

Marissa Davis
Springdale Har-Ber High School
Springdale, AR
Nicaragua, Factor 11: Malnutrition

Nicaragua: Improving the Intake of Quality Protein and Nutrients

The country of Nicaragua is 49,998 square miles located in Central America. Nicaragua is the second poorest country in Latin America, second only to Haiti. Of the 5.8 million people, 48% of the population survives on a dollar a day (World Bank). Most of the farmable fertile land in Nicaragua is located on the Pacific side of the country, while forests cover most of the Atlantic side.

Families in rural Nicaragua are rather large, consisting of 7-8 children and tend to reside around extended family. The children of these farm families have similar responsibilities as American farm children. They help on the family farm and with the upkeep of the home. Because they have such large families, they must produce or buy food to provide a meal for the family. Families tend to find the cheapest food they can, although this may not be the healthiest food. At one time in Nicaragua it was very important to eat high protein meals, people would eat beans or even beef and pork. However, the rising prices of beef and pork have led to more consumption of chicken and vegetables instead of higher protein sources of food. Families will also eat fruit that they can gather from the nearby forests. Beans are still a part of common meals although in smaller proportions.

Children are a large part of the population, in fact it is estimated that about 39 percent of the population is less than 15 years of age (FSD). While free public education is “mandatory” for primary and high school students, most students only finish primary school. In 2003, 823,000 children out of 1.55 million registered students failed to complete the school year (FSD). Most students drop out to beg or work in order to help provide for their families and younger siblings.

While at one time public education and health care were very important in the country, a period of extreme corruption within the Nicaraguan government took funding away from these programs. The current government is trying to re-establish these programs again, but the health care system is still very disorganized. Currently only 6 percent of the country’s population has health insurance. Rural areas lack access to health services due to poor roads and the general lack of doctors and nurses. Over half of mothers in rural areas give birth at home without the consultation of a medical professional (FSD).

Small farmers in Nicaragua are common, while only a small portion of the fertile land is actually farmed because much of the population is moving to more urban areas. An average farm in Nicaragua is not on the same scale as a farm in America. We build 3-5 homes on the same amount of land that these farmers have to make their living. A typical farm in Nicaragua is 2 hectares which is equivalent to about 5 acres (FAO). Maize and sorghum are the most common crops grown in the lowlands of Nicaragua while beans and vegetables are grown in the highlands (new-ag.org). Beef and dairy cattle are raised in this area also but the dairy goods, hides, and the beef are normally exported to other countries. Coffee, cotton, and bananas are also commonly grown on a larger scale, but most small farmers do not have the time or money to produce these crops.

Small farmers in Nicaragua are very poor; they do not have enough money to buy proper equipment and storage areas for the crops they grow (New-ag). Without a proper storage facility to keep moisture and animals out of the crops, most crops are ruined by the time the farmers market them. The immediate sale of crops over loads the market and drops the price of the crops leaving the farmers barely breaking even and still in the same economic turmoil that they have remained in for most, if not all, of their lives.

Farmers in Nicaragua are also in the practice of using pesticides in large amounts (Country Studies). While this does protect their crops and their profits in some ways, it also damages their environment.

There are multitudes of issues that prevent farmers from improving production in Nicaragua; one of the main issues is the recurring problem of natural disasters (Newpol). Drought, hurricanes, and other tropical storms are major issues in producing a good crop in Nicaragua. The typical farmer has a very low income and very poor access to credit (FAO). This makes it very difficult for farmers to buy quality seeds and equipment. Without quality seeds, it is impossible for these farmers to raise a healthy crop that will increase bushels per acre at harvest.

Farmers in this area continue to farm the same areas of land so, with every year the arability of the land decreases. With soil quality decreasing, this also decreases crop production because the nutrients the crops need from the soil have been diminished. Water scarcity is also a very common issue for farmers (FSD). This means that irrigation is not an option for most farmers.

Adequate nutrition is not readily available for the Nicaraguan population. Most high protein meat sources such as beef cattle are exported out of the country to places such as the United States (IFAD). The country as a whole is very poor and the cost of good protein sources is very high. There are other factors that indirectly affect the nutritional intake of the people. Illiteracy is one of the main contributing factors to the increase of the Nicaraguan poor population (Country Studies). Without proper education it is harder for people who do acquire jobs, to advance in the ranks at those jobs. This means they keep receiving an income that is too low to pay for the costly, healthier foods.

Many women do not receive the proper amount of nutrients, especially young women who are pregnant at a very young age. These young women do not have stable jobs, or often a husband to provide any kind of an income for them. When these mothers do not have adequate nutrition, neither do the fetuses growing inside them. This results in babies with physical and mental defects.

Malnutrition is a very large issue in Nicaragua; hunger and protein deficiency is present in high numbers. Farming requires strenuous tasks that a person who is not properly fed might not be able to fully perform. Protein, as most people know, helps to build muscle and strong bones. Without this vital nutrient the bones and muscles start to lose their strength. This makes farming harder and more dangerous because it increases the risk of an individual being injured. In this way, agriculture and nutrition support each other and when one fails so does the other. It is extremely hard to break this pattern once it has started down the wrong track. Without good quality crops from agriculture, protein sources such as meat from farm animals loses its quality. The lower quality protein sources, such as meat and beans, increases the risk of protein deficiency in the Nicaraguan population.

This cycle directly affects the farming families. When the family is hungry, the farmers focus shifts to feeding the family rather than marketing his crop. In opposition, when farmers are healthy they can work harder and for longer hours. With crops and animals there is a certain amount of work that has to be done to maintain a high quality product. When a farmer is unhealthy the amount of work that gets done on the farm in a single day decreases. Therefore, the less work that gets done decreases the quantity and quality of the product. Thus decreasing the amount of income the farmer receives when he sells the product.

Right now it is estimated that 1.5 million people are undernourished in Nicaragua (food4farmers.org). Most children don't finish high school because they need to earn money to feed themselves and their families. The situation is improving though; in 1990 to 1992, 55 percent of the population was malnourished. That number dropped to 20 percent from 2010 to 2012. While this is still a very high percentage of the population, it shows that the issue is being addressed and can be corrected with time (FAO). Malnutrition is defined by when the body is deprived of vitamins, minerals, and other nutrients it

needs to maintain healthy function (Hopkins). If the population growth rate continues to decrease and the programs set up by the government and other organizations continue to grow, the issue is predicted to decrease.

The overall health of people should always be a top concern. When the health of farmers decreases the quality of crops that they provide for the rest of the country also decreases. Better quality crops would increase the farmers profit and in turn boost the economy in the area. A better crop would also earn the farmer more money to feed his own family and expand the farm. When children are hungry they often have trouble focusing in school, so what little time they do spend on their studies is pointless. Their focus is more on whether or not they will have food when they return home. This issue contributes to illiteracy in the country.

Often in Nicaragua, the older children in a family will drop out of school to care for and support their younger siblings or even just to find a way to feed themselves (Save the Children). When they drop out of school, this locks them into the poorer class. As they get older and have children their children will be poor and will be faced with the same situation. This continuing cycle ensures that there will be a high number of poor, illiterate people. This cycle needs to be broken to help improve the lives of the families in Nicaragua.

The past corruption of the government eliminated a great deal of funds from education and health care (Country Studies). Without proper health care it is hard for people to address their health issues, which would often show them lacking a proper diet. They only know that they are sick and do not know from what exactly. When health care funding was decreased so were the salaries of the doctors. This decrease in salary has discouraged the few educated people from going into the medical field. Consequently, there are fewer physicians to help these suffering people (Newpol).

Over population in this country has an effect on their people being under nourished. The more people they have makes it harder to find good quality food to feed everyone. The population continues to grow rapidly but the income of families remains the same. The poor families cannot afford contraceptive methods and end up with more children than they can afford to support and to feed properly. The school dropout rate is also a factor that affects malnutrition in Nicaragua. A population that is educated increases the chance of new innovations and of positive change to help the common people in the country. When a greater percent of the population is educated, it opens up opportunities for everyone to make life better. The Nicaragua population is lacking these educated people to help their society.

The corrupt government that was in control in the past, used funds to build up a few wealthy business owners thus making an even more dramatic separation between the wealthy and the poor. This put more people in the poor or very poor categories; hurting the country's economy as a whole but also hurting the families. This corruption factor and the decline of education made it harder for the common people to move up in the social structure. When people are uneducated it is easier to control them, which would be the goal of a corrupt government. However, it hurts the country and its people in the long run. Uneducated people cannot travel, for they are not properly educated in their own language which would make learning another language or another culture almost impossible. They are stuck with only the skills they learn from their parents and their immediate community.

A community is usually controlled by an educated person that the people in the area trust to make key decisions. Children are the future of all communities and countries, when they are not educated it makes it hard to make positive changes in the future. The combination of population and illiteracy of that population is deadly to a community. More poor uneducated people add to the cycle and soon that becomes the standard of living.

Natural disasters are extremely hard on the farming community in Nicaragua. A natural disaster can ruin the soil along with the crops and the structures on the farm. Nicaragua has been hit with numerous hurricanes in the past decade (FSD). These storms can tear a farm apart leaving the already poor families with almost nothing.

Natural disasters also take their toll on the community as a whole; they destroy community buildings and can destroy the homes of everyone in the area. When this happens the government has to pay to clean up and take care of its people. This takes funding away from things like public education and health care therefore causing more suffering for the poorer people who need those services.

Although there are plenty of hardships and issues for farmers in Nicaragua, the government has identified agriculture as the sector with the greatest potential for growth (FSD).

There are a multitude of ways to help improve the situation in Nicaragua from helping farmers to produce better crops, to educating the future farmers, to providing food that is high in protein and nutrients. If the farmers increase the quality of seeds they plant this will directly influence and improve the quality of products they harvest. Farmers also need increased access to credit in order to expand their farms and improve their crop production. Even something as simple as providing farmers with proper storage bins to store their crops would make a huge difference in the farmers' income and the quality of the crop going to market.

There would be no point in bringing in big equipment that American farmers commonly use because the average sizes of their farms are less than 5 acres. Obviously, modern technology like a GPS system would not be beneficial at this time because of the illiteracy rate. Instead, proper equipment for Nicaraguan farmers would be small tractors to handle 1 to 2 row planters and harvesters. It is also necessary to provide them with the knowledge to use this equipment properly in order to improve the quality of their crops. In addition, it would be necessary to consult them through several growing seasons to help improve their farming techniques. An increased and improved bean crop would help supply more protein to the citizens.

Schools currently provide a free meal that is rich in protein and vitamins which is providing a nutritious meal and ensuring that more students remain in school. Keeping more students in school means an eventual increase in the education of the population. Schools can also be used to educate the future population on the effects of overpopulation and how it can be handled and prevented. Informing children is a great way to also inform the parents on the issues and solutions to their problems. These children who are taught basic health information including proper nutrition will go on to lead healthier lives than the generations before them.

Overall the citizens of Nicaragua should be informed of the issue of malnutrition and what foods they can eat to reduce the risk. Protein and vitamin rich meals should be highly encouraged in the nation. Also soy products should be made more readily available since it is a cheap but good source of protein and other nutrients. As easy as it may seem, the illiteracy rate in the country would be a major issue. Also the lack of modern technology such as television will make informing the people a more difficult issue to solve.

The FAO has put in place policies that will give farmers better seeds to plant on their farms (FAO). This will help with the quality of crops that they produce for their family and other families to eat. The USAID has set up stations, policies, and practices to warn citizens earlier of natural disasters. They also are helping the Nicaraguan government to set up better ways to deal with these natural disasters.

There is a local project in some communities called the Olla de Soy project; in this project volunteer mothers from the community cook cheaper soy products for the children in the area. Soy gives the

growing children a good source of protein. Being aware of these products makes them more inclined to ask for them in their own homes. This program also provides pre-school education for the younger children of the neighborhood (Micronutrition). This may give them the incentive to want further education. Also with more availability of the proper food children will have a better chance of staying in school and a great chance of a better education, thus improving the illiteracy rate in the country.

It is believed that soy beans have been grown in Nicaragua since 1948 but it has only been documented since 1967 (Soy Information Center). Since soy beans are already being harvested in Nicaragua, given the right technology farmers would easily be able to increase the amount and quality produced. Increasing the soy industry would increase the availability of protein for people's everyday diets.

Nicaragua is a beautiful country with a lot of unharnessed potential. The government needs to lead the way by setting policies that will ensure that more credit is available to farmers to buy more and better equipment. The government also should continue encouraging more crop production to build up the economy. The communities should support the government's efforts to help fight hunger and malnutrition in their areas. They should also strive to keep students in school. Corporations and organizations should work on making contraceptives more available for the people of Nicaragua to ensure that the population doesn't grow too rapidly for the food supply or economy.

Farmers should be made aware that they play a big part in providing protein for the people of their country. They should be asked to be involved in improving policies and practices that will benefit the agricultural industry in their country. Families should also be held responsible for giving feedback on how policies and practices are working for their family and what needs to be improved.

Malnutrition and the lack of protein in daily diets have affected Nicaraguans for years. Farming practices, lack of education, and a corrupted government has played a role in keeping this country from developing. Implementation of the ideas and policies mentioned earlier by the government will help the people develop individual pride. Thus this country can learn to support itself and its people.

Works Cited

"Economist Intelligence Unit." *Global Food Security Index: Country Profile*. Web. 01 Apr. 2014.

<<http://foodsecurityindex.eiu.com/Country/Details#Nicaragua>>.

"Micronutrient Initiative - Nicaragua." *Micronutrient Initiative - Nicaragua*. Web. 01 Apr. 2014.

<<http://www.micronutrient.org/vmd/Nicaragua.asp?x=1>>.

"New Agriculturist." : *Country Profile*. Web. 01 Apr. 2014. <[http://www.new-](http://www.new-ag.info/en/country/profile.php?a=2143)

[ag.info/en/country/profile.php?a=2143](http://www.new-ag.info/en/country/profile.php?a=2143)>.

"Nicaragua." *FAO*:. Web. 01 Apr. 2014. <<http://www.fao.org/isfp/country-information/nicaragua/en/>>.

"Nicaragua." *Save the Children*. Web. 01 Apr. 2014.

<<http://www.savethechildren.org/site/c.8rKLIXMGIpI4E/B.6151465/k.ED79/Nicaragua.htm>>.

"Nicaragua - Crops." *Nicaragua - Crops*. Web. 01 Apr. 2014.

<http://countrystudies.us/nicaragua/39.htm>.

"Nicaragua: Hunger, Malnutrition, and the Fight to End Them | New Politics." *Nicaragua: Hunger, Malnutrition, and the Fight to End Them | New Politics*. Web. 01 Apr. 2014.

<http://newpol.org/content/nicaragua-hunger-malnutrition-and-fight-end-them>.

"Nutrition Country Profiles: Nicaragua Summary." *Nutrition Country Profiles: Nicaragua Summary*. Web. 01 Apr. 2014. http://www.fao.org/ag/agn/nutrition/nic_en.stm.

"Youth Education & Development Issues in Nicaragua." *Youth Education & Development Issues in Nicaragua*. Web. 01 Apr. 2014. <http://www.fsdinternational.org/country/nicaragua/yeissues>.

Arne Oshaug and Lawrence Haddad. "Nutrition and Agriculture" *Nutrition and Agriculture: Brief 6 of 12*. Web. 01 Apr. 2014.

http://www.unscn.org/files/Publications/Briefs_on_Nutrition/Brief6_EN.pdf

Julio A. Berdegue and Ricardo Fuentealba "Latin America: The State of Smallholders in Agriculture" *Latin America: The State of Smallholders in Agriculture*. Web. 01 Apr. 2014.

<http://www.ifad.org/events/agriculture/doc/papers/berdegue.pdf>

"Food for Farmers Project Update" *Project Update: Nicaragua*. Web. 01 Apr. 2014.

food4farmers.org/our-projects/soppexca-jinotega-nicaragua-update/

"SoyInfo Center." *History of Soybeans and Soyfoods in Mexico and Central America (1877-2009)* -. Web. 28 July 2014. <http://www.soyinfocenter.com/books/128>.