

Grading live animal for meat trade - Specification

Part 3: Sheep

PUBLIC REVIEW DRAFT, NOVEMBER 2017

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TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Ministry of Agriculture, Livestock and Fisheries- Directorate of livestock production
Ministry of Agriculture, Livestock and Fisheries - Directorate of veterinary services
Kenya Camel Association (KCA)
University of Nairobi (UON)
Kenya Industrial Research and Development Institute (KIRDI)
Kenya Agricultural and Livestock Research Organization (KARLO)
International Livestock Research Institute (ILRI)
Kenya Livestock Marketing Council (KLMC)....Proposed
Farmers Choice (K) Ltd
Consumer Information Network
Ministry of Health- food safety unit
Ministry of Industry, Trade and Cooperatives
National Public Health Laboratories
Government Chemist's Department
Kenchic (K) Ltd.
Kenya Meat Commission
Kenya Nut limited – Morendat Farm
Choice Meats limited
Kenya Bureau of Standards (KEBS)

REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya standards shall be regularly reviewed. Suggestions for improvement to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

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KENYA STANDARD

Grading live animal for meat trade - Specification

Part 3: Sheep

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Foreword

This Kenya Standard was prepared by the Meat and Meat Products Technical Committee under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

The preparation of the first edition of the standard was found necessary so as to align the microbiological requirements, heavy metal limits and Minimum Residue Levels for pesticides and veterinary drugs residue with the current advances in science.

During the preparation of this standard, reference was made to the following documents:

Determination of living animals for slaughter: KS 01-837: part 1 and 2

Kenya Meat Commission Act Cap 363 of the laws of Kenya

ILRI discussion paper No. 22, Improvement and Diversification of Somali Livestock Trade and Marketing; Towards a formalized grading system for export quality livestock in Somalia

Stuth, J. et al., (2006). "Livestock Market Information System for East Africa: The Case of LINKS/GL-CRSP." In J.G McPeak and P.D Little , eds Pastoral livestock marketing in Eastern Africa: Research and policy challenge

ES 2789:2012-Grading live animals and carcass

Australian Standard for the export of livestock (version 2.3) 2011

PNS/BAFPS 87:2010: Live grading for slaughter cattle

Kadim, I. T., Mahgoub, O., and Mbagi, M. (2014). Potential of camel meat as a non-traditional high quality source of protein for human consumption. *Animal Frontiers* 4:13-17. doi:10.2527/af.2014-0028

Cap 360 of Animal welfare Act

The assistance derived from the above sources is highly acknowledged.

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1. SCOPE

This Kenya Standard specifies requirements for grading of sheep for meat trade

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- I. KS 01-837: Parts 2 1990 Definitions for living animals for slaughter*
- II. KS 317: Part 1, 2, 4 Carcasses and meat cuts*
- III. Code of practice for animal welfare during transportation.*

3. DEFINITIONS

For the purposes of this standard, the following definitions shall apply:

3.1 Grade –

the defined parameters that segregate live animals for meat trade into homogenous groups applied by market participants based on weight, age, sex, body condition and body conformation.

3.2 Sex –

refers to whether an animal is male or female.

3.3 Body condition –

overall body state of an animal assessed through visual observation taking into account fat and muscle deposition as it occurs in various places on the animal's body

3.4 Body condition score-

Is the score assigned through visual appraisal of specific body parts. The extent to which specific skeletal body parts {including; hips, hooks and pins, rump, shoulders, back (spinous processes of the thoracic vertebrae), ribs} are either hidden or smoothened by flesh or fat. The animals are thus categorized as excellent; good; fair and poor;

3.5 Body conformation

is the symmetry, size and shape of the various body regions of an animal relative to each other or the general appearance of the animal according to what is considered a desirable appearance. Features of an animal that comprise the 'desirable appearance' include

- a) Big frame or skeletal size of the animal—under this feature height and length as crucial elements to consider. Top quality animals are those that shall be tall with large body frame;
- b) Good muscling— under this feature, thick and long muscling is preferred;
- c) Good appearance of feet and legs—important features to consider here shall include a long and straight (level) rump; long and broad loin; long and straight back; and well set and straight legs. Cattle exhibiting a large heart girth in relation to overall body size (height and length of body) will attain a higher score.

3.6 Conformation score

- This is a qualitative categorization of animal features based on body frame, animal height and defects. They shall be described as excellent, good or fair.

3.7 Castrated male:

Male animals whose testicles have been rendered dysfunctional through an approved procedure.

3.8 Live weight:

the weight of an animal before slaughter determined through an appropriate and acceptable method.

3.9 semitendinosus is a long superficial muscle in the back of the thigh. Thus can replace with "**back muscle of the thigh**".

3.10 quadriceps are all four powerful extensors of the knee joint. They are crucial in walking, running, jumping and squatting. Because rectus femoris attaches to the ilium, it is also a flexor of the hip. Thus can replace with "**front muscles of the thigh**".

3.11 apophysis; plural noun: **apophyses**: is a natural protuberance from a bone. Thus can replace with "**natural bone protuberance**".

4.0 Grading specifications for sheep

The grading of sheep shall be done in accordance to age (dentition or records), sex (male castrated, male un-castrated, female), weight and body condition

4.1.Age: categories will be based on records and/or dentition as outlined as per KS 01-837: Part 2 1990.

Sex categories shall be based on; male castrated, male un-castrated and female

4.2 Weight: The live weight will be determined by any appropriate method including weighing scale and weight band. The minimum weight of 25 kgs will apply for Grade 1 and 2.

4.3 The body condition of sheep shall be determined according to Table 1.

Table 1: Descriptions for body conditions for Sheep

Body Score	Hind leg	Loin	Shoulder	Ribs	Brisket	Tail
Excellent	Muscle very well developed i.e., semi tendinosus, biceps femoris, quadriceps	Wide and very well developed loin up to the shoulder region, spinous processes are hidden or smoothened by flesh and/or fat	Shoulder muscles very well developed. Shoulder blade not visible	Ribs not visible	Brisket well developed, covered with flesh and/or fat	well developed fat deposit
Good	Moderately developed	Moderately developed loin, spinous processes not seen but easily felt.	Shoulder muscles moderately developed, shoulder blades slightly visible	Ribs visible, moderate flesh cover	Brisket moderately developed	moderately developed fat deposit
poor	Pin bone prominent	Poorly developed loin, spinous processes visible	Poor developed shoulder muscles, shoulder blades prominent	Ribs visible	Brisket poor developed	poor developed tail head slightly raised, limited fat deposition.

4.4 Body Conformation Score(CS) shall encompass the symmetry, size and shape of the various body regions of the goat relative to each other or the general appearance of the animal as outlined in Table 2:

Table 2: Body conformation classifications and descriptions for sheep

Scores	Description
Excellent	sheep of good height (tall), with large frame and long and straight rump, loin and back, large heart girth and straight legs.
Good	sheep of medium height with medium frame, shorter but straight rump, loin and back, medium heart girth and straight legs
Fair	sheep with defects including a short and small frame, a small heart-girth in relation to the overall body size; lordosis or kyphosis, or feet and legs that are post-legged, buck-kneed, splay-footed or sickle-hocked.


4.5 Sheep grades

The interaction of the characteristics identified above (sex, age, body condition) shall be categorized into three grades:

Table 3: Grade categories for Sheep

Grade	Sex category	Age (Months)	Live weight (kg)	Body condition	Body conformation
1.	Male(Castrated and un castrated)	≥6	≥25	Excellent	Excellent
	Female	6-18	≥25	Excellent	Excellent
2.	Male and female	≥6	≥25	Good	Good
3.	Male and female	≥6	No limit	Poor	Fair

Table 4 Sample Pictorial presentation of grades

Grade	Sex category	Pictorial Presentation
1	Male(Castrated and un castrated)	
	Female	

2	Male and female	
3	Male and female	

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