



## TRANSPORTATION AND FITNESS-FOR-TRANSPORT RECOMMENDATIONS FOR CATTLE

*Transportation is a necessary part of cattle production and should be managed to decrease the stress to the animal and people handling the animal. Veterinarians, producers and livestock haulers need to work together to determine if an animal is fit for transport. Animal and human safety and welfare should be top priority when transporting cattle. The decision to transport an animal should include considerations regarding timely culling or marketing and whether slaughter or euthanasia is appropriate.*

*For this document, “fitness-for-transport” refers to the animal’s ability to withstand transportation without compromising its welfare. Animal and human safety should guide fitness-for-transport decisions, and is dependent on the operation’s workforce and facilities. This live animal evaluation is critical to deciding whether an animal can withstand the rigors of transport, including standing for long periods in variable weather. This also includes ensuring the animal can make the entire journey from the first loading to the last unloading at its final destination.*

### GENERAL GUIDELINES FOR HANDLING, LOADING AND UNLOADING ALL CATTLE CLASSES

Personnel should be trained in assessing the health and welfare of cattle and calves, including understanding cattle behavior, evaluating fitness-for-transport, proper handling techniques, decision making for euthanasia, and conducting and documenting humane euthanasia supported by AABP/AVMA guidelines. All personnel handling or transporting cattle or calves should have documented training sufficient to ensure that animal health, safety and welfare can be assessed and an appropriate plan followed. Willful abuse during the pre-loading, loading or unloading periods must not be tolerated. Review the following considerations during transportation planning:

#### ANIMAL

- All cattle and/or calf handling should be performed using low-stress cattle handling methods. Electric prod use should be minimal for safety and welfare reasons and reserved for animals not responding to low-stress cattle handling methods. Electric prod use is strongly discouraged for calves less than three months of age.
- Verify through records that cattle transported to slaughter meet appropriate withdrawal times for any previously administered pharmaceuticals.
- Water should be made available to animals until the time of loading.
- Delay or cancel transport of an animal that appears to be exhausted or dehydrated until the animal is rested, fed and rehydrated. Cancel transport of any animal that appears injured or sick unless transporting them to receive veterinary care or, when appropriate, for immediate slaughter. For additional information, see sections “Handling and Transport Special Needs/Compromised Cattle and Calves” and “Handling and Transport of Non-Ambulatory Cattle/Calves”.
- Before unloading, check that there are no cattle in a compromised position that might be injured during unloading. Adjust unloading procedures accordingly for human and animal safety.
- Cattle that cannot be transported should be euthanized according to a written veterinary euthanasia protocol as supported by AABP/AVMA. AABP euthanasia guidelines can be found at [https://aabp.org/about/Guidelines\\_PositionStatements.asp](https://aabp.org/about/Guidelines_PositionStatements.asp).



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### PERSONNEL AND TRANSPORTERS

- The shipper must ensure that transportation arrangements have met the required guidelines for the receiver of the cattle. Communication with livestock haulers and transporters is important to ensure that guidelines and care of cattle are met.
- Identify and plan for weather conditions that could impact the safety and well-being of the cattle during transportation (extreme heat/cold). Careful consideration of weather should be made for cross-country trips when different types of weather may be encountered at various points en route to the destination. Pre- and post-trip checklists and other training tools for transporters are available through the Beef Quality Assurance (BQA) Transportation program.
- Verify the transporter understands the travel route directions and has destination address.
- Verify that the transporter has all the required paperwork, including Certificates of Veterinary Inspection (CVIs) and brand inspection records if required. Include all relevant treatment records and withdrawal times for transported cattle and calves.
- Ensure the driver has important emergency phone numbers needed en route and at delivery. Have an emergency plan in place that addresses potential transportation emergencies and unexpected situations.
- Have the driver transfer all appropriate documents in their possession to the responsible party receiving the cattle.

### TRAILER

- Verify that the vehicles are safe and provide adequate space for each animal. Total weight should not exceed capacity of truck or trailer and or legal load requirements.

- Use a clean trailer. Fecal-oral disease transmission is less likely when cattle are hauled in clean trailers. Additional disinfection measures should be considered when hauling young calves.
- The trailer bed should be clean and dry and have a non-slip floor. Cattle are less likely to be injured when provided with secure footing. If necessary, appropriate bedding should be provided, especially for calves or compromised cattle.
- The trailer should be inspected for properly working latches/gates and any defects impacting cattle safety and well-being.
- The trailer should be positioned correctly in the load-out area to minimize the potential for cattle injury during loading.
- Before loading into a trailer, a load plan should be formulated based on the animal weight, frame size and type of transportation equipment used.
- Consideration should also be given to the environmental conditions including temperature, humidity and wind speed. Adjustments to the loading plan should be made accordingly. As per BQA guidelines, temperature humidity index (THI) should be less than 84 to work or move cattle.
- Prevent injury by not commingling animals with significant variations in size and weight in the same trailer compartment.
- Position the trailer properly to minimize the potential for cattle injury during unloading.

### FACILITY

- Facilities and equipment used when loading cattle and/or calves onto transport vehicles should be designed to minimize stress and injury. Inspect the loading facility to ensure all contact surfaces are smooth and free of



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sharp edges. Ensure all equipment is well maintained and in proper working order to prevent injuries to cattle. Entry and exit lanes and ramps' flooring should have a non-slip surface.

- Ensure that the load-out area is appropriate for the type of trailer used to haul the cattle and that the load-out chutes/gates are in good repair. It is recommended that the load-out ramp be at least 12 feet long and the rise is no greater than 3.5 inches/foot. The ramp height should be appropriate for the type of conveyance.

### REGULATIONS AND LAWS

Follow local and federal livestock transportation laws within your jurisdiction. For example:

- Cattle transported for more than 28 hours must be unloaded, fed and watered as specified under U.S. federal regulation (49 U.S. Code § 80502). This regulation would not pertain to air and sea transportation methods that supply feed, water, space and opportunity for rest.
- The Canadian Food Inspection Agency (CFIA) regulates the transport of animals and specific guidance can be found at <https://inspection.canada.ca/en/animal-health/terrestrial-animals/humane-transport>.

### TRANSPORTATION OF YOUNG CALVES

This section of the guideline applies to young calves being transported to an off-site rearing facility such as another location of the same farming operation, a veal operation, or a commercial self-rearing operation, i.e., “calf ranch” or “heifer grower”. It also applies to young calves being transported to a slaughter facility or auction market.

Veterinarians are a vital part of the cattle operation's team. They should be directly involved with their clientele during the development, implementation and associated documentation of policies and procedures for calf management and transportation.

Calf transport is a growing area of research, and veterinarians are encouraged to stay current on current updated research. Industry training tools such as the Veal Quality Assurance and Calf Care & Quality Assurance programs should be considered.

### CALF SELECTION FOR TRANSPORT

Calves shipped to calf-raising facilities should be healthy, individually identified and fit for transport. Personnel determining the fitness of individual calves for transport should be trained to assess calf health and welfare including dehydration, lameness, body condition score, disease recognition and other factors. All calves should be dry, well hydrated, free from apparent illness and injury, and able to stand without assistance.

Non-replacement calves must receive colostrum at birth. Calves should be fed immediately before transportation. Feeding a meal, rather than only electrolytes, has been shown to improve transport-related health outcomes. Minimizing the length of the journey is critical to maximizing the health and welfare of the calves. A rest period during long journeys could be beneficial, but is an area of active research with inconclusive results. Where possible, retaining calves on the source farm for transporting at an older age can mitigate the impact of transport, including disease incidence and growth rates. Lessening the duration of feed restriction and length of transportation can improve transported calves' health, growth and welfare.



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Calves that are unfit for transport due to nutrition issues, disease or injury should be evaluated immediately, and treated or euthanized using methods supported by the AVMA/AABP guidelines. See FSIS 81 FR 46570 for specific information regarding requirements for the disposition of non-ambulatory disabled veal calves at <https://www.fsis.usda.gov/wps/wcm/connect/d14f378b-4ef6-479b-8088-678079e10a42/2014-0020.html?MOD=AJPERES>.

### HANDLING AND TRANSPORTING YOUNG CALVES

Calves are more susceptible to stress, particularly during transportation, and extra attention to their well-being is important. All personnel handling or transporting calves should be trained on the farm's protocols to maintain the health, safety, and welfare of calves. Personnel should also be aware of applicable local, state, and national guidelines for the transport of calves. Calves should be moved using the concept of flight zones when possible. Younger calves may not respond to efforts to move them by using the concept of flight zones and, therefore, may need to be handled individually when loading, unloading and moving.

All handling should be performed as calmly as possible to avoid unnecessarily exciting calves. All moving aids, including flags and paddles, should be used judiciously. Electric prods should never be used on calves less than three months old. Calves must never be handled solely by the ears or tail. Willful or purposeful abuse, neglect or other maltreatment of calves is not acceptable.

Provide adequate space and head room for animals to be in a natural position and to be able to reposition themselves for balance and

safety during transport. Calves should have enough space to lie down comfortably.

Drivers should be willing to accommodate seasonal changes during an individual trip that may impact calf morbidity and mortality. Very young calves tolerate a narrower range of temperatures than older calves. Therefore, the effects of temperature and weather on their specific requirements should be mitigated by tactics such as targeting optimal timing of movement to account for ambient temperature and weather conditions, adjusting ventilation on transport vehicles, providing enough bedding, or individual calf coverings in winter, i.e., "calf jackets".

### TRANSPORTATION OF STOCKER AND FEEDER CATTLE

All stocker and feeder cattle must have their processing, treatment and feeding records checked to ensure they meet assigned medication withdrawal times if destined for slaughter.

All cattle must be examined and fit for transport under the conditions the cattle are to be transported (see the section on transportation of compromised cattle). Arrangements for the unique needs of the cattle, such as protection from the weather, bedding, traveling at night during hot weather, and arrangements for offloading rest periods, must be made ahead of securing transportation.

The trailer should be the appropriate size for the number of cattle scheduled to be hauled. Stocking density should be considered to minimize injury and bruising during transport. Provide adequate space and head room for animals to be in a natural position and to be able to reposition themselves for balance and safety during transport. Ensure there is no



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gap between the ramp and the trailer that would allow injury to an animal.

### CATTLE DESTINED FOR AIR AND OCEAN TRANSPORTATION

Before loading the cattle, a load plan should be formulated based on animal weight, frame size and type, transportation equipment being used, and duration of transportation. Feed and water availability must also be considered. Follow local and federal livestock transportation regulations regarding feed and water. Maintaining cattle's general health and well-being should be the priority for feeding and watering protocols for air and ocean shipments. Additional information regarding animal transportation by sea and air can be found in Chapters 7.2 and 7.4 of the World Organisation for Animal Health (WOAH) Terrestrial Animal Health Code.

It is suggested that first-time shippers seek consultation and advice from people with experience in ocean and air transportation of cattle.

**AIR** Load plans are generally consistent as the environment within the aircraft is relatively predictable. However, consideration must be given to environmental conditions and temperatures while animals are being held on the tarmac.

**OCEAN/WATER** Load plans should be reviewed based on environmental conditions anticipated during each portion of the transportation period and the location of animals during the trip (on the deck vs. in the hold). These considerations include temperature, humidity and wind speed on the docks and onboard the ship.

### TRANSPORTATION OF LACTATING DAIRY CATTLE

No current evidence-based research deals explicitly with transporting lactating dairy cattle for non-market purposes, such as from one farm location to another. However, assuming that welfare decreases the longer an animal goes without milking, is reasonable. Further, there is an increased risk of mastitis. Lactating dairy cattle should be milked as reasonably close to shipment as possible, and the transport time should consider milking time.

### TRANSPORTATION OF CULL/MARKET BEEF AND DAIRY CATTLE DESTINED FOR MARKET OR IMMEDIATE SLAUGHTER

Veterinarians should help clients develop and implement plans to manage beef and dairy cull/market cow issues, including fitness-for-transport, treatment for conditions if warranted, or euthanasia of animals unfit for transport, slaughter and human consumption. Veterinarians should develop a written plan with their clients to be used for ambulatory cow culling decisions and assist clients with proper training of employees. In general, the following considerations should be made when transporting cull or market animals destined for market or slaughter.

Minimize the number of times cattle need to be handled from loading to arrival at the sale barn or processing plant to reduce stress and the risk of bruising.

Milk all dairy cows still lactating just before transporting to a terminal or non-terminal market. Do not load/transport animals with distended udders, which causes pain and ambulatory issues. Milk is considered a carcass contaminant in packing and processing, and is a food safety concern.



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Ensure that the stocking density is adequate for the age and class of animal being transported. Exact measurements and stocking density are areas of active research though, minimum guidelines are offered by FASS and BQA. Do not transport ambulatory animals with conditions that will not pass pre-slaughter inspection at a packing or processing plant. These include, but are not limited to:

- Cancer eye with systemic involvement
- Blindness in both eyes
- Fever greater than 105 °F
- Drug residues
- Fractures or lameness (4 or 5 on a 5-point scale)
- Unreduced prolapses
- Cows that are calving or have a high likelihood of calving during transport
- Suspected central nervous system symptoms
- Visible open wounds
- Moribund cows

### TRANSPORTATION OF SPECIAL NEEDS/ COMPROMISED CATTLE AND CALVES

Identify “special needs/compromised” cattle/calves with mobility issues, low body condition scores (BCS  $\leq$  2 on either beef or dairy scale), or suspected or confirmed disease issues.

Special needs/compromised animals with conditions that increase the likelihood of becoming non-ambulatory during transport should be either left at the farm or transported in a separately portioned compartment without other animal contact.

Injured ambulatory cattle should only be transported to a veterinary facility or for emergency slaughter at a terminal market. If injured ambulatory cattle must be transported, they should not be commingled with others.

Care should be exercised during loading, unloading and handling injured ambulatory cattle to prevent further injury.

### HANDLING OF NON-AMBULATORY CATTLE/CALVES

Non-ambulatory cattle/calves are unfit for transport and should not leave the farm of origin. Either treat and allow sufficient time for recovery, or euthanize. Do not use electric prods on non-ambulatory or injured cattle.

Cattle producers should seek veterinary consultation to determine if cattle/calves will likely respond to treatment or should be euthanized. If treatment is an option, the veterinarian and/or producer should provide the appropriate treatment including a specified time to reassess the animal for response to treatment or euthanasia. If euthanasia is the best option, proceed using AABP- or AVMA-recommended euthanasia methods.

### HEALTH CERTIFICATES/CERTIFICATES OF VETERINARY INSPECTION

The certificate of veterinary inspection (CVI) may be required for transporting cattle. It assures that transported animals are officially identified for marketing and regulatory purposes and that the veterinarian signing the CVI deems the inspected animal free from signs of infectious, contagious and communicable diseases during inspection. A CVI does not guarantee that cattle are disease-free, as cattle with no clinical signs of illness may still carry diseases. Veterinarians are encouraged to help clients determine the best strategy to prevent disease introduction into clients’ herds, including having cattle tested before shipment and recording the results on the CVI.



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Under U.S. regulations, the accredited veterinarian plays a key role in livestock traceability through the CVI and linked permanent identification. In other countries, this role is fulfilled by either government-employed veterinarians or deputized private practitioners.

However, permanent identification, documentation, and/or disease testing are still essential. Veterinarians should familiarize themselves with all applicable regulations for livestock transportation within the jurisdiction(s) where those animals will be transported.

### INDUSTRY EDUCATIONAL TOOLS AND RESOURCES ON TRANSPORTATION AND FITNESS-FOR-TRANSPORT OF CATTLE AND CALVES:

- Bajus A, Creutzinger KC, Cantor MC, Wilms JN, Gomez Nieto DE, Steele MA, Kelton DF, Renaud DL. Investigating nutritional strategies during a rest period to improve health, growth, and behavioral outcomes of transported surplus dairy calves. *J Dairy Sci.* 2024;107(7), 4895-4914. <https://doi.org/10.3168/jds.2023-23973>
- Beef Quality Assurance Program. Available at: [www.BQA.org](http://www.BQA.org). Accessed January 23, 2025.
- Buckham-Sporer K, Earley B, Marti S. Current Knowledge on the Transportation by Road of Cattle, including Unweaned Calves. *Animals.* 2023;13, 3393. <https://doi.org/10.3390/ani13213393>
- Calf Care & Quality Assurance Program. Available at: [www.calfcareqa.org](http://www.calfcareqa.org). Accessed January 23, 2025.
- Canadian Food Inspection Agency. Humane transport and animal welfare. <https://inspection.canada.ca/en/animal-health/terrestrial-animals/humane-transport>. Accessed January 23, 2025.
- Creutzinger KC, Bajus A, Cantor MC, Wilms JN, Steele MA, Renaud DL. A randomized controlled trial investigating the effect of transport duration and age at transport on blood metabolites and health of surplus dairy calves. *J Dairy Sci.* 2023;106(4), 2345–2356. <https://doi.org/10.3168/jds.2022-22548>
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- Lane C Jr., Powell R, White B, Glass S. Handling Facilities for Beef Cattle. University of Tennessee. SP690. Available at: <https://utbeef.tennessee.edu/wp-content/uploads/sites/127/2020/11/Handling-Facilities.pdf>. Accessed January 23, 2025.
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- Interstate Animal Movement Requirements, Official Website. Available at: [www.interstatelivestock.com/](http://www.interstatelivestock.com/). Accessed March 8, 2025.
- Marcato F, van den Brand H, Kemp B, Engel B, Wolthuis-Fillerup M, van Reenen K. Transport of young veal calves: Effects of pre-transport diet, transport duration and type of vehicle on health, behavior, use of medicines, and slaughter characteristics. *Frontiers in Veterinary Science.* 2020;7, 576469. <https://doi.org/10.3389/fvets.2020.576469>
- National Cattlemen's Beef Association. Right Way. Right Time. A guide to cull cattle management, 2024. [https://www.ncba.org/Media/NCBAorg/Docs/ncba-cattlefax-cull-cow-strategies-2024\\_final-1.pdf](https://www.ncba.org/Media/NCBAorg/Docs/ncba-cattlefax-cull-cow-strategies-2024_final-1.pdf). Accessed January 23, 2025.
- National Dairy Farmers Assuring Responsible Management Program. 2024. <https://nationaldairyfarm.com/>. Accessed January 23, 2025.
- Veal Quality Assurance Program. Available at: [www.veal.org/veal-quality-assurance/](http://www.veal.org/veal-quality-assurance/). Accessed January 23, 2025.
- Verified Beef Production Plus Program. Available at: <https://verifiedbeef.ca/>. Accessed January 23, 2025.
- Wilson K, Renaud D. Effects of transportation duration on lying behavior in young surplus dairy calves. *J Dairy Sci.* 2023;106(7), 1234-1245. <https://doi.org/10.3168/jds.2023-03144>
- World Organisation for Animal Health. Terrestrial Animal Health Code 2024. <https://www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/>. Accessed January 23, 2025.

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