



Training Handbook
for
Auction Marts, Buying Stations and Assembly Yards

Recommended Best Practices
for
Employee Training
Low Stress Cattle Handling
Employee Safety
Site Maintenance & Design
Emergency Planning
Dealing With Inspectors and the Public

**The Handbook was developed for Livestock Markets
Association of Canada Members Only**

**These are recommendations only and are intended
to be used to assist in employee training and as
reference materials for LMAC members and their
employees.**

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Disclaimer

The primary purpose of this handbook is to make best practice recommendations to intermediate site operators that house cattle on a short-term basis. These include auction markets, assembly yards, buying stations and feed water rest sites for livestock. The handbook is to be used as a training reference tool for low stress cattle handling and employee safety training.

It is important to note that while the authors have made every effort to ensure accuracy and completeness, this should not be considered the final word on the areas of law and practice. Seek the advice of appropriate professionals and experts as the facts of each situation may differ from those set in this handbook. All information is provided entirely “as is,” and the authors make no representations, warranties or conditions, either express or implied, in connection with the use of or reliance upon this information. The information is provided to the recipient entirely at the risk of the recipient and, because the recipient assumes full responsibility, the authors shall not be liable for any claims, damages or losses of any kind based on any theory of liability arising out of the use of reliance upon this information (including omissions, inaccuracies, typographical errors and infringing of third party rights). The reader on a case-by-case basis should reference expert, professional, legal or veterinary advice. This handbook is subject to updates, revisions and modifications at any time.

Introduction:

Guide to Animal Handling and Employee Training for Intermediate Sites

The livestock market (an intermediate site) is one of the most public points in the cattle industry. The Livestock Markets Association of Canada (LMAC), the national voice of the livestock auction industry, is committed to continuous improvement with respect to animal handling and welfare, and employee safety. With that goal in mind, LMAC, with the assistance of representatives from the Canadian Cattle Association (CCA), has developed this handbook that contains “Best Practice Recommendations” with regards to low stress livestock handling and employee safety at intermediate sites.

Intermediate sites temporarily house cattle that are unfamiliar with their surroundings. It is important to reduce the potential for stress and injury to both livestock and employees at these sites. Well-designed and maintained facilities and well-trained livestock handlers can mitigate these risks.

Livestock industry intermediate sites are subject to regulatory requirements, and can also draw interest from the general public, media and animal advocacy groups. It is of utmost importance that livestock auction markets and other intermediate sites emphasize proper low stress animal handling techniques and practices at their facilities. From both a business and ethical perspective, intermediate site owners and operators take very seriously their responsibilities when cattle are placed in their care. While the welfare of animals in their care is important, the safety of their employees and customers is equally important.

One way to reassure the public that intermediate sites are doing the right thing is to demonstrate that owners, operators, staff and service providers throughout the intermediate sites system are made aware of requirements and best practices and to strive for continuous improvement.

This document contains “Best Practice Recommendations” for Canadian intermediate sites that house cattle on a short-term basis. Intermediate sites in this document would include **auction markets, assembly yards, buying stations and feed-water rest facilities**. The recommendations in this handbook are directed specifically towards cattle handling. The reader should consult other materials if handling other species.

The content of this document will be centred on four pillars:

1. Animal handling and care
2. Employee safety and training
3. Facility design and maintenance
4. Emergency planning and procedures

This is a ***Guide to Animal Handling and Employee Training for Intermediate Sites*** and is designed to serve as a tool to assist owners, managers and employee trainers in creating and following a structured animal handling and employee education program. This guide is a critical tool, but it is not meant to be comprehensive.

Intermediate sites and individuals who work there should take all measures necessary to ensure proper low stress animal handling and employee safety. The safety of the site, the bottom line of your business, and the protection of our very public industry are dependent upon continued education and the use of proper animal handling practices.

It is recommended that employee education training sessions be held regularly to ensure that all employees who handle livestock are up-to-date on low stress, humane livestock handling practices. It is equally important that all employees are familiar with federal, provincial and municipal regulations that pertain to humane livestock handling and transportation. Each province regulates the humane treatment of animals on farms, in auction markets, assembly yards, buying stations and feed-water rest establishments. Each province has its own enforcement system. Some provinces have additional legislation related to humane animal transport. No one can ignore the law. Review the requirements and recommended practices in the Canadian Code of Practice for the Care and Handling of Beef Cattle.

If you are involved in housing or transporting animals, you are expected to comply with all regulations pertaining to your tasks. Regulated parties are encouraged to access both the federal and provincial regulations in which they operate. Key regulatory considerations to keep in mind include:

- **Federal Health of Animals Regulations: *Part XII: Transport of Animals-Regulatory Amendment***
- ***Provincial Legislation – check for the province you are located and operating in.***

Roles & Responsibilities of Site Manager and Owner

Good handling practices start with management and are encouraged and conveyed throughout the chain of command. Owners/managers should lead by example!

Owners, managers and foremen of intermediate sites have a responsibility to ensure that all employees and visitors at the facility follow proper low stress animal handling procedures, and work to protect livestock, employees and others on site from injury.

Checklist for Intermediate Site Owners/Managers

- Does this facility adhere to current federal, provincial and municipal laws and regulations to help ensure proper livestock handling?
- Is this training required for all new employees and documented by management?
- Have employees at this intermediate site undergone training on the low stress animal handling procedures and risk management?
- Have employees who have participated and completed the training program signed a document that acknowledges their completion of the training program?
- Are employees offered regular internal training updates, and are they provided opportunities to attend outside training programs on low stress handling, employee safety and facility maintenance?
- Are the livestock arriving at and departing from this facility handled and treated in an appropriate low stress manner?
- Do I understand, and are my employees aware of the constant potential for our actions to be scrutinized by regulatory officials or the public?
- Does this business have an employee policy for livestock handling?
- Does this business have a policy for handling injured, disabled or non-ambulatory animals? Is there an after-hours person with decision-making authority available on call?
- Is someone identified as the responsible party for enforcing the animal handling policies at all times (especially in the working areas of yard)?
- Do all employees know the appropriate way to respond when they observe others handling livestock egregiously?
- Is someone designated and trained to carry out euthanasia for all classes of livestock commonly handled?
- Are euthanasia tools readily available at your facility?
- Are the euthanasia tools maintained and stored under manufacturer specifications?
- Are the handling and storage areas well maintained to ensure a safe working environment for employees and a low stress environment for the livestock?
- Are alleys clear and safe for the movement of livestock?
- Are gates hung correctly to open and close easily?
- Is electric prod usage discouraged or limited in use?
- Are feed and water readily available for animals housed for more than 36 hours and as conditions require?
- Is adequate bedding that meets the environmental conditions being placed in the pen?
- What techniques and equipment are used when non-ambulatory animals are moved?
- Is all staff required to read through this handbook as part of their training program, and to confirm this has occurred?

ANIMAL HANDLING AT YOUR FACILITY

Two golden rules should be utilized when handling animals in your facility. Number one: slow down and calm down. Most injuries occur when animals are excited and/or over-crowded. Number two: use common sense and think about the consequences of your actions.

The ability to interpret/predict an animal's reaction is the most important aspect when handling livestock. Handlers need to understand behavioural principles such as the flight zone and point of balance of animals. Cattle have a flight zone and point of balance. They want to see you and be with other cattle. Use their behaviour to your advantage when handling cattle. Use pressure and release to handle cattle, as long as they have somewhere to go. Create a plan for handling the specific cattle before you start working. Understanding the flight zone and using your position to start or stop movement is key to effectively handling cattle. As a handler, you must keep cattle comfortable so that they will go by you and do what you want.

Experts agree that moving too fast, or trying to push cattle faster than they are able to move, or before they are ready, will only slow down your operation, and could lead to injuries for cattle or handlers. Cattle handling should be intentional, methodical and precise. If you slow down your handling techniques, you will find that your operation is faster and more efficient in the long run. Moving animals too quickly can result in negative effects. Avoid yelling, moving too quickly, or making unnecessary movements.

When handling and sorting cattle, smaller working groups are recommended. Move animals in small groups. Areas like the crowd pen and the staging areas leading to the crowd pen where animals are being actively handled (and not simply penned or held) should never be filled more than 75 percent full; 50 per cent is ideal.¹

Do not push crowd gates up tight against the animals, as cattle need room to turn. When a group of animals is particularly difficult to move, reduce the group size. The size of the groups should be influenced by the size of your facilities and how wild the cattle are. As a rule, cattle are herd animals and want to be with other animals. Cattle should be worked slowly back to other cattle. Give them the time and space to work this out for themselves. Set them up for success by blocking off the wrong routes, and creating a clear path for them to re-join other cattle in the designated area that you wish them to go.

Ideally, cattle shouldn't be worked from the rear. Cattle have a blind spot directly behind their tail and hindquarters. They are also prey animals and associate a handler behind them as a predator. Unless it's absolutely necessary, don't work cattle from behind. Work to one side or the other instead. You should also move in straight lines to stimulate movement; predators use an arch pattern.

¹ Temple Grandin for the North American Meat Institute 2017 Recommended Animal Handling Guidelines & Audit Guide

If you find cattle aren't moving correctly, evaluate your facilities and/or handling techniques, and see if there is something you could be doing differently to have cattle respond.

Cattle handling is a skill that takes time to hone. The goal of proper cattle handling is to minimize the stress on the animal. Stress can make the animal prone to becoming agitated, which can result in injury to the animal or handler. Expert handlers have a unique appreciation for cattle; they understand the behaviour of animals, allowing them to intuitively predict animal behaviour and move them in a way that leverages the natural instincts (flight zones) of cattle, thus reducing the stress on the cattle.

Create a plan for handling the specific cattle before you start working.

Livestock should be handled in a manner so as to avoid as much stress as possible. Always handle livestock quietly and calmly to prevent injuries to livestock and employees.

Aggressive handling should not be used. This includes over-use or improper use of tools or techniques.

Take advantage of flight zone and point of balance training to move livestock. Be aware of obstacles and blind spots that may be distracting or deterring the movement of animals through your facility.

Extra care should be taken when working with cow-calf pairs to ensure the young calves are not crowded or trampled. Handlers should take extra caution, as mother cows may feel threatened if the handler is located between the cow and calf.

Cattle acclimatized to both people and handling facilities have lower stress and improved productivity. Fearful cattle will show eye white and switch their tails back and forth; they may paw the ground and vocalize as warning signs.

Sudden novel events are frightening to animals.

Low stress livestock handling has productivity benefits. It will improve occupational health and safety as well as reducing injuries to livestock at your facility.

Stress can be minimized by:

- Maintaining handling facilities in good working order and completing repairs well before husbandry practices are carried out.
- Keeping animal handling to the minimum level.
- Designing handling facilities that minimize the risk of injury and to take advantage of natural cattle behaviour.
- Ensure livestock handlers are competent and well trained.
- Avoiding sudden jerking movements and loud noises.
- Behaving in a calm and controlled manner.
- Applying optimal pressure rather than excessive pressure by taking advantage of the 'flight zone' (extensively managed livestock that are not

used to people have a larger flight zone than livestock handled more often).

- Calmly speaking to livestock while you work with them as it can have a calming effect (avoid shouting, yelling or other sudden loud noises).
- Avoiding rushing livestock, give them time to assess a situation.
- Preventing overcrowding in confined spaces.
- Avoiding handling livestock during extreme weather conditions.

As noted, there are two instinctive behaviours that affect how animals behave during handling: the flight zone and the point of balance.

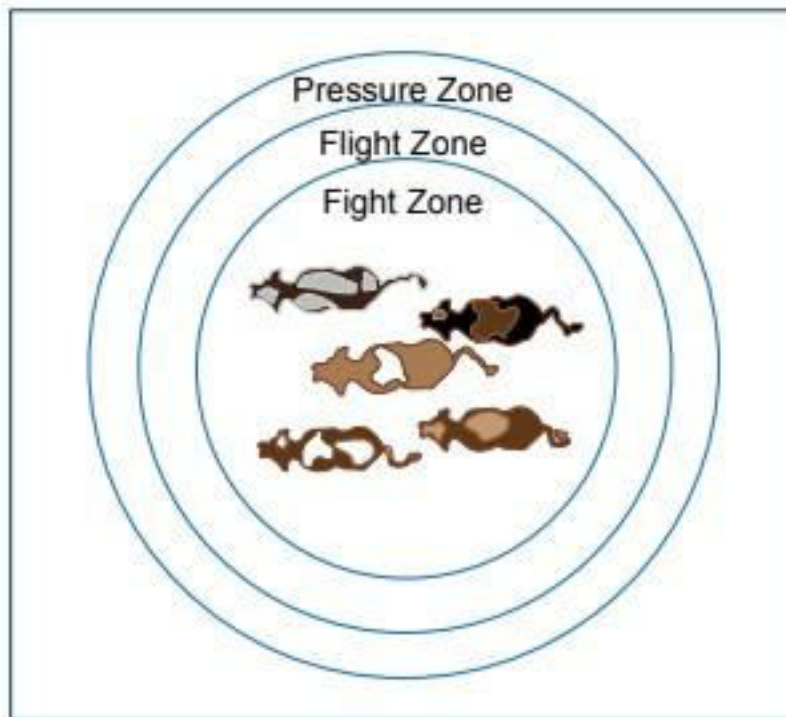
Understanding Flight Zone and Point of Balance

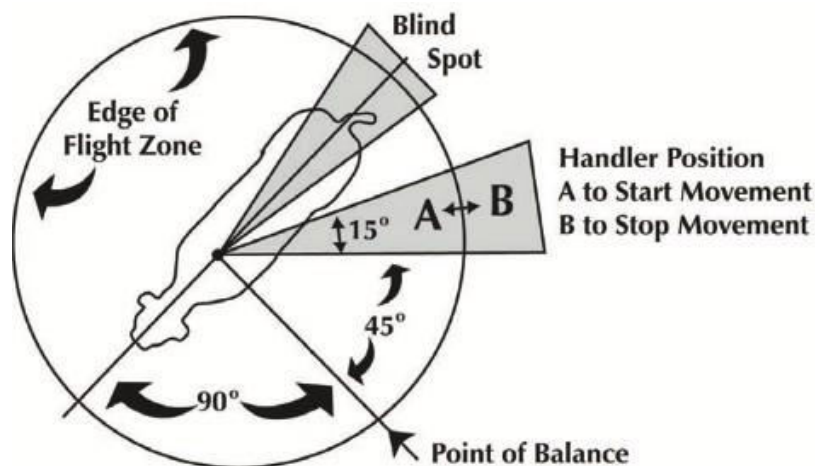
The Flight Zone - Path to move animals forward

Flight zone refers to the animal's personal space, the minimum distance an animal will maintain between itself and a potential threat. It is important to note that the flight zone will vary between animals and the size of the flight zone depends on tameness, the angle of the handler's approach, and state of excitement. Completely tame animals have no flight zone and people can touch them. Other animals will begin to move away when the handler penetrates the edge of the flight zone. If all the animals are facing the handler, the handler is outside the flight zone.

A good handler will know when to enter an animal's flight zone and when to retreat so that animals will move calmly and quietly in the desired direction. When the handler enters the flight zone, the animals will often turn and face a potential threat and try to establish a safe distance. To keep animals calm and move them easily, the handler should work on the edge of the flight zone. The handler penetrates the flight zone to make the animals move, and he backs up if he wants them to stop moving. Deep penetration of the flight zone should be avoided. Animals become upset when a person is inside their personal space and they are unable to move away. If cattle turn back and run past the handler while they are being driven down a drive alley in the intermediate site, overly deep penetration of the flight zone is a likely cause. If animals start to turn back away from the handler, the handler should back up and increase distance between him and the animals. Backing up must be done at the first indication of a turn back. ²

Figure 3 Mob personal space zones





The Point of Balance

The point of balance is at the animal's shoulder. All species of livestock will move forward if the handler stands behind the point of balance. They will back up if the handler stands in front of the point of balance. Many handlers make the mistake of standing in front of the point of balance while attempting to make an animal move forward in a chute. Groups of cattle in a chute will often move forward without prodding when the handler walks past the point of balance in the opposite direction of each animal in the chute. If the animals are moving through the chute by themselves, leave them alone. It is not necessary and not recommended to prod every animal; often they can be moved by lightly tapping.

Livestock naturally follow the leader, and handlers need to take advantage of this behaviour. Cattle will move more easily from the crowd pen into the single file chute when the chute is partially empty. This provides space for the animals to immediately enter the chute and reduces the frequency of animals turning around in the crowd pen. Some other factors to consider:

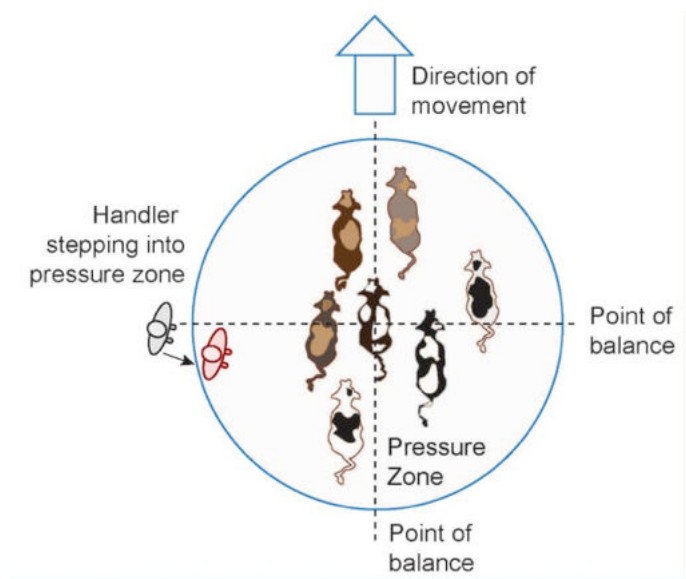
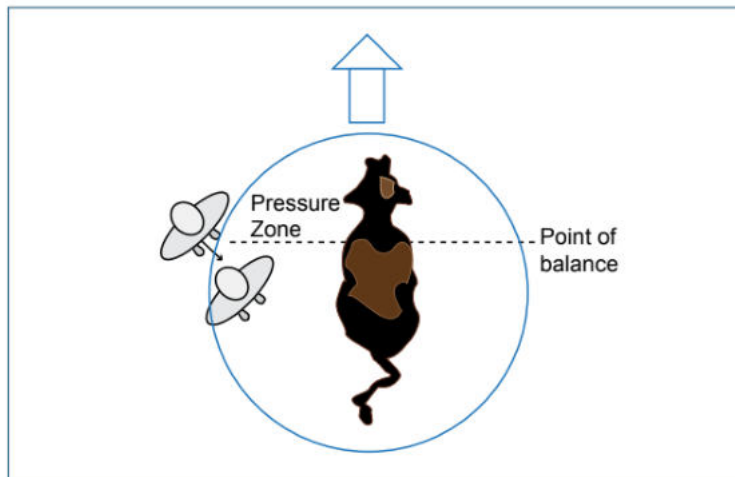
- Animals going back to where they came from: Cattle naturally feel more comfortable going back to an area that they are familiar with.
- Loose bunching in a herd: When sorting cattle, smaller groups work better. Overcrowded sorting areas will cause bunching and the use of flight zones and points of balance will be greatly reduced.
- Agitated behaviour is usually associated with fear and stress. Agitated animals may be milling tightly in a circle. Cattle that have been separated from the group may become agitated very quickly. In this situation the animal in question should be penned with another or other animals of similar weight and sex in an effort to calm it down. Handlers should be extremely cautious with mature bulls as they can be very territorial and their demeanour can change very quickly.

4.1 Point of balance

An animal has two points of balance. When inside the pressure zone, the livestock handler's position in relation to an animal's point of balance can affect which way the animal will go.

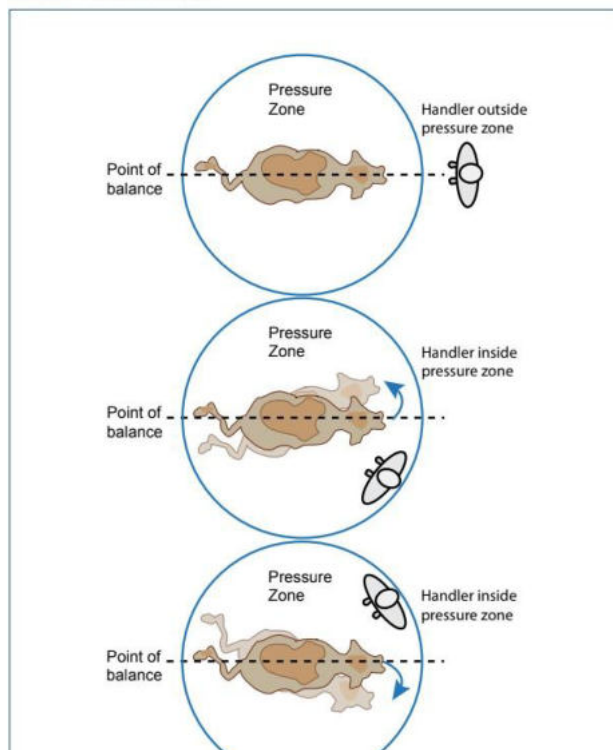
The first point of balance is behind the shoulder blades—see Figure 4. If the handler moves behind this line the animal moves forward. By moving in front of this line the animal will move backwards or turn away.

Figure 4 First point of balance



The second point of balance is from the centre of the head to the tail—see Figure 5. The livestock handler will move an animal sideways by moving either side of this line.

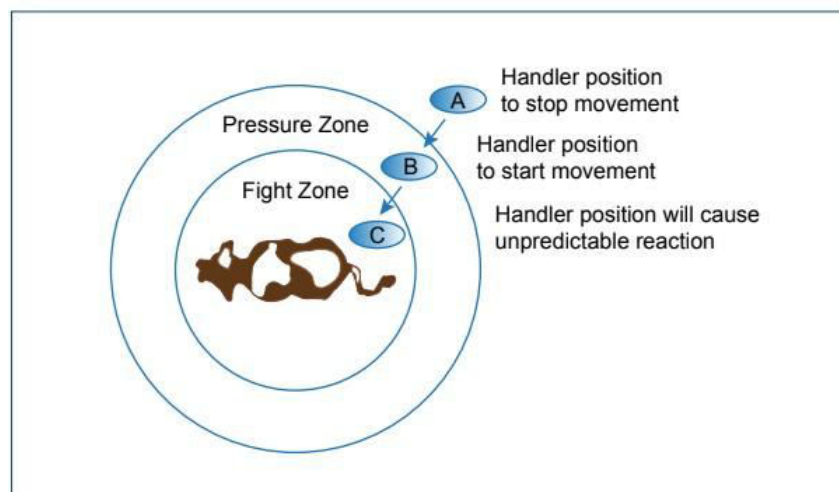
Figure 5 Second point of balance



4.2 Pressure

To move cattle using natural techniques, livestock handlers must move into the pressure zone of the animal but stop before the flight zone. Stepping beyond the pressure zone into the flight zone will cause an unpredictable reaction as it increases the animal's stress and generates a flight response—see Figure 7.

Figure 7 Livestock handler's position in pressure zones



Control Excessive Noise

Livestock move and react more predictably when they are calm and feel secure. They are also more sensitive than people to high frequency noises. Excessive yelling and hollering while handling and herding livestock can cause a great deal of stress. It is recommended that yelling be kept to a minimum when working with livestock. Excited, aggressive handling causes animals to watch the activity rather than move in the right direction. Loud, abrupt noises, such as the sound of banging metal can cause distress in livestock.

Cattle Field of Vision

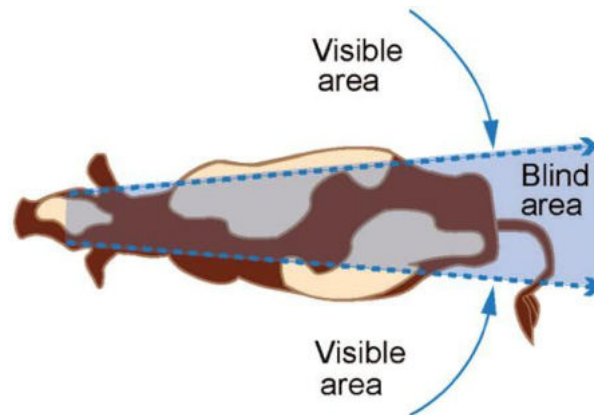
With eyes on the sides of their heads, cattle have a wide range of vision of approximately 330 degrees. However, they cannot judge distances well as they usually see the object with one eye only.

Cattle have a blind area directly behind them. If they detect movement to the side or rear, they will seek to turn to the object so both eyes can be used to assess whether the object presents a risk and gauge the object's distance more accurately.³

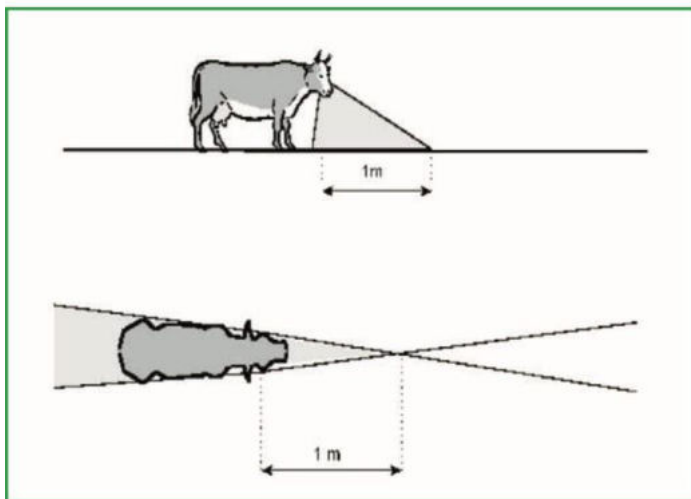
Blind Spot

When you stand behind an animal in their blind spot, they are unable to see you. When the animal is unaware of where you are, it will cause that animal fear. This can result in the animal running off or turning around to face you instead of moving in the direction that you wanted the animal to go.

1. **Cattle want to see you.** If cattle can see you, they know where the pressure is coming from. It is key to handler positioning and cattle response.
2. **Cattle want to go around you.** When you put pressure on cattle, they will want to walk around you or circle you. They will walk off, but will eventually stop, turn and look, because they want to see you.
3. **Cattle are herd animals.** If you get one started, the rest will usually go.
4. **Cattle want to remove pressure.** If you put pressure on them, they take off. That's the flight zone.
5. **Cattle can only process one main thought at a time.** If you put pressure on them until they move, it's effective. If you push too hard, they'll think of something else and go somewhere else.

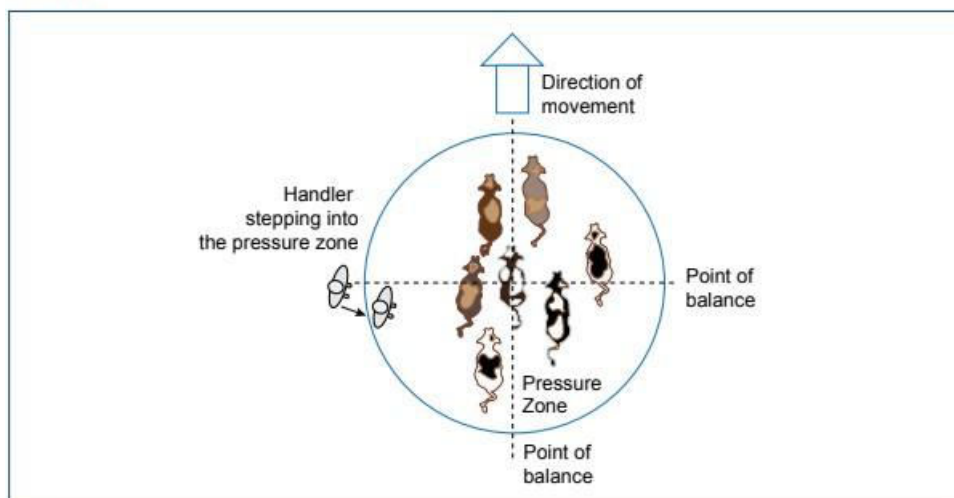


Cattle see quite differently from us



The points of balance apply equally to a mob of cattle as they do to individual animals—see Figure 6.

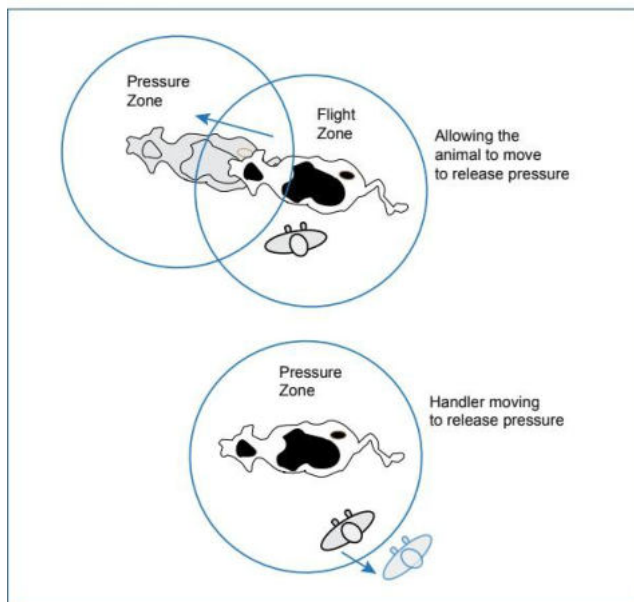
Figure 6 Mob points of balance



Once pressure is applied and the cattle respond to the pressure, the cattle must be 'rewarded' by releasing the pressure. Continual pressure is not tolerated by cattle and this will cause them to respond by lying down, breaking away from the herd or fighting the livestock handler.

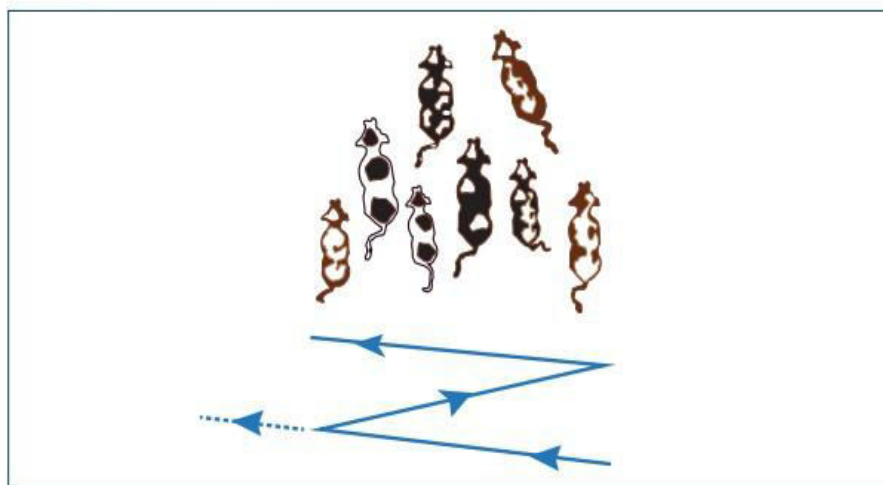
Livestock handlers release pressure by exiting the pressure zone or allowing the animal to move away—see Figure 8.

Figure 8 Releasing pressure



A zig-zag approach is the preferable method, with the first line aimed so the livestock handler would go past the cattle if they continued on that line—see Figure 10. Using zig zags to move livestock can be used by livestock handlers on foot, motorbikes, horses, vehicles and aircraft.

Figure 10 Zig-zag technique



Handling High Risk Cattle

Handling Bulls

Bulls are some of the most dangerous animals delivered to an intermediate site. They are large, filled with adrenaline and testosterone, and can inflict injury in seconds, either intentionally or by accident. Even apparently quiet bulls can easily kick, crush or gore people to death.

Any time that you are working with bulls or moving bulls, do so under calm conditions, and always have an escape plan. Bulls can become very aggressive very quickly, often without warning. An attack can happen at any time, to anyone, with any bull. Proper low-stress cattle handling can prevent many bull-related human injuries. Calm, clear and unthreatening direction for the bulls will prevent activation of the fight or flight response. Employees should never work alone with bulls or enter pens with bulls. Penning and loading bulls that have been comingled after being sold is extremely dangerous. When multiple bulls are in the same pen, especially if they are not familiar with each other, there is the potential for a confrontation between the bulls. Fighting bulls do not care what is in their way. The dominant bull in the pen may not be the most dangerous in the pen; often the scared bulls that are trying to escape are very dangerous and will “run blind” in their escape attempt. Dairy bulls have a tendency to be more aggressive than beef breed bulls. However, employees should never trust any bull under any circumstances!

Be constantly vigilant whenever you are required to work with bulls. Pay attention to the bull’s body language; they will turn broadside to present their size and power. Watch for signs of aggression such as pawing at the ground, shaking of the head and bellowing. Never turn your back on a bull, even if you think it is not paying attention to you. Bulls can and will attack unprovoked. Stay clear of bulls that are fighting in a pen or alleyway.

Just how dangerous are bulls?

- Bull attacks account for over 40% of all livestock related human 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.⁴

Cows with Calves

Cattle exhibit maternal instincts 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 her newborn. The younger the calf, the more protective the mother. Keep calves as close to the cow as possible when handling.^{5 & 6}

⁴ – 5 University of Saskatchewan: Canadian Center for Health and Safety in Agriculture. Low-Stress Cattle Handling For Productivity and

⁶ Government of Manitoba – Low Stress Livestock Handling

Culls cows and cattle brought in from the pasture can also be very dangerous. Handlers should always remember that any type of cattle can become extremely dangerous when they are forced into a fight or flight situation.

Tools – Driving Tools for Cattle

When used properly, handling tools can assist in safe and humane cattle movement. These tools include, but are not limited to, rattle paddles, rattle sticks, sorting sticks and nylon flags. Following is some information on the various tools.



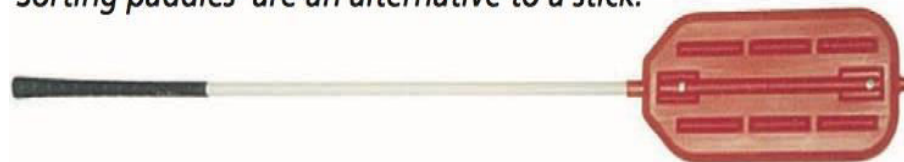
Recommended Livestock Handling Tools



These are examples of recommended handling tools for cattle.

From an animal welfare perspective, the 'rattle paddles' are preferable to sticks, and their regular use should be investigated and encouraged at all intermediate sites.²¹

'Sorting paddles' are an alternative to a stick.



Alternatives to 'sorting paddles' are small flags or plastic tassels that are attached to the end of a sorting stick. Commercially produced sorting sticks are also an industry accepted sorting tool. They are typically one metre long and made from wood or plastic, with either a shepherd-hook handle to hang on gates or the handler's arm when not in use, or a rubber grip. Intermediate sites should provide their employees with approved sorting tools to ensure compliance.

A paddle or stick has two purposes. The main function is that it is an extension of the handler's arm, which helps to keep the handler out of reach of kicks and head swings when directing and turning cattle. The second is for self-defence in the occasional situation where that is needed. This is the only time when it is acceptable to hit the cattle, and then is best around the nose or face. Indiscriminate use of sticks is unacceptable, because it may raise the animal's arousal level, which can cause the animal to become agitated, and it may bruise the animal.⁷

Whips are **not recommended** for use in intermediate sites. Whips can cause eye injuries to both livestock and employees; the risk is increased in crowded areas.

The use of dogs at intermediate sites to move cattle is not recommended, especially in close confinement areas. Dogs are seen by cattle as potential predators and therefore should not be routinely present in either the working areas of an intermediate site or the in-the-ring area, including the viewing areas. The only exception may be to help recover an escaped animal. *Even the most useful dog can create chaos and increased risks for all in an intermediate site.*

All owners, managers and employees have a responsibility to follow the best animal handling procedures and to protect livestock and employees from injury. Employees should notify their supervisor any time they observe animal mistreatment. All employees should be trained in the proper use of movement tools for livestock.

⁷ Guidance on the Safe Handling of Livestock at Marts and Lairages January 2019 by the Health and Safety Authority Australia

Electric Prods

Recommended Use of Electric Prods and Handling Tools When Handling/Moving Livestock

Electric prods are only acceptable for use on cattle as a last resort, never as a primary tool. An electric prod should only be applied to the lateral portion of the rear leg muscles between the hock joint and the hip joint, when the animal has sufficient space to move forward.

- Electric prod use should be minimized and only used as deemed necessary by trained employees.
- Use of electric prods when handling livestock is a practice that should be minimized. However, situations arise where livestock will refuse to move from a trailer, alley or chute. One animal balking can have harmful impacts on handler safety and negatively impact welfare for the rest of the animals in the group. Often other means of encouraging the animal to move (pushing or pulling) are hazardous to the personnel working with the livestock. Therefore, there are certain specific situations that occur when selective use of an electric prod is necessary to improve handler safety and animal welfare for the rest of the animals in the group
- Selective use of an electric prod is acceptable on healthy uncooperative animals that only have one direction of movement afforded them and the other measures of motivation to move them have failed (presence in flight zone, use of sorting tools and vocalizations). This would include animals in trailers, chutes, and alleys. It is unacceptable to use an electric prod on livestock when their movement is restricted due to lameness, injury, pain or sickness. If an animal is exhibiting signs of injury or illness, veterinary assistance should be sought.
- Prod use is restricted to the back and hind legs, never on sensitive areas. Electric prods or any other driving aid should never be used on sensitive areas (face, vulva, genital or anal areas, ears, eyes and nose) and never on calves under three months of age.
- Allow animals to move at their own pace. Never touch an animal that is already moving with a tool or prod. For example, while electric prods can be a useful tool to provide non-abusive stimulus for movement when used correctly, the repeated use of a prod or any other stimulus will garner only negative results, placing the animal, the employee, and your business at risk.
- Duration of the shock should not exceed one second. Count to five before administering any additional taps or shocks. Animals should be allowed time to respond before another shock is administered. If you have already delivered two shocks to an individual animal, STOP. Do not use electric prod repeatedly on the same animal.

The University of North Dakota recommends the following metrics can be used to track the percentage of animals prodded at the Intermediate Site:

- 0% animals moved with electric prod - Excellent
 - 5% animals moved with electric prod - Acceptable
 - 20% animals moved with electric prod - Unacceptable
 - 20% Plus animals moved with an electric prod - Serious Problem
- Corrective action should be taken when the percentage of animals that have been prodded during handling exceeds 5%.⁸
- Often, tapping the side of the chute will encourage the cattle to move.



Using Horses at Intermediate Sites

Maintaining safety when working cattle in an intermediate site requires riders to understand cattle behaviour and horse footing conditions. Supervisors should know the abilities of both riders and horses in order to avoid putting them in situations they aren't equipped to handle. It is important to understand footing conditions when a horse is working in wet, muddy, or icy conditions. This is important in knowing what the rider can safely ask the horse to do. If they need to move quickly or turn sharply, footing conditions will affect their ability and stability. Keeping adequate shoes (borium for ice and cement) on your horse and allowing them enough time to slow down when working in the pen or alley helps reduce potential for accident or injury. Shoeing preferences differ by rider, however adequate shoes will cause a horse to be more confident in their footing and less apt to be nervous or panic.

Riders working in an alleyway have many factors to keep in mind as they work. For that reason, working at a steady, disciplined pace will benefit both riders and horses.

In general, pen riders will be safer if they adopt an attitude of working slowly and correctly as they learn to work with animals. Doing so will reinforce safe behaviours and speed will come over time.

Green-broke horses should never be used in the close confines of an intermediate site. Horses used at intermediate sites have to be comfortable with opening and closing gates, sorting a single animal out of a group, pushing a load of cattle down an alleyway or standing quietly while their rider takes care of something. They may work in mud up to their hocks or spend time on hard ground. Horses may have to work in all kinds of weather, in rain, snow, sleet and dust.

⁸ University of North Dakota Animal Care and Use Committee Guiding Principles and Procedures Effective: 17 May, 2018

Horses used at intermediate sites should be able to handle the sounds of slamming gates, sounds coming over the penning speaker, the sounds of semi-trucks coming and going and the noise of back-up alerts on yard equipment.

If additional training is required for horse and rider, management may have to organize a horsemanship principles and safety seminar so riders learn how to safely work with their horse in the intermediate site environment.

Employees on the ground working in the same areas as the horses must be aware of their positioning at all times. They must be careful to make sure that they do not put themselves in the position that they can be kicked, stepped on or crushed against panels or gates.

Communication between alley riders and ground employees is very important. Horse riders should have training, knowledge and experience on animal movement, behaviour, flight zones and points of balance.

Unloading Cattle

When unloading cattle, a quiet low-stress approach works best.

Cattle must have a clear path to move.

Intermediate site staff, at the time of unloading, should assess if any animals need to be segregated and penned separately.

Under federal regulations, compromised animals are not to be transported to intermediate sites. Intermediate site employees have the right to refuse to unload livestock. Knowledgeable, senior staff members should be involved in this decision. If an employee has any doubt as to the health condition of any animal received, it should be duly noted on the receiving slip and penned in a segregated pen.

In the event that a staff member is not qualified or needs advice on receiving and/or penning animals, the name and phone number of a senior staff member with decision-making authority should be posted in the receiving area.

Intermediate site employees **are not required to or encouraged to** enter stock trailers while loading or unloading cattle. The responsibility of getting the cattle off the trailer is that of the transporter. At no time should employees place themselves between a moving truck and the loading dock.

Employees should be aware of federal, provincial and municipal regulations regarding the loading and unloading of livestock at intermediate sites.

SEMI-TRAILERS**BEFORE OPENING THE TRAILER DOOR:**

Make sure that the trailer is square with the loading dock and that there are no openings between the trailer and the loading dock bumper.

Make sure that gates are open in the chute, allowing the cattle to unload without crowding or stopping in the chute.

GROUND LOAD TRAILERS***Drive-Through Chutes:***

Make sure that safety gates are closed so that livestock cannot escape between the trailer and the walls of the drive-through chute.

Make sure that the alleyway is open to the holding pen so that the cattle do not turn and come back into the unloading area.

Once the path to the holding pen has been cleared, staff can give the transporter permission to open the trailer door. Staff and the transporter should make sure that they are not in danger of coming in contact with a swinging door in the event that cattle push it open faster than expected.

The trailer door should not be closed until the cattle have entered the holding area and the gate behind them has been secured.

Safety gates should be opened before the transporter departs.

BACK UP UNLOADING:

For sites that require a stock trailer to back up into a ground level unloading ramps or docks, the following is to be kept in mind.

The driver's side of the dock should have a distinctive post for the driver to use as a guide when backing up. The swing gate on the trailer should not be opened unless the trailer is square with an unloading dock, the driver has exited the truck, and presented the proper paperwork to the receiver. Employees should make sure that they are not in danger of coming in contact with the door in the event the cattle push the door open faster than anticipated. Employees should follow the cattle to the holding pen and fasten the gate behind the cattle so that they cannot return to the trailer or escape. The trailer door should not be closed until the cattle are secured in the holding pens.

Loading Livestock

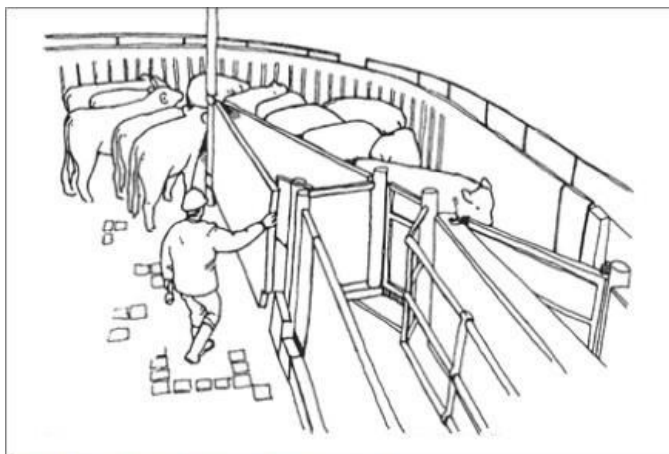
Loading Cattle

Livestock naturally follow the leader, and handlers need to take advantage of this behaviour. Cattle will move more easily from the crowd pen into the single file chute when the chute is partially empty. This provides space for the animals to immediately enter the chute and reduces the frequency of animals turning around in the crowd pen.

A partially empty chute provide room to take advantage of the cattle's natural behaviour. Handlers are often reluctant to do this because they fear gaps will form in the line and will slow the process, once a handler learns to use this method, they will find that as the animals enter the crown pen, they will head right up the chute. One of the most common mistakes is overloading the crowd pen that leads to the single file chute. The crowd pen and the staging alley between the crowd pen and the yards should never be loaded more than 75 percent full (half full is ideal) so that animals have room to turn around.⁹

Animals can become upset when a person is inside their flight zone and they are unable to move away. If cattle turn back and run past the handler while they are being driven down the alley or out of a pen in the intermediate site, overly deep penetration of the flight zone is a likely cause. The handler should back up and increase the distance between him and the animals at the first indication of a turn back. If a group of livestock balks at an object, a smell or a shadow ahead, be patient and wait for the leader to cross the shadow; the other animals will follow.

If cattle rear up in the single file chute, back away from them and don't touch them or hit them. They are rearing in an attempt to increase the distance between themselves and the handler.



Round crowd pen with correct number of cattle

⁹ Temple Grandin, Ph.D. Professor of Animal Science Colorado State University for the North American Meat Institute Animal Welfare Committee 201716

If all animals are considered fit for travel, they should be brought to the loading area and divided into groups that fit the compartments on the transport trailer. The loading density should be in compliance with federal transport regulations. The cattle should be directed to the loading chute in a stress-free manner. After the livestock are loaded on the transport trailer, the intermediate site should have the driver sign a “pass out” slip confirming the number of cattle and the identification number of a pen or buyer’s purchase number. A Transfer of Care or Animal Transport Record document indicating that all of the cattle on the transport were deemed fit for transport at the time of loading, and the time of last access to feed, water and rest should accompany the cattle.

In the event that any animals are found to be “not fit for transport,” the site employee should report the event to the supervisor-on-call, who in turn should notify the owner of the livestock.

For more information on transport regulations and requirements please visit:

<https://www.beefresearch.ca/blog/updated-livestock-transport-regulations/> or can the QR code:



The use of a crowding tub at the bottom of the chute is a safe and low stress way to load cattle.

Feed, Water and Rest

All intermediate sites must follow the federal Health of Animals regulation requirements regarding feed, water and rest.

The need for access to appropriate feed, water and space to lie down and rest will depend on how long animals will be at an intermediate site.

Animals that have been without feed and water for 36 hours and arriving at intermediate sites, are required to be provided with feed and water for eight hours.

Animals that are being housed at an intermediate site must receive feed and water after 36 hours.

Food that is free of twine, and water that is suitable in both quantity and quality must be provided to meet the animals' requirements based on their classification (age/weight/body condition, etc.)

Water bowls should be checked and cleaned on a daily basis when being used, to make sure that they are in good working order. The temperature of the water should be monitored to meet the seasonal operating requirements. Be aware of the signs of stray (tingle) voltage around water sources, such as reluctance to drink.

DEALING WITH CATTLE ARRIVING AT INTERMEDIATE SITES THAT ARE INJURED, DISABLED OR THAT HAVE BECOME NON-AMBULATORY DURING TRANSPORT, OR ANIMALS INJURED WHILE AT INTERMEDIATE SITES

Assessment

Assess the condition and likelihood for recovery vs. additional injury or suffering:

- Upon arrival, qualified personnel should safely inspect injured, down or disabled animals to determine the condition and likelihood of recovery before moving them from the trailer.
- It is recommended that every effort is made not to accept or unload animals that are in an injured or disabled condition.
- If the injury or condition worsens while at the facility, the first employee to realize the condition of the animal should immediately inspect the animal and administer aid or report the condition to qualified personnel.
- Weak or injured animals should have a pen to themselves. **Weak or injured animals should be segregated and penned separately in a pen away from stronger, active animals, where they may be pushed or trampled.**

If deemed unlikely to recover and at risk for becoming non-ambulatory:

- Non-ambulatory animals are those that cannot stand up or refuse to stand due to injury, sickness or fatigue, even if assisted.
- Prior to unloading, the intermediate site has the right to call CFIA or a veterinarian for assistance in determining "next step actions".

- If the animal is injured after unloading, notify the consignor regarding the animal's condition. The consignor may give consent to have the animal properly euthanized prior to any further movement. If the owner does not agree, a third party such as CFIA or a veterinarian should be consulted on "next steps". These decisions should be made in a manner that will avoid additional injury or suffering.
- If necessary, a "destruction order" should be obtained from CFIA or a veterinarian.
- Staff should check at least once per day to make sure that adequate feed and water is available to non-ambulatory cattle. Consult with a veterinarian on proper pain management.
- When possible, proper euthanasia should be administered immediately and prior to any further movement of the animal.
- If the animal is in a position where euthanasia cannot be administered in a safe and appropriate manner, movement should be limited, and extra care should be taken by employees to limit additional suffering.

Recovery

If deemed a potential for recovery:

- Assess the surrounding conditions.
- As needed, add sand, bedding or other materials to insure proper footing.
- Make sure that the animal has ample room for mobility.
- If necessary, move the animal out of alleyways or traffic areas to protect from additional injury.
- Provide immediate access to feed and water.
- Employees should regularly monitor injured or disabled animals and make sure that feed and water are available.
- Is pain management required? If so, initiate it.
- Allow animals to move at their own pace. Never touch an animal that is already moving with a tool or prod.
- If necessary, move the animal utilizing only low stress handling. Aggressive handling should not be used.
- Qualified personnel should regularly monitor the animal's condition. If the animal becomes non-ambulatory, coordinate with a supervisor or other qualified personnel to determine if other non-abusive stimuli should be used. In the event that the animal recovers and is fit for transport, a Movement Order should be obtained from CFIA or a veterinarian. Notify the consignor about the animal's condition.
- These decisions should be made in a manner that will avoid additional injury or suffering. ¹⁰
- Employees should be informed and aware of federal, provincial and municipal regulations regarding the transport of livestock.

Moving Non-Ambulatory Animals

The best animal handling and management practices will reduce the number of non-ambulatory animals at intermediate sites, but despite all the best efforts and precautions, at some point an animal may go down or be injured.

In this situation, it is absolutely necessary that your site have a clearly defined policy requiring proper treatment of non-ambulatory animals. Market employees must be trained to properly move non-ambulatory animals and have quick access to the equipment or handling devices recommended for moving non-ambulatory animals.

Guidelines

- Bare chains or shackles must never be used to drag or lift an animal.
- Never drag or lift an animal by its limbs or neck.
- Never raise or move an animal with a forklift unless an additional method or device is used to secure the animal during movement.
- The dragging of live animals, tying the legs on split livestock, leaving down animals in non-designated areas, or aggressive handling is prohibited.
- Do not move other animals over one that cannot or does not want to get up.
- Employees should notify their supervisor immediately if they witness someone whom they believe is working aggressively to get an animal to stand up.
- Do not leave downed animals in a pen with stronger, active cattle.
- The method for moving non-ambulatory animals should be selected with consideration for avoiding additional injury or suffering for the animal, as well as employee safety. ¹¹
- Move non-ambulatory cattle very carefully to avoid compromised animal welfare. Acceptable methods of moving non-ambulatory cattle include a sled, low-boy trailer or in the bucket of a loader. Animals should not be “scooped” into a front-end loader bucket, but rather should be humanely rolled into the bucket by caretakers. ¹²

Examples of appropriate movement methods include:

- A protective sling, such as conveyor belting, and placed into a loader bucket, sufficient for the animal’s size.
- A special lifting harness.
- If a loader is used, at least three people will be required to transfer the animal into the bucket. One person runs the loader and the other two roll the animal into the bucket. ¹³



When treatment is attempted, cattle unable to sit up unaided (i.e. lie on their side) and which refuse to eat or drink should be humanely euthanized within 24-36 hours of initial onset.¹⁴

Preloading Assessment

Preparation for transport

Each intermediate site should have a policy regarding the handling of injured, disabled or non-ambulatory animals. The policy should be posted, and all employees should be trained regarding the protocol for handling injured, down, or disabled animals. Only animals that are fit for transport under CFIA regulations may be loaded. If an employee is not sure, have them contact a senior staff member for guidance or seek the advice of a professional before deciding to load an animal. Animals must not be transported unless they are fit enough to withstand the entire journey without suffering pain or distress that is caused by or made worse by, the transport process. It is important for all employees to realize that under the federal livestock transport regulations, both the facility and individual employees can be held liable for loading cattle that are unfit.

Laminated posters to assist with loading decisions are available from CFIA and other sources; these posters should be posted at the site in a visible area near the loading chute and in staff rooms. It is recommended that these posters be used in employee training sessions.

<https://www.beefresearch.ca/content/uploads/2022/05/cattle-transportation-decision-tree.jpg>



Note: CFIA – Fit for Transport guidelines

Fit for Transport

According to the Canadian Food Inspection Agency animals are fit for transport when there are no signs of illness or poor health. This means:

- Animals are bright, alert, moving and breathing normally;
 - Animals are in good body condition;
 - Animals are able to bear weight evenly on all limbs
 - Animals are free from signs of disease (for example, normal feces, normal breathing, normal nasal discharges, no unhealed injuries, lesions or wounds)
 - No inside body parts outside
 - Not likely to give birth during the journey or be affected by metabolic conditions associated with late pregnancy or birth.¹⁵
-
- **An animal is unfit for transport if it:**
 - Is non-ambulatory (cannot walk)
 - Has a fracture that impedes mobility or causes it to exhibit signs of pain or suffering; is lame enough that it exhibits pain or suffering; halted movements or reluctance to walk
 - Is lame to the extent that it cannot walk on all of its legs (non-weight-bearing walking);
 - Has sustained an injury and is hobbled for treatment
 - Is extremely thin
 - Is in shock or is dying
 - Shows signs of dehydration
 - Shows signs of hypothermia or hyperthermia
 - Shows signs of a fever
 - Shows signs of a generalized nervous system disorder
 - Has laboured breathing
 - Has a severe open wound or a severe laceration
 - Has a navel with delayed healing or infection
 - Has a gangrenous udder
 - Has severe squamous cell carcinoma of the eye
 - Is bloated to the extent that it exhibits signs of pain or weakness
 - Is in the last 10% of pregnancy or has given birth during the last 48 hours
 - Shows signs of exhaustion
 - Shows any other signs of infirmity, illness, injury or a condition that indicates that it cannot be transported without suffering. ¹⁶
 - Is lame other than in a way that is described as unfit
 - Is bloated – but is showing no signs of discomfort or weakness
 - Has acute frostbite
 - Is blind in both eyes
 - Is not fully healed after a procedure, including dehorning, or castration
 - Has a deformity or fully-healed amputation without signs of pain
 - Has an injured penis (unhealed or acute)
 - Has a minor rectal or vaginal prolapse
 - Is in peak lactation period and cannot be milked to prevent engorgement
 - Has any other signs of infirmity, illness, injury or of a condition that indicates that it has a reduced capacity to withstand transport ¹⁷

^{15 -16 -17} Government of Canada, Livestock and Poultry Transport, Regulatory Guidance and Resources at Inspection.ca

Regulatory requirements for compromised animals include:

- Being isolated from all other animals, or penned with one familiar companion animal during confinement and transport
- Loading and unloading individually (without negotiating ramps inside the conveyance)
- Taking measures to prevent suffering, injury or death
- Transporting directly to the nearest suitable place where the animal can be properly cared for or humanely killed

Examples of measures to care for compromised animals during transport:

- Loading last and unloading first
- Providing additional bedding
- Providing water or electrolytes to prevent dehydration
- Providing veterinary care for the specific injury or illness (for example, pain medication or splints)¹⁸

As per the federal requirements, an animal that becomes unfit or compromised during transport:

- Must be transported directly to the nearest place where it can receive care or be humanely killed or slaughtered (for example, a veterinary hospital, farm, or slaughter facility),
- If the animal cannot walk or stand it is considered unfit and must not be unloaded while conscious.¹⁹

Note: intermediate sites are not required to unload compromised animals that arrive at your facility. If an employee is not sure of the special provisions needed to move a compromised animal, the animal should be assessed by a professional such as a veterinarian or CFIA inspector and a decision made by those with authority to do so before the animal in question is moved or dealt with.

Euthanasia of Cattle and Calves

The selection of a euthanasia method for an intermediate site environment should include consideration for employee and public safety.

This document does not cover all situations. When situations arise that have not been addressed in this document, the well-being of the animal in question should be evaluated and appropriate actions taken. If employees do not have the required experience or are unsure, a licensed veterinarian should be consulted.

Qualified personnel should determine the best course of action for treatment vs. proper euthanasia. If an animal is unlikely to respond favourably to treatment, there is a likelihood of treatment failure, or a potential for undue animal suffering, immediate proper euthanasia may be the best available, safe and responsible option.

Indications for Euthanasia:

- Fractures of the legs, hip or spine that are not repairable and result in immobility or inability to stand.
- Emergency medical conditions that result in excruciating pain that cannot be relieved by treatment.
- Animals that are too weak to be transported due to debilitation from disease or injury.
- Paralysis from traumatic injuries or disease that result in immobility.
- Disease conditions where no effective treatment is known, prognosis is terminal, or a significant threat to human health is present.²⁰
- Diseases that involve a significant threat to human health (i.e., rabies).
- Disease conditions for which treatment will not be pursued due to cost.
- Diseases for which the level of care to properly manage pain and distress and treat the disease is beyond the willingness or ability of the farm or facility.
- Emaciation and/or debilitation from disease, age or injury resulting in an animal being too compromised to be slaughtered on site, transported, or marketed.
- Advanced neoplastic conditions (e.g. cancer eye, lymphoma).
- Congenital or acquired conditions that produce a level of pain and distress that cannot be managed adequately by medical or management methods.
- Non-ambulatory cattle with signs of uncontrolled pain or distress.²¹

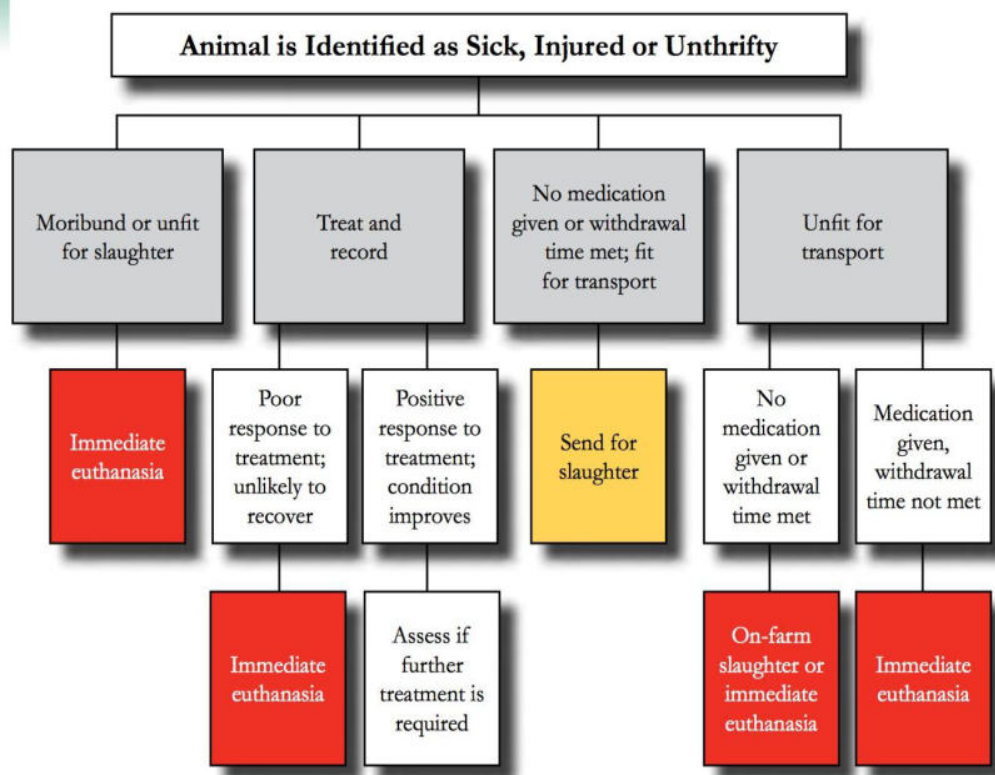
Euthanasia should be a consideration in the following scenarios:

- Loss of production and/or failure to perform and/or failure to thrive (i.e., declining quality of life such as with advanced age, severe mastitis, chronic pneumonia, etc.).
- Potential or known exposure to toxins (such as polyfluoroalkyl substances (PFAS) or lead toxicity) that would likely result in a food safety issue if sent to slaughter for human consumption.
- Extended drug withdrawal time for clearance of tissue residue.
- Behaviour or temperament issues which render an otherwise fit animal to be unsafe.
- Poor prognosis or prolonged expected recovery.
- Diseases that could threaten herd health (i.e., BVD or others).
- Non-ambulatory cattle that are not eating or which have not responded to treatment in 24 hours.

²⁰ (Beef Quality Assurance – Cattle Handling Guidelines)

²¹ American Association of Bovine Practitioners Guidelines/EUTHANASIA-2023.pdf
http://www.aabp.org/Resources/AABP_Guidelines

Decision Making



Actions involving compromised cattle include treatment, slaughter or euthanasia. The following criteria should be considered when making a decision:

- Is the animal in severe pain, distress, or debilitation? Can appropriate relief be provided?
- Likelihood of recovery
- Ability to provide the compromised animal with sufficient feed and water
- Ability to provide an adequate environment and nursing through the full recovery
- Drug withdrawal if considering slaughter
- Economic considerations of treatment, slaughter or euthanasia
- Potential for pre- or post-mortem condemnation potential if sent to slaughter
- Diagnostic information that can provide additional insights to patient or herd
- Ability of animal to survive and have acceptable welfare during transport to slaughter facility
- Whether the animal poses a danger to people or other animals due to contagious disease or temperament.

Part of meeting your responsibility to reduce pain and suffering must be to see that euthanasia is provided promptly once the decision has been made. No more than four hours (preferably much less) should elapse between making the decision to euthanize and performing the procedure.²²

An acceptable method for euthanizing cattle must be used and done by competent personnel. (*see Table 6.1 in Beef Code of Practice*).

Equipment used for euthanasia, such as guns or captive bolt devices, must be maintained according to manufacturers' instructions to ensure proper function. Be prepared to immediately deliver a second application should the first attempt not render the animal immediately insensible.²³

Facilities that store firearms on site must comply with federal regulations on storage and handling requirements.

An animal that has been euthanized should be immediately removed to an area away from live animals for disposal. During disposal and carcass movement, it is recommended that the carcass be covered. Regulations for disposal of deadstock may vary from region to region.

Choosing the Best Method of Euthanasia for your Facility

When euthanasia is necessary, the following considerations must be made when choosing a method for ending the life of the animal:

Human safety: is always the first consideration in the choice of euthanasia. The use of a firearm or even a captive bolt gun may be dangerous to humans. **The use of an approved euthanasia drug administered by a veterinarian may be considered as a potential option.**

Animal welfare: The method of euthanasia chosen should produce a rapid and painless death. However, certain environments and animal behaviour may prevent the use of a more desirable technique. The technique chosen should be the method that is safest for both humans and animals alike.

Animal Restraint: The availability of animal chutes or other methods of restraint may make some methods of euthanasia more practical than others. It may not be possible to euthanize an adult cow with an approved euthanasia drug without head restraint. The use of a gunshot or a captive bolt will also require appropriate restraint and training. In all cases, firm but gentle restraint should be exercised.

Practicality: The method of euthanasia must be practical to use. Not all persons working with livestock will have legal access to approved euthanasia drugs. Their use and storage fall under federal and provincial regulations and is generally limited to a licensed veterinarian.

²² American Association of Bovine Practitioners Guidelines/EUTHANASIA-2023.pdf

²³ Verified Beef Production Plus Producer Manual Version 1.6 Nov 2018

Skill: The use of a firearm or of a captive bolt requires skill and training to assure correct use and to minimize danger to others. The person using a firearm must understand the potential for ricochet. Designated individuals should be appropriately trained in proper euthanasia techniques wherever livestock are housed.

Expense: Some euthanasia equipment will be more expensive than others. Some techniques require more of an initial outlay such as a captive bolt gun or rifle, but continued use is inexpensive, as long as the equipment is properly maintained.

Diagnostics: When tissues are submitted to a laboratory for analysis, the means of euthanasia may be critical for obtaining a diagnosis (such as avoiding damage to brain tissue in cases of suspected rabies or BSE). If the head is required for further testing a veterinarian should be called to perform euthanasia.

Other Considerations: Some methods of euthanasia may result in involuntary motor activity of the animal, which could be misinterpreted as a painful response to observers inexperienced in animal euthanasia. This could result in great emotional distress to those observing the procedure. Training staff about various euthanasia methods may be beneficial, even if the staff will not be involved in this role.

Safe & Responsible Euthanasia Techniques

Euthanasia requires that the animal be rendered unconscious without distress or suffering prior to the end of vital life functions. The recommended methods of euthanasia vary based on species, size and maturity of the animal.

In all cases, a non-ambulatory animal that has been euthanized should be immediately removed to an area away from live animals for disposal.

Important Considerations re: Euthanasia versus Slaughter

The loss of productive function due to disease or injury in livestock presents at least two options: slaughter or euthanasia. Slaughter should be considered for animals that are not in severe pain, freely able to stand and walk, capable of being transported, and free of disease and drug residues that would constitute a public health risk. Euthanasia, a death induced by methods that do not cause pain or distress to an animal, is the appropriate choice whenever the aforementioned conditions cannot be met. ²⁴

Methods of Euthanasia in Cattle

Acceptable methods for conducting euthanasia in cattle include gunshot and penetrating captive bolt with a secondary step to ensure death.

Anatomical Landmarks

- Current information for adult cattle and calves indicates that the point of entry of the projectile should be at (or slightly above) the intersection of two imaginary lines, each drawn from the outside corner of the eye to the centre of the base of the opposite horn. If a firearm is used, it should be used within three feet of the target when possible and positioned so that the muzzle is perpendicular to the skull to avoid ricochet. When using a penetrating captive bolt, operators are advised to restrain the head so that the captive bolt may be held flush with the skull.²⁵



Penetrating Captive Bolt

Only employees with proper training should euthanize any animal. Proper equipment should be used. If no trained employees are on site, the senior employee on shift should consider contacting a licensed veterinarian.

Ensure the animal is well restrained.

Use the appropriate cartridge strength for the animal (refer to the manufacturer's manual).

Place the captive bolt pistol firmly against the animal's head on the target site, and shoot.

Be careful to avoid injury from thrashing limbs when the animal collapses.

Cut both the carotid arteries and jugular veins in the neck with a sharp knife to bleed-out the animal after stunning. These arteries and veins are on both sides of the throat.²⁶

²⁵ Ontario Government On-farm euthanasia of cattle and calves (<https://www.ontario.ca/page/farm-euthanasia-cattle-and-calves> July 20, 2022)(<https://www.ontario.ca/page/farm-euthanasia-cattle-and-calves>

²⁶ Ontario Government On-farm euthanasia of cattle and calves (<https://www.ontario.ca/page/farm-euthanasia-cattle-and-calves> July 20, 2022)(<https://www.ontario.ca/page/farm-euthanasia-cattle-and-calves>

Gunshot

Ensure the animal is well restrained. Plan to shoot outdoors when possible. Have a backstop (e.g., an earth berm, manure pile, or something that will stop the bullet if you miss or it over-penetrates) behind the area you are aiming at.

Use a firearm and ammunition that are appropriate for the size, age and type of animal. The ammunition used to euthanize an animal must be powerful enough to make the animal immediately unconscious and to penetrate the head deeply enough to destroy the areas of the brain that control breathing and circulation. This procedure requires the selection of an appropriate firearm and bullet with sufficient velocity, energy and size to pass through the skull (enter the brain), and cause massive brain destruction. A 22 calibre long rifle solid point bullet fired from a rifle is sufficient for young animals. Euthanasia of bulls and some adult cows by gunshot requires larger calibre firearms, because of the thickness of the skull. Rifles recommended include 22 magnums, .223, 243, .270 and .308. ^{26a} A shotgun using buckshot cartridges that contain 6 pellets weighing a total of 30 g can be used to euthanize most cattle older than 6 months. For calves aged less than 6 months a .22-calibre “long rifle” hollow nosed ammunition is generally adequate. Hold the firearm 5-25 cm from the target site. To avoid personal injury, Do Not place the firearm muzzle against the animal’s skull. Aim the shot down the line of the spine so that the bullet will enter the brain stem (the beginning of the spinal cord), and shoot. Be careful to avoid injury from thrashing limbs when the animal collapses. ²⁷

Confirmation of Death

It is essential that you confirm the animal’s death directly following euthanasia. A standing animal should immediately collapse. Its muscles may involuntarily contract, usually for no longer than 20 seconds. After this, it may show some poorly coordinated kicking or paddling movements before the muscles completely relax. Confirmation of death should be checked at one minute following a shot or other application for signs of return to consciousness and again after a period of 20 minutes. Check the animal for breathing, heartbeat and blinking response (corneal reflex). There should be none. The eyes should be fixed and dilated. To check the blinking response, touch the surface of the animal’s eye (the cornea). Any eye movement or blinking shows sustained or recovering brain activity. If there is any sign of breathing, heartbeat or blinking, repeat the euthanasia method or use an alternate procedure.²⁸ A live animal or one that has not been checked for confirmation of death should never be left for rendering or disposal. ²⁹

An animal that has been euthanized should be immediately removed to an area away from live animals for disposal.

During disposal and carcass movement, it is recommended that the carcass be covered.

^{26a} The Beef Site – Iowa State University - Dr. Jan Shearer - February 2014 Euthanasia Guidelines for Cattle

^{27, 28, 29} Ontario Government On-farm euthanasia of cattle and calves (<https://www.ontario.ca/page/farm-euthanasia-cattle-and-calves> July 20, 2022)(<https://www.ontario.ca/page/farm-euthanasia-cattle-and-calves>

EMPLOYEE SAFETY AND TRAINING TIPS

Employee Safety When Handling Cattle

Maintaining the safety of employees is essential. Intermediate sites should conduct regular safety inspections, hold regular staff safety meetings, offer ongoing training on safe work practices, encourage staff to report potential/actual safety or health hazards, investigate reported hazards or incidents, as well as follow schedules for the maintenance of equipment and buildings. When handling and you are faced with a choice between human safety or animal rights, the balance must always tip in favour of the safety of persons handling the animals. There is no situation where animal rights trump human safety.

Human error is the primary cause of many types of accidents. These errors in judgement and action are due to a variety of reasons, but occur most often when people are tired, especially after long hours in the fall and spring cattle runs, or because they hurried, were preoccupied, or were impatient. Workers and other persons who conduct livestock handling are at risk of sustaining injuries such as bone fractures, bruising, dislocations, crush injuries, or lacerations which, in some cases, may result in a fatality.

The livestock industry is facing a reduction in the availability of experienced workers. Many of the seasonal new hires lack or have limited livestock handling skills. Proper training of these new employees is critical. Many potential employees may not be fluent in English or French as a first language. Look at options to train livestock handlers using illustrations in signs, videos, instruction manuals and physical demonstrations, rather than just verbal instruction to communicate with livestock handlers. Translators may be considered as part of the training program.

Cattle are large, strong and fast animals that can react unpredictably. Cattle handling requires a livestock handler to have a level of skill, speed, strength and fitness.

Farm animals are responsible for many disabling injuries. To reduce the possibility of injury, talk to the animals as you approach them. Approach slowly, and do not approach an animal directly from behind. Cattle have broad, panoramic vision, except for small blind spots at the nose and in the rear, and very limited depth perception. Panoramic vision also means they are easily frightened by shadows or moving distractions outside chutes and handling areas.

The following guidelines offer general safety instructions for working with any animals:

- Have a plan when working with cattle. Know what you want to accomplish before starting. Discuss the desired outcome and the plan with co-workers.

- Treat animals with respect.
- Use adequate restraining and handling facilities when working with animals.
- Always leave yourself an escape route when working with animals (i.e., do not work in small, confined areas or back yourself into a corner).
- Do not put your hands, legs, or feet in gate or chute closures where you may become pinned or crushed by a large animal.
- Reduce the chance for slips and falls by keeping handling areas free from debris.
- Pay extra attention to frightened, sick, or injured animals whenever possible.
- Pay particular attention around animals with young offspring. Do not get caught between a mother and her calf.
- It is highly recommended to avoid handling livestock when you are alone.
- Beware of kicks. Cattle tend to kick forward and then backward with their back legs; leave room for clearance.

Injuries from cattle can relate to a number of factors - inadequate yard design, lack of training of handlers, unsafe work practices, and the weight, sex, stress factor and temperament of animals. Consider and provide what training is required before a person can confidently and competently handle stock. All employees, including experienced legacy employees, should attend updated training and safety sessions annually. All new employees should attend training sessions prior to joining staff.

Observation Before Sorting, Handling and Moving:

- Observing animals to determine their temperament prior to handling is important. This can alert the handler to possible danger. These signs include raised or pinned ears, raised tail, pawing the ground, shaking the head and vocalizing. Often injuries occur from animals that do not openly exhibit aggression or fear. An animal feeling threatened may trigger this reaction. Typical injuries from this type of situation are usually a result of being kicked, run over, stepped on, or squeezed between the animal and a solid structure as the animal tries to flee.
- According to Temple Grandin, Professor of Animal Science at Colorado State University, an animal's physical structure, psychological makeup, environment, and individual personality can influence behaviour. An animal's senses function like those of a human; however, most animals detect and perceive their environments very differently as compared to the way humans detect and perceive the same surroundings. While cattle have poor colour recognition and poor depth perception, their hearing is extremely sensitive relative to humans. Knowing these characteristics, one can better understand why cattle are often skittish or balky in unfamiliar surroundings.

Supervisors should make themselves familiar with the résumés of new employees to determine their experience working with livestock to ensure that proper training is provided. Supervisors should be aware of provincial occupational health and safety requirements for new employees in their province.

Provide first aid resources: Have a first-aid kit available near the cattle working area. First- aid training for employees is recommended to handle possible emergencies. Employees should be aware of the proper procedure when an employee is injured at the site.

Working With Gates – A high percentage of injuries to employees are the result of working with gates while sorting or penning cattle. Factors to consider:

- Are employees trained on proper use of gates? The improper use of gates can result in injury or bruising to animals and/or serious injury to employees.
- No person should stand behind a gate while loading a pen. Even if latched, gates can break free and cause serious injury.
- Never throw a gate to stop or cut off an animal. Throwing gates can cause bruising and injury to animals.
- Never stand at the end of a gate where you can get dragged between it and the opposite fence or structure and be crushed.
- Never hook your arm or elbow in the gate. Sudden movement could result in severe injury. Always stand where the gate cannot hit you, with your hand on the end so that you can easily let go if it is knocked away from you.
- Wherever possible, gates should be self-latching and large enough to latch on the other side of the adjoining alleyway.

Spot the hazard

Employees should always have an escape route when entering a pen or when working with cattle in the alleyways. The same applies to loading and unloading livestock.

Consider situations that cause stress and injury to handlers and stock.

Take into account sex, weight and temperament of stock.

Consider the effects of weather and herding on animal behaviour, and time allowed for settling down. It takes 20 to 30 minutes for excited cattle to calm down.³⁰

³⁰ Temple Grandin, Ph.D. Professor of Animal Science Colorado State University for the North American Meat Institute Animal Welfare Committee 2017 Handling Excitable Animals

Assess the potential risk

Employees with less experience should be paired with experienced staffers. Inexperienced people are easily frightened by cattle and may be hurt if they do not understand cattle behaviour.

Discuss safety concerns of handlers in regard to various tasks. Pens with wild or dangerous cattle should be identified to workers. Communication between employees working with cattle is critical to reducing worker injuries.

Check each identified hazard for likelihood and severity of injury.

Assess proposed safeguards and safe procedures for other hazards.

Make the changes

Suggestions for improving safety in cattle handling:

- Always plan ahead. Prepare and communicate safe work practices. Get assistance if necessary.
- Recommend appropriate clothing to wear, including protective footwear and body armour if required, in certain higher risk areas in the site.
- Make sure that all employees use recommended sorting tools and are aware of the policy on the use of electric prods. A good method for driving and sorting cattle is to use a plastic rattle paddle. Cattle seem to see a wider implement better and follow directions more readily if such an aid is used rather than a stick. Do not use whips. Whips are noisy and can frighten animals. They also increase the chance of eye injuries in cattle and can use injuries to employees working in the same sorting area. Excessive use of sticks in confined areas stresses animals, causing injuries and making them more difficult to handle.
- Know the limitations of yourself and others: Work within those limitations. Stay alert. Cattle can become unruly when least expected. When working with cattle, make certain that everyone is cautious at all times. If workers become fatigued, it is best to rest for a while.
- Respect cattle: Cattle are large and strong and can be unpredictable; they have the strength and speed to cause injury. Never turn your back to livestock. Extra caution should be used when working with bulls, cows with small calves and wild cattle. It is unwise to relax around them too much or to try to work them without adequate facilities and help. Consider how you can out-think cattle, not out-wrestle them.

Know the signs of cattle aggression.

The head position tells just how contented they feel....or otherwise

1 → Neutral position

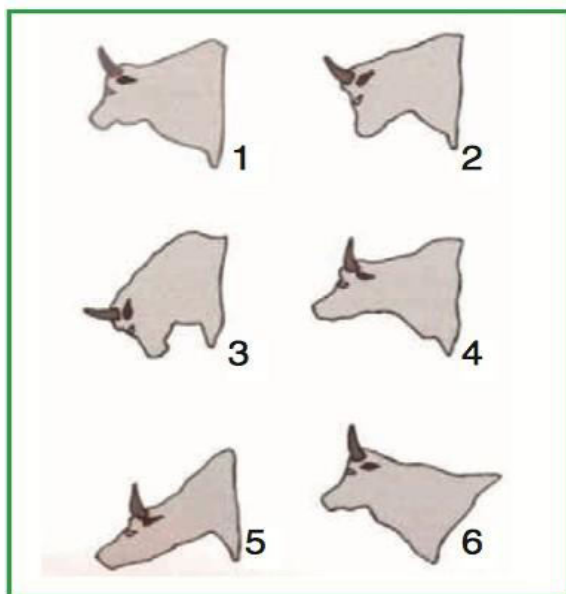
2 → Slightly antagonistic position

3 → Highly antagonistic position

4 → Confident approach

5 → Submissive approach

6 → Alert before flight position



A dangerous animal may paw the ground, moo loudly, shake its head and swish its tail aggressively. Bulls can be very territorial and cows with calves at side can be very protective.

The stock

- Cattle want to see you. If cattle can see you, they know where the pressure is coming from. It is key to handler positioning and cattle response.

- Cattle want to go around you. When you put pressure on cattle, they will want to walk around you or circle you. They will walk off, but will eventually stop, turn and look, because they want to see you.
- Cattle are herd animals. If you get one started, the rest will usually go.
- Cattle want to remove pressure. If you put pressure on them, they take off. That's the flight zone.
- When you stand behind an animal in their blind spot, they are unable to see you. When the animal is unaware of where you are, it will cause that animal fear. This can result in the animal running off or turning around to face you instead of moving in the direction that you wanted the animal to go.
- Hazards vary according to the age, sex, breed, weight, horn status, temperament and training of animals.
- Approach cattle quietly, and make sure they are aware of your presence.
- Bulls are more aggressive during mating season and extremely dangerous when fighting. Separate them into different pens where appropriate.
- Cows and heifers are most likely to charge when they have a young calf at foot.
- Isolated cattle often become stressed and are more likely to charge when approached.
- Cattle with sharp horns have the potential to be more dangerous; dehorned and polled cattle can still cause injury.
- Cattle are more unpredictable during cold, windy weather.

Cattle Penning

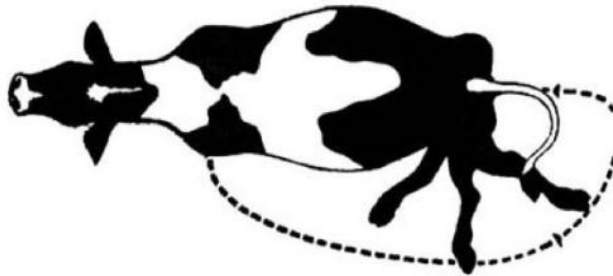
- Avoid working in overstocked yards where you risk being crushed or trampled.
- While moving cattle through a gate, position yourself to one side to avoid being knocked down by an animal trying to go through.
- Take care when working with cattle in a processing chute, loading chutes, and confinement areas, e.g. to vaccinate, apply ear tags, etc. A sudden movement by stock could crush your arms against rails or posts.

Kicking and Butting

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.³¹

31. University of Saskatchewan 40 Canadian Center for Health and Safety in Agriculture - Low Stress Cattle Handling for Productivity and Safety.

- To avoid kick injuries, attempt to work either outside the animal's kicking range or directly against the animal, where the effect of being kicked will be minimized.



Cattle commonly kick forward and out to the side.

- When working on an animal's head, restrain it from sudden movement forwards or back.
- Take care when using hazardous equipment, such as branding irons, knives for castrating, banding tools for castrating or ear tag applicators. Additional training information on processing is available on the Verified Beef Production Plus website.

Ear tagging

Only Employees who are trained and have experience in ear tagging should be assigned this task.

Before an ear tag can be applied, the animal must be caught and restrained to limit head movement and ensure accurate tag position.

Inserting cattle tags is risky because cattle neck muscles are much stronger than your arms. Cattle should be restrained in the squeeze chute and if possible, the head restrained with a nose bar or halter. Mature bulls can be especially dangerous as they are easily irritated and have thick ears, which make it very difficult to ear tag. Employees should never underestimate the strength of a bull or any other bovine. Pain associated with ear tagging can be greatly minimized through proper tag placement achieved through adequate head restraint. Injuries to employees often occur from head jerks from the animal being tagged. If you are not properly positioned and an animal's head suddenly jerks, this can crush your hands and arms against solid objects. If the head is not restrained properly, you risk the chance of serious injury. Horn stubs are also hazardous.

MANAGING THE EAR TAGGING HAZARD:

- Always work from above the animal's head – never through the rails. For difficult animals and bulls, use a head gate. Make sure that the work area is clear of obstacles and is well lit.
- Make sure only people with enough strength do this job. Have the right applicator for the type of tag you are using. Taggers should be kept in good working order, with extras on hand. An older tag applicator may be difficult to squeeze or make a loud noise that could startle the animal. New, lightweight, ergonomic applicators are more comfortable, both for the animal and for the person doing the tagging.
- Avoid hitting the cartilage ridges or major blood vessels when applying the tag. This limits the pain and distress to the animal and they are less likely to jerk their head and cause injury to the ear-tagger. The ideal location to place an ear tag is in the middle one-third of the ear. The location should be between the rises in auricular cartilage or the ribs. If a tag is placed too far towards the inside of the ear it will fit tightly due to the presence of thicker cartilage. This may also cause necrosis, the death of cells in the tissue, or sloughing tissue, which is the shedding of dead cells. Tags placed too far to the outside of the ear have the possibility to be snagged or ripped out. Proper tag placement is also important to reduce the risk of infection.
- Only do ear tagging in dry conditions. This reduces the chance of your feet slipping and helps the wound dry.
- Check that the chute is in good repair and is strong enough and the proper size for the job.
- Try to get all their heads up before you start the job.
- Take extra care if an animal has horn stubs.
- Work quickly once you are ready to insert the tag. Be alert for sudden head movements.
- Get the job over quickly so the cattle are confined for only a short time.
- Make sure that animal has a clear path to the pen once released from the chute.

Facilities and conditions

Pens and alleyways should be strong enough and of a size to match the cattle being handled.

Good yard design assists the flow of stock. Avoid sharp, blind corners, and ensure gates are well positioned.

Keep facilities in good repair and free from protruding rails, bolts, wire, etc. Employees should be encouraged to report conditions at the facility that require repairs.

Build safety passes: Safety passes or escape gates in strategic locations allow quick escape if cattle get too excited. Good locations are along the alleyway that takes cattle from holding pens to the working facility and close to the crowding area.

Where cattle need restraining, use squeeze chutes, head rails, etc.

Footholds and well-placed access ways are important.

Maintain yards in non-slippery condition, free of garbage and possible distractions that hinder cattle movement.

Safety When Working the Ring

The sales ring is considered one of the most potentially dangerous areas at an auction market. Cattle can be highly stressed in the sales ring. Usually, they have been sorted from their group and have been driven to the ring. The environment is new to them, there are unfamiliar people watching with unexpected movements, there is no apparent way out, the loudspeaker of the auctioneer is loud, the lighting is bright and there is an unfamiliar person in the ring with them. Their natural reaction is to escape and get back to other cattle.

Only competent, fit and experienced employees should be working in the sales ring. The ring man should always carry a paddle or a sorting stick so he can direct the animal at 'an arm's length'. A good ring man should wear appropriate clothing and footwear. The ring man should have a good knowledge of the use of flight zones and points of balance; they should be confident when handling cattle and have experience in identifying the animals' potential risks. A good stockman will always be totally focused on the job and their interaction with the cattle. It is not acceptable to be frequently distracted by such things as talking on a cell phone or visiting with spectators while working the ring. The ring staff should be given scheduled breaks to avoid fatigue during long sales.

If the ring is not a scale, it is not recommended that the ring-man enter the box scale to retrieve the cattle. Employees behind the scale should move the cattle into the ring. The gate must be opened and the ring man able to shelter behind the gate as the animal comes out. Once the entry gate is closed, there must be a barrier or narrow exit gate to shelter behind, should it be necessary to retreat.

Communication is very important between yard employees and the ring staff to identify wild cattle and warn other employees of potential danger. The ring staff must be careful not to get crushed against the perimeter walls or slip and fall when large groups enter or exit the ring.

Skid Steer and Equipment Operation

All employees who operate a skid steer-type loader in Canada are required to have training and have met the requirements of both federal and provincial skid steer regulations.

Skid steer and Bobcat equipment are commonly used at intermediate sites for cleaning and for feeding livestock. While these machines are powerful and versatile, if not operated properly, they also pose a significant risk to operators and those in their immediate vicinity.

Therefore, it is crucial for individuals who operate or work around skid steers and Bobcats to receive adequate safety training. Here are some reasons why:

1. Compliance with provincial occupational health and safety regulations: Employers are responsible for ensuring that workers are trained in the safe use of equipment. Failure to comply with these regulations can result in fines, legal action, and potential accidents.
2. Minimizing accidents and injuries: Proper training can significantly reduce the risk of accidents and injuries associated with the operation of skid steers and Bobcats. These machines are heavy and powerful, and accidents can be catastrophic without the proper precautions and training.
3. Protecting the operator: Skid steer and Bobcat operators are responsible for their safety and the safety of those around them. Proper training can teach operators how to operate the equipment safely, understand the limitations of the machine, and recognize potential hazards.
4. Increased productivity: Skid steer and Bobcat operators who are adequately trained are more efficient and productive, leading to increased profitability for businesses by reducing damage to property.



Site Maintenance and Design Facilities

Loading/unloading chute at intermediate sites

Permanently installed loading ramps should have no more than a 20-degree slope, and portable or adjustable loading ramps no more than a 25-degree slope. Wooden or adjustable ramps should have cleats 1.5 inches by 1.5 inches spaced 8 inches apart. Cleats should be bolted to the ramp. ³²

Permanent loading ramps should be 30 inches wide ³³ so that cattle can move up the ramp single file, with a flat 5-foot level section at the top. A self-aligning dock bumper that bridges the gap between the chute and the truck should be mandatory. The chute should be equipped with telescoping side gates or panels that fit against the truck in order to prevent animals from jumping out through the gap. If there is a gate at the top of the ramp, it should open inwardly be self-closing and non-latching. ³⁴

Concrete ramps should be built like a staircase using steps with 12-inch tread and a 3.5-inch to 4-inch rise. The surface of the steps should be grooved for good footing.

A crowding tub at the bottom of the loading chute will assist in the loading process.

A curved single-file chute is most efficient for forcing cattle to enter a truck. Loading chutes should have solid sides and a gradual curve or 15-degree bend. It is recommended to have a walkway up the outside of the loading chute so that people can go along it if necessary in order to encourage a reluctant animal in a low stress manner. Also a gate should be put at the top so a person can come out of the loading chute after following the cattle up the chute and walk back down the walk way. The gate should be self-closing, inward opening and non-latching. ³⁵

Solid chute sides are best

Truck loading ramps should have high solid sides to help keep the cattle calm. This prevents the cattle from jumping out. Solid sides prevent the cattle from seeing moving people and other distractions outside the chute. The solid sides also eliminate shadows, which will cause cattle to balk. The zebra-striped pattern cast by chutes with open bar sides causes balking. The crowd pen gate should also be solid to prevent animals from turning back.

32. Temple Grandin – Loading and Unloading Animals Properly; www.Grandin.com

33. Corrals for Handling Beef Cattle - Alberta Department of Agriculture 1993)

34. The design and construction of facilities for handling cattle T. Grandin Animal Science Department, Colorado State University, Fort Collins, CO 80523, USA)

35. The design and construction of facilities for handling cattle T. Grandin Animal Science Department, Colorado State University, Fort Collins, CO 80523, USA)

Lighting is critical

Cattle react strongly to harsh contrasts of light and dark. Lighting should be adequate, even and diffused. For example, something as simple as lighting up dark pens and buildings encourages cattle to enter. When loading animals at night, light the truck interior with frosted lamps mounted inside. But make sure the light isn't glaring into the animals' eyes. Whenever possible, loading chutes should face either north or south to eliminate direct, bright sunlight aimed at the animals' faces.

Flooring - Livestock Working Surfaces

Walking surfaces are one of the major contributing factors to livestock and employee injuries in handling facilities.

When required, add traction to the walking surface. Slippery cattle traffic areas result in footing with poor traction that causes animals to panic, increasing the likelihood of injuries.

On all hard surface alleys and corners, utilize appropriate materials to prevent slippage, absorb moisture, and provide additional traction when animals are on the move. Examples of footing that may provide suitable traction include grooved or stamped concrete, non-slip metal grating, rubber mats and adding sand or non-slip material overtop of existing flooring. Non-slip material may include sand, salt, straw, wood chips or sawdust.

Footing must be designed and maintained for the environmental conditions to prevent slipping and falling. In winter temperatures, apply sand mixed with a small amount of salt to flooring in animal handling areas to prevent it from freezing and becoming slippery. Alleys and holding pens should be cleaned after every sale.

In problem corners or alley turns, utilize appropriate facility improvements or materials to provide additional traction. Remember that all surfaces must be maintained or they will wear down.

Example: cut traction grooves in the cement surface in a crisscross fashion. Grooves should be ¼-inch (.64 cm) deep, ¼ inch (.64 cm) wide and spaced ¼ inch (.64 cm) apart. Deep square pattern for handling facilities for beef cattle. The squares are 20 cm (8 in) by 20 cm (8 in). The V shaped grooves are a minimum of 2.5 cm (1 in) deep and 2.5 cm (1 in) wide. It is intended for use in handling facilities such as truck loading ramps, feedlot handling facilities, stockyards, slaughter plants, and other places where cattle occasionally walk. These grooves can also be made in a diamond pattern that will make washing easier. Orient the points of the diamonds towards the drain. ³⁶

The majority of livestock and employee injuries that occur are due in part to poor working surfaces, and the failure to maintain the high traffic areas at the site.

³⁶ **Non-Slip Flooring for Livestock Handling** by Temple Grandin Colorado State University

Non-Slip Grates

Non-slip grates are recommended for cattle scales, crowd pens and the area in front of a squeeze chute. To prevent damage to the hooves, the bars must be welded so that the grid lies flat. Do not cross the bars on top of each other. Use heavy steel rods. The minimum diameter of the rods is 2.5 cm (1 in.). The size of the squares is 30 cm (12 in.) by 30 cm (12 in.). Why should heavy rods be used? Thinner rods tend to bend and pull away from the floor. A grating built from heavy rods will lie flat on the floor. ³⁷

Alleyways

Design and operate alleys and gates to avoid impeding cattle movement.

Alleyways should be kept clean, free of debris and have non-slip material in place or be grooved to prevent slippage and falling.

Cattle will balk and may refuse to move through a chute, alley, or facility if they see distractions such as shadows. If animals hesitate to move through an alley, chute or into a pen, there may be a very simple solution. Well maintained cross gates that can be used to prevent cattle from reversing direction and going back to their original pens are recommended in each alleyway. Since excessive noise can cause distress to animals, gates should be self-latching and maintained in such a way as to reduce noise when being used.

Eliminate Common Distractions, which may include:

1. Sparkling reflections on puddles of standing water
2. Reflections on smooth metal
3. Chains that jingle
4. Metal clanging or banging
5. High pitched noise
6. Clothing hung on fences
7. A piece of plastic that is moving
8. Seeing people moving up ahead
9. Small objects on the floor, such as a coffee cup or garbage.
10. Changes in flooring and texture
11. Drain grate on the floor
12. Sudden changes in the colour of equipment. Colours with high contrast are the worst.
13. Alley or chute entrance that is too dark. Animals will move from a darker place to a brighter place.
14. Bright light such as the blinding sun. Animals will move from a darker place to a brighter place, but they will not move toward blinding light.

Pens & Gates

Railings in both pens and alleys should be high enough and strong enough to prevent animals from jumping in an attempt to escape.

The bottom rails should have a gap of at least 30 cm to allow the handler to roll away in the event that they end up on the ground. ³⁸

Self-latching hardware on the gates is preferred. Install gate handles and latches with minimal obstructions or protrusions. Gate latches should be positive bolt, slam shut, spring-loaded type, especially in sorting areas.

Ensure latches, bolts and chains on gates are in working order and robust enough to contain livestock.

Gates should open and close in a direction that facilitates movement of cattle.

Gates should be the width of the alley so they can latch when fully open.

Cross-gates should be of solid construction so that cattle cannot see distractions down the alley.

Gate hinges should be secured with pins, or reverse hinge pins so that gates cannot be lifted off the hinges by cattle. Gates should swing open and closed without additional effort from your handlers. Check the hinges and latches often, and keep pens and alleyways clean to allow for unobstructed use of your gates.

Chain and slot-style latches are a good addition as a backup in some parts of the yards to prevent cattle escapes, for example in low pressure areas like holding pens. Chain and slot-style latches are not recommended on alleyway cross gates or other potential high-pressure areas.

Pens should be regularly inspected and maintained. Pens and alleyways should be kept free of garbage, twine, rocks and protruding objects that may injure workers or livestock. Repair any broken welds, boards, loose nails, bolts, or other objects that may result in sharp edges or corners.

It is recommended that the maintenance foreman or safety committee conduct a walkthrough or safety inspection on a regularly scheduled basis to identify repair needs that arise at the site.

³⁸. Guidance on the Safe Handling of Livestock at Marts and Lairages-Health and Safety Authority Australia 1999

Bedding and Cleanliness in Holding Areas

Pens at intermediate sites should have sufficient bedding to prevent slipping, to provide environmental comfort and to facilitate rest.

Pens should be cleaned on a regular basis with adequate bedding placed in the pen according to seasonal weather conditions and short-term weather forecasts. Animals should have a clean and dry surface available to lie down on in holding areas at intermediate sites. It is important to keep holding areas clean to prevent wet, muddy or soiled conditions. Bedding that is soiled and wet increases ammonia emissions, fly infestations, and bacterial growth, leading to an increased risk of contagious diseases. In addition, wetness impacts the ability of the material to provide warmth, which, together with poor cleanliness, decreases the likelihood of an animal using the material for resting.

Bedding provides environmental comfort for animals and absorbs waste materials. It may be used as part of winter management to provide a source of warmth, as well as for environmental management in muddy or damp areas. The need for bedding will depend on environmental conditions, the surface on which the animal is being held, and the condition and type of animal being held.

Site Security

There are significant legal issues arising from any damage caused by cattle that escape from intermediate sites. It is recommended that sites have perimeter fencing around their property. The fencing should be well maintained and be appropriate to contain the animals housed. A well-designed cattle grid or Texas gate at access points to your property will prevent cattle from leaving by the gate and is a best practice. An alternative is a gate that can be controlled by a member of staff who would have sufficient time to react. Proper fencing and gates also reduce the chance of theft or vandalism at the site. When employees are not on site, pens containing livestock should be locked. All access points to the yard and loading chutes should also be secured when there are no staff members on site.

It is recommended that intermediate sites have a protocol in place so that employees are aware of procedure and priorities when containing escaped animals. Police may need to be contacted to assist in traffic control if an animal leaves your property. This is particularly important for sites located in highly populated or high traffic areas.

Security cameras are also recommended to monitor activities in the chute areas and in other strategic locations at the site. These cameras will assist when dealing with trespassers, as well as recording deliveries and load outs.

Sales Ring

The sales ring should have walls or barriers high enough and strong enough to hold any animal or group of animals that enter the ring. The entrance and exit doors, if manually operated, should have the ability to be opened and closed from either side. In the event that the ring man is unable to open or close the doors, hydraulic doors should be equipped with multiple remote controls. There must be a safe refuge available for the employee(s) in the ring, either a barrier or a narrow exit gate. More than one barrier and exit gate is recommended for the ring. The latch on the exit gates should be able to be opened by a second person, or for exit doors, by a quick release cord that is activated by the ring man from his refuge.

The floor in the ring should have a non-slip finish and be well maintained to prevent slips and falls. The floor should have straw or wood shavings over a light covering of sand to absorb urine and feces. The ring should be cleaned and washed after every sale.

Developing an Emergency Livestock Management Plan

It is essential that intermediate sites have an emergency livestock management plan in place to deal with natural disasters such as weather-related shutdowns, fire, flooding, or situations such as loss of power, water or disease outbreaks that may require removal or quarantine of livestock on site. Identifying the hazards helps you prepare and reduce the impact when sudden events do occur. Emergencies and disasters such as fires, tornados, blizzards or floods are a common risk in many parts of Canada.

Each location should assess potential vulnerabilities based on geographic location, climate and other issues that would require swift action to assure animal welfare. Intermediate sites may also be called on to house and care for animals during road closures or weather related events.

The plan should include:

- How food and water will be provided during an emergency like a major snowstorm or road closure.
- How electricity can be provided through backup generators should power be lost.
- What housing will be provided to livestock should housing become uninhabitable due to fire or weather conditions such as flood or snowstorm.
- How animals will be evacuated in an emergency like a fire or flood.
- The plan should be kept in a visible location and should be reviewed at least annually. The plan should be shared with emergency responders in the area, so they are aware of plans in the event of certain emergencies.
- The intermediate site should also develop a contingency plan for employees, truckers and service providers for emergency situations.

Site Location:

The official address and location, premises identification number and land identification number of your facility should be posted in public areas and staff rooms, the office and receiving area. This is important so that the person reporting the event can have emergency vehicles dispatched in a timely fashion to the proper location.

The following **contact list with phone numbers** should be posted in areas where staff can use them in an emergency:

Phone numbers:

Emergency Management Organization (EMO)

RCMP	Fire Department
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Ambulance	CFIA
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Veterinarians	Livestock Transporters
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Dead Stock Removal	Hay and Straw Vendors
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Hydro and other utilities	EMO contacts
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Insurance Representatives	Site Manager
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Plans should be developed and employees advised of procedures for the following situations:

Loss of Hydro

Is there an alternate source of energy such as a generator?

Is there an adequate water supply available at the site during extended power outages?

Winter***Storm Road******Closures***

On-call personnel should be designated to be the contact person during severe weather that may close roads for an extended time. Transporters may require assistance to off load livestock during extended storms or road closures.

Feed, Bedding and Water

In the event of severe weather, there should always be no less than seven days' worth of feed, water and bedding at a site. Personnel should be designated to monitor livestock conditions during the storm and provide the livestock with adequate feed and bedding during the storm. Water supply needs to be checked to ensure that livestock have access to fresh water.

Fire or Flooding: Evacuation of Livestock

In the event of a fire or flooding at the site, there should be an emergency plan to evacuate the livestock from the site if required. Alternative routes in and out of the site for trucks should be noted in the event that the main entrance and road network is not available. Consultation with the local fire department and Emergency Measures Organization is recommended when developing this plan. A list of livestock transporters and the number of trucks available in the area to transport livestock on short notice should be developed. In the event that there is

a major fire at the site, and there is no time to load the cattle for relocation, there should be a plan in place to evacuate the cattle on site. In the event that livestock perish in a fire or flood, the plan should include disposal of the carcasses.

Temporary Housing of Livestock

The intermediate site should have agreements with alternative locations for temporary housing and care of livestock in the event that your site is compromised.

Disease Outbreak /Quarantine Protocols

In the event of a disease outbreak, e.g. Foot and Mouth, cattle at your site require short-term quarantine. Your emergency plan should provide for this scenario.

Injured Employees

Your emergency plan should also have protocols in place to deal with employees injured on site. The details of the protocols and procedures when dealing with injured staff or customers on your site who require medical attention should be included in your staff training and should be posted in areas such as staff rooms, receiving areas, office, etc. There should be muster stations assigned and clearly marked for employees to gather in the event of an emergency.

Dealing with the Public at Auctions and Intermediate Sites

It is recommended that auctions and intermediate sites have policies on restricting public access to certain areas of their operations. Visitors may not have the skills or 'livestock sense' to be in close proximity to cattle. Visitors should be supervised at all times. Children should be accompanied and supervised by a responsible adult at all times. Signage should be posted at public access points and in the public areas.

Required biosecurity practices should also be adhered to, such as boot washes, use of protective footwear, etc. You may wish to consider keeping a visitor log. Clear instructions should be given to visitors upon arrival. This is especially true in "working areas" of the site, which would include the alleyways, pens, processing area and sorting areas. All entranceways to the working area should be controlled and signage should be placed so that visitors and non- employees have clear instruction as to what areas are off limits. All signage should be placed at entrance ways, be in the line of vision, be kept clean, and if necessary, illuminated.

Signs stating "Private Property. No Trespassing" should be posted around the perimeter of the property. "Restricted Area. Employees Only" should be posted at all entrances to the penning, sorting and processing areas.

There may be times when it is necessary to allow the public into the alleyways to view the livestock, for example, purebred stock or bred cow and breeding stock sales. In these "special events," a designated time should be determined and posted. There should be no movement of cattle during that time. Pen gates should be locked, and intermediate site employees should be in attendance to supervise the visitors. If a visitor is injured on your property, you or your employee may be held responsible. Wherever possible, non-employees should be directed to catwalks to view the cattle.

Service providers, CFIA inspectors, animal protection officers and essential service workers may require access to restricted areas from time to time. These should be dealt with on a case-by-case basis. It may be necessary to have management or supervisory personnel accompany them.

Employees who supervise visits should be made aware that “animal activists” might pose as visitors or potential buyers to gain access to restricted areas. Their goal may be to get pictures or video that they can possibly use against your operation or the livestock industry. Any suspicious activity should be reported to the shift supervisor immediately. In the event of a protest on your property, police should be notified immediately. Employees should not engage with protesters. An emergency plan to deal with business interruption due to protesters should be developed and shared with all employees.



Dealing with CFIA inspections

CFIA has the authority to conduct an inspection at any location to which animals may be transported. CFIA's approach to inspections is risk-based.

When CFIA inspectors are on your property at your place of business they will:

1. Identify themselves
2. Treat you in a respectful and unbiased manner
3. Ask to speak with the person in charge or the pre-identified contact
4. Explain the purpose of the inspection and any areas that may be of specific concern

CFIA inspectors also do routine inspections to verify compliance with the requirements of legislation at:

- Assembly centres (auction markets, sale yards, or other areas where animals are gathered)

They may also conduct:

- Unannounced inspections (such as responding to a complaint or concern of a citizen or employee or a referral from a federal, provincial/territorial or municipal government department or agency)
- Roadside engagement in emergency situations, such as truck rollovers and accidents.

While on site, the inspector will collect information to verify compliance with the legal requirements and make notes to record inspection details.

The inspector may, for example:

- Ask to speak with the people involved, such as drivers, receivers and shippers
- Collect samples
- Take photographs
- Take videos
- Copy documents
- Conduct post-mortem examinations
- Review records
- Review documentation of the transfer of care and control

You are legally required to provide information to and assist a CFIA Inspector.

Disease, Allergies and Other Risk Factors

Handlers should also be concerned with zoonotic diseases, which are illnesses that can be transmitted between humans and animals. Examples of such diseases are rabies, brucellosis, trichinosis, salmonellosis, and ringworm. Preventive measures, such as sanitary practices in handling animals and their products will help to eliminate the danger of zoonosis.

People handling animals can develop allergies to animal hair, dander, or secretions such as saliva, urine, and secretions of various glands associated with the skin. Wearing the proper protective clothing and personal protective equipment is recommended when handling animals in order to reduce the possibility of developing allergies or other illness. A livestock producer can contract zoonotic illnesses by being bitten by the animal, handling an infected animal, or disposing of infected tissues.

To reduce exposure to disease, employees are to be trained to use hygiene and sanitation practices at the intermediate site, which include prompt treating or disposal of infected animals, adequate disposal of infected tissues, proper cleaning of contaminated sites, and proper use of personal protective equipment.

Biosecurity

Biosecurity includes measures and procedures used to reduce the spread of infectious disease. Biosecurity is a culture: when practised effectively it becomes part of the everyday routine. Waiting to practise biosecurity until after something has occurred is ineffective.

Disease can spread through direct animal-to-animal contact and through indirect contact via a contaminated environment. These biosecurity recommendations are not specific to intermediate sites, however the comingling of animals at intermediate sites makes biosecurity practices particularly important. Basic biosecurity principles include:

Isolation: Animals showing clinical signs of an infectious disease should be isolated. If this is not possible, they should not be mixed into a new group. Isolated animals should be monitored regularly and provided appropriate care. Staff entering the pen should wear dedicated coveralls and boots. Hands should be thoroughly washed after contact.

39. Government of Canada [inspection.ca](https://inspection.gc.ca) A Producer's Guide to Canadian Food Inspection Agency (CFIA) In sections

40. Canadian Livestock Transport Certification Manual • Livestock 2023

When possible, dedicated isolation pens should be located in a low-traffic area with dedicated equipment. Isolation pens must allow for provision of feed, water and bedding. These should be delivered at the end of the day and said equipment cleaned before use in regular pens. Pens should be constructed of materials that can be easily cleaned, washed, and disinfected. Downtime for thorough drying between uses is recommended.

Sanitation: Sanitation includes scraping or dry-cleaning, washing, disinfecting, and drying. Each step further reduces the level of potential contamination by livestock pathogens.

Scraping removes bedding and manure. This limits indirect contact between groups of cattle and may be the only practical measure in many areas of the intermediate site. Pressure washing with water should remove all visible organic matter. When available, hot water is more efficient. Detergents help remove organic matter and biofilms; this allows disinfectants to work more effectively. Consult with your veterinarian regarding the most effective disinfectant protocol, including contact time and dry time. Disinfectants do not work on dirty surfaces.

Clothing, Footwear & Other Items: Staff should wear site-dedicated clothing and footwear, and visitors should be encouraged to wear clean footwear and clothing that has not had livestock contact without being washed. Visitors who may have travelled to high risk areas may require additional biosecurity measures.

Clothing should be laundered with hot water or the 'sanitize cycle'. The wash temperature should reach 60° C with a wash cycle of 60 minutes followed by a dry cycle on high for a minimum of 30 minutes. Footwear should be cleaned to remove visible dirt or manure. A solution of one part household bleach to nine parts water is an effective disinfectant when applied for 30 minutes. This should be followed by a cold-water rinse to remove bleach solution.

Dead Stock Management: Dead stock is a source of pathogens for other animals. Dead stock should be stored in an area that prevents contamination of feed, water or pens. Equipment used to move dead stock should be sanitized before use on feed or equipment that animals will contact.

Transport Biosecurity: Transport biosecurity is beyond the scope of this document. Commercial transporters are required by the federal government to keep an Animal Transport Record. This includes the date, time and place where the conveyance was last cleaned and disinfected. Several good resources are available on how to clean and disinfect transport trailers. ⁴¹

⁴¹ – Created by Dr Leigh Rosengren – Chief Veterinary Officer – Canadian Cattle Association

Reference Publications Used on this Document

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American Association of Bovine Practitioners

Beef Quality Assurance – Cattle Handling Guidelines

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Government of Canada inspection.ca A Producer's Guide to Canadian Food Inspection Agency (CFIA) Inspections

Government of Canada, Livestock and Poultry Transport, Regulatory Guidance and Resources at Inspection.ca

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Government of Canada - Regulations Amending the Health of Animals Regulations Canada Inspection.ca

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National Cattle Feeders Association Canadian Feedlot Audit Guide December 2022 Edit, Version 11

National Farm Animal Care Council: Handling aids and Guidelines for the humane care and handling of food animals at slaughter

National Farm Animal Care Council Code of Practice for the Care and Handling of Beef Cattle released in September 2013 https://www.nfacc.ca/pdfs/codes/beef_code_of_practice.pdf

Ontario Government On-farm euthanasia of cattle and calves (<https://www.ontario.ca/page/farm-euthanasia-cattle-and-calves>) July 20, 2022

Safe Work Australia -Guide to Managing Risks in Cattle Handling July 2016 -Web www.swa.gov.au

The Beef Site – Iowa State University - Dr. Jan Shearer - February 2014 Euthanasia Guidelines for Cattle

University of North Dakota Animal Care and Use Committee Guiding Principles and Procedures Effective: 17 MAY 2018

University of Saskatchewan: Canadian Center for Health and Safety in Agriculture. LOW-STRESS CATTLE HANDLING For Productivity and Safety

Verified Beef Production Plus Producer Manual Version 1.6 Nov 2018

Additional information sourced from:

Alberta Beef Producers & Alberta Farm Animal Care - Humane Handling Guidelines for Beef Cattle Alberta

Farmer Express – Practise low-stress cattle handling to stay safe Oct 2, 2020

Beef Cattle Research Council

Canadian Agricultural Safety Association – Safe and Low Stress Cattle Handling Livestock

Markets Association of Canada – Good Handling

Texas Department of Insurance - Livestock Handling Safety

University of Minnesota - How to properly handle cattle and other farm animals

University of Missouri Animal Handling Safety

Oklahoma State University – Cattle Handling Safety in Working Facilities Western

Canadian Association of Bovine Practitioners

Work safe gov.nz - Safe Cattle Handling Guide

HELPFUL RESOURCES:

**Creating Connections
Online Stockmanship
Course: TECHNIQUES**

<https://www.creatingconnections.info/techniques/>



Whether you're a new or an experienced cattleman, learning the specific stockmanship techniques used in CreatingConnections will result in improved animal health, as well as contribute to a safer environment for both cattle and their caregivers. You might even find that by implementing the techniques, fewer caregivers will be needed to move or load cattle. The best part is a more enjoyable experience for all involved. And, for the many cattlemen who also use horses, we've included horsemanship videos as well.

**Creating Connections
Online Stockmanship
Course: Feedlot**

<https://www.creatingconnections.info/production/feedlot/>



This series of modules and videos shares insights and practical techniques to use from arrival at the feedlot to transporting market-ready cattle.

**Creating Connections:
Prevention**

<https://www.creatingconnections.info/prevention/>



Learn how animal well-being is the cornerstone of disease prevention. It is also fundamental to the prevention of accidents and improves worker safety.

Beef Cattle Code of Practice	https://www.nfacc.ca/pdfs/codes/beef_code_of_practice.pdf
	
Updated Livestock Transport: What you need to know	https://www.beefresearch.ca/blog/updated-livestock-transport-regulations/ 
Humane Handling Guidelines for Beef Cattle	https://www.albertabeef.org/files/site-content/JilWKyz1q351FRn5p5lByvdgfYcoR8vFhEpKoN97.pdf  This handbook provides producers and farm staff, auction market personnel, transporters and processors with the information needed to make humane handling decisions involving the care and transport of compromised or unfit animals.
Transport Decision Tree Printable PDF	https://www.beefresearch.ca/content/uploads/2022/05/cattle-transportation-decision-tree.jpg 

This document is not for public distribution. It was developed for the sole use of LMAC members and their employees.

The content materials in this document have been consolidated from sources available to the public, produced by subject matter experts, or have been written by LMAC members who have years of practical experience in handling livestock at auction markets and buying stations.

In the case of content that falls under federal regulations, such as CFIA, the recommendations in this document were taken directly from the regulations posted on the Government of Canada websites.

Please note that the content in this document is recommended practice only, and LMAC does not have the authority to enforce or audit handling, training and facility recommendations.

LMAC reminds its members to be aware of federal, provincial and municipal regulations in the regions in which they operate, as the regulations may vary from region to region.

Please refer to the disclaimer on Page 2 of the Handbook.