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Georgia UK, Factor 4: Animal Health

### **Georgia UK: Healthier Animals, Healthier Food**

Georgia, UK is facing an animal health crisis. While the population of Georgia may be shrinking it still has to keep up with its animal exports. There are not enough veterinarians for the animal population of the animal industry. Most farms owned are privately owned family farms that deal with small numbers of animals. Not all of those private farms will have enough money to be able to pay for the vet services such as vaccines and disease treatment such as Brucellosis and BTV (Bluetongue virus). Sometimes even if a farmer has the means to pay for the services like vaccinations, that specific vaccine may not be available when it is needed, due to supply and demand. Georgia has been a troubled country for many years being a war stricken country. Despite the population declining Georgia is regaining stability, however, they are still in need of help in the animal industry by way of animal health services. One example would be proper vaccinations and the proper techniques of administration.

Agriculture is the center of most everything in all communities whether it be in the city or country. All of the exports that it's ag industry produces makeup twenty nine percent of its total exports. Agriculture provides jobs, fulfills both the need for food of both humans, and all living things. Some of the crops used to create many common items we use today such as clothes, plastics, fuel, and medicines. The medicines needed to treat the diseases in animals. One of the things a small family farm creates through the agriculture sector is their farms, make a little extra money, more food on their plate, and more food in their belly. The money made from breeding and selling the animals helps to keep the family out of poverty. The food gives the families the nutrients that are needed to keep them from malnutrition and hunger. When a country is not starving it can focus on more important things. It cannot do great things in any capacity of industry until it has a stable environment, in the industry, agriculture, or even the workforce. Georgian people are fleeing the country at an alarming rate of approximately thirty nine people a day. Georgia's economy and all other industries are greatly affected by it. Fifty percent of all Georgia's workforce is in agricultural related jobs. Forty percent of their population lives in the rural area of the country. All of the exports that it's agricultural industry makes up twenty nine percent of its total exports.

Georgia had a tumultuous start it was a soviet territory before the cold war where there was instability and corruption then when it became independent the major populous came from immigration. Georgia went through a time of great growth before declining again. Once again the population is steadily descending daily.

The most recent major animal health problem in Georgia has been with Brucellosis. The way Brucellosis travels is by cows or heifers, coming in contact with contaminated feed, another way is carried is that it came in contact with infected cow milk, uterine discharge, or a calf that came from a mother that had it and was licked clean by another cow, or the remnants of a miscarriage were eaten. Another way that the bacterium can be transmitted is by A.I. if the bull has mated with something that has been contaminated, or by licking an infected animal. While issues with bulls can be almost entirely wiped out a symptom of a bull becoming infected by the bacterium is orchitis which is swollen testicles. The bacteria is able to live in the semen and then when the cow or heifer is inseminated directly into the uterus it will be transmitted to her. However, it has been found that if put into the mid-cervix there is a far lesser chance that the cow or heifer will become infected. If the bacterium is out of the way of the sun and is in a cool place it can live in the soil and/or surrounding areas for up to 2 months after being deposited, but out in the sun the bacterium is killed within a few hours.

*Brucella abortus* is the scientific name of a bacterium that causes reproductive problems in heifers and cows, resulting in miscarriages, retained placentas, stillborn calves, and the problems in the calves that do make it to birth can be weaker or underweight. While the previous problems listed do happen another thing to keep in mind is that most female cattle after being first infected with the brucella bacterium will only miscarry the next pregnancy she will have normal looking pregnancies thereafter but will still be shedding the bacterium her whole life. While the bacterium can be transmitted to other female cattle it can also be transmitted to other female wildlife such as deer, and even humans.

Brucellosis does have a vaccine (live) so it can be prevented but the main thing that keeps farmers from being able to use it is that either the prices are too high for the vaccination or the vaccine simply isn't available to the farmer. Bang's disease is another name for brucellosis because Bangs was the last name of a Danish vet who first found the brucella bacterium. After the vaccine was created it was nicknamed Bangs vaccine, nowadays only a licensed vet can give the vaccine and after the vaccine is administered a USDA metal tag plus a tattoo on the right ear. There is a time limit on what period of life a heifer must be vaccinated within as well (4-12 months of age.) There are multiple types of Brucellosis that affect more than just cattle, it affect sheep, goats, cats, and dogs. While it may not seem like a huge problem it compounds to make the problem huge because if one female in the herd gets it they all will get the infection within a short period of time. Like the avian flu that swept through Iowa last year, where we are still seeing higher egg prices because the lack of eggs from those hens that had to be destroyed. Georgia will have a higher cost of beef because the cows and heifers that produce the cattle to go to slaughter aren't producing those calves, the calves are just dying and not growing up to go to slaughter. The solution to all of these cows and heifers getting Brucellosis is to quarantine those that are tested positive and/or come from a herd that is known to have the bacteria. Then keep the healthy ones together and make sure that they have or get the vaccination.

In today's day and age Georgia is having a hard time with its economic growth, employment, health services for both humans and animals, because they don't have a great infrastructure, because of the . Putting an emphasis on animal health will help Georgia and the region it is in as well because if the animals are healthy then they are more productive and will produce more food which will fight poverty (money from the animals), hunger, and malnutrition (by putting out more food, the more nutrients the people will be getting.) While the population levels of malnutrition are slowly decreasing it should not be considered fixed until 0% of the population is malnourished. In 1991 the percent of the population of malnourished people in Georgia was a whopping 57% in 2015 it dropped a staggering 50% to be at the current 7%. While those numbers are getting better it is only because of the hard work that many of the farmers/ranchers/vets and animal health organisations have done.

There are many organisations that are trying to help such as the Austrian Development Cooperation (ADC), CARD-the Center for Agribusiness and Rural Development, and Heifer Georgia International (HGI), these are just three of the many organisations and programs trying to help, like HGI they have a project that benefits the agrarian population of Armenia and Georgia by improving their animal husbandry and animal health practices. After helping the farmers be more productive it will help to boost trade across the border and as an effect of that it will help bring in a better income and improve living conditions within Georgia and the surrounding region. Another project is "The Animal Health Management in Cross-Border Areas of Armenia and Georgia" this project is working to improve animal health services for 200 small communities. They will do this by making information on animal health more readily available for people in those communities, such as another effect like CARD and HGI they also help Armenian and Georgian governments' strengthen cross border economic links by having better veterinarians services and more readily available information on the control and prevention of animal diseases such as Brucellosis and BTV. All of the projects and services are working to train more veterinarians that will help the local farmers, these veterinarians work with associations that help

advocate the control and prevention of infectious animal diseases in the areas they serve. These vets have created a sort of public awareness that will give knowledge to the agricultural population in the area on advanced methods of treatment and prevention of animal health, and diseases. Between farm service centers and vet service units there are now nearly 7,000 more farmers in Armenia and Georgia that have animal health services accessible.

HGI, which is heifer georgia international, strives to help farmers in georgia, two ways, it helps families by giving them an animal typically a heifer, and teaching them how to care for it. Think of the proverb “you give a man a fish and it will feed his family for a day, give a man a pole teach him to use it and it will feed his family for years” HGI gives a family an animal that can provide them food chickens/eggs, cattle/beef or milk, goat/cheese or milk. There is one stipulation with the gift and that is the family must donate their first born female animal to a family that does not have one and it must continue to be passed on, and that they also pass on their knowledge of that type of animal. The knowledge and care of the animals that the people are taught is how HGI helps in the fight against BTV(bluetongue virus) and brucellosis.

There are five top people that work in Georgia for HGI they are part of a bigger group simply named Heifer International, and those 5 people are. George Murvanidze, Country Director, he has over 20 of expertise in international programs/organizations such as UNDP (United Nations Development Programme- in general they help improve people's life by giving knowledge and resources), USAID(United States Agency for International Development- in general they help with overseas foreign aid), Save the children(in general they promote kids rights and support kids in developing countries), he has a PhD in biology and has had several courses in ag. production/marketing, and project evaluation and monitoring, George has is also a member of Georgian National Animal Health Program Steering Committee which is also monetarily supported by the USDA it lobbies livestock supportive programs as well as animal health problems.

Natalia Gambarashvili, Finance Administrator. She is in charge of the main office and projects such as financial issues and reporting them. Her job is to keep track of the accounting, do the financial training as well as support the project holders by monitoring financial reports regularly, preparing financial reports and on occasion assisting project holders with questions about their tax reports. Mrs.Gambarashvili has a degree in English language and literature, she has also taken multiple courses in accounting more specific to Georgia laws for taxes. Natalia began her work with Heifer Georgia in 2008, she had worked in other organisations previously Mercy Corps(in general they are a group focused on humanitarian aid, helping out with natural disasters or a collapsed economy) and Save the children, just to name a couple.

Medea Tsitskishvili, Program Manager. Medea is in charge of HGI's ongoing projects, new project design/development, and project progress reporting. Mrs. Tsitskishvili is also involved in communicating with HGI's international and local partner organizations, main headquarters and field staff. She holds a degree in liberal arts and has taken part in many international training programs in bookkeeping, tax law, business, as well as ag. Management and development. Medea has been involved in HGI since 2003 but only joined in 2007 and has been working hard since.

Ramaz Giorgobiani, Project Coordinator/Trainer. Ramaz does projects and does the training ops in HGI. He has a PhD in ag and is a qualified ag. Specialist. Mr Giorgobiani joined HGI in 2008 and had previously worked in other organizations including Save the Children. He has taken many training classes in community mobilization, animal feeding, general management, seed production, vet, as well as business planning and advocacy.

Kakha Kebuladze, Heifer Georgia Field Assistant/Monitor. Kakhaber does the program monitoring procedures and logistics. He holds a degree in economics and as a retired Financial Lieutenant Colonel

he is in charge of security. Mr. Kebuladze joined HGI in 2008, but before joining the HGI team he was an office manager in CARE International.

Now it may seem like just a list of people I put on there but they are the hard working team that is trying to make sure that all livestock in Georgia is healthy, and that there is plenty of food to go around to all the people within Georgia.

#### Personal stories

Irakli Daudashvili is a veterinarian and a specialist at the National Food Agency of the Ministry of Agriculture in Georgia in the Dmanisi community. He is one of only five vets that took part in the training of trainers that was started in Austria by the Austrian Agency for Health and Food Safety (AGES.) He is currently sharing his expertise with about fifteen veterinarians in the Kvemo Kartli region who had formed a veterinarian association to to promote the veterinarian profession that is able to provide an every widening amount of services to farmers Irakli says, “Thanks to the project our regional veterinarian association is becoming popular among farmers; we receive many calls daily, and have new equipment at our disposal”

Another example of what those types of services are helping to do is the Voskanyan brothers, they are in the animal breeding business and had been for many years, but they were just raising poor quality local cows/heifers in an old traditional style barn, they paired up with Vardan Papoyan a veterinarian of the project that specialized in improving cattle genetics through A.I. (and working on better feed and barn management), through consultations and veterinarian services they now have a higher quality herd and the profits are starting to come in again Armen Voskanyan says, “We are constantly provided with professional advice from the veterinarians and through the workshops provided by CARD. Now, we are managing our herd much better and profits are increasing”.

Georgia is being faced with another epidemic, Bluetongue virus, it is affecting their meat supply (goats/sheep/cattle) five isolated outbreaks have been discovered and tested positive for the BlueTongue Virus or BTV, it is an insect borne virus that affects ruminant mammals, it causes a swelling and discolorations of the lips and tongue, hence the name Bluetongue. About 2,190 head of sheep are believed to be at risk with 68 infected animals and 35 animals euthanised so far. The sheep/goat export of Georgia represents about twenty-three percent of its exports and is worth about 13.8 million.

BTV is far more common in fine wool and mutton breeds, presumably because the breeding that goes into making a breed makes it much less resistant to some diseases, and viruses. The mortality rate is different for different breeds but ranges from a two percent to a ninety percent mortality rate.

The insect that carries the virus is know as a midge they are small two winged flies that typically live in swampy areas, they can travel 1.5-2 km a day but with windy conditions travel 200 km over open water. BTV is insect borne virus so the proper way to prevent it is by getting rid of as many insects as possible. Fly strips, pour on insecticide, netting when they are inside to prevent bugs getting in but all of this is expensive and not always one hundred percent that it will keep all midges away. There is a vaccine but it is not always available to the farmers due to supply and demand, there is no effective treatment for an animal with BTV the infected animal can be given antibiotics to prevent secondary infections but there is no treatment once BTV sets in it is a virus and has to be waited out to see if the animal will pass or not.

My solution to this problem would be to have an insecticidal spray done as often as needed to kill midges, like what they used to do to mosquitoes in Florida. Efforts would be made to try and make the treatments as cheap as possible for the farmer. Another option would be to make the vaccines as cheap as possible and more widely available for those farmers that need it.

Twenty percent of Georgia's land is arable for crops and another thirty percent is usable for livestock but of that thirty percent, ninety-nine percent of that is owned privately. There is not enough room for that many people to be able to buy land that can be used for livestock, no new people can come in and make the animal industry there efficient. A typical family farm is on 15 hectares by comparison the average family farm in the US is equal to about 180 hectares. On that bit of land they have to make their livelihood.

As a result of poor availability in vaccines and not enough veterinarians to take care of the animal industry, the animal industry does not have enough resources to keep current diseases at bay. Therefore they are required to treat the ones that the vaccines don't prevent. While there are many programs out there to help the farmers in need, there are just too many farmers in need of help. The programs themselves need more help, more volunteers, and more money to keep going and helping more farmers in the animal industry. If we are going to try to fix this problem, then vaccines, animal health care, and proper animal care information all need to be made more readily available and cheaper for the farmers. In order to fix this problem ALL types of animal health care must be made cheaper and made more readily available.

While it may seem inappropriate to suggest vaccines when the farmers may not know about how to administer them or have access to them, it does help because by having animal health organizations helping out and having those health practices in place when the farmers are ready for them just helps to speed up the process of getting better/healthier livestock. Your everyday farmer may not be able to develop new technologies in labs but he or she can spread animal health awareness to their neighbors and fellow farmers

There are some medical companies like GlaxoSmithKline and Pfizer that subsidize human vaccinations in places that have poor health care. I think that if big pharma companies in the animal industry were to start helping out and subsidizing their vaccines just the drop in price would help out the farmers that require the vaccines. HGI and other animal health organizations are already spreading the word about animal health (that means vaccines), the roads and transportation aren't an issue so the only thing holding back the farmers from getting the vaccines and chemicals required to fix the issue is the cost of it, and I believe that by lowering the cost of it would fix the problem.

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