# **Field Report: Traditional Methods of Rwandan Goat Production and Management**



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*Keywords*: Rwanda, livestock, gender, traditional agriculture, economic development, Africa, goats

doi:10.18113/P8ik159751

#### Introduction

Looking down from one of Rwanda's thousands of hills, you see specks of white, brown, black, or possibly a mixture of all three, decorating the grassy hillside. GOATS! In Rwanda, and much of Eastern Africa, goats can be found pretty much anywhere: hillsides, backyards, on the side of the road, everywhere! During my first trip to the country in 2012, I decided to conduct my honors thesis research on Rwandan goat production. Since that initial decision, I have learned much more about Rwandan goat management and production than I ever expected. In order to accomplish this task, I visited Rwanda in 2013 and 2014 for two weeks each time to conduct interviews with a total of thirteen goat herders. I also interviewed local veterinarians and veterinary students in order to assess the overall status of the goat in Rwandan goats. This report outlines the findings from these interviews, highlights the traditional methods of goat production, and analyzes the incorporation of modern approaches with traditional knowledge.

# A Brief History of Rwanda

Prior to colonial settlement, Rwanda was first inhabited by the Twa people and then later occupied by the Hutu, followed by the Tutsi by 900 AD. Since approximately 1500 AD, there has been ethnic division between the Tutsi and Hutu. Livestock were utilized as a means of payment and political reward; therefore, cattle, sheep, and goats became associated with status in society, further potentiating conflict. However, ethnic tensions were greatly exaggerated by colonial rule, including German rule in 1885 and Belgian rule, which lasted from 1918 to 1961 (Rwamasirabo 1990; Twagilimana 1998). These increased tensions led to class conflict that culminated in the Rwandan genocide in 1994, during which an estimated eight hundred thousand individuals were murdered (McKay and Loveridge 2005). In addition to the loss of human life, livestock were also slaughtered, devastating the livestock industry. Since the genocide, Rwanda has focused on regeneration and peacebuilding, both of which have helped to rejuvenate the livestock sector.

#### The Importance of the Goat in Rwanda

Goats have played a role in Rwandan societies for centuries, serving not only as a means of income and food, but also fulfilling more expansive roles. In the early colonial period, goat meat was the staple of Hutu diets, but today is consumed by all ethnic groups (Taylor 1988). Personal interviews revealed that Rwandans prize goat milk for its nutritional qualities, citing it to be more nutritious than cow's milk and, therefore, a more effective combatant against childhood malnutrition. Furthermore, goat manure is utilized as a biofuel and fertilizer (Riethmuller 2003).

On a different level, goats hold a place in Rwandan traditional ceremonies. For example, Taylor (1988) cites the donation of a goat to a couple upon the birth of their first child. Goats can be employed to strengthen community ties. For example, due to the lack of refrigeration in rural Rwanda, goat meat must be consumed shortly after slaughter; often times, families will share goat's meat with each other as a form of promoting societal bonds. According to two of the interview respondents, they donated live goats to local families in need, rather than sell them on the live market. Interestingly, according to the interviewees, while the goat continues to serve as a means of increasing neighborly relations, it no longer

functions as a means of social status, as it did in colonial times. At present, the number of goats possessed by an individual does not represent a form of wealth; however, this is not the case with cattle, particularly those of the Ankole-Watusi breed.

Ownership of goats also tends to empower women in the Rwandan society. Women have been the traditional raisers of goats since the time of their domestication nearly eleven thousand years ago (Fernandez, Hughes, Vigne, Helmer, Hodgins, Miquel, Hanni, Luikart and Taberlet 2006). The current proportion of women involved in goat herding in Rwanda is 26.3 percent (Murangwa 2010). According to the female goat herders interviewed, men learned of the economic incentives of goat herding, quickly entered the field, and took over the occupation. As more women continue to make strides in the goat herding sector, even as a sideline business, they will become more capable of generating their own income and supporting themselves.

### **Indigenous Methods of Goat Production in Rwanda**

Due to their small size and agility, goats are well-suited for grazing the steep hills of Rwanda; thus, goat herding does not require any intensive process that demands full time attention. Furthermore, the digestive system of goats allows them to digest the sparse, nutrient-poor browse that decorates the hillsides and convert it into value-added products, such as meat and milk. In this manner, they are similar to cattle; yet, goats have the advantage of being smaller and less expensive, making them a more manageable and lower-risk investment. Based on these attributes, the traditional form of goat production and management in Rwanda involves allowing goats to graze in open areas. In other words, there are very few inputs for goat herders to provide. The advantages of such a system are that the goats are spread out in a way that decreases their contraction of parasitic and respiratory diseases, which are often caused by overpopulation and/or crowded conditions. Low input also translates to high profit if the goats are marketed.

In most cases, goat herders identified goat markets as a traditional means of selling live goats. Unfortunately, there are challenges accompanying this system, such as the lack of transportation and roadways to such marketplaces. Rwandan goat herders also face problems including insufficient land and water, financial constraints, lack of veterinary expertise, inadequate genetic stock diversity, and poor nutritional quality of forage. Tackling these problems will require a multifaceted approach that involves collaboration between goat herders, veterinarians, and the Rwandan Ministry of Agriculture and Animal Resources (MINAGRI).

### **Current Status of Traditional Goat Production in Rwanda**

All thirteen of the interviewed goat herders incorporated some form of traditional goat production method into their herding, whether it was complete compliance with the tradition or more of a semi-intensive method. However, several of the goat herders suggested that they were moving toward a more modern, completely intensive system in which goats are stabled at all times and food and water are brought to them. The reason behind such a system is a perceived increase in profit; yet, there are complications, such as the aforementioned respiratory disease and parasites. Furthermore, intensive systems require more time and labor, making them a less viable option to be conducted as a side business.

#### Reflection

Over the course of my two field experiences in Rwanda, I developed a greater appreciation for both the goats and the herders involved in both goat management systems. While users of the more modern, intensive system generally dedicate more time per day to managing their goats, individuals who employ the traditional system preserve the indigenous knowledge of goat herding that has served herders for centuries, while relying on the hardiness of goats to sustain themselves on the grassy hills of Rwanda. I am fascinated by traditional methods of goat production, as they are capable of producing hundreds of goats per year without modern amenities, such as dewormers, commercial medications, and input from veterinarians, who are rare in Rwanda. Instead, they rely on substances that are more readily available. For instance, one goat herder provided her goats with water in which beans were cooked in order to increase her goats' nutrient intake. Other herders relied on plants high in tannins, such as Sesbania spp. and Lespedeza, to prevent intestinal parasites (Cannas 2014). Interestingly, such techniques are spreading to the United States as organic agriculture rises in popularity.

#### Conclusion

There is clear evidence of traditional goat herding methods throughout Rwanda, as can be seen by the tri-colored herds that populate the hillsides. Yet, many goat herders appear to strive toward a more "modern" approach characterized by an intensive stabling system. More studies must be conducted to assess the potential economic benefits of this system over traditional grazing before major conclusions can be drawn. While there are possible advantages to the modern system, there are still many positive aspects of the traditional system.

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To view Kira's ICIK seminar on Rwandan goat production and management, <u>visit</u> <u>the ICIK website</u>.

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