

***What we Do and Don't Know:  
Economic Impacts of U.S. Animal  
Welfare Oriented Changes***

**Glynn Tonsor**

**Dept. of Agricultural Economics  
Kansas State University**

# 4 Surveys Conducted

Drs. Glynn Tonsor and Christopher Wolf (MSU)

- Nov. 2007; 1,000 surveys in MI
  - 205 completes available for analysis
- June 2008; 1,001 surveys across U.S.
  - Focused on pork; gestation crate/stall use
- Oct./Nov. 2008; 2,001 surveys across U.S.
  - Focused on gestation crates/stalls, laying hen cages, dairy pasture access
- May 2010; 800 surveys across U.S.

*Please rank the following species in order of concern you have regarding current animal welfare/handling practices (1 being most concerned):*

	Oct/Nov 2008	May 2010
• Beef cattle	2.47	2.51
• Dairy cattle	3.01	3.03
• Swine/hogs	3.28	3.26
• Broilers	2.99	3.00
• Laying hens	3.25	3.21

- Beef cattle have highest mean concern (Chino perceptions may underlie this...)
- Interesting difference from ballot initiatives...

*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

## *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)

# 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 more (less) likely to vote FOR.

# 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

# MI Consumer Pork Preferences

## Simulated Purchasing Analysis

- Consumers associate farm size with gestation crate/stall use
- 4 Segments – Highly heterogeneous
- 20% have preferences ‘justifying a gestation crate ban’
- 80% “could be appeased” by voluntary production of g.c.-free pork
  - So consumers may be valuing producer autonomy



# National Consumer Pork Preferences

- 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.

# Aggregate Meat Demand Impacts

- Core unaddressed question: how has aggregate meat demand been impacted by animal welfare concerns?

# Methods: Media Indices

- 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).”*

# Aggregate Meat Demand Impacts

- Elasticities are notably smaller than price and expenditure effects
- 1999(1)-2008(4) pork & poultry indices increased by 181% & 253%:  
= 2.65% & 5.01% demand reductions...
- No direct beef demand impacts
- Cross-species effects = 0
  - HOWEVER: expenditure reallocates from meat to non-meat food

# Implications for Industry

- Aggregate meat demand impacts exist
- However, benefit of mitigation may not cover avg. adjustment costs:
  - Highlights the resident voting vs. consumption decision dilemma
- Budget reallocation effects:
  - Supports notion of a broader meat industry response rather than species-specific responses

# Demand Impacts of Media Attention to Animal Welfare

- Lusk (2010)
  - Media attention in San Francisco on Prop. 2 impacted egg demand
    - Increase for cage-free & organic
    - Decrease for conventional
  - Media attention in Dallas on Prop. 2 did not impact egg demand
- Implications:
  - “Fighting a ballot” may decrease demand for conventional products

# Summary Points:

## Consumers & Residents

- Consumer/resident desires regularly initiate change
  - Perception drives decisions
  - “Accurate knowledge” and familiarity is NOT necessary to be influential
- Consumers associate “good AW practices” with smaller farms, higher food safety
- Ballot voting behavior & regulation impacts all residents & consumers
  - Product choice set for all is impacted
- Meat demand impacts do exist and warrant industry consideration in strategy development

# Big Unknowns: Consumers & Residents

- Little is known about true desires
  - Is group indoor housing sufficient or is outdoor pasture ‘necessary?’
  - Will markets increasingly differentiate between practices?
- 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?



# Comparative Advantage/Disadvantages: Regional Differences

- Adjustments of production practices varies across states
- Timelines of implementation vary across states
  - Possible support for national legislation to “level the field”
- Short-run (assuming \$0 WTP) comparative advantage lies with:
  - states/regions not implementing change
  - of those implementing, those with older/depreciated facilities
- Longer-run implications:
  - ceteris paribus: industry size increase = unintended consequences
  - processors/retailers may cause entire industry to change, even if representative consumer isn't WTP

# An Additional Critical Point

- A state passing a ballot initiative isn't likely necessary to cause change:
  - Packers may switch:
    - Cost of segregation; switch at some critical volume
    - External PR pressures will likely continue to mount
- Example: cash- to lean- pricing of market hogs
  - Wasn't mandated, but market increasingly encouraged transition
    - **Implication**: “Fighting ballot initiatives at all costs” may not be optimal

# Current Unknowns: Producers

- Limited research on adjustment costs
- Diverse producer impacts are driven by unknowns including:
  - farm size, facility age, region of production ...
- Adjustments will likely involve environmental and other impacts as well that require assessment ...

# Summary Point

- AW pressures are here to stay
- No species is immune
- Farms will increasingly face social pressures for on-farm adjustments
- Be aware, think carefully, and be proactive: “this isn’t your father’s world”...

More information will be available at:  
AgManager (<http://www.agmanager.info/>)

Glynn T. Tonsor  
Assistant Professor  
Dept. of Agricultural Economics  
Kansas State University  
[gtt@agecon.ksu.edu](mailto:gtt@agecon.ksu.edu)