



FEEDLOT DESIGN AND CONSTRUCTION

36. Hospital and recovery pens

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Recovery pens are separated to segregate cattle by type, severity of illness or treatment, or to keep cattle from a similar area of the feedlot together.

Introduction

Early detection and treatment of ill or injured cattle will optimise welfare and productivity and minimise mortalities. Returning treated animals straight back to production pens may increase the risk of cross infection. Larger feedlots generally provide a hospital, treatment pens, convalescence (or recovery) pens and/or salvage pens to treat and hold sick or injured cattle before they are returned to production pens or exit from the feedlot.

This section explains the design principles of hospitals, sick pens, convalescence pens and salvage pens.

Design objectives

Hospital and recovery pens should be designed and constructed to

- Provide facilities for the effective diagnosis and treatment of sick or injured cattle.
- Provide facilities that allow for effective ongoing monitoring of sick or injured cattle.
- Provide accommodation that promotes the rapid recovery of sick or injured cattle.
- Minimise the risk of transferring disease to other cattle.
- Provide a safe working environment for people.



A fully-covered hospital. Roof cladding allows light with less sharp shadows.

Mandatory requirements

Compliance with

- Australian Animal Standards and Guidelines for cattle (DAFF, 2013).
- National Guidelines for Beef Cattle Feedlots in Australia (MLA, 2012a).
- National Beef Cattle Feedlot Environmental Code of Practice (MLA, 2012b).
- Storage and Handling of Agricultural and Veterinary Chemicals (AS 2507-1998).
- NFAS standards (AUS-MEAT, 2011).

Design choices

The type of hospital and associated treatment, convalescence and salvage pens required depends on the feedlot size, layout, risk profile and preferred animal health management method.

A small feedlot may be able to use the induction yards as a hospital treatment facility. But larger feedlots need to provide purpose built hospitals and recovery pens.

Feedlots with short-fed stock, high turnovers or that receive cattle purchased from saleyards have higher risk than longer fed cattle feeding operations or feedlots with predominantly Bos Indicus cattle types. The higher the risk, the more space is needed for treatment, convalescence and recovery.

Sick cattle may be treated and quickly returned to their production pen (up-and-back system) or held for two days before being returned



An animal in the crush ready to receive treatment.

(two-day system). In a bio-containment system, animals that have been treated more than once are sent to new production pens.

The up-and-back and containment systems are used regularly in feedlots. The bio-containment system is more common in smaller operations and feedlots in which all the cattle are owned by a single entity.

Ideally, hospitals with associated treatment, convalescence, recovery and salvage pens should be located centrally to the production pens because sick or injured cattle should not be walked long distances or uphill. For this reason, multiple hospitals may be needed at large feedlots. Hospitals, treatment pens, convalescence pens and recovery pens may be physically separated from production pens either by double fencing or solid fencing to minimise the risk of disease transfer to healthy stock.

As there will be some mortalities, hospitals are usually situated towards the down slope end of the feedlot complex to allow for ready transfer of mortalities to the post-mortem, disposal or composting area. Vehicles must be able to reach hospital pens.

Hospital facilities should include the following

- A shaded treatment area with a crush that minimises injury during restraint.
- Rubber matting on the floor of the entire hospital area.
- A foot bath.
- Weigh cells fitted to the crush to determine the correct dosage rate of medicines.
- Locked medicine storage, including fridge (for smaller feedlots, this could be located elsewhere on-farm with medicines transported to the hospital as needed).
- Facilities to store, clean and sanitise instruments (including hot water).
- Facilities for disposal of sharps, such as needles and blades.
- Facilities for disposal of other packaging.
- An area to record and store details of treatments.
- A post-mortem area.
- Data connection to the processing facility/office for database management.

A suggested ratio is one hospital facility (with multiple treatment, convalescence and recovery pens) per 6000 head of cattle and occupying 2–5% of total feedlot capacity. For a large feedlot (e.g. 20,000 SCU or greater), a minimum of five large treatment pens, three convalescence and recovery pens and at least one salvage pen per hospital is recommended.

In addition to the general pen design principles, provision should be made for:

- About 50% more pen space for sick cattle in the treatment pens (e.g. 20–25m²/SCU). Over crowding is a major reason for failure in feedlot hospital pen systems.
- Shallow, wide treatment pens so that sick cattle do not have to walk far to access feed and water. Convalescence and recovery pens can have a similar size and stocking density to production pens. Salvage pens can be the same size as treatment pens. Providing multiple pens also allows cattle on similar treatments



Rubber soft-flooring in handling areas.



Veterinary medicines require appropriate storage facilities.



Sink with running water for good hygiene for the handler and the animal being treated. Note disposal containers for used needles and blades.



Soft bedding in treatment pens for cattle with foot or leg problems.



Bins for disposal of waste items.

to be grouped together. Separate pens for animals with foot problems should be bedded with wood chips or straw, but this should be replaced regularly to avoid a Salmonella outbreak.

- A clean feedlot pad – the pens should be well drained and frequently cleaned. The pad should be well maintained and kept as dry as possible. The addition of soft bedding material is recommended.
- Protection from adverse environmental conditions such as mud, dust and extreme heat. North-south shade should traverse the pen during the day.
- Additional feed bunk space at 45–60cm per head. This is to encourage consumption and reduce competition between sick or injured cattle. Hay racks may be needed in the treatment and salvage pens - with good access for delivery of hay bales.
- Good access to palatable, and preferably cool, water - but with only one trough per pen to minimise cross-infection between pens. Water released from the trough during cleaning should be directed away from the pen area, possible through a sewer system.

Quick tips

- The hospital pen/s should have rubber matting or other soft flooring over the base, shade, a good crush, storage for medicine and instruments and an area to record and store details of treatments.
- The hospital area should have adequate pens for convalescence and recovery, with the number depending on the size of the feedlot and background of cattle being fed.
- The treatment pens should have 50% more pen area than in production pens, shade and 45–60cm of bunk space per head.
- Troughs should not be shared between pens and should contain clean cool water.
- Treatment pens for cattle with foot problems or leg/hip injuries should have clean, soft bedding.

Further reading

AUS-MEAT, 2014, NFAS Rules & Standards (April 2014), AUS-MEAT Limited, Brisbane, Qld.

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