



## ***TECHNICAL BULLETIN No.47***

# ***Export requirements for meat and live small ruminants***

***How can development agents assist producers to improve small ruminant export?***



# **ESGPIP**

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## Foreword

This technical bulletin titled “*Export requirements for meat and live small ruminants: How can development agents assist producers to improve small ruminant export?*” is the 47<sup>th</sup> in a series produced by the Ethiopia Sheep and Goat Productivity Improvement Program (ESGPIP). The ESGPIP is a USAID funded Project with the objective of improving the productivity of Ethiopian sheep and goats in Ethiopia.

There is great potential to increase the export of sheep and goat meat and live animals to the nearby Middle Eastern markets. The international market for live animals and meat is, however, becoming increasingly competitive. All those involved in the production, processing and marketing of sheep and goats must adopt improved practices in production, transportation, processing and packaging of products to maintain and increase market share. It is imperative that small ruminant producers, buyers and processors be aware of the status and requirements of the export market. Further, appropriate training should be provided to all stakeholders to help them meet market requirements and maximize the benefits from the growing meat and live animal export trade.

This technical bulletin is intended to create awareness on the requirements of especially the live and meat export market of sheep and goats and what can and should be done by the different participants in the process. of major factors affecting lamb/kid survival so that sheep and goat producers and other actors in the production process can avoid unnecessary loss. The contents of this bulletin are also useful for producers of other animal species. The specific roles that can be played by Kebele development agents are separately highlighted to help them assist producers in their mandate areas to make sheep and goat production market oriented and demand driven.

At this juncture, I would like to thank all those involved in the preparation and review of this technical bulletin.

Desta Hamito (Prof.),  
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March, 2011

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# **Export requirements for meat and live small ruminants: How can development agents assist producers to improve small ruminant export?**

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## **1. Introduction**

Ethiopia is home to 63.3 million small ruminants (CSA, 2009). However, the livestock sub-sector's contribution to the economy and foreign currency earnings in particular, is very low. Some of the major factors contributing to the poor performance of the livestock sub-sector include widely scattered and non-market oriented livestock production systems, lack of an efficient and effective livestock marketing system, poor market infrastructure, lack of proper transport services, and limited knowledge of and capacity to meet international standards by producers and marketers.

Middle Eastern countries (Saudi Arabia, UAE, Kuwait, Yemen, Bahrain, Oman and Qatar) and Egypt imported, 10.7 million live small ruminants and nearly 0.27 million metric tons of meat, mainly from small ruminants, in 2007. This clearly shows that there is a large potential market for small ruminants very close to Ethiopia. However, in 2009/10, Ethiopia exported only 333,271 live animals, 45% of which were small ruminants and only 9,192 tons of sheep and goat meat (EMDTI, 2010). This is extremely low considering the country's animal resource base, the proximity to the market and the adaptation of the importers to the taste of our animals. There is also a high domestic demand for small ruminant meat, particularly during religious festivals.

The international market for live animals and meat is becoming increasingly competitive and relevant actors must adopt improved practices in production, transportation, processing and packaging of products to maintain and increase market share. It is imperative that small ruminant producers, buyers and processors be aware of the status and requirements of the export market. Further, appropriate training should be provided to the livestock value chain actors to help them meet market requirements and maximize the benefits from the growing meat and live animal export trade.

## **2. Status of small ruminant export market**

The type and volume of small ruminant live animal and meat export and the destination markets are summarized below.

**Preferred small ruminant breeds:** According to abattoirs and live animal exporters, the Ethiopian sheep and goats breeds most preferred in the Middle East market are the Black Head Somali and Afar sheep. The Borena/Somali and Afar are among the most preferred goat breeds. The preferences to these breeds may have been due the breeds' lowland background, their adaptation of the buyers to the conformation of the animals and the taste of the meat. However, when there is high demand and the

abattoirs are unable to fulfil orders for specific breeds, other breeds of small ruminants are also slaughtered and exported.

**Operational export abattoirs:** As of early 2011, there are seven functional export abattoirs involved in exporting small ruminant chilled meat. Two abattoirs (HELIMEX and ELFORA) are located in Debre Zeit, 45 km from Addis Abeba; three abattoirs (Luna, Modern and Organic) are located in Modjo, 85 km from Addis Abeba. The ELFORA abattoir in Metehara is located (170 km from Addis Abeba) and the Abergele abattoir is in Mekele, 700 km from Addis Abeba.

**Volume of export:** Considering the resource base and other comparative marketing advantages of Ethiopia, the export volume to the Middle East has been low. However, the volume of both small ruminant meat and live export is growing in recent years. In 2009/10 Ethiopia exported nearly 150,000 live small ruminants and 9,192 tons of chilled sheep and goat meat. Edible offal such as liver, kidney, heart, tongue and brain were also exported. In addition, the Ethiopian Customs Office estimates indicate that about 1.1 million sheep and goats are informally traded annually with neighboring countries.

Major competitors of Ethiopia for the Middle Eastern market are shown in Table 1. Though most of these countries are very far from the importing countries, their volume of export is increasing. This increase is mainly due to the countries meeting export sanitary/ requirements, better economies of scale of livestock production, and well-informed, capable value chain actors able to take advantage of the current market more so than traditional exporting countries such as Ethiopia.

**Export destinations:** Small ruminant meat and live animals from Ethiopia are mainly exported to the United Arab Emirates, Saudi Arabia, Kuwait, Bahrain, Yemen and Qatar. The United Arab Emirates and Saudi Arabia are the largest importers of live animals and chilled small ruminant meat.

**Table 1:** Major competitors in the Middle Eastern market

Export type	Competitor	Remark *
Live Sheep	Australia	Exported 3.8 million sheep to middle East in 2007
Beef	Brazil, India, Argentina	
Sheep meat	Australia, New Zealand	
Sheep and goats	India, Iran	

\* FAOSTAT, 2007

### 3. Opportunities and challenges of the small ruminant export market

The following are some of the important opportunities and challenges/constraints influencing the meat industry in Ethiopia, particularly the export sector.

#### 3.1 Opportunities

- Large small ruminant population with diverse genotypes

- Proximity to Middle Eastern countries and adaptation of importing countries to the taste of Ethiopian animals
- High demand for small ruminant meat and live animals. The annual total meat demand of Middle Eastern countries is about 207 thousand tons of meat and 12 million head of sheep, goats, cattle and camels. Based on the export data of 2009/10, Ethiopian exports filled only 3.4 and 1.4 % of the meat and live small ruminant demand of the Middle Eastern market, respectively. There is a large potential of expanding Ethiopian exports to the Middle East if the value chain actors in Ethiopia meet export market standards.
- Diverse agro-ecologies for production of different types of livestock
- Government interest and support to the small ruminant industry
- Increasing number of export abattoirs and live animal exporters
- The expansion of agro-industries and the increase of by-product feedstuffs allowing for enhanced productivity.

### **3.2 Challenges/constraints**

- The livestock production system is not market oriented resulting in lack of a constant and uniform supply of marketable animals
- Lack of an efficient and effective livestock marketing system characterized by limited market information, absence of a livestock grading system to provide incentives to producers and limited promotion.
- Poor market infrastructure and lack of proper transport services,
- Limited knowledge by and capacity of value chain actors (producers, dealers, transporters, meat handlers, etc.) to meet international market standards.
- Prevalence of livestock diseases and inadequate veterinary support services. There have been frequent export bans mainly due to the stringent health requirements of some importing countries.
- Poor feed supply and low feed quality
- Inadequate application of HACCP (Hazard Analysis and Critical Control Points) protocols in abattoirs and export markets

Another important constraint affecting small ruminant value chain actors is limited access to market information at the grassroots level. Pastoralists and traders lack clear and detailed knowledge on the desired livestock characteristics and health requirements of importing countries. Further, these producers are also not adequately informed of the importance of establishing source of origin, traceability mechanisms, and related certification processes for marketed animals. Chain actors do not yet appreciate the importance of issues related to food quality, the link between animal health, meat quality and safety, and why documentation is fundamental in enhancing competitiveness in the global market.

The extensive production systems that dominate small ruminant production in Ethiopia not only inhibit producer access to market information, but limits the learning process on production changes required to meet the quality demands of the export market. Improved horizontal linkages among the pastoralists would improve their capacity to share information and learn/harmonise on common

strategies for responding to the market. Vertical linkage between traders and producers to national institutions in terms of both forwards and backwards information flow is poor. Strengthened agribusiness linkages would improve the efficiency to respond to market demands.

The existing livestock producers and traders associations are not well organised and structured to provide the necessary support services to facilitate effective linkages with formal markets to their members.

## 4. Important considerations to improve small ruminant export

### 4.1. Producers

Pastoralists/producers should raise animals that yield high quality and high value products and handle animals with due consideration at all times and with minimal use of force for economic reasons related to meat quality as well as to meet animal welfare standards.

- **Genetic factors:** Many physical properties of meat, such as tenderness, are greatly influenced by genetic factors. Producers can make improvements to the end quality of meat by careful selection of small ruminant breeds and strains within a particular breed.
- **Age and weight:** Meat quality changes markedly with an animal's age or weight at slaughter. Hence, producers should know the weight preference of export abattoirs and the major season that fetches a better price per kg of live weight to target their production. Regarding small ruminant live export, the demand is highest during *Eid Al-Adha* (Arafa). The price per kg live weight is also higher for this festival than other times of the year as many families will sacrifice an animal during this period. The preferred weight category is between 25-30 kg or more with good condition as animal shipping to Saudi Arabia requires about one week. Export abattoirs require sheep/goats weighing 15-30 kg (depending on the requirements of the importing country) throughout the year including for the *Ramadan* festival.

Table 2. Requirement of some importing Middle East and Asian countries for small ruminants

Consumers	Product specification
Middle East (Saudi Arabia and Dubai)	Skin-off carcass <ul style="list-style-type: none"> <li>• mutton: 8–12 kg;</li> <li>• goat: 5–7.5 kg</li> </ul>
Malaysia	Skin-off, lean carcass, <10 kg
Malaysia	Skin-off, lean carcass, 20 kg
Taiwan	Skin-on, lean, 14-16 kg goat carcass

The specifications listed in Table 2 show product type and the carcass weight category required in some countries. The lightweight carcasses are harvested from the live weight range indicated above



Fig.1 Ethiopian goat meat cuts in a Dubai super market (Photo: Ameha Sebsibe)

- **Nutrition:** The general feeding practice in Ethiopia is to graze all livestock together on communal or privately owned grazing land with all animals subjected to similar constraints imposed by overgrazed pastures. Culling unproductive animals is a practice not usually employed by most producers. Currently, the majority of indigenous sheep marketed have low live weight resulting in a poor dressing percentage and carcasses with little fat cover. Technical assistance to improve animal nutrition using available feed ingredients should be provided to producers. Enhanced feeding technologies can help livestock owners produce lambs/kids that are heavier at slaughter with greater quantity and improved quality of meat.
- **Sex:** The Gulf markets are only interested in male small ruminants for both meat and live imports.
- **Minimizing hazards found in animals and meat:** Development agents can assist producers in minimizing or eliminating significant hazards to production through creating awareness and/ or training.
  - Biological hazards are minimized by maintaining the health of the animal including providing vaccinations and proper health care. Maintain animal pens and corrals to prevent injury to animals that could allow entry of disease organisms.
  - Chemical hazards of most concern in meat are drug residues. Only drugs approved for use in small ruminants should be used and then only under supervision of an animal health official. Withdrawal times (the time needed for a drug to clear from an animal's system) for meat has been set for most drugs should be strictly followed and no animal slaughtered and consumed during the withdrawal period. Chemical contamination can also come from animals eating feed with fertilizer, pesticide, or herbicide residues. Be careful when using chemicals and do not feed grain, hay, or grass that may have been contaminated.
  - Physical hazards are not common in meat animals coming off farm. However, broken needles are one example of a physical hazard that can be prevented on-farm. Care should thus be taken when injecting animals. All injections (subcutaneous,

intramuscular, and intravenous) should be given in the neck area in front of the shoulder, never inject an animal on the rear leg. Injection site lesions (areas of toughened scar tissue resulting from an injection) can form in muscle. This portion of the meat must be cut out and discarded after slaughter. This affects animal price and the small ruminant meat industry particularly the export market negatively.

#### **4.2 Traders, Middlemen and Transporters**

Traders, middlemen and transporters purchase small ruminants to supply slaughter houses or live animal exporters. Both meat and live animal exporters require quality animals to fetch better prices, to maintain their customers' interest, and stay competitive in the market. Maintaining high quality in animals purchased and products sold is important in ensuring profit to all sectors of the livestock animal and product business. Moreover, the country also benefits from the influx of foreign currency through revenue gained by exporting animals and meat. Thus, all efforts should be made to improve the volume and quality and, hence, the value of meat and live animal export. Traders, middlemen and transporters should ensure humane handling of animals when purchasing from the market, at holding grounds, and during transportation. Care should be taken when loading animals to avoid bruising. Animals should not be overcrowded on livestock trucks and arrangements for feeding, watering and resting during transport to an abattoir or collection yard for live export need to be made. Development agents/district offices of the Bureau of Agriculture, in collaboration with their respective municipalities, could arrange awareness creation programs/training on transportation and appropriate handling of sheep and goats.

#### **4.3. Complying with buyer's Sanitary and Phytosanitary requirements**

The sanitary and phyto-sanitary (SPS) requirements of the Office International des Epizooties (OIE), a referral institution of the World Trade Organization and the importing countries must be followed to gain entry and maintain share in export markets. The export-oriented meat processing plants should follow the excellent sanitary and phyto-sanitary measures given by the OIE. The plants need to be certified with HACCP, ISO-9002, and other required standards to meet OIE norms.

Measures for meat safety begin at the primary production level, be it a farmer raising 5– 20 animals or a larger number of animals in a feedlot. The identification and traceability of the animals from production source to the abattoir needs to be maintained. It must be ensured that animals have been raised free of "List A" diseases as defined by OIE, like Foot and Mouth Disease, PPR, etc.

Requirements for import are different for different countries. However, one of the common requirements of all the countries importing live animals and animal products is fulfillment of SPS and related issues that must be confirmed by provision of health certificates issued by a regulating body. The following are some of the major requirements that need to be fulfilled in order to obtain product entry permits for some Gulf countries. (UAE, Ministry of Environment and Water, 2010)

1. The health and other certificates issued for animals and animal products export must indicate that the animal or meat is free from diseases, safe and fit for human consumption, i.e., without harmful levels of chemical, biological or antibiotic residues in the meat, and have an original veterinary health certificate;

2. Animals must be quarantined for 21-30 days before slaughtering or live export;
3. Animals should be vaccinated twice for FMD and once for PPR (sheep and goats);
4. Animals should be transported in cleansed and disinfected vehicles;
5. Animals should be slaughtered in an approved slaughter house;
6. Animals or products must have a certificate of country of origin;
7. *Halal* products must carry the appropriate certificate; and
8. The meat must not be mixed with any other animal products.
9. The carcass should be completely eviscerated and submitted to maturation at temperature above +2°C for a minimum period of 24 hours following slaughter.
10. Meat must come from young and intact male animals.

## **5. How can development agents assist producers to improve small ruminant export?**

- Provision of information:
  - Make small ruminant producers, producer cooperatives, dealers, traders and transporters aware of the high demand of the Gulf market for live animals and meat of small ruminant and the marketing potential that exists.
  - Provide information on the current small ruminant animal and meat export volume and value and the market requirements along the value chain, particularly those dealing with the prevention and control of animal diseases.
  - Collaborate with the branch offices of the Ministry of Road Transport Authority and transporters' associations to better provide information to the transport sector on appropriate animal transport.
  - Sheep and goats should not be fed with meat and bone meal and need not be treated with growth promoters.
- Assistance to sheep and goat producers:
  - Orient and train producers on the need and ways of market orientation and targeting of sheep and goat production
  - Provide training on the market requirements for sheep and goats including the weight preference of export abattoirs and the major season that fetches a better price per kg of live weight.
  - Assist in dissemination of livestock market information to producers through strengthening pastoralists' organizations
  - The domestic market for lowland animals is very limited whereas the market demand in the Gulf for lowland small ruminants is high provided the market requirement is met. Development agents can assist pastoralists/producers/producers' cooperatives by providing information on the type of animals that have more demand, production calendars for small ruminants to target major Gulf market seasons such as for *Eid Al-Adha* (Arafa), Ramadan and other times. Development agents can have direct discussion with the live animal and meat exporters to obtain information and devise the calendars.

- Identify progressive agro-pastoralists/pastoralists/producers/producers' cooperatives and assist them to form linkages with live animal and meat exporters. Contractual agreements can be made detailing the type of small ruminants, required number, desired weight, time of delivery, price, and method of payment. To model successful and sustained contract agreements, the DA should first select some lowland areas with business oriented agro-pastoralists/pastoralists/producers/producers' cooperatives. The success of these groups can then be used to encourage other producers through arranging field days and visits. Further, the DA, in collaboration with the livestock extension staff of the regional Bureau, can negotiate advance contract payments from buyers that will enable agro-pastoralists/pastoralists/producers/producers' cooperatives to purchase the required inputs and produce the agreed numbers of small ruminants.
- Assist producers in producing safe and wholesome meat by training them to:
  - provide proper care to their animals i.e. feed them well; give them clean water to drink; house them well; get them vaccinated in time etc.
  - use all drugs correctly and follow withdrawal times;
  - refrain from injecting animals in the rear muscle or loin; and
  - use pesticides and other chemicals carefully to prevent contaminating animal feeds.
  - Arrange visits for selected progressive sheep and goat producers and cooperatives to export abattoirs to help them better understand the consequences of poor management and handling of animals and also the positive influence of improved management and humane handling on meat yield and quality.
- Assist producers/producers' cooperatives to select appropriate breeds and production technologies, target markets, and increase the off-take as well as productivity per animal to ensure a constant and uniform supply of meat.
- The KDA could assist on simple ways of protecting animals from trade related livestock diseases. Moreover, he/she can make arrangements for timely delivery of vaccinations against major infectious diseases.
- Assist producers to establish and maintain records across a broad spectrum of farming activities that enables the producer to plot his/her progress in terms of production levels, income, state of the environment and other parameters.

## 6. References

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