USDA

United States	Grain Inspection,	Stop 3601
Department of	Packers and Stockyards	1400 Independence Ave., SW
Agriculture	Administration	Washington, DC 20250-3601

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R. M. Thornsberry, D.V.M.
President, R-CALF USA Board of Directors
R-CALF United Stockgrowers of America
Post Office Box 30715
Billings, Montana 59107

Dear Dr. Thornsberry:

Thank you for your letter of May 23, 2007, regarding some of the findings of the recent study of alternative marketing arrangements (AMA) for livestock that was conducted by Research Triangle Institute (RTI) under contract with the Grain Inspection, Packers and Stockyards Administration (GIPSA). In your letter you express concern about a pattern of practices conducted by the meat packing industry and request an investigation. In general I would like to note that since becoming Administrator, I have strengthened the regulatory enforcement of the Packers and Stockyards Act. For example, cases referred to the Office of the General Counsel for litigation increased 100 percent in 2006 over 2005, and 2007 is set to also show an increase of 134 percent relative to 2005. Actual complaints issued against entities found in violation of the Packers and Stockyards Act have increased also with a 39 percent increase in 2006 compared to 2005 and with 2007 set to show an increase of 152 percent over 2005.

The specific concern you state is that RTI findings show that "the prices paid by meat packers for cattle sold on a live weight valuation basis are higher than the price paid by meat packers for cattle sold on a carcass weight basis. Second, it appears the prices paid for cattle that sold on a live weight basis are also higher than prices paid for cattle sold a cash grid with quality and yield premiums and discounts." You conclude these prices lowered producer revenue more than $200 million in the period studied by RTI.

We appreciate your interest and diligence in your review of the findings of the study. The conclusions you reach are derived from one particular econometric equation reported in table 2-24 on page 2-41 of the report *Volume 3: Fed Cattle and Beef Industries Final Report*. An economic study such as the RTI study of marketing practices in the livestock-meat industries is a complex task in which the analyst must make many measurements before constructing a final model that integrates all the features learned into a single model. Land surveyors do the same thing when making a map.

In the RTI study there were roughly 100 econometric equations calculated, each taking differing measurements of the economic landscape to map out the economic effect of different marketing practices. Some of these equations were single statistical equations used for partial analysis and others were computed as systems of multiple interconnected equations for general analysis. Each of the equations contains variables that control or

account for factors that affect the dependent variable. The single equation models convey an association, i.e., a change in the independent variable is linked to changes in the dependent variable without allowing compensating adjustments. In economies as complex as the livestock-meat market, however, the prices and quantities interact and simultaneously adjust to determine one another. To account for this in the study, the results of the individual equations guided the construction of an overall multi-equation model that links stages of production and consumption with an equilibrium condition. The equilibrium allows for the potential benefit or cost to different participant groups in the economy such as producers or consumers to be measured simultaneously. I believe your interpretation of the single equation, and its coefficients from the equation you cite, fails to understand both the role of controlling variables and the need to refer to the general equilibrium model when making economic inferences about how industry-wide business practices affect livestock producers.

The single equation you cite, a demand equation, was used to measure the relationship between quantity of AMA utilization and average cash market prices for direct trade transactions. To make this measure, the main independent variables in the equation were "utilization_ama" and "showlist," which together represented the volume of AMA use, while the dependent variable was carcass-equivalent price. In order to control for price distorting effects of other variables as they measure the effects of quantity change on price, additional independent control variables were added into the equation. The control variables included the variables you draw attention to on alternate pricing methods. In particular, live weight pricing, dressed weight pricing without a grid, and dressed weight pricing with a grid. These additional independent variables are categorical variables indicating the presence or absence of a pricing method. The purpose of these variables is to "net out," or control for, the *average* differences in price paid among alternative pricing methods, so that the remainder of the variation in average carcass equivalent price could be attributed to differences in the quantity of AMA use. During the time period the study analyzed, cattle supply was generally tight, and the observed price differences are conventionally thought to be a result of differences in risk-bearing for miscalculations in the dressing yield, grade, and other quality differences. The equation was not designed nor intended to describe the variation in effects of discounts and premiums, it merely determined the average effect in order to isolate the separate effect of quantity of AMA use on price, the objective of the equation.

When drawing the inferences based on the independent control variables your analysis neglects statistically what are termed the "third order," or "skew," characteristics of the price data related to these control variables. The variable in which these characteristics are the most commonly observed is the grid pricing variable. Specifically most grid pricing schedules generally include discounts for undesirable quality attributes that are greater than premiums for equivalent, but opposite, desired qualities.
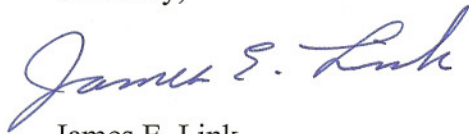
Having neglected the skew, taking the coefficients computed on the pricing method control variables and using these to draw a direct inference on the effect they have on livestock seller revenue furthers the misunderstanding. The error is compounded by making a direct inference about effect of price methods on livestock seller revenues as if

it could be experienced by the seller independent of the procurement method. An inference about producer economic revenues must use the multi-equation equilibrium model that integrates all the information from the individual measurements into a single model. Specific to your error, the livestock seller's financial position is not influenced solely by the pricing method but by the choice of marketing arrangement used that combines pricing and procurement method into a single transaction. The model that makes these integrative measurements in the RTI study is in chapter 6 of the beef volume, and in general these models find that marketing arrangements increase producer revenues.

In sum, normal known market fundamentals explain the coefficients in the single equation you question. More importantly, the full analysis using a multi-equation equilibrium model does not yield the results about which your letter expresses concern. The study was the most comprehensive research to date on livestock-meat marketing, and it found in the aggregate marketing arrangements benefit livestock producers and consumers. I point out that the Livestock and Market Information Center http://www.lmic.info/ will be posting a series of articles about the study. These articles will be independently reviewed by other knowledgeable economists and you may find these articles informative.

Thank you again for your comments. In view of the explanation provided in this letter, we do not agree that an investigation of packer pricing and/or contracting practices is required.

Sincerely,

James E. Link
Administrator