

Report on Horse Slaughter Practices in Canada
April 23, 2010

BCSPCA



Introduction

Horses and Horse Slaughter in Canada

According to a 2008 Report by the Alberta Farm Animal Care Association (AFAC)¹, five meat processing plants (all Federally licensed) were slaughtering horses in Canada at the time of the report's release. Since that time, at least two of these plants (one in Saskatchewan and one in B.C.) have closed; the authors are not aware of whether other new plants have opened. According to the same report, the largest of the existing plants is Bouvry Exports, which kills approximately 50,000 horses per year and is situated in Fort MacLeod, Alberta. The other plants are situated in Quebec. Statistics related to horse slaughter in Canada and the importation of horses for slaughter have been tabulated from data from Agriculture and Agri-food Canada (AAFC) and the United States Department of Agriculture^{2,3} and are displayed in Table 1 below.

Table 1. Horses slaughtered in Canada per year.

	2004	2005	2006	2007	2008
Horses Slaughtered in Canada (CFIA) ²	51,610	48,715	50,067	79,850	111,236
Horses Exported from USA to Canada (not limited to slaughter; USDA ³)	22,676	20,299	26,221	46,883	76,829
Horses Imported Direct to Slaughter from USA (CFIA) ²	17,535	15,672	21,709	32,452	42,319

Bouvry Exports has reported that approximately half of the horses they slaughter (25,000) are "direct to slaughter" from the USA; a further 10,000 come from Alberta and 15,000 come from the remaining three western provinces. They have also reported that one third of the horses they slaughter are purpose-bred for meat.

2008 Video Audits of Natural Valley Farms

In July of 2008, the BC SPCA was presented with DVDs from the Canadian Horse Defense Coalition (CHDC), which portrayed continuous video footage from a camera mounted above a stunning box in a processing plant used to slaughter horses. CHDC indicated that this footage had been filmed at the Natural Valley Farms horse slaughter facility in Neudorf, Saskatchewan on April 30th, 2008.

¹ The Alberta Horse Welfare Report. February, 2008. Commissioned by the Alberta Equine Welfare Group. Managed by the Alberta Farm Animal Care Association. www.afac.ab.ca. info@afac.ab.ca.

² Available at: http://www.agr.gc.ca/redmeat-vianderouge/almrt39cal_eng.htm.

³ United States Department of Agriculture: <http://www.fas.usda.gov/gats/ExpressQuery1.aspx>. Accessed: April 20, 2010.

The American Meat Institute's (AMI) 2007 audit forms (enclosed)⁴ designed by Dr. Temple Grandin (Colorado State University) for assessing the slaughter of cattle were used to audit the stunning of horses depicted on these videos. Dr. Grandin indicated through personal communication (July 29th, 2008) with the auditor that these audit forms would be appropriate for use in evaluating the slaughter of horses. Dr. Grandin also indicated that it would be feasible to adequately audit many criteria by videotape.

Natural Valley Farms plant failed this audit of stunning practices on two core criteria:

1. Slips and Falls: 13% of animals slipped in the stunning box (3% or less slips is considered acceptable for the entire facility)
2. Willful Acts of Abuse: 9 animals were willfully abused in the stunning box (one such act in the entire facility results in a failed audit)

Key recommendations of the auditor pertained to design of the stunning box (particularly with regard to slippery flooring and lack of sufficient horse restraint) and employee training and supervision. The full report is included in Appendix I.

2010 Video Audits of Bouvry Exports and Viandes Richelieu

In March of 2010, The BC SPCA was presented with further DVDs from the Canadian Horse Defense Coalition (CHDC), which portrayed continuous video footage from cameras mounted in two other horse slaughter facilities. CHDC indicated that this footage had been filmed at Bouvry Exports (Fort MacLeod, Alberta) on February 18th, 2010 and at Viandes Richelieu (Massueville, Quebec) on February 22nd, 2010. The same AMI audit forms⁴ used in the Natural Valley Farms video review were used to audit the stunning of horses depicted on these videos. The outcomes of this audit are contained in the following section.

⁴AMI Recommended Animal Handling Guidelines and Audit Guide (2007 edition). Available at: <http://www.meatami.com/ht/a/GetDocumentAction/i/1489>. Accessed: July 14th, 2008.

2010 Video Audit Findings

The video was reviewed by a farm animal behaviour specialist and veterinarian on staff with the BC SPCA, in consultation with three independent Canadian veterinarians with equine expertise. Table 2 displays the results of audits conducted on stunning and handling practices at three plants using the American Meat Institute's slaughter facility audit for cattle. As is indicated in the table, each facility has failed the audit on a variety of performance criteria.

Table 2. Summary of video audits of three Canadian horse slaughter plants. Unacceptable performance results are emphasized in bold text.

Plant	Natural Valley	Bouvry Exports	Viandes Richelieu	Score Required to Pass AMI Audit for Cattle
Location	Neudorf, SK	Fort MacLeod, AB	Massueville, QC	
Date of footage	April 30, 2008	February 18, 2010	Feb. 22, 2010	
Horses scored	208	179	82	
Multiple stuns attempted ⁵ (%)	2 (1%)	12 (7%)	4 (5%)	5% maximum ineffective stuns
Animals vocalizing in box or chute (%)	Undetermined	Undetermined	19 (23%)	3% maximum
Bleed rail sensibility (%)	Undetermined	2 (1%)	Undetermined	Zero animals
Animals slipping	27 (13%)	24 (13%)	3 (4%)	3% maximum
Animals falling	1 (<1%)	2 (1%)	1 (1%)	1% maximum
Audit Outcome	Fail – slipping; willful acts of abuse	Fail – ineffective stuns, bleed rail sensibility, slipping	Fail – vocalization, slipping	

⁵ The reviewers were not able to determine the true stun efficacy score due to the inability to assess conclusively whether horses were entirely unconscious after stunning. Accordingly, we have labeled this category "multiple stuns attempted" and submit that the true stun efficacy score may be higher than the percentage indicated here.

Summary of Major Concerns:

In summary, the audit results and other observations informed by the veterinary and behavioural expertise of the reviewers lead us to have serious concerns about the welfare of the horses being slaughtered at these plants.

Bouvry:

1. This plant exceeded the AMI threshold for ineffective stuns. That the plant does not meet the processing industry's own standards is cause for major concern. Moreover, we feel that the 5% AMI threshold is somewhat liberal and that plants should never exceed 1% missed stuns.
2. When a first shot does not render an animal unconscious, too much time elapses before the delivery of a second shot. The average time between 1st and final shots was 17 seconds and the maximum was 4 minutes. The distress experienced by these animals for this duration of time is unacceptable. We submit that this is a breach of section 79(a)(1) of Canada's Meat Inspection Regulations as the methods used fail to consistently "cause immediate loss of consciousness".
3. That two animals were suspended while conscious is a serious breach of section 78 of Canada's Meat Inspection Regulations and constitutes a reprehensible act of negligence. This is the outcome of inadequate measures taken to confirm lack of consciousness.
4. Many horses appear agitated in the kill box. We propose that the noise levels are a major contributing factor to this behaviour. Other aversive stimuli not observed on the video (such as prior handling methods) may also contribute. The length of time some horses spend in the kill box (up to 3.5 minutes) is also reason for concern, particularly due to the extremely noisy and hectic environment at Bouvry. We observed that horses became increasingly agitated, the longer they spent in the kill box.

Richelieu:

1. In this audit, 5% of horses required multiple shots to be rendered unconscious. At least a further 8 shots (7% of all horses) appeared to be placed extremely inaccurately⁶ (five of which were shots fired at the sides of horses' heads). We also observed that at least 7 horses were moving substantially at the time the shot was fired.

Due to the limitations of video auditing, we were unable to conclusively determine whether these inaccurately shot horses were rendered unconscious prior to being suspended. Accordingly, it is impossible to determine the true percentage of ineffective stuns. As above, we feel that the 5% AMI threshold is liberal and that plants should never exceed 1% missed stuns.

2. When a first shot does not render an animal unconscious, too much time elapses before the delivery of a second shot. The average time between 1st and final shots was 17.5 seconds and the maximum was 30 seconds. The distress experienced by these animals for this duration of time is unacceptable. We

⁶ At a location not close to the intersection of two lines drawn diagonally from eye to ear): Recommended Code of Practice for the Care and Handling of Horses. 2008. Available at www.nfacc.ca.

submit that this is a breach of section 79(a)(1) of Canada's Meat Inspection Regulations as the methods used fail to consistently "cause immediate loss of consciousness".

3. Many horses are left in the kill box for too long (up to 18.5 minutes) and begin to show behavioural signs of stress: lip licking, pawing, hyperventilation, craning necks around the sides of the box. A fair number of horses demonstrated strong escape behaviour, causing many of these animals to slip and fall. This may be due in part to the fact that the killer is also responsible for chasing horses into the chute and kill box.
4. Numerous horses are electric-prodded or whipped excessively, and in some cases, horses are whipped with forceful full arm motions, which we believe constitute acts of wilful abuse. In one case, a horse was whipped 15 times.

General:

1. The variety in size of equines make design of a box that is a suitable size for all breeds (including several donkeys seen to be slaughtered at Bouvry) a major challenge. Horses of breeds that are smaller than the draft breeds (or their crosses) were generally too small for the kill box. By comparison, cattle plants are presented with a generally more uniform size of animal produced by that sector. Smaller horses were able to move too much in the box, contributing to a greater likelihood of slipping and movement when stunning or shooting was attempted. According to Dr. Temple Grandin, the sides of the kill box must also be high enough to prevent horses from looking out and the kill box must be maintained well enough to prevent slipping.
2. In the opinion of the reviewers, it is much more difficult to restrain an agitated or excited horse by the head than a steer. Anatomically, horses have a much wider range of motion of their neck and head than do cattle. Accordingly, when a horse chooses to move its head, the intended target for a stun or shot⁵ travels a much greater distance. This makes it extremely challenging for a stunner or shooter to consistently hit the desired target on an unrestrained horse in order to ensure the brain is sufficiently damaged to accomplish prolonged insensibility.

We observed consistent difficulty in the actions of the stunner/shooter to aim properly. Whether using a captive-bolt or firearm, the stunner/shooter frequently had difficulty getting the animal to face forward with its head raised. Three techniques were used, none of which constitute what we deem to be professional or consistently effective methods:

- Natural Valley Farms: The stunner used one hand to raise the horse's head with a cane and the other to stun the animal. The dexterity required to achieve an effective outcome was too challenging to result in a consistently placed stun and willful acts of abuse were committed with the cane in response to frustration.
- Bouvry Exports: The outlet panel of the stunning box is mechanically controlled and used to jostle the horse in an attempt to get it to look forward. This is not consistently effective and causes some horses to slip or panic.
- Viandes Richelieu: The shooter whistles to get the horse's attention, but this technique was not consistently effective, resulting in many misplaced shots.

As a consequence of the behavioural and anatomical characteristics of horses and of the inadequate restraint provided by the kill boxes, the shooter/stunner is

often aiming at a moving target and poor stunning accuracy is the outcome. This was observed at all three plants.

3. Problems tend to occur in the latter half of the day, as demonstrated in the Table 3 below.

Table 3. Results of AMI audits provide some evidence of a decline in performance variables in the latter half of the day. Unacceptable performance results are emphasized in bold text.

Plant	Natural Valley		Bouvry Exports		Viandes Richelieu		Score Required to Pass AMI Audit for Cattle
	1 st half	2 nd half	1 st half	2 nd half	1 st half	2 nd half	
Ineffective stuns (%)	0 (0%)	2 (2%)	3 (3%)	9 (10%)	2 (5%)	2 (5%)	5% maximum
Animals vocalizing in box or chute (%)	Undetermined	Undetermined	Undetermined	Undetermined	8 (20%)	11 (27%)	3% maximum
Bleed rail sensibility (%)	Undetermined	Undetermined	0	2 (2%)	Undetermined	Undetermined	Zero animals

Appendix I – Auditor’s Report on the Slaughter of Horses at Natural Valley Farms, Neudorf, Saskatchewan

Executive Summary:

Natural Valley Farms plant fails this audit of stunning practices on two core criteria:

- 4. Slips and Falls: 13% of animals slipped in the stunning box (3% or less slips is considered acceptable for the entire facility)*
- 5. Wilful Acts of Abuse: 9 animals were wilfully abused in the stunning box (one such act in the entire facility results in a failed audit)*

Key recommendations pertain to design of the stunning box (particularly with regard to flooring and restraint) and employee training and supervision.

Four months have passed since the date of the video capture and other agencies (including the Canadian Food Inspection Agency and Saskatchewan SPCA) have made independent recommendations; therefore it is possible that some of the concerns raised in this report may have been addressed by this time.

Audit Information:

The auditor was presented with 13 DVDs from Ms. Twyla Francois, Central Regional Director for the Canadian Horse Defense Coalition and it was indicated that the footage was of the processing plant, Natural Valley Farms, in Neudorf, Saskatchewan. The DVDs contained footage as follows:

Kill Box Video 1 – 1 DVD
Kill Box Video 2 – 4 DVDs
Kill Box Video 3 – 4 DVDs
Kill Box Video 4 – 1 DVD
Kill Box Video 5 – 1 DVD
Kill Box Video Compilation of Excerpts – 1 DVD
Rendering Pit and Plant Walkthrough – 1 DVD

The 11 Kill Box DVDs contained continuous video footage from a camera mounted above a stunning box in a processing plant used to slaughter horses. One of the remaining DVDs contained excerpts from the continuous footage focussing on the stunning of several horses. The other remaining DVD contained footage of a walkthrough of the rendering pit on the property and of the processing plant outside of the hours of operation. Ms. Francois indicated that the 11 stunning box DVDs were filmed at the Natural Valley Farms plant on April 30th, 2008.

The American Meat Institute’s (AMI) 2007 audit forms⁷ designed by Dr. Temple Grandin (Colorado State University) for assessing the slaughter of cattle were used to audit the stunning of horses depicted on Videos 1-5. Dr. Grandin indicated through personal communication (July 29th, 2008) with the auditor that these audit forms

⁷AMI Recommended Animal Handling Guidelines and Audit Guide (2007 edition). Available at: <http://www.meatami.com/ht/a/GetDocumentAction/i/1489>. Accessed: July 14th, 2008.

would be appropriate for use in evaluating the slaughter of horses. Dr. Grandin also indicated that it would be feasible to adequately audit many criteria by videotape.

The 11 stunning box DVDs were viewed and audited over three days (July 16th – 18th, 2008).

This AMI audit includes 7 Core Criteria and 14 Secondary Audit Items. Secondary Audit Items are assessed through interviewing of facility personnel and evaluation of written facility protocols and accordingly were not assessed in this audit.

Audit Results:

208 horses were scored.

Core Criteria 1: Effective Stunning

The auditor was able to observe the accuracy of the captive bolt gun placement, but was generally unable to assess the animal's sensibility post-stun (e.g. by checking for rhythmic breathing, blink-reflex test, etc.) due to the limitations of the video footage. In three cases, the auditor observed possible signs of sensibility post-stun, but in-person observation would have been necessary to confirm sensibility. Other observations of note include:

- 3 animals (1%) appeared to demonstrate voluntary movement after stunning:
 - #91 demonstrated apparently voluntary movement 30 seconds post-stun. No 2nd stun was attempted.
 - #121 sat up voluntarily 4 seconds post-stun and then fell over 10 seconds post-stun. No 2nd stun was attempted.
 - #174 was shot inaccurately (directly on top of the head) and was still standing so needed to be stunned a 2nd time
- 15 stuns (7%) were inaccurately placed (too high), although the auditor was unable to tell if signs of sensibility were present in many of these animals.
- The captive bolt operator needed to use a cane to lift the head of 45 animals (22%) who were head-shy in order to access the stunning target.
- Two animals were in the pen backwards at the time of stunning, making the stun impossible to view.

Core Criteria 2: Bleed Rail Insensibility

The auditor was unable to assess this portion of the process.

Core Criteria 3: Slips and Falls

- The auditor was unable to observe animals' slips or falls during unloading from the truck, or while in the holding pen or chutes.
- In the stunning box, 27 animals (13%) recorded slips and 1 animal recorded a fall.

Core Criteria 4: Vocalization

- 4 vocalizations were observed (possibly 2% of animals), although adequate scoring of this criterion is not possible due to the limitations of the video footage.

Core Criteria 5: Prod Use

The auditor was unable to score this as the holding pen and chute were not visible on camera.

Core Criteria 6: Willful Acts of Abuse

Willful acts of abuse were observed on 9 horses (4% of animals). On each of these occasions the captive bolt operator beat the horse on the head with the cane he was otherwise using to lift the animals' heads pre-stun. These beating actions used full arm motion, not the small tapping wrist actions used more frequently to raise the horse's head. One horse (#185) was hit 16 times repeatedly.

Core Criteria 7: Access to Water

The auditor was unable to score this criterion as the holding pen was not visible on camera.

Final Scoring:

Natural Valley Farms fails this audit on two core criteria:

1. Slips and Falls: **13% of animals slipped in the stunning box** (3% or less slips is considered acceptable for the entire facility)
2. Willful Acts of Abuse: **9 animals were wilfully abused in the stunning box** (one such act in the entire facility results in a failed audit)

Expanded Comments:

Stunning Accuracy, Bleed Rail Sensibility, and Slips/Falls:

The auditor cannot speculate on sensibility of most animals after stunning, but is concerned about the high percentage of stuns that appear inaccurately placed.

In the auditor's opinion, the apparently inaccurate stuns and animal slipping are the result of the following design factors:

1. Lack of restraint and stunning box size:

The stunning box appears too large (in both length and width) for many of the horses slaughtered. Accordingly, it provides the animals with too much room to move. As a result, the captive bolt operator is frequently seen aiming at a moving target. The captive bolt operator also frequently uses his right hand to lift the animal's head with a cane, while reaching with his left hand to stun the animal. In the auditor's opinion, this requires too much coordination from the operator, making it more difficult for him to place an accurate shot.

2. Stunning box flooring:

Video footage of the plant walk-through indicates that the floor of the stunning box is textured steel (see Attachment 1) and is therefore not

adequate to prevent slipping. Some horses were observed to be shod, which may also contribute to slipping.

3. Noise in the stunning area:

The noise levels from machinery and gate clanging heard on the video were very loud. The AMI guidelines state that "because animals are so sensitive to noises, it is important to reduce noise in the stunning area in particular. Calm animals facilitate accurate and effective stunning." The auditor is unable to determine whether the noise levels are as loud as they seem, but further observation of this factor by in-person inspectors could confirm whether this needs to be addressed on-site.

Wilful Acts of Abuse:

The wilful acts of abuse committed appear to be caused by operator frustration with his inability to adequately restrain the animals to place an accurate shot. All incidents of abuse were observed in the 2nd half of the animals processed that day, providing further evidence that they are the result of fatigue and frustration. As this is a zero-tolerance criterion, immediate attention is needed to address the causes of the actions observed.

Recommendations:

The auditor recommends that:

1. Unannounced in-person audits be conducted to assess the following core criteria:
 - whether the captive bolt operators consistently position the captive bolt gun accurately;
 - whether any animals demonstrate signs of sensibility on the bleed rail;
 - whether drinking water is available to animals in the holding pen;
 - whether noise levels are as loud as they appear on the video footage.and to assess each of the AMI audit's secondary criteria.
4. The flooring of the kill box be improved to prevent slipping. The AMI Recommended Animal Handling Guidelines and Audit Guide (2007 edition) includes specific recommendations.
5. The kill box be redesigned to be more appropriate for the size of horses being slaughtered and to feature an adequate method of animal restraint. Improved restraint methods are outlined in the AMI Recommended Animal Handling Guidelines and Audit Guide (2007 edition).
6. Future acts of willful abuse be prevented by implementing the following measures:
 - discipline, as appropriate, for the employee responsible;
 - improved employee training and supervision;
 - improvements in stunning box design; and
 - use of two captive bolt operators who share the daily workload.

Auditor:

Geoff Urton, B.Sc.(Agr.), M.Sc.(Animal Science)
British Columbia Society for the Prevention of Cruelty to Animals

Date: August 21, 2008

Attachment 1:

Stunning Box Interior
(view of rear portion, including floor at bottom)

