



Results from Extension agent and Agribusiness surveys, ongoing work, and thoughts for consideration...

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Seminar on Value of USDA Data Products

Organized by the Council on Food, Agricultural and Resource Economics (C-FARE)

Location: Patriot's Plaza

355 E Street SW, Washington DC, 20024

Patriots Plaza III

Date: May 16, 2013, 9am-4pm

KANSAS STATE UNIVERSITY



Recent and Ongoing Research

- Collaborators:

- J. Ross Pruitt



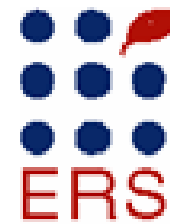
- Glynn T. Tonsor



- Kathleen R. Brooks



- Rachel J. Johnson



- Jim Robb



Overview of Recent Research

- Goal:
 - Improve understanding of preferences for USDA data to help enhance quality of existing reporting efforts
- Methods:
 - Surveyed Extension agents (NACAA), early 2012
 - 19% response rate (n=562)
 - Surveyed Outlook conference attendees, late 2012
 - 22% response rate (n=99)
 - Best-worst sequence of importance for USDA to maintain 12 examined reports



Reports Examined

- Following reports from USDA NASS included:
 - Grain Stocks
 - Cattle on Feed
 - Cattle (Inventory)
 - Cold Storage
 - Quarterly Hogs and Pigs
 - Broiler Hatchery
 - Chickens and Eggs
 - Crop Progress
- Following reports from USDA AMS included:
 - 5 Area Daily Fed Cattle Price
 - Daily Boxed Beef Cutout
 - FI Daily Livestock Slaughter
 - Weekly Superior Video Auction Report



Which of the following reports do you believe is most important and which is least important for the USDA to maintain for the U.S. livestock and poultry industry? (Check only one report as the most important and one as the least important.)

Most Important		Least Important
<input type="checkbox"/>	<p style="text-align: center;">Weekly Crop Progress (information on livestock pasture and range conditions; and planting, emergence, harvest progress, and condition of field crops)</p>	<input type="checkbox"/>
<input type="checkbox"/>	<p style="text-align: center;">Monthly Cattle on Feed (number of head placed, marketed, and total on feed of 1,000+ head feedlots)</p>	<input type="checkbox"/>
<input type="checkbox"/>	<p style="text-align: center;">Monthly Cold Storage (information on stocks of red meat and poultry in public freezers)</p>	<input type="checkbox"/>
<input type="checkbox"/>	<p style="text-align: center;">Daily 5 Area Fed Cattle Prices (prices for fed cattle sold in major feeding regions)</p>	<input type="checkbox"/>
<input type="checkbox"/>	<p style="text-align: center;">Daily Boxed Beef Cutout (information on the number of choice and select loads sold and corresponding price for delivery 0-21 days in advance)</p>	<input type="checkbox"/>
<input type="checkbox"/>	<p style="text-align: center;">Quarterly Hogs and Pigs (information on the number of hogs farrowing in the quarter and weight breakdown of market ready hogs)</p>	<input type="checkbox"/>
<input type="checkbox"/>	<p style="text-align: center;">Monthly Chickens and Eggs (information on U.S. table egg and broiler layers, pullets, and egg production)</p>	<input type="checkbox"/>



NACAA Relative Importance of USDA Reports

Report	Block 1	Block 2	Block 3
Grain Stocks (base report)	13.5% (2)	15.0% (3)	13.0% (2)
Crop Progress	42.3%* (1)	24.8% (1)	52.7%* (1)
Cattle on Feed	13.2% (3)	22.1%* (2)	12.4%* (3)
Daily FI Slaughter	8.5%* (4)	6.5%* (6)	3.9%* (6)
Daily 5 Area Fed Cattle Price	7.2%* (5)	9.7%* (5)	5.3%* (5)
Cattle (Inventory)	5.8%* (6)	11.1%* (4)	6.7%* (4)
Hogs and Pigs	3.3%* (7)	3.8%* (7)	2.1%* (7)
Daily Boxed Beef Cutout	1.9%* (8)	2.6%* (8)	1.2%* (8)
Cold Storage	1.6%* (9)	1.7%* (9)	0.9%* (9)
Chickens and Eggs	1.1%* (10)	0.9%* (11)	0.6%* (11)
Superior Video Cattle Auctions	1.0%* (11)	0.6%* (12)	0.6%* (12)
Broiler Hatchery	0.8%* (12)	1.0%* (10)	0.7%* (10)
Number of Respondents	198	184	180

Rankings in parentheses; * denotes significantly different from Grain stocks report



Relative Importance by Extension Responsibility

Report	Crop Agents	Livestock Agents	Other Agents
Grain Stocks (base report)	19.2% (2)	10.2% (3)	14.7% (2)
Crop Progress	56.7% (1)	35.6% (1)	52.6% (1)
Cattle on Feed	8.7% (3)	21.0% (2)	7.2% (3)
Daily FI Slaughter	2.8% (6)	6.1% (6)	5.7% (4)
Daily 5 Area Fed Cattle Price	3.9% (4)	8.4% (5)	4.5% (5)
Cattle (Inventory)	3.9% (5)	10.2% (4)	4.3% (6)
Hogs and Pigs	2.0% (7)	2.8% (7)	3.8% (7)
Daily Boxed Beef Cutout	0.9% (8)	2.1% (8)	1.5% (10)
Cold Storage	0.7% (9)	1.3% (9)	2.1% (8)
Chickens and Eggs	0.3% (12)	0.8% (11)	0.7% (12)
Superior Video Cattle Auctions	0.5% (10)	0.8% (10)	1.5% (9)
Broiler Hatchery	0.5% (11)	0.7% (12)	1.3% (11)
Number of Respondents	145	341	74

Rankings in parentheses; * denotes significantly different from Grain stocks report



Relative Importance of USDA Reports among Agribusiness Professionals/Market Analysts

Report	Block 1	Block 2	Block 3
Grain Stocks (base report)	10.3% (3)	15.8% (2)	25.9% (1)
Crop Progress	6.8% (7)	9.5% (5)	21.4% (2)
Cattle on Feed	20.1%*(1)	22.7% (1)	15.8% (3)
Daily FI Slaughter	8.5% (4)	6.5%* (8)	4.7%* (6)
Daily 5 Area Fed Cattle Price	5.2% (8)	6.8%* (7)	1.8%* (11)
Cattle (Inventory)	7.6% (6)	10.6% (3)	6.4%* (5)
Hogs and Pigs	19.3%* (2)	10.0% (4)	10.6%* (4)
Daily Boxed Beef Cutout	7.8% (5)	9.1% (6)	4.0%* (7)
Cold Storage	3.9%*(11)	4.3%* (9)	2.1%* (10)
Chickens and Eggs	4.9%* (10)	3.3%* (10)	3.3%* (9)
Superior Video Cattle Auctions	0.4%*(12)	0.3%* (12)	0.2%* (12)
Broiler Hatchery	5.2%*(9)	1.1%* (11)	3.9%* (8)
Number of Respondents	37	29	33

Rankings in parentheses; * denotes significantly different from Grain stocks report



Summary and Implications

- Divergent opinions on relative importance; yet similar ordering rankings
 - NACAA: farm level information more valued
 - Agribusiness/Analysts: leading economic indicators more valued
 - » Highlights role of targeted stakeholders, objective function in making budget driven decisions, etc.
- Lack of relative preferences for pricing information
 - Focused on federal reports, not state level



Conclusions and Limitations

- Lower relative preference does NOT imply lack of importance or value
 - Who are clientele served?
 - Likely varied access to alternative data/info sources
 - Downstream information shapes decisions upstream (farm level)
 - Complementarity was not examined
- Costs to develop and disseminate surveys, compose reports, etc. varies yet was not examined



Related Concepts

- Things are only argued to “have value” to stakeholders when recognized
 - MCOOL (in)awareness = limited VOI
 - Many producers don’t know USDA data/information underlies graphs they see

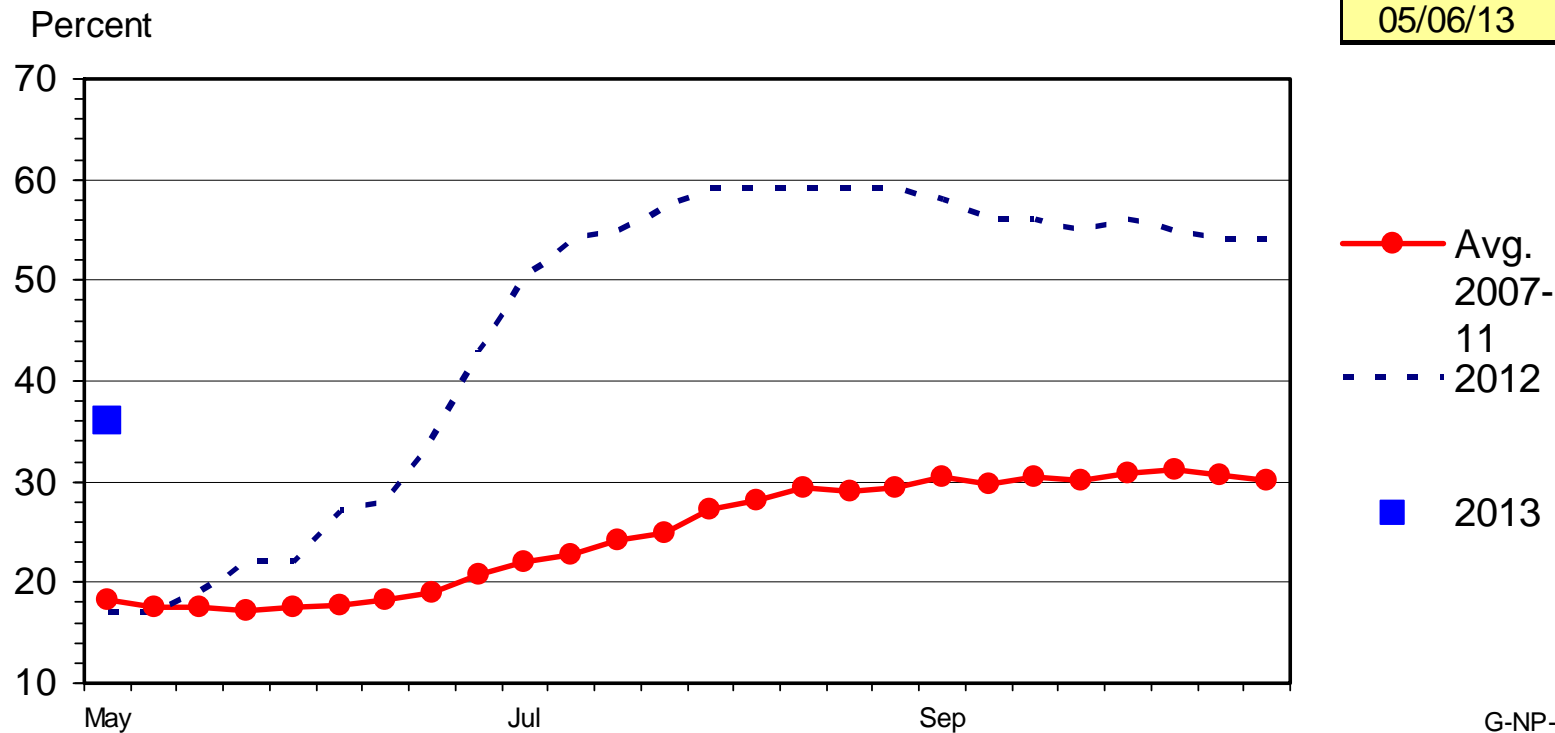


Example of 2 USDA reports
(Crop Progress; Cattle Inventory)
being jointly used to inform...

Beef Cows in states with 40% Poor to Very Poor		
Last year	Cows	% of Total
10/23/11	14862	48.31%
10/30/11	14185	46.11%
05/06/12	6161	20.03%
This Year		
10/21/12	21009	70.50%
10/28/12	21009	70.50%
05/06/13	15674	52.60%

US RANGE AND PASTURE CONDITION

Percent Poor and Very Poor, Weekly



Livestock Marketing Information Center

Data Source: USDA-NASS, Compiled & Analysis by LMIC

G-NP-30
05/06/13



Proposition for Thought: Think in “two dimensional space” to prioritize

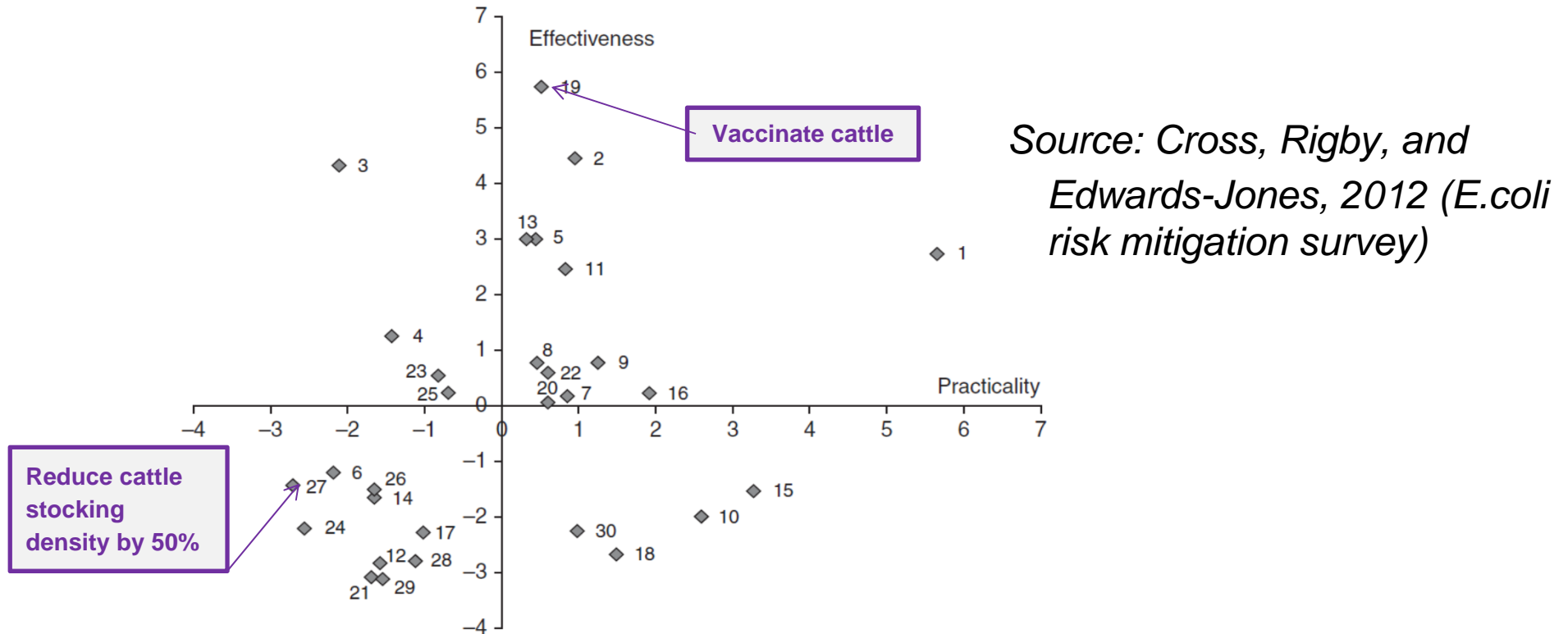


Fig. 1. Zero-centred scatterplot of mean effectiveness and practicality scores for the 30 control measures.

VOI application: existence of substitute info/data, effectiveness of extrapolating from other reports, practicality of reducing but maintaining, etc.

Proposition for Thought

- Consider breadth, depth, and precision metrics
 - Breadth: quantity of info maintained
 - # farms animals resided on, duration on each farm, etc.
 - *VOI of COF: categories of # marketed, # placed, # in inventory*
 - Depth: specific info that expands breadth
 - retail shelf to processor or all the way to cow herd?
 - *VOI of COF: category breakdowns by weight, state/region*
 - Precision: detail of tracking
 - Precise kill time and chain slot vs. “plant level” tracking
 - *VOI of COF: targeted accuracy, sample size, revision process*
- Value (and costs) = f(breadth, depth, precision)

Source: Tonsor and Schroeder, 2006; USDA, 2004



Propositions for Thought

- Substitutes should be identified
 - “public good” aspects vary by data/report
- Internal value and cost complementarities need to be assessed
 - Cattle Inventory & COF
 - Are Jan. Cattle Inv. costs higher given absence of July?
- Value changes over time
 - Increasing availability of scanner data, satellite imaging impact, etc.



Propositions for Thought

- Varied objectives and stakeholders of focus lead to different valuations and hence decisions for data/information provision:
 - Maximize typical U.S. agricultural producer's VOI given budget constraints?
 - Maximize typical U.S. livestock producer's VOI given budget constraints?
 - Minimize maximum loss of Information given budget constraints
 - Minimize RMSE of Information loss given budget constraints



Questions, thoughts, and suggestions are welcome...

This presentation is available in PDF format at:

<http://www.agmanager.info/about/contributors/individual/tonsor.asp>

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