

Luca del Olmo
Giff Hill School
St. John, Virgin Islands
Haiti, Factor 11: Malnutrition

Haiti: Improving nutrition with more affordable, accessible, and healthier foods

The Republic of Haiti shares the island of Hispaniola with the Dominican Republic and is located in the West Indies. Haiti occupies the western portion of Hispaniola and is two thirds mountainous. The rest of the country consists of large valleys, extensive plateaus, and small plains. Haiti has an area of 27,750 square kilometers (10,714 sq mi). Haiti's capital, Port-au-Prince is located on the coast in the southern portion of the island. Rainfall varies from 1 inch per month (winter months) to over 9 inches per month (summer months). Haiti is shaped like a horseshoe with two peninsulas with one to the north and the other to the south. The economy of Haiti is primarily based on agriculture. Unfortunately, this is based mainly on small-scale subsistence farming. Poverty, corruption, vulnerability to natural disasters, and low levels of education have all hampered economic development in Haiti. Although the economy has been improving, Haiti's economy largely depends upon international aid (Geography - Rural Poverty Portal).

The average family size in rural Haiti is 4 family members. This is composed of a mother, father, and 2 children. Many children lack education if they have had any education at all. (Dorte and Egset). The Haitian literacy rate is 52.9 percent with only 8.9 percent of Haitian adults having a secondary school education. Today 62 percent of the children in Haiti attend primary school while only 18 percent attend secondary school. More than 80 percent of primary schools are privately managed by nongovernmental organizations, churches, communities, and for-profit operators, with minimal government oversight. Approximately 75 percent of teachers in Haiti lack adequate credentials. For low-income families, annual school expenses account for about 40 percent of parents' income and can represent a significant financial burden.

Access to proper health care can also be difficult. The 2012 earthquake devastated the Haitian health care system. Hundreds of hospitals were destroyed or severely damaged. These have not been replaced. Private organizations such as Médecins Sans Frontières (MSF) are operating many hospitals in the country and provide free needed medical care. The future of continued support by organizations like the MSF is not clear as funding is an issue. The hospitals currently run by the MSF are not likely to be turned over to the Haitian government as they lack the resources to manage them.

The typical diet of the rural Haitian is quite poor. Rice makes up 20 percent of the typical Haitian's diet, and that percentage is growing. Unfortunately, most of the rice is imported which has added to the families' financial burden. Other staples in the diet are maize, beans and cassava. Small amounts of meat, fish and eggs are also available. However, because of the poor infrastructure (lack of roads, poor storage and sanitation facilities) access to these foods is quite limited. The poor infrastructure has contributed to a diet that is inadequate for the energy and nutritional needs of the people. The result is malnutrition and its associated problems.

Because of the poor diet, malnutrition affects one in every five children, 6.5 percent suffer from acute malnutrition, while more than half of women and children suffer from anemia. Micronutrient deficiency is also an issue. Haitians do not receive the needed amounts of vitamin A, iodine, iron, and zinc.

Vitamin A can be found in orange-fleshed non-citrus fruits and vegetables such as carrots, pumpkin, orange-fleshed sweet potato, and dark green leaves. Data on consumption of vitamin A-rich foods from 2005 indicates that less than half of all children under 35 months, and only a quarter of breastfed children 6-9 months, were consuming vitamin A-rich foods on a daily basis. This consumption pattern is of particular concern for non-breastfed children whose consumption remains relatively constant over the first three years of life, and who have higher nutrient requirements since they do not benefit from the essential micronutrients present in breast milk.

To combat the problem of vitamin A deficiency, a program similar to the Sweet Potato project that is currently being undertaken in Uganda should be implemented in Haiti.

The Sweet Potato Profit and Health Initiative campaign promotes growing sweet potatoes in Uganda. The goal of the program is to try to reduce malnutrition by using the sweet potato to supplement vitamin A in the diet. Sweet potatoes are a very good source of vitamin A. The program is now replacing the different types of sweet potatoes already in Uganda for the orange variety. The orange color is from the high beta-carotene content in the potato. The substitution of one crop for another is called biofortification. Biofortification should be implemented in Haiti. The local white and yellow varieties of sweet potato should be replaced by the more nutritious orange variety. (Charles). The orange variety of sweet potato is a much better source of Vitamin A, and has a lot more vitamins than the yellow or white ones that are commonly grown in that region of Africa. Despite its name, the sweet potato is not related to the potato. It is a root, not a tuber, and belongs to the morning-glory family.

This method of changing the usual crop of a country for a healthier one with more nutrients is in fact working and has been proven to help kids get healthier. This hasn't only been happening in the section of Africa of Uganda and Mozambique, but in other countries of the world as well. India for instance, has been growing a new type of pearl millet that helps make iron more attainable. A new type of bean has been passed around in Rwanda and a different type of corn in Zambia. Scientists have found these crops to work well in these countries and are readily available in those locations. In Uganda the spread of the sweet potato has been done by people from the International Potato Center stopping at different villages and telling about the advantages of the sweet potato and how great it is for people. All of the newly introduced crops in places like Uganda and India have been studied and proven to be better than a lot of the present crops in the area. These new introduced crops will improve the lives of the people there. All this can also be done in Haiti with a crop like the sweet potato and transporting it the same way they do in Uganda with trucks and people teaching what the sweet potato can do (Charles). This crop is great for Haiti because of its tolerance to water stress, which means that it doesn't need as much water compared to other crops. In addition, this crop has quick germination and growing, is high in nutrition, and can adapt well in different environments (Sweet Potato: Cultivated Area and Production).

The introduction of the new orange species of sweet potato in Haiti can be done in several ways. The first approach would be to contact various agricultural colleges (such as IOWA State) to see if they have an existing program in Haiti. Using an existing program is far more economical than developing a new program from scratch. After determining which colleges would be interested in the Sweet Potato initiative, a program could be developed or an existing program augmented to introduce the sweet potato into Haiti. This approach also has the added benefit of working with previously established contacts in Haiti. The local farmers are already familiar with the college personnel so disputes from cultural differences should be minimized. The program should focus on the nutritional benefits of the sweet potato but additional analysis should also be done.

Statistical analysis on sweet potato production needs to be quantified. Growth rates, yields, water usage, and area planted all need to be recorded, analyzed and published. A baseline is needed to determine the most efficient method for the propagation of sweet potatoes in Haiti. This information needs to be coordinated with the local farmers so they can see the immediate results of their work.

Additional genetics studies, with the International Potato Center located in Peru, can also be conducted. The center is in charge of 4,000 varieties of different potato and sweet potato crops, which they distribute through a network of thirty different countries (Peru Potato Lab Helps Fight Malnutrition in Africa). New types of sweet potatoes could be developed to yield a higher zinc content than the current variety. Thus, the sweet potato has the potential to be utilized to increase the content of two micronutrients, vitamin A and zinc.

A marketing project could also be done to see what makes the most sense in introducing the sweet potato to Haitian cuisine. The sweet potato can be boiled, fried and mashed just like a plantain (a type of Caribbean banana). Dishes that use plantains could be modified to use sweet potatoes instead. This type of project would target consumers in the usage of the new potato and help generate interest in the new product.

The introduction of the sweet potato can lead to the development of secondary markets and possible products for export. Sweet potatoes can be fried and packaged for export (like potato chips). They could then be marketed in North America as a healthy alternative to the conventional potato chip. This could also lead to cottage industries that produce sweet potato chips that are available to the local populace as well as for export.

The sweet potato initiative campaign would make an excellent college program. Different departments (agriculture, chemistry, plant genetics, and economics) could work together in the promotion of the sweet potato. The use of a college program to promote sweet potatoes in Haiti would also eliminate charity fatigue (donors repeatedly asked for funds to support a cause).

The introduction of the sweet potato could also be implemented through the United Nations (UN). There are currently 18 UN organizations with offices in Haiti. They work together as part of the UN Resident Coordinator system to support Haiti in its development. The two most prominent organizations that deal with food security in Haiti are the Food and Agriculture Organization of the United Nations – FAO and the World Food Programme – WFP . Because of the massive devastation Haiti suffered by the earthquake in 2010, these agencies now act primarily as relief agencies. It is not clear how receptive these agencies would be on incorporating a new project for Haiti. Colleges and Universities should be contacted first before contacting the UN agencies for assistance.

The introduction of sweet potatoes in Haiti offers a combination of three unique challenges. First, farmers have to be educated on the benefits of using the sweet potato. Second, consumers have to be introduced to the nutritional benefits of the sweet potato. Third, consumers need to find that sweet potatoes are tasty and make a positive contribution to Haitian cuisine.

Haiti has suffered from the ravages of both man and nature. Brutality, corruption, and despotism have prevented the Haitians from having an effective government. To compound the misery, Haiti has suffered from both droughts and hurricanes. Good governance, faith in institutions, and a functioning infrastructure are still ideals to be attained.

Children born in Haiti face some of the harshest conditions on the planet. Malnutrition rates in Haiti are among the worst in the Latin America and Caribbean region. Malnutrition and its related problems of diminished cognitive and physical development will hamper both the physical and mental development of Haiti's children. The situation in Haiti was dire before the devastating earthquake of January 12, 2010 and now conditions are even worse.

The introduction of sweet potatoes in Haitian economy will provide a benefit that will both help reduce malnutrition and provide an income for the many subsistence farmers. The lack of an infrastructure and limited governance should not prevent the implementation of new projects. Haiti is one of our nearest neighbors and we should help them out. The introduction of sweet potatoes will provide a small but significant step for the betterment of the Haitian people.

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