



Original Article

Sheep and Goat Marketing and Consumption in Relation To Religious Festivities in Shifting and Permanent Farming Systems in Western Ethiopia

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ABSTRACT

This study explored sheep and goat marketing and consumption in shifting farming system (SFS) and permanent farming system (PFS) in relation to festivities in Western Ethiopia. A cross-sectional random survey involving 180 households (HHs), marketing survey that provided 676 observations and focus group discussions were used to collect marketing and consumption data from the two farming systems (FSs) representing SFS and PFS. The largest supply and sales was recorded during Christmas followed by Eid Al-Adha, Eid Al-Fetir in both FSs. Prices and utilization per HH increased by up to 11.2% and 73.0% in SFS and 19.2% and 82.2% in PFS during festivals, respectively. Skin color, buyer and seller types affected prices. Sheep was preferred for HH use in both communities. For producers to better benefit from higher prices during festivals, they have to plan their production and supply to match with the fluctuating but predictable patterns of demand.

Keywords: communities, Ethiopia, marketing constraints, prices, religion, utilization.

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INTRODUCTION

In Ethiopia, sheep and goats provide 25% of the domestic meat consumption with production surplus, which is exported mainly as live animals (Markos, 2006). Smallholder farmers obtain regular and irregular benefits such as meat, manure, insurance value and social status from keeping sheep and goat (Thomson *et al.*, 2000). Their greatest value in farming systems is associated with small size, low individual cost, rapid turnover, and the conversion of feed resources not directly consumed by humans: natural pastures, fallow grazing, browse and crop residues (Budisatria, 2006; Markos, 2006; USAID, 2006).

Shifting farming system (SFS) and permanent farming systems (PFS) are the two major

farming systems (FSs) practiced in Assosa area of Western Ethiopia. Both systems are practiced among native and settler farming communities, respectively, "Assosa Agricultural Research Center (AsARC), (Assosa, Benshangul-Gumuz regional state, personal communication)". Both FSs are suitable for rearing sheep and goats. Improvement in the marketing and consumption of sheep and goats in such areas cannot be achieved without understanding the existing FSs. This is especially true in Assosa Zone of Western Ethiopia where virtually no research has been conducted except those comprehensive ones carried out by AsARC "AsARC, (Assosa, Benshangul-Gumuz regional state, personal communication)". Thus, research on marketing and consumption of sheep and goats is required prior to initiating improvement or intervention programs. The objective of this study was to explore marketing and consumption of sheep and goats in the two FSs in Assosa zone of western Ethiopia.

MATERIALS AND METHODS

Description of the Study Areas

The study was carried out in Assosa zone of Benishangul Gumuz Regional State (BGRS), located 685 km west of Addis Ababa. The area is characterized by shifting and permanent farming systems, where predictable variation exists between the two FSs in production potentials and utilization patterns of sheep and goats. Five goat types (Gumuz, Arab, Agaw, Oromo and Felata) are found to exist in the region (Getinet, 2005). In the current study area, Gumuz sheep is identified to exist in the region while the rest of the sheep breeds or types are not yet characterized. The number of sheep and goats owned per household ranges from 1-49 and 1-99, respectively (CSA, 2008).

Exploratory and Cross-Sectional Survey

Initially, an exploratory survey was carried out to have an overview of the farming system components and to pre-test the designed questionnaire. This was followed by a cross-sectional survey. The criteria for selecting a household (HH) was set to be at least one breeding female and a minimum of one year experience since acquisition of sheep and goats. Based on such criteria, 90 HHs were selected purposely from each FS. Primary data on marketing and consumption aspects related to annual off-take, market prices in different marketing events, values of sheep and goat for religious festivities, preferences and frequencies of consumption, and constrains of sheep and goat marketing and consumption were collected using structured and semi-structured questionnaires.

Focus Group Discussion

This was done with the participation of key informants, administrative members, model farmers and other pertinent bodies who were directly and indirectly involved in sheep and goat marketing and consumption.

Market Survey

Market survey was carried out in the two FSs, with Assosa and Kiburhamsa market areas representing PFS and SFS, respectively. Seven market visits were made in Assosa while four visits in Kiburhamsa, with a total of 676 observations. The following variables were recorded during each market visit: demand and supply during festivals and normal events; perception of farmers about the supply and demand and its relation to religious festivities and risky situations; market prices, coat color, type of seller, reason for selling, and buyer type during Eid Al-Fetir, Eid Al-Adha, Christmas and the normal days.

Data analysis

Data were analyzed using descriptive statistics, *t*-test, χ^2 -test, analysis of variance, pair-wise correlation, and correspondence analysis using JMP-5 (SAS, 2002).

RESULTS AND DISCUSSION

Marketing of Sheep and Goats

Demand and Supply

Higher supply and demand of sheep and goats in both markets was recorded during Christmas, Eid Al-Adha, and Eid Al-Fetir in that order than the normal days. This is possibly due to the higher religious values of sheep and goats and religious dependent consumption patterns of societies. The result is consistent with other studies that reported demand and price of sheep and goats increases substantially during religious festivities (Budisatria, 2006; Aklilu *et al.*, 2007). During Eid Al-Adha, Muslims slaughtered sheep and goats at home whereas during Eid Al-Fetir meat for the feast was mostly secured from a shared slaughtering of oxen. In these occasions in both FSs however, the supply was always over the demand in contrast to Merera *et al.*, (2014), who reported a high demand of meat and live animals for domestic and export markets in the country. This might be due to low purchasing power of local communities to meet the domestic market demand in the current study area and its poor infrastructure for the supply to meet the export market demand.

Prices of Sheep and Goats

The price of sheep and goats in both FSs was increased by two to three folds compared to the situation 10 years back. This might be attributed to increased consumption due to increased population, the current price rise, reduced consumption of beef, and general improvement of infrastructure. The current price ranges were in agreement to Kassa and Mekasha (2014), who estimated the price (265-440 ETB/head) of Washera sheep, local race in a neighboring region to the current research area. In the SFS, the price of sheep and goats during the different market events remained stable (Table 1). The non-seasonality of prices in the SFS might be due to higher demand of sheep and goats around the Ethio-Sudan border. The exception was the increased selling prices of sheep and goat in PFS during Christmas and Eid Al-Adha (Table 1). Selling prices during Eid Al-Fetir were similar ($P>0.05$) with the normal days, as celebrants preferred beef to mutton or chevron for the feast.

Table 1: Prices (ETB/Head) of sheep and goats in relation to market situations in SFS and PFS

Species by FS	Special occasions				Test	
	<i>Eid Al-Fetir</i>	<i>Normal</i>	<i>Eid Al-Adha</i>	<i>Christmas</i>	P-value	
	Mean(SE)	Mean(SE)	Mean(SE)	Mean(SE)		
SFS	Sheep	378.2(30.68) ^a	325.0(41.54) ^a	361.9(125.36) ^a	413.0(80.40) ^a	0.249
	Goat	300.2(13.77) ^a	307.1(17.99) ^a	287.6(13.32) ^a	290.0(11.73) ^a	0.784
PFS	Sheep	370.0(16.03) ^{ab}	337.8(7.36) ^b	383.1(14.34) ^a	409.4(14.34) ^a	0.000
	Goat	299.8(16.01) ^{ab}	259.4(70.03) ^b	297.1(88.43) ^a	302.6(84.84) ^a	0.002

Values with different superscript letters are significantly ($P<0.05$) different within the rows

Prices paid for white coated sheep and red coated goats were higher than the other body colors. Buyer and seller types also influenced the prices of sheep and goats. When consumers, butchers and hoteliers were the buyers, sheep and goats were sold with relatively higher ($P<0.05$) prices than when farmers were the buyers. This might be attributed to farmers' low purchasing power. Traders often bought with slightly lower prices than other buyers and sold with higher prices than farmers as their main objective is to earn profit.

Marketing Channels

Producers take sheep and goats directly to the markets, through intermediaries, or to neighboring HHs in both FSs. In some occasions smallholders from SFS also sale animals near the Ethio-Sudan border. Intermediaries purchase sheep and goats directly from smallholders or from the market. They sell animals to buyers in the market and in some cases take sheep and goats to the cross-border. Consumers (rural and urban), hotels, restaurants, butchers, and institutes often access sheep and goats from markets (Fig. 1).

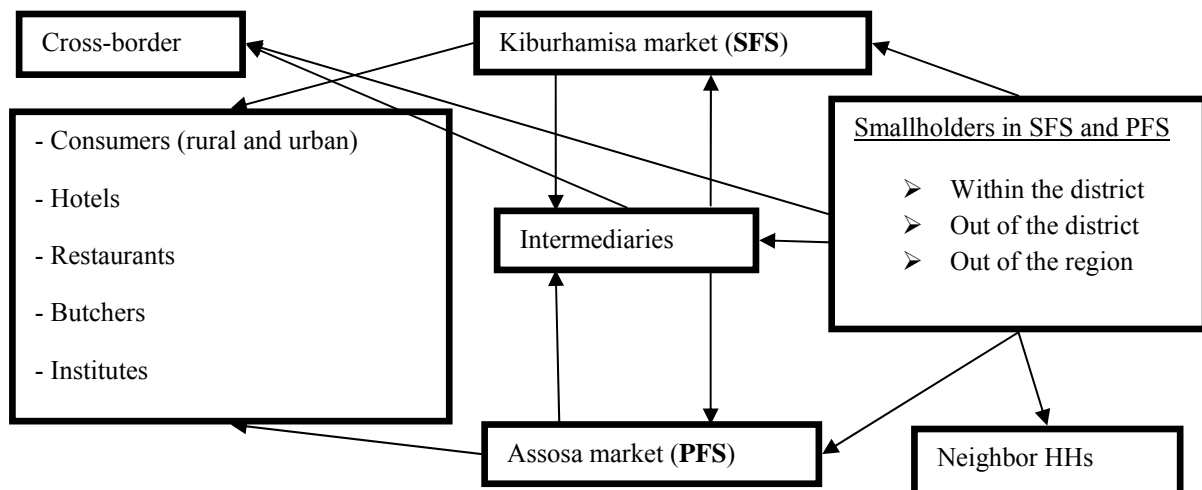


Figure 1: Sheep and goat marketing channels with reference to Kiburhamisa (SFS) and Assosa (PFS) markets

The market outlets were mainly HH consumption and cross border trading in both FSs. In many respects the characteristics of these outlets are similar to pastoral areas, in which market outlets can be grouped into five depending on their destinations and the recipients as HH consumption; local areas consumption; highland consumption (livestock deficit areas due to high population); contraband trade; and legal exports (Belachew and Jemberu, 2003).

Marketing Constraints

The major perceived constraint stated by producers was the increased supply of sheep and goats to the market from June to end of September to overcome periodic shortage of food and labor. In addition, as disease prevalence in this period reaches its peak, farmers tried to reduce risk through selling their sheep and goats. Farmers also cited the controversial role of brokers as a constraint for higher commissions and misbehaviors, but farmers were also sure of their role in avoiding discrepancies between sellers and buyers. Traders complained lack of export abattoirs, long distances to markets, absence of market incentives, sudden losses of animals due to diseases and stress, and price fluctuations as the major marketing constraints. These are the common marketing constraints in Ethiopia (Belachew and Jemberu, 2003).

Households' Sheep and Goats Consumption

In both FSs, the consumption of mutton and goats meat by the HHs was more related to religious festivals than other factors as such weddings, births, and funerals. For home consumption sheep were more preferred to goats, which is associated with the cultural believes and psychics of the producers. In both communities, mutton was believed to be of higher quality and safer for human health than goat meat while the later was believed to have medicinal value, which is attributed to the fact that goats feed upon diverse plant species.

Income was the first motive for engagement in sheep and goat production in the two FSs. The income obtained from goats over 12 month period was higher ($P < 0.05$) in SFS than in PFS (Table 2), as the per capita holding of goats was higher in the former than in the latter. A pair-wise correlation between sheep and goat holding and average annual cash income from sales was positive and significant ($P < 0.05$). Kassahun *et al.*, (1989) stated that about 48% of the income generated from livestock sector was from sheep and goat farming. Off-take rates due to sell and slaughter appeared to be similar ($P > 0.05$) for both FSs (Table 2). This is less than the annual off take rate of the country for sheep and goats (35% and 38%, respectively)

as reported by Belachew and Jemberu (2003). The variations could be due to the current study did not consider other ways of off take other than sale and slaughter rates.

Table 2: Cash income (Birr), sale and slaughter rates (%) during 2000 E.C. in SFS and PFS

Species		SFS		PFS		Test
		N	Mean(SE)	N	Mean(SE)	P-value
Cash income from sell of	Sheep	90	47.8(38.78) ^a	90	125.6(38.78) ^a	0.158
	Goat	90	274.7(48.11) ^a	90	134.1(48.11) ^b	0.040
Sale rate (%)	Sheep	90	1.65(0.99) ^a	90	3.8(0.99) ^a	0.125
	Goat	90	6.7(1.49) ^a	90	6.7(1.49) ^a	0.992
Slaughter rate (%)	Sheep	90	9.5(2.37) ^a	90	5.8(2.37) ^a	0.274
	Goat	90	7.9(1.84) ^a	90	8.6(1.84) ^a	0.778

Values with different superscript letters are significantly ($P < 0.05$) different within the rows.

Rates (%) = (Total sales or slaughter/Total flock)*100

CONCLUSIONS AND RECOMMENDATIONS

Demands, supplies, prices, and HH consumption of sheep and goats were typically seasonal and reached peak during the major holidays in both FSs. For producers to better benefit from higher prices during festivals, they have to plan their production and supply to match with the fluctuating but predictable patterns of demand. Seasonal fluctuations in supply, disease prevalence, lack of export abattoirs, long distance to markets, lack of market incentive, sudden death of animals, and unstable prices were the major constraints to sheep and goat marketing in both FSs. Studies on market access improvement options, exploring additional marketing opportunities in the Sudan, the neighboring country are recommended. Sheep and goat consumption in SFS and PFS appeared to be low. Thus, technical and institutional support needs to be provided to realize rural development and poverty alleviation endeavors.

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