
Standards for Optimizing Animal Welfare Outcomes during Slaughter without Stunning

September 7th 2018

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Standards for Optimizing Animal Welfare Outcomes during Slaughter without Stunning

Introduction

- These standards are science based and are intended to improve animal welfare.
- *Pre-slaughter stunning* (including *reversible stunning*) renders an animal insensible yet alive. This is the best method to control anxiety, pain and suffering throughout slaughter.
- Where slaughter without *stunning* is permitted by regulation, care must be taken to achieve effective control and reduction of anxiety, pain and suffering for all animals throughout slaughter.
- If pre-slaughter *stunning* is not performed, then immediate *post-cut stunning* is a best practice which will reduce the potential for animal suffering.
- These standards are based on best practices that should apply to all slaughter establishments.

Definitions

Agonal movements – the twitching and jerking reflex movements as an animal is dying

Back up stunning equipment and stunning methods – equipment that is kept ready and available for use if the primary method does not work properly

Coercion – forcing an animal using a painful or stressful procedure, so it has no option but to comply without enduring more pain or stress

Lairage – animal handling facilities at abattoirs, including loading ramps, laneways, weigh-scales, holding areas for animals in crates, pens, and feeding and watering facilities

Nystagmus – rapid movement of the eyeball in any direction (side to side, up and down, or in a circular pattern)

Rhythmic breathing – in and out breathing pattern of more than two movements, commonly accompanied by flaring of the nares and expansion of the chest wall

Sensibility – a state of awareness, able to feel pain and/or to respond to touch, sound and/or what is seen

Smooth, quiet operation of equipment – operation of equipment without jerky movements, hissing or loud noises

Stunning - rendering an animal insensible...There are two kinds of stunning, **reversible** (eg. gas inhalation, and some electric stunning) and **irreversible** (eg. captive bolt and head to cardiac electric stunning)

- **Post-cut stunning** – the process of stunning animals immediately after they have been cut; this action can reduce suffering in animals that are cut but not stunned
- **Pre-slaughter stunning** – the process of stunning animals immediately prior to the cut
- **Reversible stunning** – a stunning process whereby animals eventually have the potential to regain sensibility

Scope

This document **includes** guidance on restraint, neck cutting and post cutting management.

This document **does not include** changes to existing, applicable provincial/federal regulations or legislation.

If these words are used, they offer some flexibility:

Recommend/encourage/should: the practice is viewed as best practice, but other methods will be accepted as long as the goal of high welfare is not jeopardized.

If these words are used, strict adherence is required:

Prohibited: the practice described is banned.

Must: the standard has to be adhered to as directed.

Standards that apply to all slaughter facilities

1. Commitment to protecting animal welfare by taking the responsibility for the training, competency and validation of the skills and ability of everyone involved;
2. Develop, implement and review effective written standard operating procedures (SOPs) and training procedures. These are to include measurable criteria of success, regular monitoring of procedures and records of outcomes. Alternative solutions that achieve the same animal welfare outcomes may be considered for very small plants;
3. Training programs for people who handle, cut, or stun live animals include a knowledge of animal behaviour and physiology, handling and restraint, signs of stress and pain, and best practices for minimizing the time to loss of sensibility at slaughter, as well as equipment maintenance, including knife sharpening;
4. The operator/management provides assurance that employees have the ability to recognize when an animal is insensible, when an animal is possibly returning to sensibility, and when an animal is dead;
5. Ensure the welfare of animals at all times by the application of best practices and applicable regulations to the transport, unloading, lairage, restraining, stunning and slaughter of animals;
6. Animals that are not suitable for slaughter must be handled and killed humanely;
7. Apply a monitoring program to verify that animals are calm at the time of slaughter and are not subject to undue stress, pain or suffering during the handling, restraint, slaughter and bleed out until death is confirmed, validating that the animal was cut or stunned effectively and bled out rapidly;
8. Implement a system for rapid identification of failures to meet welfare standards and timely implementation of corrective actions that include documentation of issues and corrective actions taken to address specific and larger underlying problems.

Standards for mammalian slaughter without stunning

Based on temperament, suitability for appropriate restraint, availability of appropriate restraint equipment, and risk to worker safety, some species, such as horses, and bison, should not be considered for slaughter without stunning.

Rabbits should follow the *Standards for Slaughter without Stunning* for mammals and not birds.

1. Restraint

1. Each mammal must be individually restrained in a comfortable position, either manually or with the use of equipment;
2. All mammals must be restrained in an upright position;
3. Inverting mammals for slaughter without stunning is prohibited because it results in distress, pain and aspiration of stomach/rumen fluids;
4. Effective and humane commercial restraint equipment systems are available for cattle, sheep and goats. These must be used within the limits of the equipment (size, horns, etc.);
5. Rabbits must be restrained in a comfortable and upright position and must not be shackled while sensible. Proper restraint of rabbits must continue until there is loss of sensibility. Rabbits can retract heads and necks after cutting if proper restraint is not present. This can impede blood flow and unnecessarily prolong the time to loss of sensibility;
6. Restraining equipment, including both the body and head restrainers, must be designed, located and constructed to suit the size, species and type of animal being slaughtered. It must be functional, properly maintained and used correctly to enable:
 - secure footing for the animal,
 - smooth, quiet operation of equipment,
 - the animals to enter readily and without coercion (for example - no use of nose tongs),
 - the animals to be held forward by a pusher or a similar restraining device,
 - the animals to fit comfortably into the forehead bracket and chin lift, or similar device if being used, which:
 - provides proper access at the correct angle for effective neck cutting and bleeding out without overextension of the neck,
 - applies only moderate but firm pressure,
 - avoids excessive dorsal neck bend (backward bending);
 - requires no additional form of restraint (for example - no nose tongs);
 - adequate monitoring of the animal, including the head, for loss of sensibility, and
 - adequate access to the head and the neck for accurate neck cutting and bleeding, application of the stunning equipment when required;
7. Nothing in the design, location or use of the restraining device or manual restraint must obstruct the flow of blood, including:
 - the closing of the edges of the cut,
 - contact of the neck cut with the restraint device,
 - overextension of the neck,

- excessive restraint in the box,
 - ballooning (constrictions of the cut ends of the carotids), and
 - excessive agonal movements that hamper bleeding;
8. Mammals must remain calm during the slaughter process. Temperament of the animal should be considered in whether they are suitable for this process; and
 9. If an animal is agitated and cannot be restrained for a proper cut, it must be stunned immediately;
 10. The head must be supported after the cut to maximize blood loss, minimize mechanical impact on the surfaces of the wound, and permit proper monitoring until loss of sensibility;
 11. Manual restraint, when used, must suit the size, species and type of animal being slaughtered, and meet all other requirements noted above;
 12. Level of fatigue of the personnel on the effectiveness of manual restraint must be taken into consideration.

2. Neck cutting

1. A trained competent individual must carry out the cut;
2. The knife must be at least twice as long as the width of the animal's neck;
3. The knife must be sharp and undamaged for each animal so that the cut can be made with a minimum of pressure and the requirements in this section can be met. Knives must be checked before each cut for imperfections and sharpness. If requested, knives must be able to pass the paper test or any other comparable test for sharpness before a cut is made. To perform the paper test, dangle a piece of printer paper by one corner with thumb and forefinger. When the knife is held in the other hand, it should be able to slice through the edge of the paper;
4. The slaughter person must be proficient in how to sharpen a knife and keep it free of nicks;
5. The animal must not be restrained until the slaughter person is ready to perform the cut. Once the head is restrained, the neck cut must proceed with no more than a 10 second delay;
6. The cut must be a single pull stroke of the knife in all circumstances except if required with large ruminants where this can be extended into a total of a single pull and a push fluid stroke without interruption;
7. Based on the skin thickness, coat thickness, age and size of the animal an appropriate cut may not be possible and these points should be considered in the selection of animals;
8. At no time must the knife be removed and reinserted;
9. The knife point must not be used in a stabbing or poking motion;
10. Immediate post-cut stunning should be considered particularly for all large (over 800 lb)

bovines;

11. Both carotid arteries and jugular veins must be completely severed with the cut. Blood loss must be rapid enough to cause a rapid loss of sensibility meeting timelines stated elsewhere in this document;
12. Procedures that could cause distress or pain and suffering (including palpation, second neck cuts, tissue collection) must not be done until the animal is insensible;
13. Animal welfare and the loss of sensibility must be monitored for every animal through cutting and bleeding until death; and
14. Back up stunning equipment and methods must be readily available and suit the size, species and type of animal being slaughtered.

Bovines must be stunned immediately if they **do not lose sensibility within 30 seconds post cut.**

Small ruminants (goats and sheep) must be stunned immediately if they **do not lose sensibility within 15 seconds post cut.**

Rabbits must be stunned immediately if they **do not lose sensibility in 15 seconds post cut.**

Mammals must be stunned immediately if they are **showing vocalizing movements after the cut.**

3. Post-cut management

All mammals must be confirmed to be insensible before they are moved or manipulated.

Slaughter without stunning does not have a step that results in instantaneous insensibility, therefore:

1. In slaughter without stunning animals require a longer time to become insensible;
2. Animal welfare must never be compromised to increase speed of the line or productivity;
3. Animals must be monitored for loss of sensibility;
4. Back up stunning equipment and methods must suit the size, species and type of animal. They must be applied correctly, and must have proper maintenance as stunning must be performed safely and rapidly if required to protect animal welfare;
5. Back up stunning equipment must be readily available and prepared for immediate use, and in good working order at all times;
6. Mammals must be stunned immediately if they are showing vocalizing movements (see below for details) after the cut;

7. Bovines must be immediately stunned if they do not lose sensibility within 30 seconds. Small ruminants must be immediately stunned if they do not lose sensibility in 15 seconds. Rabbits must be stunned immediately if they do not lose sensibility in 15 seconds.
8. Mammals must be insensible before a hand or any object is placed in the wound. If bleeding is accidentally being prevented, stunning must be applied before correction measures are applied;
9. Mammals must be insensible before the restraining device is released, unless required to apply a post-cut stunning;
10. Mammals must not be wholly or partially lifted, inverted, shackled or suspended by any means until the animal has lost sensibility; and
11. Dressing procedures must not be performed on an animal that shows signs of a possible return to sensibility.

**Regardless of the choice of slaughter technique,
sensible animals are prohibited on the bleed line.**

4. Mammalian signs of loss of sensibility

The time to loss of sensibility varies between species and among individual animals. Therefore, slaughter persons need to identify when each animal has lost sensibility.

1. No rhythmic breathing;
2. No natural blinking, tracking of movement or other eye movements including nystagmus;
3. Permanent loss of muscle tone and righting reflex:
 - A righting reflex is seen when an animal attempts to retain or regain upright body posture;
4. No vocalization or vocalization movements:
 - For slaughter without stunning: the larynx (voice box) is severed from the trachea, so vocalization per se is not possible. However animals that show vocalizing movements after the cut (e.g., mouth open, neck extended, tongue rolled) must be stunned immediately even if no other signs of sensibility are observed;
5. Floppy head (“rag doll –like”):
 - Loose tongue and
 - No controlled tongue or lip movements.

The presence of any one of these: rhythmic breathing, natural blinking, righting reflex, vocalization movements, controlled tongue or lip movements, indicates the animal may return to sensibility and must be stunned immediately.

Standards for bird slaughter without stunning

The majority of birds are processed with reversible pre slaughter stunning to ensure they are insensible at the time of the cut and this is encouraged.

1. Restraint

1. Restraint equipment must be designed and constructed to suit the size, species and type of bird presented for slaughter. It must be functional, properly maintained and used correctly;
2. It is not acceptable to shackle sensible birds unless they are being stunned pre or immediately post-cut:
 - Shackling birds for slaughter without pre or immediate post-cut stunning results in avoidable pain and suffering due to movement of the cut edges and an inability to monitor effectively for loss of sensibility, and is not acceptable;
3. The best practice for bird restraint during slaughter without prior stunning, is for one person to hold the bird while another person (the slaughter person) performs the cut;
4. Proper restraint must continue until there is loss of sensibility:
 - Some birds can retract heads and necks after cutting if proper restraint is not present. This can impede blood flow and unnecessarily prolong the time to loss of sensibility;
5. Cones, if used, must suit the type, size and species of bird.
 - The fit should be sufficiently firm to prevent excessive movement or escape, but not so firm as to cause compression injuries or pain; Proper restraint of a bird in a cone involves continuing to hold the head after the cut has been made and until loss of sensibility occurs.

2. Neck cutting

1. A trained competent individual must carry out the cut;
2. The knife must be at least twice as long as the width of the bird's neck;
3. The knife must be sharp and undamaged for each animal so that the cut can be made with a minimum of pressure and the requirements in this section are met. Knives must be visually checked at regular intervals to assess for sharpness and imperfections. The interval will depend on the size and type of bird and equipment being used. If requested, knives must be able to pass the paper test or any other comparable test for sharpness at any time. To perform the paper test, dangle a piece of printer paper by one corner with thumb and forefinger. When the knife is held in the other hand, it should be able to slice through the edge of the paper;
4. The slaughter person must be proficient in how to sharpen a knife and keep it free of nicks
5. The birds must not be restrained until the slaughter person is ready to perform the cut. Once the head is restrained, the neck cut must proceed with no more than a 10 second delay;

6. At no time must the knife be removed and reinserted, used in a sawing motion, or the knife point used in a stabbing or poking motion;
7. Both carotid arteries and jugular veins must be rapidly, simultaneously and completely severed with a single stroke of the knife. Blood loss must be rapid enough to cause a rapid (see post cut management for time frame) loss of sensibility;
8. Procedures that could cause distress or pain and suffering (including palpation, second neck cut, tissue collection) must not be done until the bird is insensible;
9. Animal welfare and the loss of sensibility must be monitored for every bird through cutting and bleeding until death;
10. Back up stunning equipment must be readily available and in good working order at all times.

3. Post-cut management

1. All birds must be insensible before they are moved or manipulated;
2. The welfare of the birds must never be compromised to increase the speed of the line or productivity;
3. Birds must be monitored for loss of sensibility. If loss of sensibility has not been reached in 15 seconds stunning or rapid decapitation must occur;
4. Back up stunning equipment and methods must suit the size, species and type of bird. They must be applied correctly, and must have proper maintenance as stunning must be performed safely and rapidly if required to protect animal welfare;
5. Birds can be rapidly decapitated in the event of a poor cut in place of stunning, in which case the equipment to perform this must be available and in good working order;
6. Birds must be insensible before a hand or any object is placed in the neck cut, rapid decapitation is excluded;
7. Birds must not be shackled until they have lost sensibility, with the exception of birds where pre-slaughter or immediate post-cut stunning is being applied;
8. Birds must be dead before entering a scalding tank or a water tank;
9. Dressing procedures must not be performed on a bird that shows signs of a possible return to sensibility.

Regardless of the choice of slaughter technique, sensible birds are prohibited on the bleed line.

4. Bird signs of loss of sensibility

The time to loss of sensibility varies between species and among individual animals. Therefore, slaughter persons need to identify when each animal has lost sensibility.

1. No observed natural blinking:
 - If the eyelids are open, there is no movement of the nictitating membrane (third eyelid);
 - If the eyelids are closed, there is no movement of the eyelids or obvious eye movement under the eyelids;
2. No rhythmic breathing;
3. Permanent loss of muscle tone and righting reflex;
4. No neck tension (“ragdoll–like”);
5. No vocalization:
 - Birds that show vocalizing movements after the cut (e.g., beak open, neck extended) must be stunned even if no other signs of sensibility are observed;
6. No swallowing movements.

The presence of any one of these: natural blinking, rhythmic breathing, righting reflex, neck tension, vocalization movements, or swallowing movements, indicates the bird may return to sensibility.

Standards for stunning during slaughter

General recommendations:

- When animals are being stunned, operators need to refer to the appropriate best practices to ensure that stunning is performed properly.

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