

# Livestock and Livestock Products and By-Product Trade in Ethiopia: A Review

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## Abstract

In Ethiopia livestock are economic and social importance at household and national level in addition to significant contribution of export earnings. The country has at an advantageous position in production and possessing of different products and by-products due to high and diverse number of livestock as compared to other African countries. Pastoral area of the country is the sole supplier for both formal and informal live animal and meat exports. The livestock are marketed from the major producing areas reaches to the final consumer passing through complex channels along the supply chains involving various actors. Despite fluctuations over years, the formal exports of meat (7,717 to 16,500 tonnes) and live animals (163,000 to 680,000 head) have significantly increased in between 2006/7 and 2012/13. However, all most all live animals (85%) are exported illegally smuggled to neighbouring countries of Djibouti, Somalia, Kenya and the Sudan, using illegal trade routes and re-export to Middle East. Consequently, the Ethiopian government has lost substantial market share and foreign exchange. Lack of exporting routes and ports, illegal live animal trade, shortage of live animals and lack of appropriate breeding policy are some of the major challenges that hinder the smooth livestock trade of Ethiopia.

**Keywords:** live animals, meat, trade

## Introduction

Agriculture plays an important role in the overall development of the country economy similar to other sub-Saharan African countries (MoA and ILRI, 2013). Ethiopia is considered to be the largest population of livestock of any other country in Africa. Though, the livestock sector contributes 12-16% of total Gross Domestic Product and 33-35% of Agricultural Gross Domestic Product (MoA and ILRI, 2013). In Ethiopia livestock contributes in many ways to the household incomes and food security, direct source of food (meat, milk, egg and blood), crop production (draft power and manure), as a raw materials for leather and carpet industries, insurance against climate crises, transporting of goods and people, means of investment and source of income and foreign exchange (Ayele et al., 2003).

Cattle, sheep, camels and goats are the most important sources of live animal, and hides and skins for export markets. However, the country's considerable potential of the livestock sector is reported to be untapped, according to the Ethiopian Revenue and Customs Authority report of 2009/2010, livestock and livestock products such as: live animals, skins and hides, meat and meat products, leather and leather products were Ethiopia's fifth most important export commodities next to coffee, oil seeds, gold and chat (*Catha edulis*) (Access Capital Research, 2010). In the report, livestock and livestock products contributed to about 9.1% of the country's total export earnings with a value of about 182 million US Dollars.

Moreover, the Ethiopian breeds of cattle, sheep and goats are highly demanded for meat, hides and skins in the Middle East (Belachew and Jemberu, 2003). The country has relatively high livestock resource, proximate to export market and good policy plan of maximizing revenue of live animal and meat exports gives the country comparative advantages in livestock trade compared to competitive countries. Though, absence of well-organized market, in adequate livestock policy, inadequate permanent animal route and facilities such as water and holding grounds, lack or non-provision of transport, ineffective and inadequate infrastructural and institutional set ups, prevalence of diseases, absence of animal traceability and illegal animal trade are reported to be the major challenges of animal trade in Ethiopia (Ayele et al., 2003). Therefore, the objective of this review is to provide comprehensive information on the current livestock and livestock products and by-product trade in Ethiopia.

## Livestock Marketing and Trading in Ethiopia

For many years there have been two very different kinds of livestock marketing system in Ethiopia. The official systems supported by the government have performed poorly and these systems are burdened by excessive regulation, taxes and other transaction costs. The unofficial system described as *contraband*, illegal cross-border trade of live animals to Somali, Djibouti and Kenya then re-exported to Saudi Arabia and Yemen. The recent years there has been significantly increased cross-border trade with Kenya as a result of unable to meet its demand for from domestic meat production. On the other hand consumers goods of various kinds are purchased

from the sale of the live animals are unofficially imported into Ethiopia through this informal trade network. Ethiopia government had tried to suppress and formalize the sale of animals and remarkable achievement had been registered trade with Kenya (Michael, 2004).

Based on number of animals and market participants per market day, the Ethiopia livestock supply chain portrays a four-tier system namely; bush, primary, secondary and terminal markets. Bush markets are markets where animals are exchanged weekly between the pastoralists and small scale traders mostly for breeding purpose. Primary markets are district town markets where the sells volume does not exceed 500 animals per week. The major sellers are pastoralists and small scale traders, whereas the major buyers are assemblers and medium scale traders. Secondary markets are major towns markets where the weekly supply volume is between 501 and 1,000 animals. The major market participants are medium scale traders acting as sellers and the big traders as buyers. Terminal markets are those markets located at the big cities of the country where weekly over 1,000 animals are supplied. Big traders are major sellers whereas butchers and consumers are the major buyers (ACDI/VOCA, 2006b).

Various actors such as brokers, collectors, agents, animal trekkers, small, medium and big traders, wholesalers, abattoirs, butcheries, exporters, livestock trading cooperatives and local authority and department of veterinary services are involved in livestock market from major producing areas reaches to the final consumers. This makes the chain unnecessarily long with increased transaction costs and without significant value added activities (Negassa et al., 2011).

Live animals are bought by traders from agro-pastoralists/pastoralists and trekked to long distances, (for a period of 1-3 days) without adequate resting/shading, watering and feeding facilities. Moreover, most of the markets are unsuitable open air sites without fences and watering/feeding facilities. This leads the animals are prone to predators; deaths (5-10 %) and sickness from stress (10-15 %), body weight losses (8-13 %) thereby some being condemned at ante-mortem/post-mortem inspection. This also increased illegal cross-border live animal trade from Ethiopia to neighboring countries (Negassa et al., 2011).

There is a huge difference between Botswana and Ethiopia in the manner in which livestock are marketed and traded. As documented by Mulale (2008), Botswana's livestock, particularly cattle, are sold through a range of marketing outlets, including the Botswana Meat Commission (BMC) which has the monopoly of beef exports (69.7%), local butcheries (8.2%), traders (7%), auction (6.7%) and other farmers (8.2%). The participation of traders in the supply chain is minimal compared to Ethiopia where the majority of sellers at the terminal markets are traders (66%) followed by farmers (23%) and butchers (7%), (Ayele et al., 2003). This shows that the supply chain/terminal market in Ethiopia is dominated by livestock traders (both sellers 66 % and buyers 34 %) more than in Botswana. The dominance of livestock traders at terminal/secondary markets in Ethiopia suggests that agro-pastoralists/pastoralist participation at terminal markets is minimal (Negassa et al., 2011) compared to Botswana's smallholder farmers who participate and fully benefited from the sale of animals.

## **Livestock and livestock products and by product trade in Ethiopia**

### **Live animal and meat**

Ethiopia produced a total of 3,334,550 metric tons of meat in 2010 for home consumption. Small ruminant meat accounted for 70% of the total meat produced, while beef and camel meat accounted for 21% and 9%, respectively. This indicates that small ruminants constitute the highest proportion due to higher off-take rates and market demand. It gives the country more advantage over Botswana and Southern Africa in terms of the variety of slaughter animals and consumption patterns.

Without doubt pastoral areas remain the major supplier for both formal and informal live animal and meat exports. Ethiopia's exports consist of live cattle, sheep, goats and camels, as well as chilled goat meat and mutton, which are mainly sourced from same place. The main supply areas are Borana for cattle and chilled sheep and goat carcasses, and Somali Region for live camels, sheep and goats. Other supply areas include the lowlands of Bale, Southern Nations, Afar and the mid-altitude Agro-pastoral zones of Oromia.

The formal export values for Ethiopian meat and live-animal exports stagnated from 1996 to 2004 with a gradual/sharp rise from 2005/6 to 2012/13, with live-animal exports showing dominance over meat exports (Table 1). According to Ayele et al. (2003) reported that the official export values for Ethiopia have been declining while illegal export values have been increasing, a trend which is likely to continue and accelerate if measures are not taken to reverse the situation. The total value for meat exports was extremely low between 2007 to 2010, probably as a result of increased illegal cross-border trade of 6.8 million live animals (24.51 % cattle, 31.93 % sheep, 35.31% goats and 62.25 % camels), worth \$1,043,575,571 in the same period.

A grand total of \$1,221,155,351.00 was raised between 1996 to 2011 through formal exports and cross-border trade, out of which 85% was attributed to illegal live animal cross-border trade, 9% to formal live animal exports and 6% to formal meat exports. The US\$ value of illegal live animal exports is much higher than the combined values of both official live animal and meat exports.

Table 1. Formal live animal and meat exports from Ethiopia, 2005/06-2012/13

Year	Live animals		Meat	
	Number	Value (US\$ 1,000)	Amount (tons)	Value (US\$ 1,000)
2005/06	163,000	27,259	7,717	15,598
2006/07	234,000	36,507	7,7917	18,448
2007/08	298,000	40,865	5,875	15,471
2008/09	150,000	77,350	6,400	24,480
2009/10	334,000	91,000	10,000	34,000
2010/11	472,041	148,000	16,877	63,200
2011/12	800,000	207,100	17,800	78,800
2012/13	680,000	150,000	16,500	68,000

Source: National bank of Ethiopia (NBE)

Unlike Ethiopia, Botswana does not experience informal cross-border trade for slaughter animals but for many years has been consistent in exporting high-value chilled and frozen beef to the European Union (EU) market, although it faces heavy competition from Brazil, New Zealand, Argentina, Uruguay and Chile in terms of quality of beef, price and large economies of scale. The difference in export values is attributed to inadequate value added by Ethiopia, most probably as a consequence of the broken-down market and processing/slaughter infrastructure, and lack of coordination and regulatory framework which enhances illegal cross-border live animal trade and further hinders value added initiatives across the value chain.

The growth in demand in COMESA/SADC and in the EU is for processed livestock products but Ethiopia loses value added through official exports of live animals and uncontrolled informal live-animal cross-border trade. As a result, the country lost more than \$40 million for raw hides/skins by exporting live animals and would have earned an additional \$95 million if the same number of hides/skins were processed into finished leather and exported in that form. Although, Botswana seems to be doing better than Ethiopia, in terms of beef exports in US\$ value terms, it is doing at high cost, which is likely to erode the gains from exports.

Botswana's compliance with Sanitary and Phytosanitary (SPS) requirements and with the Livestock Identification and Trace Back System (LITS) is associated with high costs through erection and maintenance of cordon fences, and of LITS and disease control check points. For example, the initial cost of LITS was \$35 million and it is estimated that Botswana spends \$8 million to maintain this system annually. High subsidies to the beef sector which enhance exports to the EU benefit only a few groups, especially the commercial ranches and feedlot operators (Davis and Milly, 2011).

### Milk and milk product trade in Ethiopia

Ethiopians produced 3.3 billion liters of milk in 2011/2, worth \$1.2 billion, and imported an additional \$10.6 million of dairy products. The main dairy animals produced are cattle, camels and goats depending on the agro-ecology (MoA and ILRI, 2013). At 19 liters per annum, per capita annual milk consumption is well below the world average of 105 liters and the African average of about 40 liters. The major dairy products in Ethiopia include traditional and industrially produced products. The traditional products are: sour milk, 'irgo' (fermented milk), cooking butter and 'ayib' (cottage cheese). Industrial products include pasteurized milk, skimmed milk, yoghurt, fermented milk, table and cooking butter, cheese, cream and ice cream (MoA and ILRI, 2013).

In Ethiopia, fresh milk is channeled through informal and formal marketing systems. The informal market involves direct delivery of fresh milk by producers to consumers in the immediate neighborhood and sales to itinerant traders or individuals in nearby areas. Though, consumers do not have confidence in the quality of milk. Additionally, milk prices in urban areas are not easily affordable for middle and low income customers. While, the formal marketing system involves organized collection networks, bulk cooling, transport, processing and distribution. Dairy plants are at the core of the formal marketing system (MoA and ILRI, 2013).

Ethiopia's milk markets are essentially domestic. Available information indicates that the country exports milk and milk products, particularly camel milk, from pastoral areas to neighboring countries (MoA and ILRI, 2013). A significant amount of camel's milk formally and informally exported for Somali consumption through Jijiga/Togochalle / Somali land route. For instance, the formal export of camel's milk is on range between 1600 and 2500 liters per day, at a price of USD 0.08/liter. The major marketable dairy product in Ethiopia is butter which has a relatively longer shelf life as compared to fresh whole milk (MoA and ILRI, 2013). Butter is also illegally exported to Djibouti and South Africa (targeting the Ethiopians in Diaspora). Additionally, as indicated by SNV (2006), small quantities of cream are exported to Djibouti from Dire Dawa.

In the 2011/12 fiscal year, a total of 1,180,332 liters of milk was formally exported and US\$ 146,070 earned from this export market. Ethiopia is the second largest producer of camel milk (12%) next to Somali (53% of global camel milk production). Ethiopia also holds the largest livestock population in Africa. However, data of the Ethiopian Revenue and Customs Authority indicate that the country is a net importer of milk and its derivatives. The country spent over 678.75 million birr to import various products year in between 2006 and

2010. Expenditure on powdered milk accounted for 79.6%, followed by cream, 12.9% and cheese 4.3% (MoA and ILRI, 2013).

### Hides and skin trade in Ethiopia

Ethiopia generates various livestock by-products, though one of the major economic relevance is hides and skins. Other livestock by-products include bones, blood, hoofs and offal which are used in the manufacturing of stock feeds. Compared to Ethiopia, Botswana produces about 280,937 hides and 48,150 skins per annum, while Ethiopia produces larger quantities. In Ethiopia, small ruminants account for the largest production, followed by cattle and camels (Figure 1) while in Botswana cattle account for a larger proportion than small ruminants (Figure 2). Ethiopia, therefore, has a more diversified and resilient resource base, which is able to sustain the leather and manufacturing sectors. The largest proportion of hides and skins is generated from backyards and slaughter slabs, followed by municipality slaughter houses and export abattoirs, while in Botswana most hides and skins are generated from the BMC abattoirs, local authorities and private abattoirs.

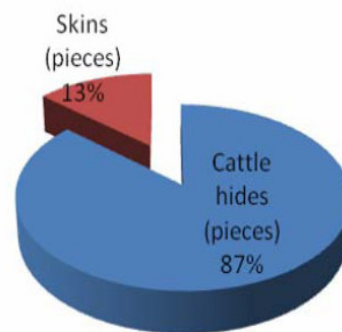
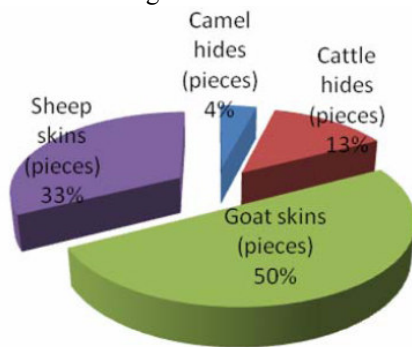


Fig 1. Ethiopia production of hide and skins(pieces), by livestock species, 2010

Fig 2. Botswana production of hide and skins (pieces), by livestock species 1999-2009

The marketing of hide and skin starts at the producer/consumer level and passes through a chain of middlemen until it reaches the tanneries. The market chain for raw hide and skins consists of the primary producers/consumers, who are the initial sources (individual meat consumers, rural slaughter slabs, municipal slaughter houses, abattoirs, meat processing plants), agents of traders, collectors, local tanners, regional medium/small traders, regional/Addis Ababa big traders and tanneries. The individual consumers who kill animals in their backyard sell the hide and skins either to agents, collectors, or directly to regional small/medium traders. After preservation by air-drying or wet salting, the hide and skins are passed on to big traders and then to the tanneries. The tanneries can be supplied directly from the slaughter premises, regional big traders or Addis Ababa big traders as well. In Ethiopia, hides and skins enter the leather value chain through 21 tanneries for processing into finished leather and these are further channeled to 850 leather enterprises for manufacturing of leather products (shoes, garments and belts).

The Ethiopian leather industry is one of the leading generators of foreign currency in the country and an important creator of jobs. Until 2006/07 exports of pickled sheepskins and wet-blue goatskins ranked second only to coffee as a source of foreign exchange. However, with the advent of the law that applied a tax on the export of semi-finished leather, the exports of these products declined in 2008 and 2009/10 no semi-finished leather was exported from Ethiopia - which coincided with the lowest level of leather and leather product exports from Ethiopia in nearly a decade. The global market for leather and leather products is huge, yet Ethiopia has a small fraction of the total global market for such products. In 2010 world imports of leather were valued at USD 19.9 billion, with USD 6.3 billion worth going to China, USD 2.3 billion to Italy and USD 1 billion to Vietnam. Ethiopia has direct long-term links to many of these markets, including Italy, China, United Kingdom, Russia and Hong Kong, which collectively account for about 75% of all leather exported from Ethiopia (AGP-Livestock Market Development Project, 2013).

As the global economy recovered and the tanneries in Ethiopia began to invest more in finishing capability, the level of leather exports recovered and in 2011/12, reached a record of USD 112 million. Despite this rebound in the export levels of finished leather, tannery capacity is still significantly underutilized with most tanneries producing at well below 50% of their installed capacities (AGP-Livestock Market Development Project, 2013). Ethiopia experiences cross-border trade of about 4,925,000 pieces of hides and 10,870,000 pieces of skins into Djibouti, Kenya, the Sudan and Somalia through informal routes. The major concerns in the production of hide and skins in Ethiopia similar to most countries across COMESA/SADC are inappropriate animal husbandry practices, lack of flaying tools, unskilled flayers and lack of technology across the value chain, which compromise the quality of raw hide/skins (COMESA Leather Chain Strategy, 2011).



### **Livestock policy environment in Ethiopia**

Livestock is an engine for economic diversification and sustainable rural development in Ethiopia. Though, most of the agricultural policies in Ethiopia are biased towards crops for food-security purposes. The low potential for crop production due to limited irrigation technologies, livestock remains a major source of income, job creation, poverty reduction, as well as increase food security and enhanced human nutrition for the majority of Ethiopian rural people in the traditional and agro-pastoral/pastoral farming systems. In this respect, livestock ownership, in terms of both quantity and quality, is an important asset because of its multiple social, economic and cultural uses (Future Agriculture, 2014).

Except for few outdated proclamations and regulations and undeclared policies, there was no clear policy on livestock development in the country. Various initiatives have made in the preparation of livestock development related policies. However, none of these were finalized for proper enactment by the government. The contribution of lack of livestock policy and inappropriate development policies developed so far in the country on livestock related activities to the decline in production and slow rate of progress could not be quantified (Future Agriculture, 2014).

Even though clear improvements has been performed in Ethiopian livestock export market since 2005, there is still no specific livestock marketing policy that harmonizes the production, animal health and marketing aspects the system as a whole. This might be due to different ministries are mandated to support different aspects of the production-marketing chain, and the specific mandates of each ministry are subject to frequent changes. For example: mandate for overseeing live animal markets has changed twice between the Ministry of Agriculture and Ministry of Trade since 2005.

- At present, the ministry of trade and industry is in charge of the export abattoirs and responsible for managing live animal markets.
- The ministry of agriculture is confined to the production and health aspects of the sector prior to establishment of the current livestock ministry.
- The ministry of finance and economics sets VAT on livestock feed – despite a critical feed shortage in Ethiopia, and the practice of exporting raw oil crops which is depriving the country of substantial quantities of oil cake feed.

One recent development is the enacting of a new Live Animal Marketing Proclamation through the Ministry of Trade. The proclamation aims to limit live animal markets to primary and secondary markets only to shorten the supply chain, remove brokers and replace livestock traders with pastoral marketing cooperatives to reduce transaction costs. The Ministry also plans to introduce a transparent auction system based on weight, grade and breed of livestock. Meanwhile, some of the provisions in the proclamation overlap with the Ministry of Agriculture's mandate on issues related to livestock movement permits and ear tagging procedures. Hence, identifying policy options for improving market participation and sales of livestock and livestock products is particularly important in the Ethiopian context as livestock play a very prominent role in the Ethiopian economy (Simeon et al., 2003).

A further challenge with policy coherence is national-regional harmonization. Ethiopia is a member of the African Union (AU), Common Market for Eastern and Southern Africa (COMESA) and Intergovernmental Authority on Development (IGAD), bodies promoting regional economic integration and the 'free movement of goods, services and people'. In line with this thinking, the COMESA Green Pass certification system is a progressive and science-based approach for supporting regional and international livestock trade. In contrast, the new Live Animal Marketing proclamation in Ethiopia reinforces the notion of cross-border livestock trade as illegal. The impacts of the proclamation on both the domestic and the export trade remain to be seen (Future Agriculture, 2014). To improve the competitiveness of live animals and meat export from Ethiopia interventions of market support services are needed apart from coordinated supply chain which reduce non value adding transaction costs .

### **International livestock and livestock product and by-product trade requirements**

International trade agreements arising from Uruguay Round trade discussions, particularly the World Trade Organization (WTO) Agreement on Application of Sanitary and Phytosanitary Measures (SPS agreement) and Agreement on Technical Barriers to Trade (TBT agreement), have moved the world toward the international harmonization of food product standards. In this regard, the work of the Codex Alimentarius Commission (Codex) is particularly important. Codex is an international intergovernmental body that develops science based that develops science based food safety and commodity standards, guidelines and recommendations to promote consumer protection and to facilitate world trade.

As part of a move towards a more targeted risk management approach, new procedures, such as the application of 'hazard analysis critical control point' are becoming integrated into national and international traded food standards, e.g. part of total quality control in ISO (International Standardization Organization) 9000. However, the costs of implementing these new procedures will add to the costs of meat. The lower throughput

plants are likely to be higher, making them less competitive (Leslie and Upton, 1999).

Technical regulations relating to quality characteristics and conditions for product presentation or description (e.g. labelling, packaging and information) and specifications on consignment procedures (testing, inspection and quarantine) may be contained in standards approved by a recognized body. Such standards relating to animal health and food hygiene are probably the most serious constraint on the expansion of international trade in meat, particularly between exporters in low income countries and high income country importers. These technical requirements are often imposed in order to protect human, livestock and plant health, as well as, wildlife. There is also growing concern about food safety resulting from food related illness (e.g. Salmonella Enteritidis infection), residues in food from various sources including agricultural chemicals and antibiotics. Indeed, these types of regulation are not new. European Union (EU) only import meat must come from herds free of foot and mouth disease, tuberculosis, brucellosis and other diseases which have been eradicated within the Union (Leslie and Upton, 1999).

Moreover, the domestic meat market is often supplied from animals slaughtered the same day, without the use of refrigeration. Meat for export would have to come from animals slaughtered and handled in EU inspected facilities specifically constructed for this trade, which meet stringent food hygiene and sanitary conditions, while the meat must be inspected by EU approved veterinarians. Trade from sub-Saharan country like Ethiopia, was reportedly constrained in recent years by a lack of EU- approved slaughter houses. Construction and running of such facilities is problematic, particularly where the volume of throughput is extremely variable and rarely reaches plant capacity. This is especially true of beef plants, particularly those depending on livestock raised in arid and semi-arid areas. This helps to explain why the bulk of exports from these areas are transported as livestock rather than meat (Leslie and Upton, 1999). International trade in food products, including milk and dairy products is increasing significantly.

### **Challenges of livestock and livestock product and by-products trade in Ethiopia**

**Lack of exporting routes and ports:** Ethiopian livestock are trucked from Ethiopian quarantine stations to the Djibouti quarantine facility, or trekked across the border into Somaliland and shipped from the ports of Berbera and Bossaso to Djibouti to the Middle East (Elisabeth, 2010). This escorted the animals to be stressed and to reduce their body weight as well as reduction in quality of meat when the animals slaughtered. Moreover, live animals are also marketed through clans that are strongly maintained across international boundaries. Accordingly, the economy and trade routes are also related to these age-old links of the clan system (FEWS NET, 2010).

**Shortage of animals for export:** All the export abattoirs are complaining about shortage of live animals supply for export markets. Some of them were even unable to meet the already requested quantity by their customers. However, rather than shortage of supply of shoats for export abattoirs, matching exporters' demand with market supply is a major observed problem (Getachew et al., 2008). As a result, the existing meat processing facilities operate in Ethiopia at less than 50% of their operational capacities. This is apparently due to inadequate supply of the required quality live animals for meat processing by the export abattoirs. The export abattoirs are competing for the domestic supply of live cattle and shoats with the demand for live animals for domestic consumption, and for formal and informal (cross-border) trade (Asfaw and Mohammad, 2007).

The legal export of both live animal and processed meat is thus constrained due to shortage legal systems created by the illicit export. Recent studies estimate annual illegal flow of livestock through boundaries to be as high as 320,000 cattle (Workneh Ayalew, 2006). This makes the actual performance to remain very low, leaving most (55 to 85%) of the projected livestock off take for the unofficial cross-border export. According to Ayele et al. (2003), the main suppliers of this illegal channel are mainly Somali region and Borena of southeast and southern Ethiopia, respectively. The immediate destinations of this illegal trade are Djibouti, Somalia, and Kenya which re-export livestock and their products to different countries where they compete with the legal exporters from Ethiopia (LMA, 2001). This loss of exportable surplus has affected the country through loss of foreign exchange; income taxes and its impact on legal livestock trade.

According to Sintayehu et al. (2010), the reported factors contributing to large volumes of informal livestock trade and exports are onerous procedures required to export formally including export licenses, quarantine, banking clearance for remitting foreign exchange, minimum weight restrictions, and informal minimum price requirements. Better prices and more reliable market across the border; poor market linkages, financial and non-financial advantages to informality, including taxation, black market foreign exchange rates, lack of bureaucratic delay and clan and linguistic ties contributed to large volumes of informal livestock trade and exports.

**Lack of livestock breeding policy:** Meat production characteristics differ in relative economic importance, especially when considering different phases of production system. In meat and live animal export, the operations such as raising breeds, reproduction and slaughter (feedlot) operations are important. However, the first two operations are not yet fully implemented in Ethiopia. Poor management of replacement heifers and cow

herds has also led to the failure of achieving optimum reproductive performance in a beef cow herd. Therefore, the major aim should be directed in attaining a high rate of calf crop (90 - 95%) with 70 - 80% of the calves dropped in 21 a day period. This goal can only be achieved by proper feeding of the herd during critical periods, minimizing calf losses at birth through adequate supervision, proper supervision of mating during the breeding period so that every cow gets bred to a fertile bull and has the maximum opportunity for pregnancy to ensue.

**Prevalence of Diseases:** In Ethiopia, there are many livestock diseases that create frequent livestock mortalities. The presence of livestock diseases apart from affecting the efficiency of production, it hampers export market development as a result of frequent bans by importing countries. Over the past few years, the country has lost a substantial market share and foreign exchange earnings due to frequent bans by the Middle East countries due to the Rift Valley and FMD outbreaks respectively in the Republic of Yemen and U.K.

**Archaic traditional production system:** Pastoralists consider their livestock as means of saving or capital accumulation. Livestock are sold when need arises for cash income or when shortage of feed and water occurs. There is no effort to strategically produce for the market by adjusting and planning production to market needs. Production planning in terms of time, type and quality of supply to maximize income is nonexistent due to lack of entrepreneurial awareness. The traditional herd management system is not adequately supported through introduction of improved breeding system. Further, the private sector has not yet proved its adequacy in promoting production through additional investment and creation of marketable surplus. Further, the scattered individualistic production system is exposed to the vagaries of natural conditions (drought and disease outbreak), which frequently affects the herd size and outputs.

### Summary

Cattle, sheep, camels and goats are the most important sources of live animal, and hides and skins for export markets. Pastoral area of the country is main supplier of cattle and chilled sheep and goat carcasses. Based on number of animals and market participant per day the livestock marketing structure pastoralist areas follows four tiers, namely bush, primary, secondary and terminal markets. Live animals are bought by traders from this area are trekked for long distances without adequate resting, watering and feeding facilities. As a result animals are more often sick, dehydrated and emaciated it leads to poor carcass quality and even some being condemned at ante-mortem/post-mortem inspections.

The livelihoods of smallholder farmers in agro-pastoralists/pastoralists in Ethiopia are highly dependent on livestock and livestock products. Moreover, live animals make a considerable contribution to foreign currency earnings. Though, shortage of feeds, absence of well-organized live animal and its product marketing structure, in adequate livestock policy, lack of adequate market information, inadequate permanent animal route and facilities, ineffective and inadequate infrastructure and institutional set ups, prevalence of diseases and illegal animal trade were mentioned as the major constraints for the sector..

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