Turning the table, using information from the meat industry to prove horse slaughter inhumane

Terri Champney, DVM
Virginia Equine Welfare Group

- *This document is not intended to endorse the slaughter of cattle, the only purpose is to illuminate the differences between the anatomy and husbandry practices of horses and cattle and to use information from experts related to the meat industry to prove horses can not be humanely slaughtered.*

Euthanasia and slaughter are not interchangeable words.

Euthanasia: the act or practice of killing or permitting the death of hopelessly sick or injured individuals (as persons or domestic animals) in a relatively painless way for reasons of mercy
Slaughter: the act of killing animals for their meat, the violent killing of a large number of people
from Merriam-Webster.com

Clearly these terms are not interchangeable, so why does the meat industry (and pro-horse slaughter advocates) use the word euthanasia to describe the act of slaughter?
The explanation may come from the American Veterinary Medical Association's Guidelines for Euthanasia.
https://www.avma.org/KB/Policies/Documents/euthanasia.pdf
At the beginning of the section concerning euthanasia of livestock the following paragraphs appear.
"While some methods of slaughter and depopulation might meet the criteria for euthanasia identified by the POE, (policy on euthanasia) others will not and comments in this document are limited to methods used for euthanasia"
This seems like a clear statement. Only euthanasia methods are presented in the document.
Yet that statement is immediately followed by approximately 2000 words describing the use of the captive bolt and gunshot for "euthanasia" of cattle, including repeated references to statistics that clearly come from the slaughter industry.
"In general, captive bolt guns, whether penetrating or nonpenetrating, induce immediate loss of consciousness, but death is not always assured with the use of this device alone. In a study …. of 692 bulls and cows where 8 (1.2%) animals had signs consistent with a return to consciousness.* Failure to achieve a 100% loss of consciousness with no return to a conscious mental state was attributed to ……, inexperienced personnel operating the captive bolt (use of the incorrect anatomical site), …… and use of the device on cows and bulls with thick, heavy skulls.
At the present time, an adjunctive method such as exsanguination, pithing, or the IV injection …. is recommended to ensure death when penetrating captive bolt is used**.**
Unlike techniques described for gunshot, the animal must be restrained for accurate placement of the captive bolt. And, unlike use of a firearm, proper use of the captive bolt

requires that the muzzle of the device be held firmly against the animal's head".** Pg. 53

* Statistics from slaughter, Grandin T, Return-to-sensibility problems after penetrating captive bolt stunning of cattle in commercial beef slaughter plants. J Am Vet Med Asso2002;221:1258–1261.
** Referred to later when discussing the importance of head restraint

It is apparent how easily the concept of euthanasia and slaughter might become interchangeable, especially since the same methods and devices are used for both and referred to in the authoritative AVMA document.

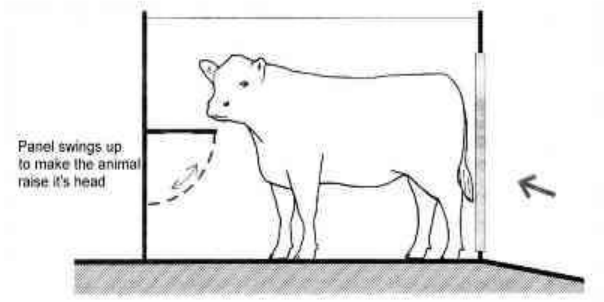
Approximately 100 words are devoted to the use of the captive bolt and/or gun for the euthanasia of horses.
"The captive bolt and gunshot are considered acceptable with conditions for euthanasia of equids. Both should only be used by well-trained personnel who are regularly monitored to ensure proficiency, and firearms must be well maintained. Appropriate restraint is required for application of the penetrating captive bolt and special care should be taken to ensure that personnel are not injured by ricochet from free bullets."
Notice the vagueness in the statements "with conditions" and "appropriate restraint". What conditions should be met when using either the captive bolt or gunshot to euthanize horses? What is considered proper restraint?

Discussion of restraint methods and devices developed for cattle slaughter.
It is a statutory requirement to have a head restraint fitted into every cattle stun box in the UK, but not in the USA. (Firearms are illegal in the UK.)
Because of the short neck of the cow, they have traditionally been restrained by the neck with a device called the head gate. It is probably based on the yoke which has been used for hundreds of years for oxen. In Great Britain the head gate is called a yoke.

The head gate is used in many slaughter facilities. The design has been improved over the years to hold and raise the head, prevent any head movement and hold the nose steady.



The cantilever system is a new variation on head restrain. (*No photo available but it can be viewed on youtube www.youtube.com/watch?v=ypnOiVW021I*, Feb 24, 2013 - Uploaded by Reza ProQuip The cantilever neck-yoke has arms which lie flat against the side of the wall; when activated, the arms move up and out to close around the neck, stopping the animals moving backwards and restricting head movement to up and down. According to Humane Slaughter Association of Great Britain this method is effective and well tolerated by cattle.
These physical devices all limit head movement, improve accuracy of the captive bolt and are intended to help insure an immediate loss of conciseness and a more humane death.
The use of non physical restraint method, again based on the short bovine neck, are preferred by the Humane Slaughter Association of Britain.
The kill box below demonstrates a chin lift with no "active" restraint except for a "butt" bar forcing the animal to the front of the box.



The head-yoke and chin-lift restraint works in two stages; the yoke closes around the animal's neck, the chin-lift then rises to push the animal's head upwards, resulting in complete immobilization of the head.

The conveyer system seen in "*The Glass Walls Project*" is a best practices video demonstration of a modern assembly-line method of bovine slaughter presented by the American Meat Institute on Youtube. It is hosted by Dr. Temple Grandin.
http://www.youtube.com/watch?v=VMqYYXswono

Cattle entering the conveyer system.

Cattle are lifted on and travel on the conveyer.

Note the v-shaped brisket of the cow fits into the indention in the conveyer to help hold the cow in place.

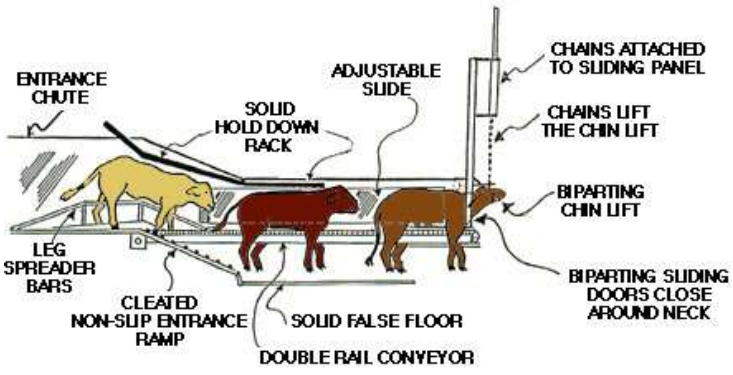


Photo 1

Photo 2

When cattle emerge from the darkness of the conveyer tunnel they are shot with the captive bolt. In photo1 the cow's head is held down, during slaughter, and the suspended stationary captive bolt is used. In photo 2 a hand held stunner is used the cow is positioned with a chin lift.

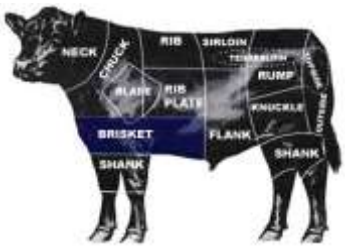
The captive bolt gun appears to be the preferred method of stunning large numbers of food animals for slaughter. Here is information from the manufacturer of a model of pneumatic captive bolt used commonly.

The pneumatic captive bolt stunner for cattle, calves and equine animals humane stunning (penetrating) for animals with max. 600 kg living weight (for heavier and older animals a cartridge driven Bolt-Stunner is recommended)**, to be operated only in combination with <u>head restraint</u> (to be provided by customer)**
Weight 12,5 kg 28 lbs

To obtain maximum bolt *velocity*, the *captive bolt gun* must be placed perpendicular to the skull. Angling the *gun* will result in less hitting power - Dr. Temple Grandin www.grandin.com

Again, from the AVMA Guidelines of Euthanasia "proper use of the captive bolt requires that the muzzle of the device be held firmly against the animal's head"

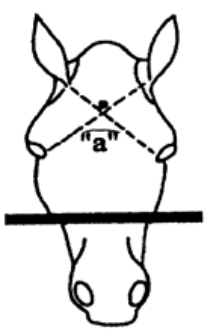
The previously discussed slaughter methods and devices have been used and refined for decades in cattle slaughter. They are used because cattle have short necks, short legs, a v-shaped brisket and are often handled in groups, maintained in holding pens and moved through chutes. Cattle are routinely restrained by the head and neck for husbandry procedures

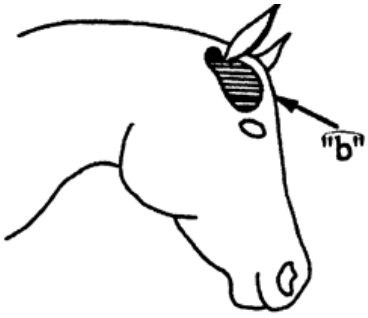


Horses have long muscular and flexible necks, long legs, and a compact rounded body. Horses are strong, quick, agile and have an extremely well developed "flight" response to stress. They have an excellent sense of smell and hearing, but poor visual accommodation, the ability to focus on close objects.

Often, the equine's first response to danger is lifting the head, and changing position of the nose/muzzle to improve vision. Most horses become extremely head shy when stressed and because of their poor near vision they will divert their heads when approached by unknown objects.
Note: When the horses' head changes position (see above) the position and angle of captive bolt stunner must also change to remain perpendicular to the forehead and firmly

From the Australian Veterinary Association, the captive bolt **"is not satisfactory for horses since firm pressure on the forehead is essential for its effective use and this tends to be resisted by the horse."**





Horses can not be humanely slaughtered for the following reasons:

1. The unfamiliar environment, with the noise of the slaughter plant (both machinery and that of other horses experiencing fear, pain and slaughter) and the smell of blood all cause an extremely heightened fearful response in the equine. The horses' reaction under stress is to escape.

2. The equine species can not be restrained by the neck in a stationary device without severe physical harm, i.e. broken neck, back and/or legs.

3. They can not be adequately restrained on a conveyer system.

As demonstrated in this presentation, the meat industry makes efforts to assure the public that the slaughter of cattle is reasonably humane. Yet all the devices and methods to achieve this outcome are based on the anatomy of cattle, which is markedly different from that of horses.

Note: This presentation/document is not intended to endorse the slaughter of cattle, the only purpose is to illuminate the difference between the anatomy and husbandry practices of horses and cattle and to use information from experts related to the meat industry to prove that using methods developed for the slaughter of cattle are not acceptable in horses.

Simply put, horses can not be humanely slaughtered.

■References sited include:
American Meat Institute
AVMA Euthanasia Guidelines 2013 USDA 2013
Temple Grandin 2010
Iowa State University
Australian Livestock Industries Government Agency
Australian Veterinary Medical Association