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Chad: Increasing Agricultural Production by Emphasizing Education

In 1958 my father was born in small town Iowa. He grew up on a century old family farm and began attending school at the age of six. He continued this education for the next twelve years until he finished high school. After his secondary education he went on to Iowa State University and studied farm business management and graduated with a four year degree. This formal education allowed him to return back to the family farm and eventually take it over- allowing him to provide food for his family and the world while being financially stable. I know in reality this amount of education would not be feasible or possible for all of the children and adults of Chad, but a change is needed if this country is ever going to conquer food security. If they could gain knowledge in agriculture and become self sufficient, the fate of so many children's lives could be changed for the better. I believe education is one of the main issues that is affecting the crop production and general livelihood of the people of Chad.

Chad is one of the poorest countries in the world. It is located in Central Africa south of Libya and east of Niger. Chad covers 1.284 million square kilometers (Central Intelligence Agency). Most of the people in Chad live in the central and southern parts of the country. This part of the country is the most fertile which is why it draws a majority of Chad's population. It can have extreme climate variations which make crop production difficult to handle for people that lack proper education (Rural Poverty Portal). The climate can vary between extreme droughts to torrential flooding. These difficult conditions explain why this country is struggling with productivity.

The typical Chadian family is made up of six to seven kids adding up to a total of eight to nine immediate family members (Chad). It is very common for the head male of a family to have more than one wife and to develop large extended families (Chad). This practice is referred to as polygamy. Childhood marriage is also very common. In fact about one third of the population of women is married by the age of fifteen. This leads to early, dangerous pregnancies and the lack of formal education for many women (Chad). In fact the average age for a girl to become pregnant in the country of Chad is 18. This is different from what we consider traditional in the United States, but in Chad it is very common. The percent of women using contraceptives is a mere 4.8% compared to 76.8% of sexually active women in the United States (Central Intelligence Agency). This leads to high density population of young women mothering multiple children and having to support all of them off of the land itself. In fact at least 80% of Chad's population relies on subsistence farming and livestock raised for their own livelihood (Central Intelligence Agency). Around 70% of smallholder farmers are single women struggling to support these large families (Chad). If this situation could be improved; meaning more men and women spend time receiving a proper education that will prepare them for life and living off the land, food security could eventually be accomplished in Chad.

Chadians' diet consists of mainly grains of millet, maize, rice, and sorghum as well as rooted starches like cassava and yams (Central Intelligence Agency). Micronutrient rich food like fruits, vegetables, and meat are very rare in Chad. This leads to the 41% of children under the age of five that are malnourished as well as underdevelopment in children (Central Intelligence Agency). 33.4% of people are severely undernourished in the country of Chad (Central Intelligence Agency). Vitamin A and iron deficiencies also cause numerous health problems for Chadians. The amount of vitamin A and iron supplementation must be expanded in order to tackle these deficiencies more efficiently. The amount of households that face food insecurity in Chad needs to be lowered. Education on precautions to these health issues as well as improved farming practices could save the lives of many and change the fate of the struggling country.

There is an inadequate amount of clean portable water in Chad to provide for the entire population. Water is often polluted from waste which can cause different health problems as well. Safe water access is improving and as of 2010 has reached 50% of the population (Economist Intelligence Unit). That still means that over five million Chadians are still in need of safe water. Improved systems and education on maintaining water supply could assist in this number to decrease continually (Economist Intelligence Unit).

The current farming practices in Chad need a lot of improvement. Agriculture is a necessity in this country because without it the people would not be able to survive. The practice of subsistent farming means you are producing only for a family to live off of- not to sell to make a profit. The main crops that are grown in Chad are cotton, sorghum, millet, peanuts, rice, potatoes (Central Intelligence Agency). There are also a few livestock farmers in Chad who raise cattle, sheep, goats, and camels. Typical farms are very small and only large enough to support on families crop.

Education of the Chadians is the key to improve this essential practice. Farmers need access to agricultural services and to the knowledge and technology they need to improve productivity. The lack of access to rural services prevents poor farmers from developing alternative income opportunities and improving productivity. The agriculture in Chad accounts for almost half of the country's GDP (Gross Domestic Profit).Currently oil is the main driving force of Chad's economy (Central Intelligence Agency). If proper education can be implemented into Chad, agriculture has the potential to become a larger part of Chad's economy.

Education can make that change happen. It could be the energy of a new face of agriculture in Chad. Many things need to be improved though. The literacy rate for Chadians is outstandingly disappointing. From people that are the age of fifteen or older, only 35.4% can read and write French or Arabic (Central Intelligence Agency). These are the country's two main languages. 20% more of males in the country are literate than females (Gender Farming First). This is a very alarming statistic; the women who are doing the majority of the smallholder farming and raising crops for the family are the ones getting the least amount of education.

Currently in Chad, males typically receive nine years of schooling and women only 7(Gender Farming First). This can be seen through literacy rates and other statistics. In the educational world of Chad men rank supreme over women. Education should be a universal right that both men and women of all ages get the chance to receive. The government of Chad at the moment is only putting 2.3% of its GDP into the education of its people (Central Intelligence Agency). This number needs to increase significantly because education needs funds to support its process, facilities, and teachers. Education needs to be provided equally to all citizens of Chad for I believe, twelve years. Twelve years of education for both men and women would: increase the literacy rate of Chadians, increase agricultural productivity, decrease the child labor in Chad of 48%, and decrease the teen pregnancy rate. Imagine the norm of Chad being one that everyone gets a strong, reputable education. A country where the people have met their potential and received the chance they deserve at a good life.

There are specific things that need to be implemented into Chad's new and improved education programs. Agriculture education is a main subject that needs to be taught. Proper practices that include planting, soil conservation, irrigation, crop rotation, and the use of natural resources are going to be essential things for subsistent farmers to eventually travel above the poverty line. 80% of Chadians go into this field of work so it is something that they need to learn to get proficient at (Central Intelligence Agency). Math, sciences, and reading will also be important core curriculum for these students. Math will be important to understand problems and situations in everyday life as well the buying and selling products. Science will

be important to understand crop growth and the process of plant science. Reading and writing are vital for communication in the country of Chad and relations with others in the world.

The teacher-student ratio needs to be minimized in Chad. This means there needs to be less students per every teacher to allow a better education and more one-on-one attention for Chadians. The cycle of knowledge needs to flow from teacher to student, so more teachers can be born and the cycle continues. This cycle could be Chad's savior- an infection of knowledge that spreads from one end to another and lasts for generations.

As I have addressed before, women's rights need to be implemented in Chad, specifically in the field of education as well as in all areas of life. Women deserve just as many rights as men because they are equals. The women of Chad can bring a lot to the economy of Chad through agriculture by raising their own crops (Gender Farming First). They could also begin to educate their own children about proper farming practices because children learn and look up to their parents.

There are many steps that need to happen for recovery and food security in Chad. The government needs to increase their budget for education of the people as well as implement government run programs to help the people around the country directly get educated. Corruption in the government also needs to stop because Chadians need strong leaders so their trust in the government can build. Specific regulations on how much education every child needs before adulthood need to be established and enforced. In the area of agriculture and crop production, improvements need to be taught and developed in irrigation-especially in the northern dessert region of Chad and during droughts. Advanced equipment should slowly start to be used in the country provided by the government so production can improve. Collaboration between farmers and farming families will also be important. Sharing tips and resources between each other will in the end help everyone. Communication with tips and education in agriculture could be transmitted through apps on cell phones to Chadians as well. Why not bring education through technology to this struggling country in a changing world?

The government is a key factor in the change to this country. The change can only come from withinhelp from the outside world can only go so far. One current program that Chad has in their country is IFAD (International Foundation for Agricultural Development). IFAD's goal is to empower poor rural women and men in developing countries to achieve higher incomes and improved food security (Rural Poverty Portal). This program finds a specific problem in the country whose fix is not exactly complicated- just necessary. By doing this they help improve the lives and future of so many. Food for Peace (FFP) targets approximately 206,440 food-insecure Chadians and refugees from CAR and Sudan (Rural Poverty Portal). They give as well as educate the many in need. More programs like this one should be brought into Chad and developed so food security can be reached. These programs need to be supported by the communities who need to allow the help in as well as monetarily from people around the world and in Chad.

Recent corruption has been in the government, but the mending that is going on should continue on its path. In the last decade, oil was struck in Chad which brought hope to many that the country would come back into money and the government would come together (Chad). The oil is causing issues though with government spending supposedly going to rural projects that never take action. Rulers continue to take over each other and there is yet to be a stable system for Chadians to look up to. Once a good, fair leader gets into command, I believe many problems will be solved. After receiving independence from France in 1960, thirty years of civil warfare, and then years of rebellion Chad is finally starting to calm down. Unfortunately the country is still ruled by the ethnic minority. This makes it hard for leaders of the

country to understand what is going on in the general lives of the majority of the people. Hopefully soon the majority can take up leadership roles and the country evolves with unity. Problems of everyone can be solved as one. It will take the citizens of Chad support of the government to allow a healthy relationship to form and grow. Reciprocally, the government needs to earn the citizens trust back before they can expect to see results. This will allow citizens to not fear voicing their opinions and concerns so direct problems can be solved and not overlooked.

To help with irrigation in Chad, programs like CAADP (Comprehensive Africa Agriculture Development Programme) could help immensely to expand their necessity of water access. Currently in Africa, only 5% of land is irrigated (Economist Intelligence Unit). CAADP is working in different countries in Africa to extend the reliable water control systems to 20 million hectares by 2015. This is an increase from the current 7 million hectares. If they succeed agriculture production will increase dramatically. If this program could include Chad or if Chad could develop a similar program, their results could possibly be the same.

Regulations need to be made on the amount of education all Chadians receive before reaching adulthood. I think that if the government increases the 2.9% of the GDP currently dedicated to education, lives of many would improve. The additional budget could help provide daily meals for students as well as more teachers, salaries for teachers, equipment, and updated facilities. A focus on growing and raising staple crops and livestock needs to be implemented into the core curriculum. Another thing to incent people to both receive an education and provide their kids with an education would be to provide meal. A very recent program that going on with collaboration between the Chadian government and the WFP (World Food Programme) is serving one hot meal a day to thousands of students on the Sahelian Belt, an area severely affects by food insecurity. The Chadian government donated \$400,000 to this program with hopes that kids will be encouraged to go to school. The meals are going to be made and purchased from local produce so it is also boosting the local economy as well. This program is one that should continually be supported by the government.

Advanced equipment coming into the country would accelerate Chad's Agricultural production as well. Education on running this new equipment would give numerous Chadians the knowledge to run the machines and collaborate with each other to allow their crops to soar. This could also come out of the government agricultural fund. Local programs may need to be started so that education could be more one on one and allow the cycle to move faster. If one person learns in every community, they can pass their education on to others so the knowledge spreads.

Finally, the new use of cell phones could benefit Chadians. As of 2012, 4.2 million people in Chad had a cell phone. That number has definitely increased and will continue to. They could use this spreading device to their advantage. Partnership with educated elders in their community who know what works in that area through the phones. Apps for the phones could bring constant updated information on farming practices as well as individual education to those who seek it. This technology could significantly benefit Chadians. Even if the cell phones do not have the capability of apps, the communication aspect between the citizens of Chad could improve many different things alone.

My father's country gave him the chance at an education and he took it. He made a life for himself and currently produces crops for the world from the education he was given. If the procedures that I suggested

for Chad to gain food security take place; they very possibly could win this ongoing battle. It will take an effort from the government, local and international programs, as well as ordinary citizens to get the job done. Imagine the majority of Chadians receiving twelve years of quality education before they begin providing for themselves; millions of people not having to worry about where their next meal is going to come from everyday. The resources are out there and it could happen. The privilege of knowledge needs to be recognized, because with knowledge the possibilities in this world are endless.

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