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Ethiopia, Factor 7: Animal Agriculture

Ethiopia: Increasing Animal Agriculture

It is essential for world hunger to come to an end in my lifetime. World hunger can be diminished, but it is going to take everyone's support to do so. It is not a problem that can be fixed by money alone. We need to send people to impoverished countries to educate the citizens. They need to learn how to raise animals and crops correctly. Providing these countries with nutritional education will offer them the knowledge and ability to become self sufficient. Becoming self sufficient is the ultimate goal while trying to end hunger. Being a current member of the FFA, I believe in the future of agriculture. Agriculture has the potential to end world hunger as we now know it. With the help of people like Norman Borlaug and Robert Chandler Jr., we have been able to find ways to genetically modify plants so they are more productive. The more agricultural education we provide these countries, the quicker they will be able to become self sufficient and will no longer have to fight the battle with hunger.

1. Ethiopian Living

As a developing country, Ethiopia faces immense famine. Being an African country, it has a rugged terrain. Ethiopia's environmental conditions range from tropical rainforests to dry deserts (Journeys. Web). As of 2015, the population stood at roughly 104 million people. With their population continually growing, Ethiopians need to find new ways to produce more food for the incoming generations. The average life expectancy of an Ethiopian is 56 years, compared to the global age of 71 years (Country Meters. Web). Ethiopia is the oldest independent country in the world, aging more than 2,000 years (thp. Web). Despite being the oldest independent country in the world, it is the most underdeveloped country in Africa (RFF. Web). Being an extremely underdeveloped country, their government is unstable, which is one of the reasons Ethiopia has poor health care (Country Meters. Web).

In Ethiopia, children are considered a sign of wealth, which results in Ethiopians having large families. The typical size of a family living in Ethiopia consists of about six people. That number does not include grandparents (Every Culture. Web). Most houses are owned by their inhabitants. Although most people own their house, the quality of their household is a downside. An estimated eighty percent of Ethiopia's houses are considered below standard (World Bank, Web).

Imagine fitting six family members in a shed or small house. The walls and floor are made of dirt, the roof is a piece of grooved, rusty metal, and there is no plumbing. The house is surrounded by thornbush to keep out hungry predators like leopards, hyenas, and wild dogs. This is what the average household in Ethiopia looks like. Only the rich can afford to have stone walls on the sides of their houses. Farmers live on homesteads with one room houses. They often own separate houses that have different purposes. Some purposes include: kitchen, bedroom, toilet, and guest houses. Three generations of a family live on the same property in two different houses. Grandparents are a valued source of knowledge. They usually serve as the children's teacher. Most Ethiopian men have only one wife but four to five children. In Ethiopia, children are a source of labor, emotional support, and an elderly's social security. Once their parents are deceased, the children inherit their land and home (Every Culture. Web).

Most parents struggle to come up with enough money to purchase needed food for themselves and their children. Their everyday diet consists of different grains and cereals. Only on special occasions do they have a meal consisting of meats such as chicken, mutton, goat, or beef. One third of Ethiopians live below the poverty line (THP. Web). An average daily income of an Ethiopian farmer is 27 cents. This makes Ethiopia the country with the lowest income in the world (RFF. Web). Forty-six percent of its population

is under the age of 15 (Country Meters. Web). Over half of the children ages 5-14 work to support their family (THP. Web). While these children are working for their daily food, they are missing out on an important step to end world hunger, which is education.

2. Problems

Education holds a higher value than money itself. Learning how to do things on their own will make them self-sufficient. In turn, they will no longer need others' help. As of 2005, the average Ethiopian male receives 7 years of schooling, while females only receive 6 years. Women often acquire less education than males because they have more duties and responsibilities to fulfill at the homestead. A typical day for a woman starts around dawn. They are expected to make coffee for their husband, cook the grains for the day's meal, and care for the children and grandparents in the house. Men, on the other hand, get up a bit later than the woman. Their routine consists of tilling soil with a plowshare and oxen, caring for the animals, and harvesting crops (Every Culture. Web). These peasant farmers must complete all of their duties in order to survive.

Children in Ethiopia are fighting for survival right now and every continuing day. They do not have the privilege to eat meats and protein, which results in malnutrition. Stunting is a major problem in Ethiopia. Stunting occurs when children lack needed nutrients from the womb through the first five years of their life. Two out of every five children suffer from stunting in Ethiopia. Stunting results in most Ethiopians being rather short and lanky. Stunting restricts kids from their education because they cannot focus on school with an empty stomach. As a result of not going to school, each of these kids lose an average of one year of education. The effects of stunting do not just affect them when they are little, it affects them throughout their entire lifetime. Of the adults living in Ethiopia, sixty-seven percent stunted as kids. Ethiopia loses sixteen percent of its Gross Domestic Product to long-term effects of child malnutrition. Eighty percent of children that stunt and or contract pathogens go untreated. This issue brings up a depressing fact that twenty-eight percent of child deaths in Ethiopia were the direct result of malnutrition (WFP 10. Web).

3. Food Shortage Dilemma

There are many aspects that affect the food shortage in Ethiopia. For example, some include heavily populated areas, drought, dry soil, and heat. The last three conditions are called desertification. Desertification is when land starts to become more arid because of changing climates. Ethiopia is facing desertification due to global warming and El Niño. Ethiopia is home to one of the most hostile deserts on earth, the Afar Desert. Temperatures can reach up to 140°F (Every Culture. Web). Although not every acre of land in Ethiopia is known to be this unlivable, most of Eastern Ethiopia is desert land. Being split by a mountain range, the rest of this country is very mountainous. Ethiopia's central mountain range is divided by the Great Rift Valley. The Great Rift Valley is known to be one of the most fertile places in Ethiopia. Thirty-six percent of Ethiopia's land is used for agricultural purposes. Twenty percent of the agricultural land is used as permanent pastures for livestock. Although fifteen percent of that land is arable, they do not use it. Ethiopians need to make more use of the farmland they have (CIA. Web). More than eight million people are enduring the drought conditions in Ethiopia and they are only expected to get worse. Since South Sudan is a country torn apart by war, more than 650,000 of its refugees have migrated to Ethiopia (WFP Ethiopia. Web).

4. Agricultural Background

Coffee was first discovered in Ethiopia and continues to be its leading export. Ethiopia has an agricultural based economy with nearly fifty percent of its Gross Domestic Product coming from the agricultural sector (THP. Web). Ethiopia's labor force consists of 49.27 million people. Eighty-five percent of Ethiopia's population is employed in the agriculture industry. However this percentage shifts depending on how bad of a dry season they receive (RFF. Web). The dry season typically starts in July or August continuing through December or February (Journeys By Design. Web). The highland plateau (Abyssinia)

in Ethiopia is highly rich with volcanic soils. These plateaus are one of the best places to raise crops and livestock. The North Central region in Ethiopia experiences much worse famine and strife because of the civil war that broke out in 1974 (Every Culture. Web). Although Ethiopia is no longer fighting a civil war, they still suffer from hunger, a bad economy, and an unstable government. Ethiopia's agriculture suffers from poor cultivation skills and periodic drought seasons. Drought creates food insecurity for millions of people (CIA. Web). Agriculture is a big part of this country's economy, workforce, and their way of life. If they could increase their agricultural production, they would be able to feed themselves and live a sustainable life.

5. Solutions

I would like to address the malnutrition problem in Ethiopia by increasing the amount of livestock being grown and consumed. Sixty-four percent of Ethiopians consumed calories are from cereals including teff, wheat, maize, sorghum, and barley (Africa Portal. Web). With an increased amount of meat in their diet, they would be able to gain muscle and weight, which would consider them no longer malnourished.

Increasing Ethiopia's animal agriculture would make their country richer and healthier. Ethiopia imported \$10 billion worth of products in 2015. The majority of products imported included food and animals. Ethiopia needs to encourage more animal agriculture so they do not have to import as many animals to save the country some money. As a result, they would be able to strengthen their economic system. If Ethiopian farmers were to raise their own chickens they could gather eggs to eat everyday. This would provide them with the nutrients they need which they do not usually receive from grains such as potassium, calcium, and protein. Eggs also contain quite a bit of Vitamin A and Vitamin B12, which are essential in all humans' diets. Vitamin A helps build an immune system as well as helps function crucial organs such as the heart, lungs, and kidneys (Vitamin. Web). Vitamin B12 helps prevent megaloblastic anemia, which makes people frail and fatigue. In the absence of these nutrients, children and adults alike suffer from weight loss. This is a main contributor to the malnutrition problem facing Ethiopia today (Vitamin B12. Web).

Another problem Ethiopia runs into is their ability to raise animals that can sustain their climate. They should raise chickens as a way to feed their family and make money. Laying chickens take about six months to mature and start laying eggs. Highly productive laying hens eat about a quarter of a pound of feed per day. There are currently two breeds of layers that can withstand Ethiopia's harsh climate. The first breed is Bovans Brown, which is a hybrid of a Rhode Island Red cock and a Light Sussex hen. This breed is a highly productive layer. Their docile which makes them a good breed for alternative production processes. The second breed of layer hens is Issa Brown. Issa Brown is a hybrid of a Rhode Island Red hen and a Rhode Island White cock. This breed is very productive. Each hen lays roughly 300 eggs during their first year of production. This breed is friendly and they lay big eggs. These two breeds were tested to see if they could withstand Ethiopia's harsh environment. They both passed with flying colors because they adapted to the environment, they are friendly breeds, and they both are highly productive (USAid. Web).

There are two main breeds of dual purpose chickens that are able to survive in Ethiopia. One of which, is the Fayoumi breed. Fayoumi were imported to Ethiopia to be tested on how well they could adapt to the hot and arid climate. They can adapt well to the environment but experiments are still ongoing to determine how productive they can be in Ethiopia. Rhode Island Reds were also imported to Ethiopia. This breed is known to be productive in breeding as well as producing eggs. Rhode Island Reds also adapt to Ethiopia's climate quite well (USAid. Web).

6. Raising Chickens

Raising free-range chickens is one of the best ways to save money on chicken feed. Although they will need to be fed chicken starter or grains for their first month of life, they will be able to "live off the land"

when they mature. Like Ethiopians' houses, chicken coops are made from recycled materials. Some are made from sticks and grasses which are then weaved together. This makes for little to no construction costs for a coop. Fearful of predators; chickens naturally stay close to their nests. As long as they are kept housed during the night, they should not wander off too far. Chickens like to roam so they can find bugs and seeds to satisfy their hunger. They also like to eat corn or grains that have been spilled by farmers (Mother Earth News. Web). The great thing about chickens is they are a gift that keeps on giving. Chickens do not just produce eggs and meat; they also produce nitrogen rich manure that can be used as fertilizer for the farmers' crops. Their fertilizer is extremely rich in nutrients such as nitrogen, phosphorus, and potassium, which are what they need in their arid soil (Seattle. Web). Some of the crops that their fertilizer helps produce would be fed to them. Chickens can eat numerous crops such as corn, seeds, barley, oats, and wheat; this makes them very versatile. The chickens would provide some valuable nutrients daily to the farmers. Assuming most Ethiopian families eat grains everyday, they would only need to consume an egg or two per meal. With the mixture of grains and eggs they would be able to obtain a stable and healthy weight. The types of chickens that can survive in Ethiopia lay an egg a day and can live up to eight years. This means most families could live a more than sustainable life off of a dozen chickens. Ethiopians can easily access chickens to start their farm from local markets. The most widely known poultry market is in the Dugda district (Mother Earth News. Web).

The only problem with starting a chicken farm is the cost of chickens. Currently, one laying chicken costs \$11.50. That's a little over a month's earnings for an Ethiopian farmer. Prices can fluctuate depending on the season and the different regions of Ethiopia. It is a good idea for farmers to invest in a rooster so when their hens die they will not have to buy more chickens. Instead, the rooster will provide them with more than enough chicks. In addition, to the problem of starting a chicken farm, roosters tend to cost a little less than hens. The reason chickens cost so much is that Ethiopia's government is struggling with inflation. Their government keeps printing money so they can trade with other countries but it is leaving their own country poor. Ethiopia needs to stop exporting food to other countries and needs to focus on feeding their own (Ethiopian Review. Web).

7. Sponsors

Although Ethiopian farmers cannot afford to purchase dual-purpose chickens the Food and Agriculture Organization of the United Nations (FAO) can. According to The Worldmark Encyclopedia of Nations, "The FAO is committed to promoting and, where appropriate, recommending national and international action with respect to the following: improvement of education and administration relating to nutrition, food, and agriculture and the spread of public knowledge of nutritional and agricultural science and practice." The FAO has pledged to improve levels of nutrition and the efficiency of agricultural production to fight hunger. The FAO funds numerous programs, one of which is the Technical Cooperation Program (TCP). The TCP had a budget of \$103.1 million through 2006 and 2007 (Encyclopedia. Web). TCP projects can be implemented in any country, at a country's request (Questia. Web). The TCP gives each project a maximum budget of \$500,000. Each project must be completed within 24 months (FAO. Web). By calculating how many people this program could help, while considering the following: the maximum budget allowed, how many people are in a family, and the price of adult chickens. If every family were given four chickens to start, 10,000 families would be saved from starvation. If the chickens were bred and distributed to other families, this would provide a chance for more families to become food secure. Realizing it is crucial for these animals to be vaccinated, \$20,000 would need to be set aside for vaccinating the chickens. Organizations such as the World Bank and the African Development Bank have set up veterinary stations in Ethiopia to provide free vaccination services. If there are not enough veterinary services available to all of the families this program is providing chickens to, then volunteer veterinarians would be needed. The extra \$20,000 could also pay for a veterinarian's services (Country Studies. Web). If everyone worked together to meet this one goal, this project could be completed within 24 months and within the \$500,000 budget.

The United States Agency for International Development Urban Gardens Program sent various breeds of chickens to Ethiopia for experimental reasons. The Ethiopian government distributed these chickens to local farmers. Scientists from the Urban Gardens Program stopped by each farm and taught the farmers how to correctly raise these chickens. By providing this free educational opportunity, the Urban Gardens Program not only educated the local farmers; they also provided an opportunity for the next generation to be educated on how to live a sustainable life through farming. By doing this, they discovered which breeds could survive better in the harsh Ethiopian environment. Once they stopped the trials, those farmers were granted to keep the chickens. The Urban Gardens Program's tests on the Fayoumi breed was non-conclusive. If the FAO would be able to fund programs like this one, then farmers would be able to become educated on how to raise chickens and would benefit from their eggs and meat (USAID. Web).

8. Conclusion

Reducing famine may not be easy, but with the help of well-funded organizations and educational opportunities, it can be diminished. To succeed in this goal, it is going to take everyone's help and cooperation. The government will have to trust these programs to take care of their country's people. The people of Ethiopia will have to trust their government's decisions. These programs will have to trust the organizations to keep funding them. The organizations will have to trust the financially stable people in the world to put aside some money to help these developing countries get back on their feet. This trust system goes round and round. Everyone must do their job or it all will crumble. One person alone cannot do ending world hunger. Instead it is going to involve a wider scale of people. People with big checkbooks will not end hunger. Hunger will end with people who have the desire to educate and help others live a successful independent life.

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