



# Livestock Care Standards Advisory Council

## Transportation Guidelines for Newborn Calves



### On Farm Recommendations:

- Newborn calves should be at least 24 hours of age prior to transport. Best practice: 4-5 days<sup>2</sup>. Canadian Code of Practice states that calves less than 7 days of age should not be transported<sup>4</sup>.
- Calves should be provided with colostrum or a colostrum replacer within 6 hours of birth<sup>2</sup>. Feed calves liquid food within 6 hours of transport.
- Calves should be dry, well hydrated and able to stand and walk on their own prior to transport.
- Electrolytes can be utilized to initially rehydrate calves.
- For traceability, individually identify each calf with a RFID implant or ear tag carefully placed, without pinching and to allow for calf growth.
- Delay any other stress-inducing procedures such as vaccination, dehorning or other handling until a week after transport.
- To prevent meat residues, “bob” veal calves (meat calves less than 30 days of age) must meet required withdrawal times for all antibiotics and medications, including those in colostrum or milk replacers.
- Feed all calves a minimum of twice daily<sup>2</sup>.
- For long transport journeys, feed calves within 5-6 hours of loading. After 18 hours of transport, stop for rest, water and feed<sup>4</sup>.
- Ideally, “bob” veal calves should be slaughtered within 30 hours of last feeding<sup>3</sup>.

### Selecting Calves Fit to Transport:

- In order to pass USDA inspection for human food, “bob” calves destined for slaughter must be strong enough to survive the journey to the livestock market and/or plant and to stand and walk without assistance at slaughter.
- Calves should be dry and healthy, and free of visible disease, disability, injury or blindness<sup>3</sup>.
- Do not ship calves that appear exhausted or dehydrated until rested, fed and rehydrated.

## Optimal criteria for calves<sup>2</sup>:

1. A minimum of 4 days of age; Canada 7 days.
2. Weight minimum of 50 lbs. (23 kg.) for Holstein or 34 lbs. (15 kg.) for Jersey.
3. Have been fed colostrum at birth and up to 4 days of age and then milk or milk replacer.
4. Free of drug and antibiotic residues.
5. Have a navel cord which is dry, wrinkled and shriveled, not pink, red, raw or fleshy.
6. Have hooves that are firm and worn flat and not bulbous with soft, unworn tissue.
7. Be in good health, alert and able to rise from a lying position. Calves should be bright, responsive and able to protect themselves from other animals.
8. Calves should be able to stand and walk without the assistance of a person to hold them up.

## Distressed calf options:

Calves that are unfit for transport due to disease or injury should be evaluated immediately and treated or be euthanized. Follow AABP euthanasia guidelines for decision making and procedures<sup>5</sup>: [www.aabp.org](http://www.aabp.org).

## Handling of Calves:

- All handlers and transporters should be trained on quiet, **gentle** handling of calves. Document training, and verify that practices are followed.
- Gentle, hand-guiding of one animal at a time is considered a **best practice** to prevent injury.
- Most newborn calves need assistance during loading and unloading from transport vehicles.
- **Never** use electric prods on newborn calves.
- Calves should **never** be lifted by only head, ears, neck, tail, hair/hide or a single leg.
- Do not ever throw, hit, drop or drag a calf.
- Calves **should not** be driven using the “flight zone”, fear or physical contact because they are too young to respond appropriately. Techniques such as yelling, whistling or using dogs can cause injuries and stress.



Individual handling of calves



Rubber mat used on ramp at truck exit

## Preparing Transport Vehicle:

- Thorough cleaning and disinfection after each shipment is important to reduce the potential for disease transmission to livestock and between facilities.

[http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/animalhealth?1dmy&urile=wcm:path:/aphis\\_content\\_library/sa\\_our\\_focus/sa\\_animal\\_health/sa\\_emergency\\_management/ct\\_disinfectants](http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/animalhealth?1dmy&urile=wcm:path:/aphis_content_library/sa_our_focus/sa_animal_health/sa_emergency_management/ct_disinfectants)

- Use USDA APHIS approved disinfectants or hot water at a minimum of 180°F (82°C) to clean.
- Vehicles used for calf hauling should be well constructed without sharp edges, broken gates, bolt heads, angles and other projections that could bruise or injure animals<sup>4</sup>.
- Inspect the vehicle to ensure that all latches and gates are working properly. Repair deficiencies prior to loading animals intended for transport.
- Ramps, if used, ideally should have a maximum slope of 12 degrees<sup>3</sup>. Target a rise of 2.5 inches per yard (7 cm per meter)<sup>4</sup>.
- Using cleats on ramps, spaced at 4 to 6 inches (12 to 15 cm) can minimize slips and falls.
- Ramps, chutes and alleys should provide safe footing and have sides high enough to prevent calves from falling or jumping off <sup>4</sup>.
- Vehicle floors should be non-slip or provide secure footing with bedding material.
- The transport compartment height should be tall enough to allow calves to stand.
- The ideal bedding used for cold weather calf transport is straw at a depth of at least 4 inches (8-10 cm). Other bedding options include sawdust (veal calves only as sawdust can cause digestive issues for calves) at a depth of 2 inches (5 cm) or sand at least 1 inch (3 cm) deep<sup>6</sup>.
- There should be continuous ventilation to provide fresh air and protection from exhaust.
- Vehicle exhaust can cause adverse effects on livestock. Measures must be taken to prevent exhaust from entering the area occupied by animals. Exhaust diverters and air filtering systems can be utilized.
- The height and size of trailer openings should prevent calves from attempting to escape.
- Have key phone numbers, alternative routes and a rescue plan ready in case of traffic, an accident, breakdown or other emergency.



Sawdust bedding, cleats on ramp



Straw bedding on double deck semi-trailer

### Cold Weather Considerations:

- During winter and cold weather, cover any openings which cause drafts or allow freezing rain and/or snow to enter the vehicle<sup>4</sup>.
- Wet calves are highly susceptible to cold<sup>1</sup> and should **not** be transported.
- Metal floors should be suitably bedded and side walls appropriately covered to insulate calves. Wet bedding can freeze. Inspect the truck frequently and re-bed if necessary<sup>4</sup>.
- Plastic plugs or slats should be used to cover holes in punch sided trailers. The number of holes covered will vary depending upon ambient temperatures, number of animals, travel time and calf condition<sup>6</sup>.

- Pay close attention to condensation which can occur on trailer walls, causing wet bedding along the floor joints. If wet bedding is noted, remove and add fresh bedding.
- Stop to check calves and ventilation at least once every 2 hours. Too much air can cause frostbite or chilling; too little air can result in respiratory distress<sup>4</sup>.



Align truck or trailer for load and unload



Example of plastic plugs used on semi-trailer

### Hot, Humid Weather Considerations:

- Protect calves from direct sunlight, high temperatures and high humidity. Keep loaded vehicles moving to provide air flow and evaporative cooling and to prevent gas buildup.
- Open trailer nose vents if present.
- Provide shade on open topped trucks (shade cloth) and leave slats open on closed trailers.
- Loading density should be reduced by 10% if the temperature is above 61°F (16°C) and 25% if weather is extremely hot and humid<sup>4</sup>.
- Load and unload promptly and minimize stops to prevent heat buildup inside the trailer.

### Loading and Unloading:

- Check to be sure the trailer is in proper alignment and that non-slip surfaces are provided on ramps and truck entrances, prior to loading and unloading.
- Segregate animals of substantially different sizes and weights in separate compartments.
- Segregate any compromised calves in a separate, rear compartment. These should be loaded last and unloaded first. In cold weather, keep distressed calves warm and prevent overcrowding by placing them in a compartment with half the normal number of healthy calves.
- Carry weaker calves to load with the least amount of suffering. Non-ambulatory or severely distressed animals that are unfit for transport should **not** be loaded.
- Loading density should be reduced by 20% for trips longer than 8 hours. Transport over 8 hours is not recommended for newborn calves<sup>4</sup>.

- Do **not** overload trucks! Optimum stocking density is outlined in the table below<sup>7</sup>:

Weight of dairy animal	Space per dairy animal
Up to 100lbs (45kg)	4 sq. ft. (0.37 sq. m)
Up to 240lbs (110kg)	6 sq. ft. (0.55 sq. m)
Up to 440lbs (200kg)	9 sq. ft. (0.84 sq. m)

### Best Practices for Drivers:

- Accelerate slowly and avoid fast stops.
- Taking curves too rapidly can cause animals to fall or hit trailer sides<sup>6</sup>.
- Check livestock after 2 hours on the road, then every 4 hours or more frequently, depending upon weather and road conditions. Keep stops short<sup>1</sup>.
- FSIS maximum allowed transport time is 28 hours, before cattle are required to be unloaded, fed, watered and rested.

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**References:**

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5. American Assn Beef Practitioners Guidelines: Transportation Recommendations for Cattle, 2014.
6. Agriculture Marketing Service Cattle and Swine Trucking Guide for Exporters.
7. Animal Welfare Approved Standards for Dairy Cattle and Calves, 2014, 3/27/14.

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