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Safe Cattle Handling – A Practical Guide

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Authors: Fragar LJ, Temperley J.

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ACAHS contact details:
Australian Centre for Agricultural Health and Safety
University of Sydney
PO Box 256
Moree NSW 2400

Tel: 02 6752 8210
Fax: 02 6752 6639
Email: aghealth@health.usyd.edu.au

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Contents

1. Introduction

1.1 This publication – its purpose

This publication aims to provide a practical guideline for cattle producers, managers and workers to improve and ensure the safety of those who work with cattle on cattle properties, and those who are in the vicinity of areas where cattle work is being undertaken.

The document briefly gives guidance on the hazards and risks associated with handling cattle in the farm setting, and practical guidelines on how to implement effective occupational health and safety (OHS) risk control that will not only reduce prevent injury, but will assist beef cattle producers to meet OHS regulatory requirements.

Producers are not required by OHS law to comply with all the recommendations in this guide. However, as as employer you are required to find effective risk controls for the hazards on your property. This guide points you to effective solutions for your consideration. You may not be able to implement them immediately, but when changes are being made you may be able to adopt these recommendations at that point.

Cattle enterprises should use this document in association with the *Managing Health and Safety in the Beef Cattle Industry* risk management package – a practical management tool for implementing OHS in the beef cattle production workplace - available on the Farmsafe Australia website **www.farmsafe.org.au**.

The guideline has been prepared under the direction of the Farmsafe Australia Beef Cattle Industry Safety Reference Group; comprising cattle producers and handlers, states' work health authorities, Farmsafe extension officers with representatives of the Cattle Council of Australia and Meat and Livestock Australia.

1.2 Health and safety problems in cattle handling

People working in the beef cattle industry are exposed to a range of injury hazards - many are common to other sectors in agriculture, but many are specific to cattle handling.

Hazards associated with beef cattle production include:

- Mechanical hazards – of the cattle themselves, of the means of transportation of handlers (ATVs, motorcycles, utes, horses, aircraft)
- Manual handling hazards
- Biological hazards – infectious diseases eg Q fever
- Chemicals – veterinary medicines and other pesticides
- Dusts
- Solar radiation – working outdoors in heat and sunlight
- Electricity
- Noise – causing hearing loss and tinnitus
- Stress and fatigue

The types of injury range from death (more than 20 each year on beef cattle properties), serious injury requiring hospitalization and down time, to "nuisance" injury that stops work for a short time, or makes work slower and reducing productivity.

1.3 Legal obligations of the people in cattle production enterprises

State OHS Acts are similar in all states in that they lay down the responsibilities of key parties involved in reducing risk of injury and illness associated with work.

Responsibilities of *employers* include:

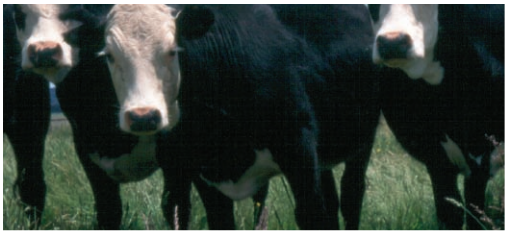
- Consultation with workers to implement OHS program
- Provision of a safe working environment
- Organisation of safe systems of work
- Maintenance of work areas, machinery and equipment in a safe condition
- Ensuring safe use, handling, storage and transport of plant and hazardous substances
- Assessment of health and safety risks to employees and others in the workplace, and institution of effective risk control measures
- Provision of adequate information, induction, instruction, training and supervision to employees
- Provision of adequate facilities for the welfare of workers

Employees also have responsibilities. Workers must take reasonable care of the health and safety of themselves and others, and cooperate with management in (its) efforts to comply with occupational health and safety requirements.

Employers and self-employed persons must ensure the health and safety of people visiting or working at their places of work, who are not their employees, by not exposing them to risk, this includes contractors.

Manufacturers, designers and suppliers of plant and substances for use by people at work must make sure that they are safe and without risks to health when properly used. They must also supply adequate information to ensure safe use.

Each of these OHS obligations must be met in the beef cattle industry and on each property.



2. Finding and fixing safety problems in cattle handling systems

The key processes (or steps) that must be set in place to manage OHS risk are:

1. Involve your workers - *Consultation*

There must be ways for workers to actively participate in the OHS program of the enterprise. How managers and employers involve workers will be different on different properties and methods may include:

- Regular meetings where safety issues are discussed
- Systems whereby safety representative are nominated to have specific responsibility for liaison between workers and managers

Whatever system is in use, it is essential that there is a clear commitment to safety of the owner and manager, and that this is obvious by the safety behaviour and activity taken on a day-to-day basis.

2. Look for unsafe conditions and unsafe practice – *Hazard identification*

Safety hazards must be identified in a systematic way.

This means that property owners, managers and workers must identify those jobs and situations that may cause injury or illness, not only to people doing the work, but also to bystanders and visitors.

Hazard identification should be ongoing and be carried out:

- At least annually
- When systems are changed – new equipment, changed facilities, changed practice

All workers should be actively encouraged to report anything that could be considered hazardous to health and safety – any unsafe condition, or unsafe action needs to be identified and action taken to make the system safe.

3. For each hazard, consider the likely outcome – *Risk assessment*

Risk associated with each hazard must be assessed in terms of the severity of the potential harm that could occur, and the likelihood that such an outcome could occur – generally greater if workers are frequently exposed to the hazard.

4. Control risk using the hierarchy of control approach – *Risk control*

Risks must be controlled to prevent injury. The *hierarchy, or order of effectiveness*, is as follows:

1. Elimination of the hazard

Where possible, hazards must be eliminated, or removed from the workplace. This is obviously the most effective way to reduce risk. While it is often not possible to eliminate a hazard, OHS regulations require employers to consider this option. If it is not possible, then the next most effective solution should be sought and put in place.

2. Substitution for a hazard of lesser risk

Where it is not possible to eliminate a hazard altogether, consider whether the hazard can be substituted for something that will do the same job, but is less risky.

3. Isolation of hazard from worker and other engineering controls

In most hazardous situations it is possible and practicable to improve the design of work and/or isolate the worker from the hazard. This is the basis of most of the safety improvements that should be put in place by beef cattle enterprises to reduce risk of injury as well as to be compliant with OHS regulations.

4. Administrative controls

Administrative controls include safe operating procedures or rules, organising work in such a way that reduces risk, giving safety induction and training to workers, supervising unskilled workers and providing safety information provision of information to workers about the safety risk associated with the work to be done and how these risks can be minimised.

5. Personal protective equipment

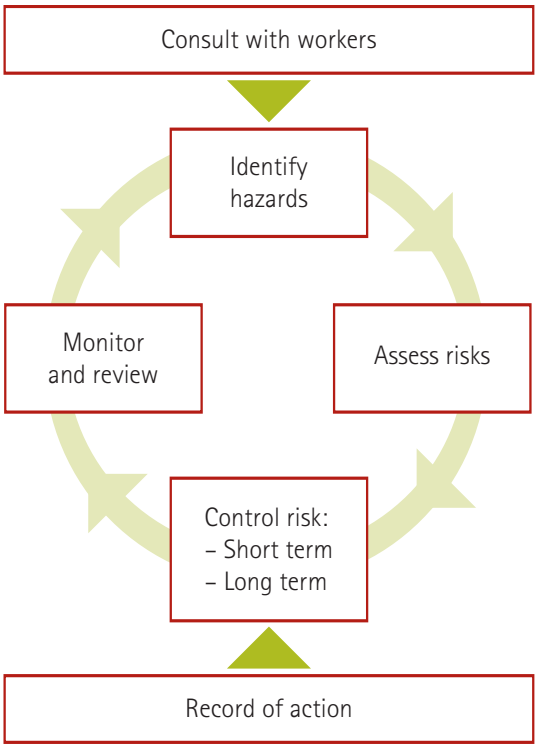
Provision and use of personal protective equipment must be provided and used where workers cannot be protected from a hazard by a control measure higher up the order (1-4 above). This includes providing helmets to protect from head injury for riders of horses and motorcycles/ATVs.

These guidelines suggest the higher order controls in the first instance, with the lower order, less effective controls that depend on individual behaviour lower in the list. In practice, best practice in OHS risk management will require a mix of controls for the high risk hazards.

5. Keep a written note of your OHS activity – Record keeping

Records of all activity in your OHS program must be kept

These are not steps to be taken on a once-off basis. The process would be better illustrated in this way:



These processes should become a key part of the management of the whole business. Successful businesses invest significantly in OHS in terms of time, money and commitment at all levels. These businesses understand that overall performance of the business benefits from good OHS practice. Such businesses do not accept that the major responsibility for workplace health and safety rests in the workers themselves, rather the opposite – that safety is a key management responsibility, and involving workers is a critical management skill.

3. Hazards, risk and risk control

3.1 Cattle yard design for safety

One of the most important things to consider when planning for safe cattle handling is the overall plan and layout of cattle yards and handling facilities. Smooth movement of cattle, people and work is not only more efficient it is generally safer for workers, contractors and other bystanders, as well as maintaining meat quality. OHS Acts and Regulations require that hazards are identified, risks assessed and controls be based on maintaining a safe system of work. For cattle properties, that includes the design of cattle handling facilities to reduce risk of injury.

Hazard and risk

Principles of good design

Yards that are not designed to encourage cattle flow will result in baulking and an increased anxiety level in the cattle that increases the risk of injury to handlers. Absence of good escape routes for the handler increases the risk of injury.

Environmental considerations

The comfort and health of animals is directly related to productivity and safety of handlers. Furthermore the working environment can pose specific risks to workers handling cattle in cattle yards

Risk controls

Review the overall design and layout of the cattle yards and facilities. Improvements can be made to existing yards, and plans for improved facilities should make safety a key factor in design.

The first principle is to design for the way cattle behave – providing appearance of clear space ahead and reducing distractions will "draw" cattle through yards and races[1].

The second principle is to design for the safety and ease of work of the people – self-latching gates, ready access and escape, surfaces that reduce risk of trips and falls, and isolation from the animal hazard.

Consult with others in the industry who are experienced in design of cattle yards for improved efficiency and safe handling[2].

Consult with workers to identify potential hazards and improvements that could be made to cattle yard areas.

1 ACC CoverPlus. *Better Yard Design.* 1999

2 Evans M (Ed) *Handling the Herd – The complete guide to cattle yard design and modification.* Kondinin Group. 1998.

Hazard and risk	Risk controls
Temperature and shade Working in hot conditions can cause heat stress for cattle and handlers. Signs in handlers include heat rash, heat exhaustion and in extreme cases, heat stroke. Early signs of heat exhaustion include: Headache, irritability, thirst, fatigue, nausea, stomach and muscle cramps, shortness of breath. muscle weakness and lack of coordination, cold clammy skin, confusion, rapid pulse.	Yards should allow for adequate sgade and water for stock. Covered yards are more comfortable and stress-free for handlers. The race and crush area are the most important places to cover. 
 **Lighting and shadows** Patches of sunlit ground or shadows will increase baulking of cattle.	It is important that lighting is adequate for the job, but does not shine into the eyes of cattle. Design yards and facilities to reduce shadows and dappling.
Noise Noise will make cattle more prone to baulk and increase handler risk.	Reduce undue noise e.g. metallic floors in cattle crushes tend to be noisier.
Surface Hard ground/yard surfaces result in footsore cattle left in yards overnight, reducing animal well-being and making handling more difficult.	Floors of yards where cattle have to stand for any period should be soft.
Dusts Dusts generated during work in cattle yards can pose a risk to handler health – respiratory disease and Q fever are 2 key risks.	Consider ways to minimise dust in terms of the surface of the yards and race. Installation of a sprinkler system will assist in dust reduction.

Hazard and risk	Risk controls
Location of cattle yards The location of cattle yards can help or hinder good cattle flow, and hence the safety of handlers. Injury associated with cattle handling is more likely where cattle baulk and become difficult to handle.	The location of the cattle yards should allow safe access in all weather conditions for cattle, people and transport. A site with drainage, firm footing and allows quick drying in wet weather is ideal. The prevailing wind should be taken into account, as the wind may carry smells and dust. Cattle move best on a ground surface that has a slight upward slope. Cattle move best through yards if they are going back to the paddock. A design that has cattle moving back towards the entrance through the forcing pen and race will help achieve smooth movement.
Yards – size and shape Yards need to be adequate for the number of animals to be handled. Overcrowding leads to increased risk for beast and handler. In rectangular yards, cattle bunch up in corners, heads away from the handler so that they cannot see the handler, increasing difficulty of handling and risk.	Some experts recommend allowing 1.5 square metres per adult animal in yards[3]. A top rail of 1600 mm is adequate height for the yards, however, 1800 mm should be allowed in forcing yards/pens and the drafting pound. Eliminate the risk of bunching up by boarding up the corners of rectangular yards. 
Drafting pound A poorly designed drafting pound increases handling difficulty and risk of injury.	The drafting pound should be centrally located, and a circular pound is best, with inward swinging gates.

3 Stafford K. *Cattle handling skills.* Accident Rehabilitation and Compensation Insurance Corporation Wellington NZ. 1997.

Hazard and risk	Risk controls
Forcing Yard/Pen A poorly designed forcing yard or pen increases handling difficulty and risk of injury. 	The forcing pen should be curved and designed so that the direction takes the cattle back to where they want to go – generally back towards their paddock. The forcing pen's maximum width should be 3 metres. This should allow cattle to be worked from the catwalk. The angle leading from the forcing pen to the race should be at least 30-35 degrees off a straight wall. Boarding up the walls of the forcing pen to block out distractions focuses the attention of the animal to the only way out – into the race. Forcing gates that travel through 360 degrees with ratchet systems that prevent them being pushed back onto the handler provide a safe way to move cattle[4] in the forcing pen.
Race Races that are too wide allow small cattle to turn around or all cattle to put their heads down beside the animal ahead, or drop their heads, making drenching difficult. 	The race length will reflect the number of cattle being handled – about 1.6 metres per adult beast. The width and height will depend upon the breed and class of cattle being handled – width between 660mm and 710mm of clear space. The race should lead to scales and crush that are in a straight line so that cattle are invited to the non-threatening view through the head-bail. Boarding up the walls of the race to block out distractions focuses the attention of the animal to the only way out – through the scales and crush.
Gates Poorly hung/designed gates and latches can make cattle work more difficult and pose increased risk of injury to the handler.	Gates should swing freely and the top gudgeon should be reversed to prevent gates being lifted off. Automatic latches are preferable. Closing a latch by hand is hazardous as a beast may reverse and push the gate back onto the handler.

4 ACC CoverPlus. *Better Yard Design.* 1999

Hazard and risk	Risk controls
Access and escape Serious injury and deaths have occurred where there has been no escape for the handler from cattle in the drafting pound and forcing pen. 	Escape-ways built into the pound and forcing pen allow for easy access of the handler to and from the areas.
Crush Using head bails while treating sick animals will reduce the risk of injury or undertaking other husbandry activity. The main risk here is being hit or crushed by the bar which goes across the crush at the back of the animal. Head bails where the locking devices are shut by hand rather than automatic increase the risk of injury.	Cattle crushes should be designed to reduce injury risk to beast and handler. See box below.

Selection of a safe cattle crush

First and foremost, a cattle crush must be able to do the job and do it safely.
A cattle crush can be assessed on the major features of:

- ☐ Versatility (how many different jobs can be performed using the crush - this will depend on access to the head, side and rear of the beast)
- ☐ Suitability for such jobs as dehorning, pregnancy testing, artificial insemination, stripping outand mouthing
- ☐ Safety for handler
- ☐ Durability
- ☐ Price
- ☐ Serviceability (how easy it is to maintain)

The following checklist will be helpful in assessing over-all performance:

Stock movement

- ☐ The beast can see well ahead
- ☐ There are no distractions to forward movement
- ☐ There is no undue noise (greater with metal floor)
- ☐ There are no odd shadows or light patches

Handler access

- ☐ The baulk gate folds back out of the way
- ☐ There is a vet gate
- ☐ There is a split vet gate
- ☐ There are split side gates
- ☐ there is adequate head clearance
- ☐ The facility gives handler good access

Stock safety

- ☐ There are no obstructions
- ☐ There is no risk of choking
- ☐ There is no risk of leg damage
- ☐ Flooring is non-slip
- ☐ The head bail has a solid yoke

Handler safety

- ☐ The baulk gate will not jam fingers
- ☐ The work area is free of protruding obstacles
- ☐ There are positive latches
- ☐ The unit is secured to the ground
- ☐ Head clearance for operators is adequate
- ☐ Noise levels are controlled
- ☐ Escape routes are adequate
- ☐ Gates operate easily
- ☐ Risk of being kicked is controlled
- ☐ The rear kick gate has a kick-shut latch

Stock control

- ☐ Baulk gate stops animals from going underneath
- ☐ Baulk gate rail spacings are adequate
- ☐ Degree of head control is adequate
- ☐ There is an adjustment method for different classes of stock
- ☐ There is positive catching
- ☐ There is a split Vet Gate
- ☐ There are split side gates
- ☐ There are positive gate latches
- ☐ There is a strong rear gate
- ☐ There is a squeeze
- ☐ The unit is secured to the ground
- ☐ Stock cannot baulk or turn back
- ☐ Stock cannot rush through

Hander operation

- ☐ Baulk gate is simple and easy to latch
- ☐ Head bail is easy to operate
- ☐ Head bail has front/back operation
- ☐ There is a simple adjustment method for different classes of stock
- ☐ There is a simple to operate squeeze mechanism
- ☐ Latches operate easily
- ☐ Latches lock securely without undue time/effort
- ☐ Levers should be of 'break-away type" mechanism to prevent facial injury
- ☐ Rear gate features smoothness of ride
- ☐ Moving parts are physically easy to operate

Hazard and risk	Risk controls
Loading ramps Poorly designed loading ramps can increase difficulty in handling and increase risk of injury to cattle handlers.	Cattle will move up an incline of around 20 degrees, and the ramp slope should not exceed this. The ramp width should be around 800-900 mm. A V-shaped section will prevent smaller animals from turning around and enable safe access to a fallen beast. The ramp should have solid walls and cattle should be able to see a clear exit at the end of the ramp. The floor should be constructed with non-slip material that does not 'resonate' or create undue noise. There should be no space between the ramp and the back of the truck. A catwalk and handrail will assist handlers to move cattle and enhance safety. Lighting is important and loading facilities should be designed so that shadows are not cast across races and ramps and light should not shine into the eyes of cattle.
Catwalks Catwalks provide a safer means of undertaking cattle work such as drenching and vaccinating safely over the wall of the race, and provides safer systems of moving cattle along the forcing pen and race. However, they should be built to ensure the safety of the handler. 	Catwalks should be installed along the forcing pens, race and loading ramp. They should be at about buckle-height, be of sturdy construction and be wide enough to walk along freely and comfortably. It is important that the height is adequate to allow safe access to the cattle, without risk of falling in onto the top of the animals. The surface should be non-slip, using eg chicken wire or other grating fastened securely to the surface. Handrails will reduce risk of falls from the catwalk – essential if the height of the catwalk exceeds state regulations for working at heights.
Amenities Lack of clean and accessible toilet and wash-up facilities puts the health of workers at risk. Lack of clean and adequate rest and eating facilities for use during work breaks reduces productivity and increases risk of ill health.	Washing and toilet facilities should be providedand be reasonably accessible from the work areas. These should be clean, private, secure and properly maintained. An eating and mess area should be provided that is separate from the work areas. Hand washing facilities should be close to the eating area.

Things you could do immediately to improve safety

You rarely have the opportunity to re-build your cattle yards from scratch, but here are a number of ideas provided by the Accident Rehabilitation and Compensation Insurance Corporation of New Zealand (ACC) that you could put in place almost immediately to improve safety[5].

- Replace or re-hang gates so that they swing freely. Reverse the top gudgeon to prevent them being lifted off
- Build catwalks on forcing pens, races and loading ramps
- Cover catwalks securely with non-slip material
- Build in access-ways, especially between forcing pen and work area
- Make the race gate self-closing, install self-closing latches and a tail bar
- Board up forcing pen at both sides of race mouth
- Board out corners in yards
- Put shelter over the working area
- Put a roof over the working area
- Divide large, square yards into smaller narrower ones
- Divide a long race by installing gates
- Concrete the race and forcing pen
- Install a head-bail and crush, reposition to give a clear view ahead
- Put a water trough in the yard
- Reposition the entrance yard at right angles to the fence-line, up-hill or on level ground so cattle aren't moving into the sun as they enter the yards.

Keep up minor maintenance

- Nails should be hammered home and flattened off
- Bolts that are too long should also be sawn down
- Loose timbers on catwalks or rails should be fastened
- The head-bail should be kept lubricated
- Gates should be kept well-oiled and free-swinging

5 ACC CoverPlus /Better Yard Design. ACC 663 Nov 99 0-478-10884-2 New Zealand

3.2 Traffic flow, access to work and movement around the cattle yards

The safety of all people should be considered in planning and organizing for flow of traffic such as cattle trucks, other vehicles, cattle movement and people. The controller of the workplace is responsible for the safety of visitors and contractors under state OHS Acts and Regulations.

Hazard and risk	Risk controls
Workers and visitors to the cattle yard area, including transport operators veterinarians and contractors, are at risk of injury if road access and visibility is poor, if there is risk of collision with other vehicles, cattle flow or people.	Access to the cattle yard area for all workers and visitors should be clearly defined and separated from vehicular traffic and cattle movement, and be safe and free from slip, trip and fall hazards. Traffic around cattle yards must be controlled, and vehicle operators and pedestrians should be clearly visible to each other to avoid collision. Speed limits should be set and signposted for traffic in the vicinity of the cattle yard area.
Visitors to the farm who are not aware of traffic hazards may pose risk to others as drivers or be at risk as pedestrians.	Visitors to the farm should be directed to the farm house or office, with clearly marked signs.

3.3 Working with cattle

Hazards associated with cattle handling occur because of their size, speed and potential aggression. The life threatening hazards are associated with kicks and charging. Inadvertent crushing of a person against the side of a yard is also not uncommon. Associated hazards such as horses and motorcycles used for mustering also contribute to the hazards from cattle.

Hazard and risk	Risk controls
General principles of cattle handling Where handlers are unaware of the principles of cattle movement such as flight distance and point of balance, the risk is increased because as animals move in an unexpected direction, injury risk is increased.	An understanding of the principles of animal behaviour gained through experience and training will help predict the way an animal will behave in any given situation. It is one of the most important controls to reduce injury.
Cattle that are overexcited or alarmed pose a greater handling risk.	Handlers should aim to keep the cattle calm, keeping noise levels down in yards. The handler needs to look for signs of fear or aggression. These are indicated by the position of the head, tail, the ears and the nostrils, rolling eyes, pawing at the ground and snorting. The trained handler can spot differences in mood and behaviour quickly and turn this to his or her advantage. Animals are handled more efficiently when their levels of stimulation are appropriate for the task. For instance, when moving lead animals through gates, levels of stimulation need to be slightly raised – this may be achieved through the appropriate use of noise or other prompting methods. Once confined, stimulation levels need to be low so that stress is low for both handler and animals. The most effective way of maintaining appropriate levels is to keep the work environment quiet. Loud voices and gates that bang loudly disturb stock. Stock respond well to routine. Always bring in and let out stock in the same manner. Avoid handling cattle when tired as lack of concentration on the task will increase the risk of injury.

Four important tips for successful and safe cattle control[6]:

1. Check the yards before working them

Before setting out the yards and races should be checked, obstacles and hazards for cattle and handlers removed, head-bail and gates checked and adjusted.

2. Keep cattle calm

Learn when it's best to back off and let things settle down – hard sometimes when the handler is impatient to get the job done!

3. Keep and eye on what happening around you

Keep looking around so you know what the other cattle are doing. Accidents happen when the handler loses track of what others are doing.

4. Use your voice

Good stock handlers use their voice constantly in different ways – to soothe and calm, to assert authority and to let cattle know where the handler is. This is important in light of their different vision from humans.

6 ACC CoverPlus /Better Cattle Handling ACC 664 Nov 99 0-478-10883-4 New Zealand

Hazard and risk	Risk controls
Cattle gender and characteristics Cattle that have been handled in yards only rarely pose greater risk of injury to the handler. Cattle can often be harder to handle singularly or in small mobs.	While *elimination* of all cattle hazards is usually not an option, using artificial insemination and reducing bull numbers would be an example of hazard elimination.
Handling bulls, of any breed or temperament always carries a significant risk. Horned bulls are more capable of causing serious injury. People who try to intercede between fighting bulls are likely to be injured.	Selling off horned animals or stock that are consistently difficult to handle is another example of elimination.
Cattle breeds and types vary in their aggression and intelligence levels. It is advisable to spend the time to get to know each herd as you work with them and to understand the general traits of British, European, Zebu breeds and their crosses.	Selecting against those animals which are difficult to handle even after consistent handling is a way of *substitution* of more docile animals for flighty or aggressive animals.
Cows with young react instinctively when defending their calves from potential danger and therefore pose a greater risk than those without young, especially if they are separated from their calf.	Regular handling of young animals is essential. This handling can take place after birth, after weaning or/and during feeding. Calves and weaners which have pleasant experiences during this handling will be calmer and easier to handle later. These handling experiences can include walking amongst stock while in the yards or riding between them out in the paddock to accustom them to the human presence. Working them through races and teaching them to follow a lead horseman will be helpful in later stages. This training of stock would be considered an *administrative control*. Bulls must be handled with caution. Mothers of newborn and other young need to be approached with caution. They may be easily enraged. Cows separated from their calves deliberately such as at weaning time or accidentally also need to be approached with care.

Hazard and risk	Risk controls
Mustering Using a horse for mustering cattle carries less risk of being charged and knocked off than riding a motorcycle. Mustering by motorcycle is not recommended for working with bulls. Most injury occurring during mustering is due to falls from horses and motorcycles. ATVs can roll and do not offer rider protection if the machine lands on the rider.	Select the safe machine for the job – 2-wheeled, 4-wheeled motorcycle, utility, or helicopter. This is the essential first consideration.
	Handlers must have the necessary skills to undertake the job safely and be inducted into doing the mustering on the specific property. Skills and induction include horse handling, and motorcycle of ATV operation.
Using dogs and stock whips is not recommended for cows with calves due to their high anxiety levels.	Helmets should be supplied and worn during mustering, using horses or motorcycles.
Mustering where the route has not been well established carries a greater risk due to potential delays and stock breakaways.	Smooth soled footwear is required for riding horses safely.
	Mustering needs to be planned to take account of time of day, weather, location of water and adequate time should be allowed. Mustering is best in early morning or in the late afternoon when temperatures are cooler, and after cattle have had a long grazing period. Stock that are rushed will be stressed and injury is more likely. Use laneways where possible.
Moving cattle in yards Handling cattle in yards as soon as they are yarded increases the risk of injury due to their high arousal level.	Cattle should optimally be allowed to settle in yards before undertaking further work – give them 30 minutes or so.
Where cattle are handled in herds that are too big for the number or skill of the handlers, or too small, to allow for herding instinct they may be difficult to handle and the risk of injury to animal and handler increases.	Cattle herd size should suit the size of the yards. Dogs should be kept out of cattle yards as they over-excite cattle which are then more likely to charge or kick.
Inadequate numbers of people to handle cattle increases the risk of injury. Lifting and carrying calves without using correct manual handling techniques increases the risk of injury.	Handlers must have the necessary skills to undertake the job safely and be inducted into working with cattle in the specific yards being used.

Hazard and risk	Risk controls
Drafting Where cattle are handled in herds that are too big for the number or skill of the handlers, or too small, to allow for herding instinct they may be difficult to handle and the risk of injury to animal and handler increases. Lifting and carrying calves without using correct manual handling techniques increases the risk of injury.	No more cattle should be put in the drafting yard than can be handled efficiently and safely.
Handling in forcing pens and races Poor race design such as races which are too wide or narrow means the handler is intervening more often which increases the likelihood of injury. Handling cattle through the rails increases the likelihood of crushing of hands or arms. Where mesh is present, the risk is much greater.	Work should be undertaken with a partner where possible. The forcing pen should not be overfilled, and the race should be packed as tight as possible to prevent cattle moving back and forth. Work should be undertaken from the outside of the forcing pen and race, on a catwalk if possible. To get cattle to move forward in the race, the handler should walk along the catwalk from front of the race to the back. Arms, head or legs should not be put through the race walls – reversing cattle may not see you and/or not be able to stop. Handlers must have the necessary skills to undertake the job safely and be inducted into doing the work in the specific cattle handling facilities.
Using the crushing and head bail The main hazards are presented by poorly designed/maintained equipment such as head bail handles that cannot be articulated and ratchet mechanisms that don't hold. Having to push up and catch with the head bail can lead to animals getting their shoulders through the bail and the stock person being injured by the lever/handle.	Work should be untaken from the outside of the crush. When using restraints on an animal, smooth, steady movements should be used to keep the animal calm and only enough pressure applied to hold the animal snugly. Handlers should stand at the end of the lever, not the side and keep it at arm's length in case it jerks upwards. Handlers should work confidently and decisively. Handlers must have the necessary skills to undertake the job safely and be inducted into doing the work in the specific cattle handling facilities.

Hazard and risk	Risk controls
Drenching Cattle (or any animals) who have a bad experience while undergoing veterinary practices such as drenching or vaccination will place the handler at higher risk of injury during subsequent tasks. Drenching methods that involve handling the animals head and mouth increase the risk of injury to the operator due to the animal tossing its head. Drenching or other procedures without the useful restraint of a head bail increases the risk of injury.	Use of pour-on drenches should be safer for the handler than drenching cattle using the head-bail. The principle is to make the experience as stress-free as possible for the cattle, so that they don't resist next time. Handlers must have the necessary skills to undertake the job safely and be inducted into doing the drenching job in the specific cattle handling facilities.
Injecting/vaccinating Vaccinating places the handler at risk of crush injury and needle-stick injury.	Cattle should be suitably restrained. Safety instructions on the vaccination label should be adhered to rigorously. Sharps disposal (needles and syringes) must be in accordance with contaminated waste requirements. Operators must have the necessary skills to undertake the job safely and be inducted into doing the vaccinating in the specific cattle handling facilities.
Other tasks- branding, dehorning, marking Each of these tasks pose specific injury risks to the operator. Cattle that have been subject to these procedures will pose higher risk on release, if the exit is not clear.	These tasks should be undertaken with the beast securely restrained. These tasks should not be undertaken by a sole operator. Operators should stand clear when the animal exits the head-bail or restraint. Operators must have the necessary skills to undertake the job safely and be inducted into doing the specific task using the specific cattle handling facilities.

Hazard and risk	Risk controls
Veterinary procedures	
Artificial insemination involves liquid nitrogen which carries the risk of burns to the face, hands and arms, particularly if gloves and goggles are not worn.	Plastic/rubber gloves should be worn where there is contact with body fluids. Strict hand washing is essential to reduce the risk of infection in the animal and transmission of zoonotic disease to the worker.
Pregnancy testing, mating and calving carry the risk of zoonotic disease, particularly if adequate hygiene measures are not taken. During these procedures, the risk of kicks or crushing is also increased.	Handlers should be vaccinated against Q Fever.
Assisting calving is likely to result in manual handling injury if the correct technique and mechanical aids are not used.	Veterinary drugs sharps disposal (needles and syringes) must be in accordance with contaminated waste requirements.
Loading and unloading	
Where the footing is very uneven or does not provide a good grip, the risk of injury is higher for animals and their handlers.	Handlers should use all available gates and hock bars to stop cattle reversing. The handler should walk down the ramp or catwalk to encourage cattle to go up, and vice versa.
The risk of injury is increased where the loading race is not designed with a V-shaped section to prevent animals turning around and enable any fallen animals to be righted without getting into the race. Sides which animals can see through discourage a free flow of cattle and, therefore, increase the risk.	Cattle should be given time to unload - they will follow each other.
Personal Protective Equipment	
Handlers are exposed to risk of foot injury from being trodden on by cattle, sunburn and skin cancer by work in the outdoors.	Operators should be provided with steel capped boots and be supervised to adhere to rules regarding wearing of suitable hats and use of sun screen.
Head injury is a risk associated with riding 2 and 4-wheeled motorcycles and horses.	Well-fitting helmets should be purchased for each rider.
Those operators handling pesticides are at risk of exposure to chemicals.	Protective gloves, aprons, masks and overalls may be required for use of some pesticides and label instructions should be followed carefully.
Dusts may cause eye problems in some conditions.	Safety glasses may be preferable to sunglasses under some dusty conditions.

3.4 Handling hazardous substances

Hazard and risk	Risk controls
Vaccination for Q fever Q fever is a risk for cattle handlers in most parts of Australia. Workers new to the industry are at special risk of contracting the infection.	Q fever vaccination is available through the Health Department in each State, and should be made available to all cattle handlers, in particular, to workers not previously exposed to work with cattle.
Parasite control Control of parasites may involve handling of chemicals that are hazardous to human health. Exposure to chemicals may occur by skin contact, by breathing in fumes, or from ingestion on contaminated hands or other articles such as cigarettes.	Application systems for delivery of parasiticides should be in good condition, with no leakage. Storage of chemicals should be secure and inaccessible to children and visitors to the workplace. Hand washing and emergency wash down facilities should be accessible to operators handling pesticides and farm chemicals.
Hormonal drug treatments Hormonal drug treatments used in AI programs may be hazardous to handlers. Prostaglandins will adversely affect asthmatics and pregnant women.	Handlers should be made aware of the hazards of hormonal drug treatment.
	All chemicals should be handled strictly in accordance with label safety directions, including the requirement for personal protective clothing and equipment such as gloves, masks, and waterproof clothing. State OHS regulations require that a record is kept for any "hazardous substance" stored and/or use in the workplace, and that Material Safety Data Sheets are available for workers handling such chemicals.

3.5 People at special risk

The employer, and/or the person in control of the cattle yard workplace has responsibility to provide a safe workplace for all people in the workplace including workers, contractors and visitors.

Most cattle yards in Australia are located on family farms and are accessible to family members, including children. The safety of all, including children and family visitors must be ensured.

Hazard and risk	Risk controls
Children and visitors Children are at special risk of injury in cattle yards. Farmers have responsibility to protect the safety of other visitors to the farm workplace.	Young children must be physically separated from cattle, particularly cattle with young. Visitors should not be permitted in the cattle yards during work with cattle unless that are trained and supervised to ensure their safety. If older children have been taught the principles of animal handling, they need to be fully supervised while undertaking animal handling tasks.
Contractors Employers have responsibility to provide a safe workplace for contractors who enter the farm workplace.	Contractors including transport operators and veterinarians should be inducted into the safety systems and rules of the cattle production enterprise and be made aware of the obligations.
Older handlers Older people handling cattle, although they may be more skilled in handling cattle, are likely to be less agile and thence at greater risk of suffering injury. Furthermore, older people, if they do fall, are more likely to suffer a fracture than younger people.	Older people will recognise that they are less agile than young people and should take appropriate steps to reduce risk: • Avoid working inside yards, forcing pens and races – work only from outside the yard. • Use younger people to handle the cattle (employees or contractors) – ensuring that they have the necessary skills to work safely and effectively.

3.6 Emergency preparedness

All cattle properties must be "emergency ready". Being well prepared with emergency plans and equipment will ensure that the damage to people and property is minimized when accidents happen.

Risk controls

General

Emergency plans and procedures should be prepared and communicated to all workers.

Emergency plans should include plans for dealing with injury, poisoning, fire, explosion, spills of hazardous substances.

All workers should be aware of emergency plans at induction, and be regularly updated.

Location of telephones and emergency numbers for ambulance, fire, police and emergency services should be included in plans and induction.

Communication systems should be in place to ensure that all workers are in contact with others on the farm, and that emergencies can be notified immediately.

The property address should be signposted in accordance with Emergency Service requirements.

First aid

A suitable first aid kit should be accessible to all workers on the property. State Work Health Authorities detail the requirements for the type of workplace. The kit should be suitable for management of common injuries and snake bite.

At least one person, preferably two people should be trained in first aid and hold a first aid certificate.

The telephone number of the Poisons Information Centre should be available.

Fire

Work areas should be kept clear of flammable materials and the area around kept cleared.

Fire extinguishers should be available where fire is a hazard.

All workers should be aware of and trained in emergency fire procedures.

4. OHS policies and practices

4.1 Induction for new workers

A safety induction form provides cattle property employers with a proposed approach to safety induction for new workers.

It should be noted:

1. That this form is for use as an introduction to safety only – it is a preliminary communication to new workers about the importance of safety on the property.
2. Specific safety induction and safe work methods statements are needed for the specific jobs that workers will undertake. They will be required for:
   - Riding horses
   - Riding motorcycles – 2 and 4-wheeled cycles
   - Mustering
   - Working in cattle yards
   - Fencing
   - Maintenance work

4.2 Managing Cattle Production Safety - Hazard checklist and business plan

Cattle producers can obtain a copy of the Managing Cattle Production Safety kit through Farmsafe Australia, or can download a copy on the Farmsafe Australia website www.farmsafe.org.au.

5. Further information and useful contacts

State/Territory Health and Safety Authorities

New South Wales
WorkCover NSW
Ph: 13 10 50
www.workcover.nsw.gov.au

Australian Capital Territory
ACT WorkCover
Ph: (02) 6205 0200
www.workcover.act.gov.au

Victoria
Victorian WorkCover Authority
Ph: 1800 136 089
www.workcover.vic.gov.au

Tasmania
WorkCover Tasmania
Ph: 1300 366 322
www.workcover.tas.gov.au

South Australia
WorkCover Corporation
Ph: 13 18 55
www.workcover.com

Western Australia
WorkSafe – Consumer and Employment Protection
Ph: (08) 9327 8800
www.safetyline.wa.gov.au

Northern Territory
Northern Territory WorkSafe
Ph: 1800 019 115
www.nt.gov.au/deet/worksafe

Queensland
Department of Industrial Relations –
Workplace Health and Safety
Ph: 1300 369 915
www.whs.qld.gov.au

National Contacts

Cattle Council of Australia
Ph: (02) 6273 3688
www.cattlecouncil.com.au

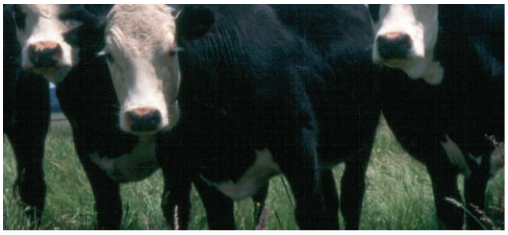
Farmsafe Queensland
(With particular interest and expertise
in cattle handling safety)
Ph: (07) 4774 0522
www.farmsafe.com.au

National Occupational Health and Safety
Commission (NOHSC)
Ph: (02) 6279 1000
www.nohsc.gov.au

Standards Australia
Ph: 1300 65 46 46
www.standards.com.au

Farmsafe Australia
Ph: (02) 6752 8218
www.farmsafe.org.au

Australian Centre for Agricultural Health and Safety
Ph: (02) 6752 8210
www.acahs.med.usyd.edu.au



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1. Health and Safety in the Beef Cattle Industry Reference Group, whose members have commissioned and made contribution to this Guideline.
2. Farmsafe Queensland Cattle Yards Checklist.
3. Accident Rehabilitation and Compensation Insurance Commission New Zealand:
   - Better Yard Design (1999)
   - Better Cattle Handling (1999)
   - Cattle Handling Skills (1997)
4. The document produced by WorkSafe Victoria (2001) *Health and Safety in Shearing*, has provided relevant information that has been used with appropriate modification for this Guide.

   Furthermore, in light of good sheep industry feedback on the suitability of the format of the woolshed guideline, that format has been used as a template for this document.
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