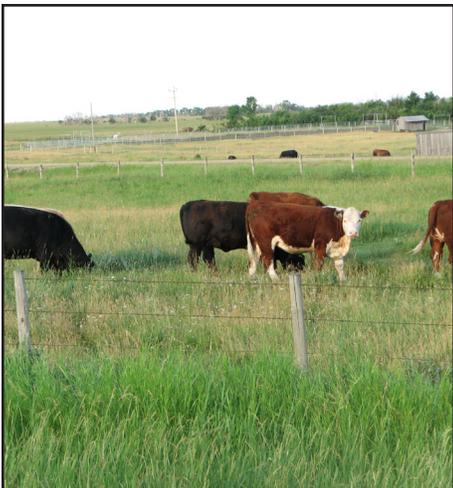




LOW-STRESS CATTLE HANDLING

For Productivity
and Safety



UNIVERSITY OF SASKATCHEWAN
Canadian Centre for Health
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Welcome to Low-Stress Cattle Handling

The Agricultural Health and Safety Network has promoted Low-Stress Cattle Handling practices for over 20 years. We continue to provide resources for farmers and ranchers to use with their family and workers.

Injuries account for unexpected medical expenses, lost work days and labour replacement costs. Cattle handler injuries and fatalities result from mishandling animals, complacency, and bad practices passed down from one generation to the next. By adopting a calm demeanor and taking the time to understand an animal's behaviour and temperament, you can better predict their actions. Patience and practice will help you develop an operation with effective cattle handlers and a calm herd.

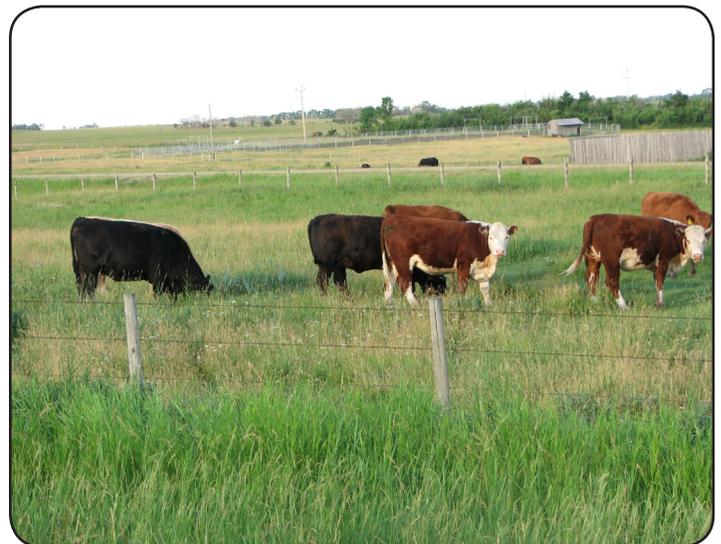
Background

Injuries in cattle handlers are most common among adults. Most of these injuries occur in spring and fall. Both men and women are involved in these injuries. Handling cattle accounts for 45% of livestock related injuries to handlers (source: Canadian Agriculture Injury Reporting).

Reducing stress on livestock during handling results in a manageable herd, increased safety for the handler, reduced shrinkage at shipping and less stress-related disorders. Genetics and experience interact to determine how an animal will behave during handling. Quiet, calm handling at an early age will help produce calmer, easier-to-handle adult animals: "People working with animals need to understand the behavioural principles of handling" (Dr. Temple Grandin).

This resource can help you gently introduce the Low Stress Cattle Handling techniques to your family and workers. You will find information and instructions helpful to explain Low-Stress Cattle Handling to your family and ranch hands. Topics include:

- Importance of Low-Stress Cattle Handling Techniques
- Benefits of Understanding Cattle Behaviour
- Animal Instincts
- Temperament
- Moving Cattle
- Flight Zones
- Chutes and Pens
- Bulls
- Cows with Calves
- Livestock Facilities
- New Workers



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Why is it important to incorporate low-stress cattle handling techniques?

Low-Stress cattle handling is safer for the animal and safer for the handler.

Dangerous situations that involve cattle are avoidable with proper training and competence. Cattle have a significant weight advantage, can move quickly, and can be unpredictable. It takes skill and practice to handle them safely.

Every year there are reports of injuries and fatalities resulting from being crushed or kicked by cattle.

You can decrease unexpected medical expenses due to injuries, days lost from work as well as the cost of replacement labour by learning Low Stress Cattle Handling techniques and making sure everyone in your operation practice the same techniques.

Animal Science Research

Dr. Temple Grandin, an applied animal behaviour scientist at Colorado State University, developed low stress livestock handling theory in the 1980s. Dr. Grandin's research demonstrates that low stress handling improves productivity including faster weight gain, more milk in dairy cows, less disease, and fewer injuries.

Researchers have incorporated animal science into animal handling. Animal science research helps producers understand why animals react to stimuli in their environments. It is possible to provide systems for cattle handling that are low stress and have a much higher level of safety for the workers when one understands animal behaviours.

Today, many trainers offer classes in low stress livestock handling in Canada.

There were 65 animal related fatalities in Canada between 2003-2012.

45% of these injuries were caused by cattle



NEVER handle cattle when you are stressed or in a bad mood! Animals will pick up on this and it will become even more difficult to handle them.



Benefits of Understanding Cattle Behaviour

A skilled handler can learn to expect many predictable animal reactions.

The ability to predict when an animal is likely to cause injury or harm to an individual is a key benefit of understanding cattle behaviour. This allows time to react and stay safe. To do this, it is necessary to understand the way animals behave and the reactions they have to stimuli in their environment.

Compared to humans, cattle have an increased field of vision at the expense of poor depth and colour perception. This means they can have an extreme sensitivity to contrasts causing them to balk anywhere there is a rapid change from light to dark or heavy shadows. Heavy shadows can appear to cattle to be 'holes' rather than shadows.

Cattle have a strong sensitivity to noise and can be spooked or frightened easily with novel objects. They will move quickly away from the direction or source they perceive the noise to be coming from. Animals may crash through objects including people in their attempt to move away from fearful objects or noises. If a person is standing too close, they could be knocked down or trampled if the animal suddenly swings around.

Aggressive handling often results in animals becoming more vigilant towards the handler, rather than traveling in the right direction. Cattle tend to move and react better if they are calm and feel secure. Yelling while working with cattle can cause them stress. Cattle will adapt to reasonable levels of sound that is continuous. Therefore, talking can actually have a calming effect on cattle.

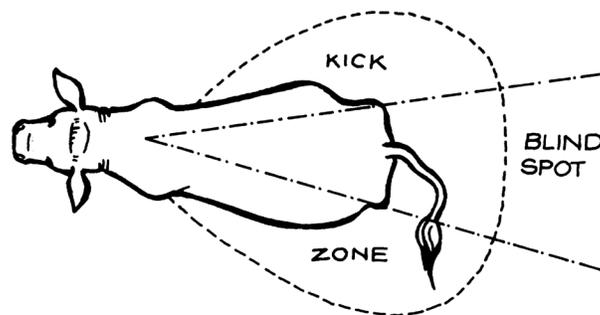
Many things can make cattle flighty including:

- Excessive noise such as shouting, barking, motorcycles or ATVs
- Being chased
- Electric prods
- Being hit
- Hunger
- Painful, new or strange objects
- When their flight zone is not respected



Animal Instincts

Cattle experience the world with panoramic fields of vision. This means that cattle have eyes that are located on the sides of their heads. This gives them a very wide range of vision but they have a blind spot. Animals are easily alarmed when a person enters their blind spot, especially if they are moving quickly. Cattle will protect themselves by kicking into that space which is known as the kick zone.



Any animal can be unpredictable at times.

Easy rules to keep in mind

- Separation from the herd may cause anxiety & unpredictable behaviour. Limit the amount of time the animal has to be alone or keep the herd nearby.
- Avoid separating animals at feeding time.
- Cattle will "follow the leader."
- Cattle have poor depth perception and need time to adjust to changes in lighting, floor and other changes; calming cattle once they are agitated may take 20-30 minutes.
- Cattle have sensitive hearing and are agitated by shouting, barking dogs and any sudden noises.
- New situations may cause anxiety and unpredictable behaviour.
- Routine is comfortable and reassuring.
- Cattle form a lasting impression of painful or frightening events which may result in future handling problems.
- Illness or injury may cause unpredictable behaviour. Note: Cattle will kick towards the injured side.
- Cows have strong maternal instincts and can be aggressive when protecting their young.
- An animal protects its territory. A bull will dominate an area.
- The Flight Zone is considered safe, personal space for the animal. Entry into the space will create a response.
- All grazing animals have wide-angle vision but can't see behind themselves. It is nature's way of protecting this blind spot for the animal to kick into that space called the kick zone.

Temperament

Every animal's unique personality can be determined by a mixture of genetic factors and its experiences. Social, aggressive, fearful, active and exploratory traits will make up the unique temperamental profile of each animal, hence determining their distinct response to the same stimulus. Every animal has the potential to be or become unpredictable. When introduced to new stimuli, an animal can become anxious. By knowing the signs of aggression in cattle it is possible to stay out of dangerous situations. Proper handling and culling cattle with dangerous temperaments creates a safer herd.



ALWAYS be alert for aggression signs and never turn your back on an animal that is showing signs of aggression!

Fear and Aggression Signs in Cattle

When handling cattle it is possible to tell how they might react based on their appearance and behaviours that they are exhibiting.

- Head and tail positions
- Ear positions
- Pawing the ground
- Erratic movements
- Tail flicking
- Bellowing: Cattle that are very distressed will often bellow loudly; take note of which animals are doing this



No two animals are exactly the same even if they are the same species.

Moving Cattle

Cattle are herd animals, and will follow the lead animal. Keep the lead animals moving in the direction you want to go. Cattle are easily distracted and can be spooked by almost anything.

More than one person should always be present when moving cattle. All motions that are made should be deliberate and sudden movements and loud noises should be avoided. Establish a route for escape before moving the animal in closed quarters. Remove distractions before moving cattle. Cattle move better and are less aggressive when physical force or electric prods are avoided. Tame cattle may be led instead of driven.

When moving bulls, be confident in all of your motions as this helps to establish dominance. Never move an aggressive bull on foot; always use a vehicle. Keep bulls moving at a trot to avoid a fight breaking out. If a pair of bulls does begin fighting, stay clear of them and do not try to break it up. If a bull is difficult to move it might be necessary to move them with a group of cows.

When closing a gate after moving a group of cattle, stand to the side. This will help protect you in case the animals suddenly push back and the gate is flung open.

Checklist for moving cattle:

- Work with another person
- Avoid quick movements & loud noises
- Respect the size of the animal
- Plan an escape route
- Avoid leading cattle into an enclosed area such as a trailer that doesn't have an escape route for yourself
- Never wrap or tie a lead rope to yourself
- Remove distractions before moving cattle
- Stand beside a gate, not behind it
- Avoid electric prods & physical force; a stick with bells or plastic ribbons alerts cattle where you are
- Change is disturbing and should be introduced gradually
- Cattle will move from a darker place to a lighter place.



Dress appropriately when working with cattle:

- Wear leather gloves
- Boots should be steel-toed with metatarsal guards
- Use rubber gloves if the animal is sick or injured

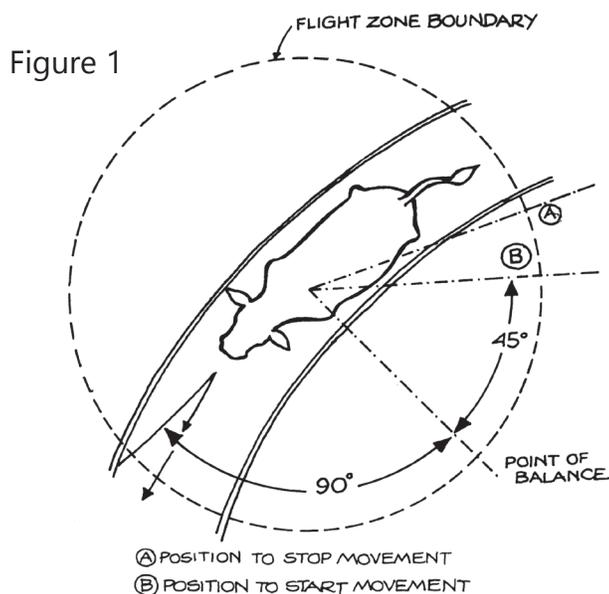
Flight Zones

This technique requires practice and patience as the Flight Zone differs with each animal. The proper use of this zone will enable you to move cattle in a desired direction.

- Cattle will move away from you to keep you out of their Flight Zone
- The Flight Zone corresponds to the animal's personal space
- To locate the edge of the Flight Zone, move towards the animal. To acknowledge your presence at the edge of the Flight Zone the animal will raise its head, stop eating, turn to you while chewing and move to face you. Once they start to move you are in the Flight Zone.
- Entering the Flight Zone will cause movement that is usually away from you. Deep hurried invasion of this space can prompt fear, agitation, and rapid movement away from you, or aggression and movement towards you.
- The size of the Flight Zone diminishes with frequent, gentle handling.

Managing the Flight Zone

When you approach an animal from outside its Flight Zone, the animal will turn and face you. To initiate movement, apply gentle pressure at the edge of the Flight Zone (Figure 1). Upon entering this area, the animal will turn away. Do not continue to pressure the animal's Flight Zone, once it is already moving away from you. The size of this Flight Zone depends on genetics, temperament and the quantity and quality of human contact the animal has received. Don't push an animal to move if it has nowhere to go or if it cannot find an exit.



Point of Balance

- Is at the animal's shoulder or chest area.
- Cow will move in the opposite direction to the direction the handler is moving as the handler passes the cow's point of balance.

Chutes and Pens

A small handling pen should be filled only half to three-quarters full to prevent overcrowding. In a curved or straight chute cattle will move forward when you walk past them in the opposite direction to their desired movement. By passing the "Point of Balance" at the animal's shoulder, you can encourage forward movement.

Drive a Herd (See Pictures Below)

- Pace or ride back and forth behind the group at a 90 degree angle to the direction you want it to move.
- Keep this up as the cattle move forward.

Get an Animal to Move Forward (or Backward)

- Walk past the animal in the direction opposite to the direction you want the animal to move.
- As you cross the animal's point of balance, it will begin moving forward (or backward).



Tip

Do not overcrowd alleys, respect the distance that animals chose to have between each other.

Bulls

Bulls may cause significant injury due to their huge size advantage and disposition. Turning your back on a bull or running from a bull makes it more likely for you to be attacked and chased, even the quietest bull can cause, under certain circumstances, injury or death. They are most dangerous during the summer months when they are out in herds for breeding.

Bulls should always be raised in a group as this helps them develop good behavioural patterns. Bulls that are raised in isolation tend to become aggressive and dangerous.

Never approach bulls while they are fighting. They are not aware of their surroundings when fighting, and it is easy for them to crash into people or fences while swinging their bodies around.

Safety Tips

- Avoid unnecessary exposure to bulls
- Work with another person
- Be aware of a bull's position at all times
- Know your escape route
- Don't be reckless around bulls

Just how dangerous are bulls?

- Bull attacks account for over 40% of all livestock fatalities on Canadian farms and ranches.
- Only 1 in 20 victims survives a bull attack.
- Most bull attacks occur in stockyards or open fields - not in barns.
- Bulls have a pecking order and may bolt to avoid a more dominant bull.
- Mating season is a high risk time for bull attacks (summer months).

Cows with Calves

Cattle exhibit maternal instinct with their young which cause them to be more difficult to handle. The new mother will often perceive you as a threat and charge to protect their newborn. The younger the calf, the more protective the mother. Keep calves as close to the cow as possible when handling.

Heifers can be very dangerous because they have never had a calf and it is impossible to know how they will react to motherhood. Extra precaution should be taken.

Take note of cows that have shown signs of aggression or charged before. They will often repeat the behaviour and should be culled from your herd.



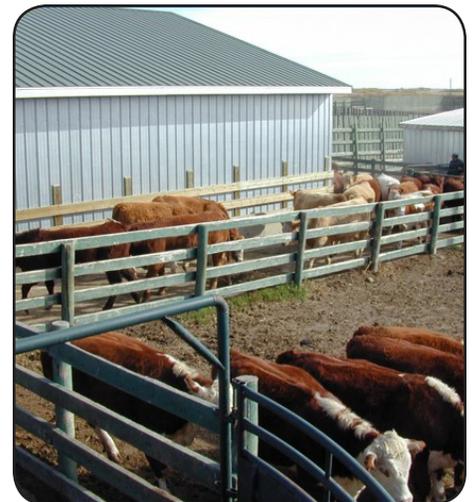
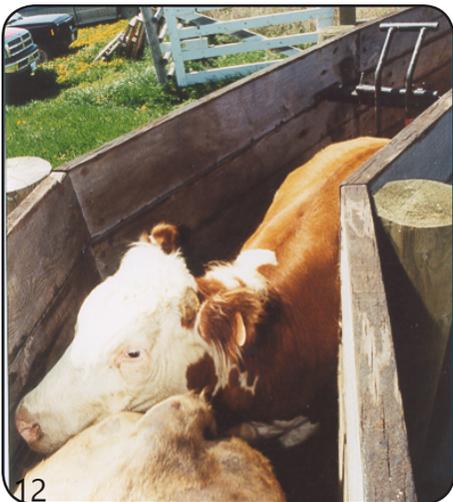
Livestock Facilities

Proper livestock facilities reduce strain on both you and the animal and will keep your workers safe.

- Keep facilities in good repair
- Provide adequate lighting - shadows can spook an animal. Light directed at the ramp can often help keep animals moving.
- Make sure floors, chutes, and ramps have non-slip footing and keep floors dry.
- Don't fill holding pens more than half to 3/4 full for easy movement and sorting.
- Make ramp slopes gradual.
- Keep chutes narrow enough so cattle can't turn around.
- Curved chutes encourage cattle to move forward.
- Consider investing in devices that reduce strain for the cattle handler, such as back-up restraints.
- Noise should be minimized in all cattle handling facilities.

Consider a man escape.

Stand beside a gate instead of behind it. You won't be crushed if it is pushed open.



New Workers

New workers and children are at high risk of injury or death while working with livestock. Train all workers on the proper ways to handle livestock. Avoid unnecessary injuries by teaching proper handling techniques and supervising their work until you are sure they are capable themselves. Always be available to new workers to help when necessary and make sure they understand that they do not need to do anything they are unfamiliar with or haven't done before. All workers must know the importance of proper PPE including gloves and closed toe footwear, preferably with steel-toe coverings.

Zoonotic Diseases

Zoonotic diseases can be transmitted from animals to humans and can cause mild to life-threatening illness. A farmer can contract zoonotic illnesses by handling infected animals, and disposing of infected tissues. Zoonotic diseases can be transmitted to humans from animals that are ill and animals that appear healthy.

- Use strict hygiene and sanitation practices.
- Wash your hands any time you have had contact with animals and before having contact with children or immune-depressed individuals, eating, or touching your eyes or mouth.
- Treat or dispose of infected animals promptly.
- Dispose of infected tissues appropriately.
- Clean contaminated sites properly.
- Use personal protective equipment (PPE)
- Ensure all workers and visitors are aware of the risks.
- Keep any cuts or breaks in skin covered.
- Keep the dust levels down in working areas as much as possible.

Always Plan for Emergencies

- Never work alone! Make sure that someone else knows how long you are gone for and when you are to return.
- Keep a cell phone with you in case you need to call for help.
- Make sure vehicles and cattle facilities are equipped with first aid supplies.
- Always have an exit plan.

When is your child ready to work with animals?

Keep children away from cattle handling areas.

For the North American Guidelines for Children's Agricultural Tasks, go to the Safe Kids Canada website resource list: www.safekidscanada.ca





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Acknowledgements

Prepared by the Agricultural Health and Safety Network staff

Reviewed by:

Dr. Diego Moya, Assistant Professor in Cattle Welfare & Behaviour at the Western College of Veterinary Medicine

Kendra Ulmer, RN, Canadian Centre for Health and Safety in Agriculture

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**The Agricultural Health and Safety Network
Canadian Centre for Health and Safety in Agriculture (CCHSA)**

104 Clinic Place, Box 23, University of Saskatchewan
Saskatoon, SK S7N 2Z4

Phone: (306)966-6644 or (306)966-6647

Fax: (306)966-8799



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Canadian Centre for Health
and Safety in Agriculture

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