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Effect of Education on Food Security in Benin

It is easy to take simple things for granted. As a middle class American food three times a day is something that I have come to expect, whether I am eating out or my family is cooking it is still something I can rely on to be consistent. I often sit down to a dinner of chicken, green beans, and rice without thinking twice, however I should because even something as seemingly simple as this is not an option for millions of people worldwide who struggle with food insecurity.

Food security is knowing where your next meal is coming from, not having to worry about how to feed your family and yourself. Food security is not only a necessity for a person to live a productive life, but also a basic human right. Food insecurity can result from a myriad of factors including water scarcity, plant and human disease, food waste, and unsustainable agricultural practices. By looking at the causes of food instability we can find effective solutions tailored to the population being affected. Finding enough solutions for the 795 million people who do not have enough food to lead a healthy life is a difficult task that must be broken down into achievable parts. Of those 795 million people almost a million are from Benin, a small West African country with a population of 10.32 million (World Food Programme 2016). This not only creates a crisis from a humanitarian viewpoint, but is putting a major hold on Benin's development as a country. To pinpoint the root causes of Benin's troubles we must first develop an understanding of Beninese society and agricultural practices today. From this it is possible to formulate a feasible solution to Benin's food security issues.

Benin is an agriculturally centered nation with 80% of its people employed by the agriculture industry (FAO 2016). This is reflected in all sections on Beninese life. The typical family size is six; the reason for such large families lies in agriculture. The more children one has the more people there are to help run around the farm which is beneficial to both decreasing the workload and increasing income. Extended family known as kinfolk are of high importance, if they live nearby they will often help raise each other's children and harvest crops (Culture of Benin). If a family member lives in the city they may send money back to their rural family, or a rural child may be sent to live with them in the city. The rationale behind this practice is that urban life provides more opportunities for education and improved healthcare. Unfortunately the majority of the population lacks access to adequate healthcare. From the moment of birth the absence of proper medical care becomes horribly apparent. About 22% of childbirths occur at home rather than a hospital or clinic leading to increased medical risk for both children and mothers The infant mortality rate is drastically high at a staggering 67.6% (UNICEF 2012). Benin does not have enough well educated citizens to provide paternal health care to these women. This trend of inadequate medical care continues throughout Beninese citizen's lifespan due to a lack of doctors, immunization, and health awareness. An unhealthy population leads to decreased agricultural productivity.

Health issues are not the only barriers to the average Beninese family. There are a multitude of obstacles to finding a job that provides a living wage, or producing enough food to sustain a family. Most Beninese do not have access to education, even if they do they often do not pursue their education beyond primary school because they are needed to help provide for their family, or due to a lack of nearby schools. This makes them unqualified for the vast majority of high paying jobs which require higher education. Instead, the greater part of Beninese work in low paying agricultural jobs where their income is at the mercy of the success of crop yields. It is a cruel irony that these people living and working with food still do not have enough to eat. The Benin diet consists of meals containing a mushy starch, a vegetable sauce with meat or fish in it, and tropical fruits. Instead of growing crops that could be used to feed themselves and their

families many farmers opt to grow cash crops, the most common in Benin being cotton. Often times farmers export crops, but still cannot make enough money to pay for their basic needs. Beninese farmer need to shift focus from unstable export crops to local crops that can sustain their own family and community. Unfortunately the current lack of crop diversity and the pesticides used on cotton ruin the land of many Beninese farmers making sustainable farming difficult. The export based farming system prevents the average 2 hectare farm in Benin from being used to its maximum capacity. (SUB-SAHARAN AFRICA 2016).

The most viable solution to Benin's food security issues is improved education. Currently Benin's education system is filled by the socially elite and urban citizens. A whopping 61.6% of the population is illiterate (CIA World Factbook 2015). Only 55.8% of students stay in school till the last year of primary school (UNICEF 2012). This education gap leads to a disconnect between the government leaders and the general population. Benin's economy has become reliant on exporting their crops. The government supports growing cash crops instead of supporting sustainable crops which would be more beneficial to the Beninese. The people in power are more concerned with their own wellbeing than that of their people. Instead of making education more available so the Beninese economy can diversify they continue the cycle that always ends in food insecurity. By educating the general population, Benin can raise a new generation of leaders with a real concern for the people they lead. Although the literacy rate is improving slightly every year the rate of change is too slow to make a real impact on Benin.

The two educational areas in most need of improvement are health and agriculture. These two factors have an enormous impact on the daily lives if Beninese, but the Beninese are sorely undereducated on both topics. If there was improved access and participation in these areas the daily life of Beninese citizens would show considerable improvement. As of now only 47% of the population is vaccinated in Benin a 12% decrease since 2001 (DHS Program 2008). If the Beninese were educated on the importance of vaccinating it could save thousands of lives. Many Beninese are simply unaware of basic health procedures such as proper hygiene, and how to prepare food without spreading germs from yourself and the anima to others. This educational chasm makes it easy for diseases to become epidemics affecting whole villages at a time, thereby decimating the year's harvest. If no one is available to tend the crops the only source of income can be lost. The Beninese population needs to stay healthy in order to produce food; basic health education can help them do so.

The second form of education that will be applicable in the Beninese daily life is agricultural. The Beninese have simply never been introduced to sustainable agriculture practices. These include, the importance of regular fertilizer application which will provide plants will essential nutrients creating more plant growth and crop diversity. Farmers will plant whatever crops bring in the most money year after year eventually destroying their own land. By spreading what we take to be fundamental farming knowledge soil health and production quantity can be dramatically increased. Education in subjects relevant to the Beninese such as health and agriculture will have the greatest effect on providing food security in Benin.

Alas, education is not the single solution to fix all of Benin's problems. Another factor that will impact the education in Benin is population growth. The population is growing at a rate of 2.7% (World Food Bank 2013). This makes it more challenging to feed the ever growing population. However, population growth may have unexpected positive effects on Benin. Over 50% of the Beninese population is under age 15 (Benin Age Structure 2015). This provides a golden opportunity to educate the young. If we teach this generation correct health and agricultural practices the message will be reaching a large part of today's workforce, they can make real changes immediately. They then can pass on their knowledge to the next generation promoting a healthy lifestyle and productive farming techniques.

The foremost obstacle with educating Beninese, young and old, is more often than not is that they are too busy working to attend a conventional full time school. Therefore the only way to teach the Beninese is to bring the education to them. There are a variety of relatively low cost ways to do this including by updating Benin's fertilizer maps which show when and where to fertilizer and then distributing them to villages. This would allow plants to absorb the correct amount of nutrients needed while not over fertilizing the soil. Another way to reach the Beninese is by setting up traveling immunization stations. These would be mobile clinics set up in vans. The vans staffed by doctors and nurses could easily travel around the Beninese countryside providing basic vaccinations. The medical personnel could simultaneously teach and distribute pamphlets on the importance of hygiene, clean cooking, and safe sex. Education on prevention of HIV/AIDS is urgent on 34.8% of Beninese adolescents have comprehensive knowledge of prevention as a result 80,000 Beninese are living with HIV (UNICEF 2012). This simple action of providing several mobile vaccination stations could significantly reduce the high number of easily preventable diseases such as the flu and whooping cough which in places like Benin without proper medical care can be fatal. By providing services such as fertilizer maps and mobile vaccination stations land can be used more effectively and more healthy, productive workers will be available resulting in increased food production.

Some projects are already at work in Benin spreading agricultural education. An organic farm named Centre Songhai in Porta Novo Benin is a prime example of sustainable practices and maximizing production. The farm was founded by Father Godfrey Nzamujo with the intention of defeating poverty through farming. He successfully expanded his 1 hectare farm into 24 hectares while doing so perfecting his techniques to optimize output. Centre Songhai has begun to expand into more African countries to spread organic farming in Africa, but Nzamujo's work is not complete in Benin. Centre Songhai in Benin employs over four hundred apprentices to encourage agricultural skills and employment. These internships could be taken one step further by connecting the program to the government. After the internships are completed interns should be offered government jobs in different cities and rural areas across the country where they can teach, promote, and set up farms emulating the agricultural practices they learned at Centre Songhai (Cleveland 2014).

The real barrier to turning these from ideas to reality is finding organizations willing to fund, implement, and run these initiatives. The government is currently in charge of creating fertilizer maps, but due to underfunding and government corruption, they have not been updated recently enough to provide accurate information. The government should be petitioned by the public to update these maps and distribute them. If they do not cooperate, the University of Abomey-Calavi in Benin could help fund and carry out the research project and volunteers could distribute the maps. As for the mobile vaccination clinics I suggest that an American Peace Corps group or the Bill and Melinda Gates Foundation be sent to Benin with the proper equipment and personnel to provide vaccinations and health care information. Even small steps such as these in a miniscule country such as Benin require enormous effort from non-profits, foreign aid, and the Beninese government. Despite the effort to it takes to make these plans a reality. If these programs are successfully carried out to increase food security they are doubtlessly worth the hard work.

As of today 2.8 million people in Benin may be unsure of whether or not they will be able to sit down to dinner tonight, but if Beninese education is improved in the areas of agriculture and health one day this will not be the case. Of course other factors are at play when it comes to Benin's food security issues, famine, foods spoilage, and human rights issues, but all of these problems can be solved through education (Cotonou 2016). Education gives Beninese the knowledge they need to overcome the many obstacles holding them back from food security. To achieve this dream, Beninese families must actively contribute by taking their children to the mobile health clinic and complying with the new health procedures they learn. Agriculturally families should begin using the fertilizer maps they are given and implementing sustainable farming practices their taught by the government workers from Centre Songhai.

Education can only be an effective tool in Benin if the strategies to reach food security are taught to willing ears.

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