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Study of the status of collection, utilization and marketing of hides and skins in Wolaita Zone, Southern Ethiopia

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The study was conducted at Wolaita Zone Southern Ethiopia with the objective of assessing the status collection, utilization and marketing of hides and skins in the study area. Multi-stage sampling was employed for all sampling procedures. Three districts were purposively selected based on livestock population, intensity of fattening, degree of slaughtering frequency and number of hide and skin warehouse. From each district, three kebeles were selected randomly. From the selected kebeles, 135 households were selected randomly for interview. Farmers in the study area rear cattle mainly for multipurpose (30%), for fattening as income source (23%), for security (9.6%), for milk purpose (30%) and for draught purpose (7.4%). About 33% of the respondents reported that collectors collect hide and skin immediately after slaughtering, 53% with some delay and 13% in the next day. Forty eight percent of the respondents use hide and skin for various domestic purposes like for harness, miran, bedding material and for making chair from which majority of them use hide and skin for 'miran' (44%) and bedding 'kurbet'(37%). Majority of the household respondents (76%) sold hide and skin to market after backyard slaughter in fresh state where as, the rest practice different types of hide and skin preservation techniques from which ground drying (57%) and smoking (24%) were common. The main factors for determination of price in the area were weight and size basis, freshness of hide and skin and absence of defects. According to the survey response, majority of producers sell their hide and skin either by price fixed by the buyers or through negotiation based on size and quality of the materials. The mean price of raw cattle hide as reported by majority of the households (57.8%) ranges from 100 to 120 Ethiopian Birr (ETB), sheep skin (69%) ranges from 50-60 ETB and goat skin (76%) ranges from 40-50 ETB. Training should be given for hide and skin collectors for timely collection to reduce spoilage and there should be hide and skin collection and marketing cooperative to have market linkage.

Key words: Collection, domestic purpose, hide and skin, marketing, preservation.

INTRODUCTION

Ethiopia is believed to have the largest livestock population in Africa. According to CSA (2013b), the population of cattle, sheep, goat, poultry, horses, donkeys, mules and camels was 52.13, 24.2, 22.6, 44.89, 1.96, 6.4, 0.37, and 0.99 million, respectively. Livestock perform multiple functions in the Ethiopian economy by

providing food, input for crop production and soil fertility management, raw material for industry, cash income, fuel and employment. Livestock sector in Ethiopia accounts for merely 47.687% of the national agricultural output and 23.7% of the agricultural export (IGAD, 2011).

The livestock subsector is a major contributor to the overall economy. It contributes 19% of GDP and 16 to 19% of the foreign exchange earnings of the country. It contributes some 35% of Agricultural GDP (or 45% if indirect contributions are taken into account). With the rapidly growing population, increasing urbanization, and rising incomes, domestic demand for meat, milk and eggs is expected to increase significantly for the foreseeable future. Furthermore, the country's foreign exchange from livestock product is increased, especially for red meat to gulf and within Africa, as well as leather and other livestock product to Europe (FAOSTAT, 2013). Livestock hide and skin contribute a significant proportion of domestic leather. Skin from goat and sheep are important economic products contributing the largest share to the total and agricultural export commodities (FAO, 2005) followed by live animals (Nigussu, 2014). However, in recent years, this rank has been relegated to fifth level mainly because of rejection and down grading inflicted on hides and skin defects mainly due to infestation by external parasites (Kassa, 2005) but also due to pre-and post-slaughter skin management problems (Zenaw and Mekonnen, 2012).

Based on the off-take rate of 7.0% for cattle, 33.0% for sheep, and 35.0% for goat, the potential production is estimated at 3.1 million hides, 7.8 million sheep skins and 8.2 million goat skins (Bisrat, 2013). This raw material of the leather industry is mainly derived from local areas of the country where basic amenities for slaughtering and subsequent marketing are either not in existence or lacking. Additional sources of hides and skins include slaughter slabs, municipal slaughterhouses, the limited number of export abattoirs and meat and meat product processing plants. Considering the development potential and economic importance of hides and skins, in the last few years, the government of Ethiopia has launched different development programs aimed to increase the supply and improve the quality of the raw material. Despite these development interventions, hides, skins and the leather industry are still constrained by the poor quality of raw materials, lack of an efficient market structure, a weak extension service, competition from local/rural tanning industries and a lack of price incentive for production of good quality raw material (Yacob, 2013).

Hides and skins are the basic raw materials for the leather industry. Currently, there are about 27 tanneries in the country and have an average capacity of 4,000 pieces of hides and 30,000 pieces of skins per day (CSA, 2013a). However, they are working under capacity even if the country has a potential to supply about 20 million pieces of hides and skins per annum. The potential supply of hide and skins depend on the scale of meat production, not on the size of livestock population. Thus, the product, that is, hides and skins, becomes available when meat is needed, not when it is appropriate for leather processing and so it is not primary agricultural commodity. As a result, the industry in the country has tremendous potential for domestic and foreign exchange earnings and the capacity to attract profitable foreign investment. Though, Ethiopia has very good potential to produce substantial quantities of skins over the last 10 years, there are indications that quality of raw hide and skins supplied has deteriorated with an increasing number of poor grades. The reason behind is the appearance of skin disease called 'ekek' due to external parasites, shortage of supply of hides and skins to meet the demand of tanneries and absence of effective market demand, absence of credit, high marketing cost, inappropriate management of animals, faults during slaughtering and improper handling of skin and hide before it reached at tannery (CSA, 2013a). This has resulted in an ever increasing number of complaints about the quality of skins and hides available to market. In combination, it has adversely affected all aspects of the industry.

Wolaita is one of the most potential sites for hide and skin production due to numerous tributary districts that convey products to zone and presence of private hide and skin collection centers that preserve and transport to the national market. However, the economic importance, local utilization, collection trend and marketing of hide and skin in the study area are not well identified and documented. Therefore, this study was initiated to assess status of hide and skin collection, its utilization and marketing in the study area.

MATERIALS AND METHODS

Description of the study area

Wolaita zone is located 390 km southwest of Addis Ababa and 165 km from Hawassa. It has a total area of 4,541km^2 and is composed of 12 districts and 3 registered towns. It is approximately 2000 m above sea level and its altitude ranges from 700 to 2900 m. The population of Wolaita zone is about 1,527,908 million of which 49.3% are male and 51.7% are female (SPSS, 2012). Out of these, 11.7% live in towns and the rest 88.3% live in rural areas. The

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annual population growth rate of the zone is 2.3%. It is one of the most densely populated areas in the country with an average of 290 people per km^2. The area is divided into three ecological zones: *Kola* (lowland <1500 m), *Woina Dega* (mid-altitude 1500-2300 m) and *Dega* (highland > 2300 m). Most of the area lies within the mid altitude zone.

Rainfall is bimodal, with an average amount of about 1000 mm (lower in the lowlands and higher in the highlands). Mean monthly temperature varies from 26°C in January to 11°C in August. Soils (mainly Vertisols and Nitosols) vary in pH from 5-6. Primary occupation of the zone is farming. Mixed crop-livestock production predominates, but there are some pastoralists in the lowlands. Generally, the climatic condition is conducive for livestock production.

Sample selection

At the beginning of the study, pilot survey was undertaken to understand and update the existing information about hide and skin production and preservation practices. During the survey, concerned offices, private hide and skin collectors, butchers and informal hide and skin merchants were involved. Multi-stage sampling was employed for over all sampling procedure. From the total 12 districts, 3 representative districts were purposively selected based on the information obtained (livestock population, intensity of fattening, degree of slaughtering frequency and number of hide and skin warehouses). From these districts, nine kebeles were selected randomly. From the selected kebeles, 15 households with a total of 135 households were selected randomly for interview.

Data collection

Structured questionnaires were developed and pre-tested before use and necessary adjustment was made prior to the actual survey. The major data collection methods used includes formal survey via questionnaires, discussions with individual key informants and focus groups, observation and visual aids.

Statistical analysis

Data collected during the individual interview were analyzed by using SPSS 20.00 release (SPSS, 2012). Survey results were reported using descriptive statistics.

RESULTS AND DISCUSSION

Purpose of keeping animals by the household

Farmers in the study area rear cattle mainly for multipurpose (30%), for fattening as income source (23%), for security (9.6%), for milk purpose (30%) and for draught purpose (7.4%). Relatively, the large percentage (23%) of households that practice cattle fattening indicates the potential of producing meat animals that are slaughtered locally and produce hide and skin.

Domestic use of hide and skin by respondents

Forty eight percent of the respondents use hide and skin for various domestic purposes like for harness, miran, bedding material and for making chair from which majority of them use hide and skin for 'miran' (44%) and bedding '*kurbet*'(37%) as indicated in Figure 1. Similar results have been reported by Hadush et al. (2013) and Kagunyu et al. (2011). (Juhar et al., 2015) that large amount of hides and skins are used as a source of various materials for household purposes. This suggests that, although majority are aware of the importance of bringing hides and skins to the market, there are still significant number of the raw materials that fail to be channeled to the collection centers and tanneries.

Collection of hide and skin

Majority of the household respondents (76%) sold hide and skin to market after backyard slaughter in fresh (unpreserved state), whereas the rest practice different types of hide and skin preservation techniques from which ground drying (57%) and smoking (24%) were common. The result is different from the report of Juhar (Foxwell, 1999) that 85% of hide and skin producers sell unpreserved hide and skin. These techniques of hide and skin curing are worse in maintaining the quality of hide and skin. As reported by the respondents, ease of using and material availability were the common reasons why the households preferred ground drying and smoking as methods of hide and skin preservation. In addition, 75 and 25% of butcheries in the study districts sold fresh and salted hide to the market, respectively.

As indicated in Table 1, 33% of the respondents reported that collectors collect hide and skin immediately after slaughtering, 53% with some delay and 13% in the next day. Moreover, 79.2% of butcheries sell hide and skin within 12 h in all districts and the rest sell their hide and skin within 24 h. The fact that most producer respondents reported to sell hides and skins in a fresh state in 12 hour without preservation is encouraged. Delaying preservation and selling without the necessary precaution results in the spoilage of products and degrades their quality. Foxwell (Jabbar et al., 2002) observed that pastoralist use sun drying methods of curing hides and skins leading to poor quality products. Jabbar (Selamawit, 2015) has identified that most animals in African countries are slaughtered in facilities which do not have adequate infrastructure or tools required to ensure production of good quality hides and skins. As a result, hides and skins that are ground dried become poor in quality.

Marketing and price of hide and skin

Farmers in the study area sell hide and skin for different actors in different prices. Informal merchants (40%),

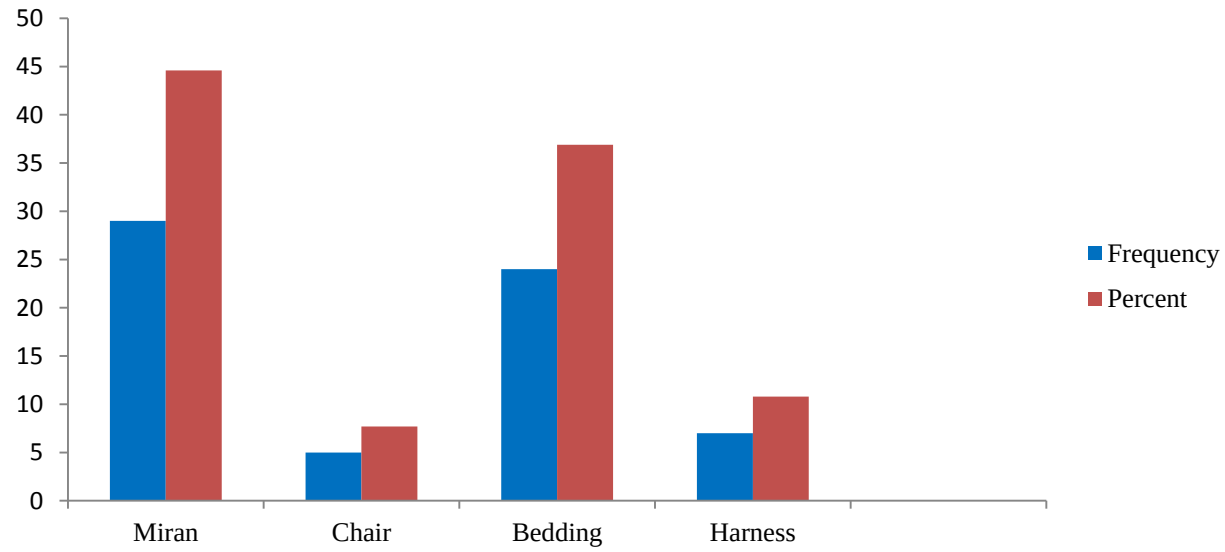

Figure 1. Domestic use of hide and skin by producer households.

Table 1. Manner of hide and skin collection.

Duration of collection	Frequency	Percent
Immediately after slaughtering	45	33.3
With some delay	72	53.3
In the next day	18	13.3
Total	135	100.0

Table 2. Price determinants and actors by hide and skin in the study area.

Actors that buy hide and skin	Frequency	Percent
Informal merchants	54	40.0
Collectors	21	15.6
Private warehouse owners	60	44.4
Price determinants		
On weight and size basis	6	4.4
Freshness of hide and skin	29	21.5
On absence of defects	32	23.7
All determinants	68	50.4

formal collectors (16%) and warehouse owners (44%) were the common actors that play great role in buying hide and skin from farmers as well as from butchers. The result is in agreement with the report of the Hadush et al. (Kagunyu et al., 2011) that informal brokers play a great role in buying hide and skin from producers. The market price of hides and skins were determined by various determinants that include size and weight of the raw hide and skin, absence of defects and freshness of hide and skin (Table 2). According to the survey result, half of the households (50%) responded that buyers use all parameters for pricing purpose, 24% reported that buyers

use the absence of defects, 22% on the basis of freshness and the rest on the basis of size and weight of hide and skin. The result is in agreement with the report of the Selamawit (2015).

According to the respondents, the price of hide and skins fluctuates at different seasons and the price of raw materials increases as it goes from producers to collection centers. The prices are usually set by traders since they are mostly price takers. The result is similar to the report of Berhe (2009). According to the survey response, majority of household producers sell their hide and skin either by price fixed by the buyers or through negotiation based on size and quality of the materials. The mean price of raw cattle hide as reported by majority of the households (57.8%) ranges from 100-120, sheep skin (69%) ranges from 50-60 and goat skin (76%) ranges from 40-50 Ethiopian birr. The result is similar to the report of Juhar et al. (2015) that the average price of raw hide, sheep skin and goat skin in Shashemene and Arsi area were 120, 52 and 32 Ethiopian birr, respectively.

Transportation and storage of hides and skins

Hide and skin are transported by human labor alone as indicated by the majority of the respondents. Forty six percent of the respondents reported that they transport hide and skin to market by sacks, 44% by plastic and the rest by wooden materials. Transporting hide and skin with other goods is less common in the study area; that is, 74% of the households responded that they transport hide and skin alone or separately. With regard to the storage of hide and skin, 43% of the respondents (producers) store hide and skin in closed area that affects the quality of hide and skin. All the 4 collection centers and 1 cooperative in Sodo Zuriya wereda visited had storage and preservation room. The storage rooms are made of cement wall with slanted store. In all areas, the storage room is well ventilated and there is a drainage system for the disposal of waste material from the raw hide and skin after preservation with salt.

Extension service on quality hides and skin production

According to the results of this survey, about 29% of the interviewed households had access to training on the hygienic production of hide and skin production. The training was given by government (100%). The result indicated that much need to be done in creating awareness on hygienic production and utilization of hide and skin.

Conclusion and recommendation

Farmers in the study area rear cattle for multipurpose: for income source, for security, for milk purpose and for draught purpose. Relatively, the large percentage (23%) of households that practice cattle fattening indicates the potential of producing meat animals that are slaughtered locally and produce hide and skin. The potential of animal rearing contributes 33% of the family income of the respondents in the study area. Forty eight percent of the respondents use hide and skin for various domestic purposes like for harness, *miran,* bedding material and for making chair from which majority of them use hide and skin for '*miran'* (44%) and bedding '*kurbet'* (37%). This implies that using hide and skin for domestic purpose may affect total amount that reach national market and thereby foreign currency exchange of the country.

According to the survey response, majority of producers sell their hide and skin either by price fixed by the buyers or through negotiation based on size and quality of the materials. The mean price of raw cattle hide as reported by majority of the households (57.8%) ranges from 100-120, sheep skin (69%) ranges from 50-60 and goat skin (76%) ranges from 40-50 Ethiopian birr.

RECOMMENDATION

1. Training should be given to reduce use of hide and skin for domestic purpose which may affect total amount that reach national market and thereby foreign currency exchange of the country.
2. Collection and marketing of hide and skin should be immediately after slaughtering to reduce post-harvest spoilage and loss of the product.
3. There should be different hide and skin marketing cooperatives in the rural areas to enhance marketing efficiency of hide and skin.
4. There should be frequent awareness enhancing training for different responsible bodies from farmer to warehouse level by government and NGOs.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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