

Hide and Skin Quality Factors and Marketing Systems in Ethiopia: A Review

Mebrate Getabalew^{1*} Asebu Mindaye² Derbie Zewdie³

1.Holland Dairy Private Limited Company, Milk Collection Point Quality Coordinator, Debrezyite, Ethiopia.

2. College of Agricultural and Natural Resources Science, Department of Animal Science, Debre Berhan University, Ethiopia

3.Ankober Woreda Agricultural and Developmental Office, North Showa Zone, Amhara Regional State, Ethiopia

Abstract

Ethiopia have huge number of livestock population first leading in Africa. In Ethiopian hide and skin quality very series due to major reasons being lack of modern slaughtering facilities, lack of knowledge and understanding of the correct methods of flaying and curing of the perishable hides and skins, quality deterioration, lack of incentive to supply good quality raw material to suppliers, and inadequate numbers of slaughterhouses and slabs, mechanical defects, poor nutrition, age of livestock, breed, climate, inadequate network of primary buyers, lack of facilities for slaughtering, preservation, storage, and transportation, “lack of incentives for improvement”, and limited effectiveness of government extension service, as well as other man-made and natural damage inflicted on the raw hides and skins, lack of marketing area, low price, inadequate preservation techniques and diseases are some factors of hide and skin quality in Ethiopia. And also most people do not preserve hide and skin before selling, this makes putrefaction and this has a significant negative effect on the quality of the hides and skin. An in-depth study of the hide and skin quality management and marketing was necessary in order to gain an insight into marketing chain, the key factors involved and constraints attached to various stages of actors. Since the above factors have been an effect on quality of hide and skin, there is a need to assess quality management and marketing of hide and skin to fill the existing problem in Ethiopia.

Key words: Livestock, Africa, Slaughtering, Deterioration, Quality, Preservation

DOI: 10.7176/DCS/11-2-01

Publication date: February 28th 2021

INTRODUCTION

The lives of millions of families in different parts of the world are dependent on livestock production in general and hide and skins in particular as a source of income and indeed for food security. In many of the developing countries, the livestock sector has enormous potential for improvement. Hides and skins are primarily the raw material for the tanning industry; where they provide leather for the manufacture of leather products. Although any hide or skin can be processed into leather (and leather products) various breeds of domestic cattle, sheep and goats provide the overwhelming majority of raw materials ((FAO, 2001). The agricultural sector in Ethiopia, engaging 85% of the population, contributes 52% to the gross domestic product (GDP) and 90% to the foreign exchange earnings (CSA, 2008). Ethiopia is believed to have the largest livestock population in Africa (CSA, 2017).

The varied and extensive agro ecological zones and the importance of livestock in livelihood strategies make Ethiopia home to large numbers of livestock. Indeed, Ethiopia has the largest livestock inventory in Africa, 59,486,667 cattle, 30,697,942 sheep and 30,200, 226 goats, 8,439, 220 donkeys, 409, 877mules, 2,158, 176 horses and 59,495, 026 chickens (CSA, 2017). The quality of hide and skin is to large extent related to the amount of damage to the grain (or outside) surface. The damage may be due to skin parasite that affects the live animal. Husbandry practice on the farm or in transport of live animal (scratches, bruising or dry contamination, horn rake); it may be due to damage during slaughter or it may be caused by inappropriate handling or inadequate preservation techniques (Adugna, 2004). About 90–95% of the hide and skin production is derived from urban as well as rural backyard slaughters, while the remaining 5–10% is produced from major urban slaughterhouses and export abattoirs (Ahmed, 2000).

These operators use poorly equipped slaughter points, where the infrastructure is sometimes a slab of concrete, under a shade, or using poles for hoisting carcasses. The hides and skin from the sources (usually the household across the country) are normally collected by village-level collectors, intermediary traders/collectors, and large traders/wholesale suppliers (Behailu, 2017). The available research results for livestock marketing in Ethiopia are outdated current knowledge on livestock market structure, performance and prices is poor and inadequate for designing policies and institutions to overcome perceived problems in the domestic and export marketing system (Ahmed, 2000).

The marketing of hide and skins starts at the producer/consumer level and passes through a chain of middlemen until it reaches the tanneries. Collectors of raw hide and skin are available in almost all towns of

Ethiopia. They collect the hide and skins through rural agents or through farmer’s carriage to the market and urban areas through intermediary collectors or themselves.

The main constraints in the marketing of hides and skins included an inadequate network of primary buyers, lack of facilities for slaughtering, preservation, storage, and transportation, “lack of incentives for improvement”, and limited effectiveness of government extension service, as well as other manmade and natural damage inflicted on the raw hides and skins, which downgrade quality (Mohammed 2000). The objective of this review is to access factors affecting hide and skin quality and marketing systems in Ethiopia.

Definition of hide and skin

The words “hides and skins” are often used interchangeably; however, according to the British standard definitions, hide is the raw skin of mature animals of larger kinds, such as cattle, horse, and other such large animals. Skin is the skin of fully grown animals of smaller kinds, such as goat, pigs, reptiles, birds, and fishes or of immature animals of the large species like calves and colts (Teame, 2017).

Factor affecting hide and skin quality

Traditionally farmers treat their animals when they get sick or injured of the different traditional methods of treating animal practiced by the farmers. Hides and skins are meat by-products and there is still little consideration given to the care required for the collection and processing of the hides and skins into high quality leather.

Poor animal husbandry

Poor animal husbandry and disease management practices lead to production of poor quality animals, hence poor quality hides and skins which further leads to low prices and that pre-slaughter operations that affect the quality of the hides and skins available to the tanning industry are principally the result of the quality of the husbandry applied by those who looked after the animals-herders, farmers, ranchers, feedlot staff, veterinarians, hides and skins merchants, arbitrary branding with hot iron, in appropriate flaying and slaughtering and post slaughter management of hides and skins and transport operators reduced hide and skin quality (Ngari, 2009).

Table 1: Defects analysis and resultant Cost in Losses in the Sub-Sector

Defects	Percentage damage	Value Loss
❖ Pre-slaughter		
Branding	21	0.95
Tick bites	23	1.04
Sores and wounds	4	0.18
❖ Peri-&Post slaughter		
Flay damage	35	1.58
Dragged grain	12	0.54
Others (e.g. putrefaction)	5	0.23
Total loss		4.25

Mechanical defects

Majority of livestock roam freely in the wilderness and are subjected to thorny and shrubby vegetation resulting in scratched hides. Though the scratches cannot be easily detected on live animals, during the tanning of hides into leather they become clearly visible resulting in low quality leather. Mechanical damage (brand marks, scratches, horn rakes, yoke marks etc), or defects due to Diseases that can be viral like LSD, Small-Pox, Rinder-Pest, Fungal like ring worm or parasitic like tick-damage, sheep ked, louse infestation and mange. Damage caused to the hides and skins under pastoral and smallholder husbandry conditions when the animal is alive is mostly attributed to various types of mechanical actions and is classified as mechanical damage. Loss of value attributed to these types of damages is estimated to be 40% of the total value of hides and skins for Africa in general. Scratches and horn rakes are amongst the most common mechanical damages found on both hide and skin (Kagunyu and Ngari, 2009).

Table 2: Hides and skins mechanical defects

Defects	Frequency	Percentage
Horn rakes	23	26.43
scratches	51	58.63
Yoke marks	3	3.45
Others	10	11.49
Total	87	100

Poor nutrition

Emaciation is the thinness and friability of hides and skins derived from animals suffering from prolonged and bitter starvation, leathers which are produced from such hides and skins are noted for their dryness and flabbiness. Cockles which are coarse wrinkles on shoulder portions of hides increase considerably when animals are under fed. Diet plays an important role in the health of the animals and also in the quality of the raw material. Poor nutrition causes an animal to be smaller, the skin thinner and of poorer substance and lacks elasticity (NPC, 1981).

Age of livestock

The male cattle or bulls, especially the older ones have thicker heads and shoulders which might cause trouble in handling. Age differences also contribute to the inferior qualities in leather. The skins of the young animals have fine and compact structures and tight grain patterns, while the skins of older animals have tougher and coarser grain surface (NPC, 1981).

Breed

Different breeds as well as husbandry practices have implications for quality of hides and skins produced. Hides obtained from cattle in commercial farms and feedlots are of as compared to those obtained from pastoralists. Local zebu also has a lower quality hides as compared to other breeds (Sahiwal, 2000).

Table 3: Cattle breeds and the quality of hides

Breed	Percentage
Zebu	18
Borana	25
Sahiwal	55
Dairy cows	2
Total	100

Climate and its effect on quality of hides and skins

The climatically conditions on which livestock is raised has an effect on the substance of its skin and on the grain of the leather. Animals raised in warm climate have a short hair and the leather produced has superior substance, smoother and finer grain patterns, whereas animals raised in cooler climate or higher altitudes grow longer wool or hair, and the leather made are of poorer substance and coarser grain patterns. These effects of climate, especially on substance is more pronounced on sheep and goat skins than on cattle hides (NPC, 1981).

Defects due to diseases

Many diseases can affect the quality of hide and skins. The commonly noticed ones can be viral, fungal and parasitic.

Table 4. Prevalence of animal skin diseases

Disease	Percentage
Lumpy skin disease	39
Small pox	8
Ring worms	32
Tick damage	21
Total	100

Marketing system of hide and skin

Marketing system may be defined as the totality of product channels, market participants and business activities involved in the physical and economical transfer of goods and service from producers to consumers. The available research results for livestock marketing in Ethiopia are outdated current knowledge on livestock market structure, performance and prices is poor and inadequate for designing policies and institutions to overcome perceived problems in the domestic and export marketing system (Ahmed, 2000).

Livestock price drop down during drought and peak up during holidays (Christian, Muslim or other public) (Adugna, 2004). Transport constitutes a major cost factor in livestock trading. As a result, transport cost determines the level of profits accrued by livestock traders. Those traders with their own means of transport accrue the highest profit margin from high turnover volume and saving in transport cost.

The main constraints in the marketing of hides and skins included an inadequate network of primary buyers, lack of facilities for slaughtering, preservation, storage, and transportation, "lack of incentives for improvement", and limited effectiveness of government extension service, as well as other manmade and natural damage inflicted on the raw hides and skins, which downgrades quality (Mohammed, 2000).

Major constraints of hide and skin marketing

The major hide and skin marketing faced were reflections of the economic policy which were characterized by socialist oriented development and centralized planning system: nationalization of major industry, financial institution, allocation of quotas, fixing prices, legal monopoly of corporation, restriction of trade movement, (Berhe, 2009). Apart from the problems that stemmed from the system the main constraints in the marketing of skin and hide included inadequate network of primary buyers, lack of facility for slaughtering, preservation, storage, transportation, disease, parasite, flay cut and lack of incentives for improvement and limited effectiveness of government extension service (Girma, 2002). The main constraints adversely affecting the production and marketing of hides and skins are outlined below.

Shortage of raw material

The expansion of artisans (local tanners) and the utilization of hide and skin for traditional household items, the existence of cross border illicit trade and misuse of the raw material due to lack of awareness, result in a low recovery rate and ultimately shortages of raw HS in the central market (Girma, 2002).

Quality deterioration

The limited number of slaughter facilities inadequacies in preservation techniques, other man-made and natural defects inflicted on the raw hides and skins downgrades quality (Girma, 2002).

Gap between demand and potential supply

The increasing number of tanneries has increased raw material demand far beyond the existing potential supply. This leads to unhealthy competition among tanneries and an escalation of price in the domestic market (Berhe, 2009).

Inadequate numbers of slaughterhouses and slabs

The number of slaughterhouses in the country is very limited. Thus, the majority of cattle, sheep and goat slaughter are carried out in the backyard that results in poor quality raw hide and skin (Girma, 2002).

Marketing channel

Formally, marketing channel is a business structure of interdependent organization that reach from the point of product origin to the consumer with the purpose of moving product to their final consumption destination (Leach, 2004). Channel may be short or long depending on kind and quality of the product marketed, available market service, and prevailing social and physical environment (Islam, 2001).

Trade and marketing of hide and skin

Market globalization poses considerable challenges to farmers and these living rural areas in developing countries, where inadequate infrastructure and limited access to information and technology increase both production and transaction costs. So, how can products compete in such markets, which are more and more demanding with regard to product quality and timely delivery should be considered (Bernet, 2006).

CONCLUSION

In conclusion utilization of these (hide and skin) animal product is poor at country level due to many reasons like, poor feeding, environment, breed slaughter effect and other many factors. In addition to these quality factors there is also a market problem also faced like transportation, market information and other infrastructure related to marketing of hide and skin. Most people do not preserve hide and skin before selling, this makes putrefaction and this has a significant negative effect on the quality of the hides and skin. An in-depth study of the hide and skin quality management and marketing was necessary in order to gain an insight into marketing chain, the key factors involved and constraints attached to various stages of actors.

REFERENCES

- Adugna A 2004. Guide line document for hide and skin quality and marketing improvement survey of sheba Tannery in Tigray, unpublished Addis Ababa.
- Ahmed Mohammed. 2000. Development potential and constraint of hide and skin marketing in Ethiopia. The opportunity and challenges of enhancing goat production in east Africa.127-138.
- Ayele Solomon. 2003. Livestock market in Ethiopia. A review structure, performance and development initiatives. Socio –economic and policy Research working paper
- Berhe A. 2009. Assessment of hides and skins market in Tigray Region: The case of atsbiwemberta woreda, Eastern Tigray, Institutes of Regional and Local Development Studies, Addis Abeba University, Addis Ababa, Ethiopia.

- Bernet T. 2006. participatory Market chain Approach(PMCA)-U ser Guide. International photo center(CIP)-Papa Andina, Lima, Peru
- CSA (Central Statistics Agency). 2008. Agricultural Sample Survey 2007/08. Volume II. Report on Livestock and livestock characteristics. Statistical Bulletin 417. Addis Ababa: FDRE. CSA (2017). Report On Livestock and Livestock Characteristics (Private Peasant Holdings). Agricultural Sample Survey .2016/17. volume ii. Statistical Bulletin 578, II (March 2016). Addis Ababa, Ethiopia.
- FAO. 2001. Commodity problems of hides and skins. Food and Agriculture Organization Rome, Italy.
- FAO. 2009. Higher value addition through hides and skins. Food and Agriculture Organization of the 69 United Nation, Rome
- Girma A. 2002. The performance of hides and skins Marketing in the Amhara National Regional State: ILRI, Addis Ababa.
- Islam .2001. Marketing system of marine fish in Bangladesh. Bangladesh J. Of Agro.Economics. 24(1and2):127-142.
- Leach,I.B. 2004. Hides and skins for the tanning industry. FAO Agricultural service bulletin. No. 123. Rome, Italy.
- Rienstrad. 2004. Africa Leather industry meets world market
- Yacob Aklilu. 2002. An audit of livestock marketing status in Ethiopia