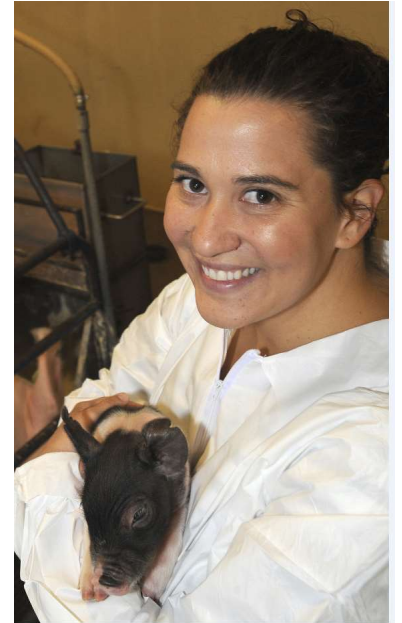




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Advancements in Swine Welfare

Monique D. Pairis-Garcia

The Ohio State University, Department of Animal
Science

614-688-1968

Pairis-Garcia.1@osu.edu



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AND ENVIRONMENTAL SCIENCES

Education

BS Biology:

Grinnell College, 2007

DVM cum Laude:

Iowa State University, 2011

PhD Animal Physiology:

Iowa State University, 2014

Diplomate:

**American College of Animal
Welfare, 2018**





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Experience

Current Position; 2014-current
Assistant Professor

- ***Animal Welfare and Behavior***

- **Animal Science Department**
65% Extension
35% Teaching





Who cares about swine welfare?

Consumers

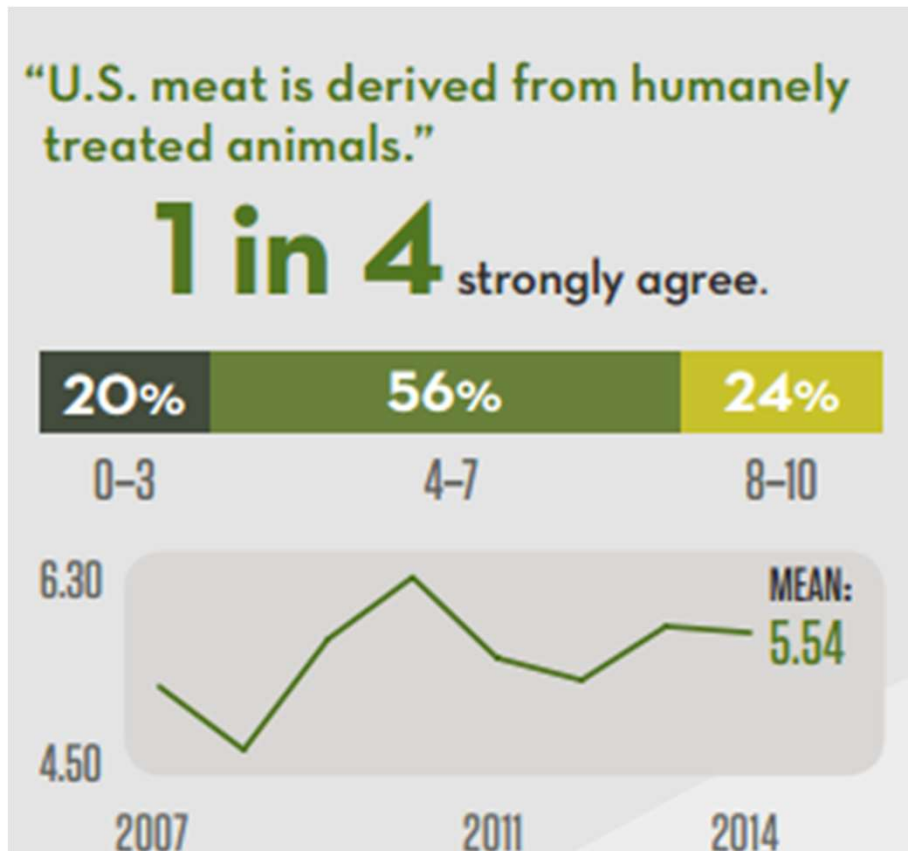
Market

Producers



Social license

The privilege of operation with minimal formalized restrictions (legislation, regulation, or market requirements) based on maintaining public trust by doing what's right





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Dear Grocer:

As a frequent shopper in your store, I want to be able to purchase products that are **Certified Humane Raised and Handled®**. I know that products with this specific certification come from animals that were raised with strict humane standards from birth through the slaughter process.

The nation's leading humane organizations back the **Certified Humane®** program and *USAToday* called **Certified Humane®** a gold standard.

This is a label that I trust and I would like to purchase these products in your store. I ask that you start selling products that are **Certified Humane®**.

Sincerely,

*For more information on meeting the growing demand for products that are **Certified Humane®**, please visit:*



www.CertifiedHumane.org

...or call Humane Farm Animal Care, the nonprofit organization that oversees the program, at (703) 435-3883.

Consumer action





Market

Food Company Policies on Gestation Crates

Below is a list of the 60+ major food companies with policies to eliminate gestation crates, followed by quotes from each regarding their policy.

Companies with Gestation Crate Elimination Policies				
McDonald's	DineEquity (IHOP & Applebee's)	Chipotle	Campbell Soup	Atlantic Premium
Wendy's	Costco	Sysco	Bon Appétit	Williams Sausage
Walmart	Ahold	Burger King	Subway	Denny's
Johnsonville Sausage	Smithfield (world's largest pork producer)	Kraft Foods (Oscar Mayer)	Quiznos	Harris Teeter
Au Bon Pain	Cracker Barrel	Compass Group	Einstein Noah Restaurant Group	Kmart
Roundy's	Hormel Foods (leading pork producer)	Target Corp.	Carnival Cruise Lines	TrustHouse
Dunkin' Brands	Maple Leaf (top Canadian pork producer)	Jack in the Box/Qdoba	Brinker (Chili's, Romano's, Maggiano's)	Whole Foods
Sonic Drive-In	Kroger	ConAgra Foods	Wienerschnitzel	Heinz
Arby's	Safeway	Carl's Jr./Hardee's	Hillshire Brands (Jimmy Dean, Ballpark)	Bruegger's Bagels
General Mills	Supervalu	The Cheesecake Factory	Royal Caribbean Cruise Lines	Baja Fresh
ARAMARK	Sodexo	Wolfgang Puck	Tim Hortons	Bob Evans Farms
TGI Friday's	Olymel (top Canadian pork producer)	Metz Culinary	Retail Council of Canada (Walmart, Safeway, Loblaws, Metro, Costco, Metro)	





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Producer

- Steward of land and animals
- Make a profit
- Aware of changes of consumer and political climate





Translating animal welfare science to the farm

- Assessments and audits
- Timely euthanasia
- Pain management



Assessments and audits

Voluntary
programs

Audited
standards

Legislation

Social License

Regulation



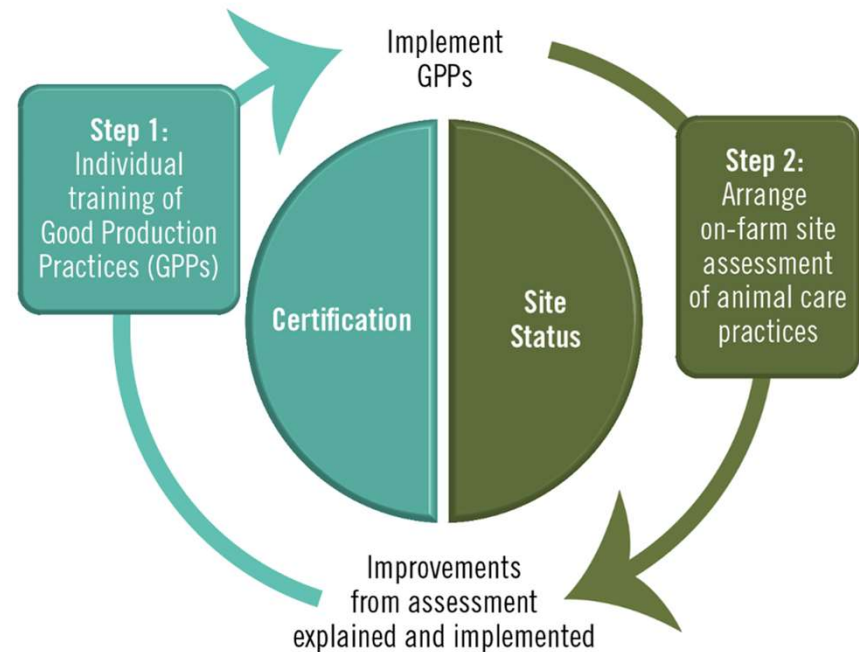
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Voluntary
programs

Program Goal: Continuous Improvement



Social license

Regulation

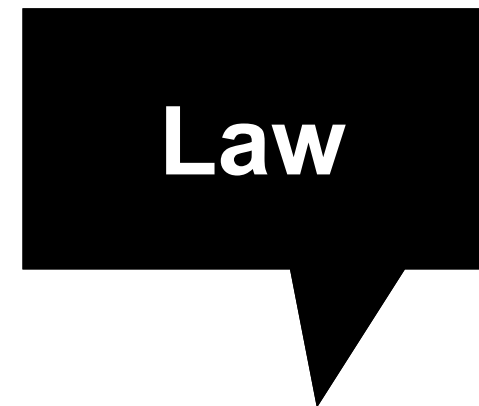


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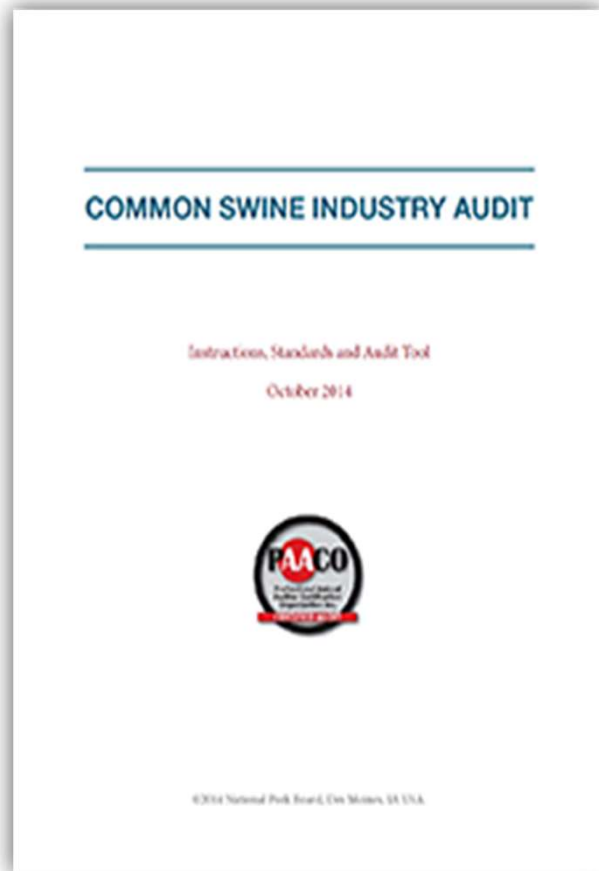


Bedre Dyrevelfærd



Social License

Regulation



Assess and score
key measurements
based on set
requirements by
the packer

Audits

Social License

Regulation



What measures are recorded?

27 key aspects of swine care and pre-harvest food safety

Focus areas:

- **Critical Criteria**
- **Animals (50%)**
- **Caretakers**
- **Records/Documentation**
- **Facilities**
- **Transportation**
- **Pre-harvest food safety**



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Impact to the industry?



Farm	CSIA Audit Total Scores		
	July, 2016	January, 2017	March, 2018
A	79.4%	80.7%	95%
B	84.7%	93.7%	94.9%
C	73.7%	93%	92.6%
D	74.9%	81%	93.4%
E	75.8%	88.3%	95.6%
F	79.8%	92.8%	95.7%



Animal based measures

Measure	A	B	C	D	E	F
Space (90%)	93.9%	97.5%	97.9%	99.6%	100%	99.6%
BCS 1 (1%)	0.00%	0.35%	1.06%	1.43%	0.40%	0.36%
Lameness (2%)	0.00%	0.00%	0.70%	0.36%	0.00%	0.36%
Abscesses (5%)	0.34%	1.06%	1.06%	0.36%	1.20%	0.72%
Deep Wounds (1%)	2.38%	5.63%	4.93%	1.43%	6.43%	1.80%
Scratches (10%)	0.00%	3.52%	0.35%	0.00%	0.80%	1.08%
Shoulder Sores (5%)	4.42%	3.52%	4.93%	2.87%	4.02%	2.16%
Tail Biting (5%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Prolapses (1%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Vulva Injuries (5%)	1.02%	2.46%	0.70%	0.00%	0.00%	0.72%



Timely euthanasia

Critical failure

Humane Euthanasia

Audit Questions: #2-5

This topic is critical to assuring good animal well-being and is an area for automatic failure.

Objective: Animals are euthanized in a timely manner, which is defined as:

- Animals that have no prospect for improvement or not responding to care and treatment after two days of intensive care must be humanely euthanized unless otherwise recommended by a veterinarian. The caretaker's past experiences with similar conditions should be used to make informed decisions about the likelihood of recovery.
- Severely injured or non-ambulatory pigs with the inability to recover are euthanized immediately.
 - An animal is considered non-ambulatory if it cannot get up or if it can stand with support but is unable to bear weight on two of its legs.
- Any animal that is non-ambulatory with a body condition score of 1 must be euthanized immediately.
- Pigs with hernias that are perforated must be euthanized. Pigs with hernias that are ulcerated and necrotic must be euthanized. Pigs with large hernias that touch the ground while standing and cause difficulty walking and are ulcerated must be euthanized.
- Any pig with an untreated prolapse that has become necrotic must be euthanized. Uterine prolapses must be euthanized immediately.



Timely Euthanasia

- Welfare ~ Quality of animal care, including at time of death
- Goal: Use euthanasia as a tool to **eliminate** pain and suffering when recovery is prolonged or not likely¹



¹AVMA, 2013



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Euthanasia equipment





Goals

Study 1

Develop a suitable adult learning-style training program related to on-farm euthanasia

Study 2

Utilize expert opinion to identify swine euthanasia criteria and barriers to euthanasia

Study 1



Study 2





Materials and Methods

- Two moderated focus groups
 - n = 9 participants in each
- Members of the U.S. National Pork Board *Animal Welfare* Committee



Focus Group Questions

1. What types of decision-making tools are currently used on farms to assist in deciding when to euthanize a pig, and how are they used?
2. What factors are considered and how are decision-making tools developed by individual farms?
3. What is the biggest factor for why euthanasia would be delayed or not performed on your farm or farms you have visited?
4. Would a standardized decision-making tool be positive or negative for the U.S. swine industry?
5. What types of euthanasia-specific training should be provided? How often should euthanasia-specific training be provided?
6. What characteristics of a decision-making tool maximize the ease of use and acceptability of the tool on farm?



Focus Group Questions

1. What types of decision-making tools are currently used on farms to assist in deciding when to euthanize a pig, and how are they used?

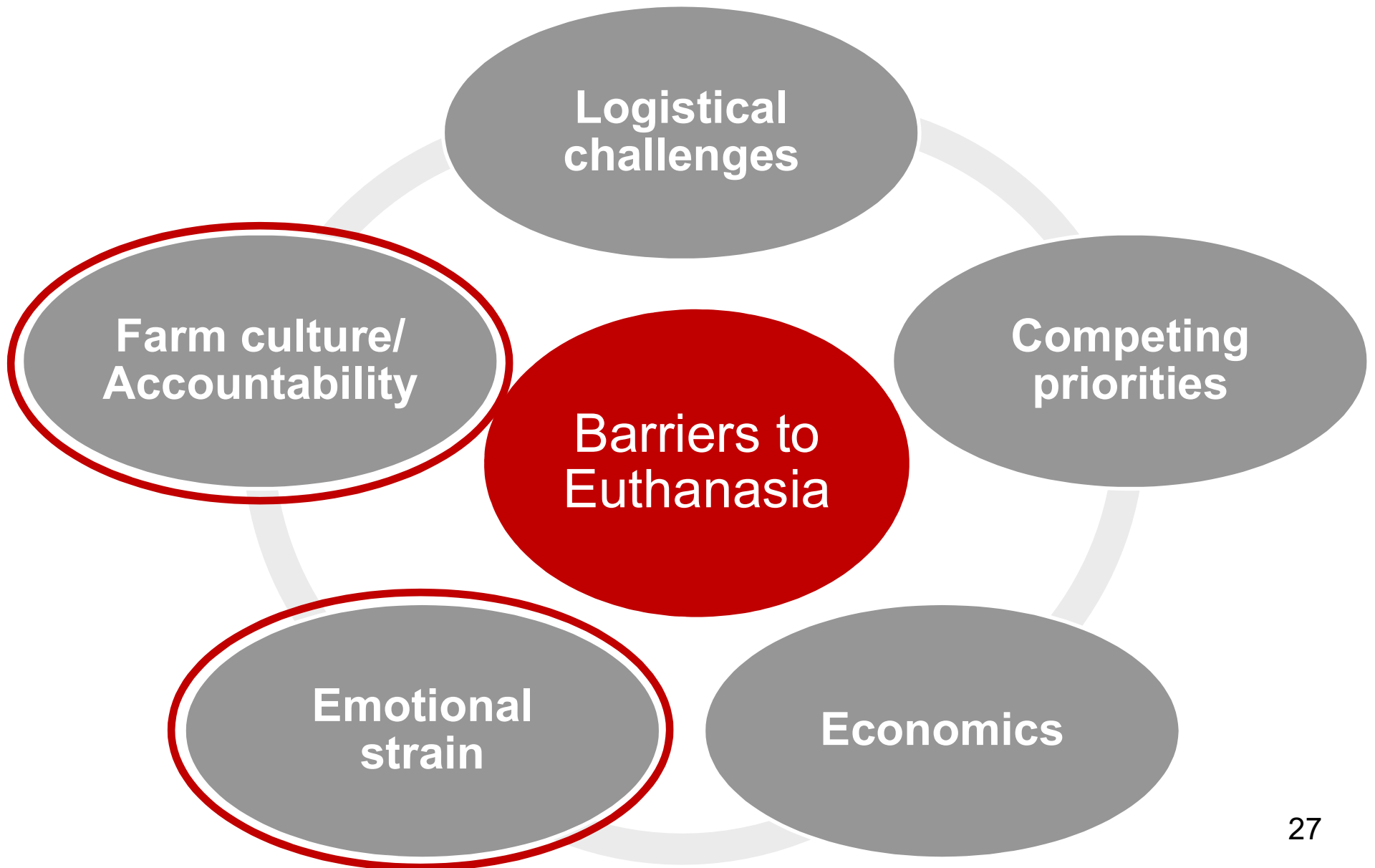
2. What factors are considered and how are decision-making tools developed by individual farms?

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4. Would a standardized decision-making tool be positive or negative for the U.S. swine industry?

5. What types of euthanasia-specific training should be provided? How often should euthanasia-specific training be provided?

6. What characteristics of a decision-making tool maximize the ease of use and acceptability of the tool on farm?





**Emotional
strain**

Sense of failure

Desire to save all
pigs



“Your job is to keep pigs alive and care for them well. The end-of-life decision is not one that really flows well with that mentality. So you’re asking people to [...] essentially say, ‘I failed.’”

- G2, producer



Farm culture and Accountability

Community
discipline

Maintaining a high
standard



“[Euthanasia] is a highly dispersed decision occurring millions of times a day across our swine farms, and it really needs a community sense of discipline with each other to keep on doing it correctly.”

- G1, academia veterinarian



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Pain management for castration



Why Castrate?

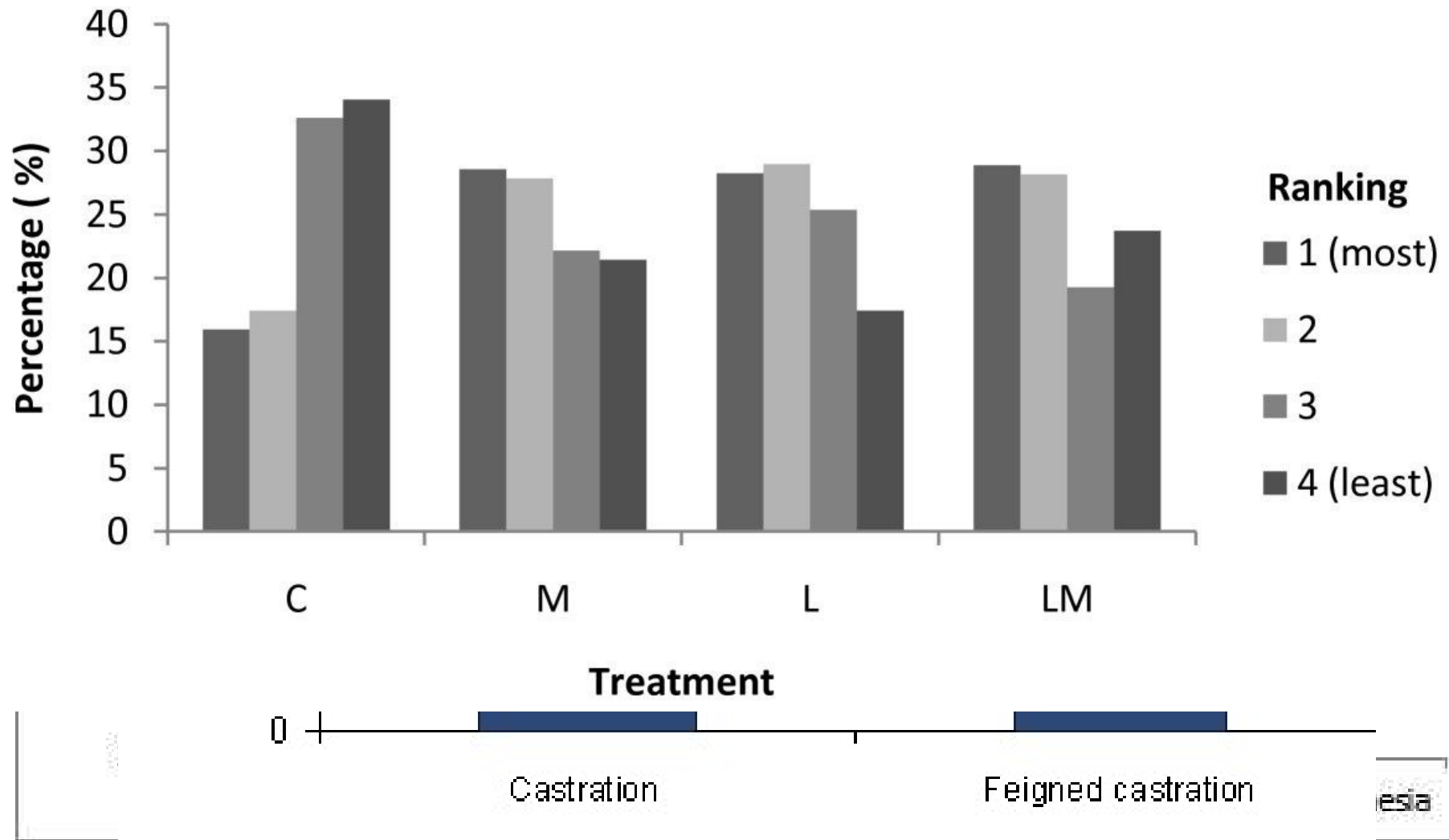
Prevent:

- Unwanted breeding
- Aggressive behaviors
- Boar taint



Slide 33

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Industry expectations



1 Increasing the number of third party sow farm audits conducted through our FarmCheck™ program

2 Urging hog producers to use video monitoring in their sow farms to increase oversight and decrease biosecurity risks

3 Encouraging hog producers to stop using manual blunt force as a primary method of euthanizing sick or injured piglets

4-Supporting the use of pain mitigation (such as anesthetic or analgesic) for tail docking and castration of piglets

5 Urging hog farmers to improve housing for pregnant sows by focusing on the quality and quantity of space provided, including urging all future sow barn construction or remodeling to allow for pregnant sows of all sizes to stand, lie down, stretch their legs and turn around.



Current challenges:

How do we implement realistic pain management in a large commercial setting?



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Effects of oral meloxicam and topical lidocaine on piglet behavior during castration



Animals

- Don Scott research facility
- 235 male piglets
- 35 litters

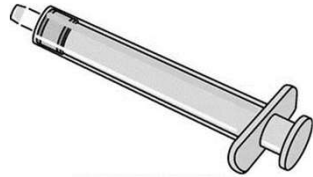

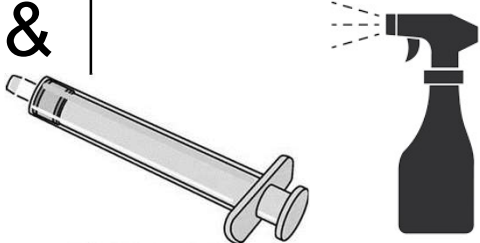


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Treatments

C	Control	No pain management	
M	Meloxicam	1mg/kg oral meloxicam	
L	Lidocaine	Spray w/ 2% lidocaine	
X	Combo	1mg/kg oral meloxicam & Spray w/ 2% lidocaine	

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Castration

- 3-7 days of age
- Same technician w/
same technique
- Treatment
administered
immediately after
castration



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Behavioral Observation

- Observers blind
- Live instantaneous scan sampling
- 5 minute intervals, (12 observations/hour)
- Hours 0-4, 24-28, and 48-52

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Pain

Behavior	Definition
Tail Wag	Tail movements side to side or up and down.
Tremble	Body is shivering. Piglet may be lying, standing or sitting.
Prostrate	Piglet is standing in an upright position with head held below shoulder height.
Scratch	Piglet is rubbing rump against the floor or sides of farrowing pen

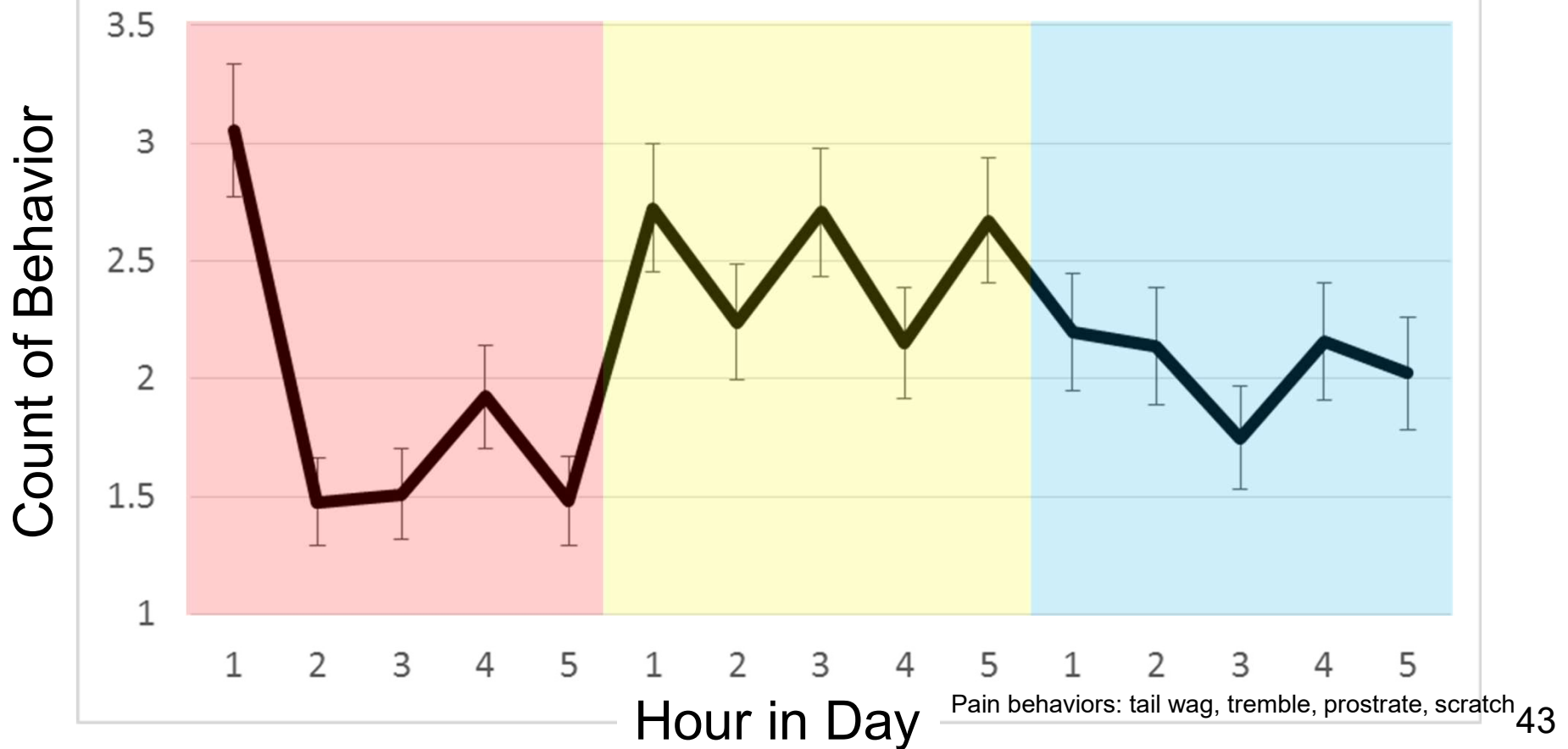
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Pain

Count for Behavior Observed in Each Hour of Control Pigs



Slide 43

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Results

- No treatment effect on behavior categories
- Pain behavior trending at 0.07

	Mean	±SE
C	2.1	0.10
L	2.4	0.11
M	2.1	0.10
X	2.1	0.11

Average counts of
pain behavior each
hour

Slide 44

- 1 add alt text to all graphics including photos, charts, and shapes. Right click the object, choose format shape, then edit the alt text title and description.
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Results

- No treatment effect on behavior categories

- **Current products being used on-farm to control castration pain are NOT effectively managing pain**

C	2.1	0.10
L	2.4	0.11
M	2.1	0.10
X	2.1	0.11

pain behavior each
hour

Slide 45

- 1 add alt text to all graphics including photos, charts, and shapes. Right click the object, choose format shape, then edit the alt text title and description.

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Conclusions

Consumer interest in swine welfare continues to increase

Swine welfare science must collaborate with producer to:

- **Identify realistic alternatives**
- **Prioritize on-farm education**
- **Prepare producers for the future**



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Thank you!
Any questions?