



BQA TRANSPORTATION MANUAL

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The Beef Quality Assurance — Transportation (BQAT) Manual outlines key Beef Quality Assurance (BQA) practices as they relate to transportation. This manual's goal is to provide producers with reminders and important references when transporting cattle.

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BEEF QUALITY ASSURANCE (BQA) OVERVIEW

THE BEEF QUALITY ASSURANCE (BQA) PROGRAM — THOUGHTFUL, RESPONSIBLE CATTLE MANAGEMENT.

This principle has been at the heart of BQA since its beginning and it is just as important now as it was more than 30 years ago. No two cattle operations are exactly the same and, as such, no program could ever list all of the "dos and don'ts" to ensure food safety, animal well-being, worker safety, and environmental stewardship. Rather, BQA promotes the adoption of a way of thinking — to always approach management decisions with thoughtfulness and an appreciation for the responsibility you have to the animals, consumers, the environment, and to the larger beef industry.

Three quotes from those that helped establish BQA still resonate today:

“If it’s not right, make it right.”

– Ladd Hitch, past president of National Cattlemen’s Beef Association

“We must make our decisions thoughtfully. You never have a second chance to make the first right decision.”

– Richard McDonald, former president of the Texas Cattle Feeders Association

“In cattle care, there are no most valuable players; everyone is important.”

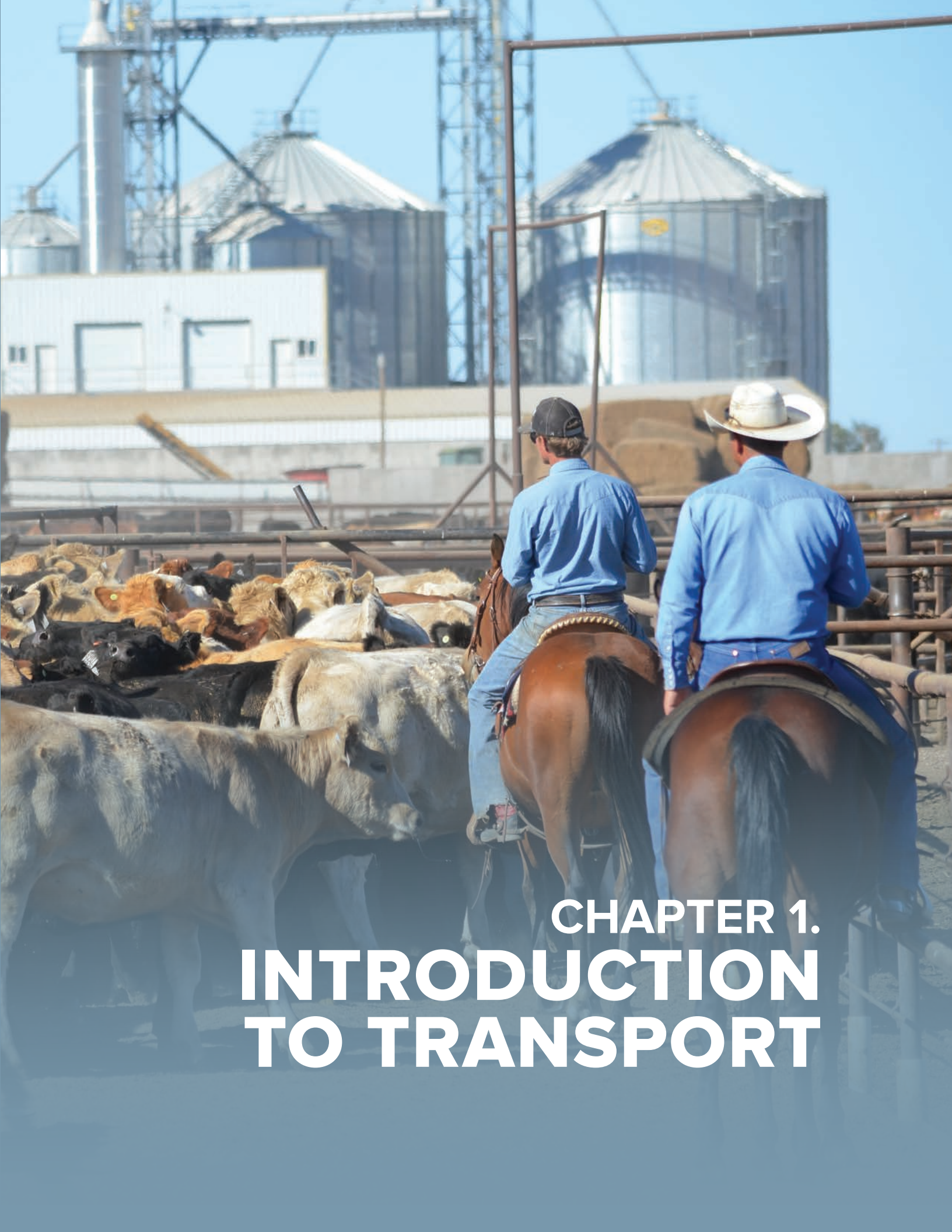
– Dr. Gary Cowman, former executive with National Cattlemen’s Beef Association



This is the official Transportation Manual of the Beef Quality Assurance program and includes the most current set of key practices, guidelines, and suggestions for providing thoughtful and responsible cattle management while in transport. The material in this manual serves as a helpful resource and serves as the foundation for training and certification programs offered nationally and by many states.

The BQA program encourages you to seek and use all reliable sources of information and these actions will help accomplish the BQA program's goals and objectives. While all of these groups may not directly influence transportation, the BQA program is a cooperative effort between beef producers, veterinarians, nutritionists, extension staff, and other professionals from veterinary medical associations and allied industries. BQAT targets professional drivers, farmers, and ranchers who transport cattle.

Beef Quality Assurance is a nationally coordinated, state implemented program that provides systematic information to U.S. cattle producers of how common-sense husbandry and transportation techniques can be coupled with accepted scientific knowledge to haul cattle under optimum management and conditions. By using best practices through BQA, transporters can save the cattle industry millions of dollars each year. When a transporter participates in the program, they are showing consumers they are ready to take every step possible to keep cattle as healthy and safe as possible.



CHAPTER 1.
**INTRODUCTION
TO TRANSPORT**



CHAPTER 1.1

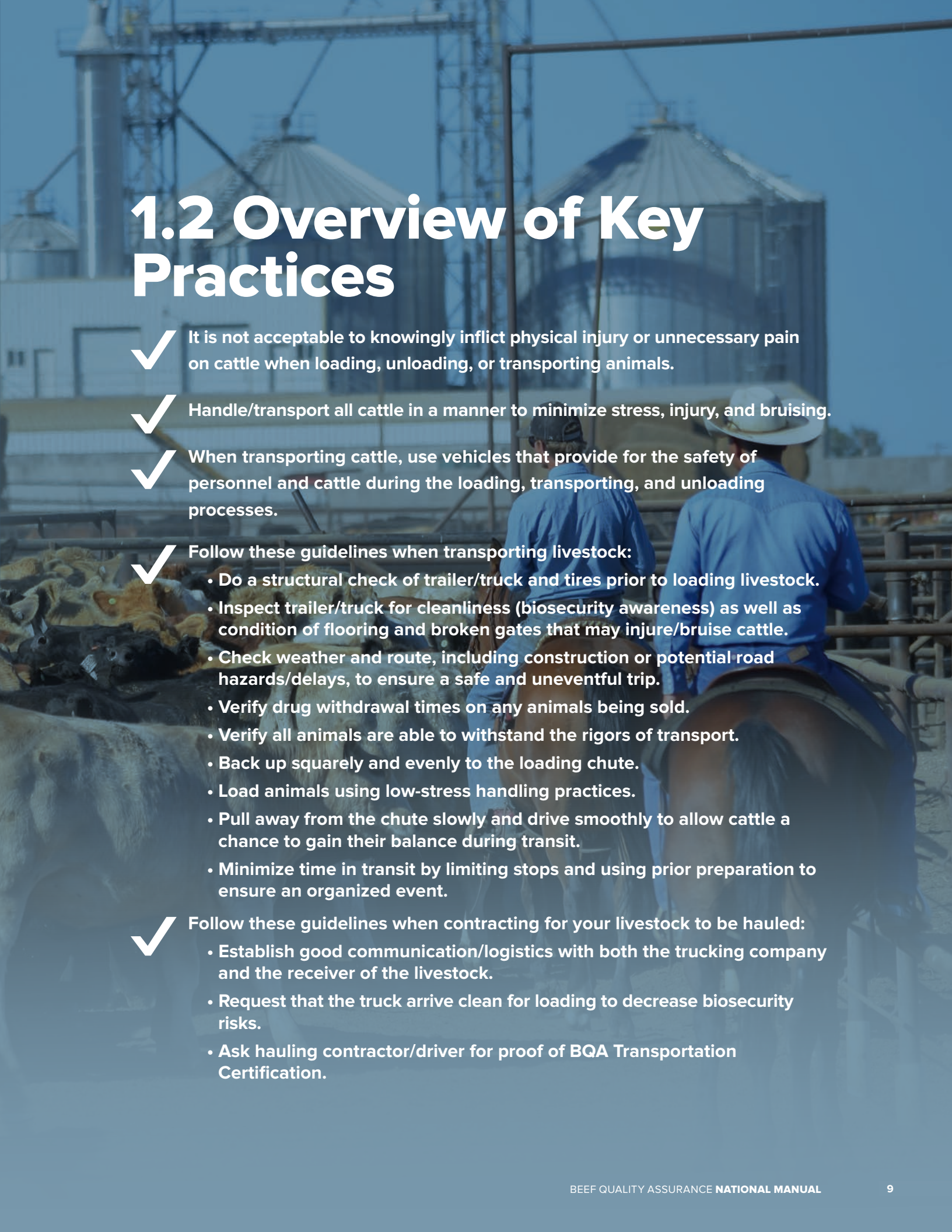
INTRODUCTION

Beef Quality Assurance — Transportation (BQAT) plays a critical role in beef and dairy industries and can impact the health and welfare of cattle. Proper handling and transport of cattle can reduce sickness in calves, prevent bruising, and improve the quality of the meat from these animals. Transportation can be one of the most stressful events for livestock animals. However, when transporting in a safe and low-stress manner, you make the animals' well-being and human safety **a top priority**. This manual will present concepts to help you take every step possible to keep cattle as healthy and safe as possible when in transport.

Cattle transportation occurs at several junctures throughout the production process. During transport, it is essential to take animal well-being and human safety into account. Improper animal care and treatment will have a negative effect on meat quality. A reduction in meat quality impacts the consumer, the production operation, and the trucking business by reducing demand and therefore financial opportunities. These are all reasons why careful transportation of animals is important.

Cattle transport is a team event. It takes effective communication between all individuals involved. Having consistent and appropriate communication about safe transportation practices and planning facilitates successful implementation of these practices. The goal is to reduce potential harm to the people and cattle involved, to ensure a quality product, and to make consumers aware of the important role cattle transporters play in the cattle industry.

1.2 Overview of Key Practices

- 
- A background image showing two men on horseback in a feedlot. They are wearing blue shirts and hats, looking towards large metal feeders. The scene is outdoors with a clear sky.
- ✓ It is not acceptable to knowingly inflict physical injury or unnecessary pain on cattle when loading, unloading, or transporting animals.
 - ✓ Handle/transport all cattle in a manner to minimize stress, injury, and bruising.
 - ✓ When transporting cattle, use vehicles that provide for the safety of personnel and cattle during the loading, transporting, and unloading processes.
 - ✓ Follow these guidelines when transporting livestock:
 - Do a structural check of trailer/truck and tires prior to loading livestock.
 - Inspect trailer/truck for cleanliness (biosecurity awareness) as well as condition of flooring and broken gates that may injure/bruise cattle.
 - Check weather and route, including construction or potential road hazards/delays, to ensure a safe and uneventful trip.
 - Verify drug withdrawal times on any animals being sold.
 - Verify all animals are able to withstand the rigors of transport.
 - Back up squarely and evenly to the loading chute.
 - Load animals using low-stress handling practices.
 - Pull away from the chute slowly and drive smoothly to allow cattle a chance to gain their balance during transit.
 - Minimize time in transit by limiting stops and using prior preparation to ensure an organized event.
 - ✓ Follow these guidelines when contracting for your livestock to be hauled:
 - Establish good communication/logistics with both the trucking company and the receiver of the livestock.
 - Request that the truck arrive clean for loading to decrease biosecurity risks.
 - Ask hauling contractor/driver for proof of BQA Transportation Certification.

1.3 PRINCIPLES OF BQA

BEEF QUALITY ASSURANCE TRANSPORTATION (BQAT) MANUAL

Welcome to doing things the right way — the BQA way. Each aspect of the BQA program is economically logical and part of good business management. This responsible management approach can bring positive benefits to the cattle producer and transporter.

To see how BQA sets the standard for proper management techniques in the beef industry, visit our website at [BQA.org](https://www.bqa.org).



BQAT CERTIFICATION

The BQAT program for cattle transporters is part of BQA. To register to become BQAT certified, visit [BQA.org](https://www.bqa.org).

CERTIFICATION OPTIONS:

BQAT Certification for the Professional Driver and Farmer and Rancher:

- » Learn the principles of transporting cattle in commercial and/or private trailers such as gooseneck trailers or other trailer types that could impact animal well-being and meat quality, as well as the financial impacts they have on the cattle industry.

KEY POINTS:

The program covers many topics including:

- » Cattle handling guidelines and diagrams
- » Checklists for loading/unloading
- » Checklists for extreme weather conditions
- » Checklists for fit/injured/weak cattle
- » Checklists for traveling
- » Loading suggestions
- » Biosecurity and emergency action plans

BQA CERTIFICATION

The BQA program is a voluntary program involving “basic training” in BQA followed by an exam. Training certification continues in communities across the U.S. with the assistance of qualified local individuals, such as veterinarians and extension educators who have completed the BQA certification and training. To learn more about becoming a BQA-certified trainer, visit [BQA.org](https://www.bqa.org).

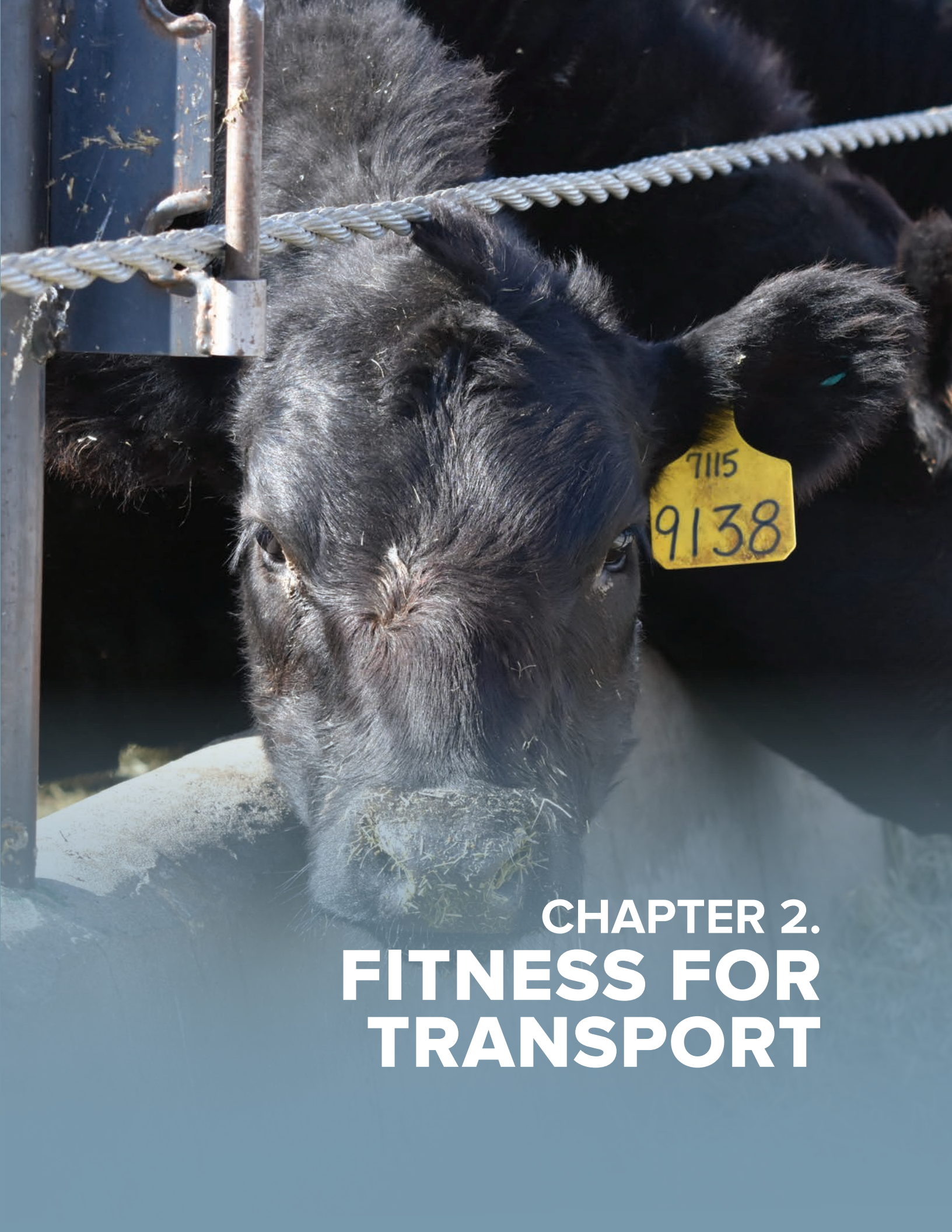
To earn BQA certification, cattle producers must either complete BQA online (visit [BQA.org](https://www.bqa.org)) or attend a training event held by a state BQA coordinator. Both options require the passing of a quiz that relates to BQA Key Practices.

To learn about in-person training opportunities, contact your BQA state coordinator. Below are the BQAT certification options.

By using best practices, transporters can save the cattle industry millions of dollars each year. When a transporter participates in the program, they are showing consumers they are ready to take every step possible to keep cattle as healthy and safe as possible. See the key points highlighted in the transportation certification.

Your BQA certification must be renewed once every three years. Following the completion of your BQA training and successful completion of the exam, you will receive a certificate of completion—an opportunity to proudly display your commitment to beef quality and animal well-being.

Recertification generally requires completing the original BQA training and certification (whether online or via workshops in your state). Some states may offer continuing education opportunities that qualify for BQA recertification. Again, check [BQA.org](https://www.bqa.org) for recertification requirements in your state.



CHAPTER 2. **FITNESS FOR TRANSPORT**



CHAPTER 2.1

INTRODUCTION

One of the most important decisions in transporting cattle is to determine if an animal is fit to be transported, and if not, if transport should be postponed to allow for treatment, or if euthanasia should be carried out instead. Having the knowledge to make this decision is essential for animal well-being. There are multiple considerations to keep in mind as you make decisions on if an animal is fit for transport, such as the health of the animal, the mobility of the animal, and the body condition of the animal. Fitness for transport guidelines include the following:

- » DO NOT move non-ambulatory cattle to market under any circumstances.
- » Make the decision to treat, cull, or euthanize cattle promptly.
- » Delay transport of any cattle that appear to be exhausted or dehydrated until the animal is rested, fed, and hydrated.
- » Use a BQA Transportation certified transport company that is knowledgeable about your cattle care expectations and provides for the safety and comfort of the cattle during transport.
- » DO NOT transport cattle to a packing or processing facility until all proper treatment withdrawal times have been followed.
- » DO NOT transport cattle or dairy with a poor body condition score (i.e., a body condition score of less than 2).
- » DO NOT transport heifers or cows where calving is imminent and likely to occur during the transportation or marketing process.
- » DO NOT transport cattle that require mechanical assistance (e.g., hip lifts) to rise and walk except for veterinary treatment. When using any handling device, abuse must not be tolerated.
- » DO NOT transport cattle with bone fractures of the limbs or injuries to the spine. Cattle with a recent fracture unrelated to mobility should be culled and transported directly to a packing or processing facility if they are ambulatory and can withstand the rigors of transport.
- » DO NOT transport cattle with conditions that will not pass pre-slaughter inspection at a packing or processing facility.¹

¹ https://www.fsis.usda.gov/wps/wcm/connect/04739d5f-6342-4b24-bcdf-1f55f77a3420/PHVt-Antemortem_Inspection.pdf?MOD=AJPERES

2.2 Body Condition Scoring

Nutritional management of the cowherd includes using a scientifically valid method called Body Condition Scoring (BCS) to monitor herd nutritional status. A cow's BCS reflects the amount of energy stores in her body at a given point in time. BCS at calving is an indicator of reproductive success in the coming production year. BCS values range from 1 (emaciated) to 9 (obese). Targeting a BCS of 5–6 for cows at calving promotes optimum reproduction and calf health. Cows that calve at a lower BCS have reduced pregnancy rates. Also, cows calving at a lower BCS may produce a lower volume and quality of colostrum and less milk which can result in reduced disease resistance and growth in the calf. Calves birthed by thin cows have increased risk of morbidity and mortality during the first two to four weeks of life. Immunocompromised calves have an increased risk of sickness when exposed to stress and pathogens throughout their life. Below is a resource for BCS scoring beef cows from Oklahoma State Cooperative Extension Service.

Body Condition Scoring involves visual appraisal of the cow. The hindquarter, shoulder, backbone, ribcage, and the transverse spinous processes (lateral extensions from the vertebrae) between the ribcage and hip bones are common evaluation points. For example, observe the last half of the ribcage. If more than two ribs are easily discernible, then the BCS is probably less than 5. Another example, if the tips of the transverse spinous processes and the individual vertebra in the backbone are visually apparent, expect the cow to receive a body condition score of 4 or lower. Descriptions of the nine body condition scores include the following:

» BCS 1. The cow is severely emaciated and physically weak with all ribs and bone structure easily visible. Cattle in this score are extremely rare and are usually affected by with a disease and/or parasitism.

» BCS 2. (Figure 2) The cow appears emaciated, similar to BCS 1 described above, but not weakened. Muscle tissue appears severely depleted through the hindquarters and shoulder.



Figure 2. BCS 2.

Photo courtesy of Arkansas Extension Service.

» BCS 3. (Figure 3) The cow is very thin with no fat cover on ribs or in the brisket and the backbone is easily visible. Some muscle depletion appears evident through the shoulder and hindquarters.



Figure 3. BCS 3.

Photo courtesy of Arkansas Extension Service.

» BCS 4. (Figure 4) The cow appears thin, with ribs easily visible and the backbone showing. The spinous processes (along the edge of the loin) are still sharp but barely visible individually. Muscle tissue is not depleted through the shoulders and hindquarters.



Figure 4. BCS 4.

- » BCS 5. (Figure 5) The cow may be described as moderate to thin. The last two ribs may be seen and little evidence of fat is present in the brisket, over the ribs, or around the tail head. No muscle depletion is seen in the hindquarter or shoulder area. The transverse spinous processes are now smooth and no longer identifiable.



Figure 5. BCS 5.

- » BCS 6. (Figure 6) The cow has a good smooth appearance throughout. Some fat deposition is present in the brisket and over the tail head. The back appears rounded and fat can be palpated over the ribs and pin bones.



Figure 6. BCS 6.

- » BCS 7. (Figure 7) The cow is in very good flesh. The brisket is full, the tail head shows pockets of fat and the back appears square because of fat. The ribs are very smooth and covered with fat.



Figure 7. BCS 7.

- » BCS 8. The cow is obese. Her neck is thick and short and her back appears very square because of excessive fat. The brisket is distended and she has heavy fat pockets around the tail head.
- » BCS 9. These cows are very obese and are rarely seen. They can be described as similar to 8 but taken to greater extremes. They also have a heavy deposition of udder fat.

Some producers ask whether cows need to be felt to determine fatness or if they can simply be looked at to assess condition scores.

A recent study indicated that cows could be separated equally well by palpation of fat cover or by visual appraisal, but the average score may vary slightly depending on the method used. For cattle with long hair, handling may be of value, but when hair is short, handling is unnecessary. Keep in mind that shrink can alter the looks and feel of the cattle as much as one score. Animals in late pregnancy also tend to look fuller and a bit fatter.

2.3 Transport Fitness

Drivers should inform producers of their expectation for cattle fitness prior to arriving to haul cattle and should not haul cattle that are

unfit for the rigors of transport. The table below identifies scenarios in which cattle are fit versus unfit for transport.

Fit for Transport	Unfit for Transport
» Cattle that have passed all treatment withdrawal times. » Cattle that are not exhausted or dehydrated. » Cattle with a body condition score greater than 2 (for both beef and dairy scale). » Mobility scores should be used to determine if an animal can be shipped. Cattle with a mobility score of 1–2 are fit for transport (scale of 1 - normal and walks easily; 2 - minor stiffness; 3 - obvious stiffness and difficult mobility; 4 - extreme difficulty when moving).² » Cattle with a mobility score of 3 should be shipped with special provisions, including location on truck and awareness of their condition. » Ambulatory cattle with a recent fracture, unrelated to mobility, should be transported directly to a packing or processing facility.	» Heifers or cows where calving is imminent and likely to occur during the transportation or marketing process. » Cattle that require mechanical assistance (e.g., hip lifts) to rise and walk. » Cattle with bone fractures of the limbs rendering inability to bear weight or injuries to the spine. » Cattle with conditions that will not pass pre-slaughter inspection at a packing or processing plant. » Non-ambulatory cattle. Cattle with a mobility score of 4 are not fit for transport. » Cattle that pose a public health threat, such as animals showing neurological signs or zoonotic disease symptoms.

2.4 Cull Cattle

The overwhelming majority of cattle are marketed in good health and physical condition. Regardless of herd size, all beef cow operations will have some cull animals. Good culling management adds value to the operation and industry. Poor culling management forgoes this value and may contribute to unacceptable product defects, animal welfare, and public health concerns, creating liability for the producer and industry.

Not all culled animals are suitable for processing into higher-value products. Some compromised cattle should not enter intermediate marketing channels because of animal well-being concerns. Instead, these cattle should be sold directly to a processing plant or euthanized (see euthanasia section), depending on the severity

of the condition, processing plant policy, and USDA or state regulations.

Culling guidelines include:

- » DO NOT market culled animals that pose a public health threat.
- » Be certain that ALL animals shipped to market have cleared mandated withdrawal times.
- » DO NOT market culled animals that have an advanced terminal condition.
- » DO NOT send disabled culled animals to market.
- » Market culled animals BEFORE they become severely emaciated.
- » DO NOT market culled animals that have an advanced eye lesion.

² <https://www.youtube.com/watch?v=QIsIfHCvkpg>

2.5 Marketing Guidelines

LAMENESS

Lameness seriously compromises well-being and is a management priority. Some of these problems are unavoidable, particularly with bulls. However, many problems with lame cattle are easily avoidable if producers cull animals before they develop feet and leg problems due to old age or chronic health issues.

If ambulatory, the packer is required to remove all tissue associated with an arthritic joint. Additionally, excessive bruising results in large trim losses. Disabled cattle should either be marketed directly to the packer or humanely euthanized.

NON-AMBULATORY (DOWNER) CATTLE

A non-ambulatory animal (commonly referred to as a "downer") is unable to stand up or walk, even if assisted. Design and conduct all procedures to prevent cattle from becoming non-ambulatory. In the event an animal becomes non-ambulatory, manage and care for it in a humane manner. Marketing cattle promptly before this issue occurs will promote a better quality of life for the animal and be more efficient for the operation.^{3,4}

Guidelines for non-ambulatory animals include:

- » Promptly diagnose non-ambulatory animals and determine whether the animal should be humanely euthanized or receive treatment.
- » Provide adequate feed and water to non-ambulatory cattle at least once daily.
- » Move downer animals very carefully to avoid compromising animal welfare.
- » Acceptable methods of transporting downers include a sled, low-boy trailer, or the bucket of a loader. Animals should not be scooped into a front-loader bucket but rather humanely rolled into the bucket by caretakers.

- » If animals are unable to sit up or rise without assistance and refuse to eat or drink, they should be promptly and humanely euthanized. Even when treatment is attempted, cattle in this condition should be euthanized within 24–36 hours.
- » DO NOT send non-ambulatory cattle to a livestock market or processing facility.

UNACCEPTABLE ACTIONS WHEN MANAGING A NON-AMBULATORY ANIMAL INCLUDE THE FOLLOWING:

- » NEVER drag non-ambulatory animals.
- » NEVER use an electric prod to stimulate an injured or disabled animal to get up unless essential to prevent further injury or death.
- » NEVER use chains, rope, or cables to lift, suspend, or move the animal unless necessary to prevent further injury or death, if allowed by state law.
- » NEVER let a non-ambulatory animal remain in any area where they may get walked on or trampled.

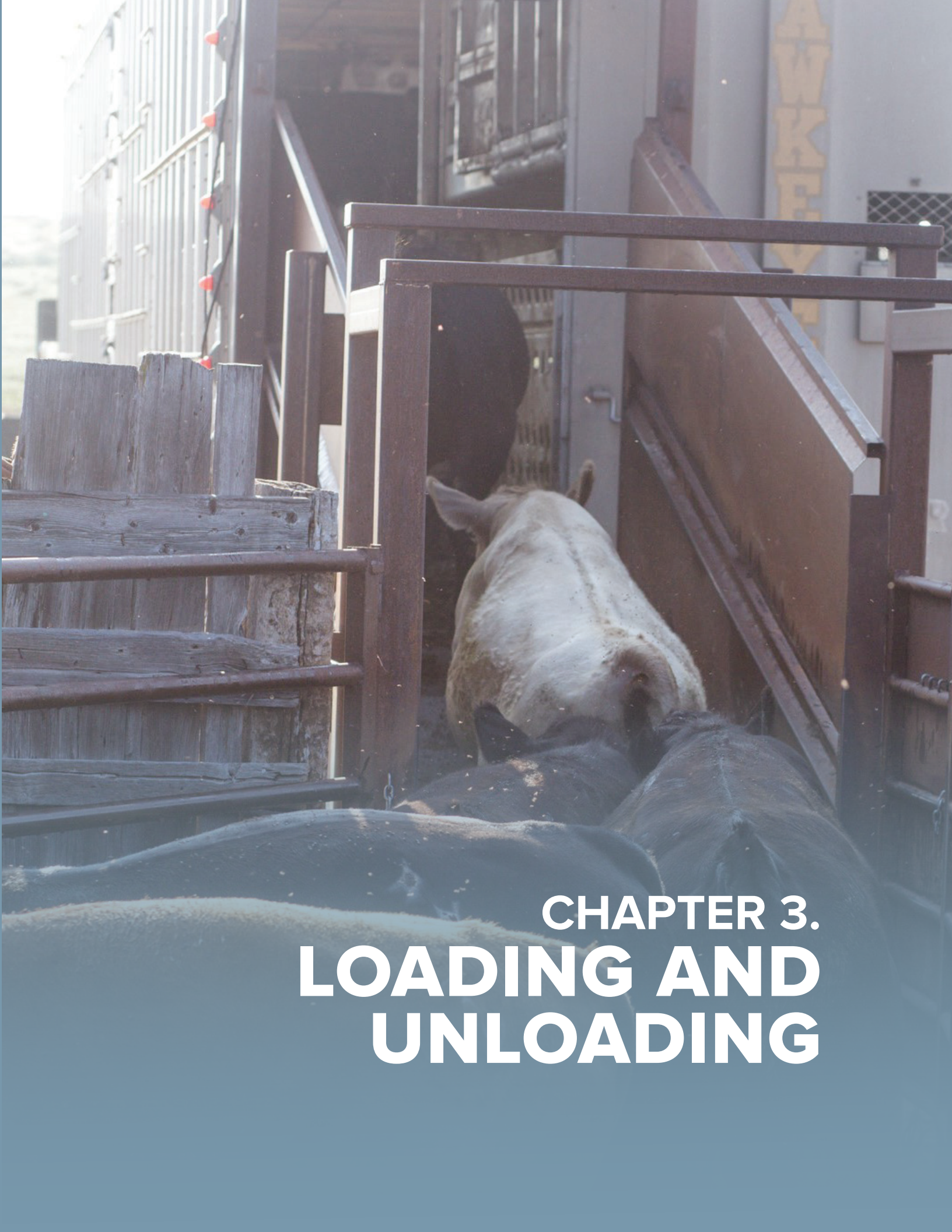
³ https://www.aabp.org/Resources/AABP_Guidelines/transportationguidelines-2019.pdf

⁴ http://aabp.org/Resources/AABP_Guidelines/non-ambulatory2020.pdf

GENERAL CONSIDERATIONS FOR "FIT" VS. "UNFIT" CATTLE FOR TRANSPORT

- » All cattle appear healthy and no apparent foot injuries are noted.
- » Cattle being transported for slaughter meet the packing plant's minimum weight requirements.
- » Cattle being transported for slaughter meet the USDA Food Safety and Inspection Service (FSIS) minimum health requirements.
- » DO NOT accept cancer eyes, emaciated animals, downers, or animals that appear sick.
- » DO NOT accept cattle that exhibit signs of Foot and Mouth Disease, as outlined in Section 6.4. Operation management must immediately be notified of cattle showing these signs.
- » When eye cancer is detected, have the eye examined to determine treatment options, or market the animal as quickly as possible and before advanced stages develop — advanced stages of tumor development generally result in the head and sometimes the whole animal being condemned.
- » If an individual animal passes the above requirements, but is STILL questionable and it MUST be loaded, be sure to load it onto the back of the trailer to minimize stress and movement distance (last on, first off).



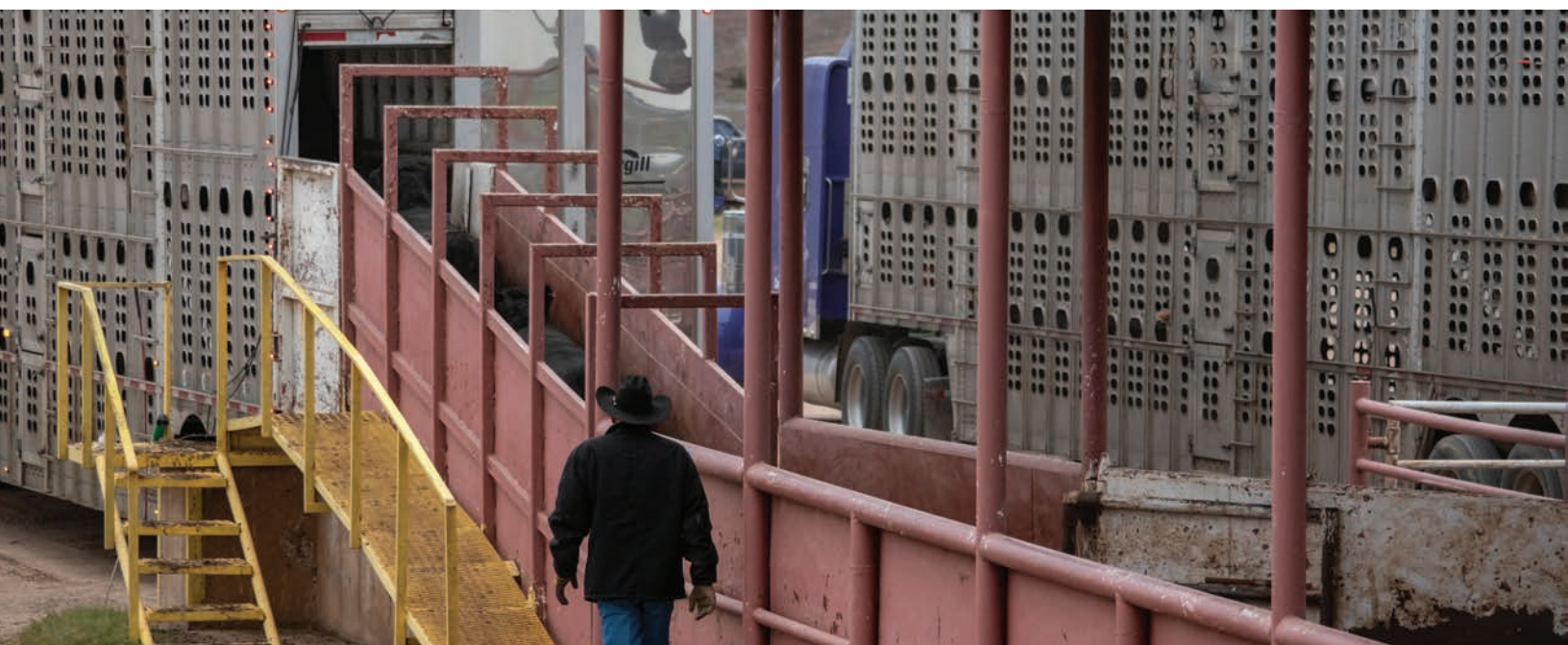


CHAPTER 3. LOADING AND UNLOADING

CHAPTER 3.1

INTRODUCTION

Apart from severe weather, transportation can be one of the most stressful events for cattle in their lifetime. An animal's loading and unloading experience has a significant impact on total transportation stress. Quiet and low-stress animal handling techniques used for loading and unloading significantly reduces animal stress, thereby allowing cattle to remain healthier and more quickly acclimate to their new environment.



USDA FSIS announced it holds livestock owners, transporters, haulers, and other persons not employed by an official establishment responsible if they commit acts involving inhumane handling of livestock in connection with slaughter when on the premises of an official establishment.⁵

Loading and unloading guidelines include the following:

- » NEVER knowingly inflict physical injury or unnecessary pain on cattle when loading, unloading, or transporting them.
 - » Ensure cattle sorting and holding pens allow handling without undue stress on the cattle or handlers.
 - » Locate sorting and holding pens near the loading/unloading facility.
 - » Ensure sorting and holding pens are suitable for herd size.
 - » Provide water for cattle in the holding pens especially during times of heat stress.
 - » Properly design and maintain loading facilities for easy and safe animal movement.
 - » Ensure all personnel properly use loading facilities to assure the safety of both cattle and cattle handlers.
- » Ensure ramps and chutes are strong and solid, provide non-slip footing, and have sides high enough to keep cattle from falling or jumping off — a ramp angle of 25 degrees or less will improve cattle movement.
 - » Ensure all vehicles used to transport cattle provide for the safety of personnel and cattle during loading, transporting, and unloading.
 - » Strictly adhere to safe loading density levels factoring animal weight and space allocation.
 - » Provide adequate space for cattle in trailers. Cattle should have sufficient room to stand with little risk of being forced down because of overcrowding.
 - » DO NOT ship cattle that are unable to withstand the rigors of transportation.
 - » Safely partition cattle into smaller areas to provide stability for the cattle and the vehicle.
 - » Ensure there is not a gap between the ramp, its sides, and the vehicle or trailer that would allow injury to an animal.
 - » Ensure vehicle or trailer doors and internal gates are sufficiently wide to permit cattle to easily pass through without bruising or injury.
 - » Load, unload, and move cattle through facilities with patience and as quietly as possible to reduce stress and injury.

⁵ <https://www.federalregister.gov/documents/2016/10/26/2016-24754/inhumane-handling-of-livestock-in-connection-with-slaughter-by-persons-not-employed-by-the-official>



LOADING

Ensure cattle can safely enter the trailer without tripping or falling.



UNLOADING

This is an example of a trailer that needs to re-position to be square to the ramp with no gap.



CHAPTER 4. **BEHAVIOR AND HANDLING**

CHAPTER 4.1

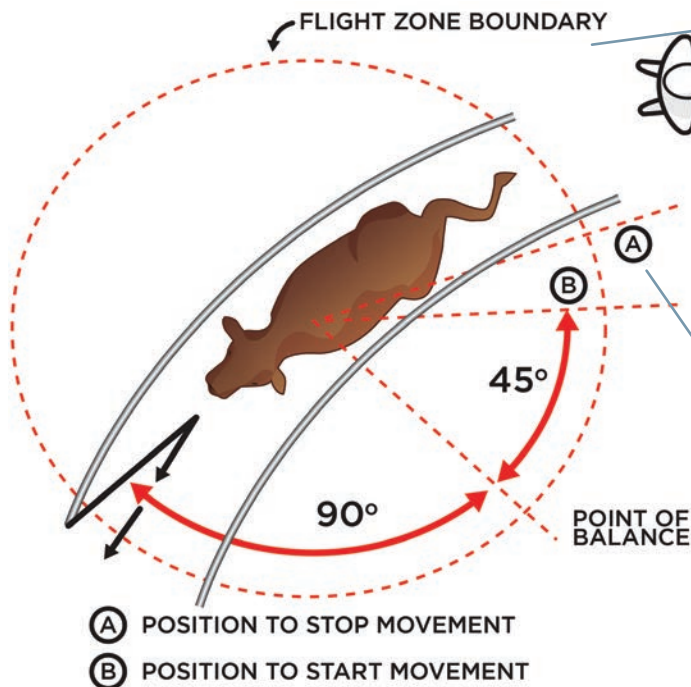
INTRODUCTION

Proper handling management, based on sound animal behavior knowledge, will reduce stress and behavior-related issues. Improper handling that does not consider cattle behavior may lower conception rates and negatively impact immune system and rumen function. This may predispose animals to adverse health events, such as shipping fever or excess shrink and/or bruising, requiring excess carcass trimming at the time of processing. The following information serves as an educational resource. All production practices should be adapted to the specific needs of individual operations.

4.2 Flight Zone

An important concept of livestock handling is the animal's flight zone or personal space. The size of the flight zone varies depending on how familiar the cattle are to their current surroundings, people, equipment, etc.

Properly using an animal's natural flight zone can facilitate efficient, low-stress cattle movement — guidelines to do so are described with diagrams on the next page.

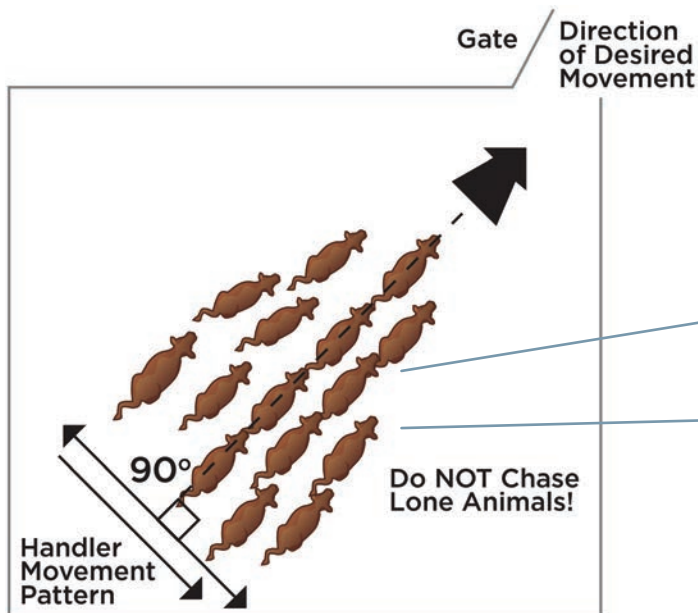


» Determine the flight zone boundary of an animal or group of animals by slowly walking up to them; they will move away when you have entered their flight zone.

» Avoid entering the animal's flight zone boundary too deeply or quickly as this may cause them to bolt away or back past you.

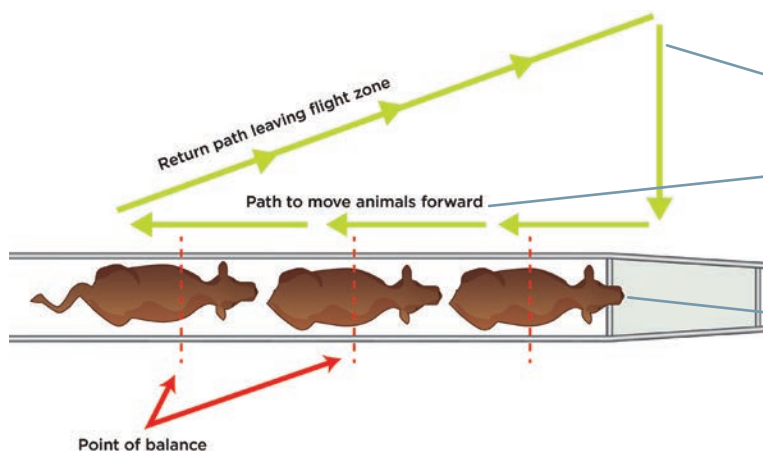
» Retreat from an animal's flight zone boundary if you want it to stop moving.

» Move cattle forward toward a chute by moving toward their rear past their point of balance (eye and shoulder).



» Allow cattle to follow one another in the direction that they are facing.

» Move behind a group of cattle in a zig-zag manner to keep you in their line of sight which will help them to keep moving forward.



» Leave cattle's flight zone to stop their movement in a chute.

» In the chute, stop cattle by moving forward past their point of balance.

» Concentrate on moving the leader(s) rather than the rear animal(s) if a group of cattle bunch up.

4.3 Cattle Handling Facilities and Equipment

In addition to working with an animal's flight zone to handle cattle, it is especially important to properly design, construct, maintain, and use cattle handling facilities. When used correctly, facilities and equipment can improve animal well-being and productivity at an operation.

Proper worker training at the operation's facilities is important to maintaining this mission.

Additional cattle housing considerations can be referenced on [BQA.org](https://www.bqa.org).



When considering the design and the maintenance of cattle handling facilities and equipment, consider the following:

- » Ensure facilities and pens have good back gates and the pens, loading ramps, and trailers have non-slip flooring surfaces
- » To heed appropriate biosecurity precautions, trailers and equipment should be cleaned and disinfected prior to hauling a new load of cattle.
- » Ensure floors in trailers can properly drain and have adequate traction with non-slip flooring surfaces.
- » Consider the following features when transporting cattle: protection from weather/elements, adequate ventilation, amount of space per animal, the potential need for bedding, the direction and force of wind, safe use of mechanical/electrical devices, and waste removal/drainage.



4.4 Temperature Considerations

The normal core body temperature for cattle is 101.5° F, on average. The animal must maintain normal body temperature to sustain essential physiological processes. Properly caring for and handling cattle includes supporting their temperature maintenance and ability to adapt

to their regional environment. It is important to prevent or address environmental conditions that approach cattle's heat and cold thresholds to maintain optimal cattle performance and health.

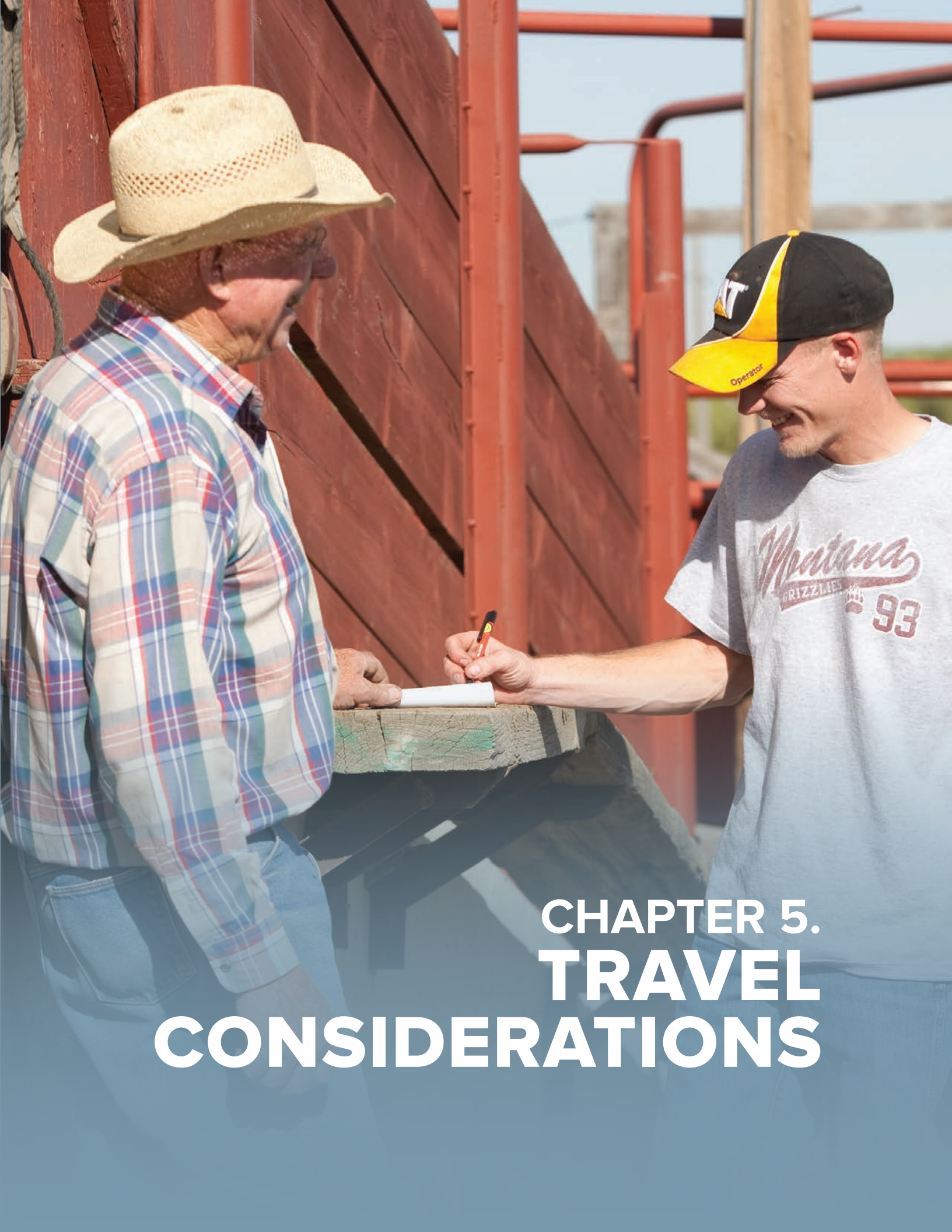
HEAT

- » Transport and load cattle during the cooler times of the day.
- » Closely coordinate the arrival of a transported load of cattle with delivery location/dispatch so animals are not on trailers longer than necessary.
- » Work cattle more prone to heat stress first, earlier in the day or later if conditions are moderate.
- » Limit the amount of time cattle spend in handling facilities or waiting on the trailer when heat stress may be more significant.
- » Make sure trailers are well ventilated.
- » Provide access to water after transporting so cattle do not get dehydrated.
- » Avoid handling cattle when the risk of heat stress is high. If cattle must be handled, a general rule is to work them before the Temperature Humidity Index (THI) reaches 84. As an example, and as seen in the image below, when the temperature is 98° F and the humidity is 30%, the THI is 83.
- » At a constant temperature, the THI increases as the relative humidity increases. Each one mile per hour increase in wind speed can decrease the THI by approximately one point.

Beef Cattle Temperature Humidity Index														
		Relative Humidity (%)												
		30	35	40	45	50	55	60	65	70	75	80	85	
Temperature (°F)	100	84	85	86	87	88	90	91	92	93	94	95	97	
	98	83	84	85	86	87	88	89	90	91	93	94	95	
	96	81	82	83	85	86	87	88	89	90	91	92	93	
	94	80	81	82	83	84	85	86	87	88	89	90	91	
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	86	75	76	77	78	78	79	80	81	81	82	83	84	
	84	74	75	75	76	77	78	78	79	80	80	81	82	
	82	73	73	74	75	75	76	77	77	78	79	79	80	
	80	72	72	73	73	74	75	75	76	76	77	78	78	
	78	70	71	71	72	73	73	74	74	75	75	76	76	
	76	69	70	70	71v	71	72	72	73	73	74	74	75	
Temperature Humidity Index (THI)														
		Normal <75			Alert 75-78			Danger 79-83			Emergency >84			

COLD

- » Adjust feed and energy rations to match increased maintenance energy requirements of cold-exposed cattle prior to transport.
- » Prior to transporting, provide windbreaks to reduce wind, moisture, and mud build-up on the cattle while in transport.
- » Keep cattle dry and cover slats to reduce cold air entering the trailer without reducing ventilation.
- » Provide bedding in severe conditions to put a barrier between cattle and the frozen ground or trailer floor.



CHAPTER 5. TRAVEL CONSIDERATIONS

CHAPTER 5.1

INTRODUCTION

Every time cattle are hauled, risks are involved. Mitigating common risks can prevent many accidents. Common risks include adverse weather, equipment failure, distracted and impaired driving, as well as driver fatigue.

The next page includes guidelines pertaining to travel considerations. Additional BQAT information and certification opportunities are available at [BQA.org](https://www.bqa.org).





» Weather

- Check weather forecast prior to loading/leaving and while en route.
- Have alternate routes available.
- Determine appropriate routes, based on truck and trailer weight. Consider:
 - Amount of anticipated traffic
 - Number of stops
 - Number of sharp turns and road width
- Constantly monitor animals for comfort and condition during any delay.



» Breakdowns

- Have another truck take the trailer if the repairs will take an extended amount of time or cannot be done at the site of the breakdown.
- Transfer animals to another unit if the problem is with the trailer.



» Safety

- Avoid distractions such as:
 - Eating or drinking
 - Talking or texting on a phone
 - Checking email
 - Reading
 - Searching for items in the truck
- Follow posted speed signs.
- Drive defensively.
- DO NOT tailgate, pass illegally, or attempt to beat traffic lights or railroad crossings.
- Stay alert.
- Never drive impaired.



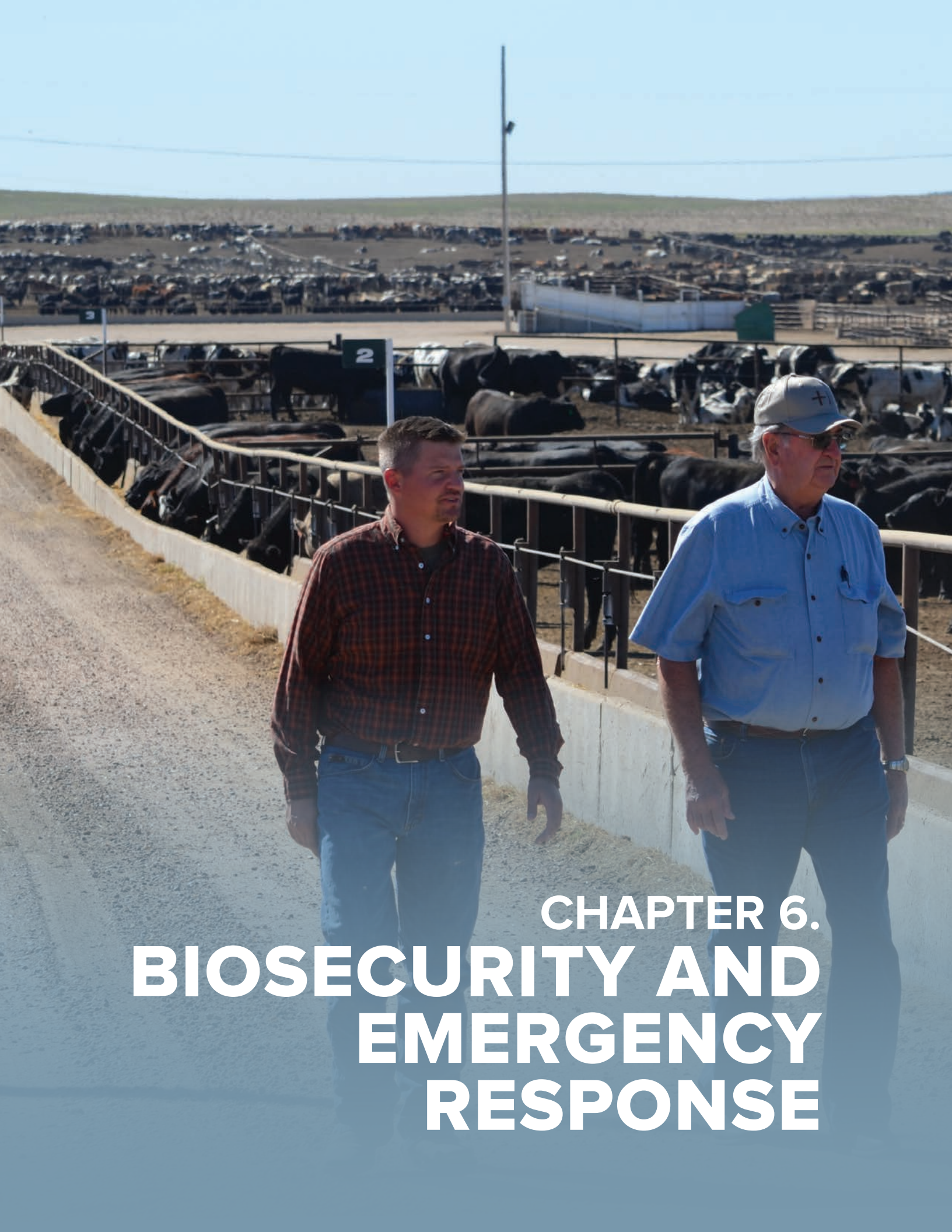
» Fatigue

- Get adequate sleep so that fatigue will not be an issue for the duration of the trip. Seven and a half hours is commonly recognized as the normal amount of required sleep.
- If you drive during the night, ensure your sleep schedule allows for a quiet, restful sleep during the day.
- Take 15-20 minute power naps to recharge as needed.
- Allow fresh air into the cab and play music to stay awake.



» Accidents

- Document any incidents with photographs for the insurance company and your employer.
- Do your best to ensure animals do not enter the roadway.
- Call 9-1-1 if the situation is life threatening for you, bystanders, or the livestock.
- DO NOT speak to the media.



CHAPTER 6.
**BIOSECURITY AND
EMERGENCY
RESPONSE**

CHAPTER 6.1

INTRODUCTION

The goal of biosecurity is to protect animals from disease. This is accomplished through disease resistance and prevention as well as minimizing or controlling cross-contamination of bodily fluids. Cross contamination of body fluids can occur directly — animal to animal — or indirectly — animal to feed to animal or animal to equipment to animal. Biosecurity management practices aim to prevent the spread of disease by minimizing the movement of biological organisms such as viruses, bacteria, parasites, etc., in or on an operation. Biosecurity is more challenging for animals raised outdoors. However, leading management practices can reduce cattle's exposure to disease-causing agents.



6.2 Biosecurity Action Plan

Cattle diseases can cause substantial financial losses, and many of these diseases can be readily transmitted during transport. Transport places cattle in close proximity and trucks, trailers, equipment, and clothing and footwear can easily become contaminated with materials carrying pathogens, such as manure, respiratory secretions, urine, feces, and fomites.

In the event of a biosecurity concern, follow these procedures to aid in containment of the disease, environmental contaminant, or intruder

posing a threat to the health and well being of a livestock load. Critically assess each situation to determine the appropriate response steps.

- » All operations should have a biosecurity plan in place for daily operations. An example template can be found at www.bqa.org/resources/templates-assessments.
- » Enhanced biosecurity plans will be necessary in the event of a Foot and Mouth Disease outbreak. More information including example templates can be found at securebeef.org.

PRACTICES FOR FARMERS, RANCHERS, AND PROFESSIONAL DRIVERS

- » When you arrive to your operation, if possible, move and unload the new stock in a location where the rest of the existing herd is not in contact with the incoming cattle.
- » When unloading cattle, observe each animal for signs of sickness. If sickness is observed in an animal, they should be removed from the group to prevent the spread of disease.
- » Trailers and equipment, if used at another farm or operation, should be cleaned and disinfected before use or loading a new group of animals.
- » Non-employees or family that are helping should have clean clothing and boots prior to entering the operation to prevent entry of organic matter and potential infectious pathogens.
- » Provide gloves, over boots, coveralls, etc., if necessary.
- » Provide areas to clean and disinfect boots, hands, and equipment.
- » All persons assisting should be trained to use the equipment they are expected to use.

6.3 Biosecurity Awareness—Foreign Animal Disease Identification

As a transporter, you contribute a critical role in a safe food supply. Drivers and haulers can monitor for signs of foreign animal diseases (FADs) and act as a stopgap in the spread of FADs. FADs are important transmissible livestock diseases believed to be absent from the United States and its territories. FADs could have significant health or economic impacts on cattle and cattle operations. Preventing FAD outbreaks in our cattle industry is the responsibility of all sectors of the supply chain.

Symptoms of typical diseases have been addressed in the Fitness for Transport chapter. The most concerning FAD in cattle is Foot and Mouth Disease (FMD). FMD is a very contagious viral disease of cloven-hooved (two-toed) animals. Common livestock affected include cattle, pigs, sheep, and goats. It has been eradicated from North America and there are many measures taken to prevent FMD from entering the country.

It is important to remember that FMD does NOT affect public health or food safety so both meat and milk are safe to eat and drink.

Onset and severity of clinical signs will vary between animals. Cattle with FMD may exhibit one or more of the following signs:

- » Vesicular lesions (blisters, ulcers, and sores)
 - In the mouth—tongue, lips, dental pad, gums, muzzle/nostrils
 - On the hooves—around the coronary band (top of hoof) and between the toes of the hoof
 - On the teats—especially in lactating cows
- » Drooling
- » Loss of appetite
- » Lameness or reluctance to move
- » Nasal discharge
- » High fever

Early recognition of FMD signs and prompt reporting are critical to containing this highly contagious disease. Drivers and haulers should immediately contact the operation's manager to notify of them of these signs. The animals should not be loaded. The State Animal Health Official (SAHO) will be contacted by the farm or veterinarian and an investigation will start.



DROOLING

Excessive salivation due to mouth lesions; nasal discharge.⁷

If FMD enters the U.S., movements on and off farms could be stopped by State and Federal Officials to try and stop disease spread. **FMD virus can spread on contaminated vehicles, equipment, even people's clothing and footwear.** In the event an FAD outbreak occurs in your area, the Federal Officials and the SAHO will likely request information that can be used to trace animals back to their farm of origin. Having accurate records of the movement of animals, vehicles, equipment, and people will be integral to the investigation. Once stopped, restarting movement will require a special permit issued by regulatory officials after the producer meets certain requirements, including enhanced biosecurity.

These practices are part of the Secure Beef Supply Plan for Continuity of Business during an FMD Outbreak. Transporters are encouraged to understand the components of an enhanced biosecurity plan. The Secure Beef Supply (SBS) Plan provides guidance to producers and transporters who have cattle with no evidence of FMD infection prepare to meet movement permit requirements. Visit securebeef.org for more information.⁶



LAMENESS

Foot lesions may cause animals to shift weight or spread out their front feet, be reluctant to move, and have a hunched back.⁷

⁶ https://securebeef.org/Assets/SBS_FMDPocketGuide.pdf

⁷ USDA APHIS Foreign Animal Disease Diagnostic Laboratory and the U.S. Department of Homeland Security (DHS) Primus Visual Information Services at the Plum Island Animal Disease Center (PIADC)

6.4 Emergency Response

First, assess the situation. If the situation appears to be life threatening for you, other bystanders, or the livestock on your trailer, request emergency medical or law enforcement assistance immediately.

ASSESSING THE SITUATION

- » Is it a disease or health concern of one or more animals on your load? Watch for abnormal behavior such as foaming at the mouth or difficulty breathing. Contact your dispatch office or a state animal health official and they will contact the appropriate officials. Wait for their instructions to proceed.
- » Is it an environmental contaminant concern? If a contaminant is suspected, pinpoint the source and isolate it. Set a safe perimeter around your load, taking
- » Set a safe perimeter around your load, taking necessary precautions to protect the safety of yourself, bystanders, and the livestock. Contact your dispatch office or local authorities and they will contact the appropriate officials. Wait for their instructions to proceed.
- » Is it an intruder concern? Be extremely cautious of strangers. DO NOT allow anyone access to your load.

PROCEDURES FOR RESPONDING TO EMERGENCIES

- » In the event of an emergency, contact the local law enforcement agency and describe your location, the nature of the emergency, and include the information about your load.
- » Develop a list of people to contact in the case of an emergency. See below.
- » Organize names, phone numbers, and contact information ahead of time so you have quick access to them in the case of an emergency.
- » Determine a list of alternative delivery location(s) if the cattle are in transit and the load needs to be canceled or rerouted.
- » DO NOT discuss details about your load with strangers or the media. Be cautious about allowing pictures or videos.



6.5 Emergency Action Planning

Emergency action plans are critical for an operation's ability to address a variety of infrequent but often dangerous situations. Emergency action plans should be available at critical access points where you, your crew, or others can find and use it to contact help. A copy should also be available in remote locations and in the glove compartment of vehicles. Review your action plan with your crew on a regular basis and update it when changes are required.

Emergency action plans should contain:

- » Premises Name
- » Premises ID Number (PIN)
- » Owner Name and/or Operator Name
- » Farm Services Agency (FSA) Number
- » GPS Coordinates
- » Site Physical Address (911 Address)
- » Directions to the Site from Nearest Town(s)
- » Important telephone numbers

- 9-1-1
- Operation Owner
- Herd Manager
- Cattle Handlers
- Veterinarian
- Local Doctor's Office
- Local Emergency Room
- Local Poison Control
- Local Fire Department(s)
- Local Police Department(s)
- State Police
- Sheriff
- Highway Patrol
- Electric Company
- Water Company
- Natural Gas Company
- Telecommunications/Internet

FOREIGN ANIMAL DISEASE EMERGENCIES

Operations that suspect FAD in an animal or herd should call the USDA APHIS Assistant Director (AD) for your state or your State Animal Health Official (SAHO). Contact information for your AD or SAHO can be obtained by

calling (866) 536-7593. You can also call the USDA Emergency number (800) 940-6524 (24 hours) for assistance. Information will be kept confidential during the investigation.

TRANSPORTATION EMERGENCIES

- » Engage all employees that transport livestock in the BQAT Program; they can participate online at [BQA.org](https://www.bqa.org) or through an in-person program.
- » Encourage local first responders to participate in the Bovine Emergency Response Plan (BERP).
- » Consider conducting a mock emergency to practice the chain of phone calls or practice responding to a stranded trailer loaded with cattle.
- » Consider who will administer euthanasia and how if it becomes necessary due to a transportation emergency.



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