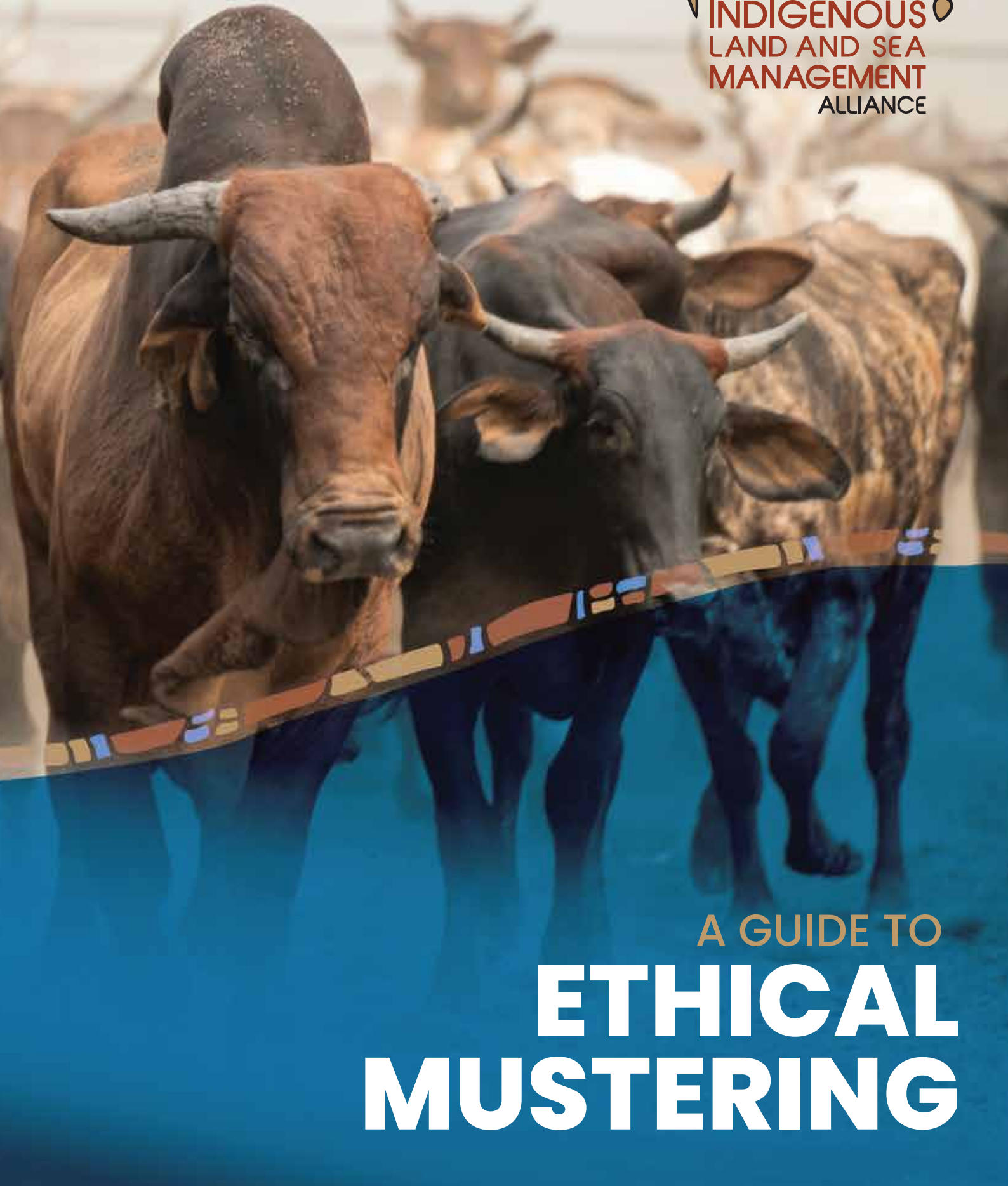


NAILSMA



NORTH AUSTRALIAN
INDIGENOUS
LAND AND SEA
MANAGEMENT
ALLIANCE



A GUIDE TO
**ETHICAL
MUSTERING**

CONTENTS

INTRODUCTION	03
What does ethical mean?	
FIVE FREEDOMS	04
ANIMAL WELFARE	05
Impact on target animals	
STAFF HEALTH & SAFETY CONSIDERATIONS	07
CHOOSING A YARD SITE	09
EQUIPMENT NEEDED	10
The Yards	
PROCEDURES	11
01. Mustering	11
02. Holding cattle in yards	12
03. Loading cattle	13
04. Transporting livestock	14
HUMANE KILLING OF CATTLE	15
Shooting of cattle	15
Frontal method	16
Poll method	16
Temporal method	16
Blunt trauma	16



IT'S MY COUNTRY...
SEEING MY FAMILY
WORK ON THIS LAND
MAKES ME HAPPY

NATHAN AMPEYBEGAN
WIK TRADITIONAL OWNER



INTRODUCTION

WHAT DOES ETHICAL MEAN?

Stemming from the Greek word *ethos*, it refers to one's "character" and "morals". Today, when we see a person or their behaviour as "moral", they're being authentic, fair, and honest.

This also means adapting to changes in the world and working to continuously improve behaviours, based on new knowledge.

FOR MUSTERING, IT CAN MEAN:

- Caring for animals in a way that supports their normal behaviours and provides a healthy, natural life - think minimal human interaction and wide open spaces with adequate feed and health care, ensuring animals are provided the 5 freedoms.
- Working to minimise impacts on the environment, taking active management to protect and enhance soils, water and indigenous biodiversity, by working to a Land and Environment Plan.



FIVE FREEDOMS



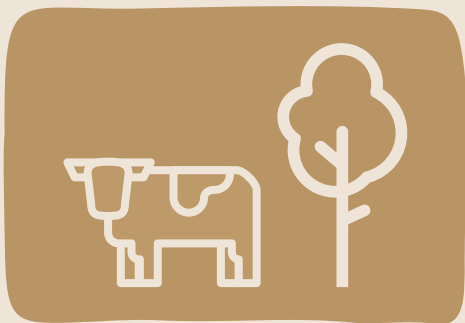
01 FREE FROM HUNGER OR THIRST

All livestock must have access to clean water and a well-balanced, nutritious diet. Freedom from hunger and thirst provides livestock with their most basic needs allowing them to remain in good health and full of energy. This is a basic and vital need for livestock, just as it is for all animals.



02 FREE TO LIVE NATURALLY

Livestock should be allowed to express normal behaviours. A normal behaviour is the way an animal acts in its natural environment. Enough space, proper shelter and housing, good food and water and company of the animal's own kind, allows and encourages the expression of normal behaviours.



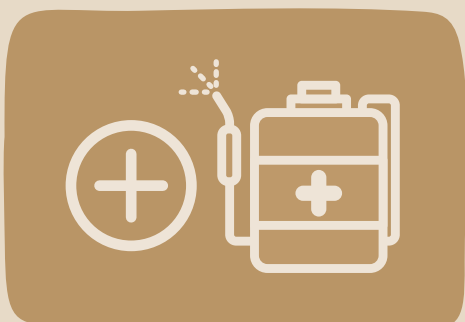
03 FREE FROM DISCOMFORT

All livestock should live in a suitable and comfortable environment. An animal's home affects how they feel, think and behave. Providing your livestock with shelter or a comfortable resting area is one way you can make sure that your herd stays healthy and happy.



04 FREE FROM FEAR OR DISTRESS

Livestock are very intelligent and emotional animals that deserve to be happy, healthy and feel safe. Caring for your herd will help you identify the things you must do to prevent your animal feeling fearful or distressed.



05 FREE FROM PAIN, INJURY OR DISEASE

All livestock must receive immediate veterinary attention when they are sick or injured. In most cases, unnecessary pain, injury and disease can be prevented through good husbandry and addressing any issues the veterinarian raises.

ANIMAL WELFARE

IMPACT ON TARGET ANIMALS

- Capture and handling increase stress in feral cattle as they are not used to confinement or close contact with humans. Operators should endeavour to keep stress to a minimum during these procedures to avoid the following conditions:
 - Capture myopathy
 - Heat stress and dehydration
 - Acute lameness due to injury or damage to tendons, ligaments or bones
 - Fight injuries due to mixing unfamiliar groups or individuals
 - Bruising and injury caused by rough capture techniques and poorly designed handling techniques
 - Stress-induced infections, such as salmonellosis
 - Feeding disruption resulting in ill-thrift or colic, and
 - Abortion in heavily pregnant females
- Mustering must not be conducted if cattle are in poor body condition, eg at the end of prolonged droughts.
- To avoid heat stress, mustering should be carried out in the cooler months.
- The tail end of the mob must set the pace rather than being forced to keep up with the leaders.
- Distances that the cattle have to be mustered should be kept to a minimum e.g. by using portable yards.
- Feral cattle should be handled quietly without force to avoid panic and trampling.
- Cattle that are severely injured during mustering or yarding must be killed quickly and humanely



- Whenever possible, avoid mustering when females are calving or have young at foot which are entirely dependent on their mother. This is to prevent dependent, calves being left to die of starvation if their mothers are mustered and the young are left behind. Although births can occur throughout the entire year. Avoid mustering during the peak calving time of late January and February.
- If trained dogs are to be used with feral cattle they should be used with caution. Dogs may be useful for mustering but may agitate yarded or confined cattle. Feral cattle may kick out at dogs if they feel threatened or cornered. Trained herding or sheep dogs may be more suitable than traditional cattle dogs as they are less likely to bite.
- Cattle must not be hit with objects such as plastic PVC pipe. However, objects such as PVC

pipes are useful. They safely extend a stock handlers reach to gently guide Cattle and provide visual obstruction to help direct Cattle as required. Electric prodders should only ever be used as a last resort when reasonable actions to get a cattle to move have failed. Use of electric prodders for Cattle is illegal in some states.

- All mature males should be separated from cows, calves and young males, especially if they are in rut.
- Only fit and healthy animals should be selected for transport. Heavily pregnant, very young or weak/ sick/injured animals must either be destroyed, given proper veterinary assistance or transported at a later date when they are in a fit condition.



STAFF HEALTH & SAFETY CONSIDERATIONS

- During construction of yards, operators should be wary of the risks of injury from lifting heavy items. Leather gloves and eye protection will help prevent injuries from wire, steel posts and hammers.
- The mustering, confinement and handling of feral Cattle is not without risk to the operators involved. A first-aid kit should be always carried.
- Firearms are potentially hazardous. During culling operations, all people should stand well behind the shooter when shots are being fired. The line of fire must be chosen to prevent accidents or injury from stray bullets or ricochets.
- Firearm users must strictly observe all relevant safety guidelines relating to firearm ownership, possession, and use.
- Firearms must be securely stored in a compartment that meets state/territory legal requirements. Ammunition must be stored in a locked container separate from firearms.
- Adequate hearing protection should be worn by the shooter and others in the immediate vicinity of the shooter. Repeated exposure to firearm noise can cause irreversible hearing damage.
- When shooting, safety glasses are recommended to protect eyes from gases, metal fragments and other particles.
- Although normally relatively placid, bull Cattle during rut should be approached with caution as they can have no fear making them quite dangerous.
- Care must be taken when handling feral cattle carcasses as they may carry diseases such as ringworm, mange and melioidosis that can affect humans and other animals. Routinely wash hands and other skin surfaces after handling carcasses. Carcasses can be heavy, so care must be taken when lifting/ dragging.





CHOOSING A YARD SITE

- Yards should be located close to suitable water.
- A suitable yard site needs to be sufficiently flat to enable the erection of portable yards. If designed to be serviced by trucks, the yard should be set up in close proximity to suitable haulage roads and adjacent to sufficient space for trucks to turn.
- Yards should be set up in a location that prevents the Cattle from seeing them until it is too late for evasion, for example on the other side of scrub through which the Cattle are being pushed.
- Where possible, yards should be positioned in a shady area with as much natural vegetation as possible. However, avoid having trees near the entrance of the yards if using a helicopter.
- Yards must be well drained to allow Cattle to sit down in areas free of surface water after rainfall. Firearms and ammunition
- For shooting animals in yards, a .44 Magnum with 240 grain jacketed hollow-point or soft-point projectile is recommended. This high calibre is necessary to gain efficient skull penetration.

Alternatively, a .308 with 150 grain soft point projectile can be used however there is a higher risk of the projectile exiting the skull compared with the .44 Magnum.

- For close-range shooting of sick or injured animals that are confined to a small yard or stock crate, a captive bolt gun or a .22 Magnum is suitable. Light fixed wing aircraft or helicopter
- The aircraft must be suited to the purpose and must be registered to perform the task.
- Small helicopters (such as Robinson's) are popular because of their maneuverability. Ultralight aircraft could also be used with helicopters, but they are less maneuverable than helicopters, and so may not be as effective
- The pilot must be suitably licensed and hold the appropriate endorsements for aerial mustering of stock.



EQUIPMENT NEEDED

THE YARDS

- Either portable or fixed holding yards are to be used.
- The entrance should have winged fences to effectively direct Cattle into the yard. Hessian should be run out from the yard for around 100 metres to form part of the wing fences. This will help prevent Cattle running into the fences. If possible, the wings should be further extended until they reach natural barriers such as the side of a range or a hill. Ribbon wings made from flagging tape attached to twine are effective. To deflect approaching Cattle, one wing fence needs to be longer than the other, commonly 500 m to 1 km long.
- Entrance gates must be wide enough (about 6m) to allow the easy flow of animals. Yards should be large enough for the Cattle to enter at a reasonable pace and pull up and settle before encountering fences and panels, and to allow all Cattle to sit on their sternums at the same time.
- The yard fencing should form both a physical and visible barrier to minimise the potential for injuries. Steel or timber post-and-rail fencing is recommended.
- Barbed wire and narrow gauge high tensile steel must not be used for containment of Cattle in high pressure areas (eg. yards, wings, corridors, and confined spaces) as it can cause severe injury to animals.
- Yards must be maintained and constructed of materials that minimise the risks of injury or escape of Cattle once inside the enclosure. Projections such as loose wire or sharp edges that are likely to cause injury should be eliminated and fences should be secure and high enough to prevent Cattle escaping. Hessian draped over vulnerable portions of the yard (eg gates and damaged sections) can be used to deter Cattle from placing unwanted and additional pressure on these sections. Removing corner strainers from the fences around holding yards may help prevent damage by Cattle. Also, removing overhead rails from gateways may help to reduce baulking as Cattle enter the yards.
- Yards should be located and designed to minimise both dust and boggy conditions.



PROCEDURES

01. MUSTERING

- 'Coacher' Cattle – domesticated Cattle that are released amongst feral Cattle to quieten them – should be used where possible during mustering.
- Motorbikes are useful for pushing Cattle through scrub, but vehicles and horses are better for containing and quietening Cattle. Skilled riders on horseback are also used to pursue & direct feral Cattle into winged yards.
- Cattle should not be excessively chased but moved steadily at a continual pace which will prevent them from turning back or baulking at the entrance to the yards. Cattle must never be driven to the point of collapse.
- Only muster that number of Cattle that can be comfortably handled.
- If Cattle need to be contained (blocked up) outside of yards it is best to do so in a large open area which allows sufficient room to remove and apply pressure as needs to comfortably contain the Cattle with minimum stress.
- Cattle should be allowed to drop out of groups that are being mustered if required to protect the safety and welfare of the animals or operators. This may include heavily pregnant females, females with dependent calves and other Cattle, especially those in poor condition, or behaving dangerously. Also, if a female camel continually breaks away and will not move along with the group, it is possible that she may be heavily pregnant or have a dependent calf hidden somewhere. It is best to leave her go and move on with the rest of the group. Animals such as this which are not easily mustered should be culled humanely in accordance with agreed best practice and ensuring that no dependent young are left behind.
- Note that mobs of young bulls can be difficult to muster. Also, some bull Cattle in rut may fight when unfamiliar groups are mustered together and can disturb muster operations making it advisable to leave or drop them out. Bulls come into rut primarily from April to September. Animals such as this which are not easily mustered should be culled humanely in accordance with agreed best practice.
- All unwanted captured Cattle should be released immediately (if allowed in state legislation) or destroyed humanely (Humane killing of cattle).



02. HOLDING CATTLE IN YARDS

- To minimise stress and injury in the yards, mature bulls must be drafted off from mixed social groups of cow/calf/young male herds as soon as possible after capture.
- If mature bulls prove to be troublesome they should be humanely destroyed to protect the welfare of other Cattle and operators.
- The stress of mustering can cause sweating and water loss, therefore Cattle must be given access to water as soon as possible after capture, either through yard watering or through succulent feed while being moved or held in open areas. Cattle will rehydrate in a few hours following even severe dehydration. Average size Cattle require up to 30-40 litres of water per day in summer.
- Leaving the Cattle for a period of time (eg. overnight) to explore and move through the yards and races with no pressure allows them to habituate to the new environment and can make them easier to handle.
- When moving animals in the yard, smaller groups of less than 15 animals will be easier to handle.
- If cattle are held in yards for more than 24 hours they must have access to feed as well as water. Low quality hay (oats, wheat or pasture) is preferred. Note that Lucerne hay can cause bloating in Cattle that are not adapted to this type of feed. Yarded Cattle will require approximately a third of a small square bale of hay per day.
- Cattle captured by mustering should be allowed a minimum of 24 hours rest with access to feed and water before they are transported on journeys longer than 8 hours. In the 24 hours prior to transport they must be assessed for signs of injury, disease, inappetence, illness, late pregnancy or distress. Account must be taken of their possible unwillingness to eat unfamiliar feed.
- Cattle should not be held in the holding yards for extended periods. If Cattle are being held for any length of time they should be drafted into a large holding paddock that contains adequate shade, food and water.



03. LOADING CATTLE

- Short, straight races and ramps with a minimal incline should be used. Metal loading ramps should be covered with dirt/sand to reduce the hollow sound which can cause cattle to baulk during loading.
- During loading it is essential that the operators are patient and remain calm. This reduces stress on the animals and makes them easier to handle.
- Occasionally, some cattle, usually older cows will sit down in the race and refuse to get up. Strategies to prevent cattle sitting down include:
 - Moving cattle steadily along the race and not allowing them to step backwards
 - Limiting the number of cattle to no more than three in the race
 - Ensuring that the hump cannot come into contact with overhead rails etc, and
 - Having livestock in a pen off to the side at the end of the race so that it is visible to the animals in the race.
 - Running the cattle through the race prior to loading to allow them to get used to the experience.
- If an animal has sat down in a race and refuses to get up, walk away and leave it for a short period – it may stand up when the pressure to do so has been removed.
- It is recommended that the rails on the race are secured with bolts which can be removed when required to shift a sitting animal.
- Electric prodders should only be used sparingly and as a last resort (if their use is allowed within state legislation). Apply prods only to the skin under the forelegs or on the back of the rear legs. Repeated use of electric prodders not only causes suffering but is likely to have the undesired effect of the animal refusing to move at all.



04. TRANSPORTING LIVESTOCK

A livestock transport trailer or truck is the preferred method.

The key things to remember are:

- The size and design of the transport vehicle should be compatible with the number of cattle being transported.
- The transport vehicle should be in good repair to ensure cattle arrive at their destination with no injuries and in the shortest possible time.
- The stock crate should be well designed so as to minimise bruising. A well designed stock crate will have a large smooth contact surface without projections on which animals can bruise.
- Pens should be approximately 3 metres in length to provide more support to animals during travel and thus reduce stress and allow them to adapt to transport more readily.



Specific requirements for the land transport of Cattle can be found in:

- Australian Animal Welfare Standards and Guidelines: Land Transport of Livestock (Animal Health Australia, 2012).

For information on requirements for the movement of Cattle within your region or across state and territory borders please refer to your local primary industries officer.



HUMANE KILLING OF CATTLE

SHOOTING OF CATTLE

A firearm or a captive-bolt are both suitable methods for humanely killing adult cattle. The firearm should deliver at least the muzzle energy of a standard 0.22 magnum cartridge. For larger animals and bulls, 0.30 calibre high-power cartridges are recommended.

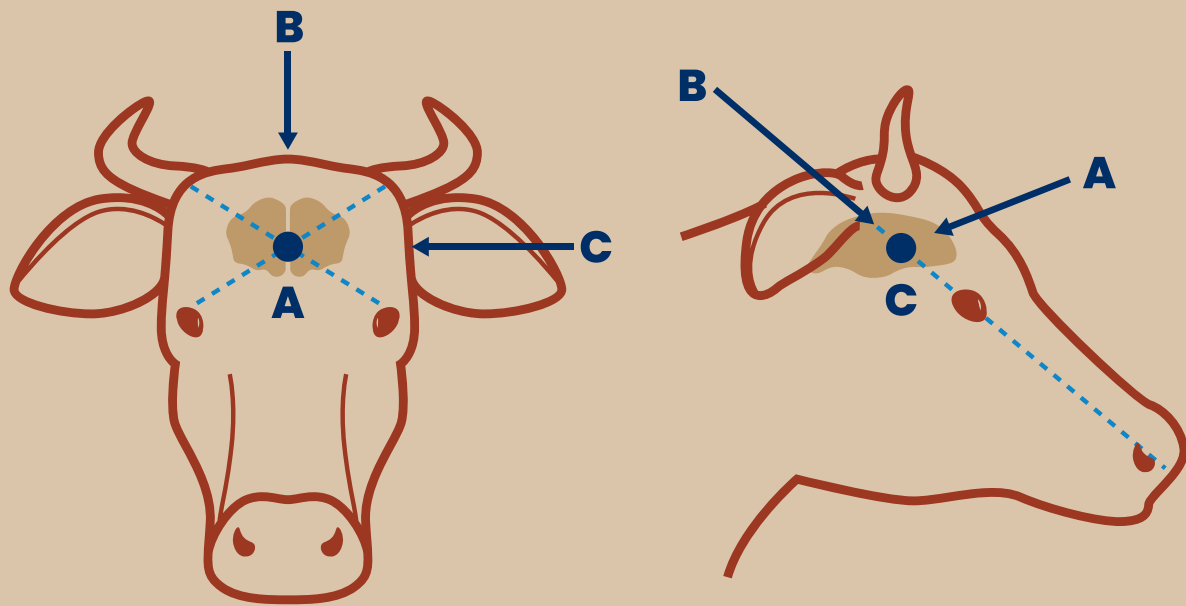
For calves a rifle should deliver at least the muzzle energy of a standard 0.22 long rifle cartridge.

Use of a captive bolt must deliver the correct charge and be followed by bleeding out to ensure death.

It may be necessary to humanely destroy Cattle by shooting in the following situations:

- When there is no market for the captured Cattle;
- If Cattle have sustained serious injury during mustering or in the holding yards;
- Where dependent young have become separated from their mother;
- Where Cattle have a disease or condition that would prevent the animal from being transported, slaughtered or domesticated.





Humane euthanasia techniques

FRONTAL METHOD

- SUITABLE FOR FIREARM OR CAPTIVE BOLT

Aim the firearm at the point of intersection of lines taken diagonally from the top of each ear to the inside corner of the opposite eye (**position A**).

POLL METHOD

- THE POLL METHOD IS NOT RECOMMENDED FOR CATTLE. ONLY USE THE POLL METHOD IF ACCESSING THE FRONTAL POSITION IS NOT POSSIBLE.

The animal is shot from above (**position B**) mid-way between each ear with the direction of aim down towards the muzzle of the animal.

TEMPORAL METHOD

- SUITABLE FOR FIREARM ONLY

The animal is shot from the side so that the bullet enters the skull midway between the eye and the base of the ear on the same side of the head (**position C**). The bullet should be directed horizontally.

The temporal position should only be used if frontal position is not possible.

Note: Stunning (by captive bolt) does not necessarily result in death. Bleeding out must be carried out immediately to ensure death occurs.

BLUNT TRAUMA

The use of blunt trauma on newborn young calves less than 24 hours old must immediately be followed by bleeding out, while the animal is unconscious, to ensure death.

