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Haiti, Sustainable Agriculture

Haiti: The Need for Better Produce and Sustainable Agriculture in Haiti

Haiti is a small Caribbean Island country in Central America that shares its only border with the Dominican Republic. Its sea borders are the Atlantic Ocean and the Caribbean Sea. This country has a population of roughly 11.4 million people with 58.8 percent of them being in an urban community and the other 41.2 percent being in rural areas. While the population density of the country is consistent in most places, the coastal areas have a slightly larger concentration of people. Haiti has 27,750 square kilometers of land with only 190 square kilometers of this land being water (Central Intelligence Agency, 2022). When Haiti was first discovered by Christopher Columbus, the island was inhabited by the Taino natives. The Spanish settlers killed off all of the natives within 25 years of living there. The Spanish had full control over this island until 1697 when they conceded a third of the island to the French, this region would become present-day Haiti. The french turned this region into the wealthiest colony in the Caribbean region by the exploitation of slaves. These slaves revolted in the late 1700s and revolted against the people that controlled them and took the land (Labrador, 2021). These African slaves are the reason the population is 95% black.

Haiti's current population is 95 percent black Africans, the other five percent is a mix of white ethnic groups and mixed races. The average family in Haiti is 3-5 people, similar to an average American household. In some families, adults will have jobs that they do to earn money for the family. These jobs do not bring in a large amount of income and living off of this can be a struggle for many families. Sixty percent of the families in Haiti are under the national poverty line. This causes many families to have to grow most of the produce that they will need. Many people struggle with growing their food because of the infertile soil that they have and the lack of knowledge about more modern agricultural practices. This causes the food to grow inefficiently and not become a suitable size to provide the correct nutrition. An article about the poor soil quality of Haiti states, "Haiti is one of the poorest and most food-insecure nations in the world. Of the country's population, estimated to be over 10 million, only 58 percent has access to an adequate amount of food. Data suggests that 45 percent of Haitians are experiencing malnutrition" (Bargout, 2013). Even though 60 percent of the land of Haiti is dedicated to agricultural use, even though only a sixth of the land has been determined as suitable for agricultural use.

The land that was exploited early after the country was discovered, lost its potential to grow successful plants efficiently. The exploitation of the land, with a combination of destruction caused by erosion, flooding, and yearly tropical storms, the ground is constantly changing and being taken away. The soil nutrients and desired soil for plant growth are taken away by these factors and this causes Haitian farmers to struggle with their home farms. Their yearly crop can be destroyed midseason by storms causing them to have to completely start their crop over. When planting is restarted midseason this leads to having a much smaller amount of crops and them being undersized. The urban population that cannot grow crops on their own, relies on the rural farmers to get their food. The average size of a farm in Haiti is only 2.5 acres. After a farmer has struggled in the field and takes the crops that his family will need, what they sell will not be able to provide much of a profit for them, and there will not be a very large amount of food going to people that cannot grow food on their own. Many of these small farms often lack the tools that

help make farming easier, “Crops are cultivated with simple hand tools; the plow or animal power is only rarely employed, except on sugarcane plantations” (Economic Growth and Agricultural Development, 2020). These small family farms are often not able to come back from their crops being destroyed so they will have to rely on other small family farms. With urban populations and a portion of the rural population relying on these farms it can often lead to there just not being enough food for everyone.

Food insecurity is one of Haiti’s largest problems, but lack of knowledge is another issue that is high on the list. The rate of education in Haiti is roughly 60 percent and only 65 percent of the population can read. Many people who live in rural areas simply do not have access to a close enough school for them to attend. Even the people who live in urban areas can struggle to find schooling. This is because there is a lack of qualified teachers and supplies for students to use to learn. Global Partnership, an organization that works with Haitian schools, describes the struggles that these schools face, “Haiti faces both supply and demand challenges in education. On the supply side, there are not enough spaces for children to enroll in school. On the demand side, the average cost of US$80 in tuition per child/per year before books, uniforms and transportation, puts basic education unaffordable for many” (Haiti, 2022). This lack of education is one explanation for farmers not knowing proper farming techniques. The way that people learn to farm can be from whatever influence is around them. Family’s farmer's techniques will be passed down because it was the only way of farming that the children have learned. Without access to education, no progress can be made to improve not only the overall condition of crops but also the way that soil is used and preserved over time. Farmers already have to work with severely unproductive soil and not having the resources and knowledge to improve the soil produces overall worse growing conditions every year.

Growing conditions are degraded every year by the lack of proper farming practices, but natural disasters also play a massive part in the destruction of farmland. It is extremely well known that Haiti is constantly being affected by the tropical storms, floods, and earthquakes that happen every year. Tropical storms and floss will rip away topsoil and the nutrients that are essential for growing healthy crops. This makes growing food a gamble every year for the whole country because one of these disasters could cripple their already struggling food source for a whole year. The crops themselves can also be destroyed by earthquakes along with more severe tropical storms. These disasters can cause damage to more than just the farmers and their crops. The Pan American Health Association describes why Haiti is specifically more vulnerable than other countries, “Haiti lies in the middle of the hurricane belt, with 1,771 km (1100 miles) of coastline, making the country subject to severe storms during the regular hurricane season from June 1 through November 30. Haiti's geographical location, combined with its under development, high population density, chronic socio-economic problems and weak infrastructure, makes it a particularly vulnerable country” (Pan American Health Organization, 2020). Haiti already struggles massively with providing public services like plumbing and roads, and these natural disasters are a large part of this problem. The progress that is made towards these services is repeatedly destroyed and setback and little progress is made because of this.

In August of 2021, a 7.1 magnitude earthquake struck Haiti. This earthquake killed roughly 2,200 people and injured another 12,000. The UN along with the World Food Programme stepped in and provided 187.3 million dollars worth of supplies to help people survive while they recover from this (United Nations, 2021). Food was one of the most important things provided because the earthquake destroyed the places where people could get food along with the places where food was grown. This food helped many people that were helpless in this situation. These supplies also helped create a building block for people to get back to where they were before this disaster. Haiti receives this support after most of the natural disasters they experience yet there has not been an increase in stability for that infrastructure of the country and its food sources. The biggest issue with this type of support is that it is mostly temporary and does not do much to help prevent a large amount of damage in another disaster and also doesn’t help farmers be able to recover their fields.

In the late 1940s and the 1950s, Norman Borlaug improved Mexican agriculture by using hybrid plants designed to be the most productive in the harsh environments they were in while still fighting the common diseases. He also taught more efficient and more conservative methods of farming to the farmers of Mexico. These new wheat varieties and improved crop management practices transformed agricultural production in Mexico during the 1940s and 1950s and later in Asia and Latin America, sparking what today is known as the 'Green Revolution'" (Global Reach Internet Productions, 2022). While Norman Borlaug did his work all over the world it helped bring up wheat production in Mexico drastically. Better crops that are more suited for the Haitian environment would make an extremely large difference in the size and nutritional value of crops. Teaching better methods of farming and putting them into practice would also provide a large difference in the soil nutrients that help crops grow strong.

Both of these solutions work and have worked for their respective purposes. The care after disasters helps many people survive through the roughest of times and gets them back on their feet. The issue with this is that these provided resources will only last for so long. Once they run out there is no structure left for the people of Haiti to build off of. Hybrid seed and effective farming help create more crops that can feed and fulfill the nutritional needs of so many people that currently do not get what they need. These would also be able to provide a way for the Haitian people to build back their infrastructure by themselves. Better seed growth would also help the people of Haiti grow their food instead of relying on outside sources providing it.

My solution to this problem would be to take Norman Borlaug's approach. Research would be conducted to find hybrid plants that could grow fast and grow well with what Haiti's soils have to offer. Once farmers can use better practices and improve their soil quality new seeds can be used. These plants will be able to have a faster turnaround time so that more people can be fed faster. Along with these hybrid seeds methods of better agriculture could be taught to anyone willing to learn about them. This will help make farming more efficient along with making soil better over time. Providing the correct tools for this farming would also be important so after a person has completed learning about this they would receive tools in a starting kit that would allow them to start farming and begin earning an income from this. The hybrid seeds that have been researched would be dispensed to people that have graduated from the course and they would receive a variety of different species depending on their preference.

The UN has had a part in assisting Haiti in the past so it would make sense for the organization to come together to help the small nation. A team of researchers could be put together from different countries that have experience in hybrid seeds. Teachers could also be picked by the UN and given an offer to go teach in Haiti. These teachers would have to be able to teach hands-on courses so that people who are not able to read, will be able to learn like everyone else. The different nations of the UN could use their funds and fund a research site in Haiti and also pay for the research and teaching that will be in Haiti. The UN could also fund the tools that the teachers will need to use for their teaching as well all of the tools that will be given to the people to farm with after the course.

Governments will have to come together and decide that this country should be able to support itself more after it has struggled for so long. Other non-profit organizations could also come into play by volunteering their time as temporary teachers or assisting with teaching. The Haitian community would have to be involved by learning the methods and then turning what they learned into a more productive farm than they previously had. A person would have to demonstrate in some way that they would be able to use what they learned on their own before they are granted a starting kit. This would not only create an incentive for people but would also make sure the correct people are getting these kits. The learning courses and the seeds for planting would be free to people so that they would be able to start these farms at an extremely low cost to them. These courses would also have to be held in safe places so that no Haitian or UN worker is in danger of being a victim of a crime. This project can be sustainable by having

the knowledge that these people learn, be passed down, and hopefully create a healthier and more prosperous community. As long as there is knowledge and seeds leftover after a disaster then regrowth can happen and people can be fed. Having more crop production should help build the economy and create a more structured infrastructure that can handle natural disasters better. These new growing processes, if done correctly, will hopefully lead to better nutrition for all the people of Haiti and a more abundant food supply that the country will be able to rely on for decades.

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