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Malawi, Factor 1: Plant Science

Malawi: The Pressure of Maintaining a Self- Sustaining Country without the Proper Resources

Malawi is a country east of Africa where magic ruled and modern science was a mystery. A land that is landlocked between Zambia, Tanzania, and Mozambique, it suffers from great famine and diseases; it is classified as one of the poorest countries in the world. Malawi lacks the proper resources for a productive living environment. Because of the many drought seasons in Malawi, many farmers have not been able to grow their own crops. There are not many educated people because many were forced to drop out because they were not financially able to pay their school tuition fees. According to Wikipedia, it is among the world's least developed and most-densely populated countries with approximately 84,000 people live in rural areas. Many of them suffer throughout their lives due to water scarcity and climate volatility. People grow their own crops and sell their crops to other farmers to financially support their everyday needs; however during drought season Malawians struggle most because they are not able to grow their own crops of maize, tobacco, corn, sugarcane, cotton, tea or potatoes. Without these crops they are not able to supply for themselves and their families. Poverty has caused many people to go without running water, electricity, food and jobs. Living in poverty, children have to drop out of school because they cannot afford to pay their school tuition. Malawi has been known as "the warm heart of Africa" for its relational warmth of the people. It has also been said, however, that due to the HIV/AIDS plague that has been going on for decades Malawi has been given a new name - "The Orphan Nation". (Kamkwamba, The Boy Who Harnessed the Wind)

Malawi is a very poor nation. It has been said that ninety percent of Malawi's population live in small villages in rural areas. Although their soil is supposed to be rich, Malawians try to survive through agriculture but researcher say that only one third of the land is suitable for their farming. Most of Malawi is malnourished because they cannot financially support themselves nor can they support their families. They are not able to grow crops either due to the drought seasons that have occurred over time. In Malawi most people have to make do with what they have and others simply do without. The country is defined as a low-income area and is ranked 170 out of 187 countries in the UNDP Human Development Index. (www.wfp.org). It has been recognized by the government of Malawi that over forty percent of Malawians live on one US dollar per day. Due to the over use of marginally productive agricultural land soil erosion and nutrient depletion has occurred. More than forty percent of households are devoted to maize production. The larger parts of Malawi were expected to suffer from food security starting in the year of 2013 and throughout the 2014 year as well. According to the Malawi Vulnerability Assessment Committee July of 2013 most rural areas are at the risk of hunger. This is a result of bad weather like droughts and poor harvest seasons and the high pricing of maize. Maize is considered Malawi's staple food. There are other economic factors as to why Malawi is suffering and why productive living conditions are at a minimum. Along with the structural food security problems, it has also exacerbated vulnerability in rural and urban areas. (www.foodsecurityportal.org)

There are many reasons why Malawi suffers food insecurity such as chronic food insecurity among the poor, the recurrence of droughts and floods, the cost of high living, malnutrition, high drop-out rates, low income for smallholder farmers, a poor agricultural market, its structures and policies and more. However, there is one key factor to food security - plant science. Plant science includes the increasing of crop yields and improving diseases, drought resistance through research and breeding of improved plant varieties. According to World Food Programme, the contributor to food security includes low crop production as a result of earlier floods and input shortages; secondary factors are low food stocks and unstable maize supply. Compared to the five-year baseline, the maize prices are 162%, a fact that also

reflects numerous market suppliers; the change of food prices from October to December in the year of 2013 were moderate. (www.wfp.org)

The main factor affecting food security is plant science. Plant science includes increasing crop yields and improving disease/drought resistance through research and breeding and improved plant varieties. Poverty, civil unrest and lack of access to markets all contribute to low yields on fertile ground. More than twenty-four percent of sub-Saharan Africa is malnourished. Bringing production of just 16 key crops up to their potential could yield more than 205 million additional metric tons of food. Malawi's plant science is the reason why food security, famine and many diseases have taken over their country. Without the proper plant science Malawi will continue to struggle with famine and disease. Droughts are a continuous factor in the Malawian country. With this factor occurring constantly, it makes life harder for Malawians especially farmers. They have a harder time trying to grow their crops after a season of drought. (www.reliefweb.int)

Many farmers in Malawi are un-educated, people of low- income, and users of urban agriculture as an insurance over income, because they need others to support them in their work. A majority of farmers' wives are unemployed as well, so they do not receive much income. Therefore, food security plays an important part in its urban areas. This country is not well-developed and is not recognized for its usage of land and cropping. However, the FAO (Food Agriculture Organization) suggested in 2002 that 33% of people in Sub-Saharan are undernourished due to the lack of food caused by the drought season making it impossible for them to grow crops. (www.fao.org)

Another major factor affecting food security in Malawi is the lack of Human Rights. Human Rights are the addressing of gender cultural and economic discrimination and improving access to credit and securing property rights for the poor and marginalized. In Malawi people are discriminated against because of their gender and education status. In Malawi it has been noticed that Malawi supports male cropper more than they do female croppers. In order to produce a healthy and successful country one needs to gain full support from all sides and people who are willing to make the change.

Malawi's main economic products include tobacco, tea, cotton, groundnuts, sugar, and coffee. These crops have been the main cash crops for centuries with a major production of tobacco in the year of 2011. The main food crops are maize, cassava, sweet potatoes, sorghum, bananas, rice, and Irish potatoes. Cattle, sheep and goats are raised as well. Various industries deal with agricultural processing of tobacco, tea, sugar and timber products. Since 2009, industrialization has grown 10%. (en.wikipedia.org, "Malawi Main Products")

Maize has been one of the top growing crops for urban farmers and the main thing sold in markets. Aside from maize, poultry and vegetables being the most profitable for urban farmers, they grow more crops that have roots than those without because crops with roots can live without inorganic fertilizers and they have the ability to withstand drought seasons. Maize can also be used and cooked in numerous ways to provide different meals.

According to Wikipedia, it is among the world's least developed and most densely populated countries with approximately 84,000 people living in rural areas. Many of them suffer throughout their lives due to water scarcity and climate volatility. People grow their own crops and sell their crops to other farmers for money to financially support their everyday needs, however during drought season is when Malawians struggle most because they are not able to grow their crops of maize, tobacco, corn, sugarcane, cotton, tea, potatoes, etc. without these crops they are not able to supply for themselves and their families. Poverty has caused many people to go without running water, electricity, food and jobs. Living in poverty

children have to drop out of school because they cannot afford to pay tuition. It has also been revealed that poor farmers are cheated for the profit of their crops despite how high the quality of the product is especially by women farmers. A female farmer complained, "We have always been cheated by businessmen who purchase our produce at very disappointing prices especially when the owners of supermarkets are not ready to buy directly from us since we don't have formal contracts with such organizations." Poor farmers were indeed short on storage space so they had nowhere to store their produce and keep it fresh. Lack of storage caused them to sell their produce during harvest season when the prices were not as high. Even though farmers grow their own crops and sell their crops for money does not mean that they can be financially stable. They still go without some of their needs and they still cannot afford to send their children to school. (www.wikipedia.org, "Malawi Food Security")

As of now urban areas are increasing in poverty and many people are living in slum houses for shelter. In 2001, Malawi developed a food production for all urban areas as a solution for poverty and food security. The Malawi policy does not consist of policy support from the government or from its city officials. Not only is there a lack of support, land for farmers cropping is being used mainly for construction. This takes away from the land farmers could use to grow their crops. (www.malawivoice.com)

In 2005, a survey was given to households all over Malawi and it was proven that many people only received education through primary schools and did not further their educations. In addition, it was proven that in terms of maize crops, many families could provide for themselves if their home were run by males instead of females because most maize growers make a higher income than those who grow other foods. Men are better equipped for cropping and it is common for a man to be able to carry the weight of cropping; therefore, we know that the crops of maize will be raised and transported properly. In these terms low income people will also not be able to financially support their crops like high income families would. It has been said by low income females that cropping wouldn't be as bad for female croppers if they had the support of others. The women feel that they are more experienced with agriculture because they have grown up in villages that taught them how to obtain and preserve crops of maize. (www.wfp.org)

Malawi is a place that has struggled most with poverty and famine. Even in the year of 2012 they struggled and many people lost their lives to starvation. Even now Malawi is still one of the poorest countries. I feel as if Malawi will probably never recover from famine or poverty if they don't receive the proper support and help that they so much need and desire. The Kamkwamba family had to make change on their own and if it weren't for their son William, they would probably still be struggling to provide water and electricity or they could even be dead because they couldn't survive life without food. If the climate volatility and water scarcity become increasingly worse than it has been then many people in Malawi will die and there will be nothing left in Malawi but deserted fields. Malawi needs to be able to grow their own crops for food and they need to be able to produce enough food to make money. Then they will be able to send their children to secondary school, since primary school is a requirement in Africa. This problem is not getting better. It is worsening by the year. There is no change happening to help the situation. It has been brought to the nation's attention how badly Malawi struggles but not much has been done to change it. (Kamkwamba)

The Malawi Ministry of Agriculture and Food Security has been brought about to help out in changing food security. There is also the UN that tries to renew Africa's problems. They have been trying to decide what has happened and how Malawi got this far in poverty and famine. They are trying to prevent this from happening elsewhere in any other country. (www.povertyactionlab.org)

Rural farms and urban families should always play a major role in the national government, and other organizations because we are all the same. We should be there to support each other whenever there is a crisis and when we see that things aren't right to help fix the problem. We should help each other,

because it has always been said “You have to ask for help in order to receive help in return.” One day you may be in the midst of a crisis and because you didn’t help others during their time of need they won’t help you. It’s simply common courtesy. Leadership also has to play a major role in the change of Malawi’s problems. It has been said that food security equals national security. National security will lose its legitimacy if thousands of people die from starvation or try to cross the borders to get away from the lives of poverty and famine. Malawi is in need of a strong food policy that will support the people and food famine. The CAADP has made a statement that even though it is small in budget it uses what little it does have to support and strengthen the agricultural institutions and authorize personnel to keep track of what is happening in its surrounding areas. Martin Bwalya said to the Africa Renewal when asked about Malawi’s dependence, “ There is no doubt that African agriculture needs strong local institutions to avoid the kind of bubble we saw in Malawi, which was lively driven by external energy.” It has now been recognized by the AU development that Africa needs institutions that will affect its shelf life and not depend on the survival of individuality. Joyce Banda, Africa’s third female president is now trying to formulate a new food policy, drawback to donors, stabilize the economy and get the agriculture back on track. (www.nepact-caadp.net/ecdpm.org)

Therefore, William used his knowledge to create better living conditions for his family. In Malawi diseases such as HIV and AIDS are widespread which causes many teachers to die. William didn’t allow this agony to prevent him from furthering his education; he went to the library daily to read about Voltage and Power to improve his knowledge to facilitate his potential. He did a great job with the windmill which attracted people from all across the world to come see. They wondered how he could do something so beneficial without an education. However, some did realize that he accomplished it because of his sacrifices and yearning goal. (Kamkwamba)

Many people are expecting Malawi to improve its population and food security by the year of 2030. Challenges will soon follow the future improvement of food security and poverty. As long as human rights and climate volatility are dominant in the land of Malawi then it will continue to be the same as it has always been, unproductive.

With the constant drought seasons and famine food security has not improved. There needs to be a support system for all Human Rights, the nondiscrimination of female farmers, and Malawi’s other major problems and concerns. Many people have suffered and are still suffering from the great famine and common diseases that are taking over Malawi. Government officials are taking over land leaving only a third of land for Malawi farmers to use for cropping. Making it even harder for farmers to grow crops and making their lives harder to maintain.

However with a little help from the U.S government and others in the United Nations, I feel that if Malawi were to partner with this organization it would become a better place. It just needs a support system and a strategy of how to turn the country from famine and disease to health and productivity. They need the extra push from their government and the motivation from the people.

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