

Mindy Xu  
Parkway South High School  
Ballwin, MO  
Haiti, Factor 12

## **Restoring Haiti's Rice Farming by Strengthening its Agricultural Infrastructure and Implementing Better Technologies**

Known by the French as “La Perla de Antilles” (The Pearl of the Carribean), Haiti was once covered with lush forests that spanned almost 80% of the country, its natural beauty earning its nickname (Roc). In the 17<sup>th</sup> and 18<sup>th</sup> centuries, Haiti's numerous sugar plantations made it the most valuable colony in the world. However, since a slave revolt in 1804 made it the world's first independent black republic, what used to be the Pearl of the Caribbean no longer gleams as it once did. By 2008, deforestation had brought the percent of forest cover to only 2-4%, UN experts reported (Katz). Now, Haiti is the poorest country in the Western Hemisphere, as well as one of the most densely populated. As of July 2012, it had a total population of 9,801,664 and a total area of 2775 square kilometers, slightly smaller than the state of Maryland (“WFP Reinforces Commitment”). With about 900 people per square mile, its density is over ten times that of the United States. Haiti's huge population is struggling both economically and socially. Education is not readily available; only 52% of Haitians can read and write. Additionally, most do not have access to adequate medical care, as the entire country only has about a dozen hospitals and about 300 doctors (“People and Past”). Furthermore, Haiti has high rates of AIDS, malnutrition, infant mortality, and poverty (“The sad bicentennial”). In fact, over 80% of Haiti's population lives under the poverty line, of which 54% live in abject poverty (“WFP Reinforces Commitment”). The most recent country-wide food security study – Enquête Nationale de Sécurité Alimentaire (ENSA), lead by the Coordination Nationale de la Sécurité Alimentaire(CNSA) and WFP, revealed that 38% of the population, approximately 3.8 million people, do not have food security. Other recent data shows that chronic malnutrition affects 23% of children between 6-59 months and that 4 percent of children suffer from global acute malnutrition. The country also lies in the middle of the hurricane belt and is subject to severe storms, flooding, and earthquakes, which have in the past, hurt the its economy drastically (“Central America”).

The vast majority of Haiti's poor and undernourished people reside in rural and remote areas of the country (“WFP Reinforces Commitment”). Much of Haiti's population is rural: about 48% of the population as of 2010 (“Central America”). Thus, agriculture is still a very large part of Haitian economy and society. About two fifths of all Haitians depend heavily on the agricultural sector, mainly small-scale farming. In fact, Haiti's agriculture contributes to 25% of its total GDP (“WFP Reinforces Commitment”). Haiti's agricultural sector has long been declining however, the primary cause of the poverty that engulfs rural communities. Environmental degradation and low production are two of the main factors behind the failing agricultural sector. In order to revive and provide food security for thousands of rural families, new agricultural techniques and practices as well as strengthened infrastructure should be implemented.

In Haiti, great emphasis is placed on the family, which has traditionally been regarded as the principal social unit. Family is especially important in rural areas, although since the nineteenth century, family structure has altered drastically. The *lakou*, or the extended family, was once the principal familial unit, and provided its members with support and financial aid (“Gender Roles”) Due to the deteriorating economy and pressure from population growth, however, the extended family has been largely replaced by the nuclear family. Nevertheless, families still remain supportive of one another, and family reputation and children are valued highly (“Family Life”). Within a family, men and women typically share household responsibilities. Women are usually responsible for tasks such as weeding, harvesting, and childcare while men do chores such as farming and gathering firewood (“Family Life”). Compared to

those in other Latin American countries, Haitian women are given a substantial amount of economical independence and therefore are much more active in market and business activities (“Gender Roles”). The family is very important in rural lifestyle; each member contributes to provide food for the family.

Farming families typically grow corn, millet, beans, yams, or rice, all of which are main components of the Haitian diet. However, terrain in Haiti is very mountainous, making it very hard for farming families to acquire arable land. Those who try to farm the mountainsides sometimes tie themselves to the mountain to keep from falling off. Others have fields in swamps or flat plantations; however, space is limited. The field which the average farmer uses to make his living is usually no more than a tiny patch of land less than two acres in size (“People and Past”). Rural families generally live in small, one-room huts, with walls of sticks covered with dried mud and thatch roofs, and plant mostly rice and corn. The luckier ones may have some chickens, pigs, or goats (“People and Past”). Many do not have access to clean, potable water, and most barely have enough to sustain themselves. Very few make a substantial enough profit from their crops to be able to live above the poverty line.

Sadly, many of the struggles of these rural families were overlooked, until a 7.0 magnitude earthquake on January 12, 2010 brought Haiti under the international spotlight. With a center just 25 km away from the country’s capital, Port Au Prince, it was assessed as the most severe disaster in the region in the last two centuries (“Central America”). Port Au Prince has historically been highly concentrated in both people and wealth, containing about 10% of the nation’s population, most of which are middle class or elite. Even a “poor” urban dweller in Port Au Prince is relatively rich compared to the average rural farmer. It isn’t surprising, therefore, that an earthquake so close to the capital would be detrimental to Haitian economy and society. It alone inflicted \$7.8 billion in damage and caused the country's GDP to contract 5.4% (“WFP Reinforces Commitment”). An estimated 200,000 were killed, about one million were left homeless, and nearly four million were in desperate need of food (“Central America”). This caused more than 600,000 city residents to flee to the countryside. This mass exodus put a huge strain on rural villages (“Republic”) and opened the world’s eyes to the stark reality of Haiti’s poorest living in rural communities. Briel Leveillé, a former mayor and founder of a leading peasant cooperative in one such community explained, “The misery of the countryside is compounding the effects of the disaster. I’ve heard people say it would be better to risk another earthquake in Port-au-Prince than to stay in this rural poverty without any help from the government” (Sontag). Though the earthquake was indeed detrimental, it forced officials to recognize the desperate living conditions of rural populations, which had endured decades of neglect (Sontag). Etienne Peterschmitt, Senior Emergency and Rehabilitation Coordinator for the UN Food and Agricultural Organization (FAO) agrees: “Most of the response has been focusing on the urban aspect of the crisis, but the international community must not neglect rural areas if they want to overcome the massive effects of the earthquake in the country” (“Haiti”).

The extreme poverty in these rural areas mostly results from the fact that Haitian farmers are no longer able to make a living from rice production. Rice has long been and still is the most important and vital of crops in Haiti (Jensen). The country is one of the largest rice consumers (per capita) in the Latin America and Caribbean region, with over 100,000 families depending on rice production for a living. Unfortunately, this vital sector has been rapidly declining in recent decades. While Haiti’s economy was almost entirely self sufficient on rice production in the 1970s and mid 1980s, the nation has since been flooded with foreign rice. By the 1990s, more rice was already being imported than domestically produced (Gorges) and as of February 2010, 80% of Haiti’s rice was imported. The extreme dependency on foreign rice has long begun to worry government officials and has had a personal effect on hundreds of thousands of rice-growing families. 37 year-old Haitian farmer Renan Reynold explained quite simply, "I can't make any money off my rice with all the foreign rice there is now. If I can't make any money, I can't feed my family" (Dodds). Reynold speaks for hundreds of thousands of Haitian families who depend on the growing, milling, and trade of rice to make a living, but aren’t able to compete with the mass

production of foreign rice. The shift from self-sufficiency to dependency on imported rice has been detrimental to Haiti's rural population.

Many blame low tariffs for bringing in these massive amounts of imported rice. In 1994, the Haitian government entered into a new agreement with the International Monetary Fund that cut Haiti's tariffs on rice imports dramatically from the previous level of 35% to the current level of 3% (Gorges). This is by far the lowest amongst its Latin American neighbors. For example, the Common External Tariff on rice in the CARICOM (Caribbean Community) zone for rice in 1999 was 25%. Promoters of Haiti's low tariff policies argue that the lowered prices benefit the consumers, or in other words, the urban population. However, the 48% of the nation that is rural has been hurt drastically by these open-trade policies, as many are unable to support their farms with the little, if any, profits that they make. Many critics of the 1994 trade liberalization policies argue that they only exacerbate preexisting poverty. Indeed, if local businesses are to be protected, raising tariffs by even a small percentage would be beneficial. Of course, solely lowering the imports of rice will do Haiti little good. 29 year old rice farmer Claudes Derilus says, "The introduction of American rice has hurt us terribly. But if it wasn't for this rice, Haitians would die of hunger" (Dobbs). This contradiction is a perfect example of just how fragile and controversial the situation in Haiti is. Simply taking away imported rice without improving Haiti's own rice production will only be detrimental to its already desperately poor population. The underlying issues of Haiti's economical decline need to be addressed.

The real problem at the core of the ongoing problems of poverty in these rural communities is that Haitian farmers simply can't produce enough. While population and consumption numbers increase rapidly, rice production has been relatively stagnant for decades. The United States Department of Agriculture estimates an annual consumption of 380,000 metric tons of rice per year for the years 2010 and 2011, but a production rate of only about 90,000 metric tons per year (Suarez), which is not much higher than that of twenty to thirty years ago. Local sellers of rice aren't able to produce enough rice to lower the prices to match those of imported rice. Domestically grown rice is too expensive to afford, as most Haitians have little purchasing power; approximately half of all Haitians live with less than \$1 a day and three quarters live with less than \$2 a day ("Haiti Overview"). As a result, while many Haitians actually prefer locally grown rice over imported rice, the limited amounts and much higher prices of locally grown rice make it an unaffordable luxury. This has allowed cheaper and more efficiently produced U.S. varieties to take its place. Thus, to bring Haiti back on its feet, we must revive its failing rice farming sector. Outdated and inefficient technology and lack of infrastructure have made it increasingly difficult for Haitian farmers to compete with foreign sellers. Investing in better implementation of agricultural research and technology to boost Haiti's food production to a level comparable to that of its competing vendors is vital to the survival of hundreds of thousands of Haitian families.

Environmental degradation, one factor contributing to lower rice production, has become a huge problem in Haiti, particularly in the Artibonite Valley, which has been deemed Haiti's "rice bowl" (Zhang). Aptly named, this region, located about 40 miles north of the nation's capital Port Au Prince, accounts for roughly 70% of the country's rice production (about 35,000 hectares of rice fields) (Suarez). As mentioned before, because Haiti's terrain is mostly mountainous, only a small portion of the land is arable. This already small portion of land is being significantly reduced due to problems of deforestation, soil erosion, and decreased rainfall, which historians trace back to agricultural practices beginning from early European settlement (Gorges). This, when coupled with the poor condition of irrigation canals, has greatly decreased agricultural productivity. In response to these problems, many Haitian farmers have employed even more land intensive cultivation techniques that only make the problem worse.

Less land intensive practices must be introduced to farmers, while still increasing productivity and yield. SARE (Sustainable Research and Education) provides grants to advance innovations in sustainable

agriculture (“What is Sustainable Agriculture?”). Scientists research ways to increase productivity while decreasing stress on the land. These practices, such as rotational farming to increase soil fertility and conservation tillage systems to reduce effects from soil and water erosion need to be implemented and taught to local farmers through education and technical assistance. These programs can receive funds either from the government or from NGOs. Of course, communities and local farmers need to be held responsible for following these practices.

Farmers should work together to voice their concerns and lobby the government for more favorable policies, as well as to implement new farming techniques and procedures. A good model for this system is the “Peasant Movement of Papaye” (MPP). The MPP was founded in 1973 and is currently the largest and oldest movement of peasant cooperatives, centered in the small town of Papaye. This organization is rooted in local community participation; families, parents, teachers, and students work together to harvest rain water, to build local seed banks, and even to maintain school vegetable gardens to provide lunch for Haitian students (Cohen). The movement also sends representatives to delegation meetings to voice the concerns of peasants who are involved. This system would be more effective if expanded to other parts of Haiti, or if new, similar systems were established in other areas that needed them. A larger membership and more involvement would allow Haitian farmers to have a greater influence on the government as well. The peasant organizations could lobby the government to import new technologies and to change current tariff policies. With the stronger connection established between rural Haitians and their government, both can then play important roles in adopting new agricultural techniques and practices from other countries. A good place to look for technologies suitable for Haiti’s environment would be Taiwan, which has developed a vast array of efficient farming technologies and rice varieties suited for mountainous terrain. The initial test beds of these imported rice farming technologies from Taiwan have already proved to be very effective in Haiti. In fact, some rice farmers in Haiti’s Torbeck area more than doubled their rice yields from an average 2.5 MT/hectare to 6MT/hectare by utilizing the new agricultural inputs from Taiwan (Zhang). Haiti’s government should also implement tariff policies that encourage farmer organizations to import agricultural technologies from other countries, at the same time, gradually raise the tariffs on imported rice and use the collected taxes to fund domestic rice farmers to buy high-yield rice seeds and technologies.

Agricultural infrastructure also needs to be improved to create sustainable recovery of Haiti’s rice farming, which can be done by Non-Governmental Organizations (NGOs), which can create projects that work along with local Haitian governments. One successful example is World Food Programme’s “Cash and Food for Work” program. The initial work projects have not only provided for poor local farmers’ desperate need of cash for seeds, but most importantly, those projects have built many vital infrastructures such as roads and bridges necessary for Haiti’s long term reconstruction and sustainable recovery. “Employment schemes which include wages paid in both food and cash in Haiti are a key component in our strategy to support long term reconstruction. The cash element helps restart the local economy, while the food component ensures people have access to nutritious food,” said WFP Executive Director Josette Sheeran (“WPF Executive”). WFP should continue partnering with Haiti’s local governments to expand this program to build better irrigation canals, more grain storages and mills in Haiti to support the recovery of rice farming.

Finally, a financial support system needs to be built to sustain farmers who already receive little, if any, support from their government. The competition between U.S. and Haiti manufacturers of rice is hardly fair, because U.S. rice production is subsidized through a variety of mechanisms, while Haitian growers receive no subsidies (Dobbs). Thus, local governmental organizations in rural Haiti must be established to provide farmers with these subsidies, as well as small loans from local banks. Protection against future disasters must also be accounted for. Haiti is subject to numerous hurricanes and earthquakes. Natural disasters can’t be stopped, and in response the government needs to plan an annual budget for regular maintenance over roads, bridges, dams, and canals that are vulnerable to damage. We can’t expect Haitian

farmers to revive their agricultural system on their own. Mark Weisbrot, co-director of the Center for Economic and Policy Research in Washington, points out, “If you look at those countries that have succeeded in dramatically increasing their per capita incomes--countries like Japan, South Korea and Taiwan--you will find they all did it under some kind of protection” (“Haitian Farmers”). Financial protection and assistance from the government, and local institutions are necessary for Haiti’s agricultural reformation.

The Lambi Fund of Haiti is an example of a key NGO that has begun to implement agricultural credit funds for farmers, demonstrating that NGOs can play very important roles in restoring Haiti’s farming economy. A grassroots organization founded in 1994 by Haitians and Haitian-Americans, the Lambi Fund focuses in funding Haiti’s agricultural projects that help increase food security and income for farming families. It partners with AGPR (The Association of Peasant Groups in Roji) to provide much needed capital to build a grain storage facility, and creates an agricultural credit fund to provide affordable loans to local farmers. Furthermore, Lambi Fund provides leadership training for the local project management team and technical trainings in grain storage operations, and nursery management (“The LAMBI Fund of Haiti”). If farmers are truly to overcome the poverty that has long plagued Haiti, they will need the encouragement from financial support systems provided by NGOs, such as the Lambi Fund, which should be broadened to reach out to more of Haiti’s farmers.

Haiti’s rural population has been struggling for decades to live off a land that is now eroded, arid, and depleted of nutrients. Its once lush terrain has suffered from a combination of political strife, natural disasters, and agricultural malpractice. The latter factor, possibly the most influential, can be dealt with. Through an implementation of better practices on a small scale by local organizations, Haiti’s land can gradually recover. These implementations, however, must be coupled with financial support and protection to farmers through their government, in order for Haitian farmers to be able to compete with foreign producers. The rural people of Haiti have long been caught in a vicious cycle of poverty and environmental degradation. Farmers are unable to compete with foreign rice vendors and therefore cannot make a living. They then resort to alternative methods such as cutting down trees to sell for charcoal, which can earn them about \$12.50 a day (Katz) or use more intensive, land-damaging cultivation processes. As more and more trees are cut down and more intensive techniques are used, the land becomes less fertile and less crops can be produced. Reforestation is important, but alone it will not be enough to bring Haiti out of this cycle. In the late 1980s, the U.S. Agency for International Development spent \$22.8 million to plant about 30 million trees, but nearly all were cut down (Katz). However, with the added implementation of new agricultural practices, rebuilding of irrigation systems, and financial networks to support local farmers, newly planted trees will really make a difference. Farmers will have the resources to make a living from cultivation of crops, without needing to resort to cutting down trees. Reforested trees can then replenish damaged soil with nutrients as well as greatly reduce erosion. Ideally, these improvements will allow Haitian farmers to produce crops in quantities far beyond subsistence level and broaden their markets to nearby countries, with the additional help of local banks. Once rural farmers start to produce enough to expand their markets, they can truly start to become self-sustaining.

#### Works Cited

“Central America and the Caribbean: Haiti.” *CIA World Factbook*, Central Intelligence Agency, 5 Jul. 2012. Web. 10 Jul. 2012 <<https://www.cia.gov/library/publications/the-world-factbook/geos/ha.html>>

Cohen, Alison. “On the Road in Haiti: Climbing Mountains with the Peasant Movement of Papaye,” *whyhunger.org*. Connect Blog, 19 Jun. 2012. Web. 5 Sep. 2012 <<http://blog.whyhunger.org/2012/06/on-the-road-in-haiti-climbing-mountains-with-the-peasant-movement-of-papaye-mpp/>>

- “Contributing to agricultural recovery in the Artibonite Valley.” *Iadb*. Inter-American Development Bank, 1 Mar. 2009. Web. 15 Jul. 2012 <<http://www.iadb.org/en/news/webstories/2009-03-01/contributing-to-agricultural-recovery-in-the-artibonite-valley,5509.html>>
- Dobbs, Michael. “Free Market Left Haiti's Rice Growers Behind.” *Hartford-hwp*. WashingtonPost. 13 Apr. 2000. Web. 24 Jul. 2012 <<http://www.hartford-hwp.com/archives/43a/217.html>>
- Dodds, Paisley. “Food imports hurt struggling Haitian farmers.” *NBCNews*. National Broadcasting Company, 26 Feb. 2010. Web. 10 Jul. 2012 <[http://www.msnbc.msn.com/id/35608836/ns/world\\_news-americas/t/food-imports-hurt-struggling-haitian-farmers/](http://www.msnbc.msn.com/id/35608836/ns/world_news-americas/t/food-imports-hurt-struggling-haitian-farmers/)>
- “Family Life.” *Culturalorientation*. Cultural Orientation Research Center. 18 Feb. 2004. Web. 15 Jul. 2012 <<http://www.cal.org/co/haiti/hfamily.html>>
- “Gender Roles and Family Life.” *Countrystudies*. U.S. Library of Congress. n.d. Web. 15 Jul. 2012 <<http://countrystudies.us/haiti/29.htm>>
- Gorges, Josiane. “Trade and the Disappearance of Haitian Rice.” *American*, Trade Environment Database, Jun. 2004. Web. 10 Jul. 2012 <<http://www1.american.edu/ted/haitirice.htm>>
- “Haitian farmers need more support, says UN agency.” *Un-foodsecurity*. United Nations. 15, Jul. 2010. Web. 22 Jul. 2012. <<http://www.un-foodsecurity.org/node/643>>
- “Haiti Overview.” *World Food Programme*. World Food Programme, n.d. Web. 10 Jul. 2012 <<http://www.wfp.org/countries/haiti/overview>>
- “Haiti: six months on, agriculture needs more support.” *Fao*. Food and Agriculture Organization of the United Nations. 15 Jul. 2010. Web. 25 Jul. 2012 <<http://www.fao.org/news/story/en/item/44069/icode/>>
- Jensen, Helen. “Nutrition in Haiti: Evidence From the Haiti Household Expenditure and Consumption Survey.” *Card.iastate*. Center for Agricultural and Rural Development, n.d. Web. 15 Jul. 2012 <http://www.card.iastate.edu/publications/dbs/pdffiles/90sr52.pdf>
- Katz, Jonathon. “Forests Vanishing Swiftly in Haiti.” *Washingtonpost*. Washingtonpost. 17 Feb. 2008. Web. 22 Jul. 2012 <<http://www.washingtonpost.com/wp-dyn/content/article/2008/02/16/AR2008021602511.html>>
- “Key Haiti Statistics.” *Lambifund*, The Lambi Fund, n.d. Web. 10 Jul. 2012 <<http://www.lambifund.org/Stats/Lambi-Haiti-Stats.pdf>>
- “The LAMBI Fund of Haiti.” *Lambifund*, The Lambi Fund, n.d. Web. 5 Sep. 2012 <[http://www.lambifund.org/about\\_mission.shtml](http://www.lambifund.org/about_mission.shtml)>
- “People and Past of Haiti.” *Openyourheart2haiti*. Open Your Heart to Haiti. n.d. Web. 22 Jul. 2012. <<http://openyourheart2haiti.org/history.html>>
- “Republic of Haiti.” *Fsmitha*. Fsmitha. N.d. Web. 16 Jul. 2012 <<http://www.fsmitha.com/world/haiti.htm>>

- Roc, Nancy. "Haiti-Environment: From the "Pearl of the Antilles" to desolation." *alterpresse*. Alterpresse. 24 Sep. 2008. Web. 22 Jul. 2012 <<http://www.alterpresse.org/spip.php?article7728>>
- "Rural poverty in Haiti." *Ruralpovertyportal*. International Fund for Agricultural Development, n.d. Web. 10 Jul. 2012 <<http://www.ruralpovertyportal.org/web/rural-povertyportal/country/home/tags/haiti>>
- Suarez, Carlos. "Rice Production and Trade Update." *Gain.fas.usda*. Global Agricultural Information Network, n.d. Web. 10 Jul. 2012 <[http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Rice%20Production%20and%20Trade%20Update\\_Santo%20Domingo\\_Haiti\\_11-9-2010.pdf](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Rice%20Production%20and%20Trade%20Update_Santo%20Domingo_Haiti_11-9-2010.pdf)>
- Sontag, Deborah. "Rural Haiti Struggles to Absorb Displaced." *Newyorktimes*. New York Times. n.d. Web. 16 Jul. 2012 <[http://www.nytimes.com/2010/03/17/world/americas/17rural.html?\\_r=1&pagewanted=all](http://www.nytimes.com/2010/03/17/world/americas/17rural.html?_r=1&pagewanted=all)>
- "The Sad Bicentennial of a Once Fabulous Sugar Colony." *Economist*. The Economist. 18 Dec. 2003. Web. 22 Jul. 2012 <<http://www.economist.com/node/2303369>>
- "WFP Executive Director Announces Scale-up of Cash and Food for Work Projects for Haiti Recovery." *World Food Programme*. World Food Programme. 13 May 2010. Web. 5 Sep. 2012 <<http://www.wfp.org/news/news-release/wfp-executive-director-announces-scale-cash-and-food-work-projects-haiti-recovery>>
- "WFP Reinforces Commitment to End Hunger Through "True Partnerships" In Haiti." *wfp*. World Food Programme. 13 Jun. 2012. Web. 16 Jul. 2012. <<http://www.wfp.org/news/news-release/wfp-reinforces-commitment-end-hunger-through-true-partnerships-haiti>>
- "What is Sustainable Agriculture?" *sare*. Sustainable Agriculture Research and Education. n.d. Web. 24 Jul. 2012 <<http://www.sare.org/Learning-Center/SARE-Program-Materials/National-Program-Materials/What-is-Sustainable-Agriculture>>
- Zhang, Kathy. "Domestic Production vs. Imports for Rice in Haiti: A Delicate Balance to Strike." *cgsd.columbia*. Center on Globalization and Sustainable Development. 16 Jun. 2012. Web. 15 Jul. 2012 <<http://cgsd.columbia.edu/2012/06/16/domestic-production-vs-imports-for-rice-in-haiti-a-delicate-balance-to-strike/>>

