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

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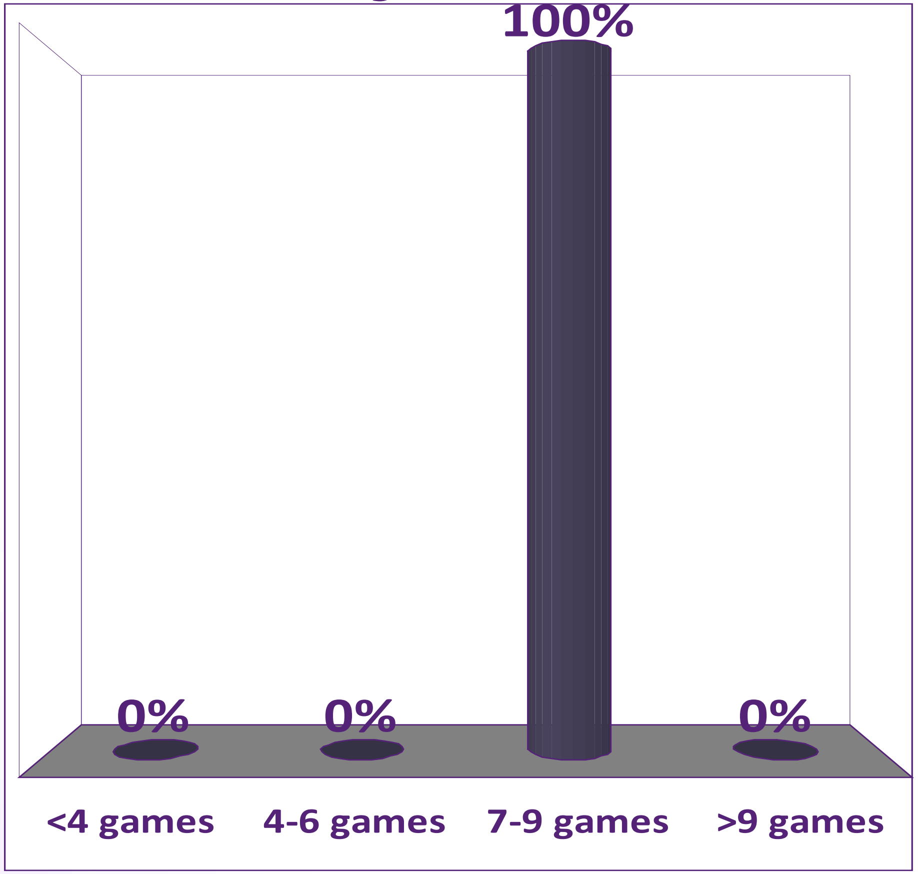
How many games will KSU's football team win this year?

1. <4 games
2. 4-6 games
3. 7-9 games
4. >9 games



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Recent Events, State by State

- Ballot initiatives:
  - FL (02'), AZ (06'), CA (08')
- State legislature:
  - 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…

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.

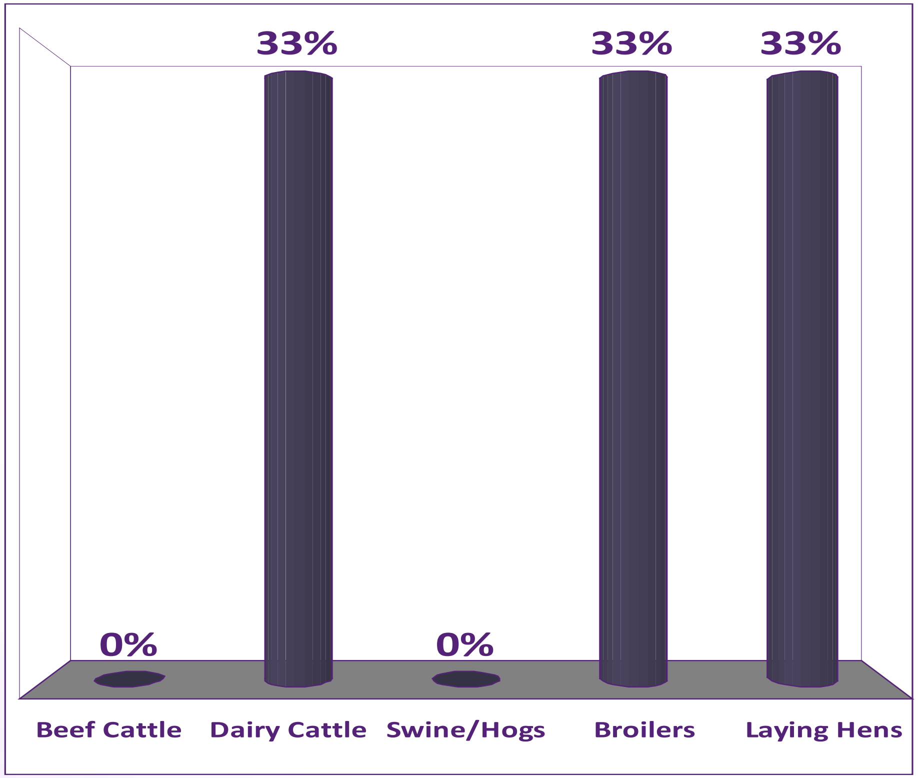
When was the last time you visited a farm with animals/livestock being raised for milk, meat, or egg production?

• 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%	

Source: Survey of 2,000 U.S. residents

Which species do you believe U.S. residents are MOST concerned with regarding current animal welfare/handling practices?

1. Beef Cattle
2. Dairy Cattle
3. Swine/Hogs
4. Broilers
5. Laying Hens



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…

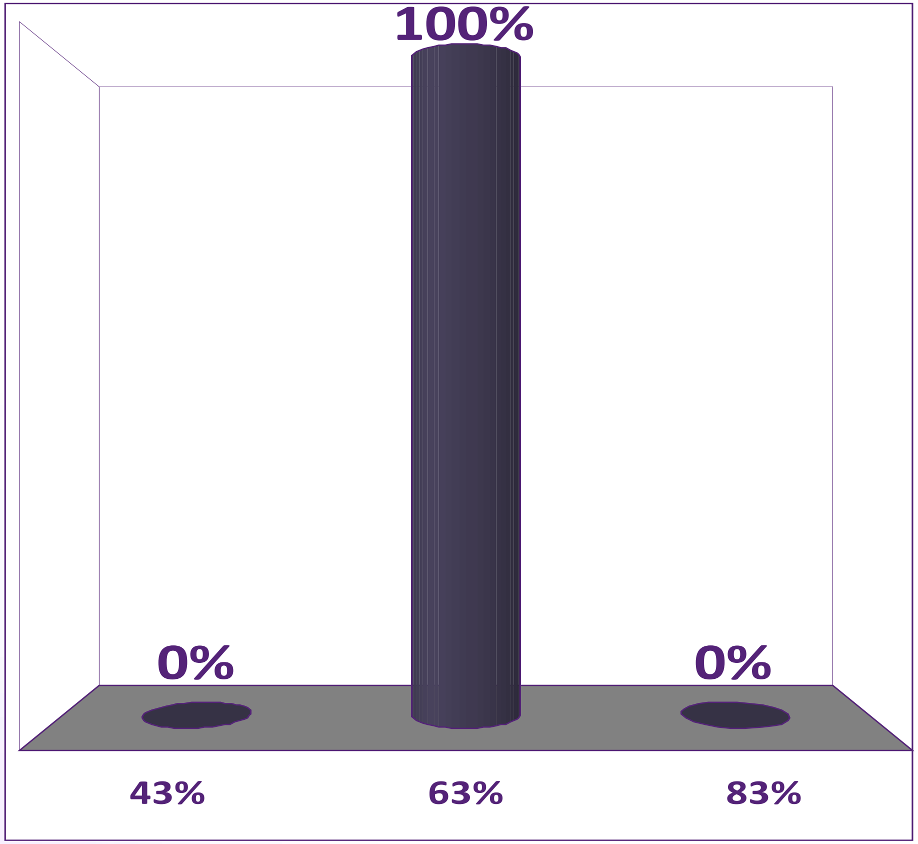
How much do you agree that the following practices seriously reduce the welfare of farm animals?

- 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

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

What portion of voters supported Proposition 2 in CA (Nov. 2008)?

1. 43%
2. 63%
3. 83%



CA's Proposition 2 Question:
Law would require farmers <u>nationally</u> 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

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.

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

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
  - Substantial costs of not being active or sending mixed signals
  - Industry may have opportunity to pursue longer implementation timetable

"… three states have passed either ballot initiatives (AZ and FL) or state legislature (OR) that will ban the use of gestation crates by swine operations in their respective states at different points in the future. … Would you vote ***FOR*** *or* ***AGAINST*** *the ban?"*

- 69% nationally (omitting FL, AZ, OR, CO) would vote FOR the ban
  - FL: 55% FOR to 45% AGAINST (Nov. 02')
  - AZ: 62% FOR to 38% AGAINST (Nov. 06')

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

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What portion of residents indicate NOT knowing the price impacts of banning gestation stalls/crates?

1. 22%
2. 32%
3. 42%
4. 52%

Perceived price impacts of g.c. ban:

	Entire Pop.	
	Raw %	"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%	

	FOR a G.C. Ban		AGAINST a Ban	
	Raw %	"Know" %s	Raw %	"Know" %s
Fall by 11% or more	3%	5%	5%	8%
Fall by 6-10%	3%	5%	2%	3%
Fall by 1-5%	3%	5%	0%	0%
Change by less than 1%	6%	11%	2%	3%
Increase by 1-5%	9%	16%	2%	3%
Increase by 6-10%	14%	25%	7%	12%
Increase by 11% or more	19%	33%	42%	70%
Don't Know	44%		40%	

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

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

Source: Survey of 205 MI residents

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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.

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

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)."

What species/industry has experienced the largest meat demand impact from animal welfare concerns?

1. Beef
2. Pork
3. Poultry

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

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

Alternative Industry Paths

- Do Nothing
  - Minimize current investment & wait for more information; but limits nearly all ability to have influence
- Proactive options:
  - Negotiate with concerned groups
    - Adjustment time and requirements may (or not) be improved
  - Seek additional legislation
    - Ag. may have more influence than reacting to ballot initiatives
      - But be careful what you ask for …
  - Support additional labeling of practices
    - ‘Swing vote concept’ on ballot initiatives;
      - Different from demand enhancing motives; (think in terms of “minimize maximum loss” rather than “maximize expected profit”)
    - Tonsor opinion: costs would likely be lower than COOL (at least for typical practices like stall/crate use)
      - Multiple trade impacts with severe consequences
  - Support ‘phase-out’ as old buildings come out of production
    - May align w/ timetables in prior ballot initiatives & reduce adjustment costs

Points for Individual Producers

- Investments (remodels, expansion, etc.):
  - Note all welfare/handling discussions
  - Consider related issues of scale economies, environmental regulation, etc.
  - Think about proactive monitoring (e.g., processors are increasingly using camcorders)

- Beyond housing, note general handling, transportation, and other concerns

- Need to be engaged and current on industry trends is notable

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 Points

- 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”…

Will you complete and submit the conference evaluation sheet (orange pages) in exchange for not having to answer 35 “clicker” evaluation questions?

1. Yes
2. No

Overall, do you think using these "clickers" enhances the breakout session experience?

1. Yes
2. No

More information at:

AgManager (http://www.agmanager.info/)

-- *includes 3 related YouTube videos & Factsheets*

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