



**USAID**  
FROM THE AMERICAN PEOPLE

# END MARKET ANALYSIS OF KENYAN LIVESTOCK AND MEAT

**A DESK STUDY**

**microREPORT #184**

**MARCH 2012**

This publication was prepared by Elisabeth Farmer, ACDI/VOCA, and James Mbwika, Consultant for ACDI/VOCA, with funding from USAID under the Accelerated Microenterprise Advancement Project (AMAP) Knowledge and Practice II task order.

# END MARKET ANALYSIS OF KENYAN LIVESTOCK AND MEAT

**A DESK STUDY**

**microREPORT #184**

## **DISCLAIMER**

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

# CONTENTS

I.	EXECUTIVE SUMMARY .....	1
II.	BACKGROUND AND INDUSTRY OVERVIEW .....	3
III.	METHODOLOGY AND APPROACH .....	5
IV.	END MARKETS.....	6
A.	Domestic market .....	6
B.	Export markets.....	13
V.	LIVESTOCK MARKETING CHANNELS .....	18
A.	Market map .....	18
B.	Value chain actors.....	22
C.	Hides and skins value chain .....	34
VI.	CONTEXT: LEGAL AND REGULATORY FRAMEWORK .....	36
VII.	COMPETITORS .....	37
A.	Livestock exporters to Kenya.....	37
B.	Meat exporters to Kenya.....	37
VIII.	CHOICES .....	38
A.	Benchmarking.....	38
B.	Market positioning.....	38
IX.	PRELIMINARY RECOMMENDATIONS FOR STRENGTHENING KENYA’S DOMESTIC MEAT SUPPLY .....	39
	REFERENCES.....	43
	APPENDIX A: INDUSTRY CONTACTS .....	46
	APPENDIX B: SLAUGHTER HOUSE SAMPLE CONTRACT REQUIREMENTS AND PRICES FOR CHOICE MEATS AND KMC .....	48

# TABLES

Table 1: Estimated Off-Take Rates and Corresponding Meat Supply .....	7
Table 2: Annual Consumption of and Expenditures on Beef per Household in Nairobi by Income Quintile, 2003.....	9
Table 3: Annual Consumption of Beef and Chicken per Household in Nairobi by Income Quintile, 2003 .....	9
Table 4: Beef Purchases by Retailer and Price.....	10
Table 5: Comparison of Meat on Bone Prices - Nairobi.....	11
Table 6: Major Livestock Markets for Major Slaughter Complexes Supplying Nairobi.....	11
Table 7: Mombasa Meat Prices in Retail Outlets (in Kshs per kg) .....	13
Table 8: Exports of Live Cattle, Sheep and Goats (2005-2010) .....	16
Table 9: Volume of Animals Traded in the Secondary Markets that Supply Nairobi and Mombasa, January 1 - March 6, 2012.....	21
Table 10: Pastoralists' Livestock Production and Marketing Calendar.....	23
Table 11: Livestock Figures and Estimated Off-take Rates for Pastoral Herds.....	23
Table 12: Livestock Market Participation by Herd Size .....	24
Table 13: Primary and Secondary Traders' Profit Margins.....	26
Table 14: Licensed Local Abattoirs .....	29
Table 15: Licensed Export Abattoirs .....	30
Table 16: Official Livestock Slaughters ('000 heads).....	31
Table 17: Meat Grades and Wholesale Prices for Beef Carcasses, 2008 and 2012 .....	31
Table 18: KMC Slaughter and Export Figures, 2006-2011 .....	33
Table 19: KMC Contract Slaughter Rates and Export Prices .....	33
Table 20: Export Volumes for Kenya Leather, Hides and Skins .....	35

# FIGURES

Figure 1: Current Prices in Nairobi (January 2012).....	10
Figure 2: Supplier Characteristics Identified as Most Important by Hotels.....	12
Figure 3: Kenya Meat Export Volumes by Destination Country, 2005-2010 .....	14
Figure 4: Markets for Kenyan HSL.....	17
Figure 5: Kenya's Exports of HSL, 2005-2010.....	17
Figure 6: Kenya Livestock Value Chain Map.....	18
Figure 7: Geographical Supply Chains.....	19
Figure 8: Garissa Livestock Market Catchment.....	21
Figure 9: Garissa Livestock Market Sales, 1997-2007 .....	22
Figure 10: Kenya's Meat Exports by Destination, 2010 .....	34
Figure 11: Standard HSL Value Chain, Kenya.....	35

# ACRONYMS

ASAL	Arid and Semi-arid Lands
DFZs	Disease-Free Zones
DRC	Democratic Republic of Congo
DVS	Department of Veterinary Services
GDP	Gross Domestic Product
HSL	Hides, Skins and Leather
KLMC	Kenya Livestock Marketing Commission
KMC	Kenya Meat Commission
KNBS	Kenya National Bureau of Statistics
KRA	Kenya Revenue Authority
LMISKE	Livestock Market Information System of Kenya
MoLD	Ministry of Livestock Development
MSEs	Micro and Small Enterprises
SAP	Structural Adjustment Program
TLU	Tropical Livestock Unit
UAE	United Arab Emirates

# I. EXECUTIVE SUMMARY

## OVERVIEW

Kenyan consumers consume an average of 15-16 kg of red meat (meat and offal from cattle, sheep, goats and camels) per capita annually,<sup>1</sup> for a national total of approximately 600,000 MT<sup>2</sup> of red meat per year. Cattle are the most important source of red meat, accounting for 77 percent of Kenya's ruminant off-take for slaughter.<sup>3</sup> Approximately 80 to 90 percent of the red meat consumed in Kenya comes from livestock that are raised by pastoralists, with the remainder coming from highland cattle.<sup>4</sup> While Kenyan pastoralists account for the majority of Kenya's meat supply (approximately 60 to 65 percent of the total), a significant portion (20 to 25 percent) comes from livestock raised in neighboring countries with significant livestock populations (Ethiopia, Somalia, Tanzania and Uganda), making Kenya a meat deficit country.

**Nairobi and Mombasa markets:** The large cities of Nairobi and Mombasa have the highest per capita meat consumption within Kenya. The authors estimate Nairobi's consumption at 25.8 kg per person, which would require the monthly supply of approximately 27,839 head of cattle, 71,555 sheep and goats, and 685 camels to Nairobi. Mombasa is another important terminal market (along with Nairobi) for livestock from pastoral areas, and particularly North Eastern Province. Mombasa's annual consumption is estimated at 21.2 kg per person in 2011, requiring a monthly supply of 8,178 head of cattle, 21,021 sheep and goats and 201 camels.<sup>5</sup>

**Supply chains:** Most of the livestock sold in Nairobi and Mombasa comes from pastoral communities, and predominantly from northern Kenya and beyond. The main markets that supply animals are Garissa, Marsabit, Wajir, Mwingi, Isiolo, and Kajiado. Many of the animals coming from northern Kenya originate from across the border in Somalia and Ethiopia, while some of those from the southern corridor come from Tanzania.

**Market segmentation:** The Kenyan meat market is primarily urban and is stratified according to income, with the middle class accounting for the large majority of meat consumers in the urban centers. While there is a significant price differential for beef between high-end and low-end markets, when consumption is segmented by income quintile, it appears that the four lower quintiles pay relatively similar prices per kg (although the meat cuts and quality differ).

**Export markets:** Although total volumes remain small (accounting for only 1 percent of Kenya's meat production), Kenya has experienced an important increase in meat exports since 2005, particularly following the re-opening of the Kenya Meat Commission (KMC) abattoir as an export-licensed facility for use by private exporters.

Tanzania and the UAE are Kenya's most consistent markets for meat exports in recent years. However, in 2010, several large new markets were opened or expanded: Qatar, Oman, Kuwait, Somalia and Egypt.

Kenya is only a minor exporter of livestock, with the number of head exported never exceeding 7,500 in a given year. The only significant markets are Mauritius and Burundi, which import Kenyan cattle and goats respectively.

---

<sup>1</sup> Behnke and Muthami 2011 (p. 6) give an estimate of 15.25 kg. The estimate in the official Food Balance Sheet for 2009 (quoted in Behnke and Muthami 2011) is very similar at 15.3 kg per capita, while FAOSTAT's most recent estimate (2007) puts red meat supply (including offal) at 16.34 kg per capita (<http://faostat.fao.org/site/610/default.aspx#ancor>, with estimates for bovine meat, mutton and goat meat, and edible offals combined).

<sup>2</sup> This calculation uses the 2009 Census figures for Kenya, which put the country's population at 38,610,097.

<sup>3</sup> Authors' computation from figures provided in Behnke and Muthami 2011, p. 32

<sup>4</sup> Authors' computation from figures provided in Behnke and Muthami 2011

<sup>5</sup> Authors' calculations, using 15.25 kg per capita as the national average for 2011.

## RECOMMENDATIONS

The recommendations outlined below focus primarily on livestock value chains originating in pastoral regions. Therefore, the authors have taken care to ensure that the strategies proposed are consistent with pastoralists' goals of mitigating risk and becoming more resilient to drought and other shocks.

These recommendations should be seen as preliminary and should be subject to more in-depth analysis than was possible during this brief study. The authors recommend additional research into the feasibility and potential costs and benefits of each of these recommendations.

### 1. Invest in cattle fattening, combined with stronger vertical linkages

Recommendation: lease existing ranches to fatten well-selected young steers for six months, and invest in feedlots to finish steers to the desired weight. Consider ranch management strategies and competing incentives and pressures faced by the owners (e.g. subdivision), and strengthen vertical linkages between ranches and pastoral producers to make it profitable for them to sell their male animals young. Look into the Ethiopian feedlot model as a potential example for Kenya.

### 2. Increase demand in the lower income quintiles by driving down prices

Recommendation: increase supply and improve value chain efficiency in order to drive down meat prices and generate increased demand. Increase local production through improvements in herd and land management—e.g. ensuring pastoralists' access to grazing land and water and strengthening pastoral mobility. Improve efficiency through strengthened vertical linkages, investments in infrastructure and efforts to reduce animal diseases and mortality, transport costs and risks associated with livestock trade.

### 3. Improve sanitary and phytosanitary systems (SPS)

Recommendation: increase veterinary department enforcement of screening procedures and of the requirement for strict vetting of animals at livestock markets before movement, as well as inspection at the point of delivery. These measures will strengthen disease surveillance and control, thereby reducing risks and costs to traders and ranchers and improving efficiency along the value chain.

### 4. Invest in key infrastructure

Recommendation: develop trekking routes through carefully sited water points (see upcoming Tufts guidelines), with feed provisions along the routes, and possibly the construction of holding grounds (both on trekking routes and at market sites). Invest in appropriate truck designs—and particularly a design that would allow for the safe movement of livestock while still enabling the transport of consumer goods (for instance, removable partitions)—in order to reduce risk. Such targeted investments have the potential to significantly reduce transport risks and costs, thereby lowering the price of meat and increasing value chain efficiency.

### 5. Analyze the effects of horizontal linkages on prices paid to pastoralists

Recommendation: focus primarily on strengthening vertical linkages, and carefully support horizontal linkages only insofar as they truly increase value chain efficiency and competitiveness to the benefit of pastoralists.

### 6. Strengthen upgrading within the hides, skins and leather value chain

Recommendation: in collaboration with the Kenya Leather Development Council, work to improve tick control and branding by pastoralists, increase the practice of wet salting of hides and skins, enhance peri- and post-slaughter operations and strategically enhance value addition along the production chain.<sup>6</sup>

---

<sup>6</sup> Kenya Leather Development Council: [www.leatherdevelopmentcouncil.go.ke](http://www.leatherdevelopmentcouncil.go.ke)

## II. BACKGROUND AND INDUSTRY OVERVIEW

The livestock sector employs close to 50 percent of Kenya's agricultural labor force<sup>7</sup> and is a primary source of livelihoods for the 6 million pastoralists and agro-pastoralists that live in the country's arid and semi-arid lands (ASALs). Estimates of the livestock sector's contribution to Kenya's gross domestic product (GDP) range from 5.6 percent (Kenya National Bureau of Statistics) to 12.5 percent (Behnke and Muthami 2011),<sup>8</sup> while estimates of the contribution to agricultural GDP range from 30 percent (Muthee 2006) to 47 percent (FAO).

Kenyans consume an average of 15-16 kg of red meat (meat and offal from cattle, sheep, goats and camels) per capita annually,<sup>9</sup> for a national total of approximately 600,000 MT<sup>10</sup> of red meat per year. Cattle are the most important source of red meat, accounting for 77 percent of Kenya's ruminant off-take for slaughter.<sup>11</sup> Approximately 80 to 90 percent of the red meat consumed in Kenya comes from livestock that are raised by pastoralists within Kenya and neighboring countries.<sup>12</sup> Another 2 percent comes from livestock raised on ranches, and the remainder comes from the highlands. Of the total red meat supply, it is estimated that 20-25 percent comes from livestock that originates in neighboring countries with significant livestock populations (Ethiopia, Somalia, Tanzania and Uganda), making Kenya a meat deficit country. Small volumes of meat are also imported from European countries, Brazil and the United Arab Emirates (UAE), but these are limited to high-end hotels and supermarkets in Nairobi, and (with the exception of processed pork imports from Brazil) volumes are extremely small.

Kenya's livestock population includes 14.1 million indigenous cattle, 3.4 exotic (primarily dairy) cattle, 17.1 million sheep, 27.4 million goats and 3 million camels.<sup>13</sup> Over 70 percent of the national livestock herd is raised by pastoralists,<sup>14</sup> and, in 2005, Kenya's livestock in the ASALs was estimated to be worth Kshs 60 billion (approximately U.S. \$800 million), with an internal trade in pastoral areas in the order of Kshs 6 billion (U.S. \$80 million) per year.<sup>15</sup> In pastoral production systems, which are characterized by extensive rangeland grazing systems, communal rangeland and water resources management, and wet and dry season mobility, livestock accounts for 90 percent of employment and 95 percent of family incomes.<sup>16</sup>

Major actors in the livestock and red meat value chains include input suppliers (forage producers), pastoral producers, livestock traders, ranch owners and managers, slaughterhouses, butcheries and processors, and meat packers and exporters. Important service providers (who are not technically value chain actors) include brokers, who negotiate

---

<sup>7</sup> Gitu 2005, cited in *Determinants of Kenya's Beef Export Supply*, Otieno, D. et al. KIPPRA Working Paper No. 85, 2008

<sup>8</sup> The official estimate from the Kenya National Bureau of Statistics (KNBS) of livestock's contribution to national GDP is 5.6 percent; however, this estimate uses a commodity flow approach that uses the recorded value, quantities and prices for officially marketed agricultural commodities. A recent IGAD study concluded that livestock's contribution to GDP was significantly higher, due in particular to the contribution of milk production that is never marketed through official channels. IGAD's estimates of the value of livestock for 2009 are Kshs 318.97 billion—150 percent higher than the official estimate of Kshs 127.72 billion.

<sup>9</sup> Behnke and Muthami 2011 (p. 6) gives an estimate of 15.25 kg. The estimate in the official Food Balance Sheet for 2009 (quoted in Behnke and Muthami 2011) is very similar at 15.3 kg per capita, while FAOSTAT's most recent estimate (2007) puts red meat supply (including offal) at 16.34 kg per capita (<http://faostat.fao.org/site/610/default.aspx#anchor>, with estimates for bovine meat, mutton and goat meat, and edible offals combined).

<sup>10</sup> This calculation uses the 2009 Census figures for Kenya, which put the country's population at 38,610,097.

<sup>11</sup> Authors' computation from figures provided in Behnke and Muthami 2011, p. 32

<sup>12</sup> Authors' computation from figures provided in Behnke and Muthami 2011

<sup>13</sup> Kenya 2009 Census

<sup>14</sup> Government of Kenya/Export Processing Zones Authority 2005, p. 1

<sup>15</sup> Nyariki, D.M., Makau, B.F., Ekaya, W.N. and Gathuma, J.M. 2005 (ALRMP)

<sup>16</sup> FAO 2005 and Nyariki et al 2005

between pastoralists and traders and play an important price-setting role, veterinarians and community animal health workers, and transportation providers. The value chains are primarily geared toward the domestic market, which consumes approximately 99 percent of domestic production. Small volumes of meat are exported by the newly re-operationalized Kenya Meat Commission (KMC) and private meat exporters who use KMC's facilities for a fee, as well as Choice Meats (a subsidiary of Farmers Choice), while the exporter LTMS-K and individual ranchers export small volumes of live animals to Mauritius, Burundi (mainly goats), and Uganda.

# III. METHODOLOGY AND APPROACH

This study is based on an extensive literature review, supplemented by analysis of UN-COMTRADE and FAOSTAT data, and validated and updated through observations at retail outlets as well as key informant interviews with meat industry actors and regulators in Kenya.

Current retail prices were observed at several local butcheries, high-end butcheries and supermarkets in Nairobi in January 2012. Key informant interviews were conducted with livestock and meat value chain actors and regulatory institutions over a two-month period ranging from December 2011 to February 2012. Institutions interviewed included: the Ministry of Livestock Development (MoLD) - Department of Livestock Production and Department of Veterinary Services (DVS), the Kenya Livestock Marketing Commission (KLMC), abattoirs (Kiserian, Dagoret and KMC), traders/ranches (Taita, Dokata, and KMC in Coast Province) and hotels (Whitestands Hotel and Nyalı Hotel). The authors also reviewed data from the Livestock Market Information System of Kenya (LMISKE). The Kenya Revenue Authority (KRA) provided data on imports and exports of livestock and livestock products between 2000 and 2010, with details on the type of products as well as exporting and importing countries. This information was corroborated with data from UN-COMTRADE and FAOSTAT. The DVS provided detailed data on capacities of domestic and export abattoirs, using structured data capture templates prepared by the authors.

Where inconsistencies appear in the data (for instance, varying estimates of per capita consumption levels, contribution of livestock to GDP, etc.), these are noted in the footnotes. Although UN-COMTRADE data is used in the analysis of volumes of meat imports, for live animal and meat exports the authors relied primarily on data reported by KRA and exporters.

# IV. END MARKETS

## A. DOMESTIC MARKET

The Kenyan meat market is primarily urban and is stratified according to income. The middle class accounts for the large majority of meat consumers in the urban centers, whose meat purchases generally take one of two forms: a) roasted, boiled or fried meat (“*nyama choma*”) eaten at the point-of-sale, or b) raw meat purchased from retail butcheries to be cooked at home in the form of stew and eaten with *ugali*. Interviews with butchery operators in suburban Nairobi suggest that the ratio of meat eaten at the point-of-sale vis-à-vis that taken home is approximately 60:40<sup>17</sup>—however, this would require more systematic verification beyond the scope of this study.

The large cities of Nairobi and Mombasa have the highest per capita meat consumption within Kenya. A 2006 study that estimated national per capita consumption at 10.8 kg (Muthee 2006)—significantly lower than the 15-16 kg per person used in this report based on more recent estimates—put Nairobi’s per capita consumption at 18.25 kg and Mombasa’s at 15kg (Muthee 2006). Today, these figures are likely to be significantly higher—indeed, if they have grown at the same rate as national consumption (41 percent in six years, if the estimates of 10.8 kg for 2006 and 15.25 kg for 2011 are accurate and consistent), Nairobi’s consumption would be estimated at 25.8 kg per person and Mombasa’s at 21.2 kg per person in 2011.<sup>18</sup>

A per capita consumption figure of 15-16 kg of red meat corresponds to an estimated total domestic consumption equaling 600,000 MT per year. This figure is close to FAOSTAT’s most recent meat production figures for Kenya—607,680 MT for 2007, up from 590,630 MT in 2006.<sup>19</sup> Exact estimates are difficult to ascertain, as official slaughterers only account for a portion of meat production, with significant numbers of animals slaughtered informally (in backyards) and/or not formally inspected. Kenya’s official slaughter figures for 2008 were: 1,856,000 head of non-ranch cattle, 36,000 ranch cattle, and 5,425,000 sheep and goats. Using a dressing weight of 156.25 kg per head (125 kg of meat plus 31.25 kg of offal, which corresponds approximately to 25 percent of meat production)<sup>20</sup> for non-ranch cattle, 300 kg per head (240 kg of meat and 60 kg of offal) for ranch cattle, and 18.75 kg (15 kg of meat and 2.75 kg of offal) per sheep and goat, this corresponds to total official meat production of approximately 402,519 kg—suggesting that approximately two-thirds of Kenya’s meat production goes through formal channels, while one-third occurs informally.

Table 1 below, adapted from Behnke and Muthami, attempts to link 2009 livestock census data with estimated off-take rates found in various studies (Kenyan and neighboring pastoral cattle off-take rates from McPeak et al 2011, dairy cattle off-take rates from Bebe n.d., and shoat off-take rates from Agriconsortium 2003), apply estimated dressing weights (Agriconsortium 2003), and estimate the total production and consumption of different types of red meats in 2009. Their calculations indicate a red meat consumption estimate of 589,000 MT—consistent with a per capita consumption figure of approximately 15 kg.

---

<sup>17</sup>Interviews with butchery operators, January 2012.

<sup>18</sup>Authors’ calculations, using 15.25 kg per capita as the national average for 2011.

<sup>19</sup> FAOSTAT 2012.

<sup>20</sup> Dressing weight estimates taken from Agriconsortium 2003, as reported in Behnke and Muthami 2011. Choice Meats has the following weight classifications for different grades of animals slaughtered at their facility in Nairobi; Class 1: High grade 175kg and above; Class 2 also high grade weight 165-175kg; Class 3 (FAQ) 150-165kg; Class 4 Standard grade (fat but below 150kg) and Class 5 commercial grade (below 150kg and not well finished).

**Table 1: Estimated Off-Take Rates and Corresponding Meat Supply**

Product	Source	Total livestock head	Est. off-take rate	Total annual off-take (head)	Est. dressing weight	Meat production	Offal production	Total (MT) & contribution to red meat consumption
<b>Beef</b>	Kenyan pastoralists	11,915,973	15%	1,787,396	125 kg	223,425 MT	55,856 MT	279,281 MT (47%)
	Neighboring pastoralists	N/A	N/A	632,649	125 kg	79,081 MT	19,770 MT	98,851 MT (17%)
	Dairy producers & other highland	5,311,800	7.9%	419,632	125 kg	52,454 MT	13,114 MT	65,568 MT (11%)
	Commercial ranches	240,000	15%	36,000	240 kg	8,640 MT	2,160 MT	10,800 MT (2%)
	<b>Total beef</b>			<b>2,875,677 head</b>				<b>454,500 MT (77%)</b>
<b>Sheep and goat meat</b>	Sheep (all)	17,129,606	13.2%	2,261,108 head	15 kg	33,917 MT	8,479 MT	42,396 MT (7%)
	Goats (all)	27,740,153	23.7%	3,800,401 head	15 kg	57,006 MT	14,252 MT	71,258 MT (12%)
	<b>Total sheep &amp; goat meat</b>			<b>6,061,509 head</b>				<b>113,653 MT (19%)</b>
<b>Camel meat</b>	Pastoralists	2,971,111	1.7%	50,509	330 kg	16,665 MT	4,166 MT	20,831 MT (4%)
	<b>Total camel meat</b>			<b>50,509 head</b>				<b>20,831 MT (4%)</b>
<b>Total red meat</b>				<b>2,875,677 cattle 6,060,000 shoats 50,509 camels</b>				<b>588,984 MT (100%)</b>

Source: Behnke and Muthami 2011

A caveat is in order here: attempting to corroborate off-take rates with estimates of supply channels and domestic consumption is a difficult and imprecise task, given that “dressing weights” refers to the hanging carcass (with head, hooves, hides/skins and non-edible offal removed) and includes all the bone which may or may not be sold and counted in “meat marketed” values, especially in different markets. In the low-end markets in particular, it is likely that “meat marketed” figures include substantial bone and fat weight that consumers must discard. Moreover, off-take rates vary widely by district and by season, and the rates presented above vary from other estimates—see the discussion on pastoral off-take rates below. Finally, the table above seems to suggest that all of the sheep and goat meat consumed in Kenya originates in Kenya—which is likely not the case. Hence the calculations presented above, though useful, should be read as estimates showing a possible scenario, rather than as firm values.

## 1. NAIROBI

A 2003 study by the Tegemeo Institute from Egerton University (in collaboration with the Central Bureau of Statistics), found that, among households in Nairobi, approximately 87 percent had consumed beef in the previous month, while only 13 percent had consumed goat meat and 2 percent had consumed mutton. Their analysis states that sheep and goat meat are “largely luxurious commodities and are hardly consumed *at home* except by a very small group of high-income households”<sup>21</sup> (emphasis added). However, goat and sheep meat account for a large proportion of roasted meat consumption at point-of-sale, e.g. *nyama choma*, and therefore it should not be assumed that beef

<sup>21</sup> Gamba 2005: 7

accounts for 87 percent of Nairobi's total red meat consumption. As the table above shows, sheep and goat meat accounts for nearly 20 percent of total red meat consumption nationwide; actual proportions for Nairobi are likely to be near this range.

#### **MARKET SEGMENTATION AND PRODUCT DIFFERENTIATION**

Income is a—or perhaps *the*—primary determinant of the type of beef products consumers choose to purchase. For lower-income consumers, price is an important factor, while consumers in high-end markets are willing to pay a premium for quality and safety. The majority of butcheries offer similar quality with little product differentiation, although there are a small number of high-end butcheries that offer beef cuts that are of significantly higher quality than those found in low-class butcheries.

**Low-end market:** The low-end market comprises the highest share of the meat market. Only three classes of meat are sold in the low-end market: meat on bone, liver and tripe. The low-class butcheries offer beef on bone, which is usually openly displayed without refrigeration. Most of the outlets in this category offer take-home as well as point-of-sale eatery in the form of roast (choma), boiled or fried meat. Price is the most important consideration in this market segment, as it is patronized by low- to medium-income earners.

**Middle segment:** The middle segment of the market offers meat on bone, boneless steaks, liver and tripe. Steak and liver attract the same price per kilogram, while meat on bone is approximately 16 percent cheaper. Tripe is sold at the lowest prices. The retail outlets in this market have a deep freezer where meat is stored overnight, but have limited refrigeration. Some of the outlets in this category offer both take-home as well as point-of-sale eatery. These classes of butcheries are found in the medium-income residential areas and are mainly patronized by the medium-income group.

**High-end market:** The high-end market is characterized by high-quality meat from well-finished animals—primarily from ranches—and by choice cuts that are priced differently. High-income consumers are more likely to buy value-added beef (e.g. choice cuts and beef sausages) than middle- and low-income consumers, and are more likely to purchase meat from high-end markets such as supermarkets and high-end butcheries. These customers perceive packaging and presentation as an important aspect of quality and safety, along with physical attributes such as the meat's color and fat content, the presence of a veterinary rubber stamp, and the cleanliness of the butchery or supermarket.<sup>22</sup> High-end butcheries charge a premium for choice beef cuts based on the source of supply, which are primarily ranches.<sup>23</sup> Supermarkets tend to offer higher quality beef cuts, which accounts for the higher prices (Kshs 400 per kg compared to Kshs 340 per kg in butcheries). In this class of meat markets fall the Nakumatt, Uchumi and Tuskys supermarkets and butcheries located in high-income residential areas such as Muthaiga, Village Market, Lavington, Karen, etc. Outlets in this category do not specialize in point-of-sale eatery, except those of restaurant category, such as the Carnivore.

**Market segmentation by income quintile:** Although the Tegemeo study likely underestimated sheep and goat meat consumption in urban areas, it provides some interesting information on household beef consumption. Tegemeo's study found that, in 2003, households in Nairobi consumed 15.81 kg of beef per adult equivalent (or 13.33 kg per capita) annually, followed in importance by chicken and eggs (at 12.42 kg and 7.46 kg respectively), for a total expenditure on meat of Kshs 17,784 per year or Kshs 1,482 (approximately U.S. \$20) in a given month. Total consumption varied by income, with those in the highest quintile consuming nearly three times more beef than those in the lowest quintile, as shown in the table below.

---

<sup>22</sup> ASARECA brochure on quality and safety of small-scale beef products in ECA

<sup>23</sup> Gamba 2005: 13.

**Table 2: Annual Consumption of and Expenditures on Beef per Household in Nairobi by Income Quintile, 2003**

Income quintiles	Beef consumption in kg – annual meat per adult equivalent*	Beef consumption in kg – annual mean per capita	Expenditures on beef per household (monthly)	Mean meat prices per kg
Highest quintile (20%)	23.77 kg	21.19 kg	Kshs 1,411	Kshs 170
Fourth quintile	22.00 kg	19.77 kg		Kshs 147
Middle quintile	18.27 kg	13.96 kg		Kshs 142
Second quintile	13.98 kg	11.89 kg		Kshs 143
Bottom quintile (20%)	8.55 kg	7.15 kg	Kshs 476	Kshs 145
<b>Average</b>	<b>15.81 kg</b>	<b>13.33 kg</b>		<b>Kshs 149</b>

Source: Tegemeo Urban Survey 2003, quoted in Gamba 2005 (p. 7 and 9)

\*Per WHO guidelines (1997), used to standardize consumption across adults and children, and men and women

While prices have increased significantly since 2003 (the authors do not have access to updated prices by income quintile but provide current prices for Nairobi by retail outlet below), the figures above are worth reporting due to the nearly insignificant difference in meat prices between the four lowest quintiles (all between Kshs 142 and Kshs 147 per kg). There is also a relatively small difference between the highest quintile (Kshs 170 per kg) and the lowest quintile (Kshs 145 per kg). The similarity in prices for the four lower quintiles suggests that quality concerns only influence the purchases of the highest income households. Moreover, the Tegemeo study hypothesizes that a small reduction in beef prices might lead to a substantial increase in consumption volumes among the low-income quintiles, due to the elastic nature of beef demand.<sup>24</sup>

**Comparison of beef and chicken consumption by quintile:** The table below provides side-by-side comparisons between beef and chicken consumption by income quintile. Beef consumption is higher than chicken consumption across all quintiles, which likely reflects a preference for beef and, for the poor, possibly a preference for meats that can be sold in smaller quantities, as opposed to chicken which is sold whole.

**Table 3: Annual Consumption of Beef and Chicken per Household in Nairobi by Income Quintile, 2003**

Income quintiles	Annual meat per adult equivalent		Annual mean per capita	
	Beef consumption	Chicken consumption	Beef consumption	Chicken consumption
Highest quintile (20%)	23.77 kg	17.97 kg	21.19 kg	15.88 kg
Fourth quintile	22.00 kg	13.82 kg	19.77 kg	12.07 kg
Middle quintile	18.27 kg	11.81 kg	13.96 kg	8.9 kg
Second quintile	13.98 kg	8.87 kg	11.89 kg	7.61 kg
Bottom quintile (20%)	8.55 kg	6.75 kg	7.15 kg	5.53 kg
<b>Average</b>	<b>15.81 kg</b>	<b>12.42 kg</b>	<b>13.33 kg</b>	<b>10.52 kg</b>

### CURRENT PRICES

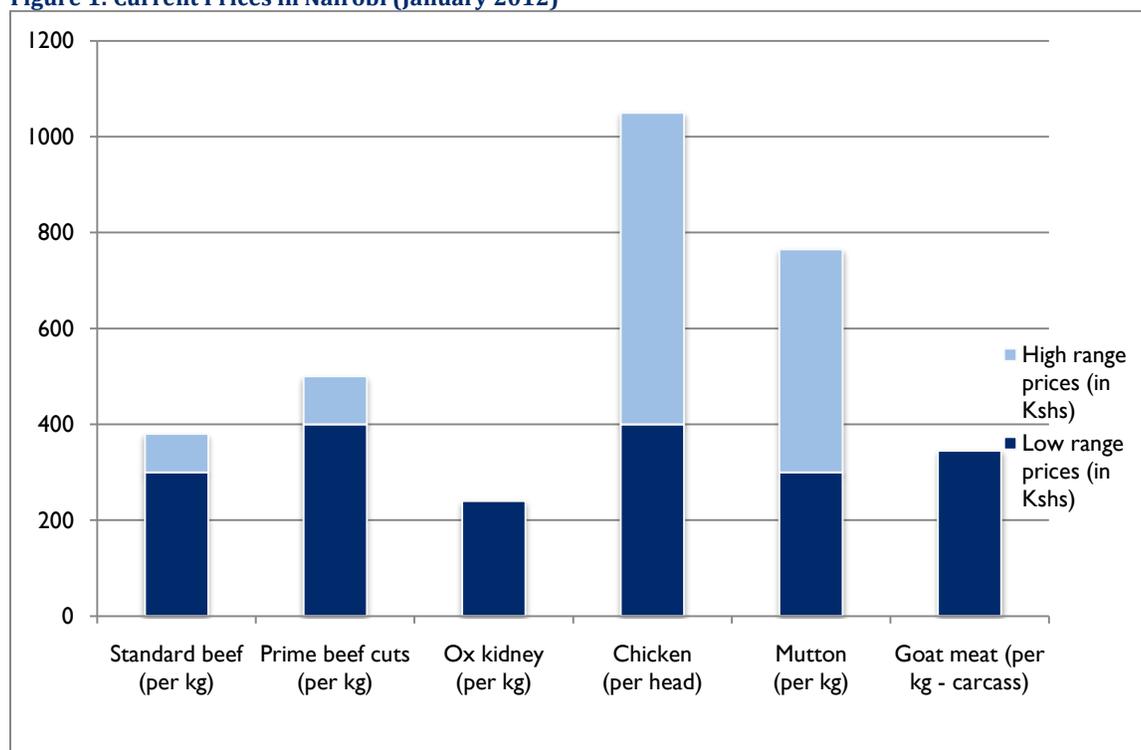
The graph below depicts meat prices in Nairobi as of January 2012, with low-range prices shown in dark blue and high-range prices (mostly at supermarkets and high-class butcheries) in light blue. Mutton prices vary according to the cut, with the loin attracting high prices and the arm attracting low prices. Goats are purchased as whole dressed carcasses and chickens are sold whole as well.

While chicken prices are shown per head, their average weight can be estimated based on studies that have found that indigenous chickens are sold at 5-6 months of age, when they weigh approximately 1.3-1.8 kg, and that their average Cold Dressed Weight is approximately 72 percent of live weight (Kingori, Wachira and Tuitoek 2010: 313). This

<sup>24</sup> European Union 2003, quoted in Gamba 2005

suggests that an average chicken yields approximately 1.1 kg of meat. Hence low-range chicken prices fall between the price of standard and prime cuts of beef for 1 kg.

**Figure 1: Current Prices in Nairobi (January 2012)**



According to the Tegemeo study, butcheries are by far the most common retail outlet for beef purchases, reported by over 93 percent of households as the most frequent source of beef purchases. Kiosks and supermarkets were a very distant second and third, accounting for approximately 3 percent each. Other results are shown in Table 4 below, updated with 2012 prices.

**Table 4: Beef Purchases by Retailer and Price**

Retailer	% of households reporting retailer as most frequent (2003)	Average prices (2003)	Current Prices in Nairobi* (Jan 2012)
Butchery	93.39%	Kshs 148	Kshs 340
Kiosk/kibanda	3.2%	Kshs 148	Kshs 300
Large supermarket	2.77%	Kshs 176	Kshs 400
Small supermarket	0.21%	N/A	
Duka/shop	0.21%	Kshs 140	
Restaurant	0.21%	Kshs 160	
<b>Overall</b>	<b>100%</b>	<b>Kshs 149</b>	

Source: Tegemeo Urban Survey 2003; \*update based on field survey (Jan 2012)

Table 5 below provides a more comprehensive overview of retail and wholesale beef prices in various Nairobi outlets in January-February 2012, and shows a much greater price differential between the high-end and low-end markets. Retail prices are provided in terms of specific cuts. However, the list provided in the table is not exhaustive. For instance, according to their January 2012 price list, KMC has 33 beef cuts, the most expensive being striploin at Kshs 550 per kg, and the lowest, trotters at Kshs 20 per kg.

**Table 5: Comparison of Meat on Bone Prices - Nairobi**

	Kshs/kg	Type or Market Segment	Pricing
<b>Nakumatt Mega</b>			
Meat on Bone	520	High end	Retail
Steak (boneless)	955		
Liver	520		
<b>Uchumi Aga Khan</b>			
T-Bone steak	690	High end to middle segment	Retail
Topside	631		
Meat on bone	488		
Tripes	274		
Liver	506		
<b>KMC (outlets/wholesale)</b>			
Meat on bone	310		Wholesale
Liver	320		
Tripe	75		
<b>Ongata Rongai Honey Moon</b>			
<b>Ongata Rongai - Places</b>	360	Low end	Retail
<b>East of Nairobi - Low end</b>			
Burma Market	200	Low end	Wholesale
Burma Market (lean on bone)	160		
Steak (boneless)	240		
<b>Ebenezer (Burma market) Retail</b>			
Meat on bone	280	Low end	Retail
Boneless steak	350		
Tripe	120		

The price differential between beef sold in high-end markets compared to beef sold in the low-end markets suggests there may be an opportunity for increased incomes and value addition through investment in animal finishing in feedlots or ranches.

#### SUPPLY CHAINS

Using 2009 census data, which puts Nairobi's population at 3,138,369, and assuming that the dressing weights presented in Table 1 are accurate, the author's consumption estimate of 21.6 kg of red meat per month requires the monthly supply of approximately 27,839 head of cattle, 71,555 sheep and goats, and 685 camels.

Animals supplied to Nairobi come from throughout the pastoral areas. The table below presents the major livestock markets supplying the two primary slaughter complexes: Dagoretti and Dandora. It should be noted, however, that many of these animals originate within Ethiopia, Somalia, Tanzania and Uganda.

**Table 6: Major Livestock Markets for Major Slaughter Complexes Supplying Nairobi**

Slaughter complex	Livestock markets	Areas supplied
<b>Dagoretti</b>	<ul style="list-style-type: none"> <li>• <b>Northeastern Province:</b> Garissa, Mandera, Marsabit, Isiolo</li> <li>• <b>Nyanza Province:</b> Migori, Kuria, Suba</li> <li>• <b>Rift Valley Province:</b> Kajiado, Narok, Turkana, Samburu, Kapenguria, Nandi, Kericho, Bomet, Laikipia</li> <li>• <b>Eastern Province:</b> Kitui, Mwingi, Machakos, Makeni</li> </ul>	<ul style="list-style-type: none"> <li>• West/Northwest Nairobi</li> <li>• West/Southwest Nairobi</li> <li>• Northern Nairobi</li> </ul>

<b>Dandora (Njiru)</b>	<ul style="list-style-type: none"> <li>• <b>Northeastern Province:</b> Moyale and Garissa</li> <li>• <b>Nyanza Province:</b> Migori</li> <li>• <b>Rift Valley Province:</b> Laikipia</li> <li>• <b>Eastern Province:</b> Kitui, Mwingi</li> </ul>	<ul style="list-style-type: none"> <li>• Eastern/Northern Nairobi</li> <li>• South East and parts of Central Nairobi</li> </ul>
------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------

Source: Muthee 2006

Most of the primary and secondary livestock sources listed in Table 6 constitute “transit” markets for originating from outside Kenya. For instance, many animals traded in Garissa originate in Somalia, while those traded on Moyale, Marsabit and Isiolo are likely coming from Ethiopia. Cattle traded in Migori, Kuria, Kajiado and Suba likely originate in Tanzania. Some of the cattle traded in Kapenguria originate in Uganda.

Other suppliers include Njiru slaughterhouse, which supplies northeastern Nairobi with beef and shoat meat; Kiamaiiko slaughterhouse, which supplies eastern Nairobi with shoat meat; and Kiserian slaughterhouses, which supply west and southwest Nairobi. In addition, Burma market, which is mainly supplied from slaughterhouses in Kajiado, functions as a wholesale market for meat in Nairobi.<sup>25</sup>

## 2. MOMBASA

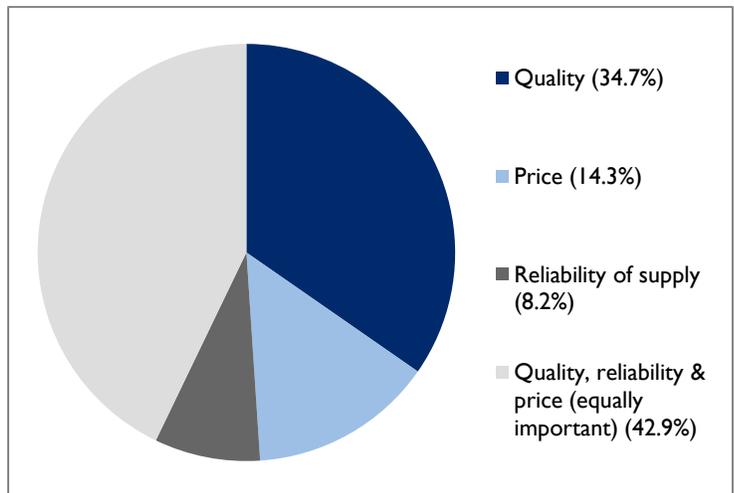
As explained above, Mombasa’s per capita red meat consumption is estimated at 21.2 kg in 2011. Using the 2009 Census population figure of 939,370, the city’s annual consumption of red meat is estimated at 19,915 MT.

### MARKET SEGMENTATION AND PRODUCT DIFFERENTIATION

As in other urban centers in Kenya, *nyama choma* retail outlets, which sell roasted, boiled and fried meat, are very popular in Mombasa. However, given the importance of Mombasa as a tourist destination, the hotel industry is an important outlet of meat and represents a larger proportion of the market than in other cities. Demand for meat in Mombasa is therefore likely to fluctuate significantly between the high season (August through December) and the low season (January through July). Many of these tourist hotels are concerned about meat quality and safety,<sup>26</sup> as they report having had problems related to improperly chilled meat, possibly associated with faulty refrigeration systems of the transport vans. Hotels require that the meat be slaughtered and processed under hygienic conditions—making the choice of abattoir important—and name quality as the most important consideration in sourcing meat.

A 2009 study by Mshenga and Owour, which found that 65 percent of hotels in the coast sourced their meat from micro and small enterprises (MSEs), surveyed hotels on the key factors they considered when purchasing meat. As shown in the graphic at right, amongst hotels that identified one key factor (rather than saying all factors were equally important), quality ranked high above price and reliability of supply as the most important consideration.

**Figure 2: Supplier Characteristics Identified as Most Important by Hotels**



<sup>25</sup> Muthee 2006: 89-90, 102

<sup>26</sup> Interviews with hotels in Mombasa, January 2012

## CURRENT PRICES

In Mombasa, tourist hotels purchase meat from leading abattoirs (KMC, Alpha meats and Hurlingham butcheries) at prices between Kshs 450 and 500 per kg depending on the cut, with beef fillet attracting the highest price of Kshs 500 per kg. Prices for both quality cuts and meat from butcheries in Mombasa are fairly close to prices paid in Nairobi. KMC prices are the same for Nairobi and Mombasa markets. For example, striploin trimmed is priced at Kshs 550 in either Nairobi or Mombasa, while rump steak goes for Kshs 450 per kg. Table 7 below provides a more in-depth look at prices in Mombasa’s meat retail outlets.

**Table 7: Mombasa Meat Prices in Retail Outlets (in Kshs per kg)**

Outlet	Steak (Boneless) Beef			Meat on Bone		Goat	Mutton
	Fillet	Top side	Rumpside	T-bone Fillet	T-bone		
Nakumatt	1,120	950	980	950	520	870	870
Tuskys	600	520	520	480	420	450	450
<b>Low end</b>	<b>Steak</b>			<b>Beef on Bone</b>			
Changamwe			400		320	340	
Mtwapa			390		320	370	

Nakumatt is a high-end supermarket, while Tuskys is a supermarket patronized primarily by the middle class. Changamwe is a residential and industrial neighborhood in a low-income part of Mombasa, while Mtwapa is a mixture of low- and middle-income class business/residential area along the Mombasa – Malindi road. Mtwapa is also patronized by tourists (local and foreign) and is a popular entertainment area. The high price of goat meat price in Mtwapa compared to Changamwe is a reflection of high demand for roast (choma) meat in the area.

## SUPPLY CHAINS

Mombasa is an important terminal market (along with Nairobi) for livestock from North Eastern Province. Assuming national averages in consumption of different types of red meat (e.g. 77 percent beef, 19 percent shoat meat, and 4 percent camel meat), a monthly supply of 8,178 head of cattle, 21,021 sheep and goats and 201 camels are required to meet Mombasa’s per capita consumption of 21.2 kg of red meat annually. Animals come from Garissa, Tana River and Eastern Province, as well as ranches from throughout Coastal Province. Butcheries are supplied from local abattoirs and slaughterhouses within the coastal region (Kasementi, Mariakani, Pungu, Miritini, Uwanja wa Ndege, Vipingo, and Malindi<sup>27</sup>), while the tourist hotels source their high-quality cuts from Nairobi abattoirs. Small quantities of high-quality meat are also sourced from the KMC Mariakani Abattoir.

## B. EXPORT MARKETS

### 1. MARKETS FOR MEAT EXPORTS

Kenya has experienced an important rise in meat exports since 2005, with volumes increasing by a factor of 11 over the five-year period between 2005 and 2010. The 2009-2010 period saw the most dramatic increase, with a doubling of volumes, although the export volumes (2,500 MT in 2010) remain small and account for only 1 percent of Kenya’s meat production.

The country’s main export destinations for meat and meat products are the Gulf States—with exports historically limited to the UAE but expanding to Qatar, Oman and Kuwait in 2010—, Tanzania and Somalia, with other African countries accounting for the remainder. In 2010, Middle Eastern countries (including Egypt) surpassed sub-Saharan African countries as the largest importers of Kenyan meat, accounting for 63 percent of all exports. African countries

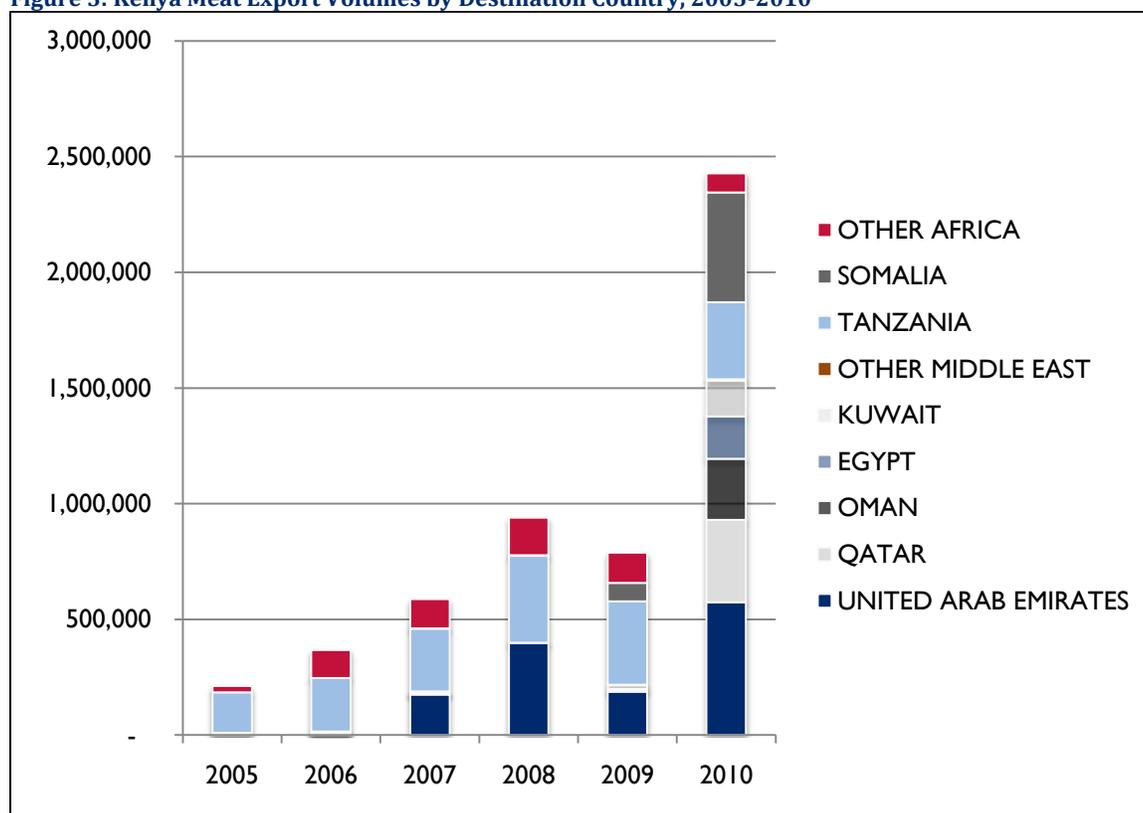
<sup>27</sup> Muthee 2006: 112

accounted for the other 37 percent, with Asian and European importers accounting for 0.36 percent and 0.03 percent respectively. Exports to Asia and Europe are too low to appear on the graph below.

Figure 3 below shows Tanzania and the UAE as Kenya’s most consistent markets for meat exports in recent years, and illustrates the importance of 2010 as the year in which large new markets were opened or expanded. These markets are Qatar, Oman, Kuwait, Somalia and Egypt.

The volumes reported in this graph include ham and other pork products (e.g. sausages), which account for a total of 6 percent of all meat exports (primarily destined to Tanzania).

**Figure 3: Kenya Meat Export Volumes by Destination Country, 2005-2010**



Source: KRA 2012. Export volumes are shown in kg.

Other Middle East = Yemen, Syria, Saudi Arabia, Bahrain, Iran

Other Africa: primarily Uganda, Sudan, DRC. Also (lower volumes): Seychelles, Rwanda, Nigeria, Mali, Ghana, Ethiopia, Eritrea, Djibouti, Congo, and Comoros

Europe: Netherlands, Switzerland, UK

Asia: India, Pakistan, Taiwan

### MIDDLE EASTERN MARKETS

Kenya’s meat exports to the Gulf States and Egypt expanded rapidly in 2010 with the re-opening of KMC as an export-licensed facility for use by private exporters. Exports are mainly comprised of goat and lamb meat, both chilled and frozen, which are destined primarily to the hotel industry and other retail outlets. Demand is particularly high during the month of Ramadan. Although Kenya’s overall share of these meat markets is fairly low (less than 1 percent in most markets), in several countries Kenya supplies 10-15 percent of goat meat imports.

**UAE market:** The UAE is an important market for beef as well as shoat meat and is—as of 2010—Kenya’s most important meat export destination. In the UAE market segments to which Horn of Africa exporters sell, importers

seek skin-off sheep carcasses weighing 8-12 kg and goat carcasses weighing 5-7.5 kg.<sup>28</sup> According to the KRA, Kenya exported 574 MT of meat—primarily chilled sheep and lamb carcasses and frozen goat meat—to the UAE in 2010, up from 188 MT in 2009 and just 7 MT in 2006.

**Qatar market:** Qatar represents an important new market for Kenya. According to the KRA, in 2010, Kenya exported 356 MT, consisting mainly of chilled goat meat, to Qatar—up from just 3-6 MT per year between 2005 and 2009. Within the same period (2010) the total imports of goat meat into Qatar were estimated at 2,487 MT of fresh or chilled goat meat valued at U.S. \$9.6 million (UN-COMTRADE)—suggesting that Qatar sourced nearly 15 percent of its goat meat from Kenya. In the same year Qatar imported 5,976 MT of fresh, chilled and frozen lamb carcasses valued at U.S. \$22.4 million. The preference was for the frozen carcasses, which accounted for 69.2 percent of the imports.

**Oman market:** In 2010, Kenya exported 264 MT of mainly chilled goat meat to Oman, up from virtually no exports (under 6 MT per year) every year between 2005 and 2009. The total imports of goat meat (fresh and chilled) into Oman were estimated at 2,746 MT (valued at U.S. \$11 million), suggesting that Kenya's share of Oman's goat meat imports is nearly 10 percent. In 2010 the total imports of lamb and mutton (chilled and frozen) into Oman were estimated at 382 MT (UN-COMTRADE).

**Kuwait:** According to the KRA, in 2010, Kenya exported 155 MT of goat meat and chilled and frozen sheep and lamb carcasses to Kuwait, up from 16 MT in 2009 and virtually none before then. Kuwait's total meat imports for 2010 are unavailable on UN-COMTRADE, hence it is not possible to determine what share of the market Kenya holds.

**Egypt market:** Kenya's ability to process boneless beef has enabled it to penetrate the important Egyptian market, with 183 MT of meat exports in 2010—all frozen boneless beef (KRA data). Since an outbreak of foot and mouth disease in January 2006, Egypt has banned live cattle and carcass imports and accepted only boneless beef imports. According to UN-COMTRADE, Egypt imported 23,725 MT of fresh or chilled bovine meat (valued at U.S. \$55.5 million) and 491,703 MT of frozen bovine meat (valued at U.S. \$706 million) in 2010. This suggests that Kenya's share of the Egyptian market is fairly insignificant. However, given Egypt's high consumption and the fact that Egypt is a member of the COMESA trading block, there is opportunity for Kenya to increase meat exports if proper sanitary conditions along the value chain are observed.

#### **SUB-SAHARAN AFRICAN MARKETS**

The most important African markets are Tanzania, Somalia and Egypt, followed by Uganda, Sudan and the Democratic Republic of Congo (DRC).

**Tanzania market:** From 2005 to 2009, Tanzania was Kenya's number one export destination for meat and meat products, with export volumes reaching a high of 360 MT in 2009. In 2010, with Kenya's dramatic increase in meat exports, the country fell to third behind the UAE and Somalia, or fourth (behind Oman) if only red meat exports are considered, as 35 percent of Kenya's exports to Tanzania were ham and pork products. The majority (52 percent) of Kenya's exports to Tanzania are frozen bone-in beef cuts, while the rest are bone-in mutton cuts, boneless beef and offal, all exported frozen. Today, Choice Meats (a subsidiary of Farmers Choice) reports exporting 35 MT of assorted meat products to Tanzania (Dar es Salaam and Arusha) every week, suggesting that total export volumes have likely increased since the 333 MT exported in 2010.

**Somalia market:** Kenya's meat exports to Somalia have increased dramatically in recent years, going from 80 MT in 2009 to 474 MT in 2010. The majority of these exports are frozen boneless beef, followed by goat meat.

---

<sup>28</sup>Amha Sebsibe 2008: 338

**Sudan market:** Sudan has traditionally been an important export destination for Kenya meat, with export volumes totaling 135 MT in 2008 and 109 MT in 2009. These exports were mostly frozen beef and frozen and chilled bone-in beef cuts. In 2010, however, exports to Sudan declined to just 36 MT, comprised nearly entirely of frozen bone-in beef and sheep meat.

**DRC market:** According to KMC, DRC is a promising meat market for Kenya and they are exploring the possibility of expanding export volumes. In 2010, Kenya exported 19 MT of meat and meat products to the DRC, mostly (94 percent) in the form of edible offal.

**Uganda market:** Uganda imports small quantities of meat from Kenya, over 90 percent of which is ham and other pork products (e.g. sausages). Uganda has maintained a ban on Kenyan beef since 1997, citing recurrent Rinderpest disease outbreaks in Kenya as the primary reason.<sup>29</sup> Indeed, data from KRA show that there have not been exports of beef products to Uganda in the last five years.

#### OTHER MARKETS

**Asian market:** Over the past five years, Kenya has occasionally exported very small volumes of meat (bone-in beef and hams/sausages) to India and Pakistan. However, given that these countries are important exporters of red meat themselves—particularly beef and buffalo meat—they do not present a significant opportunity for Kenyan exports.

**European market:** Kenya has a small quota for meat exports within the EU market—142 MT<sup>30</sup>—but is far from reaching this quota. Over the 2005-2010 period, Kenya only exported meat to three countries—the United Kingdom, the Netherlands and Switzerland—never exceeding 6 MT and never exporting to the same country for more than one year. Of these, only Switzerland imported red meat (bone-in and boneless beef, both chilled and frozen), while the Netherlands and the United Kingdom limited their imports to ham and sausages.

## 2. MARKETS FOR LIVE ANIMAL EXPORTS

Kenya is only a minor exporter of livestock, with the number of head exported never exceeding 7,500 in a given year. The only significant markets are Mauritius and Burundi, which import Kenyan cattle and goats respectively. The figures in the table below are limited to livestock intended for meat production, and exclude exotic livestock (meant for dairy or breeding purposes) as well as camels.

**Table 8: Exports of Live Cattle, Sheep and Goats (2005-2010)**

	2005	2006	2007	2008	2009	2010
Cattle	0	5,274	140	4,072	5,475	5,000
Sheep	0	12	0	0	40	0
Goats	1,705	93	4,505	3,220	1,604	0

Source: KRA

Exports of live camels from Kenya are not documented, but Hussein Abdullahi Mahmoud (2010) suggests that increasing numbers of camels are now being trekked to the Moyale market for onward export to the Middle East through Ethiopia. This corresponds with a significant reduction in camel trading at the Garissa secondary market.

## 3. MARKETS FOR HIDES, SKINS AND LEATHER (HSL)

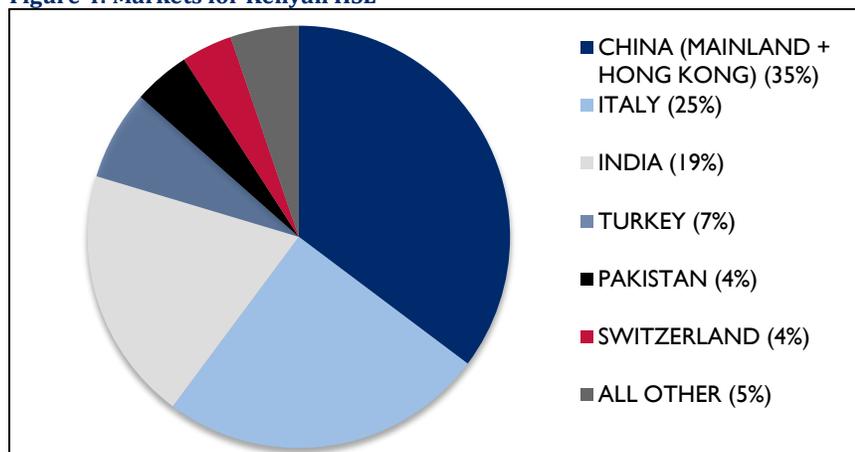
Hides and skins are exported in large quantities to China (primarily Hong Kong, although large volumes are also imported into Mainland China), Italy and India, with smaller volumes going to Turkey, Pakistan and Switzerland, where they are manufactured into shoes as well as leather garments. These destination countries are shown in the

<sup>29</sup> [www.trademarksa.org](http://www.trademarksa.org), Jan 3<sup>rd</sup> 2012

<sup>30</sup> Aklilu 2008: 11

graph below. The majority of these exports (by volume as well as by value) are semi-processed: full grains, unsplit; grain splits in the wet state (including wet blue); and crust.

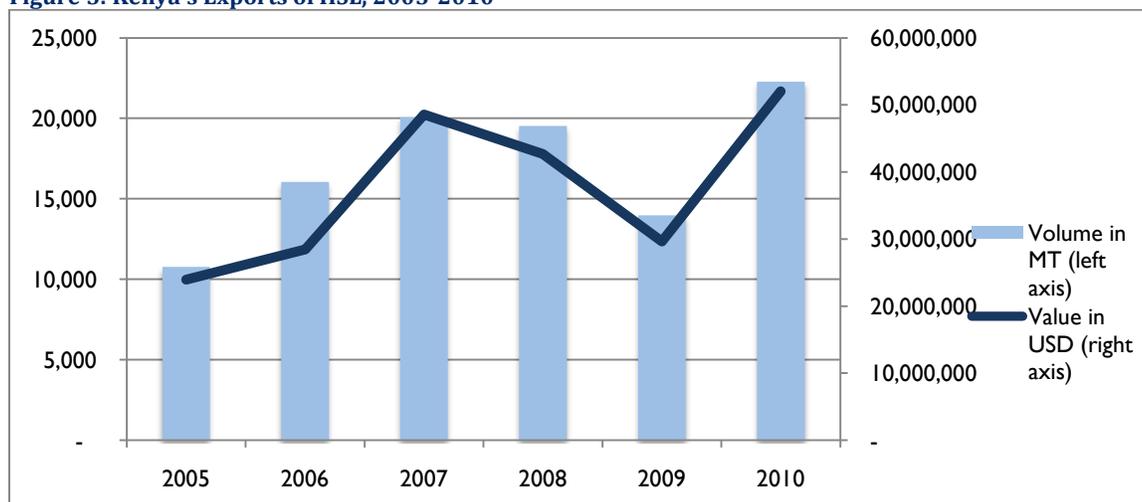
**Figure 4: Markets for Kenyan HSL**



Source: KRA

Exports of raw/undressed hides and skins fell from 11,875 MT reported in 2006 to a mere 322 MT reported in 2010,<sup>31</sup> while leather and leather product exports increased from 16,062 MT to 22,272 MT in the same period. This promising development is likely a result of the 40 percent export tax placed on raw hides and skins exports in 2007 (following a 20 percent export tax in 2006) in order to increase local value addition. Processing hides and skins to finished leather increases their value by 243 percent, while semi-processing (wet blue stage and crust—more common for Kenyan exports) adds significant value as well.<sup>32</sup> While this suggests that value addition should have increased as processing increased, the graph below appears to tell a different story: despite significant potential to increase value at each processing stage, the actual value of HSL exports relative to volume stayed relatively constant during the 2005-2010 period. The reasons for the lack of increased value are unclear but could be the focus of a follow-up study.

**Figure 5: Kenya's Exports of HSL, 2005-2010**



Source: KRA

<sup>31</sup> KNBS 2011

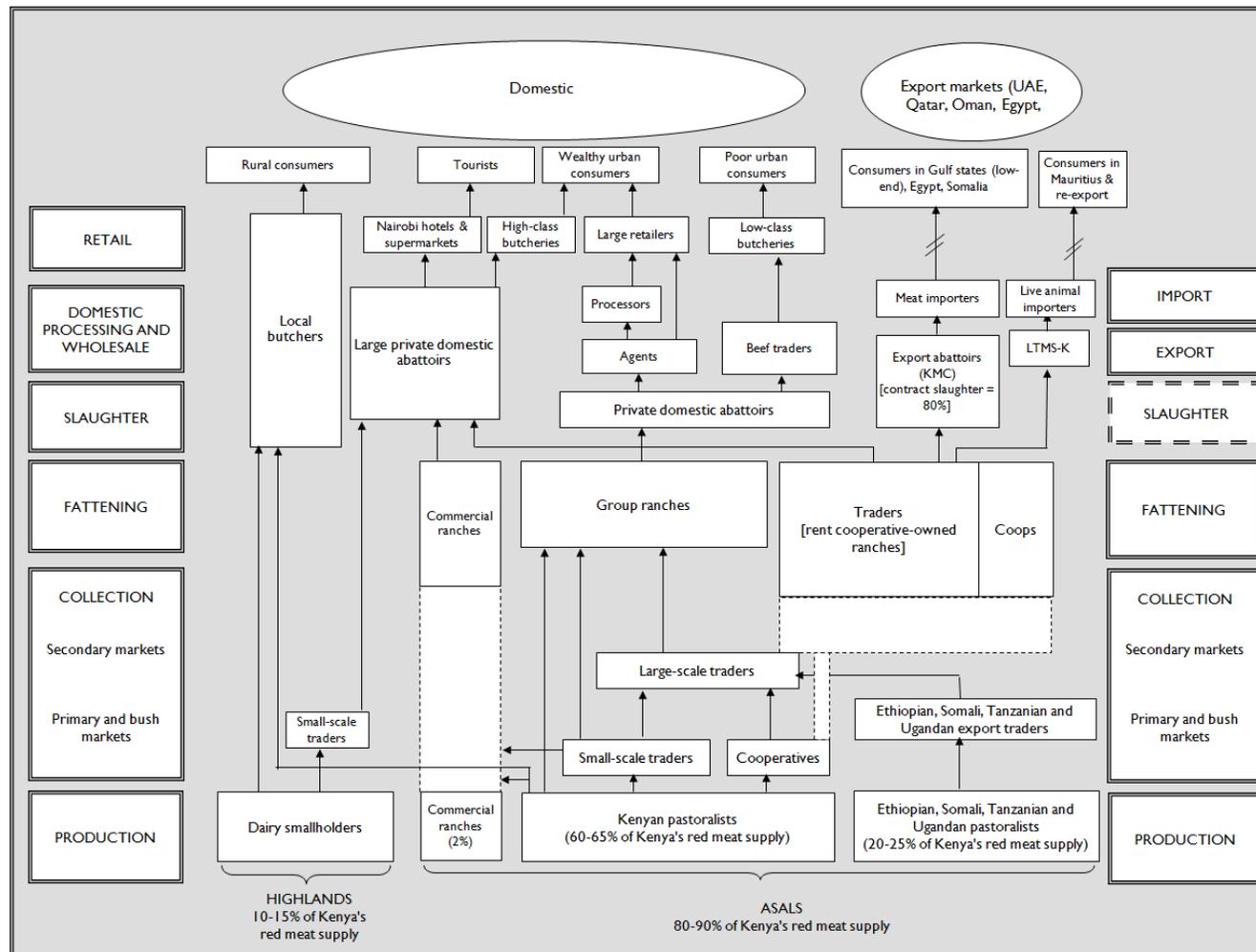
<sup>32</sup> Curtis, 2010, quoting Mwinyihija Mwinyikione, "Performance Brief – Leather and Leather Products Division." Unpublished paper.

# V. LIVESTOCK MARKETING CHANNELS

## A. MARKET MAP

The following value chain map illustrates the market transactions through which livestock (and later meat) make their way from pastoral and highland livestock holders to final consumers both inside Kenya and in export markets.

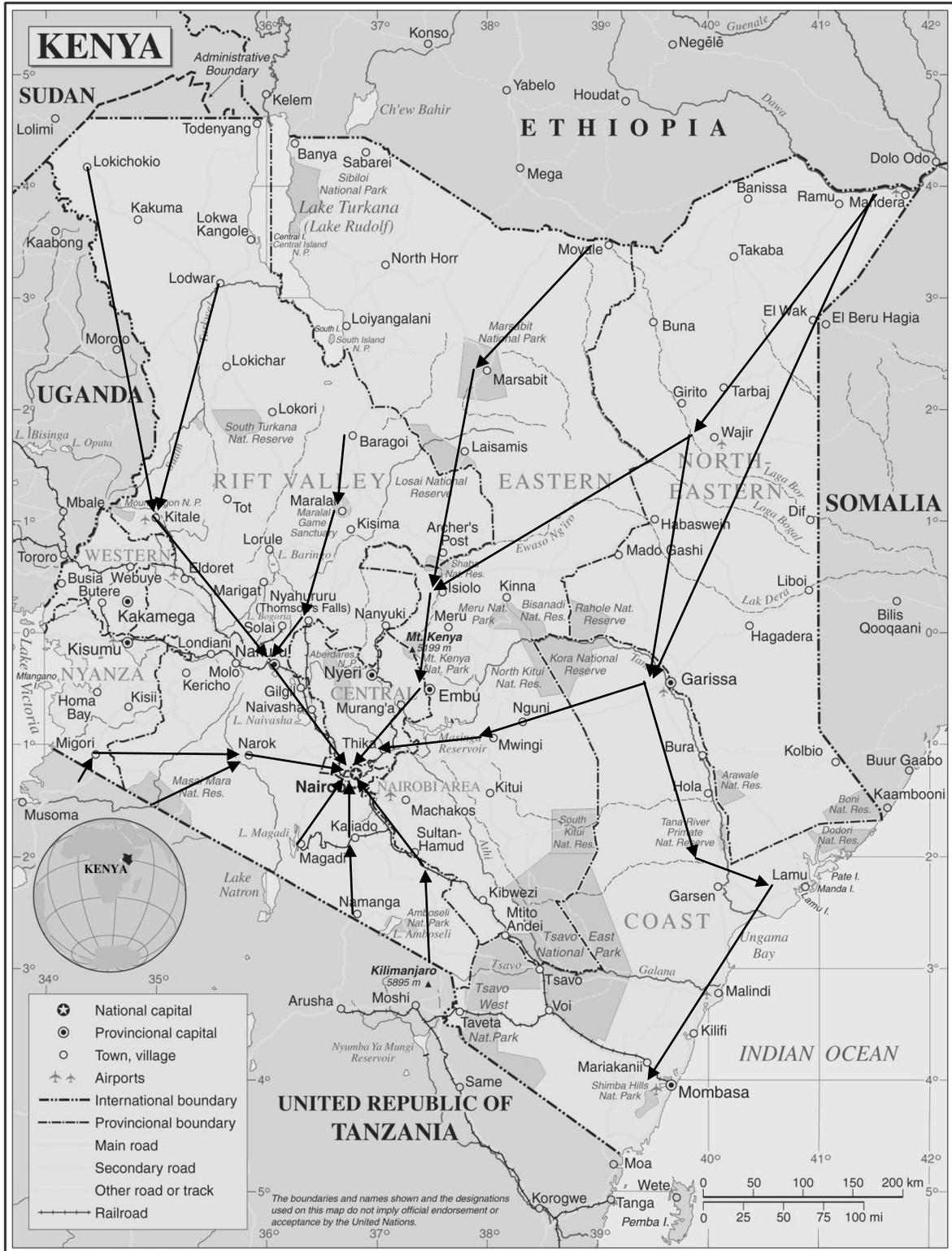
Figure 6: Kenya Livestock Value Chain Map



# 1. OVERVIEW

The following map offers a geographic view of the same supply chain.

**Figure 7: Geographical Supply Chains**



Map No. 4187 Rev. 1 UNITED NATIONS  
January 2004

Department of Peacekeeping Operations  
Cartographic Section

Source: United Nations, Department of Peacekeeping Operations, 2004, modified by authors

## 2. GEOGRAPHICAL SUPPLY CHAINS

Most of the livestock sold in Nairobi and Mombasa comes from pastoral communities, and predominantly from northern Kenya and beyond. The main markets that supply animals are Garissa, Marsabit, Wajir, Mwingi, Isiolo, and Kajiado. As indicated above, some of the animals coming from northern Kenya originate from across the border in Somalia and Ethiopia, while some of those from the southern corridor come from Tanzania. Others originate in Uganda.

The following sections provide greater detail on markets in Northeastern Province, and particularly the Garissa market catchment. For further information on other marketing routes, see Alfred Muthee/NEPDP 2006.

**Wajir:** The Wajir market is one of the important sources of livestock sold in Nairobi and Mombasa. In this market, goats and sheep are sold on a daily basis (unlike other markets in the region that have specific market days),<sup>33</sup> while cattle and camels are traded on Mondays. In Garissa, livestock is traded on Wednesdays. This allows sufficient time for traders who have purchased livestock in the Wajir market on Monday to trek them for sale at the Garissa market by Wednesday.

The council cess in Wajir is high, at Kshs 400 for cattle and camels and Kshs 140 for goats and sheep, split between the buyer and the seller. Goats are transported from Wajir and sold in the Nairobi markets (Dagoreti and Kiamaiko). They are transported in lorryloads of 120 goats at a cost of between Kshs 50,000 - 70,000 per truck, depending on the season and condition of the roads.<sup>34</sup> High prices apply during the rainy season when the roads are impassable.

Livestock are required to be inspected and a movement permit issued before they are transported from one location (market) to another. This is a sanitary measure to avoid the spread of diseases. Kshs 100 is paid per cow for the permit.

**Garissa:**<sup>35</sup> Garissa is an important market supplying Nairobi and Mombasa as well as adjoining areas in Kenya's Eastern Province, Voi Range, and Mpeketoni (near Lamu). Although a significant number of animals that transit through Garissa are consumed at destination markets, a growing number are also fattened in coastal ranches and exported to Gulf countries. Mauritius is also an emerging export market for livestock from Garissa. The cattle market in Garissa operates each Wednesday, but other livestock (sheep, goats, and camels) are traded throughout the week. Every Wednesday, KMC sends 20 trucks to Garissa market to purchase cattle for slaughter. The animals are fattened at the KMC ranch in Athi River before they are slaughtered.<sup>36</sup>

Looking at the 2012 livestock sales in some of the markets that supply Mombasa and Nairobi, Garissa had the highest turnover of cattle between January and March 5<sup>th</sup>, with 14,000 head of cattle traded within the period. Most of these cattle (8,510) ended up in Nairobi (Dagoreti and Njiru slaughterhouses), with Mombasa reporting 1,950 cattle. Within this period there was no record of camels sold in the respective markets.

“I started buying and selling [a] few goats and sheep in Wajir, but soon expanded the business and would travel across to Somalia and Ethiopia to buy goats, sheep, cattle and camels and transport them to Nairobi for sale.”

— Mrs. Fatuma Dahiyie, one of the few female livestock traders in the male-dominated trade in northern Kenya (quoted by Paul Letiwa, Daily Nation Reporter; Jan 26, 2012)

<sup>33</sup> Paul Letiwa, Daily Nation, Jan 26<sup>th</sup> 2012.

<sup>34</sup> Daily Nation, Jan 26, 2012

<sup>35</sup> Adapted from FEWSNET 2008

<sup>36</sup> Interview with KMC CEO, January 19, 2012

**Table 9: Volume of Animals Traded in the Secondary Markets that Supply Nairobi and Mombasa, January 1 - March 6, 2012**

Market	No. of Cattle Traded	Number of Goats Traded	No. of Sheep Traded
Garissa	14,000		348
Isiolo	1,580	873	497
Emali	2,111		
Wajir	2,060	255	
Lodwar		1,501	
Mombasa	1,950	3,400	942
Nairobi-Dagoreti	4,160		
Nairobi-Njiru	4,350		
Nairobi-Kiamaiko		2,520	1,300

Source: LMISKE website March 8<sup>th</sup> 2012

As shown in Figure 8, Garissa Market is an important livestock market for both southern Somalia, with at least 75 percent of cattle sold at Garissa originating from the Bay, Gedo, and Juba Valley regions of Somalia. Other animals originate in Wajir, Mandera, and Ijara districts of Kenya, as well as Ethiopia.

**Figure 8: Garissa Livestock Market Catchment**



Source: FSAU/FEWSNET

Kenya, as well as Ethiopia.

Animals sold at the Garissa market are transported by lorries to coastal ranches or Nairobi markets. Interviews with ranchers and traders indicate that the cost of transporting cattle to Nairobi or ranches at the Coast is Kshs 1,000 per head, while that for goats is Kshs 500 per head on average.<sup>37</sup> The alternative is to trek the animals, which poses significant challenges, including diseases, pasture and water shortages, and the risk of theft. Trekking is only considered during the wet season when pasture and water is available.<sup>38</sup>

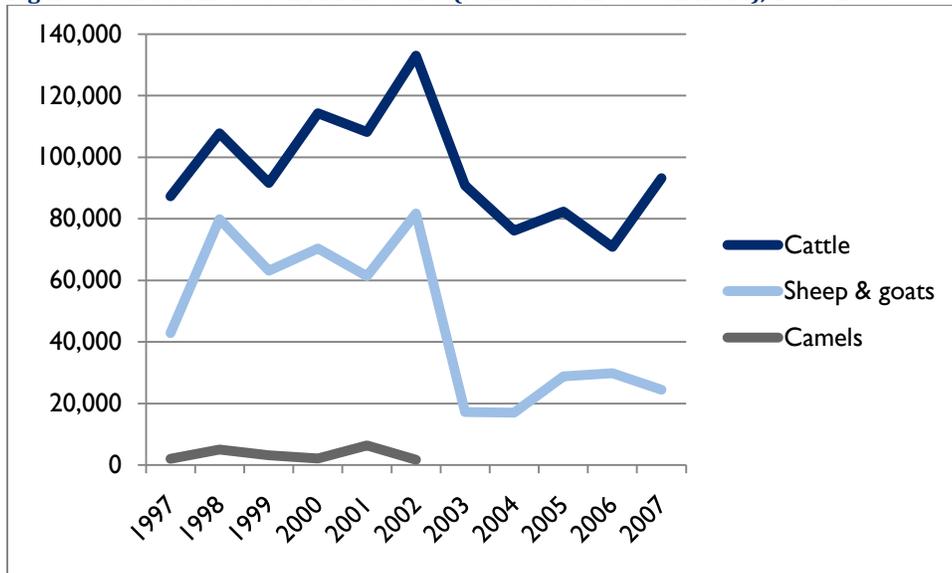
The graph below depicts changes in livestock market sales at Garissa between 1997 and 2007. The dramatic decline in 2003 was due to a temporary closure of the market by the Veterinary Department of the government of Kenya following a Rinderpest outbreak in parts of Garissa close to the Somali border.<sup>39</sup>

<sup>37</sup> While the price for sheep and goat transport seems high relative to cattle, it reflects the fact that transporters do not use double-deck lorries. Prices were confirmed by a variety of sources including KMC, KLMC and ranchers at the Coast.

<sup>38</sup> Interviews with ranchers and traders

<sup>39</sup> FEWSNET/FSAU, 2003

**Figure 9: Garissa Livestock Market Sales (Number of Livestock Head), 1997-2007**



Source: FEWSNET 2008

Note: camel sales figures not available for 2003-2006

According to LMISKE, 21,490 cattle were traded at Garissa market between November 23<sup>rd</sup> 2011 and February 1<sup>st</sup> 2012. Approximately Kshs 40 - 50 million (U.S. \$635,000 – \$793,000) exchanges hands each week in Garissa, making it a significant livelihood base for pastoral populations within the region as well as other value chain actors.<sup>40</sup> While providing price information for other markets is outside the scope of this study, further data for a variety of markets can be found at [www.lmiske.net](http://www.lmiske.net).

## B. VALUE CHAIN ACTORS

### 1. PRODUCERS

The producers in Kenya’s livestock and meat value chain are primarily pastoralists living in arid and semi-arid districts. It is estimated that 70-75 percent of the red meat consumed in Kenya comes from livestock raised within the country, while 25-30 percent comes from livestock originating in Ethiopia and Somalia or, to a lesser extent, Tanzania and Uganda. Whichever the country of origin, however, pastoral production systems are similar.

**Pastoral producers:** Kenya’s pastoral groups include the Kalenjin, Turkana, Maasai, Rendille, Samburu, Gabra, Boran and Orma, as well as several smaller groups. Livestock ownership varies by pastoral group, with the Turkana and Rendille owning mostly camels, while the Kalenjin, Maasai and Samburu own mostly cattle. According to one study, average numbers of tropical livestock units (TLUs)<sup>41</sup> per person range from 3.5-3.7 among the Boran and Turkana<sup>42</sup> to 13.4 among the Maasai<sup>43</sup>—although these figures are dated and may have been negatively affected by recent droughts. Kenya has been hit by 28 major droughts in the past 100 years, of which 4 have occurred in the past 10 years.<sup>44</sup> These droughts have caused some pastoral communities to lose 30, 40 or even 50 percent of their livestock

<sup>40</sup> FEWSNET 2008

<sup>41</sup> A TLU is a standardized measure of livestock holdings based on similar average metabolic weight (Chantarat 2011). 1 TLU = 1 head of cattle, 0.7 camels or 10 goats or sheep.

<sup>42</sup> Fratkin 2001, p. 4

<sup>43</sup> Galvin et al, 1994 quoted in Fratkin 2001

<sup>44</sup> Adow 2008, quoted in Chantarat et al 2011, p. 5

in the space of a few months,<sup>45</sup> which has had devastating consequences on household livelihoods and food security, as well as on Kenya's ability to become self-sufficient in meat supply.

It should be noted that pastoralists raise livestock as a livelihood activity centered on risk mitigation rather than commercially oriented production. This is not to say that they are not commercially oriented or that they do not aim to maximize profits, but rather that—unlike a typical “producer” within a value chain—their primary reason for raising livestock is not for the market. As Barrett et al. explain:

“Because livestock are a productive asset that generates future income, not just a storable commodity like grain, the incentives to sell or buy animals in response to shocks (e.g., drought) and to price fluctuations are more complex and tend to militate against sales. Indeed, because livestock offer the highest returns, households rationally try to accumulate herds over time. If herd accumulation is rational, then livestock marketing will respond mainly to demands for cash needs rather than to short-term profit-taking opportunities.”<sup>46</sup>

Hence the timing of marketing corresponds more with production and livelihood factors—including pasture and water availability and a household's need for cash, often to buy cereals—rather than market factors. Pastoralists indicate a preference for selling animals at the end of the rainy season (for northern Kenya, this corresponds to the months of May and November), when animals have reached optimal body condition and weight and can be sold for higher prices. However, livestock sales often occur during dry seasons (despite animals' poorer condition and lower body mass) due to the need for cash to purchase grain. These seasonal marketing dynamics are illustrated in the calendar below.

**Table 10: Pastoralists' Livestock Production and Marketing Calendar**

Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Short dry season ( <i>Jilaal</i> )			Long rainy season ( <i>Gu</i> )			Long dry season ( <i>Hagaa</i> )				Short rainy season ( <i>Deyr</i> )	
Livestock migration for pasture and water Herd separation Livestock sales Pressure on boreholes			Animal condition improvements Abundant milk supply Livestock breeding and restocking			Livestock and household migration Destocking/culling High labor demand				Livestock restocking Calving and kidding	

Source: Authors' adaptation from Pavanello 2010, Barrett 2011 and ALRMP II (Garissa) 2011

Pastoralists prefer to sell male or unproductive female animals, as productive females are critical to milk production and herd regeneration and are sold only in times of critical stress.<sup>47</sup>

The table below provides data for livestock figures in ASAL and non-ASAL districts, along with the wide-ranging estimated off-take rates for each species.

**Table 11: Livestock Figures and Estimated Off-take Rates for Pastoral Herds**

	ASALs	Highlands	Total	Off-take (pastoral)	
				ALRMP 2005	Agriconsortium 2003
Indigenous cattle	12,155,974 (primarily indigenous)	5,311,800	14,112,367	6-14%	15%
Exotic cattle			3,355,407	N/A	N/A (because non-pastoral)
Sheep	14,954,925	2,174,681	17,129,606	4-10%	13.2%
Goats	25,250,865	2,489,288	27,740,153	4-10%	23.7%
Camels	2,968,670	2,441	2,971,111	1-3%	1.7%

Sources: Livestock figures: Kenya 2009 census. Off-take rates: ALRMP 2005; Bebe, n.d. and Agriconsortium 2003, quoted in Behnke and Muthami 2011.

<sup>45</sup> Aklilu and Wekesa 2002 and Huho et al 2011

<sup>46</sup> Barrett et al. 2005: 9 (quoting McPeak 2004, Lybbert et al. 2004, Bellemare and Barrett 2005, McPeak forthcoming)

<sup>47</sup> Pavanello 2010: 11, quoting Umar and Baulch, 2007; Bailey et al., 1999; Adugna, 2006.

Off-take rate estimates vary widely by district, by season and by year. A 2005 study found off-take rates as low as 5.7 percent in Turkana, compared to 14.6 percent in neighboring Marsabit.<sup>48</sup> In Table 1 at the beginning of this report, the authors used Agriconsortium’s estimated off-take rates of 15 percent for pastoralist cattle, 13.2 percent for sheep, 27.3 percent for goats and 1.7 percent for camels, as reported in Behnke and Muthami’s 2011 study. These rates suggest that Kenyan pastoralists supply approximately 67 percent of Kenya’s red meat,<sup>49</sup> which might be a slightly high estimate as their calculations do not take into account imports of sheep and goats from surrounding countries.<sup>50</sup> Matching up off-take rates with exact contributions to total red meat supply is difficult; however, pastoralist off-take rates likely vary between ALRMP’s and Agriconsortium’s estimates depending on the season and forage and water availability. Imports from neighboring countries also vary with forage and water availability in the areas of origin, as well as varying with market demand and exchange rates between the countries. Hence the authors estimate that Kenyan pastoralists’ share of the country’s red meat supply is likely to fluctuate somewhere between 60 percent and 65 percent.

A 2001 study of pastoral marketing decisions in Marsabit District by Barrett et al. found that “pure” pastoralist households had the highest market participation rates, and those areas with the lowest market participation rates were those with the best access to alternative livelihoods, and tended to correspond to smaller herd sizes. “There exists a strong, statistically significant, positive causal association between a household’s herd size and its livestock sales volume, controlling for other household-level covariates as well as location- and period-specific effects.”<sup>51</sup> This is illustrated in Table 12 below, which shows that the number of quarters during which a household sold livestock during a two-year period was strongly correlated with the household’s herd size—the larger the herd, the more frequent the market participation.

**Table 12: Livestock Market Participation by Herd Size**

# of quarters of market participation within a 2-year period	0	1	2	3	4	5	6	7	8
% of respondents	9%	19%	23%	16%	12%	6%	9%	4%	1%
Mean herd size (TLU)	10.78	15.59	14.47	19.58	19.70	35.72	30.28	45.86	48.30

Source: Barrett et al. 2003

Wealthier households—which, according to Barrett et al, participate more in livestock markets because they have greater cash needs—are also more likely to take advantage of higher prices during post-drought periods (when pasture is rejuvenated) and sell surplus livestock at times when poorer households are holding on to the few animals they have remaining in hopes of rebuilding their herds.<sup>52</sup> This is because, for poorer households, livestock represents the highest rate of return of any assets (McPeak). Thus wealthier pastoral households, unlike poorer households, have the “luxury” of being responsive to market forces.

Pastoralists trek their animals to primary markets or sell them to collectors at pastoral settlements, water points or bush markets. Occasionally, they send a family member or community member to trek animals for sale to major urban centers, receiving the payment after the animals have been sold (in this case, the seller is just a conduit as ownership remains with the pastoralist). Long trekking distances cause pastoralists to incur high costs (animal weight loss and costs to access water and feed) and affect their access to markets as well as their ability to negotiate prices when selling.

<sup>48</sup> Barrett et al 2005, quoting Mwanga 2005

<sup>49</sup> Authors’ calculations based on Behnke and Muthami’s estimates

<sup>50</sup> These are the proportions used in the value chain map above.

<sup>51</sup> Barrett et al. 2005, quoting Bellemare and Barrett 2005

<sup>52</sup> Barrett et al. 2005: 9

### **Small-scale highland producers:**

Kenya's highland herd is split nearly evenly between pure dairy breeds and crosses or mixed breeds. The country has the most developed smallholder dairy industry in Sub-Saharan Africa, with an exotic cattle herd numbering 3.4 million head of cattle.<sup>53</sup> Smallholder dairy farmers, numbering about 1 million, produce over 80 percent of the marketed milk in Kenya. Together with other highland cattle (e.g. draft oxen, etc.), the total number of heads of cattle in the highlands is estimated at 5,311,800.<sup>54</sup> With an estimated off-take rate of 7.9 percent,<sup>55</sup> this corresponds to 419,632 head per year.<sup>56</sup>

### **Factors influencing market participation**

A 2008 study of cattle and small ruminant off-take decisions in Laikipia District found that households located near a large market were 2.6 times more likely to sell cattle and 3.7 times more likely to sell small ruminants than households in slightly more distant communities—even when controlling for a variety of other important factors, including household size, number of household members in school, education of the household head, participation in wage or self-employment, whether the household head has received vocational training, and herd size.

The study also found some evidence that households with more family members had higher cattle off-take rates, and that households with more members in school had higher small ruminant off-take rates, supporting the hypothesis that households sell animals to pay for household expenses as well as schooling expenses such as school uniforms and textbooks. Livestock prices were not included in these regressions, as the information was not available and therefore the impact of higher prices on sales behavior was not studied.

**Commercial ranches:** Commercial ranches play the role of both livestock producer and fatterer, and for the purposes of this analysis, they are covered in greater detail under fattening (below). Some commercial ranches (such as the Solio and Sosian ranches in Laikipia and Soysambu—the largest remaining ranch in the Rift Valley, covering 48,000 acres) double as conservancies for wildlife in addition to providing grazing for Boran and other indigenous cattle. In these ranches, the livestock wildlife conflict is becoming a challenge. These ranches are important for breeding pedigree Boran steers as well as fattening of animals before they are sold in the market. Animals raised in these ranches are targeted at the high-end market because of their good finish, which ensures high-quality carcasses.

### **Boran Cattle and Sosian Ranch**

The Boran is a very hardy cattle breed that originated in the ASALs of northern Kenya, Ethiopia and Somalia. As a result of their disease, heat and drought tolerance, Borans are increasingly popular in other dry parts of the world. They are now found in Zambia, Tanzania, Uganda, Australia, South Africa and the U.S., which have all come from genetic exports of Kenyan Boran cattle.

At 500 head, Sosian Ranch has one of the largest stud herds of pure Boran cattle in Kenya. The breeding herd is a registered pedigree herd and helps to maintain herd genetics for future generations. The ranch also has Boran trading stock bought from the ASALs.  
- Adapted from [www.sosian.com/cattleranching.html](http://www.sosian.com/cattleranching.html)

## **2. COLLECTORS**

**Traders:** Small-scale primary (i.e. local and/or itinerant) traders purchase small numbers of livestock from pastoral producers on a daily basis and sell them to secondary traders. Secondary traders purchase larger numbers of livestock from producers as well as primary traders, and sell them in terminal markets. Traders purchase animals individually and transport

<sup>53</sup> 2009 Census

<sup>54</sup> 2009 Census

<sup>55</sup> Bebe n.d., quoted in Behnke and Muthami 2011

<sup>56</sup> Other off-take rate estimates for improved livestock in East and southern Africa range between 15 and 20 percent (Mwenya, W. N. M. Dept of Animal Science, University of Zambia [www.ilri.org/InfoServ/Webpub/fulldocs/](http://www.ilri.org/InfoServ/Webpub/fulldocs/)); however, these rates include exotic beef animals that are bred purely for beef, which are not common in Kenya. Applying a 15 percent off-take rate to the 3.4 million exotic cattle (and keeping the 7.9 percent off-take rate for the non-exotic cattle) would raise the estimated number of head of cattle supplied from the highlands to over 661,000 annually.

them by truck—individually if they can fill the entire truck with their purchases, or by teaming up with other traders if necessary to fill the truck.<sup>57</sup> They play an important role in transporting animals.<sup>58</sup>

A 2006 study of sheep and goat marketing in Marsabit—immediately after a drought—found that sheep and goats were initially sold at producers’ homes, at grazing lands, or at watering points. This was due to the post-drought situation where few animals were being sold in formal markets and where demand exceeded supply, leading traders to search for livestock in more remote areas. Of these small ruminants, approximately half of goats and two-thirds of sheep were sold in local markets (by primary traders) before being sold to terminal markets, while the remainder were purchased by secondary traders and sold directly to terminal markets.<sup>59</sup> The study also found that secondary traders often formed business partnerships in order to share costs, particularly related to transport.

The Marsabit study found a moderate level of market concentration among primary traders,<sup>60</sup> suggesting that there are large numbers of traders and that marketing is “relatively equitably shared.” Market concentration among secondary traders, however, was significantly higher,<sup>61</sup> with a smaller number of traders, and with the largest 10 percent of secondary traders handling 35 percent of the total market trade, and the largest 20 percent handling 50 percent of the trade.<sup>62</sup> In terms of market information, the Marsabit study found that 63 percent of primary traders and 82 percent of secondary traders said market information was available and sourced from fellow traders. 35 percent of primary traders and 32 percent of secondary traders were satisfied with the available market information.

**Table 13: Primary and Secondary Traders’ Profit Margins**

	Gross margins per animal	Total costs per month	Net margins per month	Opportunity costs per month (profits from other businesses)
Primary traders	KShs 358 (USD 5.30)	KShs 64,361	Kshs 15,071 (USD 221.60)	Kshs 61,286 (USD 901)
Secondary traders	KShs 169 (USD 2.40)	KShs 104,353	KShs 27,265 (USD 400.95)	Kshs 38,791 (USD 570.50)

These low profit margins—particularly in a highly concentrated market for secondary traders—seem to suggest that the market is controlled by buyers in the terminal market. Traders incur high costs and are “absolute price takers.” What keeps traders from leaving the industry are high capital requirements and illiteracy—according to the study, traders claimed that they were “not literate enough to venture into other businesses.”<sup>63</sup>

A separate study of sheep and goat marketing in Marsabit<sup>64</sup> identified a number of constraints faced by livestock traders buying in primary markets and selling in secondary and terminal markets, including: low levels of working capital (with most traders operating with less than Kshs 10,000 in working capital and unable to access banking and credit facilities), limited business skills and high levels of illiteracy, and weak legal backing for a market management committee to run the market.

This study found that the vast majority (100 percent in three markets and over 75 percent in the other three markets surveyed) of traders were full-time traders, while only small percentages (10-25 percent in a handful of markets, none in others) were also employed in salaried positions or were herders (pastoralists) themselves.

<sup>57</sup> Tura et al. 2010:4

<sup>58</sup> Juma et al. 2006: 4

<sup>59</sup> Juma et al. 2006: 5

<sup>60</sup> The study displayed a Lorenz curve showing that the largest 10 percent of primary traders controlled 23 percent of the total market trade and the largest 20 percent of traders controlled about 40 percent of the market trade. The Gini coefficient (showing the level of inequality in the market) was 0.32—again, a moderate concentration.

<sup>61</sup> The Gini coefficient for secondary traders was 0.46—a “highly concentrated market”.

<sup>62</sup> Juma et al 2006: 7

<sup>63</sup> Juma et al 2006: 10

<sup>64</sup> Tura et al. 2006

**Livestock marketing groups:** In Garissa, nine Pastoralist Production Groups, representing over 500 pastoralists, were established by CARE to improve horizontal linkages and increase pastoralists' bargaining power when selling livestock. Other districts, including Ijara and Wajir, also report a small number of livestock marketing groups. These groups remain relatively small market actors and their success is mixed—although a recent partnership with Equity Bank for the provision of working capital could enable them to expand their operations. For further details and a case study on the development of these groups, see McKague et al, 2009.

### 3. SERVICE PROVIDERS

Although they are not technically value chain actors, because they do not take ownership of livestock within the value chain, several service providers play a critically important role at the collection and marketing stage of Kenya's livestock value chain. Four types of service providers deserve a specific mention here:

**Transporters:** Transporters operate from primary and secondary markets to terminal markets, using livestock as a “return” load after transporting consumer goods up-country. The vehicles used are not designed for transporting livestock, and animals often suffer injury. These injured animals are rejected by the abattoir or purchased at lower prices—thereby causing traders to incur significant losses. Transporters employ loaders and, in some areas, security staff.<sup>65</sup>

**Brokers:** Brokers are important players in the livestock marketing chain, particularly in secondary and terminal markets where they link potential buyers and sellers. In the terminal market, newcomers would find it very difficult to sell their animals without going through a broker.

**County councils:** County councils own the markets at which the various livestock transactions are carried out. They charge a levy for livestock sold and issue a receipt to the buyer. The receipt is proof of ownership of the animal and in some cases it indicates the identification number of the person who sold the animal. This can be used to limit the chance of purchasing stolen animals.

**Animal health service providers:** The provision of animal health services was privatized in the early 1990s as part of the Structural Adjustment Program (SAP) fronted by the World Bank and IMF. Under the SAP, the role of the DVS was reduced to veterinary regulation and management of epizootic diseases, while curative animal health care was pushed to the private sector.<sup>66</sup> However, this restructuring was effected before the establishment of alternative suppliers within the private sector and the enactment of policies and regulations that could ensure the quality of animal health services.

### Livestock marketing in Turkana

In Turkana, there are four modes of marketing of livestock (primarily shoats):

1. Mobile traders venture into the interior and barter shoats for goods (mainly food stuffs), then trek the livestock for sale in secondary markets to butchers or large traders who then sell them outside the district.
2. Pastoralists sell directly to butchers and shops/kiosk owners in exchange for cash (butchers) or goods and cash (shops/kiosk owners). Butchers are the main buyers of shoats especially in the main urban centers.
3. Pastoralists sell directly to middle level traders at the secondary market. These traders together with butchers account for more than 80% of players on livestock trade in Turkana district.
4. Pastoralists and small-scale traders sell to out-of-district traders, primarily Somalis and Borans, who visit principal livestock markets of Lodwar, Lorugum, Lokichar, Kerio and Kakuma, and purchase lorryloads of livestock that are transported to Nairobi.

High transportation costs estimated at Kshs 70,000 – 80,000 per truckload of 200-300 goats or 35-40 cattle remain the biggest impediment to livestock market development in the district (Watson and Binsbergen 2008).

<sup>65</sup> Muthee 2006

<sup>66</sup> Mugunieri et al. 2002

The private delivery of animal health services has been a challenge in marginal ASAL areas, due to the cost of the services and business viability of offering these services, especially in the sparsely populated and underdeveloped districts. To ensure access to animal health services, a number of donor-funded programs have invested in training of community animal health workers who provide these services at a minimal fee. Other attempts have been training and support to establish private agro-vets to ensure access to drugs and technical services.

Veterinarians are government agents who play a vital role in inspecting and licensing livestock movement to avoid the spread of diseases. They also inspect and stamp meat at slaughterhouses and issue transport permits for the meat.

A recent FAO study found that community animal health is not only complementary but critical to services (such as veterinary inspection services) offered by the public sector, albeit in an amorphous framework that lacks desirable institutional parameters of standardization, regulation, supervision, harmonization, uniformity and quality control.<sup>67</sup>

#### 4. FATTENING AND SLAUGHTER

Livestock raised in pastoral production systems can be marketed directly to some local markets, but for higher-end markets, animals must be fattened before being sold. Ranches play a major role in fattening of animals for sale.

**Ranches:**<sup>68</sup> Unlike neighboring Ethiopia, feedlots are rare in Kenya, and Kenyan cattle are fattened in ranches. According to the Range Management Division of the Ministry of Agriculture and Rural Development, in 2000 there were 454 ranches in Kenya, of which 84 were operational and 77 were dormant, while others were subdivided (e.g. possibly operational but on a smaller scale).<sup>69</sup> Of these, most are group ranches, while the remainder are company or cooperative-owned ranches. Group ranches entail the joint ownership of land on which individually owned livestock are herded collectively and stocking levels are agreed to collectively.<sup>70</sup> Company ranches usually purchase livestock from pastoral areas, fatten them using feed and concentrates, and sell them to high-end local markets. Cooperative ranches usually rent out grazing land to livestock traders, many of whom are Somali, who bring immature male animals (120-150 kg live weight) to graze on the free range at the ranches over a period of six months or so, until they reach 300-320 kg.

The majority of the ranches available for lease by ranchers are found in coastal Kenya. At the time of this study, there are about 12 private ranches and one public (owned by KMC) that are leased to ranchers in coastal Kenya. The ranchers are predominantly of Somali origin, which gives them strong connections with the source markets. In addition, some ranchers have connections with export markets and raise the animals for export. Livestock (cattle and camels) are generally fattened for a period of three to six months before being sold.

One exception is a large-scale rancher (Mr. Dirie) who buys four- to six-year-old cattle and fattens for a period of up to two years. He specializes in white Boran animals and buys them when they are thin (during the dry season). He has leased three ranches and is currently fattening 4,000 cattle in them. He exports live animals and also sells to local high-end abattoirs.

**Livestock feed and water supply.** In the majority of ranches, livestock graze on the rangeland. However, in some cases, ranches also have feedlots that rely on commercial feed to fatten animals for the high-end market, especially during prolonged drought. Because fodder production is not widespread in Kenya, most processed feed relies on food crop grains and residues produced for human consumption. Availability of water is also a major challenge in the ranches. Some Ranches like Taita Ranch have invested in piped water and a borehole.

In Naivasha, the Morendat beef farm raises Angus/crossbred steers from the age of eight months on superior corn, silage and alfalfa, all of which are grown on the farm. Morendat sells to a high-end hotel in Nairobi.

<sup>67</sup> FAO 2009

<sup>68</sup> Information for this section is taken from Aklilu 2008, p. 24-25

<sup>69</sup> Aklilu 2008, p. 24

<sup>70</sup> Ministry of Agriculture 1968, quoted in Ng'ethe 1993

Ranches charge Kshs 100 – 200 per cow or camel per month to graze, while goats are charged at a lower rate of Kshs 20 – 50. Some ranch owners allow free grazing of small ruminants if the rancher has many cattle. One of the ranchers indicated that he pays a monthly lump-sum fee of Kshs 100,000 for the KMC ranch, which has a controlled livestock population of 500 cattle. The other ranches he pays Kshs 120,000 and Kshs 150,000 per month respectively.

Some of the ranchers slaughter their animals directly and supply meat to high-end markets such as hotels and supermarkets. For example, Nakumatt Supermarket sources its meat from Marima ranch in Naivasha.

Livestock are required to receive veterinary screening at the point of origin and obtain a movement certificate — thereby implying that they reach the ranch disease-free. However, ranches are not fenced, and often unauthorized livestock end up in the ranches, which has caused ranchers to lose animals.

One important role that ranches play is serving as a “control valve” for higher-quality cattle entering the Nairobi and Mombasa markets. Ranchers have the flexibility to hold cattle on the ranches until market demand is high, thereby enabling them to take advantage of market fluctuations. However, this opportunity is somewhat constrained by problems of overgrazing in many ranches, which is compounded by the intrusion of illegal “ranchers” (e.g. traders) onto the land.

**Slaughterhouses, abattoirs and meat operators:** Kenya has two formal types of slaughterhouses and abattoirs: those licensed to slaughter for the domestic market (the majority) and those licensed to slaughter for export in addition to the domestic market. The distinguishing factor between domestic and export slaughterhouses and abattoirs is the procedure followed in licensing and the type of license issued, as spelled out in the Meat Control Act Cap 356. Local slaughterhouses and abattoirs operate under local slaughterhouse regulations, which meet national requirements under the Act. With the exception of KMC—which is publicly owned but provides contract slaughter services to private exporters—all slaughterhouses and abattoirs are privately owned.

Abattoirs differ slightly from slaughterhouses in that they are, by law, processing plants, and hence they often process meat in addition to slaughtering it. Abattoirs slaughter their own animals as well as (in some cases) providing slaughter services for a fee, whereas slaughterhouses are essentially fee-based slaughter service providers.

Tables 14 and 15 below list the abattoirs licensed for the local and export markets, respectively.

**Table 14: Licensed Local Abattoirs**

Abattoir	Location	Capacity	# and type of animals slaughtered annually	Operating Status	Products
Njiru	Nairobi	100 head of cattle/day			Beef
Dagoretti	Nairobi	400 head of cattle/day	Cattle Sheep Goats	80% 50% 80%	Beef Goat and sheep meat
Mlolongo	Athi River (near Nairobi)	15 camels/day	Camels	Closed	Camel meat
Mariakani	Mombasa	50 head of cattle/day	Cattle		
Bisil	Kajiado (near Nairobi)	50 head of cattle/day	Cattle Goats Sheep		
Kiserian	Kajiado (near Nairobi)	50-100 head of cattle/day 200 sheep & goats/day	3,000 cattle 3,600 goats 4,200 sheep	50% for cattle 65% for goats/sheep	Beef, Shoaat meat (hot)

Ongata Rongai	Kajiado (near Nairobi) – being phased out	30 head of cattle/day	Sheep goats	6-8sheep/goats per day	Goat/sheep meat (hot)
---------------	-------------------------------------------	-----------------------	-------------	------------------------	-----------------------

Export abattoirs operate under export slaughterhouse regulations, which are designed to meet international standards as amended from time to time. Such slaughterhouses require approval from third party countries, which are the target export countries. All export abattoirs are HACCP certified.

**Table 15: Licensed Export Abattoirs**

Abattoir	Location	Capacity	Operating Status as of Jan 2012	Products	Sanitation
KMC Athi River	Athi River	1,000 head of cattle; 1200 sheep and goats on three shift basis	1,000 head of cattle/week 1,000 sheep and goats/day (combined)	Beef (fresh, chilled and corned), Lamb and Goat	HACCP, ISO 22000:2005
KMC Mombasa	Mombasa	300 head of cattle	150 head of cattle/day 100 sheep/week 100 goats/week		Good
Hurlingham/Quality Meat Packers	Nairobi	50 head of cattle	Operating	Fresh meat cuts	Moderate
Halal	Ngong	250 head of cattle	Closed	N/A	N/A
New Mombasa Mwangoni	Mariakani	120 head of cattle	Closed	N/A	N/A
Farmers Choice (pork)	Nairobi	300 pigs	Operating		Good
Choice Meats (a subsidiary of Farmers Choice)	Nairobi (opened Sept 2010)	150 head of cattle 200 sheep & goats/day	70 head of cattle/day 55 sheep & goats/day	Processed meat products; fresh meat cuts	HACCP/Good

Source: Mbwika, J.M. and Nthuli, P. August 2004; updated January 2012

Note: slaughters are determined by demand for meat.

When animals are delivered at the abattoir, they are required to rest for a minimum of 24 hours before they are slaughtered. They are also inspected for any diseases or physical injury before they are slaughtered. Further injury inspection is done once the animal has been slaughtered to determine if there are any blood blemishes on the meat as a result of injury. This is in contrast with slaughterhouses, where animals generally do not undergo inspection prior to slaughter.

Slaughterhouses operate somewhat differently. When cattle, sheep, goats and camels are taken to slaughterhouses, butchery owners and meat wholesalers identify animals they wish to purchase for slaughter. They then negotiate a price with the owner and take the animal for slaughtering. Although it is required by law, there usually is no pre-slaughter inspection. The purchaser pays a fee to the slaughterhouse (Kshs 300 per head of cattle at Kiserian slaughterhouse) as well as a fee for the slaughter personnel (approximately Kshs 50-100, but negotiable). After the slaughter, a government veterinary officer stationed at the slaughterhouse inspects the carcass (for a fee of Kshs 100 for cattle and Kshs 25 for sheep and goats). At this point the buyer cannot come back to the seller and complain of any blemishes on the meat due to injury. If the carcass passes the veterinary officer's inspection, he stamps it to indicate that it is fit for human consumption.

After slaughter and inspection, the carcass is packed into an aluminum metal box and loaded into a truck (usually a one-ton truck) and transported to butcheries. A transport permit costing Kshs 20 is issued for each truck showing the origin and destination of the meat.

Table 16 below presents official livestock slaughters in thousands of heads. In addition to these figures, thousands of animals are slaughtered at home or in unlicensed butcheries, especially in the remote parts of the country; these slaughters are not captured under the Kenyan government's formal statistics. According to IGAD's re-estimated off-take rates, official recorded slaughter accounts for approximately 94 percent of total domestic off-take for sheep and goats and 72 percent of all domestic off-take for cattle in 2009.<sup>71</sup> These are surprisingly high percentages given the frequency of unofficial slaughter.

**Table 16: Official Livestock Slaughters ('000 heads)**

	2002	2003	2004	2005	2006	2007	2008	2009
Cattle/calves	1,854	1,669	1,641	1,786	1,911	1,720	1,892	2,057
Sheep & goats	4,765	4,289	3,851	4,220	4,775	5,014	5,425	5,716
Pigs	167	175	172	180	176	167	198	221

Source: Kenya National Bureau of Statistics (2010)

**Meat grades:**<sup>72</sup> Abattoirs in Kenya grade meat in five grades: commercial, standard, FAQ, choice and prime. KMC uses these grades for two purposes: payment of cattle supplied for slaughter and pricing of wholesale meat to butchers and other outlets. Current (January 2012) and 2008 wholesale prices for beef carcasses in each of these grades are shown in Table 17 below.

**Table 17: Meat Grades and Wholesale Prices for Beef Carcasses, 2008 and 2012**

Grade	Price per kg KMC - Sept 2008	Price per kg KMC - Jan 2012
Prime	Kshs 220	Kshs 350
Choice	Kshs 210	Kshs 325
FAQ	Above 150kg: Kshs 200 Below 150kg: Kshs 195	Kshs 300
Standard A	Above 140kg: Kshs 175 Below 140kg: Kshs 170 Between 110-90kg: Kshs 160	Kshs 285-325
Standard B	Kshs 100	Kshs 270
Commercial	Kshs 95 For canning Kshs 78	

Source: KMC

The commercial grade is the lowest and usually comes from low-grade animals (emaciated livestock from pastoral areas sold during the dry season). The meat is suitable for canning and manufacture of processed products such as sausage. It is also sold in low-class butcheries. Standard grade is the most common and is sold in most low- to medium-class butcheries. Choice meat and FAQ are found only in high-class butcheries and high-class hotels, while prime is the highest quality of beef and is usually slaughtered on demand.

KMC, Farmers Choice (Choice Meats) and Hurlingham (Quality Meat Packers) all slaughter prime grade meat,<sup>73</sup> and KMC is the only slaughterhouse that has all five grades of meat. Most of the abattoirs licensed as "local" do not grade their carcasses because of the nature of the animals slaughtered and the customers who patronize their business.<sup>74</sup>

<sup>71</sup> Behnke and Muthami 2011, p. 6

<sup>72</sup> Interviews with meat inspectors at Kiserian abattoir (Jan 17, 2012)

<sup>73</sup> MoLD and DVS

<sup>74</sup> MoLD, Kiserian and Dagoreti Abattoir staff

Animals slaughtered for prime carcasses are raised and matured in ranches with feedlots, where they are carefully fed, including with supplements of commercial feeds to produce a desired quality of meat.<sup>75</sup> Abattoirs such as KMC and Choice Meats source animals directly from these ranches.<sup>76</sup> In addition, KMC has field personnel who purchase livestock directly from secondary markets (such as Garissa) and transport them to ranches for fattening.<sup>77</sup> However, in interviews conducted for this study, both KMC and Choice Meats complained of a shortage of “good” animals for slaughter most of the year. This partially explains the under-utilization of abattoirs’ capacity shown in Table 14.

**Processors:** Many abattoirs are also processors. For instance, KMC manufactures canned beef halal (organic), corned ox tongue and bone meal used in the manufacture of animal feeds.<sup>78</sup> KMC uses the commercial grade for canning and has recently begun manufacturing sausages and pet food. Farmers Choice, a leading private meat processor (previously specializing in pork), has opened a subsidiary “Choice Meats,” which specializes in slaughter and processing of high-quality beef, goat and lamb carcasses. Production started in September 2010 and, by end of the year, the company had slaughtered 4,737 cattle. In 2011 they slaughtered 18,465 cattle and 3,648 shoats. The meat is processed into chilled cuts, burgers, sausages and hams, and is sold both locally and in the export market.

## 5. DOMESTIC MARKET WHOLESALERS/DISTRIBUTORS AND RETAILERS

In Nairobi, most cattle are sold in Dagoretti and Njiru markets, while Kiamaiko, Njiru and Dandora markets are important for sheep and goats. Animals are purchased by slaughterhouses, butchers and retailers, then slaughtered and sold to butcheries throughout the city.<sup>79</sup> There are also wholesale meat traders who purchase animals for slaughter and then distribute the meat to butcheries in the city. Others purchase animals, slaughter them and wait for meat buyers at the slaughterhouse.

**Supermarkets and high-end butcheries:** Supermarkets and high-end butcheries have cold storage facilities. The meat is supplied fresh and is stored and displayed under refrigerated conditions. Nakumatt supermarkets are patronized more by the high- and middle-income groups, with the high-income groups most likely to purchase meat from their outlets. Uchumi supermarkets cater more to middle-income groups. Hence the price differentials between the two outlets (see Table 5 in the End Markets chapter, above) reflect the income of people who patronize the outlets. Uchumi meat outlets mainly sell meat sourced from KMC and Farmers Choice, while Nakumatt offers meat from select and well-finished animals either from Hurlingham Abattoirs (Quality Meat Packers) or Farmers Choice (Choice Meats), from animals sourced from ranches in Naivasha.

**Butcheries:** Low-class butcheries display their meat in an open and unrefrigerated environment, but some have deep freezers to store unsold meat overnight.

For more on supermarkets and butcheries, see the section on market segmentation in the End Markets chapter, above.

### Plans for additional abattoirs

Plans to build four additional KMC abattoirs, including in Garissa and Isiolo (Aklilu 2008), have been stalled, according to the DVS. In the authors’ estimation, this is likely for lack of funds or skepticism about their economic viability. However, the Lamu – South Sudan transport corridor, which passes through Garissa and Isiolo with a proposed speed train, may change the scenario, as may plans to build an international airport in Isiolo as part of the Vision 2030. These developments could provide economic justification for the construction of an export abattoir.

<sup>75</sup> Interviews with KMC, MoLD and abattoirs in Dagoretti and Kiserian

<sup>76</sup> An interview with one of the major ranchers at the Coast indicated that Farmers Choice is one of their main customers for their best animals. KMC also sources the animals from private ranches.

<sup>77</sup> Interview with KMC CEO, January 19, 2012

<sup>78</sup> Interview with KMC CEO, January 19, 2012

<sup>79</sup> Tura et al. 2010: 4

## 6. EXPORTERS

**Meat exporters:** Kenya's exports of meat and meat products are small, constituting only 0.2-0.3 percent of the country's export earnings.<sup>80</sup> There are three major export abattoirs, but only one of these (KMC) slaughters significant numbers of animals for export. The other two (Farmers Choice—which primarily processes pork for the domestic market, albeit with limited exports to the Middle East and Mauritius—and Hurlingham) primarily target the domestic market, with minor exports on the side.

The publicly-owned KMC is the largest licensed abattoir in East Africa. The abattoir is ISO 22000 certified and has the capacity to slaughter 1,000 and 1,200 small stock per day, although utilized capacity is far lower. Since 2010, KMC has begun slaughtering carcasses for export by air to UAE, Kuwait, Qatar, Saudi Arabia, Tanzania, Uganda, DRC, Sudan and Egypt.

KMC slaughters export livestock on contract and delivers chilled carcasses to the airport. In one day, KMC may export approximately 20 MT, of which only 20 percent belong to KMC while the other 80 percent belong to private exporters. Most of the exports are sheep and goat carcasses.

Table 18 below presents the evolution of KMC's total slaughter and export figures since its re-opening in 2006. The figures show a dramatic rise in slaughter volumes between 2006 and 2007, a three-year decline to 2010, and a substantial increase between 2010 and 2011, which corresponds to when KMC began slaughtering on contract for private exporters (2010). As of 2011, approximately 41 percent of the meat processed by KMC is exported. This is down from 59 percent in 2010 but corresponds to a higher volume (797 MT, up from 525 MT in 2010).

**Table 18: KMC Slaughter and Export Figures, 2006-2011**

	2006	2007	2008	2009	2010	2011
Cattle (head)	6,228	27,277	20,744	16,818	13,763	18,184
Sheep (head)	-	-	6,542	6,728	17,801	29,093
Goats (head)	2,144	11,581	5,155	10,906	5,506	12,093
Total volumes (MT)	677	2,795	2,756	1,763	892	1,961
Export volumes (MT)	0	0	0	0	525	797
Export as a % of total slaughter vol	-	-	-	-	59%	41%

Source: KMC

Total slaughter figures are low as a result of inadequate supply, due in part to late payments and lower prices than those offered by other slaughterhouses.

Table 19 below presents the contract slaughter charges and meat export prices at KMC. Ninety-nine percent of exports are in the form of chilled carcasses. The contract slaughter rates are per head and include slaughter, chilling for a minimum of 12 hours and transportation to the airport in refrigerated KMC trucks. Export documentation—a Certificate of Origin, Veterinary Certificate, Health Certificate, Halal Certificate and Proforma invoice—is an extra Kshs 1 per kg. Export prices are per kg.

**Table 19: KMC Contract Slaughter Rates and Export Prices**

Product	Goat carcass	Lamb carcass	Cattle - Std A carcass	Cattle - FAQ carcass
Contract slaughter rates per head	Kshs 375/head	Kshs 375/head	Kshs 1,665/head	Kshs 1,665/head

<sup>80</sup> 2009 Census Statistical Abstract

Export price per kg	Kshs 375/kg	Kshs 375/kg	Kshs 285/kg	Kshs 310/kg
---------------------	-------------	-------------	-------------	-------------

Source: KMC

Per Kenyan regulations, following inspection, meat is transported in aluminum-lined and closed boxes to minimize contamination and spoilage. Meat handlers wear white overalls while handling the meat (either while loading, off-loading or selling).

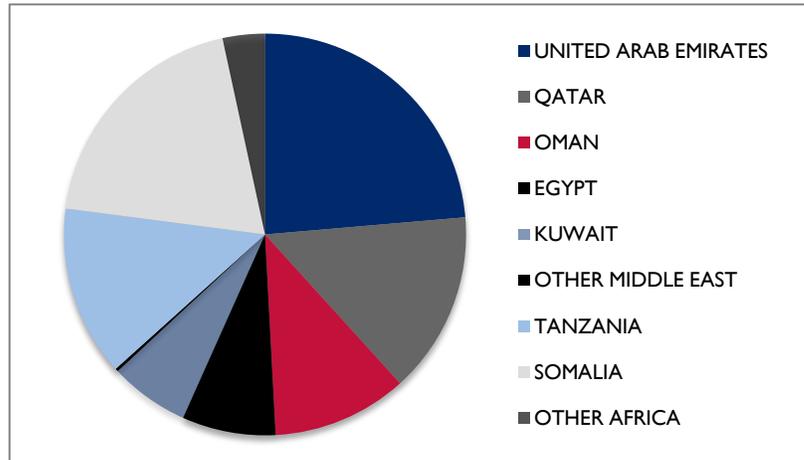
**Export destinations:** The pie graph at right shows the relative importance of Kenya’s major meat export destinations for 2010: Dubai (UAE), Qatar, Oman, Egypt, Kuwait, Tanzania and Somalia. For more details on the relative importance of each of these markets, see the End Markets chapter above.

**Live animal exporters:** Exporters such as LTMS-K export live cattle to Mauritius and goats to Burundi, with the number of head exported never exceeding 7,500 in a given year. Live cattle are transported by sea from the Port of Mombasa. These animals originate primarily from northern Kenya

and are fattened at the coastal ranches for a minimum of six months before being exported. The cattle are transported from the ranches by trucks to the port where they are inspected and certified as disease-free by veterinary officers stationed at the port.

Goats to Burundi are transported by trucks with accompanying health certificates issued by the DVS.

**Figure 10: Kenya's Meat Exports by Destination, 2010**

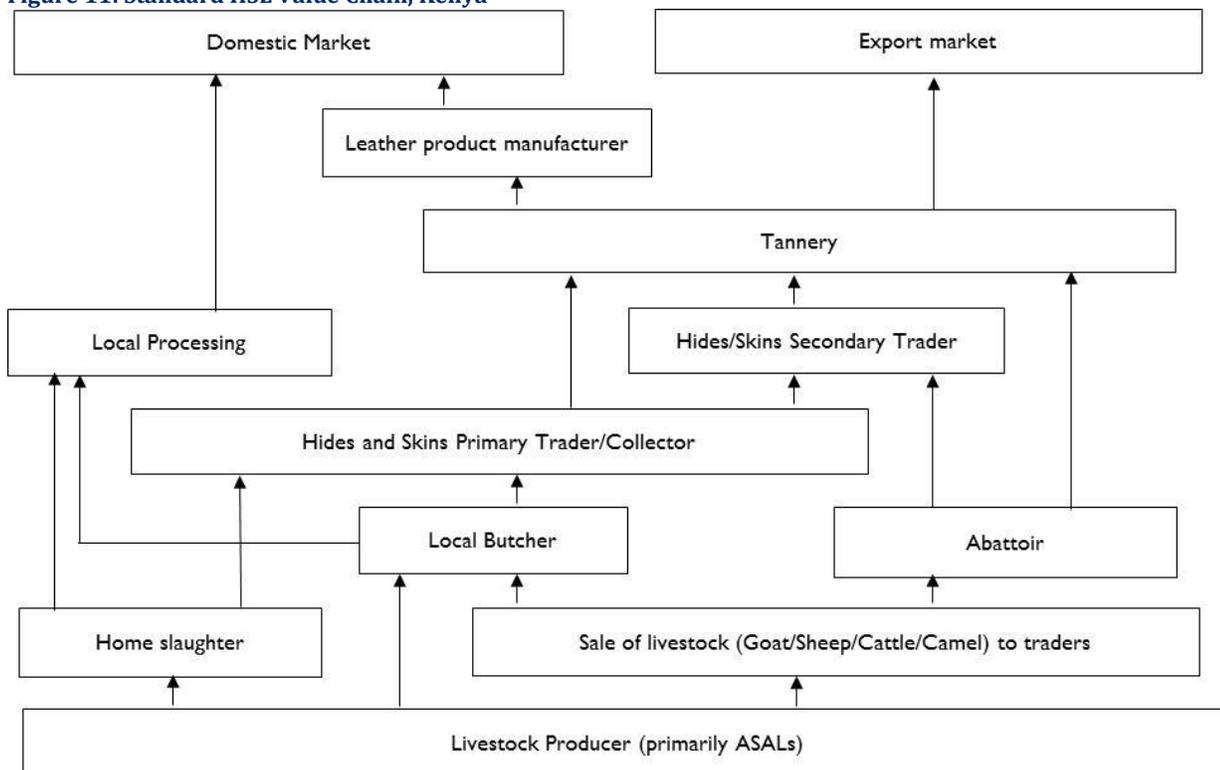


Source: KRA

### C. HIDES AND SKINS VALUE CHAIN

The HSL value chain is an offshoot of the livestock value chain. After slaughter (at home or at butcheries or abattoirs), hides and skins are preserved through sun drying (ground and suspension drying) or wet salting. Wet salted hides earn higher prices than sun-dried hides and skins. Traders collect hides and skins and deliver them to tanneries, of which there are currently 13. Semi-processed and processed hides and skins (wet blue, crust or finished leather) are exported to China, Italy and India, with smaller volumes going to Turkey, Pakistan and Switzerland, where they are manufactured into shoes as well as leather garments (for further details, see the End Markets chapter above). Finished leather is also supplied to local leather product manufacturers, such as shoemakers.

**Figure 11: Standard HSL Value Chain, Kenya**



In 2006 and 2007, the government of Kenya raised taxes on the export of raw hides and skins in order to encourage increased value addition (e.g. leather processing) in the country. This policy had dramatic effects: in the year after taxes on raw exports were increased to 40 percent, Kenya’s leather export volumes rose by 54 percent. Today, approximately 98 percent of skins and 96 percent of hides produced in Kenya are semi-processed to wet blue, crust or finished leather—up from just 56 percent in 2004. The number of tanneries rose from nine in 2005 to 13 in 2009, with utilization of operating capacity increasing from 30 percent in 2003-04 to 70 percent in 2007-08.<sup>81</sup>

In 2009, HSL contributed 0.7 percent of export earnings compared to 1.14 percent in 2005<sup>82</sup>—significantly more than meat exports. Volumes of leather exports more than doubled between 2005 and 2010 (from 10,083 MT to 22,272 MT), while exports of hides and skins (which have less value-added and are therefore of lower value) declined to nearly zero (from 15,683 MT in 2005 to an estimated 322 MT in 2010). The value of Kenya’s leather exports in 2010 was Kshs 3.3 billion (U.S. \$43.5 million).<sup>83</sup>

**Table 20: Export Volumes for Kenya Leather, Hides and Skins**

Product		2005	2006	2007	2008	2009	2010
Hides and Skins*	Volume	15,683 MT	11,875 MT	2,416 MT	841 MT	717 MT	322 MT***
	Value (Kshs M)	866	622	143	40	30	11
Leather*	Volume	10,083 MT	16,062 MT	20,049 MT	19,529 MT	13,957 MT	22,272 MT
	Value (Kshs M)	1,611	1,971	3,036	3,313	2,237	4,192

Source: \* KNBS 2009 and 2011 Economic Survey

\*\* FAOSTAT 2012

\*\*\* Estimate

<sup>81</sup> Curtis, 2010

<sup>82</sup> Economic Survey, KNBS 2011

<sup>83</sup> Economic Surveys, KNBS 2009 and 2011

# VI. CONTEXT: LEGAL AND REGULATORY FRAMEWORK

**The Meat Control Act of 1972, revised 1977 (Cap 356, Laws of Kenya):** The Meat Control Act aims to promote the supply of safe meat for both local and export markets, and requires that:

- Each export slaughterhouse be equipped with adequate sanitary facilities
- Inspection and maintenance of sanitary conditions be conducted regularly
- Carcasses and parts judged unfit for human consumption be disposed not later than 24 hours after inspection
- Re-inspection of all products be done at the time they leave an export slaughterhouse
- Export meat must be free from food additives and injurious substances prohibited by the receiving country
- Appropriate export stamps, certificates and records must be maintained

**Hides, Skins and Leather Trade Act (Cap 359, Laws of Kenya):** This act provides for the coordination and control of the trade and development of the HSL industry. It requires one to be licensed to buy hides, skins or leather for the purposes of resale, tanning, and manufacturing of goods in Kenya or for export. The act also gives guidelines on export and import of HSL. Through its provisions, this act enables the estimation of actual domestic beef production capacity or volume of imports from the number of hides traded.

# VII. COMPETITORS

## A. LIVESTOCK EXPORTERS TO KENYA

As a meat-deficit country, Kenya relies on producers (mostly pastoralists) from neighboring countries to supply 20-25 percent of its red meat consumption. How Kenyan livestock compares in price with livestock originating in Somalia, Ethiopia, Uganda and Tanzania is not entirely clear and varies over time with forage and water conditions in the respective countries. However, in his 2008 study of livestock marketing in Ethiopia and Kenya, Yacob Aklilu provides an interesting assessment:

“There is a commonly-accepted misperception in Kenya that it attracts livestock supplies from Ethiopia because of price differentials. The reality is meat prices are twice as high in Ethiopia compared to Kenya. The domestic market in Ethiopia is supplied largely by highland cattle, due to proximity, to the exclusion of the pastoral areas—the main reason for the flow of trade herds from pastoral areas of Ethiopia to Kenya. However, this trend can change at any time, when and if Ethiopia starts exporting beef, as was the case with shoats. Also note that there are more cattle in the highland areas of Ethiopia than in the pastoral areas.”<sup>84</sup>

## B. MEAT EXPORTERS TO KENYA

Meat imports into Kenya fell sharply in 2005 following the re-opening of KMC and today, Kenya’s meat imports comprise less than 1 percent of total domestic consumption. Canned beef imports, which had previously accounted for approximately half of imports, fell to zero as KMC started manufacturing the same product in 2005. In 2009 and 2010, virtually all imports (97-98 percent) came from Brazil, Italy and Mauritius. The products imported from each country are different: Kenya imports processed and preserved beef from Brazil, hams and sausages from Italy, and livers from Mauritius. Many of these products are also processed locally.

South African supermarkets, which have a presence in Uganda and Tanzania, could potentially be a future source of competition for Kenyan meat in high-end markets as they offer South African meat, especially beef. However, they are not currently present in Kenya, where the supermarket industry is dominated by local chains. The authors estimate that the chance of a South African supermarket chain penetrating the local supermarket industry is relatively small.

---

<sup>84</sup> Aklilu 2008: 12, footnote 17

# VIII. CHOICES

## A. BENCHMARKING

Benchmarking refers to how value chain suppliers—in this study, pastoralist suppliers—compare within a given market segment to the major competitors according to criteria important to buyers. The criteria important to Kenyan livestock and meat buyers include price (particularly for the low-end market), quality (particularly for the high-end market) and reliability of supply (for abattoirs and processors in particular).

**Price:** In terms of price, Kenya’s pastoralist suppliers are generally considered competitive, as the influx of livestock from surrounding countries is due primarily to the inability of local supply to meet demand, rather than the greater competitiveness of Ethiopian, Somali, Ugandan or Tanzanian producers. It was outside of the scope of this study to examine price differentials between pastoral livestock and highland livestock.

**Quality:** In terms of quality, pastoralist-raised livestock have difficulty competing with livestock raised in ranches. However, indigenous breeds raised by pastoralists, such as the Boran cattle breed, are highly valued by consumers and, when fattened in ranches, produce high-quality beef. As with price, the time constraints of this study did not afford the opportunity to examine quality differentials between pastoral and highland livestock.

**Reliability of supply:** Reliability of supply is the area in which pastoralists (on their own) do not meet buyers’ requirements. As noted above, pastoralists do not raise livestock for the market. They raise livestock as a livelihood activity designed to maximize assets and mitigate risk (through herd accumulation and mobility), rather than maximizing income (through livestock sales). Hence their marketing decisions—and the timing thereof—are more closely linked to production and livelihood factors (e.g. pasture and water availability and a household’s need for cash, often to buy cereals) than they are to market factors. In practice, livestock sales often occur during dry seasons (despite animals’ poorer condition and lower body mass) due to the need for cash to purchase grain. This disconnect between pastoralists’ seasonal sales decisions and buyers’ regular need for livestock and meat, compounded by limited capacity in Kenya’s ranches, causes a “disconnect” within the value chain and leads buyers to complain of a “lack of supply.”

## B. MARKET POSITIONING

The question of market positioning is usually posed as follows: given the market trends and the market position of competitors in high-potential market segments, what position in the market is most strategic for the value chain to be competitive? For pastoralist producers, the answer lies in bridging the “disconnect” between suppliers and buyers and adding quality and value through fattening. Specific recommendations for achieving this are provided in the following chapter.

# IX. PRELIMINARY RECOMMENDATIONS FOR STRENGTHENING KENYA'S DOMESTIC MEAT SUPPLY

Based on this study, preliminary recommendations for strengthening Kenya's domestic meat supply are: investments in fattening combined with stronger vertical linkages; efforts to increase demand in the lower four income quintiles; animal health interventions; and investments in infrastructure. Below, each of these is presented in turn, although they are largely interrelated. This is followed by a discussion of other possible strategies, which include horizontal linkages and import substitution. Finally, the study concludes with a recommendation for the hides, skins and leather value chain.

The recommendations outlined below focus primarily on livestock value chains originating in pastoral regions. Therefore, the authors have taken care to ensure that the strategies proposed are consistent with pastoralists' goals of mitigating risk and becoming more resilient to drought and other shocks.

Finally, these recommendations should be seen as preliminary and should be subject to more in-depth analysis than was possible during this brief study. The authors recommend additional research into the feasibility and potential costs and benefits of each of these recommendations.

## **1. Invest in cattle fattening, combined with stronger vertical linkages**

There is significant potential to improve and expand the finishing (fattening) stage of the value chain, which would fulfill demand in the high-end markets that require well-finished and high-quality meats. This would require leasing existing ranches to fatten well-selected young steers for about six months, and investing in feedlots to finish steers to the desired weight. Ranches and feedlots can play several important roles: add value to pastoral livestock; help bridge the “disconnect” between seasonal supply fluctuations and a constant demand for meat (and thereby enable abattoirs to operate at full capacity, improving efficiency); and even serve to facilitate commercial destocking. Feedlots, in particular, could serve as a drought mitigation measure for pastoralists: the emaciated pastoralist steer or bull is an ideal feedlot candidate because of compensatory growth, and the presence of a feedlot could facilitate commercial destocking at the beginning of a drought.

It should be noted here that Kenya's ranches, which are located in the coastal region and the eastern parts of the country, currently face extreme pressure from subdivision for agricultural production. Therefore, any strategy to improve cattle fattening must look more closely at ranch management strategies and the competing incentives and pressures faced by their owners. Additional strategies to improve the efficiency of ranching include branding animals to minimize theft and intrusion by other herds.

The establishment of feedlots would be a new development in Kenya. This provides an important opportunity, but the costs and management logistics may be substantial—in this area, there are important lessons to be learned from neighboring Ethiopia, and the authors recommend a study mission to visit some of the best-managed feedlots in Adama, Ethiopia. Because of poor infrastructure and a lack of appropriate transport systems for livestock, the feedlots should be located relatively close to the abattoirs in order to minimize chances of injury of the finished animals as they are transported to abattoirs.

The carcass pricing structures by Choice Meats and KMC would favor finished cattle with high prices, and there is therefore potential for pastoralists and ranchers to obtain higher prices for their cattle under this type of arrangement. However, the fattening of young steers in ranches and feedlots would require significant changes in pastoral herd management, as pastoralists currently sell male animals at three to five years of age, after they have reached their adult weights and can be sold at higher prices. In order for pastoralists to sell younger male animals, they must receive higher prices from selling animals young and fattening them on ranches, which would likely require them to maintain ownership at the ranch. Hence, accompanying interventions designed to strengthen vertical linkages (as well as functional upgrading) and enable pastoralists to engage in ranch leasing would be necessary.

## 2. Increase demand in the lower income quintiles by driving down prices

The Tegemeo study described in this report hypothesizes that a small reduction in beef prices might lead to a substantial increase in consumption volumes among the low income quintiles, due to the elastic nature of beef demand.<sup>85</sup> The similarity in prices for the four lower income quintiles suggests that quality concerns only influence the purchases of the highest income households—and, therefore, that driving down prices should be a priority.

Driving down prices will require strategies to increase supply—and particularly local production—as well as strategies to improve value chain efficiency. Increased local production will require improvements in herd and land management, such as ensuring pastoralists’ access to grazing land and water and strengthening pastoral mobility. Improved efficiency will require strengthening vertical linkages to ensure that slaughterhouses and abattoirs are able to obtain the necessary supply to operate at full capacity. Strengthening vertical linkages through ranches and feedlots (as described above) is one important way of increasing efficiency; however, the animals supplied through this chain are not targeted at the lower income quintiles. Improved efficiency will therefore require more innovative vertical linkages interventions, as well as investments in infrastructure and efforts to reduce animal diseases and mortality, transport costs and risks associated with livestock trade. These are described below.

## 3. Improve sanitary and phytosanitary systems (SPS)

Movement of animals across Kenya requires a movement permit by veterinary officers to certify that animals are disease-free. By law, animals found to be infected must be quarantined (for instance, in the Garissa quarantine station). However, stakeholders interviewed indicated that SPS procedures are not enforced and that animals are issued movement permits without having undergone inspection. In some cases, these animals have found their way into ranches, thereby compromising the health of animals on the ranch. In one case, a rancher in Taita lost an order of 3,000 animals to Mauritius after his ranch was invaded by livestock infected with foot and mouth disease—a problem

he attributed to laxity in vetting of animals before leaving major markets in north eastern Kenya.

The authors recommend that the veterinary department

### Animal health issues: does Kenya need disease-free zones?

The establishment of disease-free zones (DFZs) has been discussed as one strategy for addressing critical animal health issues. However, Yacob Aklilu of Tufts University identifies several critical constraints limiting the feasibility—and even the desirability—of establishing disease-free zones. These include:

- **Social exclusion:** in Botswana, the establishment of DFZs was found to exclude indigenous herders from the marketing chain and included only wealthy ranches)
- **Epidemiological factors and associated economic conflicts:** this is particularly relevant with regards to the tourism industry, as buffalo may carry foot and mouth disease
- **Financial and logistical difficulties:** the establishment of DFZs is expensive and, in a pastoralist context, extremely difficult

- Adapted from Aklilu 2008: 11-12

<sup>85</sup> European Union 2003, quoted in Gamba 2005

increase enforcement of screening procedures and require strict vetting of animals at livestock markets before movement, as well as inspection at the point of delivery. These measures will strengthen disease surveillance and control, thereby reducing risks and costs to traders and ranchers and improving efficiency along the value chain.

#### **4. Invest in key infrastructure<sup>86</sup>**

One important lesson learned from the construction of market infrastructure in pastoral areas of Ethiopia is the importance of developing holding grounds near these markets. Such holding grounds—with the provision of feed and water for a small fee—can increase pastoralists’ bargaining power by providing them with the option of holding their animals until another market day when prices may be higher. It also would reduce the risk of trekking animals to market—thereby possibly increasing sales.

Over the course of this study, livestock traders complained of the high cost of moving animals as a result of poor infrastructure. Road investments (to improve trucking) are already underway: the government of Kenya is currently in the process of tarmacking the Isiolo-Moyale road, which, when complete, is expected to dramatically lower the cost of transportation. They are also developing the Lamu-Isiolo-South Sudan corridor, which passes through Garissa and is expected to ease transport constraints between Garissa and Mombasa (Taita ranches) and lead to lower transportation costs. However, there is a need to improve livestock transport conditions, and particularly trucking. Livestock trucked from the secondary markets to the terminal markets in Nairobi and Mombasa use trucks that are not designed for livestock haulage. While this saves on costs (allowing livestock to be used as a “return” load for consumer goods), it leads to serious injuries and sometimes the death of livestock. The authors recommend that investments in appropriate truck designs—and particularly a design that would allow for the safe movement of livestock while still enabling the transport of consumer goods (for instance, removable partitions)—be made in order to reduce risk.

In addition, there is a need to improve infrastructure along trekking corridors, which are the critical routes through which animals move from primary to secondary markets. These corridors are characterized by insecurity (risk of theft) as well as a lack of water and pasture. The authors therefore recommend the development of trekking routes through carefully sited water points (see upcoming Tufts guidelines), the development of feed provisions along routes, and possibly the construction of holding grounds. Such targeted investments have the potential to significantly reduce transport risks and costs, thereby lowering the price of meat and increasing value chain efficiency.

#### **5. Analyze the effects of horizontal linkages on prices paid to pastoralists**

In an effort to improve efficiency at the supply aggregation point, pastoral marketing studies often recommend the formation of livestock marketing groups or cooperatives. However, the success of such groups is mixed, particularly when they are partially subsidized (as was initially the case for the Pastoralist Production Groups in Garissa). Moreover, such structures tend to be groups or cooperatives of traders rather than producers *per se*. While the group structure provides the opportunity for joint investments in transport (which improves efficiency), it also provides the opportunity for collusion on prices (which drives down prices for pastoralists). Some amount of cooperation between traders (for example, for transport) is already occurring, and it may be that formal “horizontal linkages” through group structures are not as beneficial to pastoralists as is generally believed.

Therefore, the authors recommend that attention be devoted to strengthening vertical linkages, as outlined above, and carefully supporting horizontal linkages only insofar as they truly increase value chain efficiency and competitiveness to the benefit of pastoralists.

---

<sup>86</sup> Interestingly, Barrett et al (2001) suggest that road and market development will have minimal effects on volumes of marketed animals. Although it may initially lead to higher volumes of sales, the presence of infrastructure will also support the development of alternative livelihoods activities, thereby reducing households’ reliance on nomadic herding and contributing to a reduction in herd sizes—which will, ultimately, reduce livestock marketing (since households with smaller herd sizes have lower rates of market participation).

## 6. Strengthen upgrading within the hides, skins and leather value chain

The bulk of hides and skins produced in Kenya come from livestock from northern Kenya. Although much of the slaughter of livestock (and therefore the production of hides and skins) occurs closer to end markets, there is significant potential for pastoralists to increase their earnings from the sector if the proper price incentives are in place. The government of Kenya's investments in improving local value addition are a critical first step, but must be followed up with upgrading further down the value chain.

The authors recommend interventions to improve tick control and branding by pastoralists, increase the practice of wet salting of hides and skins, enhance peri- and post-slaughter operations and strategically enhance value addition along the production chain.<sup>87</sup> The establishment of the Kenya Development Council offers an excellent opportunity to implement this recommendation.

### Potential for small-scale value addition

In Isiolo, a group formed by Tegemeo collects raw hides and skins, cures them and transports them to tanners. The margins realized by the group were 44% for cattle hides, 61% for sheep skins, 41% for goat skins and 49% for camel skins, demonstrating the potential for small rural groups to earn profits through simple value addition techniques (Muthee 2006).

---

<sup>87</sup> Kenya Leather Development Council: [www.leatherdevelopmentcouncil.go.ke](http://www.leatherdevelopmentcouncil.go.ke)

# REFERENCES

- Aklilu, Yacob 2008. *Livestock Marketing in Kenya and Ethiopia: a Review of Policies and Practice*. Addis Ababa, Ethiopia, Feinstein International Center.
- Aklilu, Yacob and Mike Wekesa 2002. *Drought, Livestock and Livelihoods: Lessons from the 1999-2001 Emergency Response in the Pastoral Sector in Kenya*. London, UK, Overseas Development Institute, Humanitarian Practice Network Paper 40.
- Baldwin, Katherine L., Vanessa DeVeau, Ken Foster and Maria Marshall 2008. *Traits Affecting Household Livestock Marketing Decisions in Rural Kenya*. Purdue University, West Lafayette, Indiana.
- Barrett, Christopher B., Marc f. Bellemare and Sharon M. Osterloh 2005. *Household-Level Livestock Marketing Behavior Among Northern Kenyan and Southern Ethiopian Pastoralists*. Cornell University and Global Livestock Collaborative Research Support Program (GL CRSP).
- Behnke, Roy and David Muthami for IGAD 2011. *The Contribution of Livestock to the Kenyan Economy*. Great Wolford, UK, IGAD Livestock Policy Initiative.
- Chantarat, Sommarat, Andrew G. Mude, Christopher B. Barrett and Michael R. Carter 2011. *Designing Index Based Livestock Insurance for Managing Asset Risk in Northern Kenya*. Working Paper (<http://livestockinsurance.wordpress.com/papers/>)
- Curtis, Mark 2010. *Developing the Leather Sector in Kenya through Export Taxes: The Benefits of Defying the EU*. Traidcraft Exchange, Oxfam Germany, WEED, AITEC and Comhlamh.
- FAO 2005. *Kenya Livestock Sector Brief*. Rome, Italy, FAO Livestock Information, Sector Analysis and Policy Branch (AGAL).
- FEWSNET/FSAU/Government of Kenya Arid Land Resources Management Project (ALRMP) 2003. *Closure of Garissa (Kenya) Cattle Market: Food Security Implications in the Garissa Marketsbed in Kenya and Somalia*.
- Fratkin, Elliot 2001. *East African Pastoralism in Transition: Maasai, Boran and Rendille Cases*. African Studies Review, Vol. 44, No. 3 (Dec 2001), pp. 1-25
- Gamba, Paul 2005. *Urban Domestic Consumption Patterns for Meat: Trends and Policy Implications*. Egerton University/Tegemeo Institute of Agricultural Policy and Development: Tegemeo Working Paper 17/2005, Nairobi, Kenya.
- Government of Kenya/Export Processing Zones Authority 2005. *Meat Production in Kenya: 2005*. Nairobi, Kenya, Export Processing Zones Authority.
- Hussein Abdullahi Mahmoud 2010. *Camel Marketing in the Northern Kenya/Southern Ethiopia Borderlands. Future Agriculture Research Update*. FAC Pastoralist Theme, Pwani University College, Kilifi, Kenya.
- Juma, G.P., A.G. Drucker, I. Baltenweck and M. Ngigi 2006. *Market Power and Efficiency in Indigenous Small Ruminant Marketing Channels in Marsabit, Kenya*. ILRI and Egerton University, Kenya.
- Kenya National Bureau of Statistics (KNBS) 2011. *Economic Survey 2011*. Nairobi, Kenya.
- Kenya National Bureau of Statistics (KNBS) 2009. *Economic Survey 2009*. Nairobi, Kenya.

- Kingori, A.M., A.M. Washira and J.K. Tuitoek 2010. *Indigenous Chicken Production in Kenya: A Review*. International Journal of Poultry Science 9 (3): 309-316.
- Kristjanson, P., Waters-Bayer, A., Johnson, N., Tipilda, A., Njuki, J., Baltenweck, I., Grace, D., and MacMillan, S. 2010. *Livestock and Women's Livelihoods: A Review of the Recent Evidence*. Discussion Paper No. 20. Nairobi, Kenya, ILRI.
- Letiwa, Paul 2012. *Livestock Traders Call for More Roads and Less Cess*. Daily Nation, January 12<sup>th</sup> 2012.
- Mbwika, J. M., Nthuli, P. 2004. *Assessment of the Potential Revival of the Kenya Meat Commission - Kenya Meat Position Paper*. Ministry of Livestock and Fisheries Development.
- McKague, Kevin, Farouk Jiwa, Christian Pennotti and Shamim Noorani 2009. *CARE Market Engagement Case Study: Livestock Marketing and Enterprise Project and Livestock Purchasing Fund in Kenya*. AusAID and CARE.
- Mugunieri, Lawrence, John Omiti and Patrick Irungu 2002. *Animal Health Service Delivery Systems in Kenya's Marginal Areas Under Market Liberalization: A Case for Community-Based Animal Health Workers*. Institute of Policy Analysis and Research (IPAR), and International Food Policy Research Institute (IFPRI).
- Muigai, Charles for USAID/KDLDP 2011. *Business Opportunities Survey for Niche Markets for Livestock & Livestock Product Value Addition in North Eastern Kenya: Niche Market Survey Report*. Nairobi: Kenya Drylands Livestock Development Program (KDLDP).
- Muthee, Alfred for AU-IBAR and NEPDP 2006. *Kenya Livestock Sector Study: an Analysis of Pastoralist Livestock Products Market Value Chains and Potential External Markets for Live Animals and Meat*.
- Mshenga, Patience M., and Owuor, George 2009. *Opportunities for Micro and Small Scale Businesses in the Tourism Sector: The Case of the Kenya Coast*. KCA Journal of Business Management, Vol. 2, Issue 2.
- Ndotono, Duncan 2011. *What's the beef? Naivasha's Renowned Exceptional Steak*. The Star, Thursday October 13<sup>th</sup> 2011.
- Ng'ethe, J. C. 1993. *Group Ranch Concept and Practice in Kenya with Special Emphasis on Kajiado District*. <http://www.fao.org/wairdocs/ILRI/x5485E/x5485e0t.htm>.
- Nyariki, D.M., Makau, B.F., Ekaya, W.N. and Gathuma, J.M. 2005. *Guidelines for Emergency Livestock Off-take Handbook*. Arid Lands Resource Management Project (ALRMP), Office of the President; Agricultural Research Foundation (AGREF), Nairobi, Kenya.
- Otieno, D., Omit, J., Waiyaki, N., and Miencha, F. 2008. *Determinants of Kenya's Beef Export Supply*. KiPPRA Discussion Paper No. 85.
- Pavanello, Sara 2010. *Livestock Marketing in Kenya-Ethiopia Border Areas – A Baseline Study*. Overseas Development Institute, Humanitarian Policy Group (HPG) Working Paper.
- Sebsibe, Amha 2008. *Sheep and Goat Meat Characteristics and Quality (Chapter 12 of Sheep and Goat Production Handbook for Ethiopia)*. Ethiopia Sheep and Goat Productivity Improvement Program (ESGPIP).
- Tura I., Seth Amboga and Guyo Tuke n.d. *Sheep and Goat Marketing in Marsabit County: A Case Study of North-Horr, Kalacha, Turbi, Marsabit, Korr and Merille Markets*. [www.kari.org/biennialconference/conference](http://www.kari.org/biennialconference/conference).
- Watson, David J, and Joep van Binsbergen 2008. *Livestock market access and opportunities in Turkana, Kenya*. ILRI Research Report 3.

Wayua, F. O., Ngutu, M., Nyamori, B. and Kagunyu, A. *Rural Leather Tanning as a Potential Livelihood Option for Settled Pastoral Households: The Case of Laisamis Imani Women Group in Marsabit District, Kenya*. Kenya Leather Development Council: [www.leatherdevelopmentcouncil.go.ke](http://www.leatherdevelopmentcouncil.go.ke)).

# APPENDIX A: INDUSTRY CONTACTS

## Buyers

Mr Evans Omondi  
Purchasing Manager  
Whitesands Hotel  
Mombasa  
Tel. +254 41 2128000  
Email: [evans.omondi@sarovahotels.com](mailto:evans.omondi@sarovahotels.com)

Looking for high-quality beef, mutton and goat carcasses, delivered chilled. Currently supplied by Alpha meats, KMC and Hurlingham. However, consumption quantities are small and suppliers have to go through a competitive process.

## Processors

Stanley Mbugua  
Operations Director  
Choice Meats/Farmers Choice  
Tel. +254-702113108  
Email: [smbugua@farmerschoice.co.ke](mailto:smbugua@farmerschoice.co.ke)

A privately owned abattoir and meat processor, previously specializing in pork products. In September 2010, Farmers Choice opened a subsidiary slaughterhouse (Choice Meats) to slaughter cattle and shoats. They purchase from negotiated suppliers who can provide high-quality animals. They do not offer contract slaughter services like KMC. All animals slaughtered at their abattoir belong to them. They supply meat to local butchers as well as high-end meat markets and export markets as well. Each week, they export 35 MT of processed meat products to Tanzania. They also export pork products to UAE, Uganda, Rwanda and West Africa. The average slaughter of cattle is 1,700 per month and 1,200 for sheep and goats combined. Suppliers are required to deliver animals to the factory, as the abattoir does not offer transport services. See conditions for delivery (Appendix B).

## Ranchers

Rashid Dirie  
Tel. +254 737993674  
Email: [abdirashiddirie@yahoo.com](mailto:abdirashiddirie@yahoo.com)

The ranch purchases animals for fattening, requiring that animals be disease-free and of white Boran Breed (as these are more disease-tolerant and can withstand harsh conditions, like going without water for some days). They have leased three ranches at the Coast and currently have a total of 4,000 head of cattle. They sell locally to Farmers Choice, Hurlingham and KMC and also export live animals to Mauritius. It is a family business that started in 1980. They think the ranching business is facing a lot of challenges associated with ethnic hostilities and land sub-division and are not sure it will survive beyond 10 years.

## Slaughter Houses

Dr. Ibrahim Haji Issak  
Chief Executive Officer  
Kenya Meat Commission  
Email: [ihaji@kenyameat.co.ke](mailto:ihaji@kenyameat.co.ke)  
Tel. +254 723209191

Looking for good animals, cattle, sheep and goats. They purchase directly from the market and also from supplies from ranchers. Each week they purchase 20 lorry-loads of cattle from Garissa market. Based on interviews with ranchers at the Coast, their prices are not competitive and they also take time to pay after delivery of the animals. As a public-owned abattoir, it has management challenges including political interference in its operations.

# APPENDIX B: SLAUGHTER HOUSE SAMPLE CONTRACT REQUIREMENTS AND PRICES FOR CHOICE MEATS AND KMC

## A. CHOICE MEATS

### BEEF PRICES EFFECTIVE 9<sup>TH</sup> JANUARY, 2012

The prices cover live animals delivered to Choice Meats Beef Plant at Kahawa West

1. Live animals for slaughter shall be delivered on a confirmed order a day before the kill to allow a 12 – 24 hour rest period. They shall be inspected on delivery by the Procurement Officer and the resident Veterinary Officer. A formal Goods Received Note shall be raised to cover the delivery.
2. After rest period, animals shall be slaughtered and graded following the Company's procedures where carcass weights, conformation and other quality parameters such as bruising will be considered in determining the class of the carcass.
3. Settlements for carcasses shall be based on grading as per the schedule below. All fifth quarter (by products) shall be to the account of the slaughter house.

Class 1 High Grade weight	175kg and above
Class 2 High Grade weight	165 – 175kg
Class 3 FAQ	150 – 165kg
Class 4 Standard Grade	Fat but below 150kg
Class 5 Commercial	

### HIGH GRADE BEEF PRICES EFFECTIVE 9<sup>TH</sup> JANUARY, 2012

WEIGHT RANGE		PRICE
Above 175kg CDW	Class 1	Kshs.285/=
165 – 175kg	Class 2	Kshs.270/=
FAQ 150 – 165kg	Class 3	Kshs.265/=
Standard Grade (fat below 150kg)	Class 4	Kshs.245/=
Commercial	Class 5	Commercial rates

4. All settlements shall be done within 4 days of slaughter. Direct credits to supplier's bank accounts can be effected on agreement.

5. For a carcass to qualify for Class 1 & 2, it shall have a well distributed white fat cover. Poor fat distribution and lower than the stipulated High Grade weights will qualify the carcass to Class 3 (FAQ) which will be paid at the established rates.

Fat but lighter carcasses below 150kg shall be paid at standard grade rates.

6. Carcasses with bruises and blemishes will be devalued to either FAQ or Commercial Grades depending on the extent of the damages and shall be paid at prevailing rates. Any trimmings lost due to injection or mechanical abscesses shall be deducted from settlements.

7. Commercial classification and payment is as per below schedule and will depend on the supply situation which shall be negotiated with individual suppliers as and when necessary.

#### **COMMERCIAL BEEF PRICES EFFECTIVE 9<sup>TH</sup> JANUARY, 2012**

<b>CLASS</b>	<b>PRICE</b>
Above 170kg CDW	Kshs.260/=
160 – 169kg	Kshs.250/=
150 – 159kg	Kshs.220/=
Below 150kg	Kshs.210/=

#### **NOTES:**

- *All prices shall be reviewed regularly basing on prevailing on farm prices and the Company's ability to sell derived products.*
- *At all times the Company shall have discretion of setting prices and selecting its suppliers. Naturally the Company will seek consistent and dependable suppliers.*
- *The Butchery, Slaughterhouse, Quality Assurance Inspector and the Procurement Officer shall be responsible for post-mortem grading. Their decision shall be final with any appeals referred to the Operations Director or the Head of Quality Assurance preferably in writing if not immediate.*
- *The Company shall not be responsible for any losses during transportation of live animals, in holding pens or condemned on post-mortem inspection. Any cost incurred on maintaining animals delivered without orders or required documentation shall be to the account of the supplier.*
- *Suppliers are requested to report to the Company any unethical dealings that they may encounter during the business transactions.*

Stanley Mbugua  
Operations Director

#### **CHOICE MEATS**

#### **LAMB PRICES EFFECTIVE 17/10/11**

<b>CLASS</b>	<b>WEIGHT RANGE</b>	<b>PRICE</b>
Class I	13 – 22kgs	Kshs.320/=
Class II	Below 13/above 22kgs	Kshs.300/=

**CLASS I:**

To qualify for class 1, lamb carcass shall be in the stated weight range of between 13 – 22kgs.

The carcass shall have a nice conformation with a nice spread out fat cover.

The carcass shall have no visible bruises or blemishes.

A carcass shall have been slaughtered hygienically with no evidence of secondary contamination.

**CLASS II:**

Any lamb carcass failing in class I shall be devalued to class II and shall only be used for lamb mince, bone-in-dues and any other suitable applications.

Thanks

Stanly Mbugua  
Operations Director

**CHOICE MEATS****Number of Slaughters**

<b>MONTH AND YEAR</b>	<b>BOVINES</b>	<b>OVINES</b>
Sept - 10	121	
Oct - 10	1134	
Nov – 10	1530	
Dec - 10	1952	
<b>TOTAL 2010</b>	<b>4737</b>	
Jan - 11	1004	
Feb - 11	1027	
Mar - 11	1562	
Apr - 11	1415	
May - 11	1668	
Jun - 11	1602	
Jul - 11	1545	
Aug - 11	1774	
Sep - 11	1820	
Oct - 11	1558	1027
Nov - 11	1775	1407
Dec - 11	1715	1214
<b>TOTAL 2011</b>	<b>18465</b>	<b>3648</b>
<b>GRAND TOTAL</b>	<b>23202</b>	<b>3648</b>

## **B. KENYA MEAT COMMISSION**

### **REPUBLIC OF KENYA**

### **Kenya Meat Commission**

### **PRODUCTS PURCHASE & LIVESTOCK SLAUGHTER CONTRACT**

This Contract is made this ----- day of November 2011 between the **KENYA MEAT COMMISSION**, a body Corporate incorporated under the Kenya Meat Commission Act Chapter 363 Laws of Kenya whose principal office is situated at Athi River of Post Office Box Number 2-00204, ATHI RIVER in the Republic of Kenya, (which expression shall where the context admits includes its successors and assigns) hereinafter called the **“The Commission”** of the one part.

**AND**

**Customer Limited**, a liability company incorporated under the Company laws (Chapter 486) Act of the Laws of Kenya with Head Office at Jamia Mosque, 1<sup>st</sup> Floor, of Post Office Box Number 68604 – 00622, NAIROBI in the Republic of Kenya (which expression shall where the context admits shall include its successors and assigns), hereinafter called the **“The Customer”** of the other part.

**WHEREAS** the Commission was established for the purposes, inter alia, of purchasing cattle and small stock and establishing and maintaining abattoirs and meat works and operating the same for purposes of slaughtering cattle and small stock, chilling, freezing, and canning and storing beef and mutton for both export or consumption within Kenya, and of carrying on the business, on wholesale basis of carcasses, products and byproducts thereof (herein called “the operations”)

**AND WHEREAS** the Customer has secured markets for meat and meat products from Kenya to other countries and has requested, is desirous, ready and willing to source all its meat products for exports from the Commission and in the alternative to make use the Commission’s slaughtering facilities for slaughtering its own large stock/small stock (animals) for export purposes at a fee.

**AND WHEREAS** the Commission is not currently making maximum utilization of its slaughtering facilities in place and has consented to request of offering slaughtering services to the Customer at an agreed fee under following terms and conditions, **NOW THIS CONTRACT WITNESSETH** as follows:-

#### **1. Definitions:**

In this Contract, unless inconsistent with or otherwise indicated by the context:-

- (a) “Contract/Agreement” means the terms of this Trading Agreement as set out herein together with all appendices thereto;
- (b) “Effective Date” means the date upon which this Contract is signed by the party signing last in time;
- (c) “Export” means exports of meat and/or meat products from Kenya;
- (d) “Price” means the price of meat or meat products to be supplied to the Customer by Commission;
- (e) “Commission” means Kenya Meat Commission;
- (f) “Customer” means Customer limited;

- (g) "Termination Date" means the last day of the term of this Contract or of any extended term;
- (h) "Airport" means Jomo Kenyatta International Airport;
- (i) "By Products" means head, hooves, heart, lung, liver, kidneys, rumen, and the intestines;
- (j) "Hides" and "Skins" means the hides or skins of livestock slaughtered;
- (k) "Commencement Date" means the date of signing of this Contract;
- (l) "Large Stock/Small Stock" means cattle/sheep or goats;
- (m) "Payments" means by bankers cheque, cash, or EFT (Electronic Funds Transfer)

## **2. Term:**

The Contract shall commence on the Effective Date and shall continue in force thereafter for a renewable term of Number (xx) year subject always to prior determination in accordance with the terms and conditions of the Agreement.

## **3. Healthy Requirements:**

The Customer warrants that all animals brought under contract to the Commission for Slaughterer shall fulfill the following basic veterinary conditions as set by the Commission;

- Before transportation to Kenya Meat Commission, livestock must be clinically mouthed (examined) for Foot and Mouth Disease and other mucosal diseases at the point of loading by veterinary department at the district level.
- The movement permit showing origin and destination of livestock must be given by the District Veterinary Officer. Destination of livestock to the Kenya Meat Commission must be very clear as no diverted livestock will be accepted as per norm. No diverted livestock shall be accepted, and no alternations or changes in livestock number shall be made on the order and movement permit.
- On arrival, the Veterinary at Kenya Meat Commission will examine the animals before offloading. Any one suspect in a load will lead to the entire load being rejected and under no circumstances will offloading be done.
- The Kenya Meat Commission cannot receive livestock on hoof due to veterinary quarantine regulations.
- Animals must have been treated at least thirty (30) days for any disease before delivery and as per regulations.

## **4. Rest Period:**

It is agreed between the parties that all animals delivered under contract for slaughter shall be required to rest for at least Twelve (12) hours before actual slaughter. Only animals that have been issued with a letter of No Objection by the Commission's Veterinary Office will be accepted for slaughter.

## **5. Slaughter Request:**

- The Customer warrants to always deliver its 50 percent share of slaughter stock of -----(xxx) own stock per week agreed in this agreement to Commission. It is further agreed that the commission shall also ensure that its 50 percent share of Customer's order of number (xxx) small stock per week under this contract is readily available for concurrent slaughter for purposes of selling to the Customer as per the agreed importer's or

customers or end user's time to time specifications and the Commission warrants to concurrently slaughter, chill and prepare the products to standards as required by the Customer before delivery to the designated Airport for export purposes as per terms and conditions in this Agreement.

- The Customer's livestock and those owned by the Commission destined for the Customer shall be slaughtered concurrently so as to complete the Customer's order.
- It is agreed that the Customer shall be granted permission from time to time to avail their own quality assurance provider to work in conjunction with the Commission team in ensuring that the quality and presentation of the meat and stock meet the standards of the importer, Customer or end user provided he does not adversely interfere with the Commission's normal operation systems.
- The Customer warrants notifying the Commission of delivery of slaughter its stock at least two (2) days in advance subject to agreed minimum slaughter terms of two hundred (200) small stocks per scheduled slaughter day provided that the Commission or other Commission Customers have another lot of one hundred (100) cattle scheduled for slaughter that day.
- The Commission warrants that all the Customer's products shall always be given a name tag or other similar means of identification for ease of identification.
- The Customer warrants providing additional meat rollers and hooks at its own cost should there be insufficient hooks and or rollers for slaughtering the Customer's stock and chilling demands subject to the hooks and rollers meeting the Commission specifications and the hooks and or rollers thereafter being retained by the Commission.

#### **6. Slaughter Fee:**

The Commission shall charge a slaughter fee of Kenya Shillings One Thousand Six Hundred Sixty Five Only (1,665/=) per animal (large stock) subject to a minimum delivery of One Hundred (100) heads of cattle and Three Hundred Seventy Five Only (Kshs.375/=) for small stock provided a minimum delivery of Two Hundred (200) heads for export provided however that the entire slaughter fee shall be payable before the departure of the transportation truck from the factory to the airport. It is also agreed that the Commission shall charge a higher slaughter fees in circumstances where the Customer proposes to retain the hides and skins and / or the byproducts (fifty quarter) which shall be agreed in writing under this agreement.

#### **7. Hygiene:**

The Commission warrants hygienic handling of the carcasses throughout every stage of processing save that quality of meat would be the responsibility of the Customer and / or his authorized agents in Kenya by sourcing and delivering high-quality animals.

In the event of disruption of the production process leading to deterioration of the stocks or products the Commission covenants that it shall maintain adequate insurance cover to insure against such deterioration of stocks/products PROVIDED that where deterioration occurs as a result of perils beyond the control of the Commission, such as unexpected power failure, the Commission shall not be held liable and the loss shall lie with the customer.

#### **8. By-Products:**

It is agreed between the parties hereto that there are two options for slaughter fees and byproducts as follows:

1) Livestock will be slaughtered at the standard fee as per clause 6 above and by-products from the whole processes of the Customer's slaughter which shall include offals (intestines, liver, lungs, hearts, matumbo), heads, horns, hides and skins and hooves shall be retained by the Commission.

2) Livestock will be slaughtered at an agreed higher fee and all products shall be retained by the customer. (What is Commission take on byproducts?)

#### **9. Export Permits:**

Where the product is for export, the Commission warrants dressing and issuing the certificate of origin, veterinary certificate and port health certificate and deliveries the product to the airport.

#### **10. Purchase of Meat and Meat Products and Price:**

10.1. During the term of this Contract the Customer consents to buy from the Commission and the Commission agrees to sell and deliver meat and meat products to the Customer for export purposes at a mutually agreed price from time to time and in accordance with other terms and conditions of this Contract. The parties' further covenant that prices shall be reviewed regularly on written notice as shall be dictated by market trends.

10.2. It is agreed by the Parties hereto that payment terms for all purchases of meat and meat Products by the Customer shall be payable 48 hours before loading for delivery to the Airport or through the establishment of a system of advance payment which is topped up from time to time when the balance becomes low.

10.3. Either party may give the other 7 days notice of which to re-negotiate the price at any time before the expiry of every year. In the event of failure by parties to reach an agreement with regard to a new price by the end of the notice period, then either party shall have the option to give a 30 day notice of intention to terminate Contract.

#### **11. Delivery and Export Permits:**

11.1. The Commission undertakes to ensure that the meat and meat products for export have been chilled to the exit loading temperature of a maximum of four (4°C) Degrees Centigrade within a maximum of two (2) days, dress the product and procure the requisite export documents and/or certificates supposed to be procured by the Commission at least seven (7) hours before departure of the flight. Should the Customer request, the Commission agrees to provide a dedicated reefer truck for transport to the airport for which the Customer shall pay the cost of transport if this request results in the need for the Commission to allocate another vehicle for transport on any particular day.

11.2. The Commission undertakes to provide Customer with full export documentation which shall include KMC Invoice, certificate of Halal, certificate of origin, Vet certificate, port health certificate and issue delivery note. It shall however be the sole responsibility to the Customer to obtain the requisite veterinary certificates from the relevant authorities in the country of destination.

#### **12. Early Termination:**

If at any time during the term to this Contract:-

- (a) Either party shall pass a resolution for winding up or if a Court shall makes an order to that effect (otherwise than for the purpose of amalgamation or reconstruction;) or
- (b) Either party shall be in material breach of any of the terms of this Contract and shall not remedy such breach within fifteen (15) days from the receipt by it or written notice from the other of them of such breach;
- (c) Either party shall be unable to perform to a material degree any of its obligations under this Contract by reason of any cause for a continuous period exceeding fifteen (15) days; Then the other of them shall be

entitled (Without prejudice to their other or antecedent rights and remedies) to terminate this Contract with immediate effect.

Other than termination by efflux ion of time, this contract may be terminated by either party at any time by giving the other fifteen days (15) days notice in writing PROVIDED HOUEVER that the accrued rights and obligations shall be fully performed during the notice period.

### **13. Liabilities:**

Other than agreed elsewhere in this agreement, the Customer shall indemnify and keep indemnified the Commission from and against all actions, proceedings, costs, damages and claims, demands and liability which may be taken or made against the Commission as a consequence of the sale of the products by the Customer if the said products are unwholesome, faulty, rotten and/or contaminated PROVIDED ALWAYS that the unwholesomeness of the products shall not have arisen out of the negligence, default, or any other cause such as poor handling, storage or whatever arising from the acts and/or omissions of the Commission.

### **14. Amendment:**

Amendments to this Contract can be made only with written consent of both parties.

### **15. Force Majeure:**

15.1. Neither party shall be under any liability to the other whether in contract or in tort due to their being delayed or hindered in or prevented from performing any or all of its obligations under this Contract by reason of force majeure and, for this purpose, force majeure means any of the following acts which are outside the control of the relevant party: acts of God, fire, civil disturbances, strike or industrial action, war or the threat of hostilities, import or export restrictions, any regulation, order, or interference or restriction imposed by international, national provincial, port or other public authority, breakdown of or accident to plant, machinery or facilities, failure or hindrance to transport.

15.2. If either party is unable to perform any of its obligation under this agreement by reason of any of the causes mentioned in sub-clause 15.1 above or if either party considers it likely that it may become so unable, then that party shall as soon as possible notify the other party of the estimated extent and duration of such inability and shall make every reasonable effort to prevent or limit the detrimental effects of the causes.

### **17. Notices:**

Any notice required to be given by any party here to any other shall be deemed validly served by hand delivery or by facsimile or by prepaid registered air mail letter to its address (or fax number) given herein or such other address as may from time to time be notified in writing for this purpose and any notice served by hand shall be deemed to have been served on delivery, any notice served by facsimile shall be deemed to have been served when the sender receives due confirmation that the message was transmitted in full and without error and any notice served by prepaid registered air mail letter shall be deemed to have been served when actually received PROVIDED HOWEVER that the accrued rights and obligations shall be fully performed during the notice period.

Address of the Customer: *Customer ..... P.O. Box nnnn, Nairobi. Tel: 0722 – 415605, e-mail:- .....*

Address of the Commission: *Kenya Meat Commission, K.M.C Factory, P.O. Box 2 – 00204, ATHI RIVER. Attn: Managing Commissioner/Company Secretary, Fax Number: 045 – 6626520, e-mail: [info@kenyameat.co.ke](mailto:info@kenyameat.co.ke)*

### **18. Applicable Law**

This Contract shall be governed and construed in accordance with the laws of Kenya.

**19. Dispute Resolution**

Any dispute, difference or question which may arise at any time hereafter between the parties hereto touching the true construction of this Contract or the rights and liabilities of the parties hereto shall be referred to the decision of a single arbitrator to be agreed upon between the parties or in default of agreement for 14 days to be appointed at the request of either party by the Chairman for the time being of the Chartered Institute of Arbitrators of the United Kingdom, Kenya Branch. The costs of the arbitrator shall be borne by the party against whom the arbitrator finds. The arbitrator’s decision shall be final and binding.

**20. Right of Lien:**

The Commission shall have the right to set off or lien on property or products of the Customer, without giving notice or making demand for any sums at any time owed by Customer against any and all sums owing or property of the Customer under this Contract.

**21. RELATIONSHIP OF PARTIES:**

21.1. The parties agree that they will act in good faith towards each other throughout the duration of this Contract. The parties further agree that their relationship shall be founded on the understanding that the supply of meat and meat products shall be for export purposes only based on availability of the products. During the term of this Contract, it may be necessary for the parties to provide proprietary information to each other. Any party receiving such information agrees to protect it in accordance with and to the extent required, which obligations shall survive the termination of this Contract.

**22. Confidentiality**

This Contract the information which it contains and all information exchanged relating to it are confidential between the Commission and the Customer and neither party shall, without the prior written consent of the other, disclose such information to any other person outside its own organization except to the extent that such disclosure may be legally compulsory.

**IN WITNESSETH WHEREOF**, the parties hereto have caused this Contract to be executed on the day and year first written above.

Sealed with the Common seal of

**KENYA MEAT COMMISSION (the Commission)**

In presence of

Managing Commissioner -----

Company Secretary -----

Sealed with the Common Seal of

**(The Customer)**

In the presence of

Managing Director -----

Director/Company Secretary -----