

Division of labor during care of small ruminants, a case of Mwala sub county, Machakos County, Kenya

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Abstract

Sheep and goats play a vital role in the livelihoods of small-scale farmers in developing countries. They contribute to food security through milk and meat production and indirectly through cash earned from the sale of their products. The purpose of this study was to assess division of labour during care of small ruminants in the study area. Sample size was 120 respondents. Structured questionnaires were used to collect data. Results showed that majority (67.5%) of the households kept indigenous goats followed by indigenous sheep (15%). About 44.2% had house hold size of 3-4 persons, followed by households with 5-6 persons (33.3%). Women were responsible for most of goat and sheep rearing activities such as cleaning of shelter (66.7%), supplementary feeding (70%), watering (73.3%), selling (48.3%), milking (80.8%) and making decisions on the selling of the milk (75.8%). In 75.8% of households, sheep and goats were owned by men. Men also constructed livestock shelters (65%), made decisions when to slaughter for home consumption (50.8%) and when to sell (49.2%). However, it was reported that women were the ones who took the sheep and goats to the market. Children supported their parents in construction and cleaning of shelter, feeding and watering.

Key words; goat, labour, Mwala, sheep, men, women

Introduction

Sheep and goats, the main small ruminants (Verbeek *et al.*, 2007) play a vital role in the livelihoods of small-scale farmers in developing countries. They contribute to food security and can alleviate seasonal food variability and availability directly through milk and meat production and indirectly through cash earned from the sale of their products (Homann *et al.*, 2007). In semi-arid areas goats and sheep have comparative advantages over cattle. Since they are more resistant to droughts, they utilize a wider diversity of plants and or grass and their higher reproductive rate allows populations to recover quickly. As browsers, they use different vegetation than cattle and thus allow farmers to

make more efficient use of the available natural resources. In addition, goats play an important socio-cultural role. Promoting goat/sheep production contributes to risk mitigation, particularly in drought-prone areas, and empowerment of vulnerable groups (Women, HIV/AIDS, poor) (Delgado *et al.*, 1999).

Upton (1984) noted that the potential returns from sheep and goat keeping under the traditional management system are high. In Sub Saharan Africa, goats are used for customary rites in addition to meat production and religious purposes (Odeyinka *et al.*, 2004). It has been documented that sheep and goats are the principal domesticated small ruminants in terms of total numbers and production of food and fiber products. This attribute may partly be due to their lower feed requirements compared to cattle, because of their body size (Okunlola *et al.*, 2010). This, however, allows for easy integration of small ruminants into different farming systems (Hirpa *et al.*, 2008).

Goats are deeply embedded in almost every African culture and are true friends to the rural poor and yet have received very little attention by African governments and there is little investment in their development (Peacock, 2005). Goats are kept on small farms at subsistence level and most of the milk produced is supplied immediately to households and neighbors for personal consumption as fresh milk or processed (Rubino *et al.*, 1996). According to Thear and Fraser (1986), people allergic to cow milk do not react to goat's milk. In spite of the importance of livestock, a recent review on the importance of livestock for women by Kristjanson *et al.*, (2010) argued that despite two-thirds of the world's more than 600 million poor livestock keepers being rural women little research has been conducted in recent years on rural women's roles in livestock keeping.

Therefore, this study sought to establish household labour dynamics during the care of small ruminants in the study area.

Objective

To establish household dynamics during care of small ruminants in arid and semi-arid lands of Kenya, using Mwala Sub County in Machakos County, Kenya as an example

Methodology

Mwala Sub County is located in Machakos County, one of the 47 Counties of Kenya. It lies between latitudes 0.45'S and 1.31'S and longitudes 36.45'E and 37.45'E and has a total area of 6,850 km². The region receives bi-modal rainfall ranging from 700 - 900 mm/annum and experiences mean temperatures of between 17 - 24°C.

The study used cross sectional survey research design. A simple random sampling procedure was used. This method was preferred because it ensures that all members of a population have an equal chance of being selected for study (Mugenda *et al.*, 2003). The two study locations (Kyawango and Mukaa) have a total population of 7689 households (Kenya Population and Housing Census, 2009). The researcher used a sample of 120 respondents as supported by Kathuri *et al.*, (1993) who contends that a minimum sample of 100 is sufficient to infer the whole population. The extra 20

respondents were necessary to cater for attrition. With this, each location gave 60 respondents chosen randomly.

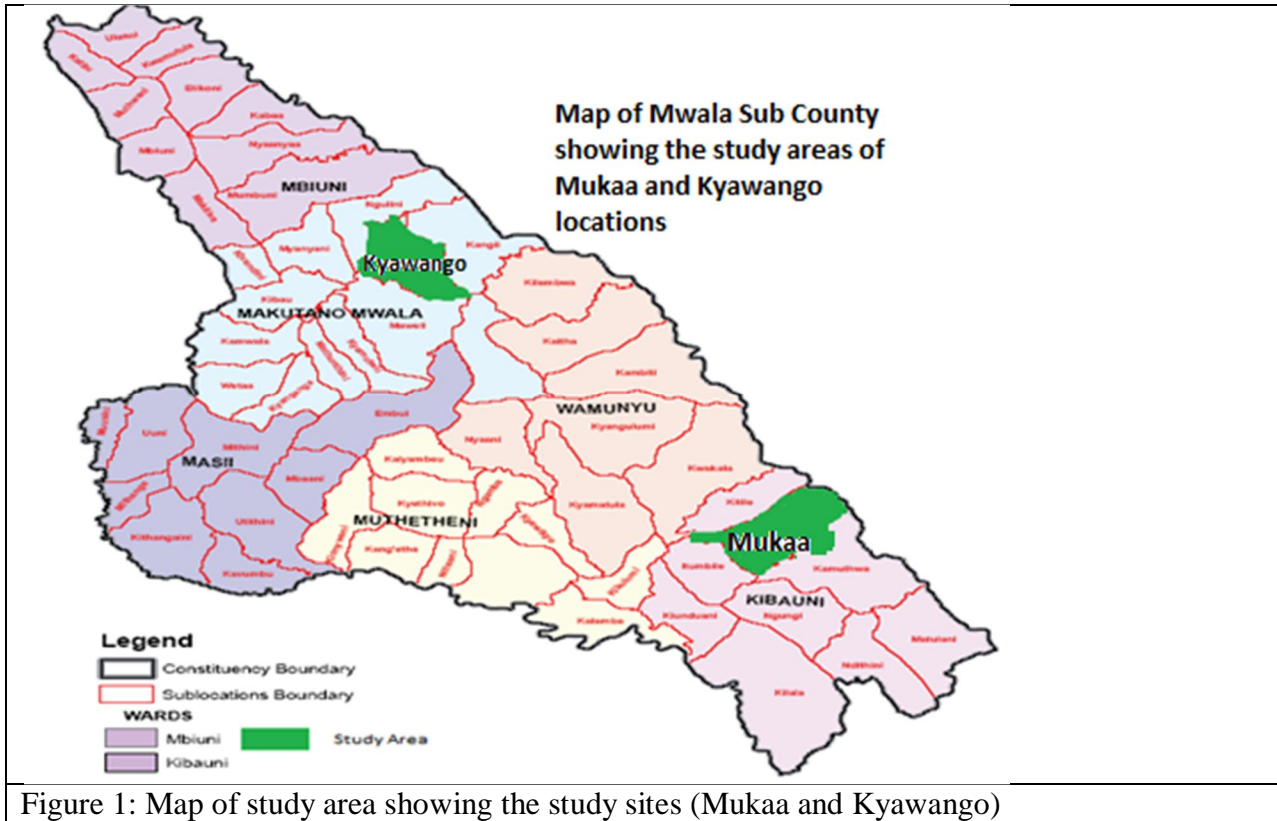


Figure 1: Map of study area showing the study sites (Mukaa and Kyawango)

Both primary and secondary data sources were utilized during the research. Structured questionnaires were used to collect quantitative data, while Focus Group Discussions (FGDs) and case narratives were used to collect qualitative data. This was done using a Checklist. Data analysis was done using the Statistical Package for Social Scientists (SPSS). Simple descriptive statistical measures such as percentage, frequency, mean, mode and median were generated and presented in tables and graphs.

Results and discussion

Breeds of sheep and goats that were kept by respondents are presented in Table 1.

Table 1: Goat and sheep breeds’ distribution

Breed	Frequency	Percentage
Indigenous Goat	81	67.5%
Improved goat	3	2.5%
Indigenous sheep	18	15.0%
Improved sheep	1	0.8%

Table 1 shows that majority (67.5%) of the households in the study area kept indigenous goats followed by indigenous sheep (15%). Both improved goats and sheep were not common among the

respondents. The study agrees with Verbeek *et al.*, (2007) that indigenous breeds of sheep and goats are the most popular genotypes in Kenya. A breeding program should therefore focus on improving these breeds according to farmers' preferences.

All the households interviewed had their households' sizes established as shown in Table 2

Table 2: Household sizes

Household size	Frequency (n=120)	Percentage
1-2	8	6.7%
3-4	53	44.2%
5-6	40	33.3%
Above 6	19	15.8%

Majority (44.2%) of households interviewed had house hold size of 3-4 persons, followed by households with 5-6 persons (33.3%). ILCA (International Livestock Centre for Africa), 1990 states that larger households usually have larger herds/flocks, ease of marketing , more stock and benefits from economies of scale due to the large family labour source. ILCA (1990) further states that the amount of household labour available and the manner in which that labour is allocated between critical farm and non-farm tasks will directly influence: the size and structure of the livestock enterprise, management techniques (e.g. herd splitting) and management performance, and levels of marketing.

Use of family labour during rearing of sheep and goats in the interviewed households is established as shown in Table 3.

Table 3: Division of labour among household members during sheep and goat rearing

	Women		Men		Children		Other Family	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Owner of sheep and goats	15	12.5%	91	75.8%	0	0.0%	0	0.0%
Constructs shelter	20	16.7%	78	65.0%	5	4.2%	3	2.5%
Cleans shelter	80	66.7%	14	11.7%	8	6.7%	4	3.3%
Gives supplementary feed	84	70.0%	6	5.0%	5	4.2%	4	3.3%
Watering	88	73.3%	9	7.5%	5	4.2%	4	3.3%
Selling	58	48.3%	46	38.3%	1	.8%	0	0.0%
Milking	97	80.8%	2	1.7%	1	.8%	0	0.0%
Docking for sheep	15	12.6%	3	2.5%	1	.8%	0	0.0%
Makes decision for selling sheep and goats	43	35.8%	59	49.2%	0	0.0%	0	0.0%
Makes decision for selling milk	91	75.8%	8	6.7%	0	0.0%	1	.8%
Makes decision for home consumption	44	36.7%	61	50.8%	0	0.0%	0	0.0%

It was established from Table 3 that women in the household were responsible for most of goat and sheep activities such as cleaning of the shelter (66.7%), supplementary feeding (70%), watering

(73.3%), selling (48.3%), milking (80.8%) and making decisions on the selling of the milk (75.8%). Men on the other side owned most of the sheep and goats (75.8%), constructed their shelter (65%) and were majorly responsible for decisions such as when to slaughter/home consumption (50.8%) and selling of the shoats (49.2%). However, it was reported that women were the ones who took the shoats to the market. Children supported their parents in construction and cleaning of shelter, feeding and watering.

According to Solomon *et al.*, (1991), labour in livestock production means physical labour inputs, control of the labour and decision-making. This study findings agree with Verbeek *et al.*, (2007) that Kenyan women own small ruminants, but their number is much lower than that of the men. This study also agrees with the African Development Bank gender equality report in 2015 which notes that in Africa, women are the most active economic agents than anywhere else in the world and they perform the majority of agricultural activities.

Conclusions and recommendations

In conclusion, it was found that indigenous goat and sheep breeds were preferred in the study area. Most households had family sizes consisting of three persons and above. All the household members participated in activities towards rearing sheep and goats as established by the division of labour. Women participated in many and more labour intensive activities than any other household member.

It is recommended that breeding programs be up scaled and should target on improving breeds according to farmers' preferences. More farmer sensitization activities should be undertaken with their messages targeting towards ensuring gender equality regarding division of labour.

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