

noteworthy

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Constructing cattle yards for small landholders

Poorly-designed cattleyards will not only result in more handling hours, but also increase the risk of injury to both the handler and stock.

Right from the point of constructing your new cattle yards, you are making decisions that will significantly impact the experience you and your cattle will have each time they enter this intensive work area.

Well designed yards, based on an understanding of animal behaviour, will increase productivity, improve meat quality and be more efficient with your time and money.

The impact stock handling has on the eventual profitability of cattle in the marketplace is vastly understated.

A producer's key goal is to make a living from owning and working with stock.

The calmer, more contented and healthier cattle are, the better for everyone concerned.

Ill functioning yards or those in bad repair can also result in bruising and hide damage, which can be costly to a producers' bottom-line.

Low stress livestock handling can contribute to the well-being of cattle by allowing the handler to work them in all situations in a safe, calm, efficient manner —

effectively minimising the amount of stress the cattle are exposed to.

The advantages of using low stress stock handling include:

- increased productivity and profit
- improved meat quality
- more effective use of your time and money
- safer for the handler
- reduced cost of production
- quiet, stress free stock and people
- learn to work through all situations confidently.

The quality of meat can be affected by several factors, including

transport and pre-slaughter bruising.

This can cause meat to darken and harden at the expense of softer flesh and the carcass can be downgraded.

Dark meat is caused by high pH levels because of the failure of glycogen cells in muscle to produce enough lactic acid to decrease pH levels.

The lack of glycogen in muscle is the result of poor nutrition and stress in animals, which occurs during handling and pre-slaughter.

Effective cattle handling facilities are a key starting point for low stress stock handling.



Definition of terms

- Holding yard - pen where cattle are temporarily confined.
- Forcing yard - pen used to force the cattle into the race or up a loading ramp.
- The race - narrow single file walkway for cattle to travel through when being moved from one location to another.
- The catwalk - raceway on the outside of forcing yards, races and loading ramps for people to work alongside the cattle.
- Cattle crush - strongly built stall or cage for holding cattle safely while they are examined, marked or given veterinary treatment.

A circular cattle handling facility for 10–50 head. There are presently a lot of cattle yard designs based on a circular forcing yard. This is a proven layout that has good workability and promotes flow of cattle. Consider the following points when deciding on the location of your yards:

- Arrange access to laneways and/or as many paddock as possible.
- Keep yards away from living areas to minimise noise, flies, dust and smell.
- Allow for all-weather access for trucks.
- Water and power should be laid on, or close at hand.
- Good drainage is essential. Shade trees make working cattle more pleasant in summer.

Design safety checklist – hazard audit

- Are receiving yards large enough for the herd size to be handled?



- Are all gates sound, swung clear of the ground and capable of being secured in both open and closed positions?
- Are gate latches mounted at an appropriate height, of a design that doesn't create pinch or crush points and are they well maintained?
- Are there any projections, such as nails or bolts that may injure humans or animals?
- Are there any dug-out or boggy areas that might pose a trip, slip or fall hazard?
- Do the yards have blind spots or areas where stock flow is restricted or cattle baulk?
- Do the drafting and forcing yards have a safe area or effective escape route for yard workers?
- Is the yard an appropriate size for the classes of stock being handled?
- Does the rail spacing allow safe access to animals for tasks to be undertaken such as vaccinating?
- Are the race and gate caps secure and at a safe working height so as not to interfere with handling operations?
- Are all sliding gates sound, easily operated and capable of being secured so that they will not open if kicked or struck?
- Do sliding gates have handles and guards to prevent the operators hand entering any gaps between the slide gates and support posts, which could be nip or crush points?
- Is there safe access to the work area to remove animals that might go down or become jammed?
- Does the ramp have an apron of 1-1.5m at the end to allow the opening and closing of truck gates?
- Is there a sliding gate at the top of the ramp that can be accessed safely to secure animals on the truck once it is loaded?
- Does the ramp have a catwalk of 1-1.5m minimum width on at least one side of the ramp?
- Are watering points and troughs in sound order and positioned where they don't pose a trip, slip or fall hazard?

- Are there options for dust control, including water for sprinkler or irrigation systems?
- Are water pipes buried, or run overhead or along railing systems to avoid being damaged and so as not to create a trip hazard?

Materials

Any combination of materials can be used in the construction, the choice depending on local availability of materials and the amount you are prepared to spend.

The areas that receive a lot of pressure from stock — such as gateways, forcing yard and race — need to be sturdy and well-constructed.

You can't afford to compromise on materials here. Panels should be made of sawn or bush timber, steel pipe or special cattle mesh.

Wire rope or cable is well suited for the outer fence in circular yards, and sheep mesh with bush timber rails on top works well where the yards are to be used for holding sheep as well.

Timber posts should be a minimum of 200mm diameter, and steel pipe at least 75mm.

Posts in the race and forcing areas should be cemented into the ground. In some soils, cross-bracing at ground level or at the top may be necessary to reduce the chance of spreading.

Cattle behaviours that affect yard design

Some of the cattle behaviours that affect yard design include:

- Natural instincts - knowing the natural instincts and common behaviour of livestock will help

operators handle animals quietly and calmly, and design yards that work with, and not against, these behaviours.

- Cattle have a 300 degree field-of-view and can see threats from almost all directions.
- Natural herders - cattle like to be with the herd and follow other animals. If they see the herd beside them in a race or forcing yard, they will stop. Solid sides on races, loading ramps and forcing pens can help to keep cattle calm and moving.
- Cattle move more easily through a curved race because they cannot see people standing by the squeeze chute.
- Ensure the entrance of the race is not too dark or appears to be a dead end with no place to go — a cow standing in the forcing pen must be able to see a minimum of two body lengths up the single file race.
- Cattle do not like to move towards bright light or shiny reflections so yard orientation should avoid situations where stock in the race, forcing pens or on the loading ramp are moving directly into sun or shadows and that the handler is not looking into the sun.
- Cattle also prefer to move back towards their paddock, so circular yards work better if the stock are moving back towards where they entered the yard.
- Cattle should move easily through the yards and enter the race without hesitation. If they baulk and refuse to move at a particular point in the system, it is important to observe them carefully to find out why. Small distractions such as changes in

floor type or fence construction can make cattle baulk.

Recommended cattle yard features

Some of the recommended features of a cattle yard include:

- Holding yard - avoid corners so that the only place cattle will bunch is in the directions they need to move, such as towards forcing yards
- Forcing yard - a half circle yard with gates that swing 300 degrees allow operators to push cattle up the race from behind the gate and at arms' length.
- The race - a curved race encourages cattle to move freely from one point to another but there are other race designs available. The ideal height is 1.5m and the recommended width between opposite posts is 675–700mm (plus the thickness of the rails).
- Loading ramp - ideally ramps should be 750mm wide between the rails. A ramp length of at least 3.5–4.6m will give the required rise to reach the ideal 1.2m loading height. A level section at least 0.8–1m long at the top of the ramp will encourage stock movement onto and off trucks.
- Ramp floors need to be non-slip and not cause a hollow noise. These can be stepped in concrete — allow a 450mm step length for every 100mm rise. Steel floors should not move or buckle under weight. Animals should not be able to see the ground below.

- Gate latches need to be positive bolt/slam shut spring-loaded, especially in forcing yards. Chain and slot-style latches are more dangerous to operators but are a good addition in some parts of the yards to prevent cattle escapes. Latches should not protrude outside the boundary of the gate.
- Non-slip pressed steel or concrete catwalks beside forcing pens, races and loading ramps assist in animal husbandry operations.

Labour efficiency, operator safety, productive stock flow and low stress cattle handling are the key factors to keep in mind when investing in handling facilities.

Well designed yards based on an understanding of animal behaviour will increase productivity, improve meat quality and be more efficient with your time and money.

It is wise to talk to other producers in your area, industry experts and yard manufacturers to help you develop an efficient yard design.

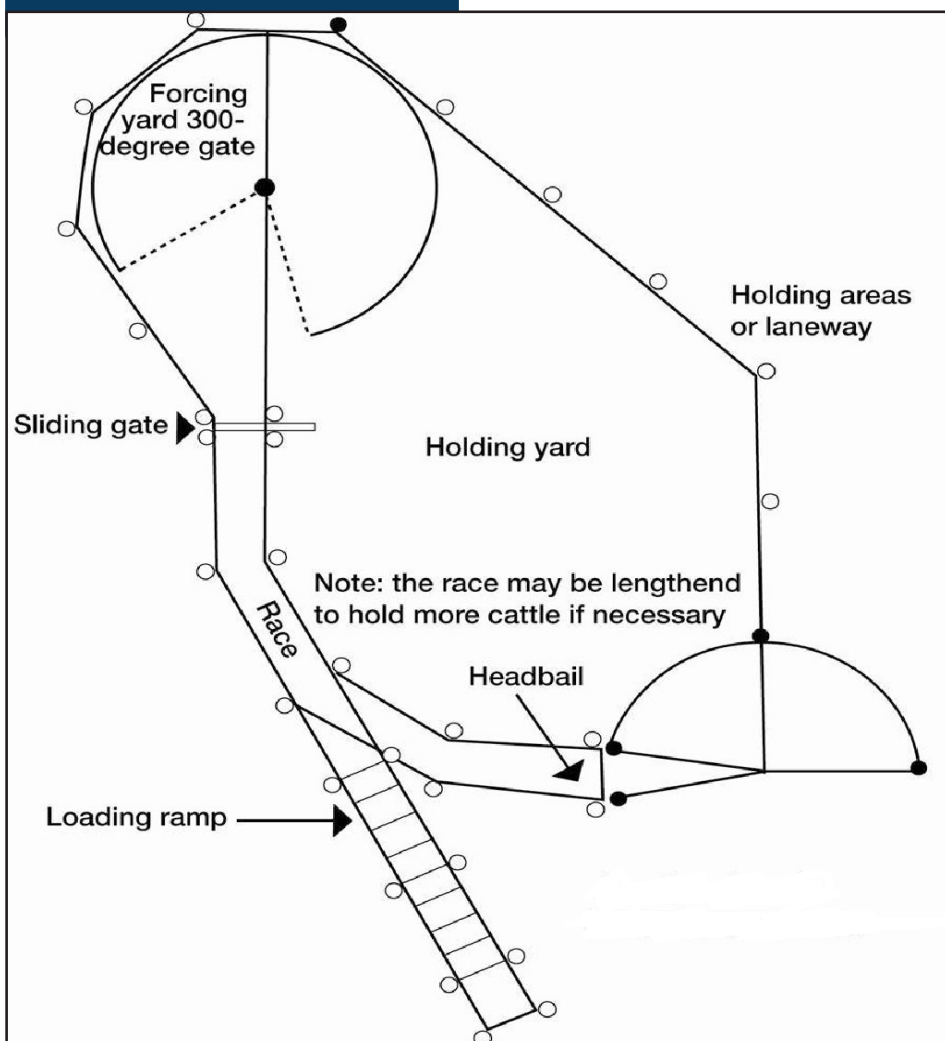
For more information

Department of Primary Industries - dpi.vic.gov.au

Low Stress Stockhandling - lss.net.au

Stress Free Stockmanship - stressfreestockmanship.com.au

Example of a circular cattle handling facility for 10-50 head.



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