

Goats in Uganda – University of Minnesota and Makerere University One Health Experience

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Background

This field experience was an opportunity for international colleagues to focus on goat production systems in three distinct areas of Uganda: Gulu, Kotido, and Mbale. This experience allowed a Veterinary Public Health and Preventive Medicine (VPHPM) resident from the University of Minnesota (UMN) and One Health Residents at Makerere University in Kampala, Uganda to work closely together. We focused on three main ideas: (1) the role goats play in the lives of those recovering after the insurgency in northern Uganda; (2) how the small land holders in the mountains of Uganda use goats to cope with diminishing land amidst increasing population size to meet the nutritional challenges of the population and improve their incomes; (3) the role goats play in HIV infected and affected families to provide a relatively inexpensive, wholesome source of protein for family members.

The primary goal of the program was to jointly identify benefits and challenges of the systems in place in Uganda and compare them to small ruminant production systems in the U.S. We identified areas of need in the existing goat programs and were able to identify potential areas for One Health programs that could pair animal and human health assets. Additionally, we identified areas where U.S. Army Veterinary Corps Officers (VCOs) and other groups could be helpful long term in this type of environment.

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and the USAID-RESPOND-OHCEA project. The project dates were May 5th - 19th, 2014, with planning before and wrap-up after.

Gulu

In the area near Gulu, we visited 18 locations with goats. In this region, goats are individually owned and managed. All of the goat farmers received two doe(female)goats from Heifer project International through a community based organization. The level of success with this project varied greatly from person to person. Some goat farmers had as many as 10 goats, while others remained with only one, and some had none remaining. The primary breed in this area is the small East African goat breed. This breed does not require a lot of food to maintain a good body condition when compared to larger breeds. This breed also does well with high ambient temperatures and seems to handle intestinal parasites fairly well. The does reportedly have one to two kids, depending on the level of nutrition.

In this region, goats are used primarily for money. The money made on these animals is typically used to pay school fees. The families in this region rarely eat goat meat or drink goat milk. Because there is no reliable way to preserve extra meat, eating goat meat is typically saved for occasions when many people gather together, such as weddings, funerals, and holidays. The goats sell for 60,000 – 250,000 USh (~23 – 95 USD) depending on the age, sex, and condition of the animal.

Some common problems reported in goats in this area include fever, diarrhea, intestinal parasites, upper respiratory infections, and Orf. Goat vaccinations are not available. This district has three district veterinarians. Non-district veterinary services are cost prohibitive, and sometimes the service providers are not well-educated on animal diseases. This can lead to

improper treatments. Other animals observed in this region include chickens, hair sheep, and dogs.



East African goat breed, doe and kid, Gulu

Kotido

In the Kotido area, a group of women sold handmade crafts in order to buy goats. The goats are mostly the East African breed. In this group, the goats are individually owned and managed as one community herd. This allows the group to provide better security, medical treatments, and herd health monitoring. The group has about 60 goats total. Reportedly, twinning is common in the herd. When goats are sold, a tariff is paid to the group in order to cover medical care and preventive treatments such as acaricide, and dewormer.

In this community, goats are used for meat, milk, and money. The group believes that children gain weight better with goat milk than with cow milk. The goat management challenges faced in this region include hunger, especially in the dry season, foot rot, caprine pleuropneumonia, peste des petits ruminants, mange, and intestinal parasites. Additionally, the community animal health worker suspects brucellosis in the herd due to multiple goat abortions. The Ministry of Agriculture, Animal Industry, and Fisheries (MAAIF) tested the herd one year ago, though no results have been reported back to the group.

In this region, we also had an opportunity to meet with a very dynamic District Veterinary Officer (DVO) and a few Community Animal Health Workers (CAHWs). The challenges they mentioned included decentralization of veterinary services, no government money for certain projects and salaries, foot and mouth disease in the region, and a lack of technical staff. This area has three district veterinarians. CAHWs are often employed by nongovernmental organizations (NGOs), which offer higher pay than the government. This causes some dissention between the government CAHWs and NGO employed CAHWs. Government veterinary officers also mentioned that the “free drugs” offered by many NGOs can cause problems between CAHWs and farmers because free drugs and services becomes the expectation. Additionally, the veterinarians in this region report seeing resistance to certain medications. They suspect that this is due to administration of improper treatments.



Kotido community goat farmers



Kotido goat herd, East African breed

Mbale

Our first experience in Mbale was with a mountain community. We were able to have a community meeting with this group. In this area, goats are used for milk, meat, manure, and money. The goats are often housed in structures off the ground, allowing the manure to drop through. Manure collection is easier this way and manure is collected and spread in gardens regularly. The group was very vocal about how goat milk tastes better than cow milk, and that children grow faster when drinking goat milk. In this community, meat is shared and eaten regularly. Some common problems with the goats include diarrhea, intestinal parasites, and pneumonia. Other challenges that were mentioned included the lack of good market for milk (~1,000 USh/L, 0.38 USD) and lack of feed in dry season. This community found the veterinary care to be good, with adequate access and acceptable fees.

One big difference in this area when compared to the others we visited is the common goat breeds. This area had crosses of East African with Toggenburg, Alpine, and Saanen milk breeds. In this area, goats often had one kid, and sometimes had two to three. This seemed to depend on the cross of the doe as well as the nutritional status of the doe.



Mbale mountain community

The other farmers that we met with in Mbale had similar dairy breed mixes. There were two separate groups. One group included those families affected by HIV. This group received one doe each from Heifer International. Members of the second group, an extension of JOY goats from Masaka, received 1 male dairy cross goat each and were expected to purchase females from farmers in the area. The goal of the second group was to achieve 50% dairy crosses. This project was started in 2008.

All of the farmers in Mbale report serving milk to their children and some drink milk themselves. A few have enough milk to sell. Live goat prices vary greatly (60,000 – 200,000 USh, ~23 – 76 USD) depending percentage of the dairy cross, age, sex, and condition. Individuals that keep market connections tend to sell animals for a much higher price than those who do not keep the connections.

There are six government veterinarians in the region, and many people reported that their access to veterinary services is acceptable. The main challenges mentioned in these groups

included problems getting feed in the dry season and the cost of medical treatments when needed.



Dairy cross goats, Mbale

Overall Summary

Despite the relatively small size of Uganda, we observed extreme regional variability in foliage, goat rearing, and goat use. The political climate is important and difficult to navigate. Each of these areas has very low income levels and poverty makes anything requiring funds difficult. People often have to sell animals in order to pay for school fees, food, or medical expenses, leaving them with even fewer resources. We noticed that while all regions received some NGO support, Kotido received quite a lot of NGO support. The people in this area seem to expect outsiders to provide free services at no cost to them.

In all areas, large families with many children are a part of the culture. Many cultures and languages exist in these regions, making communication difficult and highlighting the importance of involving community leaders. Across the country, well-trained veterinarians and technical staff are limited by funds and personnel shortages. This leads to underserved areas.

There is a need for more extension work and/or community leaders to follow up on the existing programs and to offer advanced training to those farmers who are ready for it. This can create competition in the market, which is one reason certain successful farmers are hesitant to provide training and advice to others. It was clear that the most successful farmers are those who take responsibility for both the successes and failures on their farm. The successful farmers also understand how to market their products and keep those market connections strong.

In all areas, we observed that none of the farmers currently dry and store foliage for feeding goats during the dry season. When we asked about this, we were told that people were unaware of this option and did not know how to safely dry foliage. This is something that should be considered, as farmers from all the areas we visited mentioned that adequate feed during the dry season was a problem. Farmers in many other countries regularly dry grasses as hay for feeding ruminants. These procedures could easily be shared with farmers in Uganda.

We observed that there is a potential for linking community support activities, such as training on goat rearing, with human health activities, such as family planning. For instance, we visited a farmer who was doing very well with his two Toggenburg dairy goats from which he was getting about 14 liters of milk daily. He had eight children whom he termed as, “a small family of eight;” this made it very difficult for him to realize much nutritional and economic gain from these goats as there was a competing need to feed a big family while at the same time sell enough milk to make money. We felt that small ruminant projects could be paired with human health projects. This would allow for animal management education to be given alongside health education on family planning, child nutrition, and immunization. This would comprise a multidisciplinary approach leading to more output with little input attributable to resource sharing.