



WESTERN AGRICULTURAL  
ECONOMICS ASSOCIATION

# *Role of Packers & Processors in Livestock Biosecurity Effort*

**WAEA Organized Symposium: Multisectoral Livestock  
Biosecurity & Surveillance  
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**This material is based upon research with [Dr. Lee Schulz \(Iowa State University\)](#) that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-69004-23273. All opinions are attributable to the authors.**

# ***Behavioral approaches to reducing the impact of livestock pests or disease outbreaks***



United States  
Department of  
Agriculture

National Institute  
of Food and  
Agriculture

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# Situation Summary

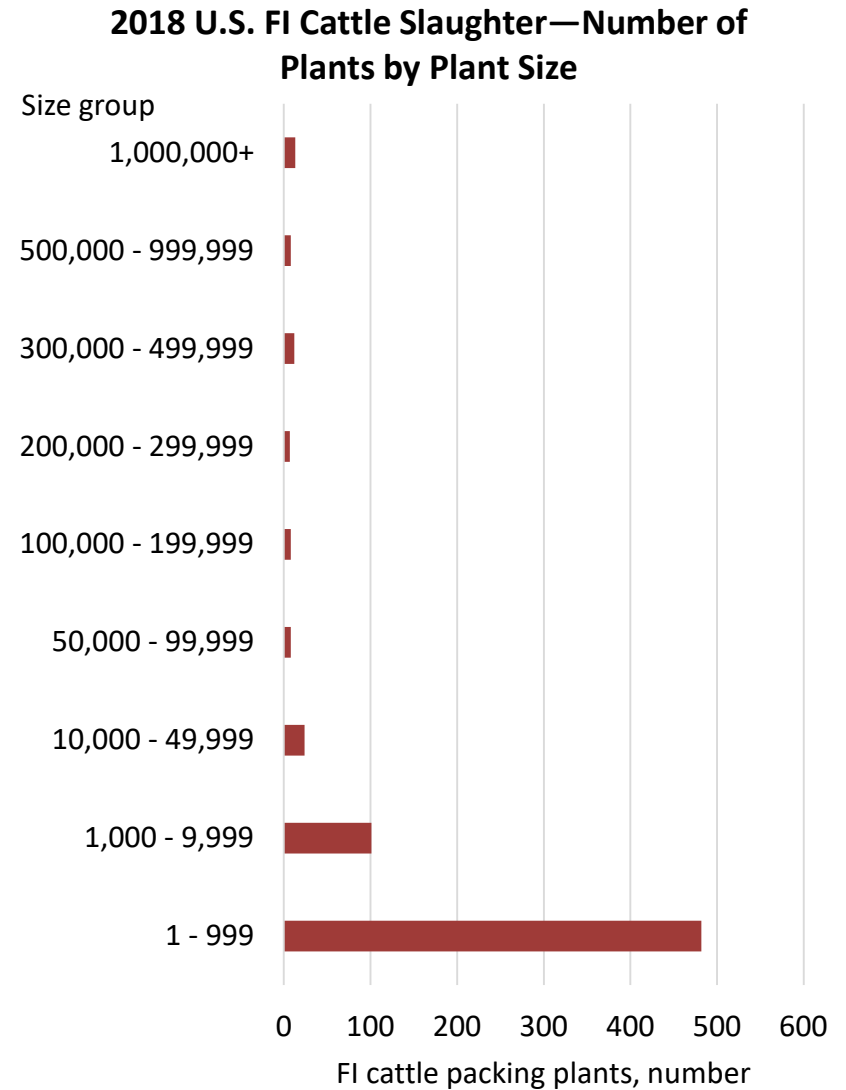
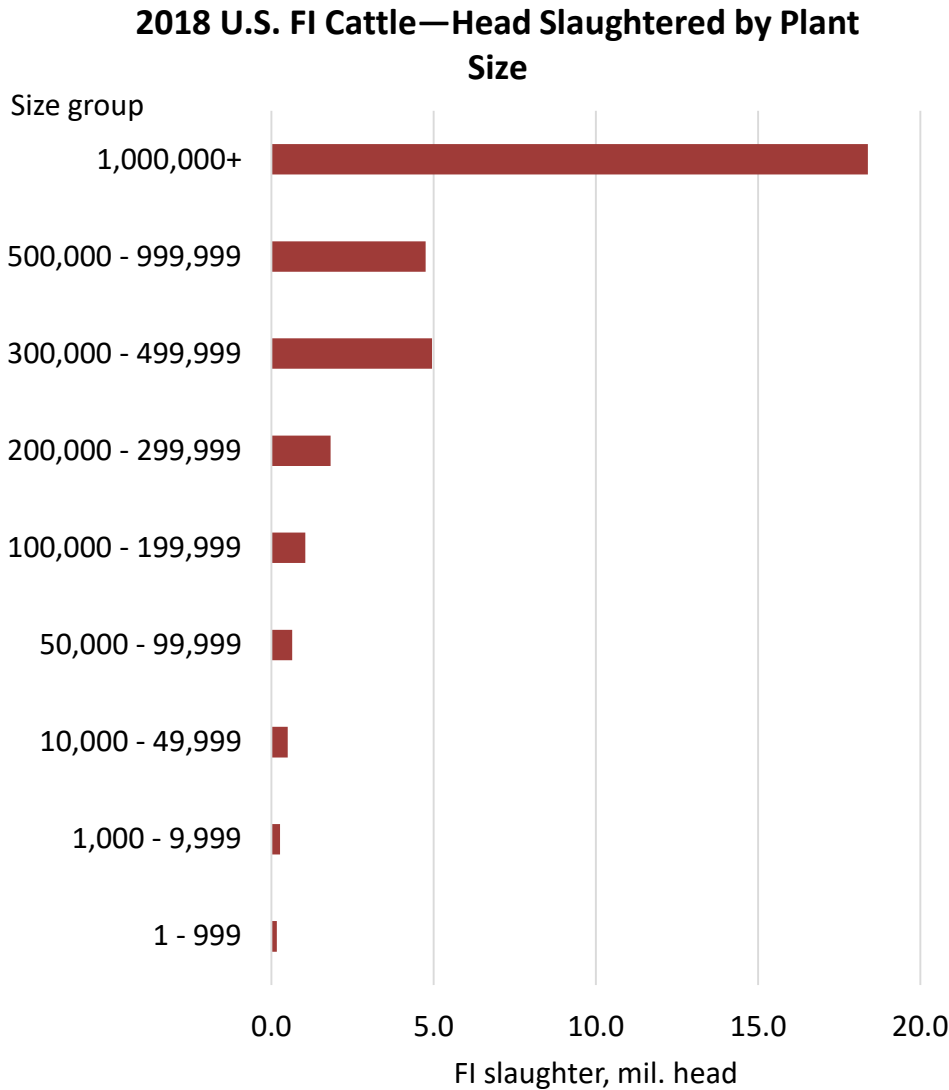
- Better alignment of public & private livestock disease efforts is needed
  - Limited gov't budgets,
  - Diverse views & concerns on risk,
  - Mix of private & public incentives

# Situation Summary

- Better alignment of public & private livestock disease efforts is needed
- Packers & processors
  - Operate with large fixed costs = ongoing production throughput is critical
    - Schulz & Tonsor (2015) – adverse impact of 2013-14 PEDv
    - Paarlberg (2014): pork packers \$481 million lower annual returns following 3% reduction in supplies

# Diverse packing industry

...But all have an important role in the industry



# KNOWLEDGE GAP

- Assessment of packer & processor economic signals to producers regarding livestock biosecurity

LM\_HG250

Des Moines, Iowa

Mon, Jun 24, 2019

USDA Market News

NATIONAL WEEKLY DIRECT SWINE NON-CARCASS MERIT PREMIUM

FOR WEEK ENDING Saturday, June 22, 2019

	Value Range*	Average*
VOLUME	0.00 - 0.00	0.00
TRANSPORTATION	0.09 - 3.00	1.25
DELIVERY TIME	0.25 - 3.00	0.77
BREED	0.00 - 0.00	0.00
PORK QUALITY ASSURANCE	0.00 - 0.00	0.00
BETA AGONIST FREE	0.30 - 1.00	0.62
OTHER **	0.30 - 15.00	4.16

\* Prices reported per hundred pounds carcass basis

\*\* OTHER category includes: Animal Welfare, Antibiotic Free, Diet/Feed, Genetics, Meat Quality, Process Verified Program, Sow Housing and Weight

\*\*\* Price not reported due to confidentiality, For more information visit:  
[www.ams.usda.gov/sites/default/files/media/ConfidentialityGuidelines.pdf](http://www.ams.usda.gov/sites/default/files/media/ConfidentialityGuidelines.pdf)

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Source: USDA Livestock, Poultry & Grain Market News Division, Des Moines, IA  
515-284-4460 email: [desm.lpgmn@ams.usda.gov](mailto:desm.lpgmn@ams.usda.gov)  
24 Hour recorded market information 515-284-4830  
[www.ams.usda.gov/market-news/livestock-poultry-grain](http://www.ams.usda.gov/market-news/livestock-poultry-grain)

Mechanisms  
already exist with  
w/r/t to several  
supply related  
and intrinsic  
attributes

# Approach Summary

□ Simple survey of North America's Packers & Processors


❖ Identify base perceptions,

❖ Examine reaction to hypothetical Tier1 event,

❖ Estimate WTP producers for livestock biosecurity



# Empirical Methods

- Partnered w/ NAMI The logo for the North American Meat Institute (NAMI) features the acronym "NAMI" in a large, bold, red font. To its right, the full name "NORTH AMERICAN MEAT INSTITUTE" is written in a smaller, grey, sans-serif font, stacked in two lines.
- Emailed 16-question survey invite; Sep-Oct 2018
  - 23 completed surveys
  - Most purchase over 10,000 head in typical week
    - Beef Cattle (40% >10k/week),
    - Dairy Cattle (57% >10k/week),
    - Swine (50% >10k/week),
    - Chicken (60% >10k/week),
    - Turkey (34% >10k/week)

# Key Findings: Base Perceptions

- Tier 1 events in next 100 years
  - Mean of 3.4 events
  
- Tier 1 business suspension
  - 50% expect under 1 month duration

# Key Findings: Reaction to Tier1 Event

- 84% expect to continue taking livestock from some, but not other suppliers
  - 11% take livestock as usual / 5% cease entirely
- Willingness to accept livestock from local, Tier 1 impacted region if x% lower purchase price
  - Double-bounded CV approach =
    - **Mean WTA if 8.04% lower price**

# Key Findings: WTP for Livestock Biosecurity

- Willingness to pay premium for livestock sourced from 3<sup>rd</sup> party verified biosecurity practices
  - Double-bounded CV approach =
    - **Mean WTP of 8.43% higher price**
    - **BUT: doesn't change with higher risk of sitting idle OR longer duration of being idle**

# Punchline for Discussion

**□ Likely a role for more direct packer-producer biosecurity incentives**

**➤ More economic research needed with perhaps future policy considerations...**

More information available at:



This presentation will be available in PDF format at:

<http://www.agmanager.info/about/contributors/individual/tonsor.asp>

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