

Economic Aspects of Animal Welfare Changes and Issues

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Background & Motivation

- Consumer interest in production methods is growing
 - Includes animal welfare
 - well-being, care, and handling of livestock being raised for meat, milk, and egg production (Tonsor)

Events Summary

- State-by-State: Ballot initiatives & Legislature
 - FL (02'), AZ (06'), CA (08') & OR (07'), CO (08'), ME (09'), MI (09')
 - OHIO:
 - *Ohio Livestock Care Standards Board* (09')
 - Agreement w/ HSUS (June 10')
 - Phase out gestation stalls by Dec. 2025; no new facilities after Dec. 2010
 - No new permits for new egg facilities with battery cages
 - Downer cattle & humane euthanasia language included...
- Live Trade
 - May 11': Australia banned live cattle exports to Indonesia because of inhumane treatment
- National Legislation & Labeling?
 - July 11': UEP & HSUS agreement

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.
 - *There are multitudes more unanswered, economically relevant questions than one can begin to tackle...*

When was the last time you visited a farm with animals/livestock being raised for milk, meat, or egg production?

• Never	24%	} 67% not in last 5 years
• Over 10 years ago	35%	
• 6-10 years ago	8%	
• 1-5 years ago	15%	
• Within last year	18%	

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 less (more) likely to vote FOR.

Perceived price impacts of gestation crate/stall ban:

	Raw %	Entire Pop. "Know" %s
Fall by 11% or more	4%	7%
Fall by 6-10%	3%	5%
Fall by 1-5%	2%	3%
Change by less than 1%	5%	8%
Increase by 1-5%	7%	12%
Increase by 6-10%	12%	20%
Increase by 11% or more	26%	44%
Don't Know	42%	

Ballot Voting Implications

- Targeting residents is difficult (latent perceptions drive voting)
- Residents were insensitive to # years for producers to comply (6-8 is common).
 - 1st or most heard voice may set adjustment timetable
 - Industry may have opportunity to pursue longer implementation timetable
- Majority show voting support but not matching purchasing behavior...

Mean vs. Median Issues...

- MI Pork Chop Choice Experiment:
 - 20% have preferences ‘justifying a gestation crate ban’
 - 80% “could be appeased” by voluntary production of gestation crate-free pork
 - So consumers may be valuing producer autonomy
- Egg Purchasing Analysis (Chang, Lusk, & Norwood, 2010)
 - Cage-free premium is 57%
 - driven by minority: <4% of sales nationally are cage-free

Aggregate Meat Demand Impacts

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

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).”

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:
 - Further highlights the resident voting vs. consumption decision dilemma
 - Consistent w/ limited “free market” disadoption...
- Budget reallocation effects:
 - Supports notion of a broader meat industry response rather than species-specific responses

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...

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 mandatory labeling of eggs

Methods: Mandatory Labeling Study

- Oct/Nov 2008 national survey of 2,001
 - Estimate demand for mandatory labeling of AW on pork and egg products

Mandatory Labeling Study: 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
- WTP about 20% higher prices
 - Likely an upper bound

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
- Alternative voluntary labeling consideration
- Consumer choice may not be enhanced
- Information overload possibility
- Composite AW index needed – AW isn't univariate

Summary Points:

- Consumer/resident desires regularly initiate change
 - Perception drives decisions; “knowledge” NOT necessary to be influential
- Ballot voting behavior & regulation impacts all:
 - Product choice set for all is impacted
 - Even if only a minority $WTP > MC$...
- Meat demand impacts do exist and warrant industry consideration in strategy development
- National housing standards & mandatory labeling discussions picking up..

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?
- What impact do AW changes have on export demand???

Unknowns: Producers

- Limited research on adjustment costs
- Diverse producer impacts are driven by unknowns including:
 - farm size, facility age, region of production ...

Final Thoughts

- AW interest, concerns, and 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 at:
AgManager (<http://www.agmanager.info/>)

*-- includes related YouTube videos, Factsheets,
and Journal Articles*

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