing, and they should help us realize that more energy must be focused on improving the lives of the less fortunate. It is easy to overlook the meaning and significance of these numbers, though. How can we comprehend what it means for 3 billion people to live on \$2 a day? For most people of western countries with commodities and possessions, it is impossible. We understand 3 billion to be a statistic, rather than what it actually is: 3 billion people with families and lives and stories, unable to eat more than one meager meal every day.

Sadly, these numbers and statistics are not new to many people. The problem is that these people do not act to make the changes that are necessary for world hunger to be mitigated. In most cases, simple education or funding is all it takes to help farmers rise out of the continuing cycle of poverty and hunger. Education is a powerful tool that can cause a significant rise in farmers’ understanding of efficient cropping techniques. Newer technology, fertilizer, seeds, and infrastructure can make a huge difference in the productivity of a farming community, as well. Farmers all around the world are eager to learn how to be better farmers; they are just without the means to stay up to date with the new information.

Although poverty and hunger are very localized and specific to certain regions, education and funding are powerful tools that can be applied to all impoverished areas to raise the standard of living. As soon as education is better shared and funding is better distributed, there will be a significant decline in world poverty. In Malawi, Africa for example, there is a great percentage of farming families living in poverty. With a constantly deteriorating fertility of their fields, the size of their harvests has noticeably shrunk, leading to a smaller income for these farming families; thus, these families are unable to get out of the cycle of poverty and hunger. Although these farms are not all experiencing the exact same problems with their crops or machinery, educating communities about possible parasitic species or new fertilizer techniques, for example, can apply in some way to each family. The greatest problems in Malawi are the dated farming techniques employed by the subsistence farmers and the lack of information or funding reaching the smaller farms (“Malawi Demographic”). With 5 million out of 14 million Malawians affected by the ongoing food crisis, and with 90% of Malawians engaged in subsistence farming, there are few places that are in greater need of a restructured extensive educational agriculture policy (“Malawi”).

Malawi is considered to be one of the poorest and most densely populated nations, not only in Africa, but in the entire world. The poverty of Malawi is seen in the typical income for a farming family. On

average, a small subsistence farm family will make \$180 per year (“Official”). The utilities available for farmers also shows the level of poverty: 7% of households in Malawi have electricity, and electricity is much more common in urban areas (30%) than in rural areas (2%); and drinking water is available to only 64% of Malawian households, with 74% of these households being urban and only 9% being rural (“National”). The incredible density of Malawi is evident in the fact that the number of rural farms is much greater than the number of urban houses; about 11,402 farms as opposed to 2,262 urban homes. The vast majority of citizens employed as farmers combined with only 118,484 square miles of land results in a very small distribution of farming land for each family. Most family farmers live on somewhere from one to three Hectares (which is equivalent to 2.471 acres to 7.413 acres) of land (“Malawi: Smallholder”).

Despite the size of the farm, location, or income difference, all farmers in Malawi grow maize, tobacco, or sugarcane on what is classified as subsistence farms. Malawian farmers do not often utilize techniques such as crop rotation or irrigation and frequently mix their different crops within the same field, known as crop mixing. These practices are not recommended any more, but for the farmers ends are more important than the means to reach the ends. The pressure to produce crops, specifically tobacco and maize, results from tobacco being the nation’s largest export, at 70% of the export revenue, and from maize being the staple food of Malawians. Stacia Nordin, a sustainable food and nutrition security consultant says, “Food in Malawi has always meant maize,” (“Malawi: Diet”) because the entire 2,611,486 tons of maize produced annually remains in Malawi for domestic consumption (“Afrol”). 90% of Malawians are subsistence farmers, living on rural farms, with tobacco and maize among the top crops being planted. This statistic makes the need for better education and technology even more dire as the majority of the country’s population is affected by the food insecurity crisis, which revolves around the harvesting of maize.

The reason for the food insecurity crisis in Malawi can be attributed to several origins. As already mentioned, a lack of education of farmers about efficient farming techniques is one of the greatest causes. Other barriers to improving agricultural productivity and income include that very little research is being done to improve technology and farming techniques and what little research is published is available primarily to the minority wealthy farmers. Also, increasing population, drought, poor resource management and, consequentially, environmental deterioration also contribute to hindering agricultural progress. Educating family farmers about results from agricultural yield and sustainability research and providing access to and support for implementing methods to correct these barriers is vital if Malawi is to have food security and less poverty and hunger.

Before understanding the current situation in Malawi, it is important to understand some of the events that created the current state of poverty. The Malawian government, acting in good faith and in response to recurring droughts that were harming the harvests, tried to lessen the country’s dependency on agriculture. The government ended subsidies for maize, the staple crop of Malawi, and privatized seed and fertilizer companies (Nsiku). These actions only raised the price of farming beyond the reach of smallholder farmers, though. Farmers could no longer afford fertilizers to have healthy and productive farms, which meant they no longer had a steady source of income. This situation led to a food crisis and damaged economy. Realizing the error in their thinking, the government, in 2003, agreed to restart free seed and fertilizer programs to increase maize production (Rubey). Although not entirely the government’s fault, the poverty of Malawi was greatly damaged from 2000 to 2003. The effects of those years are still being felt today, however the situation today is even worse because of the other, pre-existing, barriers facing subsistence farmers.

Although there are government programs in place now to try to restart the agriculture of Malawi, the state of the agriculture is still worsening. Severe and constant droughts and floods greatly impact the fields of smallholder farmers. Without measures to protect the soil from droughts or floods, soil erosion

is becoming a real problem for farmers. During droughts, farmers have no source of water, especially with only 3% of all farms being irrigated (Kanyama-Phiri). For subsistence farmers, each harvest season is important because the family's yearly income relies heavily on having each harvest be as productive as possible. A failed harvest for Malawian farmers is especially unfortunate, since they are given so little land (and therefore such a little opportunity to produce crops to sell and from which to profit) in the first place. Without means to curb the effects of nature on their crops, the agriculture of Malawi will not improve.

Poor crop planting techniques will also ruin the chances of Malawi's agricultural state from improving. Monocropping, an agricultural practice in which the same crop is planted year after year, is very common in Malawi ("Malawi Economic"). Although this allows farmers to specialize in a particular crop, the environmental effects of this technique are very drastic. Monocropping depletes the soil because the plant constantly strips the soil of the nutrients it needs. Crop pests and disease are also common results of monocropping. In Malawi, monocropping is worsened by the fact that there are little to no fertilizers or pesticides available to curb some of the effects of monocropping. When the government removed subsidies for fertilizers, research for new fertilizers slowed down considerably. Fertilizer became very expensive and farmers accepted that they would have to do without any means to make their soil healthier and able to handle the effects of monocropping. Without fertilizer, the quality of farms decreased significantly. Unfortunately, it takes years to recover from soil infertility, though. Farmers had started down a path of continually worsening harvests because of their inability to care for the soil. The land was ruined because of poor cropping techniques.

To make matters worse, Malawian farmers dealt with an unnaturally fierce case of parasites during the years after the food crisis. H.R. Mloza-Banda graduated from the University of Malawi with a degree in agriculture. His focus was on parasites, specifically a parasitic plant called striga. Striga affects agriculture planted by subsistence farmers who have no means to protect their crops from infestation. Corn, the staple food of Malawi and the most common crop on subsistence farms, is the main target of striga. Mloza-Banda researched striga for several years, until he came to the conclusion that unless farmers were educated about the parasitic mechanisms of striga, they would not see an end to the ruining of entire harvests (Mloza-Banda).

Like the government feared, Malawi's dependency on agriculture, specifically two crops, was unhealthy for the farmers or for the land. Especially with the severe droughts and floods, whose effects the government unsuccessfully tried to minimize, relying solely on agriculture for a family's income is dangerous. The trend of worsening soil fertility reduces a family's income and therefore their ability to purchase food to eat. After 2003, the world was concerned that no progress was being made to either help farmers employ better crop techniques or to move the country away from a 90% dependence on agriculture. Malawi has no natural resources of her own, though, and has very little industrialization in the urban centers. Farming is the only way to keep a majority of people employed.

A lack of markets or access to markets also affects Malawian farmers. Selling their crops is very important for farmers because it is their only source of income. When they have extra crops to sell, many times, they are unable to get a fair price for them because they are limited to the markets near their farm. The infrastructure is not well established to handle traveling to distant towns to sell goods to a different audience. This problem is connected to another issue, the lack of off-farm labor. Farmers with a second source of income would be able to survive by selling their crops to local markets. The ability of farmers to travel and create larger markets is not present in Malawi. Without the means for competitive prices, farmers are cheated out of a fair income.

Finally, and maybe most importantly, the current level of education of farmers is not adequate for 21st century farming. Current farm practices in Malawi are not beneficial to the farmers or the land being

farmed. One of the most useful tools Malawian farmers could be granted now is the information needed to understand how to farm productively and efficiently. What little research is released and available to farmers is very general and vague, and therefore unhelpful in making significant reform to the outdated techniques currently employed.

One of the greatest questions about educating the subsistence farmers pertains to the most effective method that could be used to make the greatest impact. Two possible paths for educating farmers have emerged. The first one, called agricultural extension, or agricultural advisory services, is concerned more with the ends than the means. In contrast, community-driven development, the second possible method of education, is concerned with the means ahead of the ends. These two approaches are different, yet could be combined to create a powerful tool for not only educating subsistence farmers, but also producing results of improved agriculture.

The agricultural extension program was created by scientists and researchers of agricultural issues in countries like Malawi. The program's goals are rooted in products rather than means: increasing food security, promoting productivity, and improving rural livelihood. Although the program has suggestions for achieving these goals, the greatest concern is that simply educating farmers will not result in speedy or sustainable food security. Education, however, is important. The program believes in educating farmers about the changes in the global food and agricultural system, such as the rise of supermarkets or the importance of standards and labels, about the potential benefits of non-farm rural employment, and of the constraints of production imposed by the increasing HIV/AIDS epidemic ("Role"). This approach is likely to experience actual success and progress in the state of the agricultural techniques; however its success is likely only if an effective method of encouraging farmers to change their current practices is discovered.

It is this point, that the agricultural extension program lacks a feature to make it attractive to and easy to follow for subsistence farmers, that allows for the merging of the two separate programs. The community-driven development is very accommodating to the needs and concerns of the local farmers. The CDD was started by the International Fund for Agricultural Development in 2002. Unlike the researchers and scientists who put together the extension program, the CDD was established by an agency of the United Nations with help from non-governmental organizations and many individual donors who care more for the wellbeing of the farmers than of the land. The goals of the CDD are to build the capacity of rural communities to articulate their needs and to support a clearer and more constructive dialogue between the various participants. Basically, the CDD wants to create a long-term process for sustainable poverty reduction by changing the culture of dependency and strengthening the capacity of rural communities to play a greater role in their own development. This approach encourages group discussions so that farmers can learn to support each other as well as community cooperation. Forming groups, rather than remaining independent, will efficiently and successfully allow more farmers to receive new information ("Community").

The combination of these two approaches has many positive qualities to it. First, having two different groups of founders, the collaboration of the two projects would increase global awareness of the initiative. Also, it would allow both the scientific and societal views of resolution to be included in the program, creating a more comprehensive program for reform. Finally, incorporating both sets of goals into one complete program would allow all aspects of the issue to be covered. The means to achieve the end as well as the end goal would all be represented. If the benefits of both of these two individual programs were to be united into one singular package, actual progress and achievement would be realistic results.

After establishing a cohesive education program, a change from outdated farming techniques to informed and efficient farming practices would take place. The two individual programs both dealt with a series of issues that if the two programs combines, could be effectively reformed. The majority of these

common issues relate to proper farming techniques. Plant diversification is one of the most important issues facing Malawian farmers today. Both programs encourage replacing maize or tobacco as the reason for monocropping, with other crops. Planting vegetables or other grains would not only help the soil and export revenue, but it would also help balance the Malawian diet. Plant diversification could mean planting several different crops on one farm or even planting different crops in the farms each year. Another term for crop diversification is crop rotation, the planting of different crops in the same spot every so many years to avoid depleting the soil of nutrients. A second technique the programs both address is the use of fertilizer or pesticide to prevent crops from harm. Making fertilizers more available to farmers, crops could become resistant to pests as well as natural elements, like drought and flood. The availability of methods to keep farm land healthy would be dealt with in what the CDD calls “maize verification trials.” These trials would not only develop recommendations for labor-saving and efficient fertilizer application methods, but also demonstrate the effectiveness of fertilizing and taking preventative measures to keep crops healthy. If farmers were able to employ better techniques to farming their land, they could get more from their land in terms of product. A greater amount of crops harvested translates to a higher income and the likelihood that families will live better and healthier lives.

Educating family farmers about results from agricultural yield and sustainability research and providing access to and support for implementing methods to correct these barriers is vital if Malawi is to have food security and less poverty and hunger. Education is probably the most important step in this process. Helping farmers learn today’s farming techniques is important, however helping farmers understand the thinking behind the techniques will allow them to be self-sufficient and have a sustainable food source throughout the years to come. Without a doubt, farming practices will again change and improve; in order to prevent a situation like the one the world is experiencing now, where a large majority of farmers are unclear as to the best farming procedures to carry out, helping farmers understand the concepts of efficient farming is necessary. Before progress can be made to the efficiency of impoverished subsistence farmers, the farmers must be educated and informed on what it is that must be adapted.

After farmers are knowledgeable and up to date with the current farming techniques and methods, action is the next most important step in achieving food security and lessened poverty. Just informing farmers of what needs to be done does not guarantee that something will actually be done. Organizations, such as the agricultural extension program and the community-driven development program are two examples of groups who understand this concept. After educating farmers, for example, these two groups have specific plans to introduce fertilizers or seeds to rural farmlands so that farmers can begin putting their newfound understanding of farming to work.

The process to secure food stability and lessened poverty around the world cannot happen overnight. It is a process that must be followed or else the risk of returning to the current impoverished situation is possible. Patience and determination are two qualities necessary for the process to succeed. The list of goals to accomplish through the extension or CDD programs is extensive, and accomplishing all of these goals requires a global conscious effort. No longer can the world stand by and watch the numbers gradually worsen, and yet still only see numbers. It is time for the people in the world with the ability to help the less fortunate see that there are people behind the numbers. In honor of the 30th anniversary of World Food Day, now is the perfect opportunity for the world to reach out to the impoverished nations of the world and offer our support.

Works Cited

- “Afrol News - Malawian maize production up 27%.” *Afrol News - African News Agency*. 01 Sept. 2009. <<http://www.afrol.com/articles/10397>>.
- “Community Driven Development.” *International Fund for Agricultural Development (IFAD)*. Web. 01 Sept. 2009. <<http://www.ifad.org/english/cdd/index.htm>>.
- “Goal One: Eradicate Hunger and Extreme Poverty.” *HUNGER 2009: Global Development: Charting a New Course*. 30 Aug. 2009. <<http://www.hungerreport.org/2009/mdgs/35>>.
- Kanyama-Phiri, G.Y. *Soil Fertility Management Programs in Malawi*. The Rockefeller Foundation, 2001. 29 Aug. 2009. <http://ppathw3.cals.cornell.edu/mba_project/soilforce/SFmgmt.html>.
- “Malawi.” *The World Factbook*. Central Intelligence Agency, 12 Aug. 2009. 29 Aug. 2009. <<http://www.cia.gov>>.
- “Malawi: Diet diversification answer to food insecurity.” IRIN; Humanitarian News and Analysis from Africa, Asia, and the Middle East. 29 Aug. 2009. <<http://www.irinnews.org/>>.
- “Malawi Demographic and Health Survey.” National Statistical Office [Malawi], 2005. 29 Aug. 2009. <<http://www.measuredhs.com>>.
- “Malawi Economic Brief.” The Scottish Government, 2005. 29 Aug. 2009. <<http://www.scotland.gov.uk/>>.
- “Malawi: Smallholder Fertilizer Project.” IFAD, 30 June 2009. 29 Aug. 2009. <<http://www.ifad.org>>.
- Mloza-Banda, H.R. “Integrated Management for Striga Control in Malawi.” *Bioline International Official Site*. Web. 01 Sept. 2009. <<http://www.bioline.org.br/request?cs96065>>.
- “The National Statistical Office of Malawi.” 29 Aug. 2009. <<http://www.nso.malawi.net/>>.
- Nsiku, Nelson. “Fertilizer Subsidies in Malawi.” *Global Subsidies Initiative*. 29 Aug. 2009. <<http://www.globalstudies.org>>.
- “Official Website of the Government of Malawi.” 29 Aug. 2009. <<http://www.malawi.gov.mw>>.
- “The Role of Agriculture in Development.” *International Food Policy Research Institute (IFPRI)*. 30 Aug. 2009. <<http://www.ifpri.org/>>.
- Rubey, Lawrence. “Malawi's Food Crisis: Causes and Solutions.” Southern Africa Regional Poverty Network. 01 Sept. 2009. <<http://www.sarpn.org.za/documents/d0000148/index.php>>.
- “United Nations General Assembly Resolution 35/70. World Food Day.” *FAO: FAO Home*. 30 Aug. 2009. <http://www.fao.org/wfd/docs/unga_en.htm>.
- “World Food Day - 16 October.” *Welcome to the United Nations: It's Your World*. 30 Aug. 2009. <<http://www.un.org/Depts/dhl/food/index.html>>.