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Haiti: Food Insecurity

### **Haiti: Food Insecurity Fought by the Modern Dinosaur, Chickens**

Food insecurity is a serious problem all over the world, and the country of Haiti is no exception. Haiti is one of the poorest countries in the world with most of the citizens not earning more than \$1 a day (Davidson). Because of this, most of the population is below the poverty line and struggles to rise above it. There are many ways that would potentially fight food insecurity effectively, but raising chickens would benefit many families in Haiti. Haiti can observe what other countries are doing to improve their chicken operations and use it to improve their own.

As of 2020, Haiti had a population of 11.4 million people. These 11.4 million people live on 10,714 square miles. 59% of Haitians live below the poverty line, this means they struggle to even eat. Another 24% are in extreme poverty. 52% of the population reside in the urban areas of Haiti and the other 48% reside in the rural areas (Lawless et al., 2021). The rural population farms more than  $\frac{2}{3}$  of Haiti's land with farms averaging to be 2.5 acres each. Only  $\frac{1}{3}$  is actually suitable for farming (Lawless et al., 2021). Farming on marginal land is damaging to the environment and reduces the productivity of the land they're using. Haiti's climate is warm and humid, it's tropical (Lawless et al., 2021).

Haitian families generally have 10 family members in a household, especially in the rural areas. These families have many family members yet they have to live in a 2 room house. The typical diet of these cramped families consists of millet, rice, beans, corn, yams and other starch staples. This diet alone lacks many of the necessary nutrients, but the average family in Haiti cannot afford the foods that provide adequate nutrients. This leads to severe malnutrition and stunted growth. According to data collected in 2019, Haiti's stunting rate was high at 21.9% (*A closer look at hunger and undernutrition in Haiti*). Rural families are subsistence farmers, meaning the food they eat is the food they can grow. Unfortunately, their lands are depleted of nutrients so production is low. The families barely have enough to feed their families, so they usually do not have extra crops to sell. The urban families usually work some of the lower paying jobs in the city such as trash collector and traffic director. They have to spend almost all of their earnings on food for their family, but they cannot afford the more nutritious food like they need to. Some urban families work for farms or other agricultural related jobs outside of the city. While the parents and older children work, the younger children attend school. Haiti has a system of public schools to give the poorer children access to education. Unfortunately, the public education system is not considered to be very good. Private schools are more prestigious and people seek these out for a better education, but most families cannot afford to send their children, especially if they have a lot of children.

Food insecurity in Haiti is severe with 4.4 million of Haiti's population needing food assistance immediately. Agriculture in general has a low productivity rate in Haiti. The severity of food insecurity has been on the decline since 2010. The GHI(Global Hunger Index) of Haiti was 34.7 in 2019 (*A closer look at hunger and undernutrition in Haiti*). This GHI score measures the hunger in Haiti. It takes into account the percentages of child mortality, under-nourishment, child stunting, and child wasting. While 34.7 is the lowest score since 2000, it is still considered serious (*A closer look at hunger and undernutrition in Haiti*). Not only is there food insecurity for the people of Haiti causing these serious GHI numbers, but many farmers struggle to feed their livestock year-round. Currently, the USAID is helping the Haitian farmers to improve their farms and store food for their animals for the times when food is scarce. Better fed animals grow and produce better than those that experience a "hunger season."

Raising chickens is a great way to help Haitian farmers become self-sustainable and rise above the poverty line. The KORE foundation is currently helping Haitian farmers achieve this self-sufficiency by giving them loans to start raising and selling chickens. The chickens used in this operation are for the dinner table, not egg production. Once the chickens are grown, the farmers take them to the market to sell. The KORE foundation also tries to teach the farmers to read and write. This will help the farmers be able to learn to keep a record of their income and expenditures for their chickens.

The KORE foundation operation is extremely beneficial for the farmers, but it could be improved upon. Instead of selling all of the chickens for meat, the farmers could keep some of the hens they raise to get a daily source of eggs. These eggs are healthy to eat and the extra eggs could be sold. While selling eggs won't earn the same amount per dozen as a single hen would, they would provide a constant source of income. KORE farmers have to buy new chicks for every cycle (McGee, 2016). With a rooster and an incubator, the KORE farmers could be self-sufficient in producing and raising their chicks. This would increase the revenue they earn from selling their chickens. Most farmers do not have access to electricity, their incubator wouldn't be able to be plugged in. The KORE foundation could provide them with solar powered incubators. An alternative to incubators would be to own two different chicken breeds: one for breeding and selling and another for hatching eggs. For these farmers to get out of poverty and stay out, they need a breed of chicken that is dual purpose and is adapted to Haiti's climate. This can be achieved through selective breeding.

Many breeders around the world use selective breeding with chickens to achieve desirable traits. I do this with my rare breed chickens here in eastern North Carolina. Usually, the traits we breed stick to the Standard of Perfection for each individual breed, but Haiti would be breeding for a good quality dual purpose chicken that thrives in their environment. To further decrease the expenditures of the farmer, the chicken should also be an excellent forager so the farmer does not have to buy as much food. By creating a chicken with all of these necessary traits, Haiti will have a breed specific to their needs. The Haitian people can start with backyard flocks of these chickens. This will allow more families to benefit from this newly developed chicken breed. The farmers that become really successful in raising these chickens can expand their operation.

Eventually, chickens can be a huge part of Haiti's economy and some farmers will be able to have large successful operations. These larger operations can provide jobs to those who are still suffering from extreme poverty.

Haitians living in urban Haiti will not have the land or resources necessary to create a sustainable chicken farm. Raising chickens for eggs and meat can benefit more than just the Haitians in rural or suburban areas, though. As the poultry industry in Haiti grows, this industry and the farmers involved will be able to offer more and more jobs for those living in the cities of Haiti. In addition, eggs from the selectively bred chicken will become readily available as more families take on the responsibility of a chicken farm.

The qualities of the selectively bred chicken are crucial in helping Haitian farmers become self-sufficient, but they aren't the only factor. The farmers need to be educated and there needs to be a way to effectively combat the diseases and injuries the chickens will inevitably get. With the funding that could be provided by the KORE foundation, the Bill and Melinda Gates foundation (Bill Gates himself supports using poultry as a means to ending food insecurity), other organizations, and Haiti's government, Haiti could incorporate 4H classes into their public school system. Classes could also be provided to the farmers who wish to give chicken raising a shot. Unfortunately, many chicken diseases are either a mystery or incurable. Here in the US, we need to conduct more research on poultry health. After thoroughly understanding and being able to cure more diseases, our universities can start poultry science programs to produce quality poultry vets. This can help Haitian farmers because the vet students could have a semester abroad in Haiti with their poultry science professors. The professors can teach both American and Haitian students. They could also use the chickens of the Haitian farmers as learning experiences. This will allow the poultry science students to learn hands-on and the farmers get the help they may need. As an alternative to the study abroad program, the Haitian government could fund research in poultry science and produce their own vets. Poultry vets can be crucial in saving a flock of chickens, which would be a critical source of food and income for the Haitians.

Education is critical when it comes to improving anything within a country. As stated above, improving education based around poultry could significantly improve the sustainability of Haitian livelihoods. Education needs to start young, though. Teaching the existing farmers how to begin and maintain a chicken farm is excellent, but the education needs to extend for generations to come. As humans, we learn the best during our younger years of life (Janacsek et al., 2012). Primary and secondary education in Haiti exists, but the quality and accessibility is subpar. The education system in Haiti mainly consists of private schools, which are too costly for the typical Haitian family (*Haiti: Global Partnership for Education*). Haiti does have some public schools, but they lack the resources and quality teachers that the private schools have access to. The Haitian government is currently budgeting for the improvement of the education system, but improvements are slow (*Haiti: Global Partnership for Education*).

Accessibility to quality teachers is one of the most important aspects of an education system. Public schools in Haiti should focus on hiring qualified teachers by checking their credentials

(Lynch, 2019). In addition, Haitian teachers should teach more life skills, such as budgeting, so the children are better prepared for adulthood (Lynch, 2019). In order for teaching to be effective, teachers need access to the best possible tools. The Haitian government needs to include school supplies and materials for the teachers to utilize (Lynch, 2019). A strong base of general education will aid students when they transition to adulthood. These students will be set up for successful learning once a quality poultry science department is established in Haiti.

Organizations around the world are putting time and resources into bringing Haiti out of food insecurity and poverty. Some of these organizations provide some food and other resources, but these resources run out and the Haitian citizens remain in severe poverty. The best way to bring and keep Haitians out of poverty is to set them up for independence. Providing education and a breed of chicken geared towards the needs of the Haitian people will allow them to build their economy and rise above the poverty line.

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