

Financial and Production Implications of Animal Welfare Legislation

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Overview

- Quick overview of some new research since last year's presentation
- Outline of industry & producer financial aspects to consider w/r/t recent MI legislation & phase out of gestation stalls

Demand Impacts of Media Attention to Animal Welfare

- Tonsor & Olynk Working Paper
 - Small, but negative impacts on meat demand
 - Cross-species spillovers exist
 - Demand impacts last 1-2 quarters
- Implications:
 - “Tune of the press” impacts demand
 - Collaboration across species is important

Demand Impacts of Media Attention to Animal Welfare

- Lusk Working Paper
 - 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

Comparative Advantage/Disadvantages: Regional Differences

- Initiation of phasing out crates/cages varies across states
- Timelines of implementation vary across states
- Facility ages are largely unknown...
- Short-run (assuming \$0 WTP) comparative advantage lies with:
 - states/regions not implementing change
 - of those implementing change, those with older facilities
- Longer-run implications:
 - ceteris paribus: beef/poultry gain; industry size increase
 - processors/retailers may cause entire industry to change, even if representative consumer isn't WTP

Drivers of Transition Cost

- Feasibility of retrofitting existing stall facilities vs. building new facilities
 - Current age, condition, and site details
 - Useful life assumptions: 15 – 25 yr estimates
- Need/desire to keep same # of sows
- Time available to make adjustments
 - MI=10 yrs; CA=6 yrs
- Variable costs & production impacts
 - Farrowing rates, breeding rates, etc.
- Learning Curve of Management & Labor
 - i.e. ESF requires CPU knowledge

Cost of Switching from Sow Stalls to Group Housing (Brian Buhr 07')

- No information known on facility age
 - Critical driver of comparative advantages in industry adjustments
 - For instance: Seems likely that NC barns are older (moratorium) and OK barns are newer (recent expansion)
- Assumes 12% of sows are in non-stall inventories
- Cautions readers as information is from small sample (targeted phone interviews) and building designs/assumptions were not commercially tested...

Cost of Switching from Sow Stalls to Group Housing (Brian Buhr 07')

- Productivity differences/assumptions (e.g., farrowing rate) drive NPV conclusions more than capital costs of adjustment (25 yr NPV analysis)
- Suggest retrofitting, rather than building a new barn, as long as existing stall barn is under 21 years of age

New Facility Cost Comparisons – 2,400 Sows (Buhr 2007)

- Stall Facilities
 - \$1,425/sow
- Small Pen (5-6 hd/pen) Trickle Feed
 - \$1,568/sow [20 sq ft/sow]
 - 20% more building square footage to get same # of sows as stall system
 - Equipment costs decrease relative to stalls
- Large Pen (66 hd/pen) Electronic Feeder
 - \$1,277/sow [18 sq ft/sow]
 - Same building footprint as stalls & walkways
 - Less equipment than small pens & stalls = lower building cost
 - Technically more advanced = more skilled labor

Estimates of Converting Stall Buildings (Buhr 2007)

- Converting stalls to pens in an existing barn = \$150/sow
- A new barn would likely be added to keep same # of sows as stalls if a small pen design was selected
- Assuming 20 sq ft/sow, total conversion cost of a 2,400 sow site to small pens (5-6 hd) = \$731,429

Lammers et al. (2007)

- Compared sow stalls and group housing in hoop barns
- Total cost per weaned pig were \$34.28 (stalls) & \$33.09 (hoop barn)
 - Driven by investment costs (\$9.13/pig in stalls vs. \$7.59/pig in hoop barn)
 - Variable costs higher in hoop barns (\$25.55/weaned pig vs. \$25.15)
- Highly unlikely that hoop barns will be the main replacement for sow stalls...

Impact of Sow Housing on Labor Requirements (Baidoo, 2007)

- Electronic Sow Feeder vs. Stalls
 - Labor must be more skilled
 - Basic CPU understanding for feed system
 - Estimates an extra 15 minutes are needed to check 50 sows [double check CPU w/r/t feed] in groups
 - @ \$15/hour = \$27.45/sow/year

Many Pieces of Missing Information

Examples Include:

- Consumer/resident perceptions of alternatives
 - How do +/-6 sow/pen, +/-70 sow/pen, hoop, and pasture systems compare? Will markets differentiate between practices?
- If removal of stalls increases farm size, will that trigger additional pressure from consumers/residents?
- No assessment of practical transitional costs of 4-6 months needed to retrofit a barn from stalls to groups...
- Estimating consumer & producer impacts
 - Farm size, facility age, region of production, etc. drive diverse producer impacts
 - Preferences, perceptions, meat consumption habits, and governmental resource allocation preferences drive consumer & resident impacts

Notable Existing Resource

- National Pork Board's Sow Housing Calculator

- <http://www.pork.org/documents/News/Sow%20Housing%20Alternatives%20Calculator%20-%20Don%20Levis.doc>

QUESTIONS

- Tonsor's website:
 - <http://www.msu.edu/user/gtonsor/>