

Beef Production: The Basics

Cattle Handling Facilities

Cattle are large, powerful animals and, although they can become very tame when handled frequently, people are regularly injured and even killed by cattle, especially bulls. The problem is exacerbated when horns are not removed. Cattle handling facilities circumvent many problems and, once erected, provide ease of management for many years if good quality material is used. Ultimately, handling facilities are erected to:

- Minimize stress to animals. With well-planned facilities, cattle can be processed very quickly and returned to their grazing.
- Prevent injury to people and to the animals. Injuries to people are stressful and injuries to livestock cause financial losses.

A number of factors related to animal behaviour should be considered when designing a handling facility and the services of an animal scientist can be very useful in this regard, although agricultural engineers usually design handling facilities. Some factors worthy of consideration include:

- The first step is to decide where to place the handling facility. Animals should not have to walk too far to reach the facility and placing a handling facility within reach of the farmer's house circumvents the need to travel far to fetch items such as vaccines that were forgotten at home.
- The most important part of a handling facility is the cattle crush or race and everything should be planned around the crush.

Start with the crush, ensuring that it is sited on a slope in such a way that cattle walk uphill in the crush. Ideally the rise should not be steep (a slope of 1:70 is ideal) and the crush should be angled across the slope. Rain will then not run down length of the crush and cause erosion. Drainage is across the width of the crush, washing the dung inside the crush away from the side where the people are standing.

Most people work with cattle from the right hand side *i.e.* they use their left hands to do rectal examinations.

The width of a crush varies with the size of the cattle that will enter the crush, from 680 mm for smaller animals up to 750 mm for very large cattle.

A height of 1 500 mm is acceptable for most breeds of cattle, whereas, with larger, wilder cattle, a height of 1 900 mm should suffice. The dimensions and spacing of horizontals are illustrated in Figure 13.

A crush can vary in length, but should not be shorter than two cow lengths because cattle have a herding instinct, and should an animal refuse to enter a crush, placing a tame animal in front often entices other animals to follow. Where a crush is more than 14 animals long, efficiency is lost because people working with the cattle need to walk too far from the pre-holding area to the front of the crush and, unless spacers are provided, cattle in a long crush tend to move back when handled and crush animals in the rear. A crush length of 1 700 mm per medium sized cow is usually satisfactory. Vertical posts should be placed at one animal intervals.

Many farmers like to provide for a smaller crush where calves can be handled. However, a full-sized crush can be used for calf management by adding barriers lower down. Stringing a cable between the ground and lowest horizontal pole and between the first and second horizontals prevents calves from escaping. The handler then enters the crush and works with the calves in the crush, with the neck clamp closed and the rear of the crush closed with poles. With larger calves, crush width can be reduced by hanging motor-car tyres or poles inside the crush.

Although a neck clamp is useful, a crush with a gate in front can be used for most operations by using some means to immobilise animals, such as tying their heads to the side of a crush using a leather thong, which will not cut into their skins. Loose poles placed across the crush in front of vertical posts is usually all that is needed to prevent animals exiting at the rear.

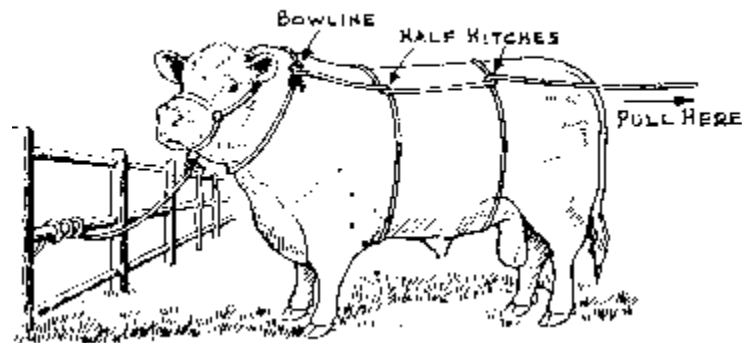
- Holding pens where animals are kept prior to handling must comprise an area of at least 2.3 m² per mature cow. Where animals must remain close to the handling facility for a day or more, they should not be kept in the holding pens. Small paddocks with water must be provided for this purpose in close proximity to the handling facility.
- From the holding yards, animals are moved to a forcing yard, where provision is made for only 1.67 m² per mature cow, which makes it easier to force the animals to enter the crush. The exit from the forcing yard into the crush must be tapered to prevent animals milling around the entrance to the crush and to prevent injury to animals.

Many plans for handling facilities are available. The above comprises a summary of basic principles to assist in choosing an acceptable facility. The size of the facility must be decided by the number of cattle a farmer has and what size herds will be processed at a time. Costs could play a role, but, considering that a handling facility which is well built can last 15 years or more, additional expenses for a good facility are usually warranted. Figure 12 illustrates a very small handling facility for a farmer owning 5 to 10 cows, which can also be used on larger farms in remote paddocks for the treatment of the odd sick animal.

Dipping facilities

Planning a dipping facility is best done by an engineer. It is often said that a plunge dip is better than a spray race. Research does not support this belief. It has been shown that, where the management of a spray-race is effective, with modern dips, the results achieved in spray races are as good as those achieved in plunge dips in terms of tick control. Dipping managers must:

- Ensure that the right type of dip is used at the right concentration. With some dips, different compounds are used in a spray race to that used in a plunge dip.
- Replace the water in dips from time to time. The effectiveness of many dips is inhibited by dirty water.
- With spray races, nozzles must be checked regularly for clogging. Where nozzles are clogged, pipes rusted or engines in poor repair, dipping in a spray race becomes less effective.



Using a thick rope to drop an animal

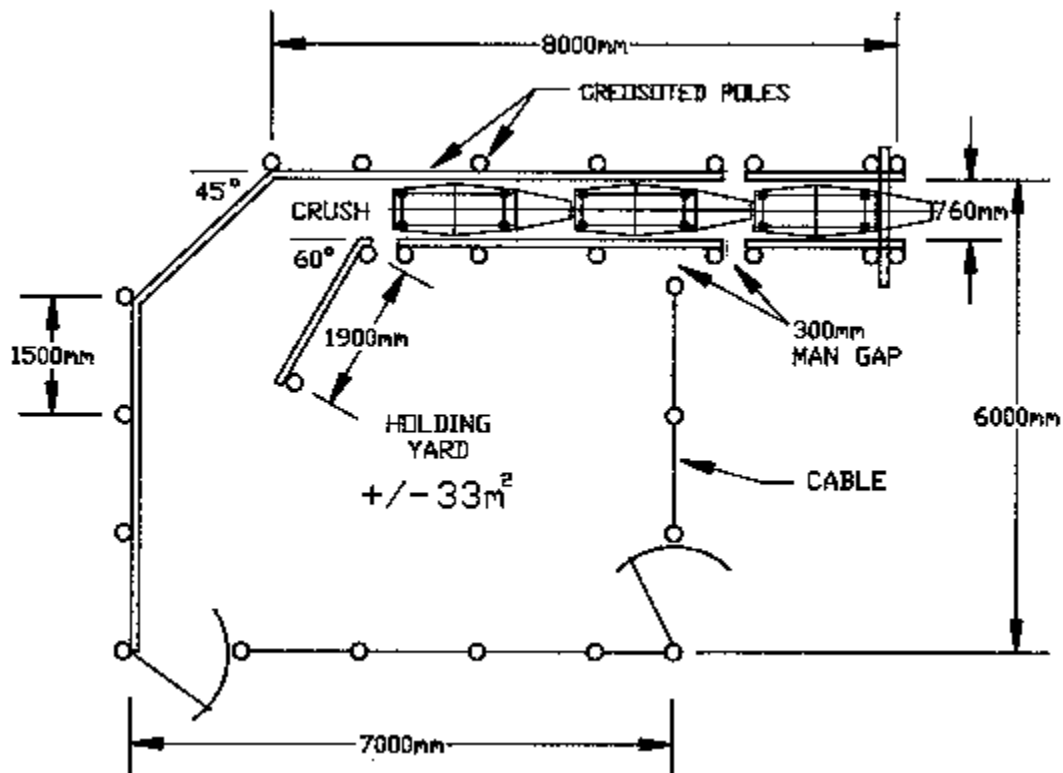


Figure 12. Diagram of a small cattle handling facility