



**Ministry of Agriculture and Rural Development Animal  
and Plant Health Regulatory Directorate**

**Pre-purchase Inspection Guideline**  
(for export cattle, sheep, goat and camel)



**November, 2008  
Addis Ababa  
Ethiopia**

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**List of acronyms**

°C	Degree Celsius
°F	Degree Fahrenheit
BCS	Body condition score
CBPP	Contagious bovine pleuropneumonia
CCPP	Contagious caprine pleuropneumonia
Cm	Centimetre
CNS	Central nervous system
FMD	Foot and mouth disease
Km	Kilometre
LSD	Lumpy skin disease
PPR	Peste des petits ruminants
RVF	Rift Valley fever
S/he	She or he
SPS	Sanitary and Phytosanitary Standards
TADS	Trans-boundary animal disease
Tel.	Telephone

## Foreword

This technical document entitled “Pre-purchase Inspection Guideline” is one of the documents in a series of guidelines and Standard Operating Procedures (SOPs) developed by the Ministry of Agriculture and Rural Development (MoARD) in collaboration with the Ethiopian Sanitary and Phytosanitary and Livestock and Meat Marketing (SPS-LMM) Program. SPS-LMM program is financed by USAID and is implemented by the Norman Borlaug Institute for International Agriculture, Texas A&M University System. The main goal of the SPS-LMM program is to increase exports of meat and livestock to benefit Ethiopian livestock producers and exporters and to promote national economic development.

This guideline and SOP is intended to assist livestock and meat exporters to easily identify animals affected by trade sensitive diseases using clinical signs and lesions. It will assist the disease prevention and control efforts of the country by admitting only those animals which can yield SPS certifiable products for international markets. The guideline and SOP includes methods for pre-purchase inspection and signs and lesions in animals affected by trade restricting diseases.

At this point, the Animal and Plant Health Regulatory Directorate (APHRD) would like to thank the SPS-LMM program and USAID for developing and publishing this guideline and SOP.

Last but not least, I would like also to thank Drs. Nega Tewolde and Wondwosen Asfaw for preparing this guideline and SOP.

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## 1. Introduction

International trade in livestock and livestock products continues to be seriously hindered by trans-boundary animal diseases (TADs). These diseases are transmitted rapidly and have substantial socioeconomic impacts and human health implications in recipient countries. As a result, increased awareness on the impacts of TADs is forcing consumers to demand for safer food.

Food safety is getting increasing importance worldwide and importing countries are setting stringent animal health requirements on the import of livestock and livestock products.

To ensure safe livestock and livestock products trade and meet international standards, Ethiopia has introduced a two Phase SPS certification system. The proposed system is based on the OIE concept of “Compartmentalization” approaches whereby compartments will be established based on strict management and bio-security procedures. In this system, animals will be inspected before they are purchased, identified and kept in bio-secure compartments, individually tested and vaccinated and certified as free from trade sensitive TADs. Apart from this, additional mitigation measures which are carried out in export abattoirs including ante-mortem inspection, meat inspection, removal of the head and pharynx early in the slaughter process, meat chilling and de-boning will reduce the risk of TADs to levels deemed acceptable by importing countries.

To this background, pre-purchase inspection will serve to identify and reject non-compliant animals from moving into Phase I and II SPS compartments and admit only those animals which can yield SPS certifiable products for international markets.

## 2. Objectives

The main objectives of the pre-purchase inspection are

- To identify and reject animals showing clear evidence of being affected with a disease or condition that could render the animal risky for other animals. This aspect is extremely important because it permits the interception of diseased animals which, if permitted to enter the SPS certification facilities, could be responsible for contamination of any structure of the facilities, feedstuff, water, animals, vehicles, equipment, clothing and shoes of employees, etc.
- To identify and reject animals which are suspected of being affected with a disease or condition that might render the animal unfit for human consumption.
- To identify and reject animals which could pose a threat to the health of personnel handling the animals in the SPS certification facilities (zoonosis).
- To identify and reject animals which are suspected of having an emerging or re-emerging diseases of trade importance.
- To prevent injured animals from being purchased and transported to SPS certification facilities.

When the pre-purchase inspector suspects the presence of any of the diseases and symptoms mentioned above, s/he shall forthwith reject the animal from being purchased. In case of emerging and re-emerging trade sensitive diseases, the pre-purchase inspector should inform the nearest Phase I Government veterinary inspector. Then the Government veterinary inspector shall confirm the presence of such diseases and immediately inform the Federal Animal and Plant Health Regulatory Directorate for further actions.

Pre-purchase inspection involves a visual and physical evaluation of the animal to identify any conditions that may indicate disease or illness. The pre-purchase inspector is responsible for identifying such animals and making decisions as to allow or reject them from being purchased and enter the nearest Phase I SPS certification facility.

### **3. Responsible body**

Pre-purchase inspection will be carried out by a veterinarian or an animal health assistant representing the private sector. The private pre-purchase inspector will be trained by the Government to evaluate and recognize abnormalities and disease symptoms in animals. S/he will do her/his jobs under a close supervision of the Federal Government Veterinary Inspector responsible for the nearest Phase I SPS Certification facility. Before animals are purchased, the pre-purchase inspector should have close contacts with the Woreda animal health personnel to have an idea on the status of TADs in the areas where animals are sourced.

### **4. Facilities required for pre-purchase inspection**

To enable adequate inspection to be carried out before each animal is purchased, the private sector should avail certain minimum requirements in terms of facilities. Such facilities may include stethoscope, thermometer, recording forms, flashlight, bull holder, etc.

### **5. Procedures and methods for pre-purchase inspection**

The pre-purchase inspector needs to have local knowledge on the situation of TADS in the areas where the animals have come from. For this reason, s/he should regularly contact and obtain adequate information from the nearby Woreda animal health personnel. Purchase of animals should be avoided from areas where there has been outbreak of TADs.

- For FMD, animals should be sourced from areas where there has not been outbreak of the disease for the past three months and the disease has not occurred within a 10 km radius of the purchase area.
- For RVF, animal should be sourced from areas where there were no clinical diseases in animals or humans within the past six months.

Each animal must be inspected before it is purchased. Pre-purchase inspection should be conducted in two ways, namely, observation of animals at rest and in motion.

The inspector should inspect each animal both at rest and in motion because certain abnormal signs, such as laboured breathing, are easier to detect while the animals are at rest. Other abnormalities, such as lameness, may not be detected until s/he observes the animals in motion.

When the inspector performs at-rest inspection, s/he must position her/him self at various locations. S/he should carefully observe each animal and note its general behaviour while it is at rest. S/he should also determine if any of the animals show abnormal behaviour patterns such as excessive excitability or severe depression. S/he should look at the heads, necks, sides, rumps, and legs of as many animals as s/he can see. S/he should make a note of any abnormalities.

When the inspector performs in-motion inspection of each animal, s/he should position her/him self so that s/he can easily view the animal as it is driven. S/he should direct the owner to move all the animals slowly and individually back and forth, while s/he observes each animal for abnormalities by viewing both sides, head, neck, shoulder, flank, hind quarters, legs, feet and rump and also cleanliness of the animal.

Animals should be securely identified to allow trace back of individual animals.

## **6. General signs of diseases and conditions**

Healthy animals in good condition have a shiny appearance of their hair coats. They are well muscled and the ribs and pelvic bones are not prominent. The eyes of a healthy animal are clear, bright and moist. The muzzle is slightly moist and cool. The skin of a healthy animal is smooth, supple, flexible, and free of any lumps, loose scabs, flakes or debris. Under normal circumstances, the mucous membrane around the conjunctiva and inside the mouth is pink in colour, smooth and it glistens. Healthy animals walk in balanced rhythms with the head swaying or nodding slightly in time with the animal's movement. When standing, the animal is comfortable on all four feet. In the absence of a physical exertion, the movement of breathing in and out should be silent. However, the respiration rate can also increase following exercise or an increase in environmental temperature or humidity.

The inspector should look for the following general signs which indicate that an animal may have a condition or disease that renders it to be unfit for export. In general, the signs of a condition or disease are grouped into the following broad categories, namely, body movement, body condition and signs on the body's surface.

### ***6.1. Abnormal body movement***

Signs that indicate a condition or disease in an animal can be associated with body movement and action, body position, condition, function, surfaces, discharges, and body odour. Some examples of the signs associated with body movement, action and position include,

- Lameness or limping: sometimes the cause of lameness is rather obvious sometimes not.
- Stiffness and pain-this may be caused by arthritis in one or more joints.



- Central Nervous System (CNS) signs: certain diseases can affect the brain and CNS. The animal may appear extremely nervous or restless, excessively anxious or upset, or stagger or circle. Certain poisons and toxic residues that the animal has been exposed to may cause abnormal movement, such as staggering or circling. An animal may be disoriented and run into things or butt its head against objects.
- Animals may have muscle tremors or shivering, hold their head to one side, or have any number of abnormal gaits.
- Animals may scratch excessively or rub their hide against objects. Scratching and rubbing associated with hair loss may indicate that the animal has lice or mange infestation.
- Animals may strain and assume abnormal body positions. For example, urinary, intestinal and respiratory disorders may cause straining and abnormal positions such as arching of the back, tucking in of the abdomen (stomach), and extending the neck and tail.
- An animal may have difficulty in rising or be unable to get up at all. "Downer" animals may be down for a variety of reasons ranging from an injury to severe illness or depression. All "downers" must be carefully examined by the inspector. If the animal is down and stays down, it should be rejected. If an animal is just lying down and rises and moves easily, it is acceptable.

## ***6.2. Abnormal body condition***

The inspector may also see animals with signs associated with abnormal body condition. Examples of abnormal body condition include:

- Animals that are extremely thin and weak: the inspector may see animals that are thin and weak due to chronic disease problems such as pericarditis, pneumonia, nephritis, etc. Animals that are in a very poor condition and exhibit other signs such as depression, lethargy, respiratory difficulty, etc. should be inspected carefully. Remember, though, that animals can be normally thin and thinness alone may not be an abnormal sign. For example, some animals may be very thin as a result of underfeeding. However, they may also be bright and alert, have a good appetite, and show no other abnormal signs. These animals should not be rejected from being purchased. However, they need to be fed and conditioned before they are exported as live or meat. Livestock must not be selected for live or meat export if they are in an emaciated body condition. Cattle must be from condition scores 3 to 8 (inclusive) on a scale of 1 to 9, shoats from condition scores 2 to 4 (inclusive) on a scale of 1 to 5 and camels from 2 to 4 (inclusive) on a scale of 1 to 5 (see Annex 2).
- Abnormal signs associated with body functions include respiratory distress such as labored or rapid breathing. These signs are commonly seen in animals with lung disorders such as pneumonia. Coughing and sneezing are other signs associated with pneumonia and other respiratory disorders.
- Animals may exhibit pain. Pain may be manifested by signs such as groaning, grunting, or grinding of teeth.
- Animals may have difficulty drinking and swallowing or appear to be blind. All of these signs are abnormal and may be associated with a great variety of diseases.
- Depression or disinterest may be a sign that the animal is in a dying or moribund state. A moribund animal may not respond to noises or other stimuli.
- During the steps of examination, the inspector should check the body temperature of each animal.

### ***6.3. Abnormal signs on the body's surface***

- There are a great number of abnormal signs associated with body surfaces. Injuries and fractures are included in this group. When observing animals, the inspector should be on the alert for abnormal growths, swellings, and enlargements such as hernias. Among the conditions that the inspector may see include actinomycosis, commonly called "lumpy jaw", which involves the bony structures of the head, particularly the lower jaw (mandible).
- Abnormalities of the skin and mucus membranes will be observed while performing inspection. Animals may exhibit a variety of skin lesions including a roughened, dry, or dehydrated hair coat or large patches of hair missing. The inspector should look out for superficial ulcers, sores, blisters or vesicles, particularly around the feet or around the mouth. There are several diseases that may cause these signs, including foot-and-mouth disease, which is a reportable disease.
- The colour of exposed membranes of the body, such as the gums or the eyes, may be an indication of a disease condition. The membranes may appear reddened, or very pale, or may have a yellowish colour to them.
- Animals may also show signs of abnormal body discharges or abnormal odours. Abnormal discharges can include excessive salivation, discharge from the nostrils, diarrhea, blood, and pus and spillage of tears onto the skin under the eyes. In dehydrated and diarrheic animals, a fold of skin fails to spring back to its original position after it is picked up and released.
- Along with a thorough visual examination of animals, your sense of smell is a very important aspect of performing inspection. For example, an animal may have a prolapsed rectum that has become infected and results in a strong, foul odour.

## Annex 1. Trade sensitive livestock diseases

### Rinderpest (cattle plague)

- Very severe and contagious cattle disease with a mortality of up to 100%,
- The disease causes a severe oculonasal discharge which becomes purulent,
- Severe diarrhea causing death due to dehydration,
- Multi national campaigns to eradicate Rinderpest from the globe is in the verge of success,
- Ethiopia is certified as free from Rinderpest disease.



**Foot and mouth disease (FMD)**

- Contagious acute viral infection,
- High morbidity, low mortality,
- Clinical signs, particularly salivation and lameness occurring simultaneously with vesicles should be regarded as FMD until proven otherwise,
- The samples required are fresh vesicle fluid and epithelial fragments from ruptured and un-ruptured vesicles. The sample should be forwarded to the laboratory in glycerol-saline in a thermos flask containing cold chill packs but not wet ice.



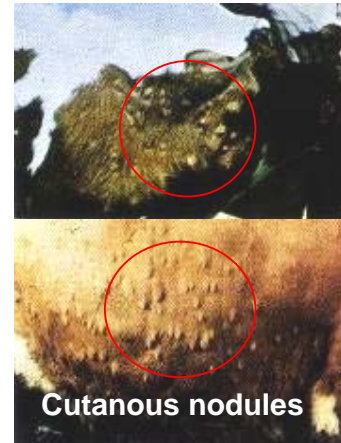
## Rift Valley fever (RVF)

- Very young lambs, calves and kids are highly susceptible to infection with RVF virus. The mortality rate is 90-100% in lambs and kids under a week old and 70% in calves. This acute form is less common in older sheep and goats which have a mortality rate of approximately 20-30%,
- Clinical signs in adult sheep and goats are not consistent but may include a rapid rise in temperature, vomiting, mucopurulent nasal discharge, unsteady gait and frequently, abortion,
- Body temperatures of 40°C to 41.6°C for 24 to 96 hours have been recorded in calves,
- Clinical signs in adult cattle include high temperature, salivation, anorexia, general weakness, fetid diarrhea, a rapid decrease in lactation, and abortion,
- Abortion may be the only marked sign in cattle,
- Mortality in adult cattle is usually less than 10%,
- The incubation period in young lambs is 12 to 24 hours. In older animals, an incubation period up to 3 or 4 days may occur,
- The disease in animals may occur in parallel with influenza like disease in humans.



### Lumpy skin disease (LSD)

- In classical form, LSD is an acute viral disease of cattle, characterized by the eruption of variably sized cutaneous nodules, edema of one or more limbs, and swelling of the superficial lymphatic glands,
- In severe cases, LSD can affect the mouth, conjunctiva and the nostrils,
- Insect transmission is considered more important than is contact transmission.



### Contagious bovine pleuropneumonia (CBPP)

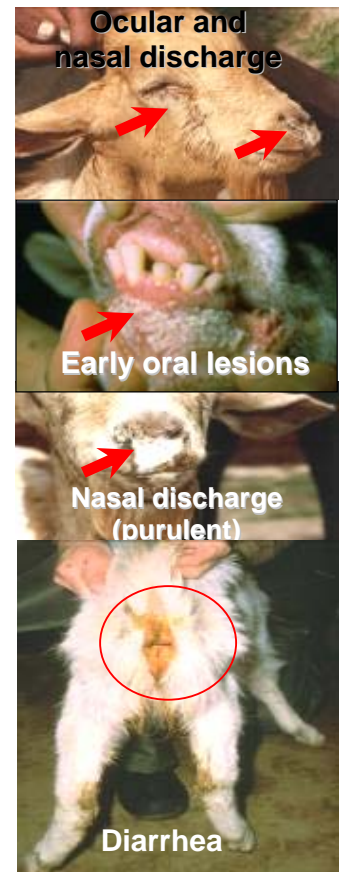
- A chronic disease of cattle common in pastoral areas,
- Signs include, moderate fever with respiratory, pulmonary and pleuretic symptoms (polypnoea, characteristic attitude of elbows turned out, arched back, head extended) and coughing,
- When the animal gets up or after exercise, breathing becomes laboured and grunting can be heard,
- At percussion, dull sounds can be noticed in the low areas of the thorax.





### **Peste des petits ruminants (PPR)**

- PPR is a severe, fast-spreading disease of mainly domestic small ruminants,
- It is an acute, contagious and frequently fatal disease of goats and sheep characterised by fever, ocular and nasal discharges, oral erosions, diarrhoea and pneumonia,
- It is characterized by sudden onset of depression, fever, discharges from the eyes and nose, sores in the mouth, disturbed breathing and cough, foul-smelling diarrhea and death.



### **Contagious caprine pleuropneumonia (CCPP)**

- CCPP is a purely respiratory illness of goats characterized by a fever of 106° F (41° C), coughing, and a distinct loss of vigor,
- Affected goats have labored breathing; later they may grunt or bleat in obvious pain. Frothy nasal discharges and stringy salivation are often seen shortly before death.



## Sheep and goat pox

- The disease is more severe in lambs and kids than in adults,
- The overall flock mortality may be 50% while the mortality in young animals may approach 100%,
- A sudden onset of fever develops, which peaks at 40–42°C, with discharges from the nose and eyes and excess salivation,
- The animal loses its appetite and is reluctant to move,
- Skin lesions erupt in 1–2 days. The lesions extend over all the skin but are most obvious where wool or hair is shortest, such as on the face, ears, axillae, groin, perineum and under the tail,
- Lesions may be seen on the mucous membranes of the mouth, nostrils and vulva,
- Acute respiratory distress occurs if lung lesions are present,
- The lesions follow the classical pox cycle of skin erythema (redness), papule (0.5–1.5 cm diameter), vesicle, pustule with exudation, encrustation and scab formation, over about two weeks,
- Matting of the fleece occurs due to the exudates from ruptured pustules.





**Contagious ecthyma (orf)**

- It is caused by a Pox virus and is highly infectious viral disease of sheep and goats characterize by the development of pustular and scabby lesions on the muzzle and lips,
- Deaths are due to the extension of lesions in the respiratory tract.

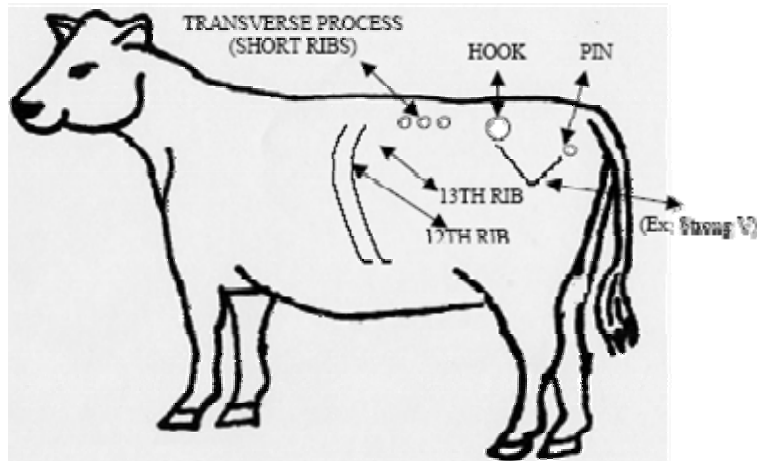
**Brucellosis**

- Clinical signs include fever, lameness, chronic cough caused by bronchitis and swelling of scrotum.



## Annex 2. Body condition scoring

### A. Cattle



**Step 1.** Look at the last two ribs (12th & 13th rib). If you see the 12th & 13th rib, it is below BCS 5. If you do not see the 12th & 13th it is BCS 5 or above.





**Step 2.** If you see the transverse process (short rib), It is BCS 3 or less.

**Step 3.** If you see a very strong V, it is BCS 1 or 2.

**Step 4.** Look between the hook and pins.

Description	Shape
<ul style="list-style-type: none"> <li>If it is BCS 6, has a shallow U.</li> </ul>	
<ul style="list-style-type: none"> <li>If BCS 5, has a strong U (shallow umbrella)</li> </ul>	
<ul style="list-style-type: none"> <li>If BCS 4, has V shape (if 12th &amp; 13th rib is showing, the fore ribs are not noticeable and the transverse process, or the Short ribs are not noticeable.)</li> </ul>	
<ul style="list-style-type: none"> <li>If BCS 3, has a strong V (where the transverse processes are slightly noticeable)</li> </ul>	
<ul style="list-style-type: none"> <li>If BCS 2, has a very strong V</li> </ul>	

**Step 5.** Determine tail head fatness by getting rear view and looking down the back.

Description	Shape
<ul style="list-style-type: none"> <li>If BCS 5 (tepee effect from rear).</li> </ul>	
<ul style="list-style-type: none"> <li>If BCS 6 (flat across the back)</li> </ul>	
<ul style="list-style-type: none"> <li>If BCS 7 (indenture across the back)</li> </ul>	
<ul style="list-style-type: none"> <li>If BCS 8 (deep indenture across the back; patches of fat across the side)</li> </ul>	
<ul style="list-style-type: none"> <li>If BCS 9 (extra fat, trouble walking)</li> </ul>	

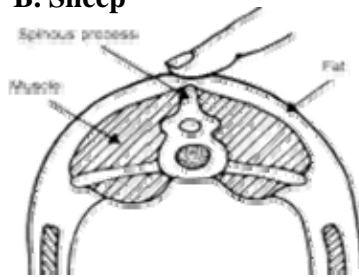
**B. Sheep**

Figure 1. Feel for the spine in the center of the sheep's back, behind its last rib and in front of its hip bone.

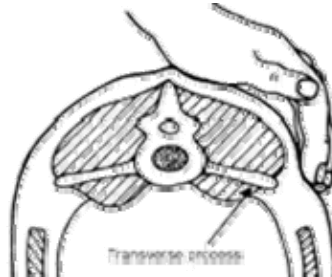


Figure 2. Feel for the tips of the transverse processes

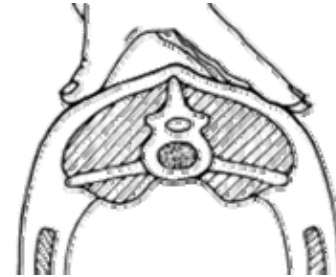


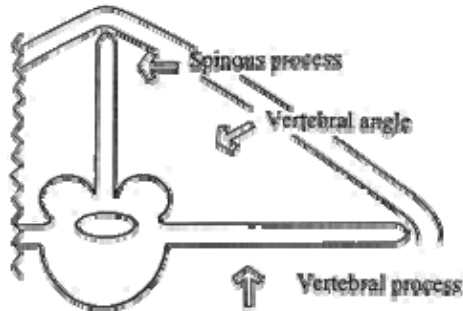
Figure 3. Feel for fullness of muscle and fat cover.

Score	Description	Illustration
<b>1. Emaciated</b>	Spinous processes are sharp and prominent. Loin eye muscle is shallow with no fat cover. Transverse processes are sharp; one can pass fingers under ends. It is possible to feel between each process.	
<b>2. Thin</b>	Spinous processes are sharp and prominent. Loin eye muscle has little fat cover but is full. Transverse processes are smooth and slightly rounded. It is possible to pass fingers under the ends of the transverse processes with a little pressure.	


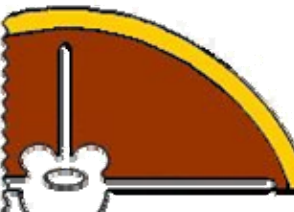

Score	Description	Illustration
<b>3. Average</b>	Spinous processes are smooth and rounded and one can feel individual processes only with pressure. Transverse processes are smooth and well covered, and firm pressure is needed to feel over the ends. Loin eye muscle is full with some fat cover.	<p>Diagram illustrating the 'Average' condition. Labels: Spines smooth rounded, Moderate fat cover, Muscles full, Transverse process smooth rounded, Firm pressure needed to feel ends.</p>
<b>4. Fat</b>	Spinous processes can be detected only with pressure as a hard line. Transverse processes cannot be felt. Loin eye muscle is full with a thick fat cover.	<p>Diagram illustrating the 'Fat' condition. Labels: Spines detected only as a line, Fat cover thick, Muscles full, Transverse process cannot be felt.</p>
<b>5. Obese</b>	Spinous processes cannot be detected. There is a depression between fat where spine would normally be felt. Transverse processes cannot be detected. Loin eye muscle is very full with a very thick fat cover.	<p>Diagram illustrating the 'Obese' condition. Labels: Spines not detectable; fat dips over spine, Fat cover dense, Muscles very full, Transverse process not detectable.</p>

## C. Goats

Parts of the Loin: Spinous processes are the bones felt on top of the back. Vertebral processes are the long bones horizontal to the spine. The vertebral angle is the triangle between the top of the spinous process, the edge of the vertebral process and the skin. The muscle inside this angle is the *longissimus*, or eye muscle, a roast or part of a T-bone steak.



Score	Description	Illustration
1. Poor	<p><b>Loin:</b> No muscle on edges of transverse process, bones very sharp, thin skin Vertebral angle has little muscle and is very concave. Spinous processes very prominent with no muscle in between.</p> <p><b>Rump:</b> Sharp outline visible; no muscle between skin and bones</p> <p><b>Pins:</b> Very sharp, no padding</p>	A cross-section of a loin showing a very sharp, narrow vertebral angle with minimal muscle filling it. The spinous process is prominent and sharp.
2. Thin	<p><b>Loin:</b> Muscle extends to the edges of transverse process; spacing can be felt between the vertebral processes, thin skin.</p> <p><b>Rump:</b> Outline slightly contoured; light padding but bones still somewhat prominent and very easy to feel.</p> <p><b>Pins:</b> Sharp, little padding</p>	A cross-section of a loin showing a wider vertebral angle with more muscle filling it compared to the 'Poor' section. The bones are still somewhat prominent.






Score	Description	Illustration
<b>3. Good</b>	<p><b>Loin:</b> Muscle and subcutaneous fat covers edges of vertebral process; individual bones are somewhat distinct.</p> <p><b>Rump:</b> Smooth, without signs of fat; pelvic bones and spine are distinct</p> <p><b>Pins:</b> Slight pressure needed to feel the pin bones</p>	
<b>4. Fat</b>	<p><b>Loin:</b> Vertebral processes indistinct and firm pressure needed to feel them. Vertebral angle rounded but not yet bulging over spinous processes. Spinous process spacing difficult to detect; spine felt as a hard line.</p> <p><b>Rump:</b> Heavily padded with fat; bones can only be felt with firm pressure.</p> <p><b>Pins:</b> Heavily padded with fat, and firm pressure needed to feel them</p>	
<b>5. Obese</b>	<p><b>Loin:</b> Edge of vertebral processes and spacing between too fat to feel bones. Vertebral angle bulges over the level of the spinous processes. Spine lies in the center of a groove of fat.</p> <p><b>Rump:</b> Buried in fat, bones very indistinct.</p> <p><b>Pins:</b> Buried in fat, hard to locate.</p>	

**NB:** Scores 1-3 represent muscle growth/expansion. Muscle does not grow after score 3. Scores 4 and 5 represent fat accumulation.

## D. Camel

The condition of a camel is estimated by looking at the store of body fat i.e., the hump. This reflects the internal fat reserves and provides a good correlation with total body fat. The camel deposits excess energy as fat into the hump sac and into some internal linings. This contrasts to the energy reserves of other species where fat is deposited into the subcutaneous tissues, internal linings and within the muscles.

During processing at the abattoir, the internal body fat and hump fat is removed. Excessive fat limits the exercise tolerance of the camel and makes long distance transport stressful. Camels destined for the abattoir should be hump score 3 or 4. Range is 1-5 based on the amount of fat in the hump.

<p><b>Score 1:</b> Little or no fat in the hump sac, hump hairy and may be leaning to one side.</p>	
<p><b>Score 2:</b> Hump with moderate development rising 5% higher than chest depth, but may also be leaning to one side.</p>	
<p><b>Score 3:</b> Hump with good development and rising to 10% higher than chest depth. Hump is still sculptured inwards on both sides and still fits over the chest and abdominal area.</p>	
<p><b>Score 4:</b> Hump fully developed and rising to 15% higher than chest depth. Hump rounded outwards on both sides and runs from the shoulder to the rump.</p>	
<p><b>Score 5:</b> Hump over-extended and rising more than 15% higher than chest or the hump is so full that it is rounded on the sides like a semi circle.</p>	



### Annex 3. Sample animal movement certificate

#### Animal movement certificate (For animals moving to Phase I SPS Certification facilities)

Certificate No.....

Region..... District..... Inspection site.....

#### I. Quantity of animals

Species of animal	Sheep	Goat	Cattle	Camel
Number of animals				
Identification tag range				

#### II. Place of origin of animals.....

Name/address/telephone # of owner.....

.....

#### III. Destination of animals (Phase I SPS Certification facilities)

Name/address/telephone # of owner.....

.....

Means of transportation.....

#### IV. Health information:

The undersigned Pre-Purchase Inspector certifies that:

- a) The animals indicated above and examined by me this day present no clinical signs of disease,
- b) There are no reports of Rift Valley fever nor foot and mouth disease in the reported place of origin of animals during the last 6 and 3 months, respectively,
- c) To the best of my knowledge, the animals have not been in contact with other animals suffering from foot and mouth disease, rinderpest, peste des petits ruminants, contagious bovine or caprine pleuropneumonia, lumpy skin disease, sheep and goat pox or camel pox.

The animals are authorized to proceed to the above destination.

Issued at..... Date.....

Official stamp

Name/address of Pre-Purchase Inspector

.....

.....

Signature.....

Original (white) – to accompany livestock until the nearest Phase I SPS Certification facility

Duplicate (yellow) - to remain in book

## References

**EXCELEX, 2004.** Proceeding of the Animal Health Inspectors Training Workshops conducted in Jijiga and Awash. Inspecting live animals for export. Reference for veterinary inspectors, FAOR, Addis Ababa, Ethiopia.

**Faculty of Agriculture and Environmental Sciences, 2008.** Body Condition Score. Macdonald Campus of McGill University. Department of Animal Science. Dairy Cattle Production 342-450A.

**Schwartz, H.J. and Dioli, M. (1992):** The one humped camel in East Africa, A pictorial guide to disease, health care and management, ISSN 3-8236-1218-2.