



SHEEP WELFARE HOT BUTTON TOPICS

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Animal Welfare in Practice – Sheep Welfare; UPEI

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WHAT IS WELFARE?

BIOLOGICAL
FUNCTIONING
& HEALTH

More than health and productivity when we consider if an animal has a good life

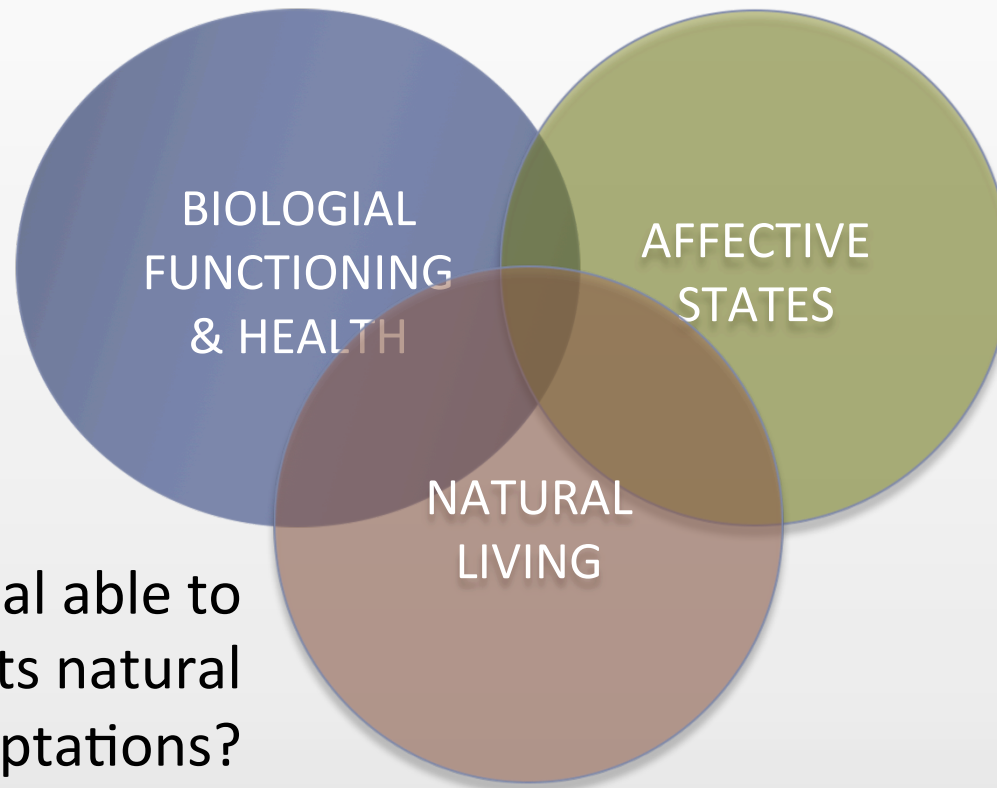
AFFECTIVE
STATES

Must also consider how does the animal lives its life

Example – Common Husbandry Practices and Pain



WHAT IS WELFARE?



Is the animal able to
use its natural
adaptations?

EXAMPLE: NATURAL BEHAVIOURS



Dr. Gosia Zobel



Ministry of Business,
Innovation & Employment



Introduction

- ▶ Sheep Code of Practice first developed in 1990s
- ▶ 2013 – vastly updated
- ▶ Based on best available information of what constitutes humane and proper care of sheep
- ▶ Required Practices
 - ▶ Regulatory or minimum expectation of the industry, these are “must do’s”
- ▶ Recommended Practices
 - ▶ Encouraged to adopt



Who wrote this code?

- ▶ **Code Development Committee**

- ▶ Primary producers (5)
- ▶ Extension personnel (1)
- ▶ Veterinarian representing the CVMA (1)
- ▶ Animal welfare regulatory enforcement personnel (1)
- ▶ Animal welfare organizations (1) National Farm Animal Care Council
- ▶ Processors (1)
- ▶ Transporters (1)
- ▶ Chair of Scientific Committee (1)

- ▶ **Scientific Committee – to research areas of doubt or where change may have occurred (3)**

- ▶ Report of recommendations to Code Development Committee

- ▶ **Funded by Agricultural Flexibility Fund - AAFC**



2.1.3 Lighting

Sheep are seasonal animals and sensitive to photoperiod.

Sheep must be provided with an appropriate period of rest from artificial lighting (e.g. 6 hours), but they must not be kept in permanent darkness (18).

Light is also required to facilitate proper care of the animals by the stockperson, so that sheep kept in buildings can be thoroughly inspected at any time and the sheep can be handled appropriately during emergencies, shearing and during daily care routines (1). Throughout the hours of daylight, the level of indoor lighting, natural or artificial, should be such that all housed sheep can be seen clearly by the stockperson.

Appropriate lighting for handling areas is also important for the welfare of sheep. Sheep prefer moving from darker to lighter areas. Shadows can startle sheep and make moving them more difficult.

Exterior lighting of facilities can help minimize predator problems, but care must be taken to avoid affecting the diurnal cycle of the sheep.

REQUIREMENTS

Sheep housed indoors must be exposed to a natural daylight cycle (using either artificial or natural light), except for breeding animals under a controlled light regime.

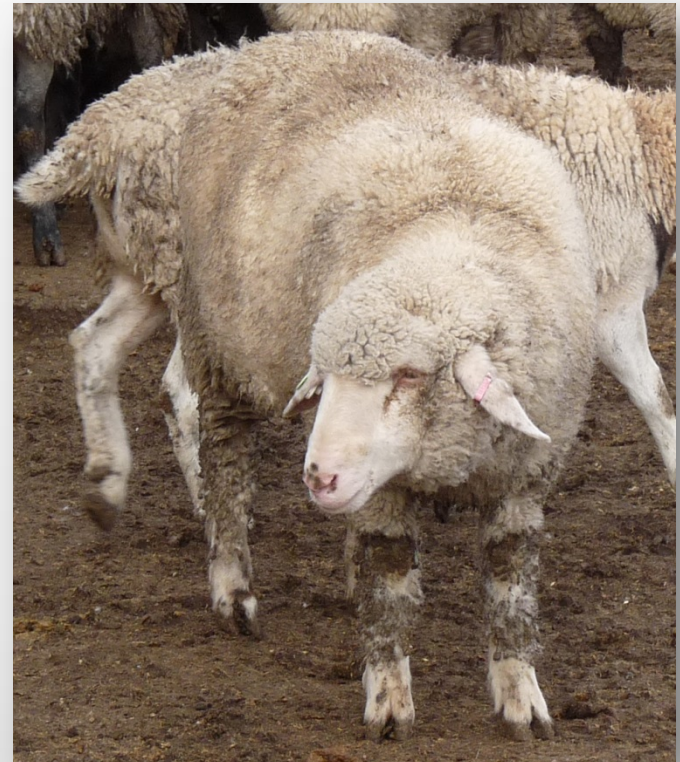
Lighting must be sufficient to allow appropriate care and inspection by stockpeople.

RECOMMENDED PRACTICES

- a. ensure six hours of darkness in a 24-hour period for housed sheep.

What areas are covered by the code?

- ▶ Section 1: Environmental Conditions
- ▶ Section 2: Facilities
- ▶ Section 3: Feed and Water
- ▶ Section 4: Health Management
- ▶ Section 5: Husbandry Practices
- ▶ Section 6: Transportation
- ▶ Section 7: Euthanasia
- ▶ Handout includes the issues researched by the Scientific Committee



For this presentation

- ▶ I will focus on three issues that can be controversial issues
- ▶ Castration and taildocking
- ▶ Transportation
- ▶ Euthanasia



Castration - Requirements

- ▶ Consider whether necessary
 - ▶ No need if lambs are slaughtered before puberty
- ▶ Must be supervised or performed by competent person
- ▶ Pain mitigation protocol – consult flock veterinarian
- ▶ Monitor signs of post-op complications
- ▶ Short-scrotum castration **MUST NOT** be practiced



Requirements for Different Methods

Method	Age Range
Rubber ring (confinement & semi-confinement)	24 h to 10 days
Rubber ring (pasture lambing)	24 h to 6 weeks
Surgical (cut and pull)	24 h to 4 weeks – no pain mitigation > 4 weeks – anaesthesia and analgesia required
Burdizzo (clamp)	1 w to 6 weeks – no pain mitigation > 6 weeks – anaesthesia and analgesia required
Any method	> 10 weeks must be performed by a veterinarian

Recommendations

- Avoid castrating on rainy days on pasture
- Shouldn't use rubber rings > 7 days
- Administer pain medications whenever possible
- Tetanus vaccination should be kept up-to-date
- Collaborate with flock vet to develop sound protocols to reduce pain

What does the science tell us?

- ▶ Castration may not be necessary in lambs slaughtered at or before puberty, but certain management considerations are required.
- ▶ Conclusions on pain responses to castration can only be tentative. The research evidence is capable of different interpretations. Caution is required when utilizing the interpretations of the relative severity of pain from different methods of castration.
- ▶ All methods of castration result in a response indicative of pain.



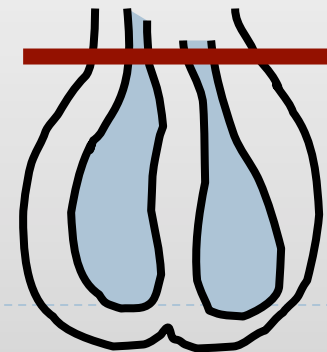
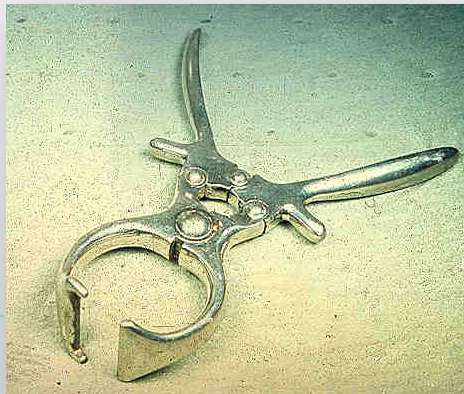
Rubber ring castration

- ▶ There is a marked physiological and behavioural response to rubber ring castration that is indicative of acute pain.
- ▶ Local anesthesia injected into the scrotal neck and cord or the testis can reduce this response.
- ▶ A non-steroidal anti-inflammatory drug can reduce this response.
- ▶ Until the scrotum falls off after about 4 weeks, it remains swollen and appears to cause behavioural signs of discomfort.



Clamp (burdizzo)

- ▶ There is a physiological and behavioural response that is indicative of acute pain.
- ▶ Local anesthesia injected into the scrotal neck and cord can reduce this response.
- ▶ Clamp and ring method
 - ▶ The response to the combined clamp and ring method appears to be less than castration by rubber ring alone, but greater than castration by clamp alone.



Surgical method

1. There is a marked physiological and behavioural response to surgical castration that is indicative of acute pain.



So what is likely to happen?

- ▶ Cost of a veterinarian performing castration on newborn lambs?
 - ▶ Will this be used as a good investment by the producer in the cost of production of that lamb?
- ▶ Training necessary to assure that producers have the skill to safely inject an anaesthetic into the cord
 - ▶ Don't overdose lidocaine in a very small ruminant (3 – 7 kg bw)
 - ▶ Don't inject into the artery or vein of the cord
 - ▶ Inject so that anaesthesia is achieved
- ▶ As a veterinarian, I must first assure that it is safely and effectively used



Best approach – my opinion

- ▶ For lambs destined for market < 6 months of age, don't castrate
- ▶ Halal slaughter prefers intact
- ▶ For lambs to be marketed > 6 months, castrate as newborns using local anaesthetic and NSAIDS – clamp and ring
- ▶ Why is a lamb not ready for market before 6 months of age?

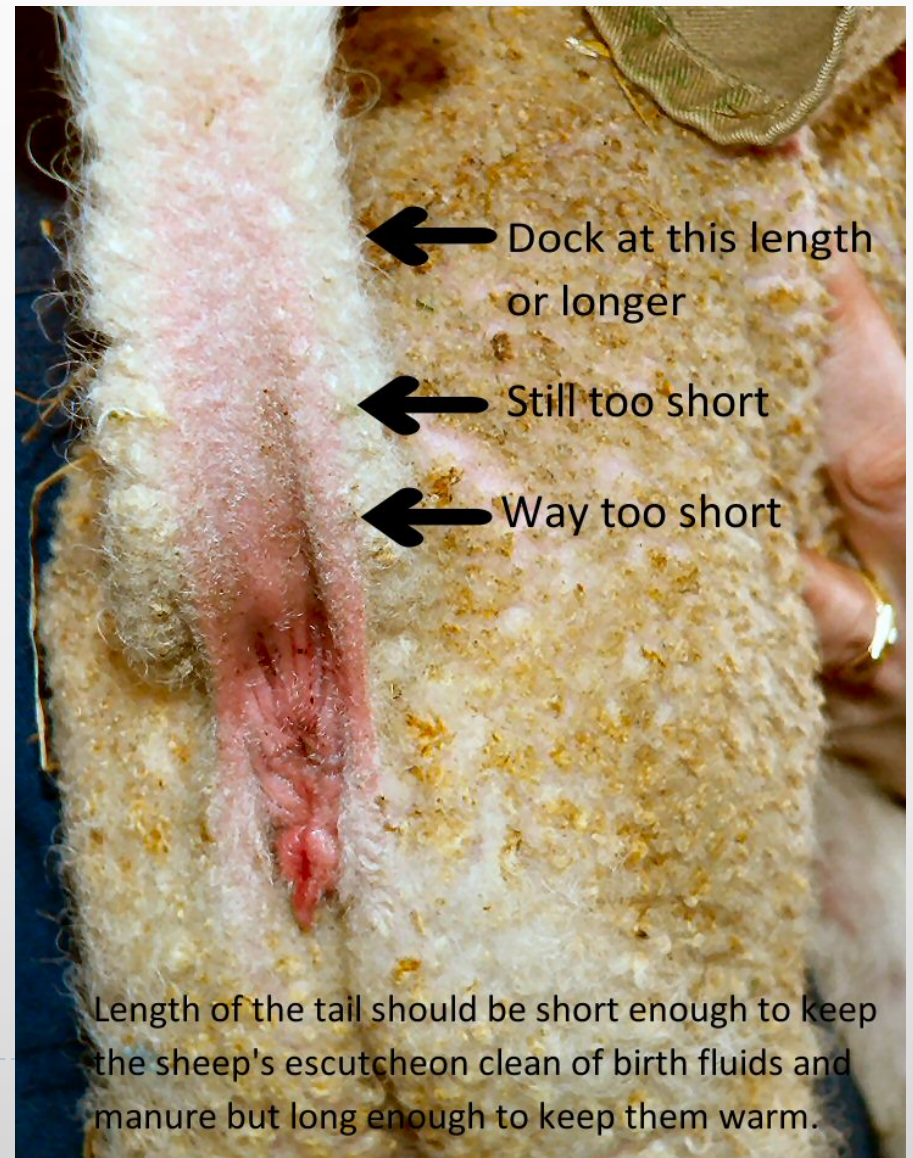


Tail docking - Requirements

- ▶ Decision to tail dock based on welfare risk/benefit rather than routine
 - ▶ Not necessary for short-tail / hair breed of sheep
- ▶ Must be performed / supervised by competent person
- ▶ Monitor for signs of post-operative complications
- ▶ Method which used blade alone can only be performed by a veterinarian with anesthesia and analgesia
- ▶ If docked > 6 weeks of age, only by a veterinarian...
- ▶ Rubber rings not past 6 weeks of age
- ▶ 6 weeks chosen because of pasture-lambing ewes; need to prevent mismothering
- ▶ Must be long enough to cover vulva in ewes and equivalent length in rams
 - ▶ No shorter than distal end of caudal tail fold



Proper Length for Taildocking



What is the intent of tail docking?

- ▶ To keep the “back-end” clean of feces, dirty wool
- ▶ Not for aesthetics

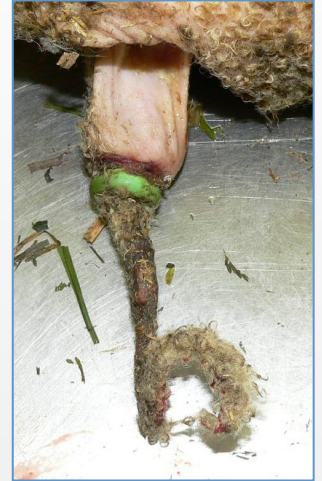
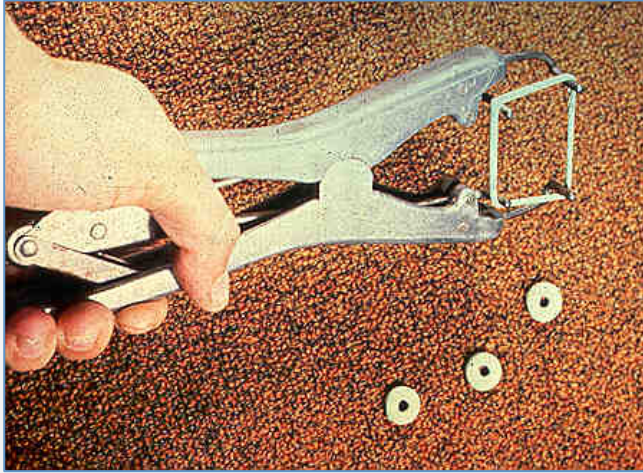


Tail-docking - Recommendations

- ▶ Tail-docking by rubber rings should be done 24 h to 7 days of age
- ▶ Use hot iron method whenever possible – LEAST PAINFUL!
- ▶ Administer pain relieving drugs whenever possible
- ▶ Consider performing tail docking and castration at the same time if castration to be done



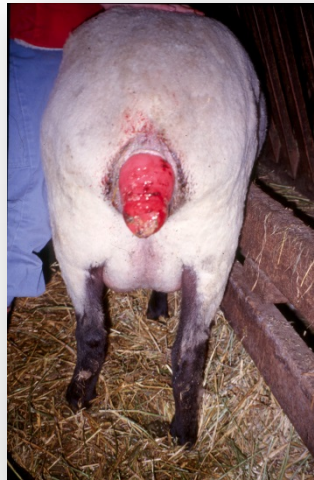
Taildocking



Complications



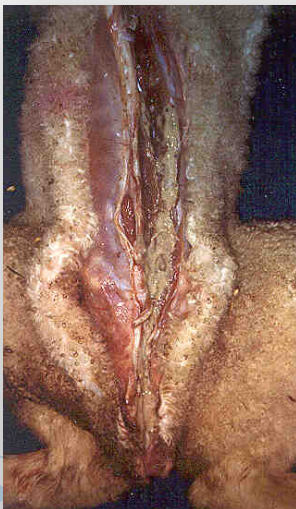
Clostridial infection of tail docking wound



Rectal prolapse from short-docking



Pain from ringing.



Tail-dock abscess from short-docking or dirty equipment. Causes damage to spinal cord and paralysis.



Dr. Snyder videos on using anaesthetics for tail docking and castration

https://drive.google.com/drive/folders/0B7V7dvE_Vj_RLVJyeDVXVZhZUHM



So where is the controversy?



- ▶ Approximately 1 year ago
- ▶ **MEMO TO ONTARIO SHEEP PRODUCERS REGARDING TAIL DOCKING**
- ▶ Over the past few months OSMA Board members had been fielding concerns around the length of tails of sheep at sheep shows and this, coupled with increasing public scrutiny around livestock production, led to the OSMA Board deciding that it had to ensure that OSMA's actions were in line with the best management practices that are being promoted.
- ▶ The result is that OSMA will no longer be supporting events or shows unless it can be assured that the animals in attendance will be compliant with the Codes of Practice in relation to tail docking. The timing for this decision falls in line with OSMA's new Fiscal Year and, as such, is effective immediately.

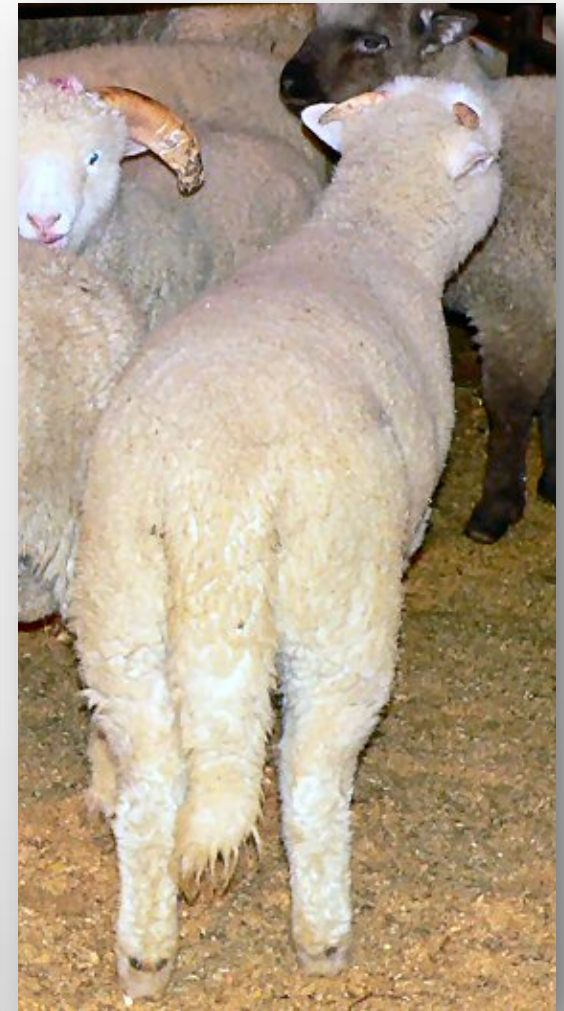
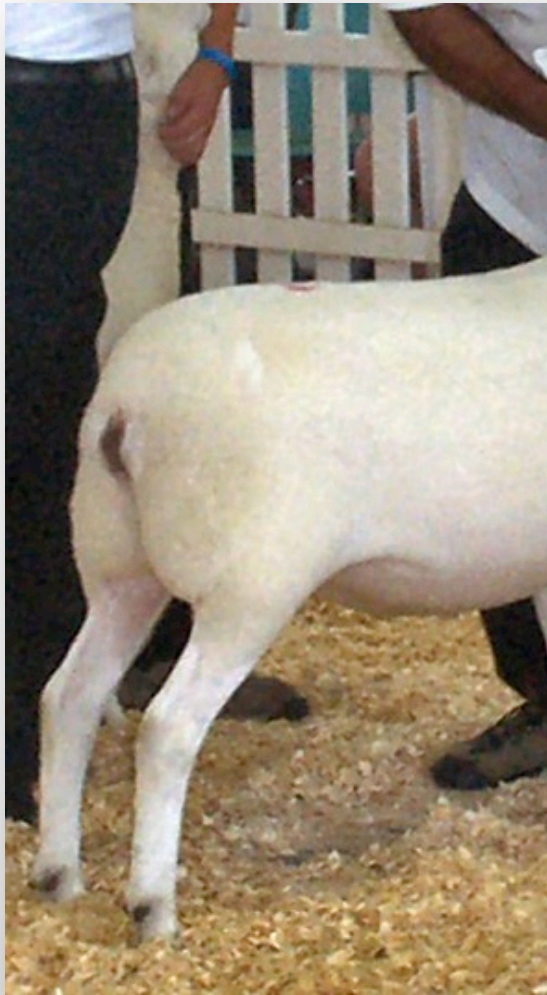


Outcry from many producers that show sheep

- ▶ Loss of “reliable” support of sheep shows
- ▶ Choice of
 - ▶ Not show sheep that currently don’t meet the standard or
 - ▶ Go without OSMA support including Royal Winter Fair
- ▶ Soft approach didn’t work in the past so OSMA felt it had to be firm
- ▶ Affected “show” producers attempted to change the minds of OSMA by insisting description doesn’t make sense
 - ▶ Below the tail fold
 - ▶ Cover the vulva
 - ▶ Can you be compliant with one and miss on the other?
- ▶ Decision was that wording is sufficiently clear – both!



Bigger question, do we need to dock at all?



What is the risk if we don't dock?

- ▶ Fly strike?
 - ▶ Docking doesn't guarantee no risk
 - ▶ Need more tools to manage fly strike
 - ▶ Carcass contamination from dirty wool?
 - ▶ Control diarrhea diseases – coccidiosis, internal parasites
 - ▶ Shear / crutch older lambs
 - ▶ Research to assess risk properly
 - ▶ Cleanliness of escutcheon in lambing ewes
 - ▶ Would shearing manage that risk
 - ▶ Opinion
 - ▶ Other countries have banned tail docking
 - ▶ We are going to be pushed to justify the practice
-



Transportation

- ▶ Think about where that animal is going, how long it takes to get there
- ▶ Is that animal fit to be shipped?



Fitness for Transport - Requirements

- ▶ Fit – able to withstand the stress of the intended journey without experiencing suffering
- ▶ Unfit – cannot be transported without undue suffering
 - ▶ Non-ambulatory (downers)
 - ▶ Animals with weakness or emaciation
 - ▶ Severe lameness
 - ▶ Pain aggravated by transport
- ▶ Euthanize!
 - ▶ Rather than ship



Lame & thin ewe at sales barn Emaciated ewe (left) at sales barn

Fit for Transport - Requirements

- ▶ Compromised Animal – reduced capacity to withstand stress of transportation
 - ▶ Injury, fatigue, infirmity, poor health, distress, very young, very old, impending birth, heavy lactation
 - ▶ Neonatal lambs unaccompanied by dam must be > 7 days
- ▶ If need to transport a compromised animal
 - ▶ Only locally and direct – no trip through the sales barn or collection yards – and to where can receive care and attention or be immediately slaughtered or euthanized
 - ▶ Last loaded and first unloaded
 - ▶ Segregated from all other animals or penned with one familiar animal – eye contact with other sheep
 - ▶ Additional bedding, protection from adverse weather
- ▶ Determining fitness for transport is responsibility of producer
- ▶ Transporters have legal right to refuse to transport an animal they deem is unfit



At the sales barn...



Facial infection



Kids at sales barn too young!



Goat suffocating from
CLA abscess



This ewe lambbed
at sales barn

Thin, depressed,
sick ewe



This ewe was sold at the sales barn this spring



Families watched with young children while we dealt with this ewe.
Not a very good image for the industry!



Determining fitness for transport - Recommendations

- ▶ ID and document animals with infirmity, e.g. treatment given
- ▶ Animals should not be shipped in advanced disease states
- ▶ Ship only healthy animals to sales barns, breeding stock sales
 - ▶ Avoid shipping animals with infectious conditions
 - ▶ E.g. seropositive on maedi visna test – what should be done?
- ▶ Consider that animals may travel through multiple stops and yards before reaching slaughter plant or final destination



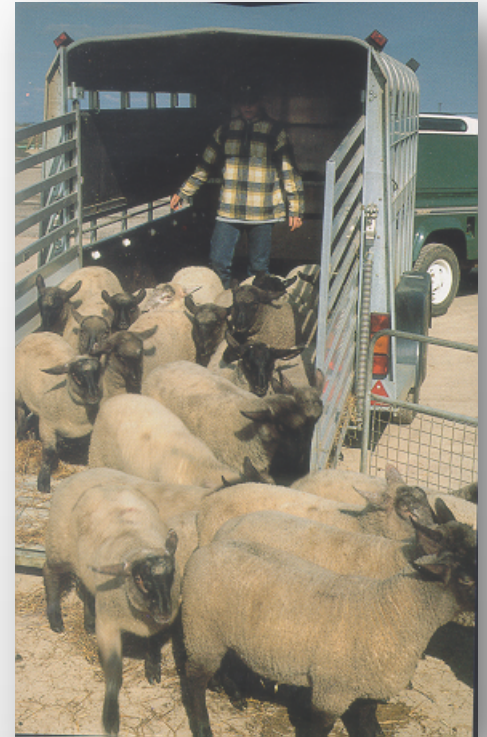
Arranging transport

► Requirements

- Producers must be familiar with federal and provincial transport regulations
- Producers must ensure a competent stockperson oversees loading and unloading

► Recommendations

- Select reputable transporters
- Train staff to load / unload
- Loading facilities must match transport vehicle
 - E.g. sides match tightly to truck and gates to prevent escapes
- Paper work complete



Preparing Sheep for Transport - Required

- ▶ Fed in 5 h period before loading unless confinement in vehicle < 24 h
- ▶ Access to water until loading
- ▶ Lactating dairy ewes milked-out prior to loading
- ▶ Lactating ewes shipped without lambs dried off prior to shipping
- ▶ CSIP tags must be in the ear and readable!



Loading and Unloading

▶ Requirements of producers

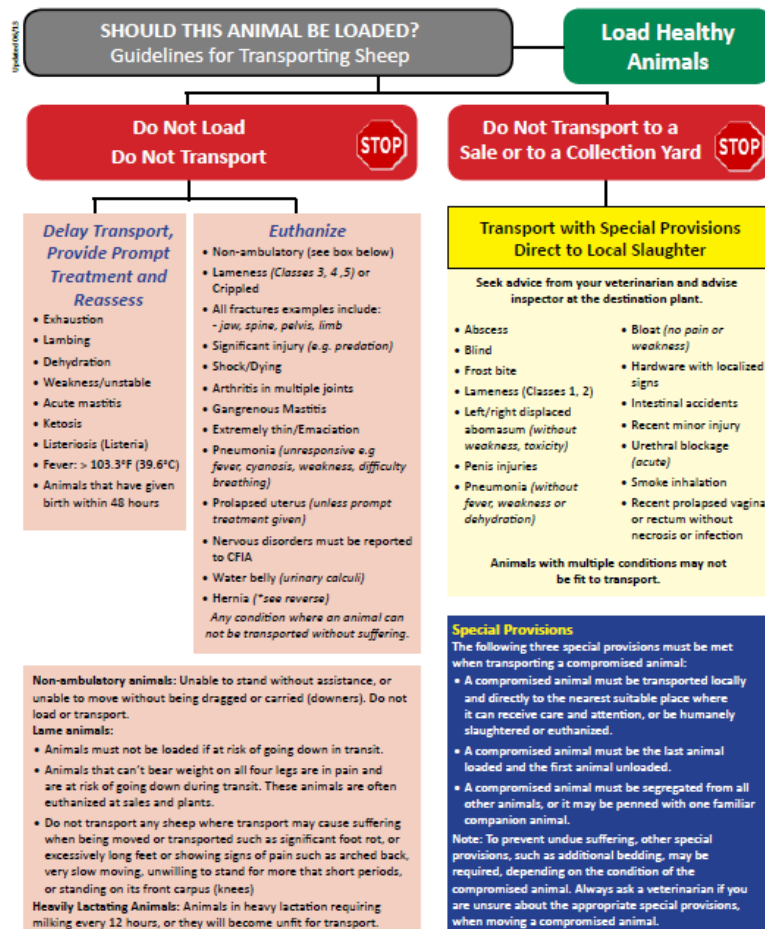
- ▶ Federal regulations – Health of Animals Act for ramps
 - ▶ Not have a slope > 45 degrees; in good repair; sides to prevent falling off; no gap between ramp and vehicle; safe and secure footholds
- ▶ Never grab wool (muzzle dogs)
- ▶ Never use electric prods
- ▶ Trucks in good repair, bedded and clean
- ▶ Do animals require immediate feed & water after unloading?

▶ Recommendations

- ▶ Uniformly lit – light in the trailer
- ▶ Move sheep in groups appropriately sized, at a reasonable pace
- ▶ Calm and quiet
- ▶ Loading densities should reflect weather conditions



Guidelines for Dealing with Compromised Sheep



Guidelines for Dealing with Compromised Sheep (continued)

Guidelines for Dealing with Compromised Sheep

Federal Transportation Regulations (2012)
Health of Animals Regulations www.inspection.gc.ca

DO

- Segregate animals of different species, or substantially different weights and ages, or if incompatible by nature.
- Provide proper ventilation, drainage and absorption of urine.
- Have sufficient headroom for animals to stand in a natural position.
- Spread sand in the vehicle or have vehicle fitted with safe footholds, in addition to appropriate bedding.
- Ensure that animals unloaded for feed, water and rest remain at least five hours and longer if five hours is not enough, for all animals to receive food and water.
- Ensure that animals segregated in trucks receive extra protection from cold and wind chill; supply ample bedding.
- Euthanize animals promptly when you identify conditions outlined in the "Should this Animal be Loaded?" chart.

DO NOT

- Transport a sick or injured animal where undue suffering may result.
- Transport when the animal is liable to give birth during the journey, unless under the advice of a veterinarian for medical care.
- Continue to transport an animal that is injured, becomes ill, or is otherwise unfit to travel beyond the nearest place it can be treated.
- Use electric prods or goads on sheep
- Load or unload animals in a way that would cause injury or undue suffering.
- Crowd animals to such an extent as to cause injury or undue suffering.
- Transport livestock in trailers unless they are suited for safe handling of that species or class of livestock.

Source: Transporting Livestock by Truck (CFIA)

** this document adopted from Guidelines for Dealing with Compromised Cattle, Sheep and Goats version 05.10

Lameness Classes

These categories can be used to determine the status of an animal's mobility, from normal to non-ambulatory.

Transport as soon as possible

Class 1

Visibly lame but can keep up with the group; no evidence of pain.

Class 2

Unable to keep up; some difficulty climbing ramps. Load in rear compartment.

Do not Load or Transport*

Class 3

Requires assistance to rise, but can walk freely.

Class 4

Requires assistance to rise; reluctant to walk; halted movement.

Class 5

Unable to rise or remain standing.

* Any animal, including Lameness Classes 3, 4, or 5 may only be transported for veterinary treatment, on the advice of a veterinarian.

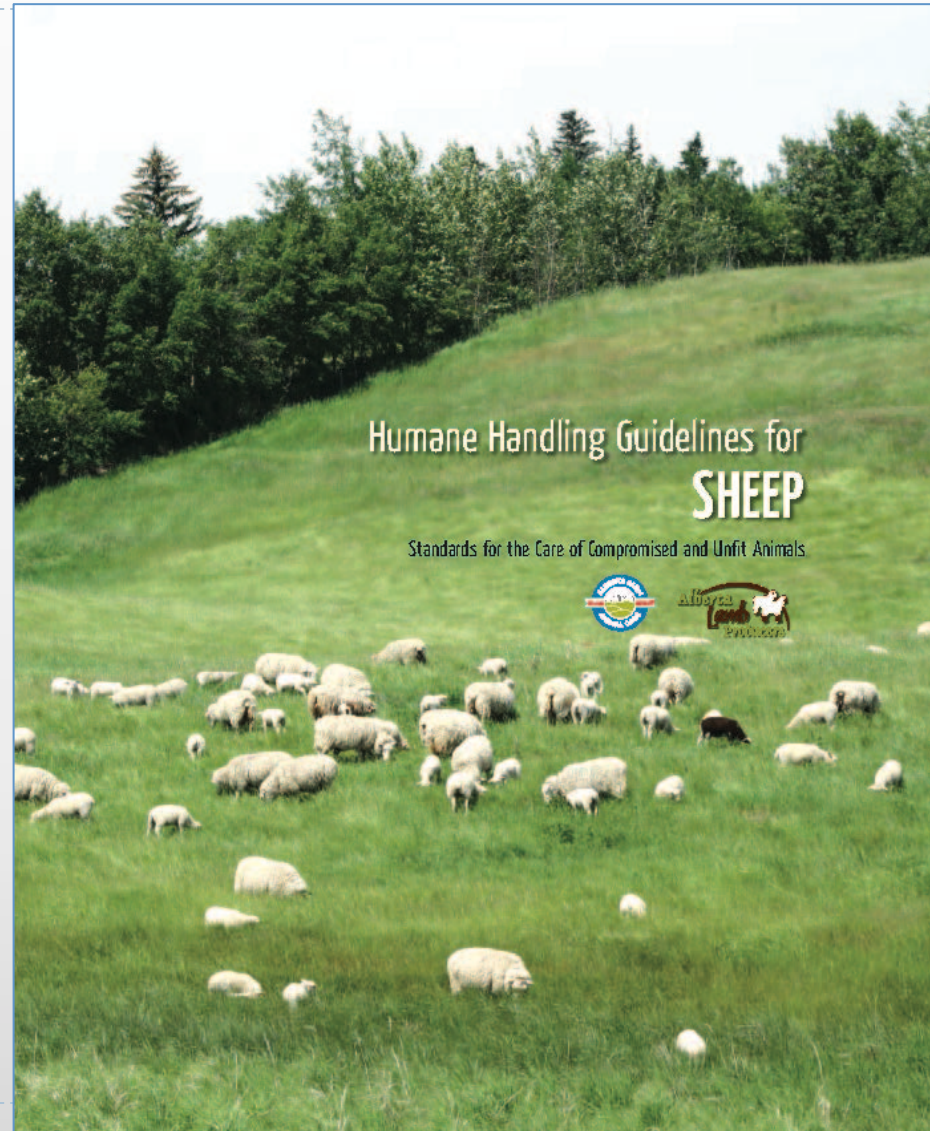
**CFIA Livestock
Emergency
Transport Line
1-877-814-2342
(Ontario only)**

Hernias:

Do not transport an animal that has a hernia that meets one or more of the following criteria:

- impedes movement (includes conditions in which the hind legs of the animal touches the hernia when the animal is walking)
- is painful on palpation
- touches the ground when the animal is standing in its natural position, and/or includes an open skin wound, ulceration, or obvious infection.

Alberta province has produced a handbook to assist understanding of decision tree



SWOLLEN JOINTS (POSSIBLE ARTHRITIS)

Checkpoints:

- ♦ Multiple joints affected and/or the animal is in poor condition overall or is reluctant to stand.

Management Options:

- ♦ Do not transport – euthanize.



Other Conditions

TOO THIN (BODY CONDITION SCORE OF LESS THAN 2 OUT OF 5)

Checkpoints:

- ♦ Body condition scoring (BCS) is a tool for determining if an animal is too thin (BCS of less than 2 out of 5), too fat (BCS greater than 4 out of 5), or in ideal condition. Monitor body condition of each animal – identify animals that are losing condition early so they can be culled early or treated promptly.
- ♦ Animals that are too thin may also be weak or show other signs of illness.

Management Options:

- ♦ BCS 2 – Thin, little fat cover.
- ♦ Transport with special provisions direct to local slaughter (not to a sale or collection yard).
- ♦ BCS 1 – Emaciated, no fat cover, boney processes can be easily felt.
- ♦ Do not transport – euthanize.



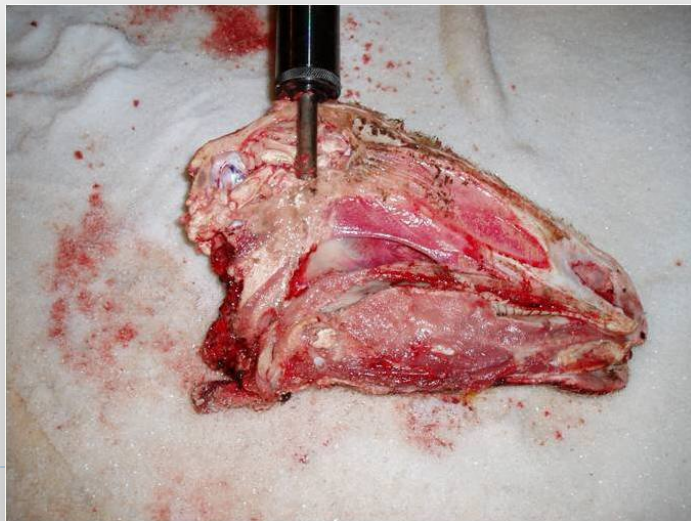
Euthanasia

- ▶ Every farm needs a protocol for decisions about euthanasia
 - ▶ Who is going to do it
 - ▶ How are they going to do it
 - ▶ When should a sheep / lamb be euthanized?



Euthanasia Decisions - Requirements

- ▶ Sheep must be euthanized without delay if experiencing pain or distress and no reasonable expectation of recovery
- ▶ Written euthanasia plan for each phase of production
- ▶ If not familiar with how to euthanize, consult veterinarian
- ▶ Need to know when and how and who

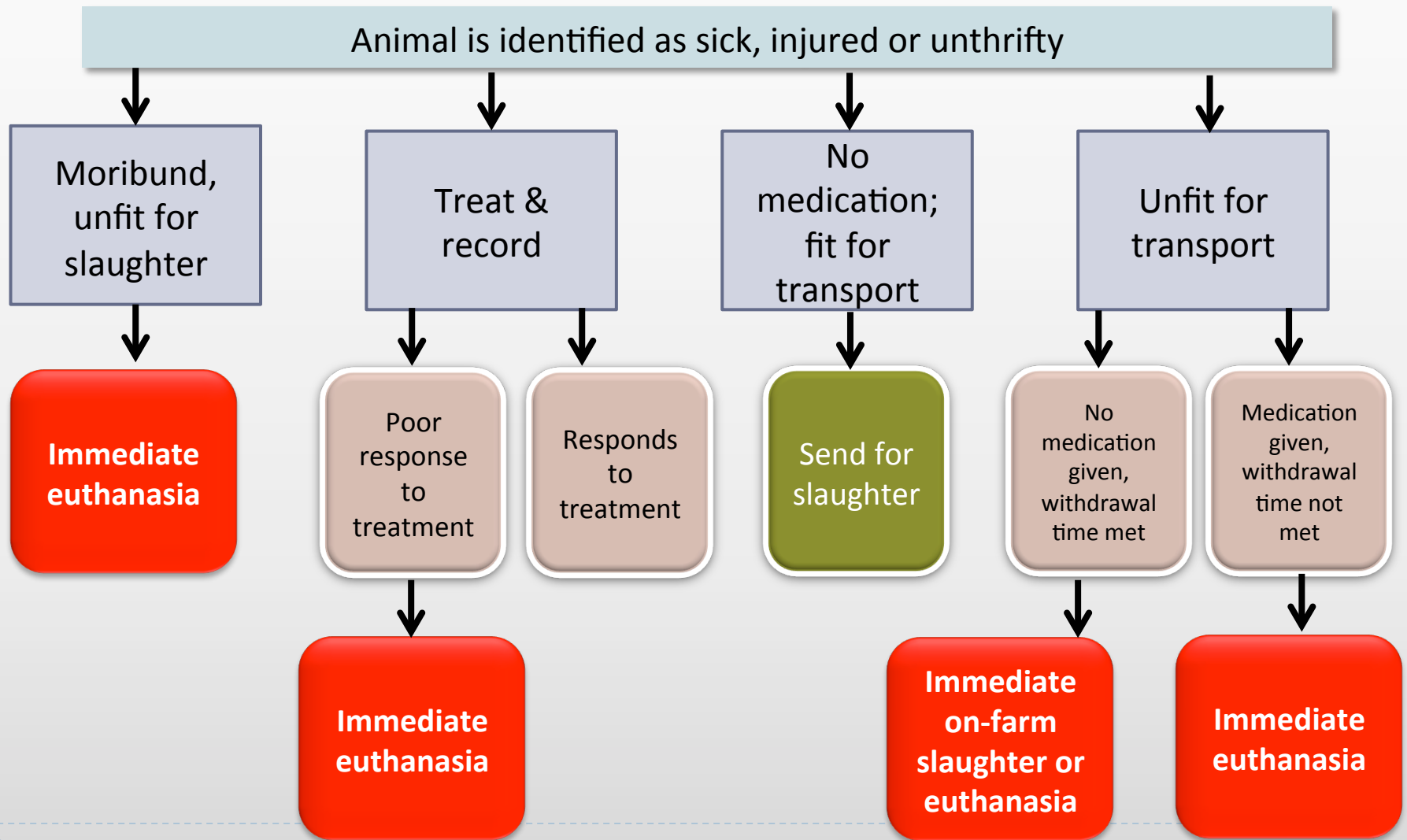


Captive bolt to the brain.
Must be followed by secondary
method to stop the heart.
e.g. exsanguination, pithing,
intravenous potassium chloride

Captive Bolt using Cash Gun



Decision Tree for Euthanasia - Example



Euthanasia Methods

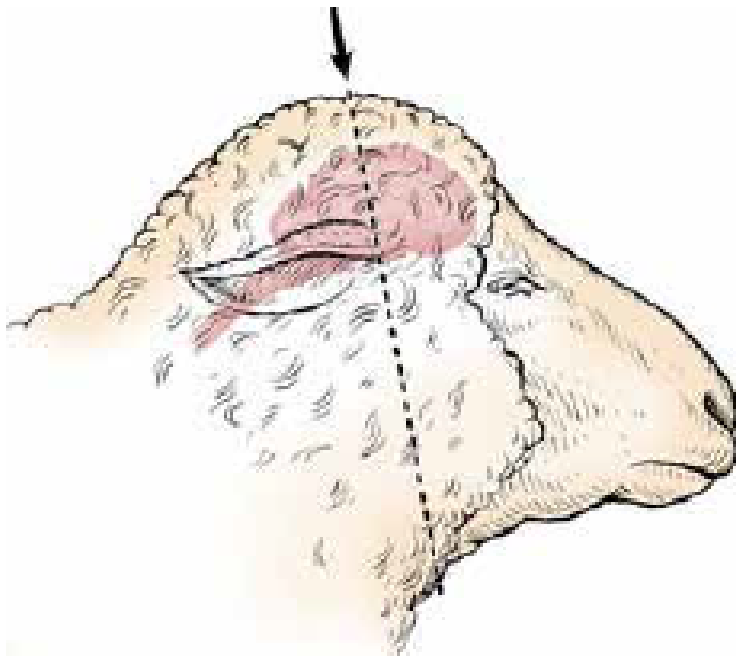
Method	Suitable For	Procedure and Equipment
Firearm	All animals	Minimum .22 caliber ...
Penetrating captive bolt followed by secondary method	All animals	Use appropriate cartridge, charge...
Non-penetrating captive bolt gun	Lambs < 15 kg (33 lb.)	Confirm insensibility and then bleed out
IV Barbituate	All animals	Only by vet, carcass is toxic
Blunt force trauma followed by bleed-out	Neonatal lambs up to 5 d and < 9 kg (20 lb.)	Strong blow to top or back of head. Confirm skull is crushed. Confirm insensibility and then bleed out



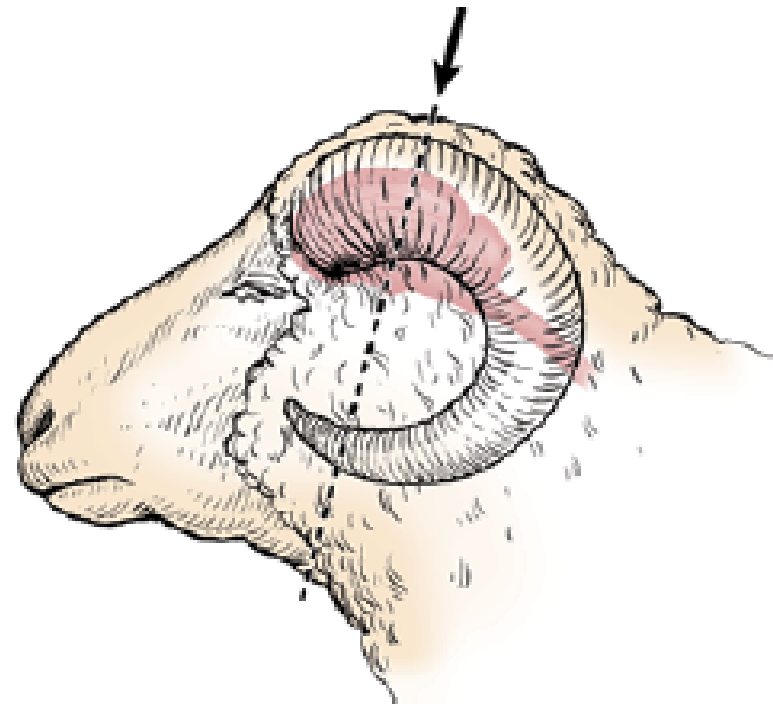
Anatomy is important to assure method works

Location of the brain within the skull of a mature sheep and the correct placement and direction of shot or captive bolt penetration for polled and horned sheep.

Not Between the Eyes!
— but slightly behind the poll or
on the top of the head



Proper site in horned sheep is
behind the poll as shown



Euthanasia Methods - Requirements

▶ Requirements

- ▶ An acceptable method must be used
- ▶ Must be quick, cause minimal stress, pain and result in rapid loss of consciousness followed by death without the animal regaining consciousness
- ▶ Every farm must have the ability to euthanize animals and training and tools
- ▶ Do not move sheep prior to euthanasia (drag, prod, force)

▶ Confirm death – requirements

- ▶ If indication of returning consciousness, repeat euthanasia procedure
- ▶ Monitor until death – no respiration, heartbeat, dilated unreactive pupils
- ▶ Confirm death before moving
- ▶ Dispose of carcasses according to provincial/municipal regulations



Dr. Gosia Zobel: Kid (lamb) euthanasia

- ▶ Manually applied blunt force trauma (BFT) = common method of euthanasia for sick or excess goat kids
- ▶ Not well received by farm operators or industry and may vary in effectiveness, **resulting in a call for a more standardised controlled method of BFT**
- ▶ **Controlled BFT delivers an appropriate and uniform amount of force** each time it is applied and brain injury is more consistent (AVMA, 2013)

American Veterinary Medical Association (AVMA) Guidelines for the Euthanasia of Animals: 2013 Edition

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Slides care: Dr. Mhairi Sutherland

Kid euthanasia

- ▶ **Other species:** several devices for applying controlled BFT are commercially available
- ▶ **Goat kids:** no commercially available euthanasia devices
- ▶ A non-penetrating captive bolt was found to be effective for euthanizing pigs less than 3 days of age (Casey-Trott *et al.*, 2013)

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Slides care: Dr. Mhairi Sutherland

Evaluated the effectiveness of a compressed gas powered non-penetrating captive bolt

Euthanized goat kids within 48 hours of life



TED, BOCK Industries, Inc., Philipsburg, PA, USA

Dr. Gosia Zobel



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Slides care: Dr. Mhairi Sutherland

Captive bolt placement – back of head, between ears



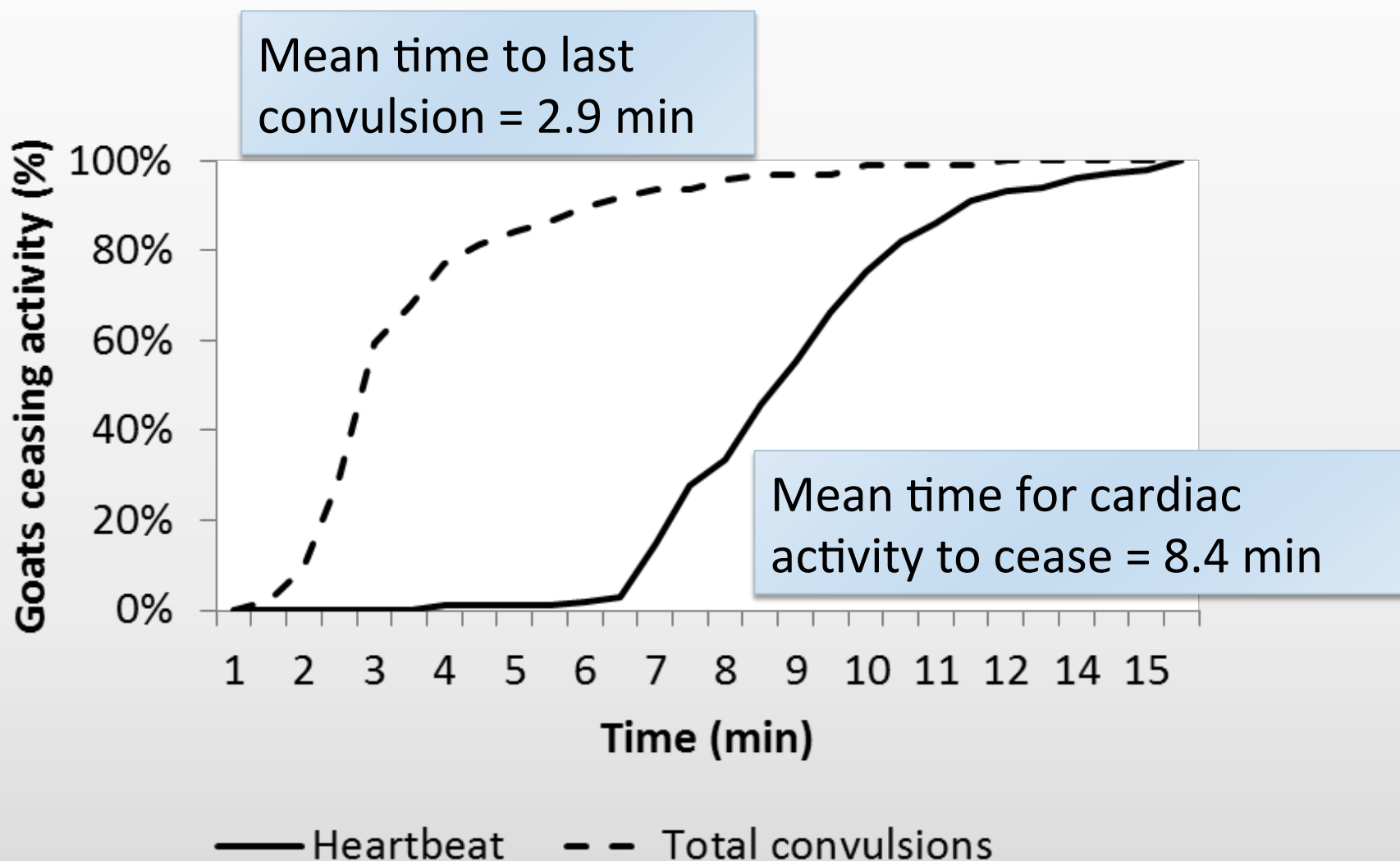
Slides care: Dr. Gosia Zobel
Dr. Mhairi Sutherland



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All goat kids were rendered immediately insensible



Never let an animal die in pain and distress



Summary

- ▶ Every producer wants to take good care of their livestock
- ▶ This code, written by and for producers gives valuable information on how to best do that
- ▶ Nothing controversial about that!

