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Cote d'Ivoire, Factor 11: Malnutrition

Cote d'Ivoire: The Effects of Malnutrition

In many third-world countries like Cote d'Ivoire, which is located on the Ivory Coast, face challenges that may be looked over in first-world countries. Many of the problems are detrimental to the population. One of the major issues in Cote d'Ivoire is diet diversity, which is the leading cause for malnutrition. Diet diversity is defined as the number of unique foods consumed by household members over a given period. This has been validated to be a useful approach for measuring household food access, particularly when resources for undertaking such measurement are scarce according to FANTA (Food and Nutrition Technical Assistance). Diversity of food is one of the key factors in living a healthy lifestyle, something that helps build a society and add numbers to the population instead of numbers falling dramatically. If someone could diversify crops in small countries like Cote d'Ivoire they will be able to eat and grow more than the main crops by small scale farmers in their region; rice, yam, cassava, plantain, maize, and vegetables. In Cote d'Ivoire two thirds of the population are employed in some sort of agriculture sector, but due to the lack of money Cote d'Ivoire is only self-sufficient in the crops of cassava, yam, and bananas, but relies heavily on imported goods like rice, dairy products, meats, and fish. The country falls into two distinct agricultural regions: the forest region in the south and the drier savannah in the north. The richer soil is in the forest region. The cattle and poultry also reside in the forest region because of the infestation of the tsetse flies. "Tsetse fly (genus *Glossina*), also spelled tse-tse, also called tik-tik fly, any of about two to three dozen species of bloodsucking flies in the house fly family, Muscidae (order Diptera), that occur only in Africa and transmit sleeping-sickness (African trypanosomiasis) in humans and a similar disease called nagana in domestic animals. Tsetse flies are distinguished in part by a forward-projecting piercing proboscis on the head that is capable of puncturing skin. They readily feed on the blood of humans, domestic animals, and wild game" (Encyclopedia Britannica, Inc.). This insect affects many of the animals, which already only answer to 40% of the meat demand, making it harder to produce healthy livestock and poultry with this pest, leading farther into no diet diversity.

The leading principle of hunger and malnutrition is poverty; "the World Bank has estimated that there were 896 million poor people in developing countries who live on \$1.90 or less a day" (*Our Africa*). Living off such a small amount of money that does not even start to pay the cost of living in the country, causes a person(s) to go hungry, most of the time days on end. Though poverty causes hunger and malnutrition, hunger is the leading cause of poverty as well, "by causing poor health, small body size, low levels of energy, and reductions in mental functioning, hunger can lead to even greater poverty by reducing people's ability to work and learn, thus leading to even greater hunger" (*Our Africa*). In third-world countries there is something called the teeter totter effect which is balancing the economy and the people, more on one side of the teeter totter can throw any progress made in the past and recent years away which makes the country have to start all over again.

In Cote d'Ivoire, the strengths in agriculture are urban absorption capacity (absorptive capacity has been defined as "a firm's ability to recognize the value of new information, assimilate it, and apply it to commercial ends"), agriculture imports tariffs, and food loss. Thus helps add to the teeter totter on the economics side of things, by adding any new technology to add to food diversity and malnutrition, tax other countries who import to them to try and add more money into their system, and they take every crumb of food and consume or use it to its full ability. If Cote d'Ivoire were weak in these areas they

would sink farther down and worsen the country's food diversity, creating more malnutrition in its people.

Prevention is key. In order to create diet diversity and eliminate malnourished people, a sustainable lifestyle is needed. According to researchers *Our Africa*, it is estimated that the life expectancy in Cote d'Ivoire is 50 years old according to WHO in 2009 with 118 children in every 1,000 likely to die before five years of age and 17% of children below five are underweight as well. Compare this to the United States whose life expectancy is around 79 years old. Due to having no choice but to consume the crops they grow in their front yards. There is no easy transportation or market access that is worth enough to makeup for the loss of food on the way due to infestation or bacteria on carcasses. This also creates a roadblock on the path to success. By creating more market places and roadways that are within every little village it may help the commute be more successful and people can sell their produce and livestock/poultry to those who may have a more efficient way of growing certain things or raising more animals compared to other villages. If there is a way to make money, there is a way to buy food, which creates a way to help diet diversity, and help overcome nutrient deficiencies.

New technological advances play a key role in creating diet diversity and sustainable crop life. The president of Cote d'Ivoire announces that the national biosecurity law adopted by the parliament on July 1, 2016 is going to be implemented into their system. "The law aims to ensure an adequate level of protection of human and animal health, biodiversity, and environment against the potential risks associated with use of modern biotechnology and derivatives while safely utilizing the technology for its benefits" (*Food and Nutrition Technical Assistance III Project (FANTA)*). During this addition many opportunities can arise and many tests are being ran which include: Stacked Bollgard II x Roundup Ready Flex (insect and herbicide tolerance), Bt Cowpea (insect resistance to Maruca Vitrata), Bt maize approved for first confined field trial in 2016,"(*Food and Nutrition Technical Assistance III Project (FANTA)*). All of these modified plants will be aimed at surviving the insects and diseases that the Ivory Coast are up against. "Bt cotton remains the only crop commercialized in Burkina Faso and Francophone West Africa. However, it was not planted in MY2016/17 due to unresolved issues between Monsanto and the cotton stakeholders regarding the shorter fiber length" (*Food and Nutrition Technical Assistance III Project (FANTA)*).

Imports and exports help with commercial production in Cote d'Ivoire, "about 98% of cotton fiber from Francophone West African countries is exported mainly to Asia" (*Food and Nutrition Technical Assistance III Project (FANTA)*). Exporting goods to Asia help the economy expand and improve. Importing goods are not as well reported, especially the genetically engineered products because of the difficulty in monitoring across the region, "as the Reference Laboratories in West African Economic and Monetary Union (WAEMU) do not have the proper input to detect the presence of GE products in products"(*Food and Nutrition Technical Assistance III Project (FANTA)*), because of this issue biological advancements are highly needed in this country.

Rural and urban farmers and families will be the key factor in implementing these advancements that have been mentioned above as well as play important roles to even the teeter totter out and create a nutritional diet for everyone in their developing country. By being a young undereducated citizen in a developing country makes it difficult to understand what other countries have because all they know is the same food, the same shack, the few animals that survive the climate, and the body appearance of the people around them not understanding how the world could be better and that they are in an unhealthy environment. By educating the youth and helping support a number of children with food and shelter and

providing them with education will create a different perspective on life which can help others gain trust and understanding on what needs to be done and how they could get there.

Different groups that could be made are the United Nations by helping third-world countries get the basic needs of life. The UN helps countries be at peace with many things but how can a country be at peace when they are not even healthy enough to work and live longer than 50 years. Another group or organization that can help is the World Bank by providing the country with enough money to sell goods at a price that is cheap enough to have money to plant and buy other goods as well as transporting their goods to a market place on transportation that is worth having creating diet diversity and malnutrition. International research agencies around the world could help by researching ways to modify different crops from around the world to be able to be grown and sold in such a region as well as create a vaccination for insects and diseases that affect the only meat source they have access to in Cote d'Ivoire. Along with the governmental resources, other non-governmental groups can help from first-world countries as well by studying abroad and sharing knowledge that they have learned in their home country. Civic-organizations are another resource that can be formed within communities to create a neighborly environment by doing this you can help farmers who grow different crops share an amount of yield they pick each harvest and this creates diet diversity and starts to eliminate malnutrition within a country.

My solution for the citizens and animals of Cote d'Ivoire is assisting in building immunity with vaccinations. The tsetse fly (as mentioned earlier) causes a lot of issues with the land, animals, and people. In lieu of killing off the tsetse fly, as it has its part in the ecosystem, combating it in a safe way gives the country the chance to produce more successfully. Vaccinations, being the talk of the world, has helped decreased the amount of disease in many countries. Vaccinations would not keep the flies away, but it will assist the animals and humans fight against the sleeping sickness the fly carries, as well as decrease human and animal illness rates from the flies. The male flies usually bite people while the females go after the large animals. Because the country is very open to new ideas and renovations to their country, I believe they would take advice for reducing and fighting against this pest. As of right now there is no known vaccination, but time and research will resolve this issue. Though this will not eliminate all of the problems with the fly, it is a start in the right direction.

By researching Cote d'Ivoire I have learned that I am more than lucky to be apart of a country that only faces about half a million cases of low food security compared to many many more in developing countries. This paper has inspired me to help others who are in need of what I know as the basic needs of life. Understanding that what I thought I knew about food security was far and few between. My eyes were opened to a whole new style of living life. Knowing that even the smallest advances in a third-world country can make a huge difference even though it may be considered daily life in another country. I know I have taken food, clean water, and more than enough shelter for granted and never knew it until I learned how a girl my age does not even weigh a fraction of what I do and that breaks my heart because I know they do not even have anywhere close to the amount of opportunity that I do living in a country that is considered one of the most successful in the world. Another thing I looked at in a different view was my land that was able to be operated on and that is healthy enough to produce enough food to export all over the world. Living in Iowa is more than just another state it is the opportunity of a lifetime and I am more understanding of what I have put in front of me every single day and I would be stupid to not take advantage of it as well as take care of it. Knowing I have a chance that I am going to wake up every morning is more than a lot of people get in a third world country. Another opportunity I get every day is the care of a doctor or a grocery store and even owning pets instead of livestock. Through this paper I was

reading things I did not necessarily want to hear, but I know it is the truth and that was the hardest thing to work through. While I go forward in life I will take my knowledge that was learned through this eye opening opportunity and dig deeper into all parts of the world and hopefully one day be apart of a world revolution in making the world a place where everyone gets close to equal opportunities as everyone else does in life. I am thankful that the Iowa Youth Institute is working on making the world a better place as well as bringing in the future generations that will be the leaders of our future world. Thus being said, I strive to achieve as high as I can and help others do the same.

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