


## Animal Welfare Oriented Expectations of the U.S. Public: Situation and Implications

Seminar: Producers, Animals, and Consumers: Animal  
Welfare in U.S. Food Animal Production

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www.agmanager.info

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### Which of the following was the best college football decision?

1. K-State re-hiring Bill Snyder
2. Missouri joining the SEC

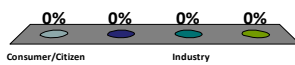


KSU-Snyder	0%
MU-SEC	0%

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### What best characterizes your main interest in animal welfare?

1. I'm interested as a consumer or citizen
2. I'm interested as a livestock producer
3. I'm interested as a non-producer, employee in the broader livestock industry
4. Other




Consumer/Citizen	0%
Industry	0%

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### Which species/industry are you most involved with?

1. Beef cattle
2. Dairy cattle
3. Swine/hogs
4. Broilers
5. Laying hens
6. Equine
7. Other Species
8. Not Applicable



Beef	0%
Dairy	0%
Hogs	0%
Broilers	0%
Hens	0%
Equine	0%
Other	0%
NotApp	0%

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## Background & Motivation

- Consumer & resident interest in food production methods is growing
  - Think about discussions on food safety, farm size, GM-feed, hormone use, etc....
  - Includes animal welfare
    - well-being, care, and handling of livestock being raised for meat, milk, and egg production (Tonsor)

**SOCIAL MEDIA**  
**Man-Made Meat**  
 A TIME.com piece on the world's first lab-grown burger, to be served in 2012, got our Google+ followers so riled up that they maxed out the site's 500-comment limit, with many answering our question, Would you eat test-tube meat?

Comments, clockwise from left: Brontae Hunter, Miss M, Gian Robinson, Phil DiNuzzo

Source: March 12, 2012 TIME magazine

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By affirming these principles, America's pork producers acknowledge their responsibility to:

- Produce safe food
- Protect and promote animal well-being
- Ensure practices to protect public health
- Safeguard natural resources in all of our practices
- Provide a work environment that is safe and consistent with our other ethical principles
- Contribute to a better quality of life in our communities

SOURCE: <http://www.pork.org/Programs/32/wecare1.aspx>

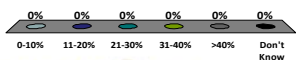
Which of the following issues/attributes are most important to you in making retail meat, milk, or egg purchasing decisions?

1. Animal Welfare
2. Country of Origin
3. Food Safety
4. Price
5. Other
6. I don't know



What portion of total eggs sold in the U.S. do you think are cage-free eggs?

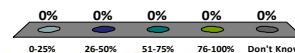
1. 0-10%
2. 11-20%
3. 21-30%
4. 31-40%
5. Over 40%
6. I don't know



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How much of a price premium do you think is currently paid for cage-free eggs in the U.S.?

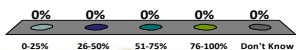
1. 0-25%
2. 26-50%
3. 51-75%
4. 76-100%
5. I don't know



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What portion of U.S. residents do you believe would vote in-favor of banning the use of battery cages throughout the U.S. egg laying hen industry?

1. 0-25%
2. 26-50%
3. 51-75%
4. 76-100%
5. I don't know



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### Events Summary

- U.S. State-by-State: Ballot initiatives, legislature, agreements
- Live Trade Events
  - May 11': Australia banned live cattle exports to Indonesia because of inhumane treatment
- National Legislation & Labeling?
  - July 11': UEP & HSUS agreement
- 2012:
  - McDonald's – wants plans for gestation stall phase out
  - OK pork video – pressure on Wal-Mart sourcing
  - Tyson Foods – FarmCheck Audit Program

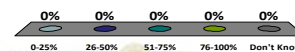
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### Voting vs. Buying Divergence & Information Provision

- Relatively few “animal welfare” labels on U.S. retail products
  - AW ranks low in broad food interest public surveys
  - No USDA PVPs with direct claims
  - <5% of eggs are “cage-free” ; mean WTP >50% ...
- “Debate” being carried out more in the media, ballots, and legislative arenas than retail shelf
  - “labels aren’t sufficient” view leads to bans...
    - Most recently, note CA vote on GM ingredients...

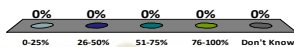
What portion of beef produced in the U.S. do you believe comes from operations/production systems providing appropriate overall care?

1. 0-25%
2. 26-50%
3. 51-75%
4. 76-100%
5. I don't know



What portion of beef produced in the U.S. do you think the typical U.S. resident believes comes from operations/production systems providing appropriate overall care?

1. 0-25%
2. 26-50%
3. 51-75%
4. 76-100%
5. I don't know



### Current Regulations

- Growing number of states with passed ballots or legislation restricting production practices
  - Interstate commerce law quickly comes to play...
    - Some groups think non-ballot states are safe production havens...
- Discussion for national standards (UEP-HSUS)
  - Leads to growing tension across species...
- Europe is “ahead” by most timetables
- Uncertainty reduces investment ...

## Highlights of AW Research

- Public concerns are not unique to any species
- Trust in the source of AW information is driver of ballot voting
- Residents are insensitive to timetables
- Public doesn't know about retail price impacts
- Media attention to AW influences meat demand
- Online videos influence perceptions; not WTP
- Mandatory AW labeling has public support

## Consumer/resident desires regularly initiate change

- “Perception is reality”
  - perception drives decisions
- “Accurate knowledge” and familiarity is NOT necessary to be influential
- No one individual can be “educated” on everything...

## Tonsor's Overall Take

- AW is one of several “social challenges” here to stay – also related to perceived others...
- Trend of pressure coming from sources “outside the retail shelf” also here to stay
- AW is not univariate yet many debates, bans, labeling schemes, etc. treat it as such
- Does AW fit into a “cost of doing business” category in US that areas of global meat demand growth simply don't care about???

More information @ AgManager (<http://www.agmanager.info/>)

<http://www.agmanager.info/livestock/marketing/AnimalWelfare/default.asp>

The screenshot shows the AgManager website interface. At the top, there are navigation links for Home, Livestock Marketing, and other resources. Below this is a table of various market reports and news items. A prominent section titled "Livestock & Meat Marketing: Animal Well-Being and Welfare" contains a table of articles and videos. The table has columns for Title, Author, Date, FactSheet, Paper, Presentation, or Animal Article, and Video. Below the table, there are links to "Animal Welfare Videos by Dr. Glynis Tonsor" and three specific video titles: "Mandatory Labeling of Animal Welfare Attributes (Meat)", "Consumer Preferences for Animal Welfare Attributes: The Case of Gestation Crates", and "Consumer Voting and Demand Behavior Regarding Swine Gestation Crates".

Title	Author	Date	FactSheet, Paper, Presentation, or Animal Article	Video
Mandatory Labeling of Animal Welfare Attributes: Public Support and Considerations for Policymakers	Tonsor and Wolf	July 2011	Animal Article	MP4
U.S. Meat Demand		September 2010	Animal Article	MP4
The Influence of Animal Welfare Media Coverage		September 2010	Animal Article	MP4
Consumer Preferences for Animal Welfare Attributes	Tonsor, Olynk, and Wolf	December 2009	Animal Article	MP4
Consumer Voting and Demand Behavior Regarding Swine Gestation Crates	Tonsor, Wolf, and Olynk	July 2009	Animal Article	MP4
Consumer Use, Perceptions, and Demand Impacts of Alternative Animal Welfare Systems	Tonsor	July 2009	Presentation	MP4
Alternative Animal Welfare Responses: Culture and Implications for Producers and Industry at Large	Tonsor	March 2009	Presentation	

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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## Supporting Material Slides

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### Animal Welfare Research Overview

- 4 Surveys (w/ Christopher Wolf, MSU) Since 07'
  - Mainly gestation crate/stall and laying hen cage focused
- Aggregate meat demand, AW media impact study
- Online dairy video impact study
- Mandatory labeling of AW information study
- Just started 3-Yr USDA Beef and Dairy Cattle project

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*How much do you agree that the following practices seriously reduce the welfare of farm animals?*

- Castration, Tail Docking, Cages/Crates, Indoor Confinement
- Swine, Dairy Cattle, Beef Cattle, Laying Hens
  - Responses are grouped by production practice rather than species.
  - Suggests 'no industry is immune' and that concerns are global across species

Source: Survey of 2,001 U.S. residents

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**CA's Proposition 2 Question:**  
*Law would require farmers nationally to confine calves raised for veal, egg-laying hens, and pregnant pigs only in ways that allow these animals to lie down, stand up, fully extend their limbs, and turn around freely.*

- CA actual vote (Nov 2008):63% FOR
- Survey national question:
  - National support: 70% FOR (Oct/Nov 2008)
  - National support: 66% FOR (May 2010)

Source: Survey of 2,001 & 800 U.S. residents

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**Determinants of voting response in national Proposition 2 questions:**

- State of residence not a factor
- Some observable socio-economic traits are influential
- Info. accuracy perceptions are most influential
  - Those perceiving livestock industry (consumer groups) to provide accurate AW information are much less (more) likely to vote FOR.

Source: Survey of 2,001 U.S. residents

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**Ballot Voting Implications**

- Targeting residents is difficult (latent perceptions drive voting)
- Residents were insensitive to # years for producers to comply (6-8 is common).
  - 1<sup>st</sup> or most heard voice may set adjustment timetable
  - Substantial costs of not being active or sending mixed signals
  - Industry may have opportunity to pursue longer implementation timetable

Source: Survey of 1,001 U.S. residents

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**Perceived price impacts of g.c. ban:**

	Entire Pop.		Source: Survey of 1,001 U.S. residents			
	Raw %	"Know" %s	FOR a G.C. Ban		AGAINST a Ban	
	Raw %	"Know" %s	Raw %	"Know" %s	Raw %	"Know" %s
Fall by 11% or more	4%	7%	3%	5%	5%	8%
Fall by 6-10%	3%	5%	3%	5%	2%	3%
Fall by 1-5%	2%	3%	3%	5%	0%	0%
Change by less than 1%	5%	8%	6%	11%	2%	3%
Increase by 1-5%	7%	12%	9%	16%	2%	3%
Increase by 6-10%	12%	20%	14%	25%	7%	12%
Increase by 11% or more	26%	44%	19%	33%	42%	70%
Don't Know	42%		44%		40%	

Source: Survey of 1,001 U.S. residents

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### Mean vs. Median Issues...

- **Egg Purchasing Analysis** (Chang, Lusk, & Norwood, 2010)
  - Cage-free premium is 57%
    - driven by minority: <4% of sales nationally are cage-free
- *Majority show voting support but not matching retail purchasing behavior...*

### National Consumer Perceptions

- Consumers infer food safety and pork quality from gestation crate/stall use.
  - Common perception is that g.c use reduces food safety and pork quality.
- Supporting evidence:
  - Valuations of gestation crate/stall-free pork are lower when food safety & quality claims are present on pork chop labels.

Source: Survey of 1,001 U.S. residents

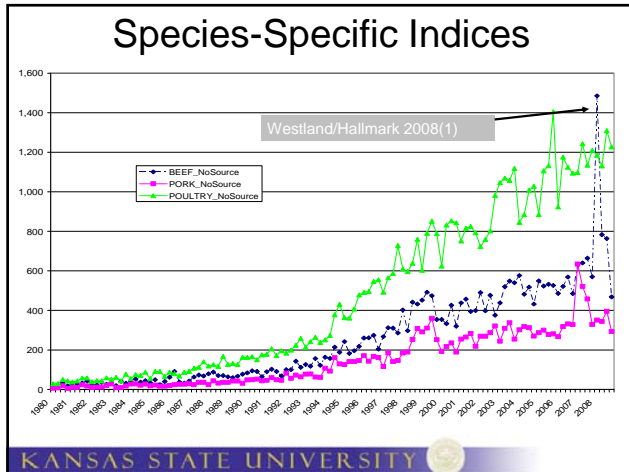
### ***Impacts of Animal Welfare Media Coverage on Meat Demand***

### Methods: Media Indices

(collaborated w/ Nicole Olynk, Purdue Univ.)

- Lexis-Nexis searches (1980-2008) of major U.S. newspaper and magazine articles with key words:  
 “(animal welfare) or (animal friendly) or (animal care) or (animal handling) or (animal transportation) AND (food or diet or meat).”





### Methods: Model

- Estimated aggregate demand model
  - Beef, pork, poultry, non-meat food
  - Allow for “cross-meat” and “out of meat” substitution impacts
- Control for time trends, quarterly seasonality, prices, total meat expenditures, and AW media impacts

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### Results Summary

- *Reject* null hypotheses of:
  - No AW media effects
  - AW media effects being contemporaneous only
  - AW media effects extending beyond 6 months
    - SO: AW media effects are significant in the quarter of article release & one subsequent quarter...
- *Fail to reject* null hypotheses of:
  - Cross-species spillover effects = 0
    - SO: AW impacts lead to expenditure reallocation to non-meat food rather than to increases in competing meats...

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### Results Summary

- AW media elasticities are notably smaller than price & expenditure effects
- Increases in AW media have:
  - Not directly impacted beef demand
  - Reduced pork demand (both in short- and long-run)
  - Reduced poultry demand (in long-run)
- AW impacts lead to expenditure reallocation to non-meat food rather than to increases in competing meats...
- 1999(1)-2008(4) pork & poultry AW media indices increased by 181% & 253%
  - = 2.65% pork & 5.01% poultry demand reductions...

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## Implications

- Aggregate meat demand impacts exist. Do they cover avg. adjustment costs?
  - Highlights the resident voting vs. consumption decision dilemma ...
  - Also consistent with limited "free market" disadoption observed to-date by livestock industry...
- Budget reallocation effects:
  - Supports notion of a broader meat industry response rather than species-specific responses
  - All species lose as expenditures leave meat complex...



## Future Work Opportunities

- Reassessment & replication needed
- Net Information vs. Separating out "positive," "negative," and "neutral" articles...
- No delineation by source considered...
- Broader global "comparative advantage" consideration needed (pork exports: 20-25%)



## ***Nature of "Media" is Changing... How Influential are Today's Videos?***

- Information flows constantly and instantly
  - Mobile devices complement computers, TVs, print material
  - Videos related to food production are posted regularly
    - Yet impacts and effectiveness are largely unknown
  - Previous work suggests media (non-video) influences meat demand...



## Methods: Video Treatments

- National online sample of 800; May 2010
- Three videos – randomly allocated
  1. "Happy Cow" video (CA dairy producers)
    - Check-off funded; very positive tone
  2. "Unhappy Cow" video (PETA)
    - Very negative tone – presumably seeks consumption reduction
  3. Farmers Feed Us video (Center for Food Integrity)
    - Farm family focused - \$5k grocery lottery rollout



## Video Study: Take Home Points

- Perceptions may be altered by videos
  - We assessed short-term, reaction impacts – what about persistence???
- Stated milk WTP is unaltered by videos
  - Altering perceptions (and hence votes) but not purchasing behavior = industry dilemma...

## ***Mandatory Labeling of Animal Welfare Attributes: Public Support and Considerations for Policy Makers***

## Comparative Ad(dis)vantages = National Legislation???

- Adjustments of production practices varies across states
- Timelines of implementation vary across states
  - Possible support for national legislation to “level the field”
  - Increasingly pockets of producers may lead the call..
- July 7, 2011 UEP & HSUS agreement
  - call for national standards regarding laying hen housing
  - call for mandatory labeling of eggs

## Objectives of this Study

(collaboration w/ Dr. Chris Wolf – Michigan State Univ.)

1. Examine U.S. resident support for mandatory labeling of AW information on pork and eggs
2. Outline considerations for assessment *prior* to implementing any mandatory labeling policies

## Methods

- Oct/Nov 2008 national survey of 2,001
  - Purposely around CA's Proposition 2 vote...
- Assess awareness and perceptions w/r/t AW
- Estimate demand for mandatory labeling of AW on pork and egg products



## Results

- 62% in favor of mandatory labeling of pork (gestation crate/stall use) and eggs (laying hen cage use)
  - 44% reversed support with price considered
- Perceived accuracy of AW info. from livestock industries *relative* to consumer groups is critical demand driver



## Pre-Mandatory Labeling Implementation Considerations

- Through benefit-cost assessment is needed
- Delineations needed:
  - Frequent consumer vs. advocates for change/bans
  - Producer impacts likely vary within industries
  - Mean vs. median economic welfare distinctions
- Alternative voluntary labeling consideration
- Consumer choice may not be enhanced
- Information overload possibility
- Composite AW index needed – AW isn't univariate



## *Summary Points & Thoughts*



### Summary Points: Consumers & Residents

- Voting and purchasing behavior mismatch = dilemma for industry...
- Meat demand impacts do exist and warrant industry consideration in strategy development
- National housing standards & mandatory labeling discussions picking up..

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### Summary Points: Consumers & Residents

- Consumers associate “good AW practices” with smaller farms, higher food safety, improved product quality...
- Ballot voting behavior & regulation impacts all:
  - Product choice set for all is impacted
    - Even if only a minority WTP>MC (mean vs. median distinction)

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### Big Unknowns: Consumers & Residents

- Little is known about true desires
  - E.g. Is group indoor housing sufficient or is outdoor pasture ‘necessary’ to concerned segments?
- Would ‘site unseen’ meat from other countries be accepted if U.S. production costs accelerate?
- If adjustments (i.e. remove stalls) increase farm size, will that trigger additional pressure?
- What impact do AW changes have on export demand?
- Will individual/group ID have a growing role in AW discussion?

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### Current Unknowns: Producers

- Limited research on adjustment costs
- Diverse producer impacts are largely driven by unknowns including:
  - farm size, facility age, region of production ...
  - recognize public data sources on these issues is decreasing ...
- Adjustments will likely involve environmental, food safety, and other impacts as well that require consideration
  - “nothing happens in a silo” ...

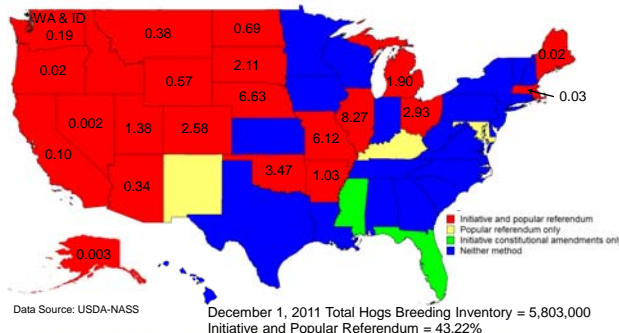
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### An Additional Critical Point

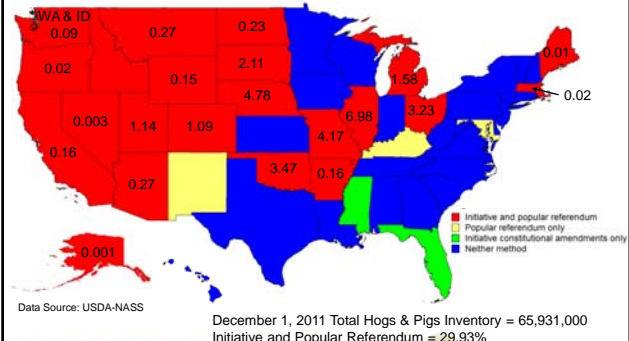
- A state passing a ballot initiative isn't likely necessary to cause change:
  - Packers or retailers may drive a switch:
    - Cost of segregation; switch at some critical volume
  - External pressures will likely continue to mount (e.g. Jan. 2012 HSUS video w/r/t OK pork; Wal-Mart PR pressure)
- **Implication:** "Fighting ballot initiatives at all costs" may not be optimal



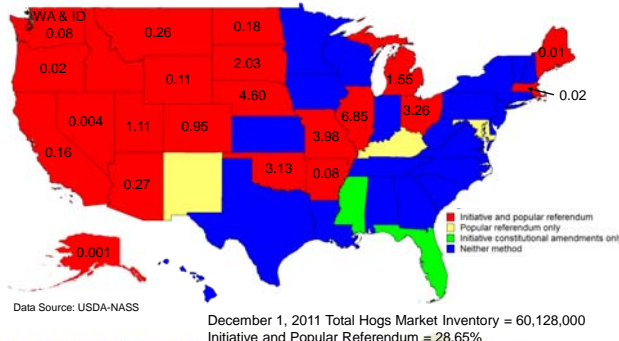
### December 1, 2011 TOTAL Hogs Breeding AS PERCENT OF TOTAL U.S.



### December 1, 2011 TOTAL Hogs & Pigs AS PERCENT OF TOTAL U.S.



### December 1, 2011 TOTAL Hogs Market AS PERCENT OF TOTAL U.S.



## Alternative Industry Paths

- “Do Nothing”
  - PROS:
    - Minimize current investment
    - Wait for more information & avoid “building the wrong barn”
  - CONS:
    - Limits nearly all ability to have influence if “not at the table”
    - Misses opportunity as public views farmer/rancher to have most influence...
      - Risk sending signal of indifference to AW...



## Alternative Industry Paths

- “Proactive” Options (not necessarily mutually exclusive):
  - Negotiate with concerned groups
    - Adjustment time and requirements may (or may not) be improved
  - Seek additional legislation
    - Ag. may have more influence than reacting to ballot initiatives
  - Support additional labeling of practices
    - Different from demand enhancing motives; (think in terms of “minimize maximum loss” rather than “maximize expected profit”)
    - However multiple trade impacts with severe consequences (E.g. WTO-MCOOL) so voluntary labeling warrants alternative consideration...
  - Support ‘phase-out’ as old buildings come out of production
    - May align w/ timetables in prior ballot initiatives & reduce adjustment costs
  - Invest in public image (e.g. Center for Food Integrity approach)
    - Reconnect (not necessarily defend) with public; may not be sufficient for short-run response but may be necessary for long-run survival



## Certified Humane Website’s Comparison Chart

<http://www.certifiedhumane.org/uploads/pdf/Comparison%20Charts/Comp.Standards.Comparison.Chart.wappendix.8.13.12.pdf>

- 5 Programs
  - HFAC/Certified Humane, Animal Welfare Approved, Global Animal Partnership (GAP), USDA Organic program, and American Humane Certified
- 37 “animal-welfare standards”
- Initial 4 of 19 pages cover all species standards: traceability, growth hormones, antibiotics, transport, euthanasia

