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Chad: Modernization of Cattle Production

Chad is a majorly underdeveloped nation that has a high amount of potential. All of the nation's agriculture and other industries could benefit from the modernization of cattle production. The typical family in Chad varies a great deal based on their diverse population. A family's diet is affected greatly by their ethnic background, but there are some typical meals in Chad. Education and health care available in the country is very limited. The typical farm is simple; produces a variety of products and most farmers do things similarly to other farmers. Cotton is the most common product in the nation with cattle production as the second most common product. Chad has an excellent arabic gum industry as well. A typical family faces a lot of barriers due to the underdevelopment of the whole nation. The government itself is underdeveloped, so in return, cannot help the rest of the nation's people or industries. Most families in Chad have to fight many problems associated with poverty. There is a lack of available markets and many people battle nutritional issues. Animal agriculture in the nation is out dated and affects all agricultural production. Methods that are used have been the same way for a long time and have continued to be used in this fashion. Many other issues are caused by this factor. Changes here would help make changes possible in all other areas of agriculture. Several options exist for modernizing cattle production and most of them would work for Chad. However, only one seems to benefit Chad the best, which is the use of a hoop building feedlot setup. This setup is within the reach of a country similar to Chad. A hoop building feedlot setup could produce not only good cattle, but also other products that could benefit other areas of the nations agriculture areas. It would demand products from various industries in the nation and it would help the nation financially as well. Development of the young railroad industry would increase by demanding a new form of transportation of cattle. This new method would also benefit the unity of the diverse nation. It would cause everyone to rely more heavily on each other for certain products that they need to help themselves produce their end products. The nation would also need a plan for implementing this new project and would have to be ready for the obstacles that will rise during the process.

The average family in Chad has 8 to 9 people, so parents typically have 6 to 7 children (Tchad, *Children's Page*). Chad has various ethnic groups, which means there is not a specific typical diet. However, one popular dish is a grain porridge, made with sorghum or millet flour. It is served with sauces that have meat, dried fish, tomatoes, onions and good spices. Some staple foods are maize, manioc, potatoes, rice, sesame, and some bean species. In southern Chad, no fish is included in their diet, and more forest products are consumed due to their location. Typically, mothers and other relatives raise the children since fathers do not become involved in their children's lives until later years. These children are dependent on their families until their early twenties. Only 60 percent of Chad's children attend primary school, but their literacy rate is about 20 percent (Countries and Their Cultures). This is a low rate compared to other countries in Africa. A small minority seek further formal education. Most children learn further education about a specific trade from their family. Higher education in Chad is extremely undeveloped, except the University of Chad and some technical-administrative colleges. The university is often closed due to war and other reasons. Therefore, the few young people who do seek higher education go to France or other French-speaking West African countries. When it comes to health care, Chadians are mostly dependent on basic primary health care and poly clinical aid, especially traditional medicine. This is due to the state health care system being underdeveloped and neglected. In a few of the larger cities there are hospitals, but they have poor facilities. There is one doctor per 38,000 people, and this is a very low ratio (Countries and Their Cultures). These things are hard on the people of Chad, because

malaria, schistosomiasis, and river blindness are found in the south while people in the north deal with drought and famine.

Agriculture and animal production employ 85 percent of the workforce in Chad (Encyclopedia of the Nations, *Chad-Agriculture*). The farming methods are simple and mechanical equipment is rarely used. Farmers mostly use their hands or use cattle to work their fields. Top exports of the country include cotton, cattle, and gum arabic. Farmers also grow grains, oilseeds, tubers, and several other leafy vegetables. Chad produces 600,000 to 1,100,000 tons of grain per year, which is mostly consumed locally or made into alcohol (Encyclopedia of the Nations, *Chad-Agriculture*). Cotton employs approximately 2.5 million people in Chad and accounts for half of the export revenue. The production of raw cotton has varied from 94,000 to 260,000 tons in the past decade (Encyclopedia of the Nations, *Chad-Agriculture*). These production levels greatly depend on the amount of rainfall. Cotton prices changing throughout the world also affects cotton producers in Chad. Chad's next biggest export is cattle. They mainly travel overland to Nigeria. Cattle producers have a semi-nomadic lifestyle meaning they take their cattle north during the rainy season and south in search of green pastures during the dry season. These migrations raise controversy when the cattle damage farmer's crops. Herders tend to travel in small groups, but do arm themselves well to defend against angered farmers. Camels, donkeys, goats, and sheep are raised in Chad as well. Animals such as these represent savings and, in some areas where money is scarce, they are a symbol of wealth. In the 1900s, Chad became the world's second largest producer of gum arabic. The country increased their production from around 6,000 tons in the early 1990s to 18,000 tons in 2000 (Encyclopedia of the Nations, *Chad-Agriculture*). Chad's gum is exported to Europe and other industrialized countries including the United States. This product is used in soft drinks, pharmaceuticals, and lots of other products (Encyclopedia of the Nations, *Chad-Agriculture*). Small-scale harvesters that tap wild acacia trees throughout the semi-arid Sahel region produce the gum.

Chad is a very diverse country and has many barriers. A lot of their barriers have to do with the lack of national unity. There are many different ethnic groups that speak different languages. This makes communication and cooperation very difficult. Chad also has a slow rate of urbanization. Many people live in small farming hamlets, cattle camps, villages, and oasis (Countries and Their Cultures). Most of the population lives in the southern portion of the country where farming is more successful. Since Chad is one of the poorest countries in Africa, most of the families have to deal with extreme poverty. The large distances and poor infrastructure have ruined the development of a national market. Occupations include agricultural production, manufacturing, services, and the military. Most of the economy is geared towards farming and livestock raising. Agriculture generates 40 percent of the gross domestic product and livestock generates the 18 percent (Countries and Their Cultures). Lack of a developed economy and no economic strategy can be blamed on the lack of national government, nonexistent infrastructure, violent conflicts, and political problems. The outlook and potential for the country is very good though, because development continues in the industries of cattle, mineral deposits, commercial farming, and oil production. Chad continues to need foreign aid. France is the main supporter of Chad, and supplies about 30 percent of Chad's national budget (Countries and Their Cultures). Their market system is underdeveloped and industries are small. However, there is a large oil refinery. Many minor industries include the production of beer, cigarettes, textiles, and natron. There are industries waiting to be developed in gold, uranium, kaolin, bauxite, and tungsten, but explorations of these industries has been slow. In Chad, there is very little social class distinction for the people. This is mainly because most people are of the same, very low, socio economic status. Also, with so many different ethnic groups living in the area, distinguishing the different social statuses is very difficult. Another barrier facing most people is the lack of a government. Since their independence, Chadians have tried a variety of governments. Numerous revolts have taken place against the governments. Groundwork for a democratic institution has been set, but is still undeveloped. The country's diverse population still looks for the possibility of a better political system that fits all of their needs.

One factor that affects food security in Chad is animal agriculture. The methods used for producing and raising cattle are out of date and that not only hurts their production, but also the crop production in their country. Currently in Chad, there is a continuing conflict over land between the crop producers and cattle herders. Methods of nomadic herding that are used affect the herder's families by constantly traveling or having one member, typically the father or other older males, constantly gone. These practices also affect the lives of crop producer's families. Since the herds of cattle occasionally damage crops, farmer's incomes can be ruined. Hence, the need for modern cattle raising methods need to be established. The trends for this factor are constant, and continue to be the same. Improving the cattle production methods would greatly affect the relationship between cattle producers and crop producers. This would help with the unity of the nation and could benefit everyone in this nation. Variety of weather patterns will affect which new method should be used. Another issue in the country, which is transportation, could be greatly affected in a positive way by improving cattle production methods. If nomadic herding methods are not used, new ways of transporting the cattle need to be considered. As a result of improved transportation, Chadians should make a profit due to increased usage of the new transportation system.

In order to effectively deal with the need to improve methods of animal agriculture is to modernize the methods used. This can be done by keeping the cattle in a feedlot set up. There are many options as to create housing for feedlot cattle. Possible options include confinements, hoop buildings, or other various barn styles. From a financial standpoint, the hoop building would be the best option for the people of Chad. A hoop building is not only one of the most inexpensive options, but is also one of the easiest to build. Hoop buildings would be beneficial to more than one person in Chad. Chadians alone cannot afford a hoop building. However, if multiple cattle producing families came together and could form a community around these cattle operations, they may be more affordable. The government would also be important in making sure other herders saw these operations as models to follow after. There are many ways that this would help the cattle production in Chad. First, they would no longer have to battle with the crop producers due to the damage done to crops by the cattle. Next, the cattle producers would be able to produce better cattle with the new production method. As a result, they would be able to control the diet and rations of each animal much easier. Cattle would be eating a much more nutritional diet which, in return, would make better meat. Another benefit to the cattle producer would be the growth rate of the cattle. With the new diet, the cattle would grow at a much quicker rate and farmers would sell them much quicker than with the old methods used. The cattle farmers would also have safer and healthier cattle with the new setup. Cattle would no longer be out in the open where they are susceptible to predators including other humans and cattle would stay much healthier since they would not be traveling around catching diseases.

These new methods would also benefit other industries as well. The crop growing industry would benefit greatly from these changes. First, they would no longer have to battle damage to their crops due to grazing cattle, and could produce more efficiently. Next, the cattle in these new operations would need new things to eat. Crop producers would need to raise more grain to sell to the cattle producers, and this would help them make more money. Products that they already produce such as roughages or stalks could be sold to the cattle farmers. Cattle producers would need these for bedding or to use to feed their cattle. Another benefit that the crop producers could get from the new feedlot cattle would be the use of their manure as a fertilizer. The soil in Chad is not the best to begin with and has probably never had any artificial fertilizer added. This would be a great opportunity for the crop producers to produce better yields from their crops. One other industry that would benefit from these changes would be the transportation industry. Currently, the main way to transport is to migrate cattle in herds. With the feedlot cattle already confined, it would be much easier and faster to load them onto some form of transportation and ship them around the country and even export them elsewhere. The best option would most likely be to use the railroad to ship cattle. Railroads in Chad are extremely developed, but they have only been

around for a very short time. This would be a great opportunity for the railroads. They would be able to develop much quicker knowing that there are opportunities waiting for them. Finally, these new methods would help the country of Chad by assisting with their outside relationships. If they were able to export good cattle at a much quicker rate to other African countries, this would improve their image to other nations. Although, there would be some troubles with cattle in the new cattle producing method. First, some of the cattle might not be able to live in the new conditions based off their needed diet and other breed characteristics. Another issue would be that it would take the cattle time to get used to the new diets and may have to change over a slow period of time. None of these issues would cause big enough negatives to outweigh the benefits of the new production methods, however.

The nation would need a plan for implementing this new production method and would need to be ready for the obstacles that will arise. First of all, the government would need to fully support the change and help promote it. Due to the government's lack of funding, they would not be able to financially help in this project. This is where they would need to rely on the help of outside nations or other organizations. Since France is such a large ally, it is very likely they would be a large financial supporter of this project. Other countries such as the United States could form organizations to help pay for not only the building themselves, but also the original cattle to fill them. Also, a group or organization would also be needed to help assist and educate the people of Chad on how to build and maintain the new buildings. If the building were assembled by groups this would assist in unifying the nation. Along with the Chadian people getting assistance with this project, some responsibility will still fall on the individuals or group who will own the buildings. They will have to assist in all aspects including financial and construction. The rest of the people of Chad will also need educated on what is going on and how the whole nation is going to benefit from the project.

All of the nation's agriculture and other industries could benefit from the modernization of cattle production. The typical family in Chad varies a great deal based off their diverse population. Their ethnic background can affect a family's diet, but there are some typical meals in Chad. Education available in Chad is limited as well as health care availability. The typical family farm is simple and produces a variety of products. Most farmers do things similarly. Cotton is the most common product in the nation with cattle production being second. Arabic gum is an industry that has began to flourish as well. Chad produces a variety of grains and several other agricultural commodities. Families in Chad face a number of barriers due to the underdevelopment of the whole nation. The government itself is very underdeveloped, so in return, cannot help the rest of the nation's people or industries. Numerous families in Chad have to fight many problems associated with poverty. There is a lack of available markets and many people battle nutritional issues also. Animal agriculture in the nation is very old fashion and affects the entire agricultural production in Chad. Methods that are used have been the same for a long time and have seemed to remain very constant. Many other issues exist as a result of this factor. Changes here would help make changes possible in all other areas of agriculture in Chad. There are many options for modernizing cattle production and most of them would work for Chadians. However, the use of a hoop building feedlot setup would work the best. Hoop building feedlots are within reach of a country like Chad. This setup could produce not only good cattle, but also other products that could benefit other areas of the country's agriculture. It would demand other products from other industries in the nation and that would help them out financially. The young railroad industry in Chad would have the opportunity to be utilized, by demanding a new form of transportation for cattle. This new method would also benefit the unity of the diverse nation. It would cause everyone to rely more on each other for certain products that they need to help themselves produce all commodities. If the nation of Chad could develop this modernized cattle production method, they would truly become a much better nation.

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