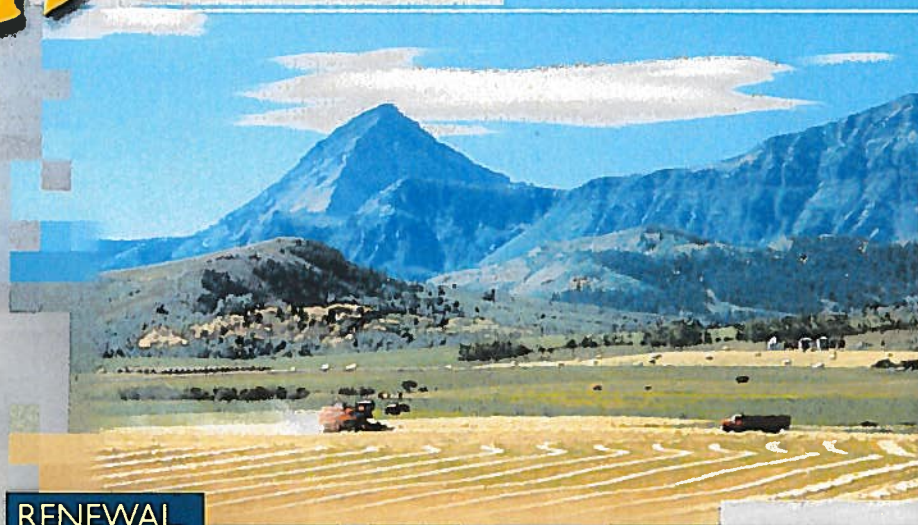


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SECTION 3: LIVESTOCK SAFETY

3.1 Livestock Safety Introduction (Video)

FROM THE VIDEO:

Livestock are at the centre of many farm businesses—from small dairies to massive feedlots. Livestock handling is an everyday activity.

However, large animals like cattle and horses have the size and strength to do serious harm.

Every year, serious injuries and deaths occur. Half of all farm injuries in Alberta involve livestock.

JIM DEPEW:

"...when I first started with the cow that I was working on I had respect. That's why I put a rope on her foot, I tied it back to make her stretch out on three legs so she couldn't kick me with the free foot and I did everything right so I wouldn't get hurt but then when I took the rope off I made the mistake of trusting her and stuck my arm through the boards and bang she broke my arm in half."

"...when we're around animals there are all sorts of things that are completely out of our control, it doesn't matter how well this horse is trained she will still instinctively react and if she feels threatened she'll look after herself first and then worry about other things later so in those instances there is really nothing you can do to prevent the injury other than be prepared for the worst case. The helmet as far as I'm concerned is crucial..."

Animals act on instinct—the instinct to escape from predators.

Understanding this will help you handle livestock in a way that keeps you from being injured, and minimizes stress on the animal.

The most obvious hazards in livestock handling include:

- being kicked, stepped on or crushed
- being hit by gates as they open
- having fingers, hands and arms pinched by gates and chutes as they close
- slipping and falling because of wet floors and slippery corrals
- being cut or jabbed by veterinary instruments
- falling off horses

To handle animals safely, protect your hands with gloves, and your feet with CSA-approved workboots. The best boot has a guard to protect the top of your foot.

Scan your work area for obvious hazards: slippery surfaces and damaged handling facilities. Whenever possible, use a catwalk and a squeeze chute. And, have an escape route.

When handling animals, use their natural "flight zone" to your advantage.

Try to make your first contact with cattle quiet and non-aggressive. Avoid animals that are obviously frightened or "spooked"—they can be unpredictable and charge out of blind fear.

Finally, keep children and bystanders out of livestock handling areas. Inexperienced people can be injured. And, they can distract you from immediate dangers.

3.2 Safe Handling Facilities Checklist

DVD:

Are your handling facilities and techniques up to the task?

- Floors, chutes and ramps have non-slip surfaces.
- Handler has a quick escape route.
- Inside of chute has a catwalk.
- Animals can see others ahead (follow the leader).
- No shadows or bright spots exist.
- Handling facilities are in good repair.
- Fences and gates can withstand crowding pressure.
- Cattle in pens have room to turn (don't overfill).
- Restraining equipment is used.

☒ **Use this checklist to evaluate the safety and efficiency of your handling setup.**

Design & Layout

- ☐ Floors, chutes and ramps have non-slip surfaces. Ramps have gradual slopes.
- ☐ Concrete floors have rough surfaces to prevent slips under wet conditions. High traffic areas have a grooved finish. Floors drain water away readily.
- ☐ The facilities always provide the handler with a quick escape route. (This is especially important when working with livestock in confined quarters.)
- ☐ There are adequate facilities for male animals. (Most can be dangerous, requiring special facilities and handling.)
- ☐ There is a catwalk along the inside of the chute. (This puts the handler in the best position to move the animal. Never have a catwalk overhead.)
- ☐ The working chutes are curved. (Curved chutes prevent animals from seeing the truck, squeeze and handler until the last moment. A curved chute also takes advantage of the animal's natural circling behaviour.)
- ☐ There are solid sides in crowding pens, single file chutes and loading chutes. (Solid sides are best in areas where people are inside the animal's flight zone, or where the level of fear in an animal affects its behaviour—such as the squeeze chute and the immediate area preceding the chute.)
- ☐ Each animal can see others ahead of it. Cattle follow the leader. Make single chutes at least 6 metres (20 ft.) long or 10 to 15 metres (30-50 ft.) long for larger facilities. Blocking gates in a chute need to be "see-through" so cattle can see the animals ahead. If a cow sees a dead end, she will balk.
- ☐ Materials are strong enough to withstand crowding animals. (For example, light steel panels in area of pressure will fold.)
- ☐ Handling equipment is suitable for doing neck injections, when required.

Lighting

- ☐ Lighting in the livestock facility is even and diffused to prevent shadows. (Avoid loading animals where they have to look into the sun. Shadows and bright spots make the animal more skittish and therefore more dangerous to the handler. Animals will move more easily from a dark area to a light area. You can create diffuse lighting with the use of skylights, by opening doors or by adding windows to an indoor facility.)

Maintenance

- ☐ Handling facilities are kept in good repair. (Make sure that corrals, gates and fences are in good condition, with no plank ends or pieces of metal sticking out. Fences and gates must be strong enough to resist animal crowding.)

Working in the Facility

- ☐ Cattle have an opportunity to get used to new pens and facilities. (Change is stressful for animals. Let them settle down and they will be easier to handle.)
- ☐ Handlers keep out of sight. (Cattle balk at moving or flapping objects. Stay out of sight behind the solid sides of crowding pens, single file chutes and loading chutes. Stand back from the headgate so that cattle cannot see you.)
- ☐ Cattle have enough room to turn in holding pens. (Do not overfill. Fill pens half to three-quarters full so animals can be moved and sorted quietly.)
- ☐ Restraining equipment is used consistently and properly. (Good restraining equipment will allow the handler free and easy access to any part of the animal. It will also prevent handler and animal injuries. Use anti-kick and back-up bars to prevent balking in the chute.)

3.3 Understanding Animal Instincts

DVD:

Make animal instincts work for you!

- Changes in lighting can spook animals (avoid shadows, loading into sun).
- Avoid sudden movements or loud noises (predator!). Announce your presence.
- Be calm and deliberate. Never force an animal when it has nowhere to go.
- Recognize territorial body language (may switch from "flight" to "fight").
- Single animals feel vulnerable and may act unpredictably.
- Animals are aggressive when protecting their young.
- Move wild cows first, two at a time.

Animals perceive the world around them in a unique way. Understanding animal behaviour and common instincts is an essential tool for safe handling. Good handlers get animals to work with them by taking advantage of the animals' instincts.

- Some types of livestock, such as beef cattle, swine and dairy cattle, are colour-blind and have poor depth perception. This causes them to be sensitive to contrasts in light, movement and noises. Changes in lighting and shadows can excite or spook animals.

Handler's Response: Ensure lighting in livestock facilities is even and diffused to prevent shadows. Avoid loading animals where they have to look into the sun.

- Horses cannot see anything behind them or under their heads. Cattle can see everything around them except what is directly behind their hindquarters. A cow's view of the world is different from our own. It can easily detect motion, but may have trouble distinguishing what it is.

Handler's Response: Avoid sudden movements or loud noises. Sudden, jerky motions cause fear because these are the same types of movements that predators make. Avoid startling an animal. Announce your presence before getting close. Enter a pen through the gate out of which animals will be pulled. This will draw their attention and make them aware of your presence.

- Most animals respond to routine.

Handler's Response: Be calm and deliberate. Be patient and never force an animal when it has nowhere to go.

- It is very common for animals to have a strong territorial instinct.

Handler's Response: Learn to recognize the body language of a strongly territorial animal. Take extra precautions when moving these animals, because their response may alternate between "flight" and "fight." Work with other handlers to move problem animals. Always have an escape route.

- Cattle in the dark will move towards the light.

Handler's Response: If you are loading at night, use frosted light to shine into the truck. Avoid glare in their faces.

- Separation from other animals can cause unpredictable behavior. Single animals feel vulnerable and can react aggressively. A single animal left alone in a crowding pen or working chute will try to rejoin its herdmates and may charge the handler.

Handler's Response: Treat single animals with great caution to ensure your safety. The kick zone and blind spot will vary from one species to the next, and also between individuals. Be aware of the kick zone and blind spot of the animals you are dealing with.

- Most animals tend to be aggressive when protecting their young.

Handler's Response: Be careful around newborn animals.

- Wild cows can excite the whole herd.

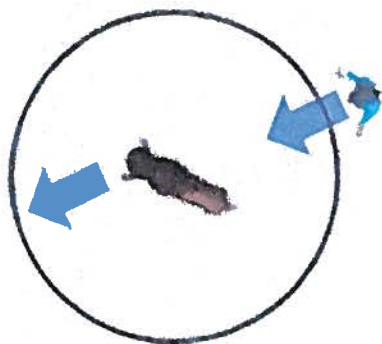
Handler's Response: Move any wild cows through ahead of the others. Use the buddy system (two at a time) to move problem animals.

3.3.1 Flight Zone

DVD:

Use the "flight zone" and "point of balance" to control an animal's movement!

- Flight zone = distance where an animal perceives a threat (predator response).
- Enter the flight zone and the animal will move away.
- Size of flight zone increases for wilder animals.
- Work at the edge of the flight zone to move cattle calmly.



Every animal has a "flight zone". The flight zone is the distance from the animal to something it perceives as a threat, like a predator. Any intrusion into this zone will cause the animal to move away. When you back off, the animal will stop moving.

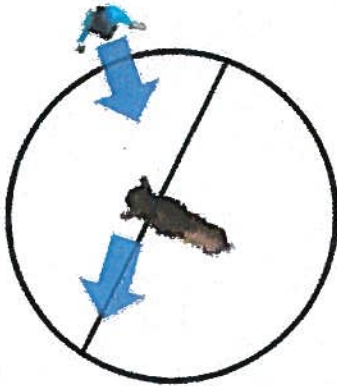
- The size of the flight zone depends on the animal. It can vary from a great distance for a wild range cow, down to nearly zero for a tame cow. The flight zone radius may be 1.5 to 8 metres (5-25 ft.) for feedlot cattle and 100 metres (300 ft.) for range cattle.
- A herd of cattle will have a shared flight zone, which is slightly smaller than their individual flight zones.
- By working just on the edges of the flight zone, a handler can gently move cattle in the required direction without distressing the animals. Work at the edge of the flight zone at an angle of 45 to 60 degrees behind the animal's shoulder.

3.3.2 Point of Balance

DVD:

"Point of Balance" determines which way the animal moves (predator response).

- Handler moves in front of POB: animal backs up or turns away.
- Handler moves behind POB: animal moves forward.
- Point of balance helps handler move animals forward or backward in a chute.



Experienced handlers will recognize this feature of animal behavior. It's called the "Point of Balance." It's a critical area within the flight zone.

The Point of Balance is an imaginary line extending from the animal's shoulder to the edge of the flight zone. It represents a quick response that's "hard-wired"—helping the animal instinctively decide which way to run from a predator.

- If the handler moves in front of the Point of Balance, the animal should back up or turn away.
- If the handler moves to the rear of the Point of Balance, the animal should move forward.
- For the handler, the Point of Balance is an especially important tool for controlling animals in a confined area or single-file alley. The animals can't simply turn and run away, so they'll tend to move forward or backward depending on the handler's actions.

3.3.3 Horse Instinct and Handling

DVD:

Caution: even a quiet horse can "spook"!

- Horses flee when threatened, and kick or bite when cornered.
- Ears laid back = preparing to kick or bite.
- Avoid blind spots such as under head and behind rump.

Use correct body language:

- Slow, deliberate movements calm a horse.
- Approach toward the shoulder.
- Speak to the horse and keep a hand on it as you move around.

Never wrap the reins or lead around your hand, in case the horse bolts.

Always wear a riding helmet.

Caution must be taken, even around very quiet horses. Accidents can happen when you do not expect them.

Horse Instincts

- Do not run around horses. If a horse sees movement without seeing the cause, it will react very quickly.

Horses can "spook" when they see unfamiliar objects or circumstances, or when they hear or smell something they are not familiar with. This is part of their survival instinct, which is to flee from danger when they feel threatened or to kick or bite when they feel cornered.

- When approaching a horse, always walk at an angle toward the shoulder, never from behind or ahead. Even in a stall, try to approach towards the shoulder. Speak to the horse before entering, and wait until it turns and faces you. If the horse is tied, make sure it moves over in the stall before you enter.

Be aware of your body language. Calm, deliberate and confident actions help to calm a horse, since you are signalling that you are not a threat. Quick movements or nervous actions will make a horse skittish because it is unsure of your intentions.

- Horses have wide-angle vision, but there are two blind spots where they can't see you:
 - under their head
 - behind their tail

Their hips also block their vision of their rump area. Speak to your horse so it knows where you are at all times. Also, keep a hand on the horse as you move around it.

Reading a horse's "body language" can help you anticipate hazardous situations.

When a horse lifts its head and pricks up its ears, its attention is focused on a far-away object. Be careful not to surprise your horse at this time, since it may kick you as a defensive reflex.

When a horse's ears are laid back, it is getting ready to kick or bite.

Horse Handling

- Lead a horse from the left side, walking between the head and shoulders. This gives you the best control of the head.
- Never wrap the reins or lead shank around your hand or loop it in such a way that it could pull tight around your hand. Fold any excess lead rope in your left hand so that, if the horse were to bolt, it would not wrap dangerously around your hand.
- When leading a horse, turn it to the right (away from you) so it won't step on you. Push its head to the right using the leadshank, held in your right hand, as you move ahead beside its shoulder. In some circumstances it may be necessary to turn your horse to the left. To do this safely, take the lead shank in your left hand. Place your right hand on the ribs of your horse and, as you turn the horse's head, apply pressure to keep your horse from stepping on you.
- Do not go under the neck of a horse to get to the other side. If you do, you are passing through a blind spot and may frighten the horse. Go around the hindquarters, talking to your horse and keeping hand contact on the horse as you walk around, so that it knows it's you when you pass through its blind spot. The closer you stand to a horse, the less likely you will be injured if kicked. You may be shoved away, but not hurt.
- Always wear a riding helmet when riding a horse.

3.3.4 Swine Handling

DVD:

Cattle handling principles also work for hogs!

- Hog handling requires a great deal of strength.
- Children and older adults can be knocked down and trampled.
- Sort with solid panels (protects legs from bites).
- Danger: use extreme caution with an aggressive boar in a breeding pen.
- Danger: sows can be very aggressive when farrowing.

Hog Handling Basics

- The handling principles for cattle also work for hogs.
- Hogs require a great deal of strength to handle. Children and older adults can be knocked down and trampled by large numbers of swine.
- Sorting with solid panels is effective. When hand-held panels are used, the handler's leg is protected from bites.

Boar Handling

- The presence of an aggressive boar makes the breeding pen one of the most dangerous locations in a swine operation.
- The chance of injury is greater with individual mating than with pen breeding.
- Boars' tusks must be cut short (detusking) since they can cause serious injury to handlers.

Farrowing Hazards

- The farrowing pen is also a dangerous location on a pig farm.
- At farrowing time, a sow can be extremely dangerous. This is a result of severe hormonal changes, which make the sow much more aggressive than a cow.
- Stalls or farrowing crates are recommended to protect the handler.

3.4 Livestock Handling Checklist

DVD:

Livestock handling is easier and faster with two people!

- Approach animals calmly and quietly.
- Move animals together.
- Don't overcrowd pens.
- Know your escape route.
- Watch for crush or pinch points (gates, chutes).



Use this checklist to evaluate how safely you handle livestock.

- ☐ I always work with another person when handling livestock.
- ☐ I use my knowledge of animal psychology (point of balance and flight zone) to move livestock in a stress-free manner.
- ☐ I understand that livestock are sensitive to loud noises and quick movements and I approach animals calmly and quietly so they always know where I am.
- ☐ I use the herding instinct to my advantage by allowing animals to move together, follow a leader and travel at their own speed thereby minimizing stress and decreasing the chances of injury.
- ☐ I am careful not to overcrowd a pen to reduce the chances of panicked animals causing injury to handlers.
- ☐ I am always on the lookout for aggressive behavior in livestock and plan an escape route before entering any area with livestock.
- ☐ I ensure that a lead rope is not wrapped around me or tied to me.
- ☐ I am careful of hazards (crushing, pinching) when working with animal handling equipment including gates.
- ☐ I practice good hygiene when working with livestock and I am up to date on all zoonotic diseases that could be a potential health threat to handlers.

3.5 Preventing Disease Transmission

DVD:

A zoonotic infection is one that can be transmitted between animals and humans. A number of diseases can be contracted from cattle and swine. Some of these can be quite serious. Take precautions.

- Keep hands away from mouth and eyes.
- Cover cuts, scratches and punctures.
- Isolate diseased animals. Wear personal protection. Keep children away.
- Prevent cuts and needle stick injuries. Promptly clean with soap and warm water.
- After handling animals or manure: wash hands thoroughly with soap and warm water.
- Vaccinate livestock, dogs and cats. Control rodent populations.

Seek medical attention if unusual symptoms occur. Tell the doctor you work with livestock.

Human infection can be avoided using good sanitation and management practices, such as:

- good personal hygiene, including thorough hand washing with warm water and soap after handling animals or manure, and keeping hands away from your mouth and eyes
- taking precautions against cuts and needle stick injuries
- promptly cleaning cuts, scratches, punctures and scrapes with soap and water
- covering cuts, scratches and punctures with waterproof dressings (to prevent disease entry)
- wearing personal protection around diseased animals (rubber gloves, rubber boots and aprons)
- vaccinating livestock against common diseases
- vaccinating dogs and cats
- controlling rodent populations

Animals that are sick should be isolated from healthy animals, and access to them, especially by children, should be restricted. Take every precaution and wear protective clothing when handling sick animals.

3.5.1 Zoonotic Infections

A zoonotic infection is one that can be transmitted between animals and humans. A number of diseases can be contracted from cattle and swine. Some of these can be quite serious. Take precautions.

If you experience any unusual symptoms or illness, seek medical attention and make sure to communicate that you work around livestock.

3.5.2 Diseases from Swine and Cattle

Diseases from swine include:

Brucellosis, erysipelas, *Streptococcus Suis* Meningitis, ascariasis, swine influenza, scabies, sarcoptic mange, ringworm, leptospirosis, toxoplasmosis and salmonellosis.

Diseases from cattle include:

Anthrax, bovine tuberculosis, brucellosis, campylobacteriosis, cryptosporidiosis, *Escherichia Coli* (*E. coli*), giardiasis, listeriosis, leptospirosis, pseudocowpox, ringworm, salmonellosis and *Streptococcus Zooepidemicus*.

Additional information is available at Alberta Agriculture's web site:
<http://www.agric.gov.ab.ca>