Economics of Farm Animal Welfare

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Ames, IA

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Background on Economic Fit

- Theme of this year's symposium:
  - *"Connecting stakeholders to enhance the profitability and welfare of beef cattle."*
  - What role does an economist have?

Background on Economic Fit

- Many are happy economists only ‘have two hands’ …
  - **Supply**
    - Influenced by anything impacting costs of producing, processing, or marketing livestock or derived meat, milk, and egg products
  - **Demand**
    - Influenced by anything impacting acceptance and valuation of livestock or derived meat, milk, and egg products
- Debates & conversations over food production (including AW) have core economic components

Background on Economic Fit

- The Center For Food Integrity (@foodintegrity) tweeted on Wed, Sep 04, 2013:

  "Science tells us if we can do something. (**supply**)

  Society tells us if we should do it." (**demand**)

- Think about gestation stalls, laying hen cages, beta-agonists, handling techniques, euthanasia practices, regular provision of clean and fresh feed and water …

Current Situation

- AW is not a top of mind issue for typical U.S. meat, milk, and egg consumers
  - supported by direct survey assessment
  - consistent with limited AW labels on retail products

- *IF* AW were a top priority for consumers we would likely observe:
    - more exerted consumer WTP behavior
    - increased product differentiation by suppliers
      - *"textbook, free-market adjustments" would work*

Current Situation

- AW impact from consumers is indirect:
  - presented attributes (or claims) regularly send cues to at least some consumers:
    - safety and quality are inferred from gestation stall use
    - “natural” triggers cues similar to “organic”
    - meat color triggers a host of quality cues
  - consumers see AW as one of several aspects comprising the “proper way to produce meat, milk, and eggs”
  - beta-agonist use discussions are a recent industry example
    - within industry customers reflect indirect consumer influence

Current Situation

- Bans pass when voted upon by residents…
  - Cage-free eggs (5% mkt share vs. 2/3 voting support)
  - "Vote-buy" disconnect not unique to AW
    - Consider calls for mandatory labeling
      - GM ingredients (CA's Prop 37), country of origin, etc.
- "Debate" being carried out more in the media, ballots, and legislative arenas than retail shelf

Current Situation

- Growing number of states with passed ballots or legislation restricting production practices
  - Implications follow this “unfunded mandate”
  - Interstate commerce law quickly comes to play…
    - Some think non-ballot states are safe production havens

- Ongoing discussion over national standards
  - Leads to growing tension:
    - across species & within species

Existing Economics Literature

- Studies limited in overall number and replication
  - Limited funding; relatively new issue; few land-grant economists focused on AW…
  - Only known meta-analysis (Lagerkvist & Hess, 2011 ERAE) based on 24 studies (only 6 in U.S.)

Highlights of past AW Research Tonsor has been involved in…

- Public concerns are not unique to any species
- Trust in the source of AW information is key driver of ballot voting
- Residents are insensitive to timetables
- Online videos influence perceptions; not WTP

Highlights of past AW Research Tonsor has been involved in…

- Public does not know about retail price impacts
- Bans are not economically needed in presence of voluntary labeling
- Media attention to AW influences meat demand
  - Beef demand not impacted
  - BUT total meat expenditures

Benchmarking Cattle Producer & Public AW Perceptions

- Ongoing USDA Grant (w/ Wolf, Thomson, Swanson, & McKendree)
- Four nationally representative surveys
- Establish perception & knowledge benchmarks
- Compare views on effectiveness and practicality

"What percentage chance (0-25%, 26-50%, 51-75%, 76-100%, Don't Know) do you believe the typical U.S. beef product comes from:"

	COW-CALF PRODUCERS	U.S. PUBLIC	COW-CALF PRODUCERS	U.S. PUBLIC
	Cond Wtd Avg	Cond Wtd Avg	Don't know	Don't know
Cattle provided access to fresh, clean feed and water	64%	43%	8%	24%
Cattle provided antibiotics to prevent illness and disease	51%	43%	8%	27%
Cattle provided shade, windbreaks, and ventilation	49%	32%	11%	30%
Cattle dehorned/disbudded with pain control	20%	24%	20%	41%
Cattle older than three months of age castrated with pain control	18%	23%	18%	42%
Farms/ranches with consistent training program for employees focusing on principles of animal care and handling	28%	31%	19%	30%
Farms/ranches with third party verification that appropriate animal care and facilities are provided	18%	31%	25%	31%
Farms/ranches where injured or sick animals are treated or euthanized promptly	50%	31%	14%	33%
Farms/ranches with a herd health plan, developed with the help of a veterinarian	42%	32%	13%	30%
Farms/ranches with less than 100 beef cows	38%	24%	16%	30%
Farms/ranches providing appropriate overall care for the well-being of their cattle	63%	39%	9%	25%

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Average of Don't Know Response Frequencies:

Producers: 15%
vs.
Public: 31%

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Areas of General Agreement

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Areas of Opportunity for Targeted Communication and Education

or

Possible Threat from Inaction

Benchmarking Grant, Preliminary Findings:

U.S. Public Views on Effectiveness & Practicality of 9 Actions

- Which of the following actions, if implemented throughout the entire U.S. beef industry, is the most practical and which is the least practical to improve the welfare of beef cattle?

(Check only one issue as the most and only one as the least practical)

Most Practical	Action	Least Practical
	Develop a herd health plan with the help of a veterinarian.	
	Restrict use of antibiotics to only disease treatment.	
	Third party verification that appropriate animal care and facilities are provided on farm.	
	Provide access to fresh, clean feed and water appropriate for the animal's physiological state (appropriate energy for milk production, pregnancy, or weight gain).	
	Castrate male calves either within the first three months of age or with pain control.	
	Promptly treat or euthanize all injured or sick animals.	

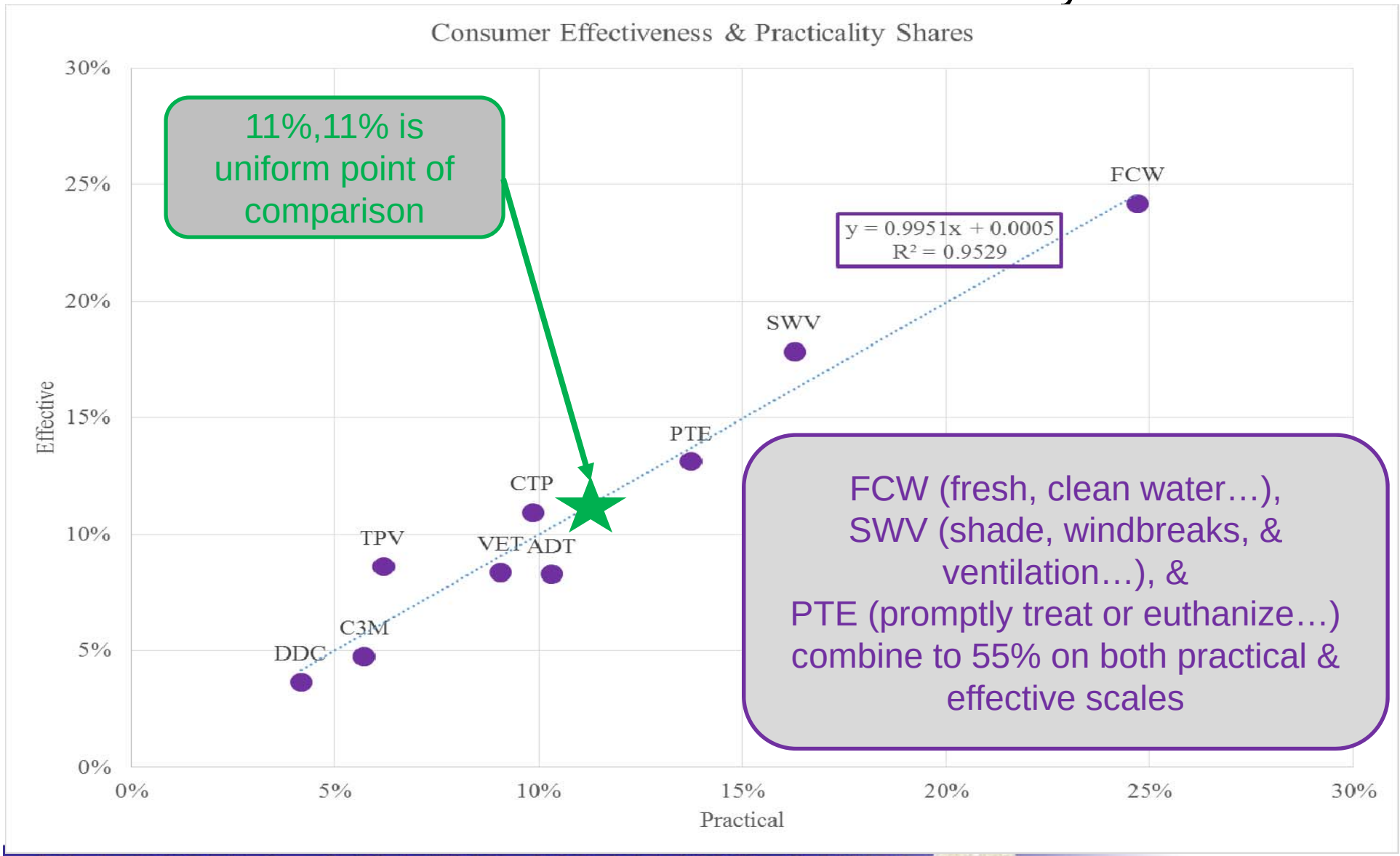
Benchmarking Grant, Preliminary Findings:

U.S. Public Views on Effectiveness & Practicality of 9 Actions

Effective Shares	Practical Shares	Action
8%	10%	Restrict use of antibiotics to only disease treatment
5%	6%	Castrate male calves either within the first three months of age or with pain control
4%	4%	Dehorn (remove horns)/disbud calves either before horn tissue adheres to skull or with pain control
13%	14%	Promptly treat or euthanize all injured or sick animals
8%	9%	Develop a herd health plan with the help of a veterinarian
18%	16%	Provide adequate comfort through the use of shade, windbreaks, and ventilation assuring clean, dry, sanitary environmental conditions (housing, pasture, or dry lots) for cattle
9%	6%	Third party verification that appropriate animal care and facilities are provided on farm
11%	10%	Consistent training program for owner and employees focusing on principles of animal care and handling
24%	25%	Provide access to fresh, clean feed and water appropriate for the animal's physiological state (appropriate energy for milk production, pregnancy, or weight gain)

Benchmarking Grant, Preliminary Findings:

U.S. Public Views on Effectiveness & Practicality of 9 Actions



Economic Realities Going Forward

- Outcomes will only partially align with best or optimal AW outcomes
  - Economic &/or political optimality will trump “AW optimal”
  - Public will give license to utilize only a subset of available production options that ‘technically work’ (CFI quote…)
  - Vote-buy disconnect will persist
    - Short-term “unfunded mandates” will continue…
- Not unique to AW: food safety, environment,…

Economic Implications of AW Situation: Livestock Producers & Industry

- "Unfunded mandate"
  - Change is required yet not immediately paid for
    - Reduces supply (e.g. contraction of industry)
- Larger average size?
  - likely an unintended consequence
- State-by-state comparative advantage changes
  - Movement in production centers over time?
    - "In-fighting" spatially within species
- Global comparative advantage changes?
  - global demand growth critical to benefit from…

Economic Implications of AW Situation: General Public (Consumers & Citizens)

- Heterogeneity of impacts warrant noting...
  - Typical consumer
    - not WTP premium yet higher prices follow prod. costs
  - Typical resident
    - Absorbs tax implications of enforcement (opp. costs)
  - Highly concerned consumer likely better off *relative to typical*
    - ***But*** differentiation, labeling, etc. alternatives do exist…

Economic Implications of AW Situation: Government

- Global comparative advantage changes?
  - Implications for meeting food export targets
  - Reduced industry base for tax revenue
- Tax implications
  - Enforcement & oversight expenses follow passing ballots, legislative changes, etc.
- School lunches – costs of protein provision…

Economic Implications of AW Situation: Society

- Society always varies “weights” placed on producer, consumer, citizen, and central gov’t impacts when assessing change…

- R&D investment restrictions?
  - Food security (2050 challenge) implications
  - Likely similar impacts on meeting food safety, climate change, etc. challenges

Tonsor's Overall Take

- AW is one of several "social challenges" here to stay
  - Public perceptions frequently drive change
  - Trend of pressure coming from sources "outside the retail shelf" also likely here to stay
- Recall theme, need to identify and improve connection of producers and consumers w/r/t AW
- I wish "KISS" applied but it doesn't:
  - Many more questions than answers currently…

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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