Assessment of sheep marketing system in Burie district, North Western Ethiopia

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Assessment of the sheep marketing system was carried out through informal and formal surveys in selected kebeles and in selected sheep markets in Burie district in north western Ethiopia to assess the marketing system and to identify the constraints of sheep marketing in the area. The farmers interviewed in the selected kebeles for the informal survey were selected purposively and for the formal survey, by systematic random sampling method. In addition, three sheep markets namely Derequa, Burie and Kuche were selected and data were collected from these markets for this study. Farmers on average had 3.7 heads of sheep (n = 127, SD = 2.46) per household. On average, one household in the study area sold 1.1±1.40 heads of sheep (n = 127) per year. Farmers mainly sell sheep during Easter, New Year and Christmas. Sheep from Burie district and neighbouring districts and even neighbouring region enters into Burie district for marketing. Among the constraints identified in sheep marketing lack of market information service, sheep market price fluctuation during some months of the year, lack of market infrastructure and remoteness of markets to the producers that sell sheep were the main ones.

To make improvements in sheep marketing system in Burie district, these constraints should be given more emphasis in research and development activities that are going to be undertaken in this area.

Key words: Burie district, marketing system, sheep, Ethiopia.

INTRODUCTION

Sheep production is one of the main enterprises in mixed-crop livestock system in Ethiopia. Sheep production provides food, cash income and manure to the smallholder farmers. Smallholder farmers rear sheep mainly for two purposes: for cash income and slaughter for home consumption during festivals. Small ruminants provide about 48% of the cash income generated by livestock production (Kassahun et al., 1991) and local per capita consumption of mutton and goat meat is estimated to be 2.8 kg (Belachew and Jemberu, 2003). Generally, technical, socio-economic and institutional constraints limit sheep productivity in Ethiopia (EARO, 2001). Marketing problem is one of the hindering factors in sheep production in the smallholder producers.

Efficient marketing system enhances the commercialization of the smallholder system and it also increases animal productivity and income of the producers. According to Belachew and Jemberu (2003), a relatively huge number of exportable surplus livestock, proximity to the export market especially to the Middle East countries and other factors give the country a comparative advantage in livestock trade. The country has 1.02 million heads of surplus and exportable sheep annually (Belachew and Jemberu, 2003). Poor marketing system affects the country’s foreign exchange earnings. Due to the inevitable changes in the world the smallholder producers should adapt to these changes, marketing opportunities and constraints.

In Burie district, the sheep marketing system is not studied and constraints are not identified. Assessment of the sheep marketing system is necessary to make the smallholder sheep producers beneficial from sheep rearing. Before introducing any change in the marketing system, the current marketing system should be studied and evaluated (ILRI, 1995). Therefore, this study was conducted to assess the sheep marketing system and to identify the sheep marketing constraints in Burie district, northwestern Ethiopia.
MATERIALS AND METHODS

Description of the study area

This study was conducted in Burie district which is located between 10°15′N and 10°42′29″N and between 36°52′1″E and 37°7′9″E in Amhara National Regional State, Ethiopia. It has an estimated area of 838.9 square kilometers with altitude range of 713 to 2604 masl (BOFED, 2008; IPMS, 2007). The rainy season in Burie is from May to September with a monomodal pattern and a mean annual rainfall of 1386 to 1757 mm (IPMS, 2007). According to IPMS (2007) the long term annual temperature of Burie ranges from 14 °C to 24 °C.

Informal survey

Based on secondary data and participation of district livestock and crop experts, 4 representative rural kebeles were selected for this study. The selected kebeles were Woheni Durebetie, Woyenema Ambaye, Denbun and Boko Tabo. Checklist was prepared and used for the informal survey. Resident farmers for the interview were selected purposively from the selected kebeles. For key insider interviews, kebele administrators and religious leaders were selected and interviewed. For individual interviews, farmers who were involved in sheep production were selected and interviewed. During key and individual interview selection, those farmers who lived in the area for several years were selected and interviewed. For the group interview, farmers from different age, economic status and gender were included.

Formal survey

Based on the informal survey result, questionnaire was prepared and pretested. The formal survey was conducted on the same kebeles that were used for the informal survey. Farmers interviewed were selected from the kebele residents list by systematic random sampling method. Enumerators from each kebele were selected and trained on data collection and the enumerators collected the data from the selected individuals.

Nature of sheep markets in the district

Three sheep markets namely Derequa, Burie and Kuche were selected and used for the study. Market linkages were assessed through secondary data and informal survey. From the selected markets, total number of sheep supplied for sell per one market day and price of sheep traded was recorded on selected market days. Sample sheep traded were selected from each class (age and sex group), weighed and price of the sheep traded was recorded. At the beginning, on the selected markets informal interviews were conducted to assess the nature of sheep sellers, sheep buyers and sheep sources to these markets. Based on these data, questionnaires were developed for sheep sellers and buyers. On the selected markets and on selected market days, sellers and buyers were selected randomly from the market and were interviewed. In addition, sheep traders in each market were selected and interviewed during the study. The data collected were analyzed using SPSS stastical software (SPSS 12.0, 2003) and were summarized using descriptive statistics. Mean comparison was done using one way ANOVA.

RESULTS AND DISCUSSION

Sheep rearing is one of the main cash income sources for the farmers in Burie district. According to Ayele et al. (2003), assessing several studies in the Ethiopian highlands, concluded that livestock account for 37 – 87% of the total farm cash income of farmers. In addition, the livestock sub-sector in Ethiopia contributes from 12 – 16% of the total and 30 – 35% of agricultural GDP. Farmers in Burie district rear sheep for two main purposes, to get cash income and for home consumption on festivals. This is also true in most parts of Ethiopia. According to IPMS (2007), the human population of Burie district is 169,609 from this total population about 143,854 (85%) lives in rural areas. Farmers in Burie district on average had 3.7 heads of sheep (n = 127, SD = 2.46) per household. Easter, New Year and Christmas are the main occasions on which farmers slaughter sheep in the study area.

The three sheep markets in Burie district namely, Derequa, Burie and Kuche seem to fall in the category of primary and distributive markets (Adane, 2008). This classification is based on the purpose of sheep buyers. Men are usually responsible for selling sheep on these markets. The sheep to be sold were usually transported on foot from home to the sheep markets. The number of sheep offered for sale per one market day in each market place is given in Table 1. The number of sheep offered for sale in Burie market was higher (P<0.001) than that offered at Derequa or Kuche market.

Most of the animals sold on market were males at young age. Based on the informal survey, the age of most of the sheep sold on market ranged from 6 to 12 months. These animals were preferable on market. According to Beneberu (2003) younger sheep fetch higher prices, this case is not only for economic purpose but also the choice for their tenderness, softness and the like. One household in the study kebeles sold on average 1.1 heads of sheep (n = 127, SD 1.40) per year. Farmers usually sell sheep during Easter, New Year and
There is demand for kets of North Shewa. The main factor affecting the number of animals offered for sale was related to variations in overall supply and demand as well as in the characteristics of animals offered for sale. Factors affecting the number of animals offered for sale include demand during festivals, cash needs for crop inputs and food purchases. Animal characteristics that affect price are weight, age, breed and colour of the animal sold (Ayele et al., 2003). According to Million (2003) animal characteristics that affect price are mainly weight, sex, age, condition and colour. In addition to these factors, the purpose for which the animal was purchased affects its price. These include buying for resale, slaughter, fattening and reproduction. Access to price information also affects price of the animals (Adane, 2008).

About 80% of the total sheep sold by farmers per year were sold on market. Farmers in the study area sold about 20% of the sheep they sell within their own residence kebeles. The animals sold in the farmers' residences were mainly males for slaughter during festivals and females for breeding purposes. The buyers...
in these places were local farmers themselves. Farmers on average buy 0.8 heads of sheep (n = 127, SD 0.94) per household per year for breeding or home slaughter purposes.

The markets where farmers in Burie district buy and sell sheep were different. Farmers usually went to remote and rural markets for sheep buying where market prices for sheep were lower. Farmers usually bought sheep from these markets for trading (profit) or breeding purposes. On the other hand, farmers sold sheep in the nearby and urban markets where market prices for sheep were higher.

There was a difference in the number of sheep brought per one seller in each market. On average, for the three market places, one seller brought 2.6 heads of sheep (n = 314, SD = 1.87) at one time for sale on market (Table 4). The number of sheep brought for sale per person is higher (P<0.001) for Burie market compared to Derequa or Kuche market. There was a difference in sheep breed composition in the three markets. In Derequa market, about 97% of the sheep bought for sale were Washera breed, whereas in Kuche market, about 76% of the sheep brought for sale on market were Horro breed. This means there were more Washera breed for sale in Derequa market and more Horro breed, on Kuche market.

Sheep traders bought sheep from Burie district markets and sold them on Burie market (Burie District), Mankussa market (Jabi Tehinan District) and Shendi Market (Womberma District). Sheep traders usually transport the animals from the market of origin to the next selling sheep market on foot. So, there was no cost for transportation of the sheep except the labour cost for driving the animals to these markets by the sheep sellers. From this study there was no clear pattern in the flow of sheep from Burie district markets to distant and large markets found in bigger towns. In Burie district, sheep traders bought sheep from markets in Burie district and sell almost all of them within the district sheep markets. Hence, a market chain which links the sheep markets in Burie district to large urban markets and meat processing plants is non-existent.

From this study result, sheep traders got on average 1.74 USD per head of sheep sold. This profit is very low considering the marketing costs incurred during the process of sheep marketing. This value is almost equal to two days of wage for a daily laborer in the area during the study period. But as traders buy and sell several sheep at one time, the profit they obtain depends on the number of animals they buy and sell on these markets. On average, one sheep trader brought to the market 4.5 heads of sheep (n = 31, SD = 1.88) for sell at one time. Assuming all the animals brought for sell to the market to be sold and the estimated profit per head (1.74 USD), one trader may get 7.8 USD per one market day.

Sheep sellers (mostly sheep producers) who sell sheep in Burie district markets did not have adequate information on market prices of sheep (67%) when they took their sheep to the sheep markets. According to Beneberu (2003), traders have better information and they are in a stronger negotiating position than farmers in the market. Provision of market information to the smallholder producers enables them to get appropriate market prices for their products.

According to Muturi et al. (2001) farmers need periodical market information to enable them negotiate for better prices. In addition, availability of market information creates transparency among all players in the market. Lack of transparency in the market discourages production and perpetuates poverty. A good flow of market information makes commodity prices competitive.

### Table 2. Purpose of sheep buying by sheep buyers in the sheep markets in Burie district

<table>
<thead>
<tr>
<th>Purpose of sheep buying</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>For slaughter</td>
<td>90</td>
<td>60</td>
</tr>
<tr>
<td>For slaughter and rearing</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>For breeding</td>
<td>43</td>
<td>29</td>
</tr>
<tr>
<td>For resale (trading)</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>

N = Number of respondents

### Table 3. Mean price per head and per kg of sheep in the three sheep markets in Burie district

<table>
<thead>
<tr>
<th>Name of the sheep market</th>
<th>Price per head (USD) Mean±SE</th>
<th>Price per kg (USD) Mean±SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derequa</td>
<td>14.7±1.12*</td>
<td>0.5±0.02*</td>
</tr>
<tr>
<td>Burie</td>
<td>16.1±3.31*</td>
<td>0.6±0.01*</td>
</tr>
<tr>
<td>Kuche</td>
<td>15.5±5.56*</td>
<td>0.6±0.01*</td>
</tr>
</tbody>
</table>

*Currently 1 US dollar (USD) is 18 Ethiopian birr (ETB)

SE = Standard error; Means with different superscript letters within a column are significantly different (P<0.05)
and results in fair distribution of benefits to producers, traders and consumers (Muturi et al., 2001). Grading system is important in market information system. Some of the sheep sellers in the study area got market price information mainly from traders or their neighbors. There was no public market information source in the area to the sheep producers, traders or consumers in general. This case reduces the marketing system transparency and efficiency. This condition may increase the marketing cost and this in turn reduces the amount of money the producers get from the buyers. Availability of market information reduces risk to traders (ILRI, 1995). Lack of reliable market information makes traders to increase their margins to protect themselves from risk. Market efficiency contributes to increased level of food security by reducing consumer prices, increases returns to producers, or both (Million, 2003). Private traders get this information from their relatives and friends. Most of the traders use this information to get better profit from the sale of their commodities (Million, 2003). The collection, analysis and dissemination of price information are vital to make the markets more transparent.

There were several sheep marketing constraints in Burie district. There was no market information service (current prices, long-term prices, characteristics of buyers and their preferences) for the producers, traders and consumers. There was also lack of market infrastructure. The market places were not fenced and they did not have facilities. One sheep market (Derequa) lacks road and transportation access. Poor infrastructure hinders the movement of livestock inputs and outputs (Million, 2003). These conditions not only affect the producers’ income but also the supply of concentrate feeds and veterinary supplies. According to Ayele et al. (2003), when income of producers increases through better access to information, market and infrastructure, they could improve production both in terms of quantity and quality.

Farmers encountered several problems during sheep selling on markets. Low market prices in some months of the year, being paid forged Birr from the buyers and remote market places especially to the lowland people were the main ones. Farmers said that the current sheep market prices were generally good and encouraging when the prices are compared with several years before. Good market price is an opportunity for the sheep producers in the area.

In the sheep markets there was no weighing or grading of animals to be sold. Buyers and sellers judge the sheep they bought/ sold through physical observation only. This is a disadvantage especially for the sheep sellers. There is no precise method to know the quantity (in kg) as well as the quality (fat or lean meat) of produce sold or bought. As there was no grading system on the markets of sheep in the area, this will affect the production of quality sheep and sheep productivity in the smallholder system. According to Belachew and Jemberu (2003), grading and standardization reduces marketing costs and enhances communication between buyers and sellers.

Classification of animals into types, grading and weighing are essential for the buyers and sellers in general. For the sheep buyers, higher market prices and buying sick sheep were the main problems. Generally, sheep buyers complain that quality sheep on market was not available for slaughter as well as for breeding purposes.

### Conclusion and recommendation

As there is lack of market information this should be collected and provided to all participants in the sheep market. Sheep markets especially for the lowland residents are remote. Establishing new markets in these places, improving market facilities, improving road and transport access is essential. As there is market price fluctuation during some months of the year linking the sheep markets in Burie district to larger and urban markets and meat processing plants is also essential to make the sheep producers more beneficial from sheep production. In addition, selling animals through farmers’ cooperative is another alternative to make the farmers in the area more beneficial.

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REFERENCES


