



DRAFT EAST AFRICAN STANDARD

Cattle feedlot operations — Specification

PUBLIC REVIEW DRAFT MAY 2022

EAST AFRICAN COMMUNITY

PUBLIC REVIEW DRAFT MAY 2022

Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in East Africa. It is envisaged that through harmonized standardization, trade barriers which are encountered when goods and services are exchanged within the Community will be removed.

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

Article 15(1) of the EAC SQMT Act, 2006 provides that “Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose”.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

© East African Community 2021 — All rights reserved*

East African Community

P O Box 1096

Arusha

Tanzania

Tel: 255 27 2504253/8

Fax: 255-27-2504481/2504255

E-Mail: eac@eachq.org

Web: www.each.int

* © 2021 EAC — All rights of exploitation in any form and by any means reserved worldwide for EAC Partner States' NSBs.

Cattle feedlot operations — Specification

1 Scope

This Draft East African Standard specifies requirements for cattle feedlot. It includes space requirement, feeding and watering facilities.

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.

3 Terms and definitions

For the purposes of this standard, the following terms and definitions shall apply.

3.1 feedlot

land area with its physical facilities used for cattle fattening under controlled conditions

4 Location

4.1 The location shall conform to the land use plan of the area.

4.2 The site shall be accessible to service roads, water and power supply.

4.3 The site shall be on an open ground that allows free air circulation.

4.4 The site shall be well drained.

4.5 The building shall be constructed in an east-west orientation and the structure for marketable animals shall be located near the service road.

The feedlot pen shall be rectangular. The area for the shed shall have its long sides on a North-South orientation and the holding facility for marketable animals shall be located near the service road

4.6 The site shall be located where the prevailing winds will not carry odors to the farmhouse and the residential settlement.

5 Space requirements

The recommended minimum floor space requirement for cattle is shown in Table 1.

Table 1 – Floor space requirement for cattle

Animal category (according to weight)	Minimum lot/loafing area per animal m²	Maximum shed area m²	Maximum feeder space cm
Less than 200 kg,	10	2	50
Between 200 – 400 kg	15	2.5	70
Greater than 400 Kg,	25	3	80

7 Structural requirement

7.1 Floor

7.1.1 Concrete floors shall be skid resistant. The minimum floor thickness shall be 76 mm with 2 % – 4 % slope towards the drainage.

7.1.2 If the floor is earth lot, it shall have a slope of 4 % – 7 %.

7.2 Roof

7.2.1 Adequate roofing shall be provided over the feeder space to protect against rain and excessive heat from the sun.

7.2.2 The roof slope shall not be less than 25 %. If roofing is made of indigenous materials, the minimum roof slope shall be 58 %.

7.2.3 The minimum height of the top of the roof beam shall be 2.2 m from the floor.

7.3 Pen wall

7.3.1 Pen walling and post shall be preferably made of G.I. pipes schedule 40. The diameter of vertical and horizontal railing member of the pen wall shall be at least 50 mm and 75 mm for the post. D -55. Other building and fencing materials that meet desired strength for cattle containment may be used to construct the holding pen. Poles embedded into the ground should be termite resistant or treated against the same.

7.3.2 The maximum center to center spacing between vertical railing members shall be 2 m and for horizontal railing member, spacing shall be 400 mm.

7.3.3 The maximum center to center spacing between post shall be 2 m and shall be embedded in a concrete pedestal with a minimum depth of 400 mm.

7.3.4 Each post shall be provided with 150 mm concrete protectors.

7.3.5 The pen shall be 1.5 m – 1.6 m high.

7.3.6 Fittings and internal surfaces of the pens shall be free from sharp edges or projections to avoid injury to the animals.

7.3.7 Paints that may be toxic to animals shall not be used on surfaces accessible to them.

8 Functional requirements

8.1 Pen size Pen width should be adequate to provide the required trough length and standing space for the number and size of cattle being fed in the pen.

8.2 Pen Facilities

8.2.1 Feeding trough

8.2.1.1 Feeding trough shall be placed on a higher gradient of the feeding area.

8.2.1.2 Inside surfaces of the feeding trough should be smooth and it should have rounded corners to facilitate cleaning.

8.2.1.3 The dimension of the feed trough should be 400 mm depth, 450 mm – 700 mm bottom width and 700 mm – 900 mm top width

8.2.1.4 The inside floor bed of the trough should be 150 mm above the level of the apron to facilitate natural feeding stance.

8.2.1.5 Feeding trough shall be provided with horizontal rail to restrain the animals from stepping into the trough. The height from the pen floor should be 1.1 m - 1.2 m.

8.2.1.6 The pen side of the feeding troughs shall be provided with concrete or gravel packing aprons to provide strong footing floor while the animals are feeding, and improve sanitation, if the pen has an earth floor. The minimum length of the concrete aprons shall be 2 m.

8.2.2 Watering facility

8.2.2.1 Water troughs should be made of concrete or galvanized metal tanks. Float activated valve should be provided to regulate the water level.

8.2.2.2 The water troughs shall be provided with concrete or gravel packing aprons to provide strong footing and improve sanitation and keep the water clean, if the pen has an earth floor. The minimum length of concrete aprons shall be 2 m.

The water trough should have a stop-cork drainage pipe at the bottom for purposes of cleaning it out. One meter length of water trough space should be provided for every thirty cattle

8.2.2.3 The open water tank of 250mm shall be provided for 8-10 head.

8.2.2.4 If automatic waterer is used, one automatic waterer should be provided for 15 animals and it should be placed at a height of 1m.

8.2.3 Lighting

8.2.3.1 The housing shall be provided with lighting intensity of 200 lux

8.2.3.2 All electrical installations shall be inaccessible to all animals

8.3 Loading chute

8.3.1 The Loading chute should be provided, and should be oriented so as to minimize bright sunlight. The width shall be 700 mm – 800 mm.

8.3.2 A catwalk on one side of the chute should be provided to allow the handler to direct the cattle to the desired loading/offloading direction

8.3.3 Loading chute should be provided with telescoping side panels and a self-aligning dock bumper.

8.3.4 The chute should be provided with loading ramp with a level-loading surface of about 1.5 m wide to walk on or off the truck. The height of loading ramp for different types of vehicle is shown in Table 2.

8.4 Loading ramp

8.4.1 Loading ramp floor shall have cross battens every 200 mm to prevent slipping.

8.4.2 Ramp should have a slope of 30%.

Table 2 – Ramp height for different vehicles

S/N	Vehicle	Height m
i	Gooseneck trailer	0.4
ii	Pick-up van	0.7
iii	Van-type truck (7 ton - 20 ton truck)	1.0
iv	Tractor trailer	1.2
v	Double deck	2.5

8.4.3 The slope of the permanently installed ramp shall not exceed 36%. For portable or adjustable loading chute, slope shall not exceed 47%.

8.4.4 If stair-stepped concrete ramps are provided, each step should have 90 mm – 100 mm rise and 300 mm tread width. The step surface shall be roughened.

8.5 Passage (if necessary)

The central alley or the driveway should be elevated and shall have a minimum width of 3 m if vehicles are allowed to enter within the building and it shall have a solid base.

8.6 Weighing scale

Platform weighing scale should be provided.

8.7 Drainage

The gutter shall have a minimum width of 460 mm and a minimum depth of 200 mm. The roof above should have a water collection gutter and the pen should slope away from the feed trough for further rain water drainage.

8.8 Feed storage

Storage sheds for all feedstuffs; hay, grain, mineral salt shall be provided to keep feed safe from rain, direct sunshine, moisture and rodents, and be inaccessible to animals. Feedstuff shall be placed on top of pallets, protecting them from direct contact with the floor.

9 Waste disposal

Feedlot waste disposal should comply with existing regulations on waste management of the respective Partner State.

PUBLIC REVIEW DRAFT MAY 2022