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### **Haiti: Increasing Agriculture to Improve and Save Lives**

January 12, 2010, is the day Haiti – a country dealing with problems in government, economy, and disease – was overtaken by an earthquake. With a magnitude of 7 out of 10 on the Richter scale and known as the worst earthquake in 200 years, the deadly disaster killed approximately 300,000 citizens and left 634,000 homeless while causing eight to fourteen billion dollars in damage. (New York Times- Haiti) The earthquake was a great challenge to an already unstable country. Haiti is the poorest country in the Western Hemisphere and located to the west one of the wealthiest, the Dominican Republic. Sharing one-third of an island in the Caribbean Sea, the terrain is mountainous and rough and the climate is tropical. (CIA Haiti- Geography) Only 10% of rivers remain due to deforestation, and much of the nation is now desert. (Helping the Less Fortunate) Haiti needs aid in order to obtain a stable and healthy environment.

I know what is in need, and I know what it is to have plenty. I have learned the secret of being content in any and every situation, whether living in plenty or in want. I can do all this through him who gives me strength. (Philippians 4: 12-13)

The location of Haiti gives the United States the opportunity to assist. A two-hour plane ride from Miami to Haiti allows for accessible travel to deliver supplies. The government of Haiti has been unstable for many years, some leaders being overthrown and others dying in office. Their government is currently a Republic led by René Préal. Fifty-eight percent of land in Haiti is used for agricultural purposes where the approximate acres farmed per family are two and one-half. (World Bank) By practicing successful farming techniques while raising livestock, poultry, and vegetables, as well as crops, the health and income of the country as a whole will increase.

Malnutrition and lack of resources allow malaria, typhoid, dengue fever, and hepatitis to threaten the citizens of Haiti. Haiti has the highest infant mortality rate and AIDS/HIV prevalence in the Western Hemisphere. Well-educated doctors are also rare. One out of eight children will die before reaching the age of five. (Helping Those Less Fortunate) The average Haitian does not receive half of the daily-required minimum calorie intake due to a shortage of locally grown and affordable food. (Cooperative Farm Initiative in Haiti) The life expectancy is only sixty-two years of age. (Haiti) By growing food, such as vegetables, higher nutrition would be available resulting in healthier immune systems and overall better health. Excess vegetables could be sold at a local market. An investment may be needed to initiate a local market in order to have a demand, but if there is income, people will spend in return. Trades are also a logical idea. By trading goods, a society can share their wealth, so everyone can then be impacted by goods each individual is developing. People will also learn to work together, and the benefits will impact everyone. More supply, less demand equals less money; less supply, more demand equals more money. Haiti is currently struggling with supplies. A fifty-five pound bag of rice costs twenty-two dollars and a one hundred pound bag of rice costs seventy-five dollars when \$450 is the average yearly income per household. (Helping Those Less Fortunate) The expense of food is unrealistic compared to the income; therefore, many people have no option but to go without. By increasing supply, the demand may remain the same, but the price drop will allow food to be affordable for all.

With an average of two and one half acres per farm, opportunity is limited. 616,700 farms were recorded in the 1980 Haiti Census. (Land Tenure and Land Policy) Land is measured in hectares, with the average farm measuring 1.4 hectares, which is compared to 2.5 acres. Only five percent of farms contain greater amounts of land than 1.4 hectares. (Haiti) According to research done in 2010, Iowa has 92,400 farms which contribute to 30.8 million acres of farmland. The average farm size is 333 acres. (Iowa Agriculture Quick Facts) The country of Haiti is 27,750 km<sup>2</sup> which compares to the size of Delaware or Maryland in the United States. (Haiti at a Glance) It is the eighty-eighth most populated country in the world with 9,801,664 people. (Haiti) Two-thirds of Haiti's population lives in a rural area. The agriculture industry supplies sixty-six percent of the work force. 3.6 million people obtain a job, leaving two-thirds of the nation's population unemployed. (Haiti) By increasing the production of agriculture, more jobs can be added and more supplies and nutrition supplements will be available.

Thirty-three percent of farmland is used for crop and feed production. (Haiti) Power tools and tractors are a limited resource, so farm work is completed by hand. Due to natural disasters, agriculture production has declined over the past years. Crops produced in Haiti include corn, sweet potatoes, and rice. United States imports are damaging Haiti's crop demand. The United States creates a crop that is much more efficient and cheaper compared to the labor costs and work that goes into Haiti's crop production. Seeds are very expensive and Haitian farmers don't have enough money to buy a good quality of seed, but by using proper seed and grain storage the excess can be saved and used more efficiently.

Exports are measured at 14 percent while imports are measured at 41 percent. (Haiti at a Glance) The main export is coffee, which results in six percent of total income. Flour, rice, and beans are an important shipment and clothing, mattress, and automobiles are imported from the United States. Over the years Haiti has become a major transshipment point for illegal drug trafficking. Rice and beans are considered the most common dish and are made up of most urban meals. Haitians generally eat two meals a day: a small breakfast of coffee and bread, juice, or an egg and a large afternoon meal dominated by a carbohydrate source such as manioc, sweet potatoes, or rice. The afternoon meal always includes beans or a bean sauce, and there is usually a small amount of poultry, fish, goat, or, less commonly, beef or mutton, typically prepared as a sauce with a tomato paste base. Fruits are prized as between-meal snacks and if a snack is an option it can be eaten before one goes to sleep. Non-elite people do not necessarily have community or family meals, and individuals eat wherever they are comfortable.

The average rainfall is 1400 mm (Haiti at a Glance) which converts to approximately 55 inches per year compared to Iowa's average precipitation at 45 inches per year. Haiti's average temperature ranges from about twenty-five degrees Celsius to thirty degrees Celsius which converts to seventy-seven degrees Fahrenheit to eighty-six degrees Fahrenheit compared to Iowa's average yearly temperature of 48.1 degrees Fahrenheit. Irrigation systems leading from rivers and other water sources can be built to carry water to flood rice fields as well as water other crops. Corn can be genetically modified to accommodate and thrive in Haiti's climate conditions. Nitrogen and other fertilizers are needed to grow a good corn crop. By using a rotational system, legumes can be planted that will replenish the soil with beneficial nutrients. Red clover and alfalfa will restore the fertilizer. Soybeans are legumes that replace the loss of nitrogen. Crop rotation is not being used now because the seeds are not always available and space is limited. The United Soybean Association has access to an invention called a "Soy Cow." With a ratio,

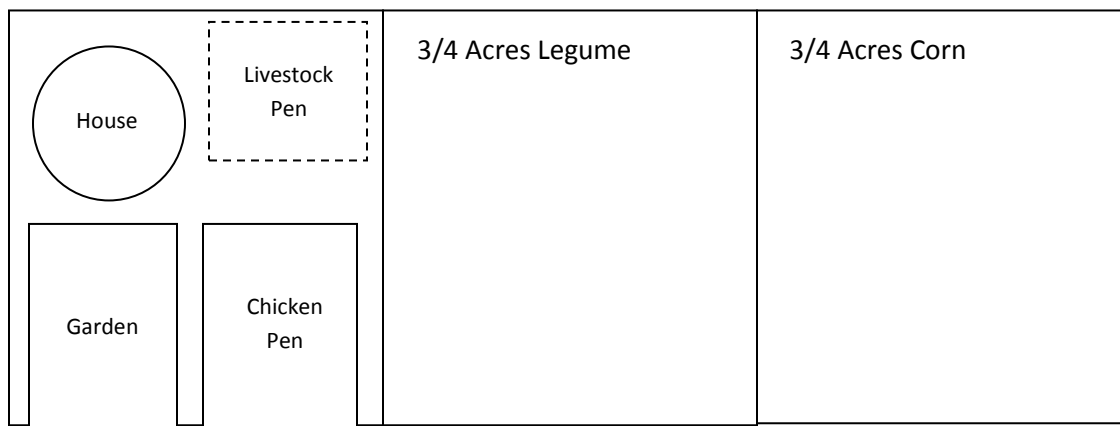
soybean and water can be conglomerated to create soy milk which provides nutrients when consumed. The crops grown can be ground and processed for human consumption or made into feed for livestock.

Forty-eight percent of Haiti's farmers own a minimum of one cow. (Haiti) Goats, chickens, and pigs are also productive livestock. In the late 1980's Haiti broke with the African Swine Flu. The government demanded slaughter, and 1.2 million pigs were destroyed leaving many farmers without reimbursement for the loss of livestock. (Haiti) In the 1980 Haiti Census over one million goats were raised in Haiti. Goats are plentiful, giving both meat and milk which can be processed as many other dairy products. Goats require less feed compared to cows and offer a comparable amount of byproduct and are a practical resource. Poultry production is also very practical. Manure can be used to fertilized soil for crop plots and gardens. Chickens require less space than most livestock, and produce eggs, which are high in protein and excess, can be sold for profit. Chicken is a healthy, lean source of protein. Through investors manufacturing a chicken processing plant, chicken can be a source of food, and jobs will be multiplied.

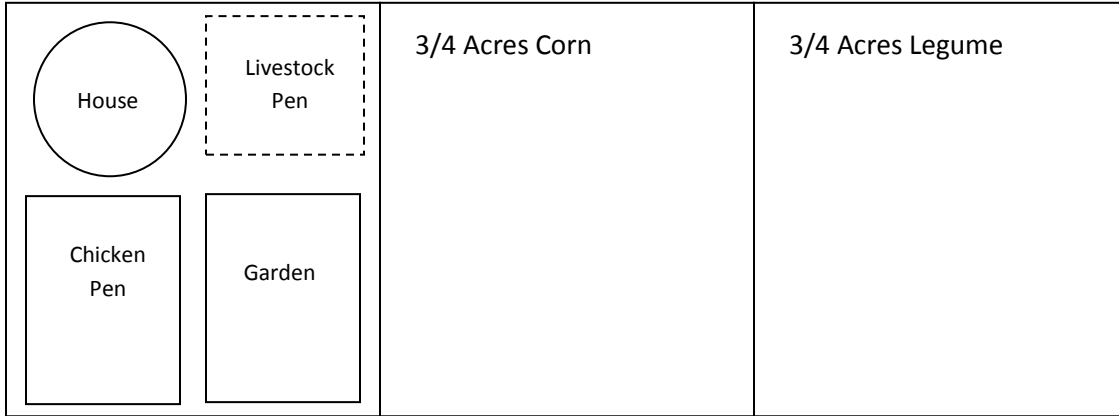
The man of the household is expected to provide housing and tend the land for the women and children. Only forty percent of couples are legally married in Haiti and that is considered the upper-class. Some men may have more than one wife living in different homes that he provides for. The woman makes the decisions for the funds and takes care of the home. An average family may consist of adopted children and grandparents as well as biological relations. A higher education can also help the country out of poverty, most kids are taught skills and school isn't always an option. By learning how to be more efficient and competitive with trade the poverty level has the chance to decrease. (Culture of Haiti)

With only one-third of the population of Haiti employed, jobs will better the nation. (Haiti) A chicken processing plant will increase job demand. Processing chickens for human consumption will repay farmers raising chickens and produce a profit by selling the product. As production increases, chickens can be raised in commercial housing. Commercial housing will need to be managed, which again creates more jobs. Excess manure can be sold and used to fertilize the distressed ground which will be an advantage to crop production. By efficiently utilizing the amount of land each farmer has to produce livestock and crops to the fullest value, the agriculture in Haiti will grow and increase the way of life. To efficiently use the land provided, spilt the 2.5 acres three ways. 3/4 acres would be a legume crop and the other 3/4 acre corn, alternating every year. The living would be on the other third which would have the house, pen for livestock, a garden and chicken pen which, after rotation, the fertilizer made by chicken manure can be utilized by the garden.

Example Plot (Year 1):



Example Plot After Rotation (Year 2):



Various methods are currently in effect to improve Haiti. Since the earthquake in 2010 housing has been a struggle. The earthquake left 634,000 citizens homeless, forced to live in the streets and in refugee camps. (Haiti) United State agriculture is impacting this by creating a home that is built out of Sukup grain bins. (Special Delivery) IowaSafeTHomes are 18 feet in diameter and are one hundred percent free from termite, earthquakes, water, and wind up to one hundred and thirty miles per hour. Each bin costs roughly \$5700, and these bins are currently being assembled in the Village of Hope in Port au Prince, Haiti. Made from 90 percent recyclable materials, these homes are built with a double roof to protect from heat and can house up to ten people. The roof collects water that can be used for drinking, washing, and watering crops. The roof can also withstand five thousand pounds for storage or sleeping space for humans. Water is a vital resource that one in eight people in the world live without. (Why Water) By using irrigation systems, water can be moved from the source. Drilling wells is also practical. The Water Project is focused in Africa and by seeking a source of water and drilling, fresh water is made available. This knowledge can also be applied to Haitian life.

Haiti brings hope. The government is becoming more stable and is willing to accept aid to positively influence the people of Haiti. Located closer to the United States than other various countries in need, especially in Africa, it is a benefit for both countries. A greater amount of supplies can ship to Haiti for less money compared to other countries; visits are easier to obtain and overseeing success is manageable. As various practices are used and performed, these results and ideas can be taken and used and modified in other countries like Haiti. By increasing agriculture production Haitian life can be improved by not only increasing employment and profit but also health and welfare.

## Works Cited

Schlatter, Lori "Helping the Less Fortunate" *Wayland Reporter* 29 March 2012

"Haiti" *New York Times* 19 Jan 2012

<<http://topics.nytimes.com/top/news/international/countriesandterritories/haiti/index.html>>

"Haiti" *Central Intelligence Agency World Factbook* 21 March 2012

<<http://www.geo.mtu.edu/UPSeis/magnitude.html>>

Cox, James "Economy in Haiti on life support" *USA Today* 26 Feb 2004

<[http://www.usatoday.com/money/world/2004-02-26-haitiecon\\_x.htm](http://www.usatoday.com/money/world/2004-02-26-haitiecon_x.htm)>

"List of Haitians Head of State" *The Embassy of Haiti* 2012

<[http://www.haiti.org/index.php?option=com\\_content&view=article&id=67&catid=56&Itemid=114](http://www.haiti.org/index.php?option=com_content&view=article&id=67&catid=56&Itemid=114)>

*Cooperative Farm Initiative in Haiti* 2012

<[http://www.farmhaiti.org/index.php?option=com\\_content&view=frontpage&Itemid=1](http://www.farmhaiti.org/index.php?option=com_content&view=frontpage&Itemid=1)>

"Iowa Agriculture Quick Facts" *Iowa Department of Agriculture and Land Stewardship* 2011

<<http://www.iowaagriculture.gov/quickFacts.asp>>

"Haiti at a Glance" *The Embassy of Haiti* 2012

<[http://www.haiti.org/index.php?option=com\\_content&view=article&id=66&catid=56&Itemid=107](http://www.haiti.org/index.php?option=com_content&view=article&id=66&catid=56&Itemid=107)>

"Special Delivery" *Iowa Food and Family* 2012

<<http://iowafoodandfamily.com/specialdelivery/about.html>>

"Why Water" *The Water Project* 2011 <<http://thewaterproject.org/how-to-give-clean-water.asp>>

"The Culture of Haiti" *Haiti* 2012 <http://www.everyculture.com/Ge-It/Haiti.html>

