Recommended Handling Guidelines and Animal Welfare Assessment Tool for Horses

The equine industry working together for responsible animal care
Recommended Handling Guidelines and Animal Welfare Assessment Tool for Horses

This Horse Welfare Alliance of Canada project is a team effort to continuously advance animal welfare in the equine industry.

Content developed by

Jennifer Woods, J. Woods Livestock Services
www.livestockhandling.net
P 403.684.3008   E livestockhandling@mac.com

Project coordination and design by

Mikki Shatosky, Declercq Design
P 403.932.1877   E design@declercq.ca

Project commissioned by
Horse Welfare Alliance of Canada (HWAC) with the cooperation of the Alberta Equestrian Federation (AEF)

Working committee
Dr. Temple Grandin, Grandin Livestock Handling Systems Inc.; Dr. Anne Allen, Canadian Food Inspection Agency; Bill desBarres, Horse Welfare Alliance of Canada / Alberta Equestrian Federation (AEF); Sonia Dantu, AEF, Joseph Astling, United Stated Department of Agriculture, Les Burwash, Alberta Agriculture and Rural Development, Dr. Carolyn Stull, University of California Davis, Bouvry Exports and Susan Church, industry consultant

The program was reviewed by
North American Food Animal Well-being Commission

Funding for this project was provided by

for more information on this program or other equine welfare initiatives visit

www.horsewelfare.ca
Contents

Introduction 1

1 General Equine Behavior and Handling 2
   Flight Zone ........................................... 3
   Trouble Shooting for Animal Movement .......... 4

2 Facility Design 5
   Loading and Unloading Ramps ....................... 6
   Corrals and Holding Pens ........................... 6
   Gates .................................................. 6
   Alleyways and Chute Systems ....................... 6
   Restraint Area ....................................... 6

3 Transportation 7
   Condition of trailer ................................ 7
   At loading .......................................... 8
   Loading Density .................................... 8
   On the Road ........................................ 9
   Time in transit .................................... 9
   Environment in the trailer ......................... 9
   Driving tips ....................................... 11
   At the plant ........................................ 11
   Risk Factors ....................................... 11

4 Compromised Animals 12
   Body Condition Scoring Horses ...................... 14

5 Stunning 16
   Firearms ........................................... 16
   Penetrating Captive Bolt Gun (CBG) ............... 17
   Insensibility ....................................... 17
   Stunning to Bleed Interval ........................ 18
   Troubleshooting stunning ........................ 18
<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td><em>Willful Acts of Abuse</em></td>
<td>19</td>
</tr>
<tr>
<td>7</td>
<td><em>Core Criteria Animal Welfare Assessment</em></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Core Criteria 1: Preparedness of the plant for receiving animals</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Core Criteria 2: Timeliness of Arrival of the Truck and Trailer and Animal Unloading</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Core Criteria 3: Transport Assessment</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Core Criteria 4: Effective Animal Handling and Stunning</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Core Criteria 5: Access to Water</td>
<td>28</td>
</tr>
<tr>
<td>8</td>
<td><em>Animal Welfare Assessment Form</em></td>
<td>29</td>
</tr>
</tbody>
</table>
Introduction

Horses have been a source of protein for people around the world for centuries. Over one billion people, or 16% of the world population, eat horse meat. In 2008, 111,236 horses were processed for meat in Canada and 20,912 tonnes of horse meat was exported. Canada’s third largest exported meat is horse meat.

As with all other livestock, horses at processing are closely monitored by the Canadian Food Inspection Agency (CFIA) and regulated under the federal Health of Animals Act and the Meat Inspection Act and Regulations.

In 1991 the American Meat Institute (AMI) established the first voluntary animal welfare guidelines and audit tools for the meat packing industry (cattle, pigs and sheep). These have since evolved into the world-recognized Recommended Animal Handling Guidelines and Audits, 2010 Edition.

In 2008, the newly formed Horse Welfare Alliance of Canada (HWAC) recognized the lack of resources for the horse meat plant industry. Following through on their mission statement of “Promoting the humane handling of horses throughout all their life stages”, HWAC commissioned this Recommended Handling Guidelines and Horse Welfare Assessment Tool for Horses (www.horsewelfare.ca).

This project, coordinated through the Alberta Equestrian Federation, was lead by livestock handling specialist Jennifer Woods. Jennifer has worked with Dr. Temple Grandin and the livestock industry to develop assessment standards and tools for cattle, sheep and pigs. She is a member of the AMI Animal Welfare Committee and the North American Food Animal Well-being Commission (NAFAWC).

Animal welfare and equine industry experts, processing plant owners and government officials worked together to develop these guidelines. The guidelines offer detailed information about equine behavior and handling, facility design, transport, compromised animals, effective stunning and willful acts of abuse.

These guidelines are intended to be utilized by the horse processing industry for guidance, education and self assessments. They provide a consistent standard upon which to measure animal welfare.

These guidelines are intended to be utilized by the horse processing industry for guidance, education and self assessments. They provide a consistent standard upon which to measure animal welfare. Third party assessments ensure customers, consumers and the general public that horse owners, caregivers and handlers are given the guidance and resources to provide optimal care for their animals throughout all stages of life.

The objective criteria in the guidelines is based on work done for other livestock species by AMI and Dr. Temple Grandin. New criteria has been added and existing criteria has been customized to meet the needs of horses. The compliance levels were developed to be achievable when plants employ good animal handling and stunning practices.

The numeric criteria in the animal welfare assessment were developed based on professional judgment of the author with input from the committee. While it is essential to set numeric targets, the mere act of assessing, measuring and tracking will help companies manage and improve animal welfare. As stated by Dr. Temple Grandin, “you cannot manage, what you cannot measure.”

Just as plants strive for continuous improvements based on new practices and information, HWAC and the working committee strive for continuous improvements and refinement of this document. The general recommendations and the assessment criteria are based on real data and observation. However, as additional research is completed and new information is generated, this document will evolve and be continually updated.

Visit www.horsewelfare.ca for more information on the work being done by HWAC and the equine industry.
General Equine Behavior and Handling

Understanding animal behavior is key to good livestock handling. With proper handling, animals experience less stress and fear. The chance of injury to the handler or the animals is greatly reduced. The economic loss due to bruising and down-grading is significantly lessened. Handling horses at a plant or market is very different from handling individual animals.

Handlers must do their best to keep the animals calm at all times. Calm animals are much easier to work with and move than excited animals.

Horses, like all livestock, are prey animals. As their main objective is survival, they have very strong flee or fight instincts. Most aggressive and dangerous behavior is based on fear. If given a choice, most prey animals will choose to flee versus fight. When animals are threatened and feel they cannot flee, the fight instinct normally appears.

The two main motivators for prey animals are fear and food. Prey animals need to be fearful enough to flee threats when necessary, and they must have food to survive. Understanding how to utilize these motivators will assist you in handling animals.

Horses have a very strong herd instinct. Isolation from herd mates is one of the strongest stressors of prey animals. Lone animals, especially horses that come from a herd environment, will become very agitated when isolated. Horses in a group will remain calmer and be easier to handle.

Horses have different vision than humans. Each eye has approximately a 130° field of vision, for a total range of vision of about 260°. They have blind spots directly behind them, under their nose, in the middle of their back near the withers and directly in front of their forehead, see diagram.

They have monocular vision (eyes operate independently of each other) when looking to the side and binocular vision (eyes operate in tandem) only when looking straight ahead.

Horses have poor depth perception, they cannot make out detail very well. Quite often they will balk at shadows and water puddles due to the lack of depth perception. Eliminating distractions such as puddles and shadows will allow the horses to move easier.

Animals also take longer than humans to adjust to the changes in light intensity. When moving from a barn to bright sunlight or from the daylight to a darker interior, the animals will need time for their eyes to adjust. Once their eyes have adjusted they see better than humans, especially at night.

Horses also do not see colors the same as humans. Studies have shown they are most sensitive to yellow and blue, with every other color taking on a grayish appearance.

Horses have very sensitive hearing. In comparison to humans, sounds are amplified to horses and they hear pitches that are not audible to humans. Keeping people and equipment noises to a minimum will result in the animals moving calmer and more efficiently.

Horses are different from other protein producing species as they are often trained for use in sports, recreation and work. Horses arriving at auction markets and processing plants come from a wide variety of backgrounds and with various degrees of training. Always use caution and in most cases treat the animals as though they are not trained or broke.

Always approach a horse on the left side as traditionally horses are trained to be left side dominant. This is due to the fact that most humans are right handed and must stand on the left side of the horse to lead with their right
maintain visual contact with other horses at all times, this will aid in keeping them calm and motivate them to move forward as their herd mates do.

Flight Zone

All animals have flight zones. This is the space or distance an object, person or another animal needs to be away from an animal before invoking fear. When the flight zone is penetrated, the animal becomes fearful and begins to move away. Flight zones are located around an animal and in the space above them. The flight zone is the stop and go mechanism of moving livestock.

To calmly move an animal, you must barely penetrate the flight zone. You do not want to invoke a high level of fear in the animal, you just need to motivate them enough to begin moving.

As you approach an animal, as soon as it begins to move away, you have entered the flight zone. If you go deep into the zone the animal will most likely run or turn back on you. The most effective way to move animals is by skirting the edge of the flight zone, when done properly you will only need to step back a few steps to remove yourself from the zone and stop the movement of the animal. The animal with the largest flight zone will determine the flight zone of the herd.

Prey animals respond best to visual pressure, so the positioning of the handler is important. They have to see the 'pressure' to respond to it. You cannot stand in the animal’s blind spot and expect it to respond. If they cannot see you, they will not move in the direction you want them to. They may turn around to see where the noise is coming from or strike out. Prey animals will always try to maintain visual contact with the predator.

The size of the animal's flight zone is determined by the amount of contact the animal has had with people, quality of human contact, genetics, familiarity, offspring and current environment. As the animal becomes more frightened their flight zone becomes larger.

A second component of this concept is the point of balance. This is located in the shoulder area of an animal. If the pressure is coming from behind the point of balance the animal will go forward. If the pressure is in front of the point of balance, the animal will go backwards. See diagram for the proper positioning of the handler.

When working animals in a tub or chute system, utilizing the point of balance and herd instinct is usually enough to keep the animals moving. Horses should be allowed to maintain visual contact with other horses at all times, this will aid in keeping them calm and motivate them to move forward as their herd mates do.

Handlers should work alongside the tub and single file chute, ideally slightly elevated on a catwalk. When handling horses in a tub system, the tub should only be filled half full and the crowd gate should never be used to push animals. Overfilling the tub or overcrowding with the gate will cause the animals to bunch up and turn back from the single file entry.

Animals should be allowed time to move through the system, without being rushed. When the animals are moving through the system themselves, leave them alone. If the lead animal baulks, allow them time to investigate and move forward.

When an animal acts up in the handling system, back away from the animals and allow them time to calm down.

Use of electric prods on horses is strongly discouraged, it should only be a means of last resort when all other options have been exhausted. Acceptable handling tools include flags and rattle paddles. Animals must never be struck with a handling tool or any other object. The handling tools are used to apply visual pressure to the animal to get it to move.

Animals must be moved through a system facing forward at all times. If a horse is facing backward, it must be taken back to a point in the system where it can be turned around—even if it means moving other animals back. Backing a horse into a knock box is unacceptable.
Loose animals

Though uncommon, occasionally animals will get loose during unloading, handling or even up in the stun box area of a plant. All facilities should have perimeter fencing in place to contain any animals that becomes loose while on plant property.

When an animal is loose within the plant premises, it must be handled calmly at all times. Do not chase the animal as this will elevate their fear levels and the danger level to those attempting to corral the animal.

Remember, not only is the animal fearful of the unfamiliar surroundings, but horses being herd animals, can become very agitated when isolated. Quite often the horse will make attempts to regroup with other animals.

A loose animal on the kill floor is a very dangerous situation as it is a confined area with people and equipment. Remain calm, immediately stop all activity and clear people from the area. Two or three designated personnel can then quietly and slowly remove the animal from the area.

Trouble Shooting for Animal Movement

If animals refuse to move through an alley, chute or race, there may be a very simple solution. Clear the problem area and check for distractions that are hindering movement.

Any one of these items on the following list may cause animals to stop moving or back up and prevent a properly designed facility from working efficiently.

In some facilities, two or three different distractions must be removed before animals will move easily. Often, identifying the problem requires trial and error.

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sparkling reflections on puddles</td>
<td>Adjust lighting.</td>
</tr>
<tr>
<td>Reflections on smooth metal</td>
<td>Adjust lighting.</td>
</tr>
<tr>
<td>Chains that jiggle or metal that is clanging and banging</td>
<td>Fasten chains, secure loose gates, use rubber on gates to prevent clanging</td>
</tr>
<tr>
<td>High pitched noises and other loud or reverberating noise</td>
<td>Silence or muffle the noise</td>
</tr>
<tr>
<td>Air hissing</td>
<td>Silence with mufflers or pipe outside</td>
</tr>
<tr>
<td>Air drafts blowing toward approaching animals</td>
<td>Redirected air flow away from animals</td>
</tr>
<tr>
<td>Visual distractions</td>
<td>Remove any clothing and loose items that may be hanging on fences or gates</td>
</tr>
<tr>
<td>Moving piece of plastic</td>
<td>Secured or removed</td>
</tr>
<tr>
<td>Fan blade movement</td>
<td>Install a shield to block the animals’ view</td>
</tr>
<tr>
<td>Movement of people</td>
<td>Install a shield so approaching animals cannot see them</td>
</tr>
<tr>
<td>Small object on the floor such as a coffee cup, hose or paper</td>
<td>Remove items, keep area clean</td>
</tr>
<tr>
<td>Changes in flooring and texture</td>
<td>Make flooring including texture uniform</td>
</tr>
<tr>
<td>Drain grate on the floor</td>
<td>Move drain grate outside races</td>
</tr>
<tr>
<td>Sudden changes in the color of equipment or flooring</td>
<td>Use of single colors on floors and walls can facilitate movement, avoid high contrast and painting anything yellow.</td>
</tr>
<tr>
<td>Race entrance is too dark</td>
<td>Adjust lighting to illuminate area</td>
</tr>
<tr>
<td>Blinding light</td>
<td>Adjust lighting, animals will avoid moving towards blinding light (bright sun or a bare light bulb)</td>
</tr>
</tbody>
</table>

(Adapted from AMI Recommended Handling Guideline and Audit Guide 2010)
2 Facility Design

Properly designed facilities are key to low stress handling of horses. Facilities should be designed to utilize a horse’s normal behavior, instincts and movement patterns. Animals need to be able to “flow” through a handling system.

Both the safety of the horses and the handlers need to be strong considerations when designing handling facilities.

General Considerations

All handling facilities must have non-slip flooring. When floors are slick it is very difficult to handle animals as they become easily agitated and lose confidence. The animals may also injure themselves by slipping or falling.

Non-slip flooring for horses can include dirt alleyways or grooved / roughened concrete. You must insure the concrete is grooved sufficiently enough to prevent slipping and can withstand constant traffic. If grooving is too shallow, such as with a rough broom finish, it will not prevent slipping and it will wear down to a smooth surface quickly.

Existing floors can be grooved with deep patterns that are at least 0.6 cm (1/4 in) x 0.6 cm x 0.6 cm. Experience has also shown that for new floors a 20 cm (8 in) diamond or square pattern with 2.5 cm (1 in) grooves are best.1

The flooring should be slightly arched to allow for run off and easy cleaning. A dirty floor where the grooves are filled in with manure and dirt are no longer non-slip floors. All alleyways, holding facilities and stun boxes must have proper non-slip flooring.

Facilities should be designed to keep noise to a minimum. Noise is very distracting to animals and can make moving them very difficult. Gates, panels and loose chains are common examples of noise violators within livestock handling facilities.

All equipment should be installed securely to prevent rattling and clanging. Chains should not be allowed to hang loose in areas where they can bang against other equipment.

Equipment must be maintained (oiled, secured) at all times. Machinery such as hydraulics and motors can also produce distracting noise. It should be muffled as much as possible. Insulation can be installed into the roof or walls to assist in proper acoustics.

Lighting in a handling facility should be the equivalent of a bright, overcast day. It should not be too bright or too dark. Lighting should be installed in a manner that prevents shadows. Horses have poor depth perception, a shadow will appear as a hole in the ground and horses will balk.

Due to the change in lighting, the transition from outside to inside a building is the most common area for animals to balk. The horses will experience temporary blindness and require time for their eyes to adjust before they will move forward. This can be avoided by ensuring the entrance is well lit and the light is not aimed directly into the horses’ faces.

The entire chute area should be illuminated, including the stun box. This will not only eliminate light and dark patches, but also utilizes the horses instinct to move toward light. Lights should be routinely cleaned and burnt bulbs replaced immediately.

All surfaces and edges must be free of protruding objects that can bruise or injure animals. This applies to all handling areas including ramps, holding pens, alleyways and the stun box. Animals can be bruised by blunt objects as much as they can by sharp objects. The most vulnerable area on the horse for bruising is their torso. Facilities must be routinely inspected and broken objects immediately repaired. This is not only an animal welfare issue, but also a meat quality problem as animals can bruise up to the point where they are bled out.

All areas should be free of any visual distractions. Moving or flapping objects will cause animals to balk. Puddles of water, shadows, coats hanging on the side of alleyway can all be distracting to animals. Even items as small as a paper cup laying on the ground can make an animal stop. Put yourself in a position to see what the animals see and look around. Facilities must be kept clean and inspected for visual distractions routinely.

Air should not be blown directly into the face of the animals. If a fan is set up to blow into the face of the animal at the entry to the facility or anywhere in the chute system, the animal will not move forward. Forced air must be set up so it does not directly impact the animals.

---

1 American Meat Institute (AMI) 2010
Loading and Unloading Ramps

All ramps should be inspected for broken boards, missing cleats or areas where an animal can injure themselves or become trapped.

The trailer must be backed up flush to the ramp with no gaps or holes. The trailer must set level with the loading ramp so the animals are not required to step up or down.

Loading and unloading ramps should be designed so that they have a 2 m (7 ft) level dock at the top of the ramp. The dock should be long enough so that one animal can fit all four legs on the dock upon exiting or before entering the trailer. Loading ramps should be around 81 cm (32 in) wide and at least 1.5 m (5 ft) high. If covered, the ramp will require an overhead clearance of at least 2.75 m (9 ft). The slope of the ramp should not exceed 20°.

Ideally, unloading ramps will be wider than the loading ramp. A ramp that is 2.4 to 3 m (8 to 10 ft) wide allows the horse plenty of room to descend the ramp without the restrictions of a single file chute.

All ramps should be solid with no gaps or spaces where an animal can get a foot or leg stuck. Ramps should be equipped with non-slip flooring including cleats placed at 20 cm (8 in) apart. Solid sides on ramps are best to eliminate visual distractions around the loading/unloading area.

Corrals and Holding Pens

Corrals should be designed to feed easily into and out of the main alley for receiving and movement down to the processing area. All corrals must have access to potable water for all animals at all times. They should be designed for proper drainage to prevent mud buildup.

Corrals should never be overcrowded, ideally the pen should be no more than a third full.

Corral and pen fencing should be approximately 1.7 to 1.8 m high (5.5 to 6 ft) with rails a maximum of 23 cm (9 in) apart, the bottom rail should be 38 to 46 cm (15 to 18 in) from the ground.

The holding pen off the unloading ramp should have the capacity to hold all the horses from a full commercial trailer. Short term holding areas such as the unloading area or holding pen into the crowd tub or chute system should allowed a minimum of 7.6 to 9 m² (25 to 30 sq²) of area per horse.

Gates

All gates should swing freely and have no protruding objects that a horse can get caught on or injure themselves.

Gates should fit to allow for only small gaps on either end of the opening. If the gaps are too large, a horse may get their head or leg stuck.

Gates that swing out of a corral into an alleyway should be long enough to reach across and close off the alley with no large gaps. Ideally, gates will swing out and create an angled wall for ease of movement of horses out of the corral and down the alley. To achieve this, gates should be 0.6 m (2 ft) wider than the alley. As an example for a 4.3 m (14 ft) alley, a 4.9 m (16 ft) corral gate will create the desired slant.

Alleyways and Chute Systems

All alleyways should be designed at the same height and spacing specs as corral and pen fencing. Ideally, alleyways should be 3.7 to 4.9 m (12 to 16 ft) wide, depending on how many animals are processed through the facility at one time.

Single file chutes should be 81 cm (32 in) wide and at least 1.8 m (6 ft) high. Solid sides are highly recommended on all single file systems. There should be a gap at the bottom of approximately 30 cm (12 in) to allow for drainage and cleaning of the chute. A catwalk should be installed 46 cm (18 in) off the ground on the outside of the chute to allow the handlers to work the horses from the side.

Restraint Area

Horses should enter the restraint area with minimal baulking. The restraint box should be solid sided with nonslip flooring. The restrainer area should be well lit, especially at the entrance to the stun box.

The box must be narrow enough so horses are not able to turn around. The handlers should be able to release the animals from the box if a horse goes down and is unable to get up.

There must be no sharp or protruding objects within the stun box that can injure the animal.
Transportation

Transportation is a vital part of the humane processing of protein meat products. Animals arrive at the plants daily on both commercial transport vehicles and in small livestock trailers. Some travel short distances from local feedlots, farms and auction markets, while others are transported several hours and across provincial, state and international borders. No matter the distance traveled, all animals must be transported in a humane manner in vehicles that will not harm or cause unnecessary stress to the animals.

The trailer must be designed in a way that horses are able to load and unload with ease. The horses must be able to maintain balance during transport and must have plenty of clearance to allow for movement of their heads. The trailer must be designed to provide an appropriate environment (ventilation, climate) for the horses and there must be no sharp edges or protruding objects that can cause injury to the animals.

For years, horses have been transported in trailers designed to haul livestock such as cattle, hogs and sheep. Research in the US has shown that injuries to the head, withers, back, tailhead or croup of horses during transport were documented more frequently in double deck trailers than in goosenecks and single deck trailers.1 Of the three designs, horses in single deck, commercial trailers received the least amount of transport related injuries.

The research referenced above was commissioned by the US Department of Agriculture (USDA) to allow for the development of science based regulations. One of the recommendations from this study was to eliminate the transport of horses to slaughter in double deck trailers. In 2001, the US enacted the Humane Slaughter Act for Horses including a complete ban on the transport of horses in double deck trailers. Horses destined for slaughter can only be transported in straight trucks or single-deck trailers in the US.

In the revised Health of Animals Act (Part VII, Transportation), the Canadian Food Inspection Agency (CFIA) has proposed the elimination of double deck trailers for the transport of horses.

Currently, it is legal to haul horses in double deck trailers in Canada, but the animals must be able to stand in a natural position without injuring themselves and they must be able to drop their heads for balance.

Horses must be able to move their head and neck freely without hitting their head and they must have enough room to spread all four legs for balance. As a guide, it is recommended that there be at least 2.5 cm (1 in) of clearance for each hand of horse height at the withers.2

This requirement alone has almost eliminated the practice of transporting horses in double deck trailers in Canada.

As part of a cross border collaboration, CFIA enforces the US Humane Slaughter Act for horses arriving at the Canadian border. When a hauler is found in violation, CFIA will refuse entry to Canada and contact USDA.

Condition of trailer

The flooring in the trailer must be nonslip to provide adequate footing for the animals. If the floor is a stamped aluminum tread, it must maintain a minimum tread depth of at least 3 mm (or the width of a nickel). Flooring must be free of any gaps or spaces where a horse can get a leg caught. If the trailer has wood flooring, the wood must be inspected regularly for rot and broken boards. If rubber matting is placed over wood, the matting should be lifted often to ensure the wood is in good condition. The floor should be cleaned frequently to prevent animals from slipping and to prevent corrosion of aluminum and rotting of wood.

All gates must swing freely and close securely. There must be no gaps where horses can get their legs or head stuck. If internal ramping is present, it must extend fully down to the floor and set level. The ramping must be stable, with nonslip footing.

---

1 Survey of Trucking Practices and Injury to Slaughter Horses, Grandin T.
2 Recommended Code of Practice for the Care and Handling of Horses
There must be no sharp or protruding objects anywhere in the trailer that can injure a horse. Trailers must be inspected regularly and maintained at all times with any required repairs done immediately.

All trailers must allow for adequate ventilation. Fresh air circulating through the trailers will prevent the build up of mold spores, urine/manure fumes, exhaust fumes and dust, which is critical to a horse respiratory health.

At loading

Loading and unloading is often believed to be the most stressful part of the transportation process. Horses should be handled quietly and without force during the loading process. Animals must be given time to ascend the loading ramp and pass through the transition area of the loading dock, into the trailer.

The base of the loading ramp and entrance into the trailer are two common areas for the animals to balk due to transition in footing and lighting. If internal ramping is present in the trailer, the animals must be allowed to ascend/descend the ramp at a speed they are comfortable with in order to lessen the chances of slips and falls.

Once the animals have been loaded the driver should check the load before departing to ensure all the animals are standing and that they have sufficient room in the trailer including head clearance. All gates and doors must be checked to ensure they are closed properly and secure.

Loading Density

Animals must be loaded at the recommended loading density, see Maximum Loading Density Loose Horses table below. Over crowding horses on a trailer can lead to fighting and restlessness, resulting in bruising, injury and animals falling.

By law in Canada, horses cannot be loaded in a manner that would be likely to cause injury or undue suffering, including overcrowding. Allowing too much space may also cause problems for the animals, so gating compartments in light loads is also imperative. Horses must have enough room to spread all four legs for balance. Loading density will need to be adjusted for hot weather transport by decreasing the number of horses in the trailer.

Maximum Loading Density Loose Horses (metric)

Minimum space allowance for loose loaded horses in transit based on average individual body weight (Metric). The top line describes maximum trailer carrying capacity (left hand axis); minimum space per animal is the bottom line and right hand axis. Thin horses require more space than a well-conditioned horse of the same weight. Reduce load by 10-15% for hot humid conditions and for foals transported more than 8 hours. (Modified from Whiting, T. Maximum loading density of loose horses. Can. J. Anim. Sci. (1999) 79: 115-118).
On the Road

Drivers must remember they are transporting a live load and drive accordingly.

In Canada there is training available for livestock haulers, shippers and handlers through the Certified Livestock Transport (CLT) training program. This industry developed program focuses on the humane and safe relocation of livestock and the regulatory requirements for Canada and the US. Visit www.livestocktransport.ca for details on CLT.

Time in transit

By law in Canada, horses cannot be confined in a transport vehicle for longer than 36 hours without rest, water or feed. The horse must also be allowed time to rest and be provided access to feed and water 5 hours before transport by law.

Environment in the trailer

Horses will heat up very quickly, even in cold weather, when confined in a trailer with other horses. The trailer must allow for the exhaust of body heat to keep the animals at a comfortable temperature during transport. Air movement through a vehicle can circulate out heat and humidity.

When in motion an external low pressure area is created at the front of the trailer. Air will enter the trailer through the rear openings, move forward over the animals and leave through the front openings. This explains why fresh shavings, spread evenly over the trailer floor, tend to be blown towards the front of an empty vehicle.

Vents in the front of the trailer allow air in, but this air will be immediately drawn out again (by suction) through the front side openings. This prevents the air from traveling through out the length of the trailer. However, the pattern of air flow through the trailer can be influenced by both the vehicle’s speed and by the direction and force of the wind. If there is a strong cross-wind, while travelling at low speed, the resulting air flow will be through and across.

The diagram below illustrates the flow of air through a commercial livestock trailer.

The optimal temperature range for horses is between -10 and 24°C (14-75°F). Within this temperature range horses are able to maintain their body temperature.

Heat stress is more of a threat to horses than cold stress. During hot weather it is best to transport animals during the early morning or evening hours, to avoid the heat of the day. Temperatures within the trailer are normally 5 to 8°F higher than the ambient temperature outside the trailer. Since horses release heat through respiration and sweating mechanisms, the humidity within the trailer also increases as the temperature increases. This will also adversely affect the air quality within the trailer, elevating the stress levels of the horse. Refer to the Livestock Weather Safety Index on the next page.

In winter months, the animals should be protected from extreme cold and sleet or freezing rain. A wet animal will chill significantly sooner than a dry animal. Research in cattle has shown that cattle with a dry, average coat could maintain their body heat without expending extra energy up to 0°C (32°F), cattle with a heavy coat -7°C (20°F), but cattle with a wet coat had to expend extra energy at 14°C (57°F).

In extreme weather conditions, animals must also be protected from the cold or heat while waiting for unloading. For example, in cold weather the trailer should be parked in an area that provides protection from the wind. In high temperature conditions the trailer should be parked in an area that provides shade and allows for a breeze to pass through the sides of the trailer.

---

1 Health of Animals Act, Part XII Transportation of Animals
2 J. Woods / Horse Welfare Alliance of Canada, Horse Hauling Course
3 Craig Richardson, Ontario Ministry of Agriculture Food and Rural Affairs, Cold Stress on Trucked Cattle
How to Read this Chart

Check a weather forecast for temperature and humidity. Locate the expected temperature in the column on the left. Extend that temperature in a straight line across the chart until it intersects with a line from the expanded relative humidity.

Temperature above 38° C (100° F) are always DANGER, and if the relative humidity is above 25% the situation is EMERGENCY.

If the intersection of temperature and humidity on the chart is in the ALERT range, load 10% fewer horses and plan to deliver them to market by 11:00 A.M.

If the index is in the DANGER zone, load 20% fewer horses and haul them at night.

If the index is in the EMERGENCY zone, postpone horse shipments until the weather moderates.
Driving tips

When pulling away from the loading area or starting from a fully stopped position the driver must do so slowly. This will allow the horses time to balance and adjust to the movement of the trailer.

When going around corners, the driver must be aware that the horses will scramble and the load may shift if corners are taken too fast. Many accidents occur on curved highways and off/on ramps. Since animals in the trailer cannot anticipate what is coming up on the road, all corners and off/on ramps must be taken at a speed of at least 10 to 15 km/hr below the posted speed, with acceleration occurring as you come out of the corner.

The driver must always allow adequate space between themselves and other vehicles to avoid sudden braking.

Drivers should stop and check the load within 2 hours of departure and then every 4 hours during long trips. The rest stop should be brief especially in extreme weather conditions.

If an animal goes down in transit and appears unable to get up or is injured, the driver must locate an adequate unloading and holding facility and tend to the downed animal immediately. They must unload as many animals as needed to get access to the downed or injured animal. If the transporter is close to their destination, it may be best to continue on and immediately tend to the animal at the destination.

It is illegal to continue to transport an animal that is injured or becomes ill or otherwise unfit for transport during a journey beyond the nearest suitable place to which it can receive proper care and attention.

The driver should immediately check the conditions of the horses upon arrival at the plant. If a load arrives and the horses appear to be stressed, that trailer must take priority in the unloading queue. All animals should be off-loaded in a timely manner, ideally unloading within an hour of entry onto the plants premises.

At the plant

Animals should be given ample time to unload, they must not be rushed. Animals may balk at the transition area of the trailer door and unloading dock. They must be given the time to adjust to the transition and proceed without force – this often is just a matter of seconds. Once one animal departs the trailer and descends the ramp, the others will follow.

Use of electric prods or poking horses through the punch holes or slat is NOT acceptable. See Chapter 1 General Equine Behavior and Handling for proper handling tools.

Loading facilities including sort pens, alleyways and ramps must be designed to allow for segregation and easy flow of horses onto a trailer (Chapter 2, Facility Design).

All ramps should be inspected prior to loading animals to insure there are no broken boards, missing cleats or areas where an animal can injure themselves or become trapped. The trailer should be backed up flush to the ramp with no gaps or holes. The trailer must set level with the loading ramp so the animals are not required to step up or down. The loading dock must be kept free of snow and ice to reduce the chance of slipping and falling.

Risk Factors

Although the goal of all transporters is to get the animals to their final destination safely and in a timely manner, risk factors do exist with each load transported. Drivers must not only be aware of these risk factors, but they must also have a plan in place to deal with them if they should occur.

Any incident that stops a loaded livestock unit, from a minor delay at a construction site to a serious accident, is cause for concern because loaded units depend on airflow to maintain an acceptable environment in the livestock compartments. Time in transit is a critical factor as well, and expedient delivery of a healthy load of animals to the destination point is the goal of every move.

Transportation emergencies can include motor vehicle accidents, breakdowns, flat tires, road construction, plant shutdowns, severely injured or downed animals or dangerous weather conditions. By being prepared, the driver will be able to respond in an effective manner and lessen the impact of the incident and the delay.

During roadside emergencies, the safety and well-being of the animals is the responsibility of the driver. They must do all they can to ensure the welfare and comfort of the animals, while protecting the companies property.

Drivers should always keep emergency contact information with them in their vehicle. The list should contain contact information for dispatch, the plant, your insurance company and the emergency contact number for any emergency response team your company or the plant may have. The plant must also have a plan in place for transportation emergencies for animals in transit to the plant.

1 J. Woods, An Analysis of Commercial Livestock Truck Accidents in Canada and the US
2 Health of Animals Act, Part XII Transportation of Animals
Compromised Animals

A *compromised (unfit) animal* is an animal with reduced capacity to withstand the stress of transportation. This may be due to injury, fatigue, infirmity, poor health, distress, very young or very old age, impending birth or any other cause.¹

Unfortunately, there are the rare times when compromised animals arrive at processing plants. This is a major animal welfare concern.

Recognizing that the humane handling of horses is a priority and that responsible animal care decisions must be made particularly with unfit animals, the Alberta equine industry developed the *Humane Handling Guidelines for Horses: Standards for the Care of Unfit Animals* (www.horsewelfare.ca).

The intention of the humane handling guidelines is to stop the transport of compromised animals or to provide special provisions to compromised animals that may be able to make a short haul trip if handled correctly. These guidelines are a valuable tool to owners, caregivers, transporters, plant management and staff and animal welfare assessors to assist in making the responsible decision on how to handle questionable or compromised animals.

Compromised (unfit) animals require extra work and attention by staff and management — the animals will either require immediate euthanasia or will need to be handled with special care until stunning.

**Under no condition are compromised animals to be dragged, pushed with a mechanized vehicle, hit, kicked or abused in any way.** If a compromised animal is going to be held at the plant facility for over 24 hours it must be provided feed along with water².

Compromised (unfit) animals include:

- **Non-ambulatory (downer)** — animals that are reluctant to walk or have halted movement. An animal that has an obvious physical problem such as a broken leg or pelvis. Animals that cannot rise and are unable to stand unaided.

These animals can not be transported. They must be euthanized on the trailer or wherever they go down. They cannot be moved for slaughter.

- **Poor Body Condition Score** (BCS) — a BCS of 1 is defined as extremely emaciated. Spinal vertebrae, ribs, tail-head and point of the hip and buttock are prominent. Bone structure of withers, shoulders and neck easily noticeable. No fat can be felt anywhere. Very thin, weak with obvious signs of malnutrition, old age or disease. These animals cannot be moved or transported. See page 16 for BCS chart.

A BCS of 2 is emaciated, slight fat covering over base of spinal vertebrae. Spinal vertebrae, ribs, tail-head, point of hips and buttocks are prominent. Withers, shoulders and neck structure accentuated. Theses animals should only be transported with special provisions (bedding, in the back of the trailer by itself) direct to slaughter.

When an animal with a BCS of 2 arrives at the plant, they must be segregated from the other animals, moved the shortest distance possible and have priority processing. These animals will have to be handled slowly and with extra care.

¹ *Humane Handling Guidelines for Horses: Standards for the Care of Unfit Animals* 2008
² Health of Animals Act, Part XII Transportation of Animals
• **Sick or diseased** - symptoms to look for in a sick animal are an increased rate of breathing, thick white or yellow nasal discharge, fever, slobbering and coughing. Other signs of illness and/or disease include loss of coordination, circling, paralysis or aggression. Bloody diarrhea, blood from the eyes, head pressing or any other suspicious symptom should be reported.

These animals must be segregated from the rest of the animals and reported to the plant veterinarian immediately. These animals must not be transported.

• **Severe injuries** - this can include deep gaping wounds, profuse bleeding, prolapses, broken limbs, severe head injuries, scrotal hernias or severe laminitis. These animals must not be transported.

If the injuries are severe such as a broken limb, the animal must be euthanized upon arrival. If the animal is able to move without further injury and minimal effort, it should enter the processing system immediately.

• **Pregnant mares** - a mare that is exhibiting late stage signs of pregnancy or is liable to give birth in the immediate future. Indicators include relaxation of the vulva; udder appears full; wax like beads of milk or droplets on the tips of the teats. Visibly pregnant mares must not be processed.

• **Heat or cold stress**
  Heat or cold stress can affect the welfare of horses during transit. The optimal temperature range for horses is between –10°C to 24°C in the trailer in still air. Within this temperature range, the horse maintains body temperature. Heat stress is more of a threat to a horse than cold stress.

• **Aggressive animals** - Aggressive animals should be immediately segregated from the other horses to prevent injury and distress to those animals. These animals are very dangerous and should be handled cautiously.

**Euthanasia Procedures**

The plant must have a written policy in place for the euthanasia of compromised animals. It must also have acceptable tools available and staff trained in the procedure.

The two most accessible methods of euthanasia for horses in a plant are by **penetrating CBG** and **firearms**. Correct application of both of these tools is outlined in **Chapter 5, Stunning**. All CBG and firearms within the plant must be properly maintained, cleaned and stored in a dry environment.

When euthanizing a horse on farm, in the trailer or in the holding pens, it must be confirmed dead before the body can be moved.
Body Condition Scoring Horses

Body Condition Scoring (BCS) is an easy and practical method of assessing the nutritional status of an animal. (Henneke et al. 1983) The BCS system for horses ranges from 1 (emaciated) to 9 (obese). The scoring system allows caregivers to monitor the condition of horses and adjust nutritional requirements as needed. It scores the deposition of fat in the whole body, the neck, withers, loin, tailhead, ribs and shoulders.

**BCS 1**

**WHOLE BODY**
- Poor condition
- Extremely emaciated
- No fat tissue felt

**NECK**
- Bone structure visible

**WITHERS**
- Bone structure easily visible

**LOIN**
- Spinous processes project prominently

**TAIL HEAD**
- Tail head, pin and hook bones project prominently

**RIBS**
- Project prominently

**SHOULDER**
- Bone structure easily noticeable

**BCS 2**

**WHOLE BODY**
- Very thin
- Emaciated

**NECK**
- Bones faintly discernible

**WITHERS**
- Bone structure faintly noticeable

**LOIN**
- Spinous processes prominent

**TAIL HEAD**
- Slight fat covering over base of spinous processes
- Transverse processes of lumbar vertebrae feel rounded

**RIBS**
- Prominent

**SHOULDER**
- Faintly discernible

**BCS 3**

**WHOLE BODY**
- Thin
- Accentuated

**NECK**
- Accentuated

**WITHERS**
- Accentuated

**LOIN**
- Fat build-up halfway on spinous processes, but easily discernible
- Can’t feel transverse processes

**TAIL HEAD**
- Prominent but individual vertebrae can’t be visually identified
- Hook bones rounded, but easily discernible
- Pin bones not distinguishable

**RIBS**
- Faint outline discernible

**SHOULDER**
- Not obviously thin

**BCS 4**

**WHOLE BODY**
- Moderately thin
- Not obviously thin

**NECK**
- Not obviously thin

**WITHERS**
- Not obviously thin

**LOIN**
- Negative crease along back

**TAIL HEAD**
- Prominence depends on conformation
- Fat palpable
- Hook bones not discernible

**RIBS**
- Faint outline discernible

**SHOULDER**
- Not obviously thin
BCS 5

WHOLE BODY
• Moderate condition

NECK
• Blends smoothly into body

WITHERS
• Rounded over spinous processes

LOIN
• Back is level

TAIL HEAD
• Fat around tail head beginning to feel spongy

RIBS
• Individual ribs can be felt, but not visually distinguished

SHOULDER
• Blends smoothly into body

BCS 6

WHOLE BODY
• Moderately fleshy

NECK
• Fat beginning to be deposited

WITHERS
• Fat beginning to be deposited

LOIN
• May have slight positive crease down back

TAIL HEAD
• Fat around tail head feels soft

RIBS
• Fat over ribs feels spongy

SHOULDER
• Fat beginning to be deposited
• Point-of-shoulder not discernible

BCS 7

WHOLE BODY
• Fleshy

NECK
• Fat deposited along neck

WITHERS
• Fat deposited along withers

LOIN
• May have positive crease down back, behind shoulder

TAIL HEAD
• Fat around tail head is soft

RIBS
• Individual ribs can be felt
• Noticeable fat filling between ribs

SHOULDER
• Fat deposited behind shoulder

BCS 8

WHOLE BODY
• Fat
• Fat deposited along inner buttocks

NECK
• Noticeable thickening of neck

WITHERS
• Area along withers filled with fat

LOIN
• Positive crease down back

TAIL HEAD
• Tail head fat very soft

RIBS
• Difficult to feel individual ribs

SHOULDER
• Area behind shoulder filled in, flush with body

BCS 9 - Not necessarily a desirable state of health

WHOLE BODY
• Extremely fat
• Fat along inner buttocks may rub together
• Flank filled in flush

NECK
• Bulging fat

WITHERS
• Bulging fat

LOIN
• Obvious positive crease down back

TAIL HEAD
• Building fat around tail head

RIBS
• Patchy fat appearing over ribs

SHOULDER
• Bulging fat
Proper stunning practices are not just good animal welfare standards—they are also the law. In Canada and the US, an animal must be rendered insensible on the first stunning attempt by law. When stunning is done correctly, the animal will feel no pain as it is rendered instantly insensible with no chance of return sensibility. Good stunning practices result in optimal animal welfare and ensure better meat quality.

All handling of animals must be as low stress as possible, see Chapter 1, General Equine Behavior and Handling. The animals must NOT be prodded, struck or deliberately mishandled in anyway. They must enter the restraint box in a proper manner (ie. not backed in, only one animal in restraint box at a time, etc.) and worked through the system quietly. If animals become fearful or frantic in the stunning area, the handlers must back off and allow the animal to calm down. Calm animals facilitate accurate and effective stunning.

Facilities must be designed to encouraged the natural flow of animals up to the restraint box (see Chapter 2, Facility Design). Horses should enter the restraint box easily, with minimal baulking. The animals' vision should be blocked as they enter the restraint area to limit distractions such as people and equipment. Horses should not be able to see out of the stun box or onto the slaughter floor. The entry to this area must also be well lit as animals do not want to enter dark spaces.

All box type restraint devices should have nonslip flooring. Nonslip flooring will lessen the chance of an animal panicking, slipping and / or falling. If the restraint is hydraulically controlled, it must move in a slow, steady motion. Noise should be kept to a minimum in the restraint area, modifying any parts that clang, bang or hiss. When closed, the animals should not be able to turn around in the restraint. If the restraint closes in completely on the animal, the restraint must apply ample pressure so the horse feels like it is being held. Excessive pressure will cause pain or lead to an injury.

Restraint boxes should be able to effectively accommodate all size classes of horses. Ideally, the restraint will hold the animals body in place, not restrain their head. Head restraint is much more stressful on an animal than full body restraint. If an animals is effectively body restrained, they will stand calmly in the stun box and not require a head restraint. If a horse struggles or vocalizes while in the restraint box, it is often an indication that the restraint is causing discomfort.

There are two methods of stunning that are currently acceptable for horses at processing — they are by firearm and by penetrating captive bolt gun (CBG). Both methods are highly effective when applied correctly. No matter which method you choose, it must render the animal immediately insensible.

**Firearms**

Gunshot euthanizes by mass destruction of the brain. The degree of brain damage inflicted by the bullet is dependent on the characteristics of the firearm, the nature of the bullet and the accuracy of the shot. It is imperative to use a sufficiently powered firearm.

The firearm must provide enough muzzle energy to effectively penetrate the horses skull and travel as far back into the brain as possible. A minimum muzzle energy of 1,000 ft. lb. (1,356 J) of muzzle energy is recommended for horses.

The point of entry is approximately 2 cm (1 in) above the intersection of the X that is formed by drawing a line from the center of the ear to the inside corner of the eye. See diagram below.

---

The gun must be maintained through regular cleaning and proper storage in a low humidity area. All ammunition must be kept dry and only enough ammunition for the current shift should be kept out in the stunning area. Any leftover ammunition must be returned to dry storage at the end of each shift.

### Penetrating Captive Bolt Gun (CBG)

Due to variability in the size of horses processed, a .25 calibre, extended CBG is recommended to ensure animals of all sizes are rendered insensible immediately, on the first application. Refer to the manufacturer’s recommendations for the proper cartridge strength.

Pneumatic penetrating CBG (air powered) must be supplied with sufficient air pressure and air volume to operate and, for the most part, are limited to processing plant environments. It must have a functional air pressure gauge. Refer to the manufacturer’s recommendations for PSI for stunning horses. Silencing devices must be installed. The sound of hissing air will agitate the animals.

The penetrative CBG must be held flush to the horse’s head. Placement of the CBG should be slightly higher at 3 to 5 cm (1.2 to 2 in) above the intersection of the X. This allows for the difference in the trajectory of the bolt when held flush to the head. Horses are animals that are head shy by nature, so the stunner operator must be patient and not chase the animals head.

Poor maintenance is the most common cause of failed stuns. Guns must be cleaned at the end of every shift and buffers rotated. Buffers and washers should be replaced when necessary and extra parts must be available at all times. Most CBGs come with test stands for testing bolt velocity. This testing should be part of the daily maintenance program.

Processing plants must have at least two operating penetrating CBGs on site at all times. These guns should be routinely rotated and utilized as a backup when needed. All cartridges must kept in a room or storage box with low humidity. Only enough ammunition for the current shift should be taken out to the stunning area.

Rotate stunning staff regularly to prevent physical and mental fatigue, which may lead to poor stunning. All plants must have back up employees not only trained in proper stunning, but utilized on a regular basis so they remain efficient in stunning.

Plant management should perform daily internal assessments of stunning and provide refresher training and encourage open communication with all stunners.

### Insensibility

Insensibility must be confirmed before an animal is hung for bleeding. If the animal was not rendered insensible on the first attempt, it must be immediately reshot and insensibility confirmed.

Horses, like all species may experience involuntary kicking following stunning — this is referred to as tonic and clonic movement. It will begin shortly after stunning with the most aggressive movement lasting 5 - 15 seconds. Random kicks and flinching can be expected to occur for another 2 - 3 minutes and in some cases more, this is normal. It is not to be mistaken for sensibility.

Remember, as with all species, the head must be dead. Below are signs to watch for to determine insensibility:

- **Natural blinking** - the eyes should be relaxed and wide open with no controlled eye movement or natural blinking. There may be “twitching” around the eye area known as *nystagmus*. Natural blinking occurs when the eye closes and then re-opens. Blinking must occur two times in a row. Observe a live horse if you are unsure of what a natural blink looks like.

- **Corneal reflex** - when the cornea of the eye is touched there should be no blinking or flinching reflex.

- **Righting reflex** - a properly stunned animal will hang with a limp neck and head when shackled. The head of the animal should hang straight down with a straight back. Animals should not attempt to right themselves, this is when they attempt to lift their heads upwards and arch their backs. Involuntary muscle reflex may cause the head to move and this should not be confused with righting reflex. Horses that are shot with firearms tend to have less muscle tone and less tonic or clonic kicking than horses stunned with a CBG.

- **Rhythmic breathing** will not be present in a properly stunned animal. There will be an initial exhaustion of air or intermittent gasping, but the breathing should not be rhythmic or steady.

- **Tongue movement** - the lips of the horse, especially the bottom lip should hang very loosely. The tongue may be hanging out of the mouth and be limp - this will not occur in all horses. A sign of sensibility is the tongue moving in and out of the mouth.

- **Tail movement** - the tail should relax and hang down.

- **Twitching nose** - a horse should not twitch its nose when pricked with a pin.
**Stunning to Bleed Interval**

Since firearms and penetrating CBG are both effective stunning devices, the recommended stun to stick interval is **up to 60 seconds**. All animals must be confirmed insensible before sticking occurs.

Proper sticking will promote rapid blood loss. Some horses may exhibit muscle contractions or head movement in response to nerve stimulation at sticking; this is an involuntary movement and does not indicate sensibility.

No skinning or leg removal can occur if the animal shows any signs of return to sensibility. Any employee who works in the stunning and sticking area must be trained and proficient in the recognition of return to sensibility.

---

**Troubleshooting stunning**

Following is a list of possible reasons for poor stunning results when using a captive bolt guns (CBG) or firearms:

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CBG</th>
<th>FIREARM</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Horses are not rendered insensible on the first application.</td>
<td>• Poor placement. Stunner is not placing the CBG correctly. Refer to the beginning of this chapter.</td>
<td>• Poor placement. Stunner is not placing the firearm correctly. Refer to the beginning of this chapter.</td>
</tr>
<tr>
<td></td>
<td>• Air pressure too low to power a pneumatic CBG. Refer to manufacturers recommendations. The CBG usually requires a dedicated compressor.</td>
<td>• Incorrect ammunition or firearm muzzle. The energy is too low to effectively render the animal insensible, refer to manufacturers recommendations.</td>
</tr>
<tr>
<td>• Firearm or CBG misfires.</td>
<td>• The CBG has not been maintained. A dirty CBG will lose bolt velocity, clean nightly. High bolt velocity is required for effective stun.</td>
<td>• Firearm has not been maintained. Clean firearms at the end of every shift.</td>
</tr>
<tr>
<td></td>
<td>• CBG cartridges are damp. Ammunition must be kept in a dry place and only enough brought out on the slaughter floor for that days production.</td>
<td>• Firearm bullets are damp. Ammunition must be kept in a dry place and only enough brought out on the slaughter floor for that days production.</td>
</tr>
<tr>
<td></td>
<td>• An overheated CBG cartridge loses bolt velocity. Rotate cartridge fired stunners to prevent overheating.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Worn cylinder bore on pneumatic CBG. Even when serviced correctly, the machined cylinder bore eventually wears out and the gun will lose hitting power. Replace the CBG. A clean air supply will help prevent cylinder wear.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• CBG has not been maintained. Clean and rotate buffers at the end of every shift.</td>
<td></td>
</tr>
<tr>
<td>• Stunner operator issues</td>
<td>• Poor ergonomics of bulky pneumatic CBG. Adding additional handles will aid positioning.</td>
<td>• The stunner chases the animal’s head. The operator must be trained to wait for the animal to stop moving and then position the firearm. Chasing the head will result in poor stunning.</td>
</tr>
<tr>
<td></td>
<td>• The stunner chases the animal’s head. The operator must be trained to wait for the animal to stop moving and then position the CBG. Chasing the head will result in poor stunning.</td>
<td></td>
</tr>
<tr>
<td>• Horses are slipping and falling.</td>
<td>• Careful, quiet handling and moving of animals will calm animals and make them easier to stun correctly. Limit distractions in the box. A slick floor in the stunning box will cause horses to scramble and become agitated. Install non-slip flooring.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• If the horses are scrabbling in the stun box it may not properly sized for animals. Make necessary adjustments.</td>
<td></td>
</tr>
</tbody>
</table>

(Adapted from AMI Recommended Handling Guideline and Audit Guide 2010)
Willful Acts of Abuse

A willful act of abuse is when a person deliberately injures or abuses an animal. Any willful act of abuse is grounds for automatic failure of the assessment and possible prosecution under Canada’s Health of Animals Act and provincial animal protection laws. Document the incident and continue on with the assessment.

Willful acts of abuse include, but are not limited to:

- dragging a conscious, non-ambulatory animal,
- deliberate slamming of gates on livestock,
- intentionally driving horses over the top of one another,
- making horses jump out of trailers that are high off the ground and require ramps,
- hitting or beating an animal,
- backing an animal the wrong way into the restrainer,
- transporting a severely compromised animal (i.e. broken leg, downer).

If an animal welfare assessor witnesses a willful act of abuse, the assessment will immediately cease and the plant will fail.

NOTE: CFIA inspectors are required to document the willful act of abuse and continue on with the assessment.
Core Criteria Animal Welfare Assessment

CORE CRITERIA are objective standards that can be easily measured and scored. In order for a criteria to be considered objective, they must be easy to score with a point system or a yes or no answer, with little if any subjectivity.

The core criteria for this animal welfare assessment are based on the criteria established by Dr. Temple Grandin and the American Meat Institute (AMI) Animal Welfare Committee for cattle, sheep and swine. They measure the condition of the animals arriving at the plant, the overall condition of the trailer they are transported in, the facilities accepting the animals, the handling of the animals within the lairage and processing areas and the stunning process.

Scoring and measuring performance:

• Enables management to monitor employees and quickly troubleshoot problem areas.
• Assures customers that their supplier is meeting industry established standards on animal welfare.
• Assures the public that horses being processed for protein products are being treated humanely.

SECONDARY CRITERIA are points of interest that are not scored, but assessed to provide a broader picture of the facility and care of the animals. The assessor will do visual inspections of the secondary criteria and note any concerns they may have. Assessors may also note any other observations concerning animal welfare they have while at the plant.

Core Criteria 1: Preparedness of the plant for receiving animals

This core criteria assesses the plants preparedness for receiving animals. A plant must be ready to receive animals at all times, have appropriate facilities to receive animals and a written policy in place to deal with animals in transit to the plant.

The plant is scored once on each of the criteria during an assessment.

1. The plant has written animal welfare policy for transporters
   Each plant must have a written policy in place that outlines expectations and guidelines for transporters hauling horses to the plant. This transport policy may be developed in-house or may reference the Certified Livestock Transporter (CLT) training program. Each driver must be provided copies of the plant’s policy and operate within compliance of it.

2. The plant provides extreme temperature management tools (water, fans, etc.)
   Plants must have policy in place to protect the horses from over exposure to extreme temperatures, either hot or cold. The optimal temperature range for horses is between -10 and 24°C (14-75° F). Within this temperature range horses are able to maintain their body temperature.

   The horses must be protected from wind, rain and sleet in cold weather as this will cause them to chill very quickly and experience cold stress.

   Heat stress can be very detrimental to the welfare of horses and they must not be left on a stationary trailer in extreme heat for any extended period of time. Heat stress is more of a threat to horses than cold stress. When the air temperature rises above 24°C it becomes more difficult for horses to release sweat. Plant policy must promote the quick offload of animals in hotter temperatures or provide management tools to keep the horses cool on the trailer while they are waiting to be offloaded.

1 J. Woods / Horse Welfare Alliance of Canada, Horse Hauling Course
3. **Emergency plans in place for animals in transit**
Plants must have emergency plans in place for animals in transit to the plant. Emergencies include, but are not limited to plant shutdowns, breakdowns, accidents, border closures or traffic problems.

4. **Written policy for compromised (unfit) animals**
The plant must have a written policy outlining what is considered a compromised animal and how the animal should be handled, including whether it should be euthanized or not. This policy can be an internal plant policy or reference to the *Humane Handling Guidelines for Horses: Standards for the Care of Unfit Animals*. If internal, the policy must comply with the Health of Animals Act and humane handling guidelines.

5. **Acceptable handling tools are available and used properly**
Acceptable tools include flags or rattle paddles. Use of electric prods on horses is strongly discouraged, it should only be a means of last resort when all other options have been exhausted. The handling tool must have no parts that will injure the horse in any way (ie. sharp edges or protrusions). It must never be used in a way that will harm the horse.

6. **Acceptable euthanasia tools are available at unloading area**
Tools for euthanasia must be available in the unloading area at all times. Acceptable tools for the euthanasia of horses includes firearms and CBG — *euthanasia must only be done by trained employees*. Tools must be properly stored, employee training must be documented and maintenance records maintained.

7. **Gates and ramps in unloading area are in good repair**
Gates must swing freely, latch securely and have no sharp or protruding objects that can injure the horses. Gates must be designed for horses.

8. **Nonslip flooring**
All areas of the unloading area should have nonslip flooring. Examples of nonslip flooring include texturized concrete, rubber mates, cleats and grates.

9. **Unloading area and ramps in good repair**
The unloading area must be in good working condition at all times. There can be no holes or gaps where animals can get their heads, legs or hooves caught. There must be no missing cleats on the ramps and the area must be clean enough to not jeopardize the footing of the animals. In the winter the unloading area must be kept clear of snow and ice.

10. **Adequate lighting**
Lighting should be the equivalent of a bright, overcast day. Inadequate, excessively bright and/or uneven lighting can impede the movement of horses. The lighting in the unloading area should encourage the movement of horses. Light should not be aimed into the faces of the animals.

11. **Personnel are available to receive animals**
Plant staff should be available to receive animals during normal plant hours. Staff must also be available to assist after hours if needed. Staff contact details and unloading instructions should be clearly posted.

**SCORING**

- **Excellent**: 11 out of 11
- **Acceptable**: 10 out of 11
- **Not Acceptable**: 9 out of 11
- **Serious Problem**: 8 or less of the 11

**SECONDARY CRITERIA**

12. **Does the plant have a “No Electric Prod Use” policy posted?**

13. **Were acceptable handling tools used correctly?**
Core Criteria 2: Timeliness of Arrival of the Truck and Trailer and Animal Unloading

The timely arrival and prompt unloading of horses is crucial to animal welfare. Ideally, unloading will begin within a half hour of arrival and all animals will be completely unloaded within an hour. This is especially critical in times of temperature extremes. The plant and transporter both share the responsibility in the timely arrival and prompt unloading of the horses. Some plants will schedule the arrival of animals at their plants, while others rely on the drivers arriving in a general time frame at the plant.

There are many variables in the delivery of livestock to an establishment. In some cases, even with a good scheduling program, there can be several trailers arriving at the same time, which results in a delay of the unloading. Delays at the plant may result from inclement weather, slow down or shut down of plant production, lairage at capacity, unavailability of receiving staff, arrival of trailer before or after receiving hours or difficulty unloading livestock. If there is a delay in unloading, the assessor should note what caused the delay.

Trucks may be delayed due to road closures, power outages, bad weather, or poor road conditions. Some delays may be the result of difficulties in loading the animals. The transporter must do their best to arrive during their scheduled times - arriving early or late can lead to a delay in the unloading of the trailer. If the transporter is not on schedule it is his responsibility to call the plant and notify them of the new estimated time of arrival.

There may also be circumstances when livestock are held on trailers at an off-site location to prevent a backup of trailers at the plant. Although this practice may be implemented occasionally, it is discouraged, especially during extreme weather conditions.

1. **Timeliness to unloading**

   The timing begins as soon as the trailer arrives at the plant premises and stops when the first horse walks off the trailer. The plant will receive the full 4 points if unloading of the trailer is started with 30 minutes of its arrival at the plant. Points will then be deducted for each additional 30 minutes.

   Plant begins unloading within:

   - 30 minutes of arrival: 4 points
   - 31 - 60 minutes: 3 points
   - 61 - 90 minutes: 2 points
   - > 90 minutes (with reason): 1 point

   **SCORING**

   To pass, only 1 trailer of the 3 can receive a score of less than 4 points.

   **SECONDARY CRITERIA**

2. **Actual unload time** - start at the time the trailer arrives at the plant premises and stops when the first animal walks off the trailer. Ideally all animals will be completely unloaded within an hour of arrival.
Core Criteria 3: Transport Assessment

This core criteria provides an overall snapshot of the trailers arriving at the plant, it is not intended to assess individual transporters. The recommended sample size is three trailers. It may take more than one day to complete this criteria as only a few trailers arrive at a horse plant daily.

You will need to obtain the total number of animals on board from the driver. Once the number is confirmed, there will be no need for the animals to be counted as they come off the trailer.

1. Preparation and unloading of trailer
Four areas are assessed for this core criteria: trailer loaded at proper density, horses have adequate head clearance, incompatible animals are segregated when necessary and there is proper ventilation. It is up to the assessor to observe these criteria without entering the trailer or obstructing unloading.

1.1 Trailer loaded at proper density
The assessor will visually observe the horses for loading density. Signs of overcrowding include horses not settled, excessive fighting, animals standing on each other, animals down and unable to get up. If there is concern that a trailer may be overcrowded, reference the Loading Density Chart page 8.

1.2 Horses have adequate head clearance
If horses appear to be hitting their heads on the roof or if several animals come off the trailer with poll (top of head) injuries, measure the compartments for clearance. Each animal must be able to assume a natural stance standing with four feet on the floor and have a full range of head and neck motion without touching the deck or roof of the vehicle or container. As a guide, it is recommended that there be at least 2.5 cm (1 in) of clearance for each hand of horse height at the withers.

1.3 Incompatible animals segregated when required
Aggressive animals and animals incompatible by nature (ie. stallions and geldings or mares, ponies or foals with large horses) must be segregated in separate compartments. Animals with shoes on the back feet also must be segregated from other animals. Signs of aggression include animals with injuries from bites and kicks and / or excessive vocalization in the trailer. Not only is improper segregation a poor welfare practice, it is also against the law.

1.4 Proper ventilation
Trailers must allow for adequate ventilation. Fresh air must circulating through the trailer will prevent the build up of mold spores, urine/manure fumes, exhaust fumes and dust.

SCORING

Each of the core criteria are worth 1 point, for a total of four points per trailer. Add the totals for the 3 trailers. To pass, the plant must receive a total score of at least 10 out of 12. In the comment area note the truck number and why any load receives less than 4 points.

Excellent: 12 out of 12
Acceptable: 10 out of 12
Unacceptable: 9 out of 12
Serious problem: 8 out of 12 or less

SECONDARY CRITERIA

1.5 Were the animals unloaded quietly and calmly?
1.6 Did the driver or handlers have electric prods in their hands?
1.7 Did the driver or handlers use a prod (through the holes in the trailer or otherwise)?
1.8 Were rattle paddles or flags or other handling tools used correctly?
2. Condition of trailer
Horses should be transported to slaughter in an optimal environment. The transport environment includes not only
the climate within the trailer, but also the condition of the trailer. The trailer will be assessed for the following criteria
after the animals have been unloaded and cleared of the loading area.

2.1 Trailer properly aligned with the unloading area
The trailer must be properly aligned with the unloading dock/ramp before unloading begins. There must be no
gaps between the trailer and the dock where animals can get stuck.

2.2 Non-slip, solid flooring
The trailer must have non-slip flooring to minimize slipping and falling. Examples of non-slip flooring include,
but is not limited to rubber mats, stamped tread, sand, shavings, steel reinforcement rods, etc. There must be
no holes in the floor or items that can cause the animal to stumble.

2.3 Gates and doors open freely and secure firmly
All gates, doors and roller doors must open and close freely and are able to be secured shut. There must be no
gaps or holes that the horse can get their heads or legs stuck.

2.4 No sharp or protruding objects that can injure animals
There must be no sharp or protruding objects that animals can injure themselves on. This includes gates, pass
through areas, trailer walls, the floor and ramps.

2.5 Ramps extended and set firmly
No broken boards, missing cleats or areas where an animal can injure themselves or become trapped. The
trailer must be flush to the ramp with no gaps or holes. The loading dock must be free of snow and ice to
reduce the chance of slipping and falling.

SCORING
Each of the core criteria are worth 1 point, for a total of five points for this core criteria for each trailer. Add the
totals for the trailers. To pass, the plant must receive a total score of at least 13 out of 15.

Excellent: 15 out of 15
Acceptable: 13 out of 15
Unacceptable: 11 out of 15
Serious problem: 10 out of 15 or less

3. Falls in the unloading area
Falls are scored when the horses are exiting the trailer and in the immediate unloading area. Falls in the trailer are
NOT scored. A fall is scored when any non-limbic part of the body touches the ground (ie. the belly or chest). See
the next criteria for a definition of a slip.

NOTE: Temperament of animals - temperament may be correlated to the number of slips and falls. Note any
temperament comments in the comment area of the form.

SCORING
Score 3 trailers of animals as they are unloading. Each animal can only be scored once for falling. To pass, no more
than one animal coming off each trailer can fall. A horse cannot be scored for both a slip and a fall.

SECONDARY CRITERIA

Slips in the unloading area
A slip is when a animal loses contact with the ground in a non normal manner or when a limbic part of the body
touches the ground (ie. knee).

SCORING
If more than 3 animals coming out of the trailer slip determine what the problem is and consult with management.
4. **Condition of Animals**

Fitness to transport is one of the biggest welfare issues related to transport. An animal must be fit enough to endure the normal stress of transport. Animals that are compromised are more likely to become fatigued, injured, immobile or die during transport. Factors that may affect fitness during transport include weather, trailer condition, other animals, driver skills, genetics, footing and length of journey. Compromised animals are scored in this criteria.

Animals will be scored during the unloading process and tallied in the column provided. An animal can only be counted once as compromised and only under one condition. Assessor, handlers and management should have ready access to the *Humane Handling Guidelines for Horses: Standards for Care of Unfit Animals* (resource area of www.horsewelfare.ca). It should be referenced any time there is a question on an animal’s fitness to transport.

4.1 **Dead on Arrivals (DOAs)**

Animals that arrive dead on the trailer. This does not include animals that are euthanized on the trailer or immediately following unloading. Animals that require euthanasia must be classified under one of the following criteria.

4.2 **Non-ambulatory (downer)**

Non-ambulatory animals include: animals that are reluctant to walk or has halted movement. Animals that refuses to put weight on affected limb or has obvious physical problem such as a broken leg or pelvis. Animals that cannot rise and are unable to stand unaided.

4.3 **Poor Body Condition Score (see Chapter 4, Compromised Animals for the BCS chart)**

A BCS of 1 is defined as extremely emaciated, must not be transported. Spinal vertebrae, ribs, tail-head and point of the hip and buttock are prominent. Bone structure of withers, shoulders and neck easily noticeable. No fat can be felt anywhere. Very thin, weak with obvious signs of malnutrition, old age or disease.

A BCS of 2 should only be transported with special provisions (bedding, segregated in the back of the trailer) direct to slaughter. A BCS of 2 is emaciated, slight fat covering over base of spinal vertebrae. Spinal vertebrae, ribs, tail-head, point of hips and buttocks are prominent. Withers, shoulders and neck structure accentuated. If a BCS 2 arrives at the plant mixed with other animals and not following the special provisions, they will be scored as compromised.

4.4 **Sick or diseased**

Signs of illness and/or disease include loss of coordination, circling, paralysis or aggression. Bloody diarrhea, blood from the eyes, head pressing or any other suspicious symptom should be reported.

Other symptoms of illness and/or distress include:

- Fever
- Slobbering
- Cough
- Nasal discharge
- Dehydration
- Excessive sweating or shivering
- Frequent lying down and rolling over
- Kicking at belly
- Off feed or water (inappetence)
- Persistent diarrhea or constipation
- Abnormal behavior (lethargic, depression, etc.)
- Head bobbing
- Odd stance
- Unwillingness to rise
- Difficulty moving

4.5 **Severe injuries**

This can include deep gaping wounds, profuse bleeding, prolapses, broken limbs, severe head injuries, scrotal hernias or severe laminitis.
4.6 Heat or cold stress
Heat or cold stress can affect the welfare of horses during transit. The optimal temperature range for horses is between –10°C to 24°C in the trailer in still air. Within this temperature range, the horse maintains body temperature. Heat stress is more of a threat to a horse than cold stress.

Signs of heat stress include panting and sweating. Signs of cold stress include shivering and bunching up.

4.7 Pregnant mares
A mare that is exhibiting late stage signs of pregnancy such as relaxation of the vulva, udder appears full, wax like beads of milk or droplets on the tips of the teats.

SCORING

The scoring is based on 3 loads of horses. Tally animals with any of the above conditions. Add the score for each trailer and divided by the total number of horses on the trailer.

Excellent: less then 1% compromised animals arriving on the trailers.
Acceptable: 1 to 3% compromised animals arriving on the trailers.
Unacceptable: 3 to 4% compromised animals arriving on the trailers.
Serious problem: greater then 4% compromised animals arriving on the trailers.

SECONDARY CRITERIA

4.8 Are there any wet animals in the trailer? Yes or No
Core Criteria 4: Effective Animal Handling and Stunning

1. Falls in the stunning area
   Good animal welfare and quiet calm handling is impossible if animals are slipping and falling. All floors must be nonslip.

   Falls can be scored in the holding area, the single alley chute leading up to the stun box and within the stun box itself. A fall is scored when any non-limbic part of the body touches the ground (ie. the belly or the chest).

   **SCORING**

   Score a minimum of 20 animals. To pass the plant must have no more than 1 animal fall out of 20.

   **SECONDARY CRITERIA**

   Slips in the stunning area
   A slip is when an animal loses contact with the ground in a non normal manner or when a limbic part of the body touches the ground (ie. knee). If animals are slipping determine what the problem is and consult with management.

2. Stunning
   Effective stunning is critical to humane processing of horses. To ensure a humane, accurate stun of the animal and increase safety for all involved, allow the animal to calm down in the stun box.

   Ideally, the horse will be stunned within 30 seconds of entering the box. Note: shots in the air or when the animal is not touched do not count as missed shots.

   **SCORING**

   When the number of horses assessed is 20, animals must be rendered insensible with one shot at least 95% of the time, this allows for 1 miss per 20 horses. If the assessment is based on an accumulative score of 100 or more horses an insensible score of 99% would be required to pass.

3. Bleed rail insensibility
   If a horse is found to be sensible on the bleed rail, it is grounds for automatic failure. Employees must confirm insensibility of each and every animal before it is hung for bleeding. Animals that show any signs of returning to sensibility should be immediately re-stunned. All animals must be completely insensible before the start of the dressing procedures including, but not limited to skinning and removal of any body part.

   Return to sensibility includes the return of:
   - Rhythmic breathing (score if moved in and out twice),
   - Stiff curled tongue,
   - Eye blinking like a live animal,
   - Arched back/righting reflex or response to pin prick or pinch on the nose.

   If there is an animal that is found sensible on the bleed rail, a historic review of bleed rail insensibility should occur to determine if this is a reoccurring problem or an isolated event. See Chapter 5, Stunning for more detailed information on insensibility.

   **SCORING**

   An animal that returns to sensibility on the bleed rail is an automatic failure.
Core Criteria 5: Access to Water

All livestock must have access to clean water at all times in holding pens. Failure to provide horses with water in holding areas is not only against the law but also an automatic failure of the assessment. Unloading pens, staging alleys and crowd pens are not considered holding areas unless the animals are held there more then 30 minutes.

SCORING

Failure to provide horses with water in holding areas is not only against the law but also an automatic failure of the assessment.

Core Criteria 6: Deliberate Acts of Abuse

Deliberate acts of abuse include, but are not limited to:

- dragging a conscious, non-ambulatory animal,
- deliberate slamming of gates on livestock,
- intentionally driving horses over the top of one another,
- making horses jump out of trailers that are high off the ground and require ramps,
- hitting or beating an animal,
- backing an animal the wrong way into a the restrainer,
- transporting a severely compromised animal (i.e. broken leg, downer),
- hitting / striking an animal in the face.

SCORING

Deliberate acts of abuse result in an automatic failure of the assessment.
# Animal Welfare Assessment Form

Date: 

Name of assessor and company: 

Plant location: 

Plant contact: 

Temperature / weather conditions: 

## Core Criteria 1 - Preparedness of the plant for receiving animals

1. The plant has written animal welfare policy for transporters ___ / 1
2. The plant provides extreme temperature management tools (water, fans, etc.) ___ / 1
3. Emergency plans in place for animals in transit ___ / 1
4. Written policy for compromised (unfit) animals ___ / 1
5. Acceptable handling tools are available and used properly ___ / 1
6. Acceptable euthanasia tools are available at unloading area ___ / 1
7. Gates and ramps in unloading area are in good repair ___ / 1
8. Nonslip flooring in unloading area ___ / 1
9. Unloading area and ramps in good repair ___ / 1
10. There is adequate lighting ___ / 1
11. Personnel are available to receive animals ___ / 1

**TOTAL** ___ / 11

**SCORING:** To pass, the plant must receive a total score of at least 10 out of 11.

**PASS / FAIL**

## SECONDARY CRITERIA

12. Does the plant have a “No Electric Prod Use” policy posted? Yes / No
13. Were acceptable handling tools used correctly? Yes / No

**COMMENTS**

---

HORSE WELFARE ALLIANCE OF CANADA | Recommended Handling Guidelines and Animal Welfare Assessment Tool for Horses
Core Criteria 2 - Timeliness of Arrival of the Truck and Trailer and Animal Unloading

1. **Time from arrival to unload** - start at the time the trailer arrives at the plant premises and stops when the first animal steps off the trailer. See scoring below.

<table>
<thead>
<tr>
<th>Time Range</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 minutes of arrival</td>
<td>4 points</td>
</tr>
<tr>
<td>31 - 60 minutes</td>
<td>3 points</td>
</tr>
<tr>
<td>61 - 90 minutes</td>
<td>2 points</td>
</tr>
<tr>
<td>&gt; 90 minutes (with reason)</td>
<td>1 point</td>
</tr>
</tbody>
</table>

**SCORING:** To pass, only 1 trailer of the 3 can receive a score of less than 4 points. If the score on any trailer is below 4 points explain why in the comment area below.

**PASS / FAIL**

### SECONDARY CRITERIA

2. **Actual unload time** - start when the first animal steps off the trailer, stop when last animal is unloaded. Ideally all animals will be completely unloaded within an hour of arrival.

<table>
<thead>
<tr>
<th>Time Range</th>
</tr>
</thead>
</table>

**COMMENTS**
### Core Criteria 3: Transport Assessment

**1. Preparation and unloading of trailer (score 3 trailers)**

<table>
<thead>
<tr>
<th></th>
<th>Trailer 1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Trailer loaded at proper density</td>
<td>___ / 1</td>
<td>___ / 1</td>
<td>___ / 1</td>
</tr>
<tr>
<td>1.2 Horses have adequate head clearance</td>
<td>___ / 1</td>
<td>___ / 1</td>
<td>___ / 1</td>
</tr>
<tr>
<td>1.3 Incompatible animals segregated when required</td>
<td>___ / 1</td>
<td>___ / 1</td>
<td>___ / 1</td>
</tr>
<tr>
<td>1.4 Proper ventilation</td>
<td>___ / 1</td>
<td>___ / 1</td>
<td>___ / 1</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>___ / 4</td>
<td>___ / 4</td>
<td>___ / 4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>___ / 12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SCORING:** To pass, the plant must receive a total score of at least 10 out of 12. If any trailer receives less than 4 points comment why below, include the truck number.

**PASS / FAIL**

#### SECONDARY CRITERIA

<table>
<thead>
<tr>
<th></th>
<th>Trailer 1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 Were the animals unloaded quietly and calmly?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>1.6 Did the driver or handlers have electric prods in their hands?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>1.7 Did the driver or handler use a prod (through the holes in the trailer or otherwise)?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
<tr>
<td>1.8 Were rattle paddles or flags or other handling tools used correctly?</td>
<td>Yes / No</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
</tbody>
</table>

**COMMENTS**

---

### Condition of trailer (score 3 trailers)

<table>
<thead>
<tr>
<th></th>
<th>Trailer 1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Trailer properly aligned with the unloading area</td>
<td>___ / 1</td>
<td>___ / 1</td>
<td>___ / 1</td>
</tr>
<tr>
<td>2.2 Nonslip, solid flooring</td>
<td>___ / 1</td>
<td>___ / 1</td>
<td>___ / 1</td>
</tr>
<tr>
<td>2.3 Gates and doors open freely and secure firmly</td>
<td>___ / 1</td>
<td>___ / 1</td>
<td>___ / 1</td>
</tr>
<tr>
<td>2.4 No sharp or protruding objects that can injure animal</td>
<td>___ / 1</td>
<td>___ / 1</td>
<td>___ / 1</td>
</tr>
<tr>
<td>2.5 Ramps extended and set firmly</td>
<td>___ / 1</td>
<td>___ / 1</td>
<td>___ / 1</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>___ / 5</td>
<td>___ / 5</td>
<td>___ / 5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>___ / 15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SCORING:** To pass, the plant must receive a total score of at least 13 out of 15.

**PASS / FAIL**

**COMMENTS**

---
3. **Falls in the unloading area (score 3 trailers)**

<table>
<thead>
<tr>
<th>Trailer 1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of falls per load (body touches the ground)</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>Total animals on the trailer</td>
<td>___</td>
<td>___</td>
</tr>
</tbody>
</table>

**SCORING:** Score 3 trailers of animals as they are unloading. Each animal can only be scored once for falling. To pass, no more than one animal coming off the trailer can fall. A horse cannot be scored for both a slip and a fall. To pass, no more than one animal coming off each trailer can fall.

**PASS / FAIL**

**SECONDARY CRITERIA**

4. **Condition of animals (score 3 trailers)**

<table>
<thead>
<tr>
<th>Trailer 1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Dead on arrivals (DOAs)</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4.2 Non-ambulatory (downers)</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4.3 Poor Body Condition Score (BCS 1-2)</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4.4 Sick or diseased animals</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4.5 Severe injuries</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4.6 Heat or cold stress</td>
<td>___</td>
<td>___</td>
</tr>
<tr>
<td>4.7 Pregnant mares</td>
<td>___</td>
<td>___</td>
</tr>
</tbody>
</table>

**Total**

<table>
<thead>
<tr>
<th>Trailer 1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total animals on the trailer</td>
<td>___</td>
<td>___</td>
</tr>
</tbody>
</table>

**PERCENTAGE**

<table>
<thead>
<tr>
<th>Trailer 1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ %</td>
<td>___ %</td>
<td>___ %</td>
</tr>
</tbody>
</table>

**SCORING:** To pass, the plant must receive a total percentage of less than 3%.

**PASS / FAIL**

**SECONDARY CRITERIA**

<table>
<thead>
<tr>
<th>Trailer 1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.8 Wet animals - Are there any wet animals in the trailer?</td>
<td>Yes / No</td>
<td>Yes / No</td>
</tr>
</tbody>
</table>

**COMMENTS**
Core Criteria 4: Effective Handling and Stunning

1. Falls in the stunning area
   Scored when any non-limbic part of the body touches the ground (ie. the belly or the chest).

   SECONDARY CRITERIA

   Slips in the stunning area
   Scored when an animal loses contact with the ground in a non normal manner or when a limbic part of the body touches the ground (ie. knee).

2. Stunning
   When the number of horses assessed is 20, animals must be rendered insensible with one shot at least 95% of the time, this allows for 1 miss per 20 horses. If the assessment is based on an accumulative score of 100 or more horses an insensible score of 99% would be required to pass. Ideally, the horse will be stunned within 30 seconds entering the box. Tally the number of failed stuns and note if they are due to apparent lack of maintenance or a missed stuns due to poor aim.

3. Bleed rail insensibility
   If a horse is found to be sensible on the bleed rail, it is grounds for automatic failure. Employees must confirm insensibility in each and every animal before it is shackled and bled out. Animals that show any signs of return to sensibility should be immediately re-stunned.

   All animals must be completely insensible before the start of the dressing procedures including, but not limited to skinning and removal of any body part. Return to sensibility includes the return of:
   - Rhythmic breathing (score if moved in and out twice);
   - Stiff curled tongue;
   - Eye blinking like a live animal;
   - Arched back/righting reflex or response to pin prick or pinch on the nose.

SCORING: use the following table to score 20 horses. Mark a F for fall, SL for a slip (secondary criteria), S for a failed or missed stun or X for any animal that returns to sensibility.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
<td>7</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

Falls (F)      To pass, the plant must have no more than 1 animal fall out of 20
               $$\frac{x}{20}$$  PASS / FAIL

Slips (SL)    Secondary Criteria
               $$\frac{x}{20}$$

Failed or missed stun (S)  To pass, the plant must have no more than 1 animal out of 20 stunned incorrectly
               $$\frac{x}{20}$$  PASS / FAIL

Bleed rail insensibility (X)  If a horse is found to be sensible on the bleed rail, it is grounds for automatic failure.
               $$\frac{x}{20}$$  PASS / FAIL

COMMENTS
Core Criteria 5: Access to Water

Do the animals have access to water?  

Yes / No

SCORING: If the answer is no, it is grounds for automatic failure.

PASS / FAIL

COMMENTS

Core Criteria 6: Deliberate Acts of Abuse

Willful acts of abuse include, but are not limited to:

- dragging a conscious, non-ambulatory animal,
- deliberate slamming of gates on livestock,
- intentionally driving horses over the top of one another,
- making horses jump out of trailers that are high off the ground and require ramps,
- hitting or beating an animal,
- backing an animal the wrong way into a the restrainer,
- transporting a severely compromised animal (i.e. broken leg, downer),
- hitting / striking an animal in the face.

Have you seen any deliberate acts of abuse observed?  

Yes / No

SCORING: Any willful act of abuse is grounds for automatic assessment failure.

PASS / FAIL

COMMENTS
## Horse Transportation Assessment Form - Final Scoring

| Core Criteria 1 | Preparedness of the Plant for Receiving Animals | Circle results: Pass / Fail |
| Core Criteria 2 | Timeliness of Arrival of the Truck and Trailer and Animal Unloading | Pass / Fail |
| Core Criteria 3 | Transport Assessment | Pass / Fail |
| | - Preparation and unloading of trailer | Pass / Fail |
| | - Condition of trailer | Pass / Fail |
| | - Falls in the unloading area | Pass / Fail |
| | - Condition of the Animals | Pass / Fail |
| Core Criteria 4 | Effective Handling and Stunning | Pass / Fail |
| | - Falls in the stunning area | Pass / Fail |
| | - Stunning | Pass / Fail |
| | - Bleed rail insensibility | Pass / Fail |
| Core Criteria 5 | Access to Water | Pass / Fail |
| Core Criteria 6 | Deliberate Acts of Abuse | Pass / Fail |

---

Assessors name

---

Assessors signature

---

Date

---

COMMENTS

---

---

---

---

---

---

---

---

---

---