Charlee Bender
Ankeny Centennial High School
Ankeny, IA
Sudan: Animal Health

Sudanese Struggle With the Health and Safety of Their Animals

Animals are dying unexpectedly. They are suffering from diseases that could be prevented; however, due to the lack of needed resources, their deaths are the result. Thousands of animals are dying when waiting to be exported after an outbreak of Rift Valley Fever closing trade ("It Was Painful"). Sudan relies heavily on livestock for food and to help with its economy. The government needs to find a solution that will help with the livestock that are getting common diseases from being traded. The health and safety of animals in Sudan right now is unpleasant to think about. Animals deserve a program where they can have better health care which will help decrease deaths from common diseases.

Sudan is located near the eastern border of Africa. The country's population is 43,976,000 (Spaulding, et al.). Sudan's population is approximately 200 million less than the United States population. While Sudan has fewer people than the US, it also has less land, therefore making it more densely populated. Out of the total population of 43,976,000, 35.65% of that is urban population. Sudan's urbanization is less than its percentage of rural areas, so there are fewer cities in Sudan because most of the people live in the country. Approximately 64.75% of the Sudanese live in rural areas where there are not a lot of people around them and not that many city noises.

Sudan's government is large. To demonstrate this, one article states that the executive branch includes a first and second vice president. The bicameral legislature consists of a directly elected National Assembly (426 seats) and an indirectly elected Council of States (50 seats). Also, Sudan's president is head of state and head of government. ("Sudan" Culturegrams). Sudan has a national assembly that has 426 positions that people can have and also there are 50 seats for the council of state.

Approximately 15.7% of Sudan's land is currently cultivated, which means it is capable of being plowed and used to grow crops ("Sudan", CIA Factbook). An article on Britannica states that Sudan's main crops include cotton, peanuts (groundnuts), sesame, Arabic gum, sorghum, and sugarcane (Spaulding, et al.). These are highly used products due to their use in Sudan daily meals. They use meat, vegetables, and they use nuts to make desserts. Hot, dry, and arid desert climate depends on the rainy season but the rain varies by region (April to November) ("Sudan", CIA Factbook). This climate is not good for crops because since it is hot and dry they get little rain. It will affect how the crops will grow, and it will make the crops dry out because of how little water Sudan gets. Sudan's terrain can be described as a flat plain-like environment that has desert plains that dominate North Sudan. To illustrate, Sudan does not have a mountain range or rivers that are widely known because Sudan has large farmlands. Due to farmland, rivers line the edges of Sudan. Sudan has a dry climate which makes it hard to grow certain crops. To fix that problem they grow mostly vegetables and grains.

The family size in Sudan varies depending on where people live. The typical family has six to seven children in rural areas so the children can help with farming ("Sudan", Culturegrams). Family involvement in running a farm is a priority and enables them not to have to pay someone to do a job that they can get done with their family. Rural families use their children to help them on their farms instead of hiring people to do that for them. Urban families usually consist of three or four children ("Sudan", Culturegrams). Not having to run a farm makes it practical to have a normal size family in urban areas. People will be able to spend time with their families if they live in the city because they do not have a farm that they have to worry about having enough hands to keep care of. Families in Sudan eat a lot of grains and meat because they have a lot of livestock and farms where they get locally-grown food.

Families typically eat a lot of meat, vegetables, and grains. Sorghum, millet, and maize are staple grains ("Sudan", Culturegrams). These products that they eat are from farms and other products that are made in factories. The use of locally produced crops to make meals is widely used because they have fruit, meat, and more to choose from than if they are getting their products from grocery stores. Men are responsible for earning an income, herding livestock, and leading the family. Women cook, clean, care for the children, and help men with farming ("Sudan", Culturegrams). The men in the family rely on the women to care for the family. But, the women in the house rely on the men to make money.

At the beginning of the 21st century, roughly half of all Sudanese had access to health services (Spaulding, et al.). Some people do not get the appropriate health care they deserve. They have to come up with ways to use the bathrooms, they have to find places to get clean water, and they have to find places to take showers/wash their hands. Others do not understand what people in Sudan go through until they read articles about it. This is a big issue that is happening right now, not only in Sudan. People that do not have access to health care have a high chance of getting sick compared to people that have health care. 76% of primary-age kids get to attend elementary school. Only 28% of kids then get to attend middle school ("Education"). Some of the kids do not get to learn how to read or write. A possibility is that these would be the rural kids because they are helping their families and they do not have the time to go to school. Only a third of the households have access to proper sanitation; while about 68 percent of households have access to improved drinking water sources ("Water, Sanitation"). Having access to clean water, being able to wash their hands, and being able to use the bathroom in Sudan is a privilege. Some people do not get to have this if they live in poor areas.

The health, safety, and quality of livestock has a huge impact on the Sudanese. Thousands of livestock waiting to be exported end up dying from hunger and thirst, after an outbreak of Rift Valley Fever closed the trade port ("It Was Painful"). Rift Valley Fever is a viral infection that is commonly seen in animals located in the sub-Saharan part of Africa. While animals are most common to get this disease, humans can get this infection. This disease is transmitted by the blood or organs of the infected animal. These diseases that are common in animals can be spread to humans, which will have an effect on the country. If this would happen this would be called an outbreak or a pandemic. You could compare this outbreak to the current Covid-19 pandemic that has gone on for two years.

These animals are traded for money and they get eaten for food but then end up dying because of a common disease. The way this virus is transmittable hints that they need to find a way that we can prevent this. But, this virus contaminates the food we eat so a solution that prevents the virus would be helpful. The International Committee of The Red Cross has been extending support for animal health by training animal healthcare workers. Training animal health workers and doing large mass vaccination has decreased the number of animals that are dying from these diseases (International). When animals contract a disease and need medical attention there are animal healthcare workers that can tell the farmers what is wrong with the livestock. They also can suggest getting a vaccination that helps prevent and fight any common disease but has worked on the Rift Valley Fever. This contribution to the economy and resource distribution for livestock and animal health services are currently not equal to the revenues that are generated by the section. It is also usual for less than one-quarter of the development budget to be delivered. The livestock section employs directly or indirectly about 40 percent of the population and contributes valuable animal protein to the diets of all of Sudan's people ("Livestock"). The economy, resources for livestock, and animal health services contribute to this trend because of the people that use trade of livestock for the economy. This is because people will pay money to have good, valuable animal protein. Animal health services are improving but still could improve by giving the farmers the option to give their livestock mass vaccination.

Without a question, vaccination is the most effective method for avoiding infectious diseases in livestock. There are several benefits to immunization. In the lack of a broad spectrum of antiviral vaccines, it is the

only approach available to prevent, or occasionally treat, viral livestock infections. This is to help eliminate the possibility of mass animal slaughter ("Veterinary vaccines"). These types of mass vaccinations have been shown to provide the support and strength they animals need to fight off the viral infections they can get. Mass vaccination is the only available option to help prevent livestock from infections. Unless you could find an antiviral vaccine that could be used but there are very limited antiviral vaccines. The Sudanese people have not found an antiviral vaccine that can help prevent diseases in livestock. An antiviral vaccine would be a good alternative to the mass vaccination option because it would give the animals the antibodies they need to help fight off different types of diseases. They would need to find one that could fix all diseases that animals can get instead of one. But the government or researchers in Sudan definitely needs to find an antiviral vaccine for Rift Valley Fever because that is a common disease in livestock. If mass vaccination stops working for infections in animals. Life for the livestock would have drastic change because the other option is mass animal man slaughter which is not the option the Sudan government should ever have to pick.

With that being said, mass vaccination in livestock has helped the animals from getting and fighting common diseases that get passed around through animals. The International Committee of the Red Cross and Musa have jointly taken control of the mass vaccination program to help the Sudanese Ministry of Animal Resources which are aiming to vaccinate livestock against common diseases like Rift Valley Fever ("Renewed Hope"). The Sudanese Ministry of Animal Resources is trying to prevent/protect the livestock so people can have the valuable products that they get from the animals. Mass vaccination improves food security by advancing the quality of the livestock. The quality of food security is the safety, health, and nutrition of livestock. These components are improved because the vaccine helps the animal fight disease which increases the safety and health of the livestock. The vaccination program is aiming to vaccinate around 700,000 livestock in Sudan ("Renewed Hope"). These organizations have a good thought process on how many livestock they should vaccinate. However, this program could spread across all of Sudan which means they need to train more people to be able to vaccinate all of Sudan. By doing this it would help Sudan tremendously and it would decrease the deaths in livestock that die from common diseases. Sudan needs this program to become countrywide vaccination because it will increase food security. By the quality of the livestock, the numbers of animals they can trade for food, and other daily needs. Improving food security in Sudan will help the people be able to have the products they want and be able to get them when they want them. They would not have to wait for it because of the borders that are closed. There are many ways to help provide protection from diseases.

Vaccines must be administered and stored on farms at the proper temperatures in order for them to function properly. The way vaccines function is by triggering the animal's own immune system to react and "remember" in the event that a future threat from a disease really materializes. Therefore, there is no risk associated with animal immunization for the food those animals produce for us ("Farm Animal"). These mass vaccinations are possible because if the vaccines are stored and administered right they will provide support for the animals. These vaccines help the immune system remember to react and fight off disease. This would the animal in the future because they could use their knowledge to provide the stuff they need to prevent diseases. Mass vaccination does not affect the food the animals produce that we use. Completing one final mass immunization, looking for the illness, swiftly reporting and containing outbreaks. In a last vaccine effort, they will attempt to vaccinate every animal in every county. After that, we'll stop immunizing. This is the final round of vaccinations. Each owner of cattle is responsible for paying for the vaccination of his or her cows. We will pinpoint the regions for vaccination where earlier vaccination efforts have fallen short with the assistance of the cattle keepers ("Community Awareness"). The local Sudanese people have extended their support to help mass vaccination of livestock. They have made a plan in which they said that they will attempt to vaccinate every animal in Sudan. They will stop vaccinating after the final round of vaccines. The farm owners or the owners of the cattle will need to pay for their vaccines. Local Sudanese will have assistance from the cattle keepers to see how to have the vaccination efforts work in Sudan.

Since the economy, resources for the livestock, and animal health services contribute to this trend, mass vaccination is a good solution that would help all of the livestock no matter what kind. Outbreaks of Rift Valley fever can be prevented by a sustainable program of mass vaccination in animals ("Rift Valley Fever"). Mass vaccination seems to have been helpful in livestock. Sudan has used vaccination in their country, but if we could get more people trained and have a couple that could be on farms it would help the animals in the long run. To get more people to administer vaccines, the government would have to publicize that farmers need more workers to inject the vaccine into their livestock. Administering more vaccines will help Sudan provide more locations for the community. It would also help food products because it would make the animals healthier. But, the vaccination does not affect the food products because the chemicals cannot be transmitted into the food. The live virus and inactive virus vaccines have been produced for only veterinary use. The live dose only uses one dose and it provides long-term immunity ("Rift Valley Fever"). Vaccination is helping the livestock because it provides immunity to common diseases and helps fight off them. One-shot vaccines help farmers be able to get every animal a vaccine and help prevent confusion on how to get them back to get another dose. This vaccine does not affect the products that we get from livestock because it does not get injected into the valuable protein.

Mass Vaccination can be done in a one-dose shot. There is another option where it takes two shots. However, this one has a few side effects. These side effects do not change the way the animal acts; it only changes how the animal reacts to the medicine. The inactive virus vaccine dose is required to have multiple doses to get the immunity to prevent/protect against common diseases ("Rift Valley Fever"). Even though the inactive virus vaccine requires more shots it still helps prevent/protect the animals from common diseases. The livestock mass vaccination program has to be admitted in the animals before the outbreak ("Introduction"). Mass vaccination has to be admitted before the outbreak because if it is not injected before the widespread outbreak the vaccine would not be as effective. An outbreak spreads fast so it could get from one livestock to another in a short amount of time. So making sure all of the animals are vaccinated is a good step to do if they want to prevent/protect their animals from common diseases.

Not only does mass vaccination in livestock improve the health and safety of animals. It also improves the well-being of the animal. Vaccination of livestock is currently managed by the International Committee of the Red Cross and is jointly owned by Musa ("Renewed Hope"). The ICRC has been a part of this program since 2013. They were trying to vaccinate almost 700,000 animals by 2021 but Covid had an impact on what ICRC could do. Covid shutdowns affected who Sudan could trade with and what they could do with the livestock. World hunger is not only affected by the quality, quantity, and availability of livestock, it is also affected by the health and safety of the livestock. If the health and safety of the livestock decrease. It will affect the quality, quantity, and availability because if there aren't enough animals there won't be enough quantity of food which decreases the availability. The quality of the food could be affected because the animal if the animal is sick. It could transmit the sickness to humans if that sickness is transmittable to humans. The government could fix this problem with vaccines or an antiviral that helps prevent infections/diseases in animals.

Mass vaccination is an excellent solution. That would help fix the unpleasant feeling that happens when people think about the health and safety of the livestock in Sudan. This program helps with animal health care by training people to vaccinate animals from outbreaks such as Rift Valley Fever. Mass vaccination should be an accepted solution by the government of Sudan because it improves food security. Thousands of animals should not have to suffer and die from common diseases because they are waiting to be exported for trade.

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