

U.S. consumers are expressing increasing interest in the production practices used in modern food production. An issue rapidly increasing in importance to consumers is the treatment of farm animals raised for meat, milk, and eggs destined for human consumption. Recently U.S. residents in several states have signaled concern for animal well-being through ballot initiatives that prohibit the use of particular practices (i.e., gestation crates/stalls in swine production).

However, a critical question remains: what, if any, influences do animal-welfare concerns have on aggregate consumer demand for meat? This publication summarizes findings and implications from a broader study that sought to address this issue. Additional information on the study is available at [www.agmanager.info](http://www.agmanager.info).

## Methods

In this study, it was assumed that publicly available information influences consumer perceptions of meat product quality, which in turn influences consumption decisions. In the analysis of U.S. meat demand, consumer perceptions of product quality are presumed to be potentially influenced by media information regarding animal handling and welfare concerns.

An extensive search of top U.S. newspapers and magazines was used to develop indices reflecting public information on animal welfare that U.S. consumers received from 1982 to 2008. These indices are presented for the 1999 – 2008 period in Figure 1.

Each index has increased over time with notable increases in recent years. As expected, the index gener-

ated for articles references beef (or cattle) and animal welfare issues (*BEEF AW INDEX*) clearly experienced a sharp increase early in 2008 when the highly publicized Westland/Hallmark event occurred in Chino, California.

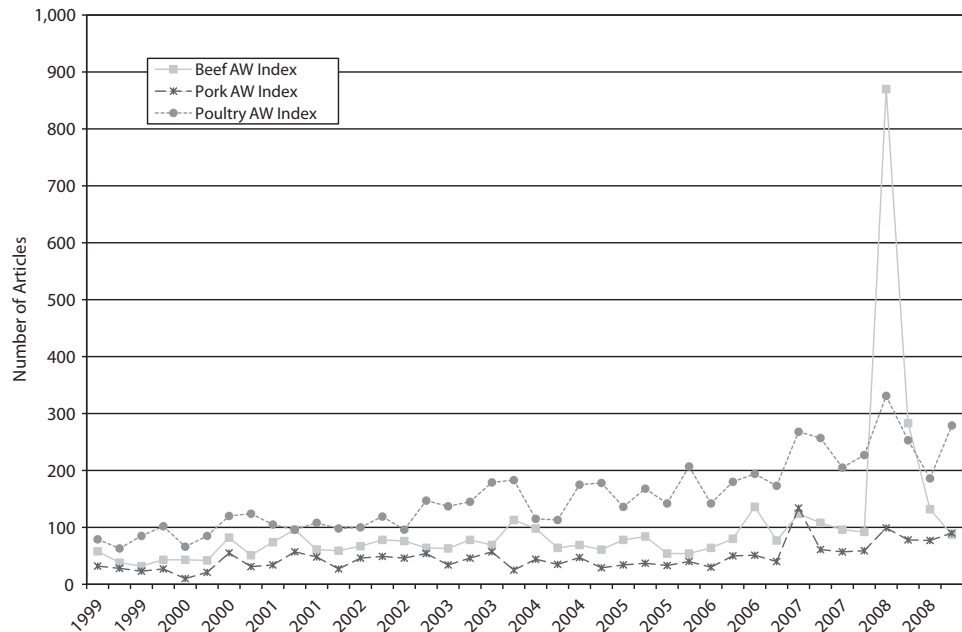
These media indices were incorporated in a meat demand system estimated to identify the effect of animal welfare information published by U.S. media sources on exercised beef, pork, poultry, and non-meat food demand of the typical U.S. consumer for 1982 – 2008.

## Results

The estimated economic model suggests media attention to animal welfare issues has not directly impacted beef demand, yet that attention has reduced both pork and poultry demand. The analysis also

suggests media articles influence meat demand for both the quarter they are released and the subsequent quarter following the article's publication.

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**Figure 1.** Species-Specific Media Indices (Number of Articles, 1999 – 2008 period).

While estimated animal welfare elasticities are notably lower than price and expenditure elasticities, this should not be mistaken for economic insignificance. For instance, between the first quarter of 1999 and the fourth quarter of 2008, the pork and poultry animal welfare indices increased by 181.3 percent and 253.2 percent, respectively. Using the estimated long-run elasticities it is suggested that pork and poultry demand increases over the last decade would have been 2.65 percent and 5.01 percent higher, respectively if media attention in the fourth quarter of 2008 was at equivalent levels as the first quarter of 1999. While the point estimates of these elasticities are smaller than price and expenditure effects, over a longer period of increasing media attention to animal welfare issues, they convey notable economic impacts to the U.S. livestock industry.

While beef demand is found to not be directly influenced by increased media attention to animal welfare issues, this should not be interpreted as the beef industry being immune. In particular, this study found increased media attention caused a reallocation of expenditures to nonmeat food rather than real-locating expenditure across competing meat products. Accordingly all three evaluated livestock and meat industries stand to lose if total meat expenditure is reduced as consumers obtain increasing amounts of media information regarding animal well-being and handling issues. More narrowly, if consumers make budget adjustments in favor of nonmeat products, the aggregate meat market loses the ability to internally compete for those funds.

## Conclusions and Implications

The key findings of this study can be summarized as:

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- As a whole, media attention to animal welfare has significant, negative effects on U.S. meat demand;
- Direct effects of media attention are primarily associated with pork and poultry demand;
- Increasing media attention to animal welfare issues triggers consumers to purchase less meat rather than reallocate expenditures across competing meats.

Core implications of these main findings:

- U.S. livestock producers and industry leaders must recognize meat demand impacts exist in discussions and negotiations regarding legislatively triggered production practice requirements;
- Influence of media on total meat expenditure suggests beef, pork, and poultry producers may be well served by collaborating in recognizing and responding to changing societal pressures regarding animal well-being.

While this study provides the first assessment of how media attention on animal welfare information influences consumer meat purchases, much additional research is needed. Perhaps most importantly, the changes to estimated consumer demand need to be paired with production cost impacts associated with adjustments in on-farm production practices to derive estimates of net economic influences on consumers, livestock producers, and society in general. This study supports this and related evaluations to improve the understanding of how increasing pressure to adjust on-farm practices to reflect societal pressures regarding animal well-being is economically impacting market participants throughout the livestock and meat-supply chain.