

Charles K. Anumonwo  
Cortland Junior Senior High School  
Cortland, New York

## **To Feed a Nation: A proposal aimed at reforming the Nigerian agricultural system and increasing food security for its impoverished citizens**

In recent times there has been a worldwide shortage of food. However, this is by no means a new problem. There are countless impoverished people around the world who have been suffering from malnutrition and starvation for decades. Food security, the ability of the average citizen to access food in sufficient quantities and qualities for survival, has never been a more pressing issue. The world community as a whole has largely ignored this problem until now. Finally, after several years, within which time the demand for food has seemingly far outstripped the supply, the nations of the world have begun attempting to alleviate the problem and provide food security for the majority of the world. This is no easy task, especially when one considers the fact that the world's population is steadily increasing while the amount of arable land is decreasing due to urbanization, desertification, and salinization. Simultaneously, changing weather patterns and increased global temperatures have led to an increased number of recent droughts. Together, these problems have led to massive losses in regards to agricultural yield in an absolute sense, as well as in relation to the number of people who are in need of food. However, these losses and more could easily be recouped by simply reallocating current agricultural output in a more equitable and forward-thinking manner. The West African nation of Nigeria is a perfect example of the current inequity that must be addressed in order for food security worldwide to become an attainable goal.

A typical Nigerian family is considered to be poor. In fact, in rural areas the level of people classified as being in a state of poverty reaches as high as 80%. The average Nigerian makes less than 530 U.S. dollars per annum and must use that income to cover all of his needs. (Rural Poverty) This is extremely difficult to do as Nigeria has one of the world's highest fertility rates and a very high average family size. (Nigerian) The Nigerian culture places high value on having many children, not only for their love and affection but also for their aid in running a household. It is not uncommon for a poor farming family to consist of two parents and six or seven children in the hopes of using their labor to increase productivity on the farm. (United States of America, July 2008) Unfortunately, children can become a very heavy financial burden and any income gained from increased productivity thanks to their labor is spent on food and other necessities, often to the point where money is actually being lost. This causes them to spiral further into food insecurity, as there are now more mouths to feed and no more land on which to grow food. This forces many small, rural farmers to look into methods of fully utilizing their current farmland while also expanding and claiming larger tracts of arable land. The most common method of doing so is to plant on the same land year after year while cutting down trees in order to expand. Both of these actions are harmful to the soil in the area because they deplete it of nutrients and make it more prone to erosion. Therefore, in the long run these actions are actually harmful to the small farmer as he is destroying the land on which he hopes to grow his food. Unfortunately, not many rural farmers are aware of the risks posed by their practices and continue to degrade their land in an attempt to eke out a living from their small farms. (Ezeji, Joachim, May 2009)

Under current governmental policies it is difficult for small farmers to make profits without access to considerable amounts of land. Unfortunately, over 94% of Nigerian farms are less than 10 hectares in size qualifying them as "small" under the international ranking system. (Ozowa, Vincent N, June 1997) The remaining 6% of Nigerian farms qualify as medium under this ranking system. Even these farmers lucky or affluent enough to own medium classification farms are unable to use their land to produce meaningful amount of wheat, rice and other grains. They must still focus a large amount of their resources on the

production of cash crops if they wish to avoid a hand-to-mouth scenario and improve their quality of life by any appreciable degree. Nigerian farmers with the necessary capital and land to make significant contributions to the food security of the nation tend to focus solely on the production of cash crops that can be exported to other countries for sizable financial profits. Crops like sugar cane, palm oil, and soy are all in high demand in developed countries. They offer some of the highest profit margins available for Nigerian farmers but come with a hidden cost: they take up land that otherwise would be used to grow staple food crops like wheat and rice which the Nigerian poor depend upon to survive. Although Nigeria has the potential to produce enough of these staples to feed not only itself but also the surrounding region while retaining its current levels of cash crop production, the land necessary to do so is unavailable for use, lying fallow due to lack of proper irrigation systems. It is estimated that the amount of potentially arable land left unused is equal to that currently devoted to all agricultural work. (Rural Poverty) This means that the amount of usable land could be doubled without negatively impacting any other sector of the Nigerian economy. This would certainly increase the amount of food produced and would go a long way towards reaching a suitable level of food security for all Nigerians.

The soil in Nigeria, in general, is particularly hospitable to the growth of food staples like wheat and corn. (Aryeetey Attoh, Samuel, 2010) The most prevalent types of soils in the region are called oxisols. This type of soil is well suited to agriculture and it is for this reason that Nigeria is so capable of producing food staples. The soil has no appreciable levels of chemicals polluting it and although nutrients level are decreasing due to leaching, a process in which heavy rains and the constant flow of water remove needed nutrients from the soil, this process can easily be reversed through the implementation of more environmentally sound methods of farming. Alfisols are another type of soil that exists within Nigeria. It is located in less humid and rainy areas than the Oxisols and therefore is not as prone to leaching. This gives it a comparatively high nutrient content that makes the soil suitable for the production of staples like corn and cassava. Currently the vast majority of the soil in most of rural Nigeria is acceptable for use in the production of wheat. (Ishaq, M, August 2001) However, it is not producing at anywhere near its full potential. Lack of irrigation and misuse or even no use of fertilizers cripple the crop's potential yield. (Rural Poverty) With proper fertilization and irrigation techniques the farmland in Nigeria could be made nearly perfect for either small or large-scale wheat production. Practicing crop rotation systems instead of the traditional method of farming would also go a long way towards stopping the soil degradation that has slowly been occurring in recent years. Together, these steps would serve to greatly increase the productivity of farms by increasing the yields for both wheat and corn produced in Nigeria.

In recent years there has been considerable improvement in regards to the crop diversity of Nigeria. However, the situation is far from controlled. In fact, a single season of poor rain or a relatively minor increase in global food prices has the potential to throw Nigeria and the surrounding region into turmoil. (Gabriel, Omoh, May 2008) However, just as quickly as the situation could deteriorate so too could it stabilize if appropriate preventative measures are taken. The redistribution of the majority of crops away from the exportable cash crops like soy, sugarcane and corn into grains like wheat and rice, meat and dairy products, and crops used to make biodiesel has the potential to dramatically lower food shortages, increase the income of poor farmers, and boost Nigeria's economy due to trade increases. As it stands Nigeria is a food deficit nation. (Gabriel, Omoh, May 2008) This means that they import more food and food products than they export. This is largely due to their overreliance on other nation in regards to getting the staple foods that they need, most noticeably wheat and rice. Even the Nigerian government realizes that this is a problem yet it still continues to earmark billions of dollars per annum for the importation of foreign rice. (Nigerian survey, April 2008) This is highly inefficient and leaves the country highly vulnerable to spikes in the price of rice and other staples. For example, in 2008 when the price of rice skyrocketed the Nigerian government pledged to spend 600 million (Hecht, David, August 2009) dollars to import rice for its citizens. However, this plan was halted after it became known that it would take just as long to get the food to those who needed it as it would for them to grow it themselves. To do

so would also be significantly more expensive for the farmers than if they were simply to switch their crop production to focus on the necessities and to provide their own food. (Nigerian survey, April 2008) This is just one example illustrating the fact that small sustenance farmers in Nigeria have the potential to benefit greatly from a more equitable rate of production of wheat, rice, and other staple grains.

The individual benefits to be realized from a more equitable allocation of resources are staggering. By growing staple crops not only will the farmers be producing food for themselves and their families but they will also be providing food that is necessary to many other people in Nigeria and the other surrounding nations. This provides a direct economic benefit because they will be able to sell their excess product in these markets allowing for decent profits. The extra income would considerably improve the quality of life for the small-scale farmers in Nigeria. The money could be used for reinvestment purposes, which would eventually allow for the purchasing of more land, better farm implements and the more expensive types of bioengineered breeds of crops like NERICA, a type of high-yield hybrid rice developed specifically for use in the African climate. (Eradicate Extreme Poverty) These changes would further increase productivity and a cycle of economic prosperity could begin. The extra income could also be used to benefit the farmers in ways not focusing on agriculture. The profits made from exportation made possible by the reformed agricultural system could be put to use by using them to pay for the education of the farmer or the farmer's family member helping to raise Nigeria's literacy rate which currently rests at a comparatively poor 68%. (Rural Poverty)

The health and social benefits to the redistribution of output towards a more equitable split between staple foods and cash crops are also impressive. With a steady food supply and higher incomes the overall health of the average Nigerian citizen would be greatly improved. The money would allow for access to appropriate healthcare and the food would provide them with the necessary strength to fight off diseases that otherwise may have proven fatal. It is predicted that with an increase of food security would also come an increase in the Nigerian life expectancy, which currently sits at an abysmal 47 years old. (Rural Poverty) Economically, the increase in income would allow for more spending within the country. With the majority of the population being farmers and the majority of the farmers receiving a considerable increase to their income, the economy of Nigeria could potentially soar upwards. This would allow for the long awaited government spending aimed at improving infrastructure both within the cities and in the more rural areas. These improvements would include road building, better communications, and access to clean water, all things that not only improve the quality of life but also allow for even more agricultural productivity. With better communications and roads the problem of crop spoilage would be severely reduced. Also there would be better access to new technologies for farming which would allow the farmers the opportunity to increase their yields via new methods, an option that has been sorely lacking in the past.

The Nigerian government must step forward and provide its full support if Nigeria is to effectively reform its agricultural system and equitably allocate its resources and output. As it stands, there exists very little intrinsic motivation for the small-scale sustenance farmer to change from producing high value crops to the less profitable, but far more necessary, food staples. Changing one's farming procedures can be an expensive and time-consuming ordeal. For this reason many farmers are hesitant to do so, especially when it is freely admitted that they are moving into a less financially profitable sector. However, it is imperative that they are convinced to make this change. Without a concentrated shift in farming practices there is little hope that Nigeria will be able to become independently secure in regards to its food supply. Nigeria's status as a food-deficit nation is unlikely to change unless government policies are reformed to provide extrinsic motivation to the small-scale farming community. One option with potentially large benefits is to provide government subsidies to small farmers who are producing set amounts of wheat, rice, yams, and other staple foods. This would allow farmers to cut costs and therefore make production of these crops more profitable. While this plan of action has been attempted before it with fertilizers is has

largely failed due to rural Nigeria lacking the telecommunication networks and road systems necessary to make a system of government subsidy coupons work. (Asekunowo, Victor) Therefore, an alternative would be to have the subsidies occur at a manufacturing level. By subsidizing the fertilizers and equipment needed to produce the staple grains the savings would be passed on to the individual farmers without the possibilities of late arrivals or fraudulent coupons that derailed the previous attempts. Although it is unrealistic to think that these crops, even with government subsidies, could compete profit wise with the far more lucrative cash crops like sugar cane, corn and palm oil, these subsidies could go a long way towards convincing farmers to make the switch to staple food production or, at the very least, to expand their production to include reasonable amounts of dedicated food products.

International organizations have the potential to play a large role in restructuring the Nigerian agriculture system in order to more efficiently allocate its resources and production. However, if they are to do so then they must use a different approach than that of the past. In the past most international aid has been given to large-scale farming corporations and the initiatives have generally ended in failure. (Ezeji, Joachim, May 2009) This is because these larger farming endeavors have had two major faults. The first is that they, like most large corporations, focused on generating profits. This led them into the production of cash crops like sugarcane instead of using their size and advantages to help the nation by concentrating on the production of meat and dairy products. The second major flaw that plagued the larger corporations was their utter inability to adapt to the ever-changing needs of crops grown in the Nigerian climate. Their size limited their ability to make the quick, instinctual decisions that are crucial to farming in African conditions. If the various international aid organizations want to be successful at helping Nigeria they must follow the example set by the World Bank. In January, the World Bank approved a 150 million dollar Commercial Agriculture Development Project in Nigeria. (Hecht, David, August 2009) The CADP is targeted at Nigerian farmers operating small to medium sized farms. These farms can use this money which comes in the form of a loan to pay for some of their various farm expenses like transportation, allowing them to use the saved money to invest in the production of different crops like the food staples to increase food security, or crops that can be turned into biodiesel for transportation. The excess food produced can then be sold and the biodiesel exported to developing nations. These actions will produce profits that can be used to reinvest in agriculture and of course pay back any loans given by the World Bank and other nations. If more international aid groups follow the World Bank's lead, it will become very feasible for Nigeria to reform its current system of production allocation.

In conclusion, in order to stabilize the food situation in Nigeria several changes must happen. First and foremost, agricultural output has to be improved. This can be done by increasing the use of arable land and creating more efficient and widespread irrigation systems. These systems will allow for better crop yields and therefore better overall productivity. Secondly, the allocation of farming resources, especially land, must be altered to focus more on staple foods necessary for survival than on cash crops that will be exported for financial gain. There also needs to be a shift from the mentality that large farms are the answer to the problem into the realization that, when given help from both national and international sources, small-scale sustenance farms have the potential to produce the food staples that Nigeria needs. This shift will allow the government of Nigeria to fill its reserves of these necessary foods from within, saving money by reducing the need for imports and providing another market for the small-scale farmers. This will provide the small-scale farmers of Nigeria with an increased income that can then be used to further increase agricultural productivity through reinvestment, expansion, and further diversification. With a concerted effort into making these changes happen the Nigerian people have the potential for food security for all and therefore be well on their way towards a better quality of life. While this essay has focused on the Nigerian people, the actions presented within are applicable on a global scale. With slight modifications made for economic status, social conditions, and available resources the plans discussed have the potential to allow for increased food security for all of the world's poor and hungry.

## Works Cited

Aryeetey Attah, Samuel. *Geography of Sub-Saharan Africa*. 3rd ed. Upper Saddle River: Pearson Prentice Hall, 2010. Print.

Asekunowo, Victor O., Grace T. Olutunla, and Adebisi G. Daramola. "Seeking an Alternative Modality to the Management of Nigeria's Fertilizer Subsidy Scheme- an Empirical Approach to the Case Study of Ondo State, Nigeria." Diss. Federal University of Technology, 2008. Medwell Journals. Web. 7 Sept. 2009. <<http://medwelljournals.com/fulltext/pjss/2008/116-127.pdf>>.

"Eradicate Extreme Poverty and Hunger." United Nations. Web. 1 Sept. 2009. <<http://www.mdgmonitor.org/goal1.cfm>>.

Ezeji, Joachim. "Supporting Nigerian farmers to do well." *Whichwaynigeria.net*. 22 May 2009. Web. 8 Sept. 2009. <<http://www.whichwaynigeria.net/supporting-nigerian-farmers-do-well/>>.

Gabriel, Omoh, Henry Umoru, Lukat Binniyat, and Babatunde Jimoh. "Nigeria: Food Crisis - How Prepared is Nigeria to Tide Over the Crisis?" 5 May 2008. Web. 4 Sept. 2009. <<http://allafrica.com/stories/200805050618.html>>.

Hecht, David. "Little Keeps Nigeria From a Crisis of Hunger." *The Washington Post*. 2 Aug. 2009. Web. 22 Aug. 2009. <<http://www.washingtonpost.com/wp-dyn/content/article/2009/08/02/AR2009080202091.html>>.

Ishaq, M., M. Ibrahim, and R. Lai. "Tillage effect on nutrient uptake by wheat and cotton

as influenced by fertilizer rate." Diss. Ayub Agricultural Research Institute, 2001. Abstract. *ScienceDirect*. 20 Aug. 2001. Web. 28 Sept. 2009. <<http://www.sciencedirect.com/science?>

Nigerian. National Bureau of Statistics. *Agriculture*. The Federal Republic of Nigeria. Web. 10 Sept. 2009. <<http://www.nigerianstat.gov.ng/descr.php?recordID=11>>.

"Nigerian survey shows signs of growing food crisis." PANAPRESS, 24 Apr. 2008. Web. 4 Sept. 2009. <<http://en.afrik.com/article13354.html>>.

Ozowa, Vincent N. "Information Needs of Small Scale Farmers in Africa: The Nigerian Example." The World Bank, June 1997. Web. 11 Sept. 2009. <<http://www.worldbank.org/html/cgiar/newsletter/june97/9nigeria.html>>.

"Rural Poverty in Nigeria." *Ruralpovertyportal*. International Fund for Agricultural Development. Web. 9 Sept. 2009. <<http://www.ruralpovertyportal.org/web/guest/country/home/tags/nigeria>>.

United States of America. Library of Congress. Federal Research Division.

*COUNTRY PROFILE: NIGERIA*. July 2008. Web. 11 Sept. 2009. <<http://lcweb2.loc.gov/frd/cs/profiles/Nigeria.pdf>>.