

Teaching Stunning and Sensibility to Employees and Management (Pork)

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Definitions

What is stunning?

- The act or method of rendering an animal unconscious and unable to feel pain
- Death may or may not occur after stunning is complete

What is insensibility?

- The state of being unconscious and unable to feel pain
- Death ≠ Insensibility
- Must have a proper, effective stun to achieve insensibility
- Federal regulations mandate insensibility be achieved on first attempt
- Insensibility exists on a scale of consciousness to unconsciousness (Terlouw, 2016)

Proper stunning and insensibility are CRITICAL in order to humanely euthanize an animal.

Types of stunning - Pork



Captive Bolt – concussive force + permanent physical damage to brain

CO2 – absorption of CO2 causes death of brain cells

Electrical

- Head – Grand mal seizure
- Heart – Cardiac arrest



Gunshot (smaller plants) – permanent physical damage to brain



What could go wrong??

	Captive Bolt	CO2	Electrical	Gunshot
Equipment failure	X	X	X	X
Incorrect placement	X		X	X
Improper/lack of restraint	X		X	X
Poor contact	X		X	X
Human error	X	X	X	X
Animal factor	X	X	X	X

Thorough **training** helps eliminate or minimize things that could go wrong.

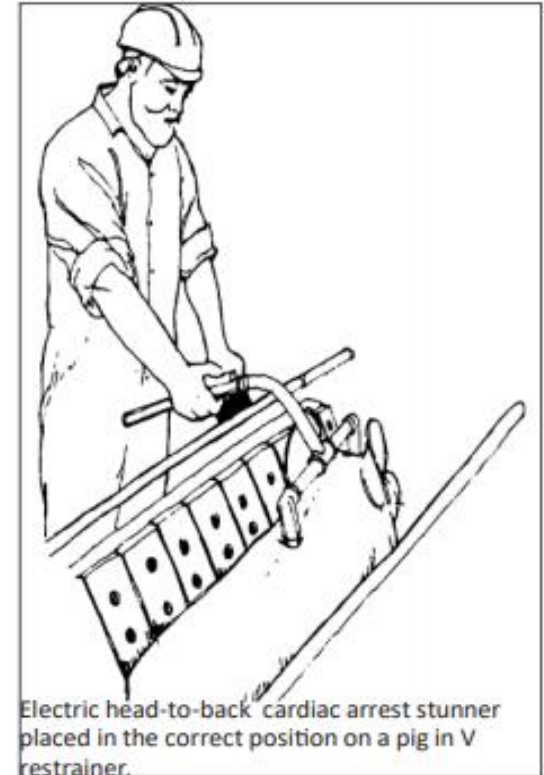
Who should be trained?

Stunning

- Employees responsible for stunning animals
- Management that directly oversees animal handling areas
- Maintenance responsible for servicing stunning equipment

Insensibility

- At minimum
 - Employees responsible for stunning
 - Management in animal handling areas
 - Shacklers
 - Stickers
- Ideally
 - All employees and management in animal handling areas



What should stunning training include?

	Stunners	Managers	Maintenance	Animal Handlers
Equipment	X	X	X	
Correct placement	X	X		
Proper restraint	X	X		X
Good contact	X	X		
Human error	X	X		
Animal factor	X	X		
Employee safety	X	X	X	X

What should insensibility training include?

	Stunners	Managers	Animal Handlers
Signs of properly stunned animal	X	X	X
Signs of returning to consciousness	X	X	X
Signs of fully sensible animal	X	X	X
How to handle a sensible animal	X	X	X

Spectrum of sensibility

Assessing Unconsciousness in Livestock During Slaughter		
Definitely Unconscious: ALL of the following signs are ABSENT	Unconscious But Beginning Transition Back to Consciousness: ONE OR MORE of the following signs are PRESENT	Definitely Conscious: ANY of the following signs are PRESENT
<ul style="list-style-type: none"> • Menace reflex that occurs when a hand is waved in front of the eye without touching • Eyelash reflex in response to touch • Corneal reflex* • Rhythmic breathing where the ribs move in and out at least twice 	<ul style="list-style-type: none"> • Eyelash reflex in response to touch • Rhythmic breathing where the ribs move in and out at least twice • Corneal reflex* 	<ul style="list-style-type: none"> • No loss of posture/animal standing • Righting reflex on the rail • Vocalization • Spontaneous, unprovoked blinking • Menace reflex that occurs when a hand is waved in front of the eye without touching • Eye pursuit of a moving object
Unconscious: No Action Needed	Unconscious: Re-stun Immediately	Conscious: Re-stun Immediately
<p><i>*For cattle, a finger may be used to test the corneal reflex. Because pigs and sheep have small eyes, a small blunt object like a pencil eraser or something similar may be used.</i></p>		

Effective methods of training

Classroom training

- In person training (i.e. powerpoint presentation, worksheet, video, etc.)
- May be one-on-one or as a group
- Test

Hands on

- Need to physically demonstrate how to use the gun
- Training may be done in phases
 - 1- Trainee observes trainer perform stunning
 - 2- Trainee practices on deceased animal under trainer supervision
 - 3- Trainee performs stunning on live animal(s) under trainer supervision
- Test or validation that trainee is ready to be fully certified

Need documentation of all steps of training for records.



Documentation of training

Training documentation may contain...

- Date of training
- Trainee name/signature
- Trainer name/ signature
- Translator name/signature (if needed)
- Topic(s) of training
- How long the certification is good for
- Acknowledgment statement that trainee understands what to do and what the consequences are of any misconduct



What do you think?



Is every employee capable of being a good, reliable stunner?

If someone requests an employee be trained to stun but you don't believe they are reliable, should you train them anyways?

If you start the training and realize they are struggling and not likely to improve, should you complete the training anyways?

What if someone is already certified but conducts themselves irresponsibly? Can their certification be revoked?

On-going process monitoring

Periodic monitoring/auditing of certified stunners

Recertification process to refresh/update techniques and policies

Equipment maintenance

- Cleaning (captive bolt, electrical stunning wands, fire arm)
- Calibration (CO2)
- Preventative maintenance

Validation of stunning equipment

- Chronograph
- Electrical stun box tester

Stun #	Time of Stun	Index	Stunner	Current	Voltage	Stun Time	Error Flags
13	8:37:37 PM	13	ALINE	1.45	244	1.8	
12	8:37:31 PM	12	ALINE	1.55	252	1.8	
11	8:37:26 PM	11	ALINE	1.54	222	1.8	
10	8:37:20 PM	10	ALINE	1.53	253	1.8	
9	8:37:14 PM	9	ALINE	1.50	244	1.8	
8	8:37:09 PM	8	ALINE	1.52	251	1.8	-- Early Stun
7	8:37:02 PM	7	ALINE	1.53	223	1.8	
6	8:36:57 PM	6	ALINE	1.55	248	1.8	
5	8:36:51 PM	5	ALINE	0.90	204	1.8	-- Labeled Prod
4	8:36:45 PM	4	ALINE	1.52	224	1.8	
3	8:36:39 PM	3	ALINE	1.54	231	1.8	
2	8:36:34 PM	2	ALINE	1.54	250	1.8	



Training resources

NAMI Slaughter Plant Guidelines and Audit

- <http://animalhandling.org>

NAMI's Animal Handling & Stunning video for packers

- <https://members.meatinstitute.org/apps/#Store>

AVMA Guidelines for Humane Slaughter

- <https://www.avma.org/KB/Resources/Reference/AnimalWelfare/Documents/Humane-Slaughter-Guidelines.pdf>

Stunner maintenance pamphlet

- Proper use, preventative maintenance, and repair

Veterinary Simulator Industries

- <https://vetsimulators.com/products/captive-bolt-gun-training-models/>

