

Production and marketing data and information has been provided publicly by the U.S. Department of Agriculture to aid in the decision-making process of buyers and sellers of agricultural commodities. There is little information on the relative value of publicly funded agricultural reports by end users. An improved understanding of preferences for USDA data and information has the potential to allocate scarce public resources in a manner that enhances quality of existing reporting efforts and informs the public about current and future supplies of agricultural commodities.

The purpose of this study was to gain knowledge on the current preferences of agribusiness professionals and market analysts for USDA market data and information in the livestock and poultry sector. Surveying these individuals involved in the agricultural supply chain provided insight into the needs of marketing intermediaries and the clientele these individuals typically serve.

Data and Methods

The study was designed to determine the relative importance agribusiness professionals and market analysts place on livestock data collected and disseminated by the USDA's Agricultural Marketing Service or the National Agricultural Statistics Service by using best/worst scaling. Respondents to the electronically distributed questionnaire were provided a series of repeating questions asking them to choose the most important and least important report from a list of six to seven randomly selected reports. The reports included in the choices were:

- 1) USDA National Agricultural Statistic Service's Grain Stocks, which is published quarterly and includes information on stocks of grain in on- and off-farm storage.
- 2) USDA National Agricultural Statistic Service's Cattle on Feed, which is published monthly and includes the total number of cattle on feed that are placed and marketed in 1,000-plus head feedlots.
- 3) USDA National Agricultural Statistic Service's Cattle, which is published semiannually and includes information on the number of U.S. beef and dairy cattle, by class.
- 4) USDA National Agricultural Statistic Service's Cold Storage, which publishes monthly information on stocks of red meat, poultry and other food products in public freezers.
- 5) USDA Agricultural Marketing Service's 5 Area Daily Weighted Average Direct Slaughter Cattle Price, which includes prices and volumes of cattle sold in the major U.S. cattle feeding regions.
- 6) USDA Agricultural Marketing Service's National Daily Boxed Beef Cutout and Boxed Beef Cuts, which disseminates information on the number of choice and select beef loads sold and the corresponding prices for those loads.
- 7) USDA Agricultural Marketing Service's Estimated Daily Livestock Slaughter Under Federal Inspection, which includes the number of cattle, swine and sheep at federally inspected slaughter plants.

8) USDA National Agricultural Statistic Service's Quarterly Hogs and Pigs, which contains information on the number of hogs farrowing in the quarter and weight breakdowns of market-ready hogs.

9) USDA National Agricultural Statistic Service's Broiler Hatchery, which is published weekly and contains information on the number of broiler egg sets and chick placements in the 19 leading states for broiler production.

10) USDA Agricultural Marketing Service's Superior Video Cattle Auction Feeder Cattle Weighted Average Report, which is published weekly and contains information on sales from the previous week aggregated by region.

11) USDA National Agricultural Statistic Service's Chickens and Eggs, which is published monthly and contains information on U.S. table egg and broiler layers, pullets and egg production.

12) USDA National Agricultural Statistic Service's Crop Progress published weekly throughout the growing season and containing information on livestock pasture and range conditions and conditions of field crops.

The questionnaire was electronically distributed to professionals in agribusiness and/or market analysts. Approximately 470 email addresses were obtained from a list of recent attendees at a major ongoing national professional agricultural outlook conference conducted for economists and market analysts from agribusiness and public sector institutions². The response rate was 21.8 percent after accounting for undeliverable email addresses. Selected summary statistics are shown in Table 1.

Respondents were primarily male (88 percent), with averages of 12.2 years in their current positions and 24.1 years total in agriculturally related positions. The nature of those positions primarily were agribusiness, consultants and others for a combined 67 percent of respondents. Respondents who listed "other" primarily were employed in academia/Cooperative Extension Service or the federal government. The principal responsibility of respondents was general/multiple commodities (31 percent) followed by beef cattle (24 percent).

²To protect confidentiality of respondents, the specific outlook conference is not provided.

U.S. Census Bureau regions were used to determine regions and are defined in the footnote to Table 1. The majority of respondents were in the midwestern and western regions of the United States (72 percent). Thirty-four percent of respondents were directly involved in a farming operation. Of the 18 percent of respondents directly involved in a livestock or poultry operation, only 8 percent purchased a private data or information subscription such as CattleFax, DTN or Feedstuffs. Sixteen percent of respondents were directly involved in a crop farming operation, but only 3 percent of those purchased a private data or information subscription.

Best/worst scaling was used to determine the preferences respondents had for publicly available USDA data. Respondents randomly received one of three versions of the questionnaire, which varied in the number of questions posed and reports included per question. This type of analysis is described in detail in Lusk and Briggeman (2009) and was used by Pruitt et al. (2012) in a similar analysis of county Extension Service agents. Results were estimated using a random parameters logit model. Statistical tests determined there were significant differences between the versions used in this analysis.

Results and Discussion

The importance of each USDA report was estimated in relation to USDA National Agricultural Statistics Service's quarterly Grain Stocks report. Estimated logit regression coefficients have no natural economic interpretation, but the coefficients can be used to estimate shares of preference for each report. These shares are shown in Table 2, by treatment. The monthly Cattle on Feed report was the most important in two of the three treatments, with the quarterly Grain Stocks ranked as the most important in the other treatment. Although results from each of the three versions could not be statistically pooled, estimated shares of preference are similar across versions.

Results, in general, favored those reports that could be described as leading economic indicators (including Grain Stocks, Cattle on Feed and Hogs and Pigs). These reports provide information on the ability of the United States to feed its population, levels of supplies in storage and use in macroeconomic forecasting models. Less emphasis was placed on reports that contained farm-level pricing information (Superior Video Cattle Auctions summary report and 5 Area Daily Weighted Average Direct Slaughter Cattle Price). Respondents did not value information on the poultry industry to the degree of reports focusing on the cattle and hog industries. Respondents also were asked to identify the three reports they believed were the costliest for USDA to publish. More than 42 percent of respondents listed the quarterly Grain Stocks as the costliest to produce, followed by the weekly Crop Progress. Respondents felt the daily total of federally inspected slaughter was the costliest livestock-oriented report to produce, with the monthly Cold Storage report the least costly for USDA to publish.

The final question posed to respondents was to rank the substitutability of existing USDA reports with data and

information currently available in the marketplace. Each of the 12 reports was listed, and respondents were able to rank the amount of currently available substitutable information on a ranking scale of 1 (no substitutable information currently available) to 5 (a large amount of substitutable information currently available). With the exception of price-oriented reports, the average for most reports was approximately 2, suggesting respondents feel there is very little substitutable information in the marketplace for most of the reports included in this questionnaire. ANOVA tests confirmed there were no differences in means across the three questionnaire blocks.

Implications

Compared to the Extension Service agents surveyed in Pruitt et al. (2012), agribusiness professionals and market analysts expressed preferences for those reports that focus on leading economic indicators regarding the ability of the United States to provide enough food and fiber for its population. As with the Extension agents in Pruitt et al. (2012), agribusiness professionals and market analysts did not express strong preferences for reports focusing on the poultry industry. This could be a reflection of the concentration and coordination of the broiler chicken industry and respondents' lack of regular interaction with contract broiler growers. Respondents to the current questionnaire also expressed stronger preferences for information on the hog industry than did Extension agents.

Agribusiness professionals and market analysts were not as focused on pricing reports published by USDA. This could be a reflection of the importance of the Market News Service, which was not included in this study. The current study was focused solely on those reports fully financed by the federal government. Relative to the other reports included in this questionnaire, the fact pricing reports were seen as those with the most substitutable information currently available in the marketplace is not a surprising result, given respondents were not asked whether the information was produced by a public or private entity.

Although some reports were not preferred by respondents, this does not mean the information contained in those reports is not important. The results in this survey differ from the Extension Service agents surveyed in Pruitt et al. (2012), as was expected. This is primarily due to the target audiences for each of the questionnaires serving different clientele groups. Furthermore, the lack of substitutability expressed by respondents for many of the reports included in this questionnaire highlights that each report is important, even if it is not the most important.

As with the survey of Extension Service agents described in Pruitt et al. (2012), this questionnaire did not account for the cost to develop, collect and disseminate information on a specific topic by the USDA. The advent of the Internet has reduced the cost of dissemination for USDA reports, but there is still a considerable investment in people and other resources to generate these market-sensitive reports.

Table I. Summary Statistics for Selected Variables

Variable	Mean	Standard Deviation	Minimum	Maximum
Female	0.12	0.33	0.00	1.00
Age	49.01	12.58	25.00	69.00
Years in Current Position	12.22	10.95	0.00	40.00
Years in Agriculturally Related Positions	24.08	13.39	0.00	52.00
Nature of Current Position				
Agribusiness	0.20	0.40	0.00	1.00
Brokerage	0.05	0.23	0.00	1.00
Consultant	0.20	0.40	0.00	1.00
Finance	0.08	0.27	0.00	1.00
Journalist	0.04	0.21	0.00	1.00
Trade/Commodity Association	0.08	0.27	0.00	1.00
Other	0.27	0.45	0.00	1.00
Primary Commodity Focus				
Beef Cattle	0.24	0.43	0.00	1.00
Crops	0.19	0.39	0.00	1.00
Dairy Cattle	0.05	0.23	0.00	1.00
Hogs	0.04	0.21	0.00	1.00
Poultry	0.07	0.25	0.00	1.00
Multiple Commodities	0.31	0.46	0.00	1.00
Food	0.02	0.15	0.00	1.00
Region				
Northeast ¹	0.07	0.25	0.00	1.00
Midwest ²	0.42	0.50	0.00	1.00
Southern ³	0.20	0.40	0.00	1.00
Western ⁴	0.30	0.46	0.00	1.00
International	0.02	0.15	0.00	1.00
Directly Involved in Farming Operation:				
Livestock	0.18	0.38	0.00	1.00
Crop	0.16	0.37	0.00	1.00
Livestock Producers Purchasing Data ⁵	0.08	0.27	0.00	1.00
Crop Producers Purchasing Data ⁵	0.03	0.18	0.00	1.00

¹ Northeast region defined as Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.

² Midwest region defined as Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin.

³ Southern region defined as Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, Virginia and West Virginia.

⁴ Western region defined as Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

⁵ Of respondents who farm, percentage who purchase non-USDA data.

Table 2. Relative Importance of USDA Reports Among Agribusiness Professionals and Market Analysts

	Block 1	Block 2	Block 3
Quarterly Grain Stocks (base report)	10.2 percent	15.8 percent	25.9 percent
Weekly Crop Progress	6.8 percent	9.5 percent	21.4 percent
Cattle on Feed	20.1 percent*	22.7 percent	15.8 percent
Daily FI Slaughter	8.5 percent	6.5 percent*	4.7 percent*
Daily 5 Area Fed Cattle Price	5.2 percent	6.8 percent*	1.8 percent*
Semiannual Cattle Inventory	7.6 percent	10.6 percent	6.4 percent*
Quarterly Hogs and Pigs	19.3 percent*	10.0 percent	10.6 percent*
Daily Boxed Beef Cutout	7.8 percent	9.1 percent	4.0 percent*
Cold Storage	3.9 percent*	4.3 percent*	2.1 percent*
Monthly Chickens and Eggs	4.9 percent*	3.3 percent*	3.3 percent*
Superior Video Cattle Auctions	0.4 percent*	0.3 percent*	0.2 percent*
Weekly Broiler Hatchery	5.2 percent*	1.1 percent*	3.9 percent*
Number of Respondents	37	29	33

* Denotes the relative importance of a report is significantly different from the reference report of quarterly Grain Stocks at the 5 percent level in each survey version.

Table 3. Perceptions of Costliest USDA Reports to Publish and Degree of Substitutability of Existing USDA Reports

Report	Percentage of Respondents Rating Report as Costly to Produce ¹	Substitutability of Report ²	
		Mean	Standard Deviation
Quarterly Grain Stocks	42.4 percent	1.92	1.21
Weekly Crop Progress	39.1 percent	2.09	1.08
Cattle on Feed	21.7 percent	2.07	1.17
Daily FI Slaughter	38.0 percent	1.93	1.04
Daily 5 Area Fed Cattle Price	31.5 percent	2.67	1.29
Semiannual Cattle Inventory	28.3 percent	1.86	1.23
Quarterly Hogs and Pigs	22.8 percent	1.81	1.03
Daily Boxed Beef Cutout	33.7 percent	2.30	1.20
Cold Storage	6.5 percent	1.92	1.05
Monthly Chickens and Eggs	7.6 percent	2.03	1.10
Superior Video Cattle Auctions	18.5 percent	3.36	1.26
Weekly Broiler Hatchery	9.8 percent	1.96	1.03

¹ Percentage of respondents who ranked report as one of three most costly for USDA to produce.

² Amount of substitutable information currently in the marketplace with 1 being no information and 5 being a large amount of substitutable information.

Note: ANOVA tests confirmed means were not significantly different across the three questionnaire versions.

References

Lusk, J.L., and B.C. Briggeman. 2009. "Food Values." *American Journal of Agricultural Economics* 91,1 (February):184-96.

Pruitt, J.R., G.T. Tonsor, K.R. Brooks, and R.J. Johnson. "County Extension Agent Preferences for USDA Market Information." Louisiana Agricultural Experiment Station Publication

Authors

J. Ross Pruitt, Assistant Professor, Department of Agricultural Economics and Agribusiness, LSU AgCenter

Glynn T. Tonsor, Associate Professor, Department of Agricultural Economics, Kansas State University

Kathleen R. Brooks, Assistant Professor, Department of Agricultural Economics, University of Nebraska

Rachel J. Johnson, Economist, USDA Economic Research Service

The views expressed here are those of the authors and may not be attributed to the Economic Research Service or the U.S. Department of Agriculture.

Visit our website: www.LSUAgCenter.com

Louisiana State University Agricultural Center

William B. Richardson, Chancellor

Louisiana Agricultural Experiment Station

John S. Russin, Vice Chancellor and Director

Louisiana Cooperative Extension Service

Paul D. Coreil, Vice Chancellor and Director

Pub. 3230 Online Only 02/13

The LSU AgCenter is a statewide campus of the LSU System and provides equal opportunities in programs and employment.