Packer Concentration, Captive Supplies and Fed Cattle Prices

Summarized by John D. Lawrence
Extension Livestock Economist
Director, Iowa Beef Center

Not a new issue

This squall between the packers and the producers of this country ought to have blown over forty years ago, but we still have it on our hands ....

Senator John B. Kendrick of Wyoming, 1919

Not a new issue

Only after considerable further investigation will we know whether or not reform in the packing industry is necessary. It is conceivable that such monopoly elements as exist yield desirable results. A less extreme possibility is that results are undesirable but not sufficiently bad to bother about.

Nicholls, William H. 1940. Market-Sharing in the Packing Industry. *Journal of Political Economy* 22:225-40.

Packer Concentration, Steer and Heifer Slaughter

	1976	1998
Plants 50,000+ hd	145	38
Million head	22.4	26.7
Plants 500,000+ hd	5	14
% of 50,000+ output	14.8	66.8
Average/plant	666,800	1,274,400
4 Largest firm share	25.1	80.0

Economies of Scale

- Larger plants have lower costs
- Larger plants also operate at higher plant utilization than smaller plants further lowering their costs
- Significant incentive to consolidate
  - Lower cost for large firms
  - Can bid higher prices to attract cattle
  - Draws cattle away from smaller firm and drives up its costs

Concentration and Price

- Reason for concern if over 4 firms have over 55-60% or the market
- Positive relationship between number of bids and prices
  - Regions with multiple bids had higher prices than regions with one bid
  - Regions with 5+ bids not significantly different from regions with 2-5 bids

Possible Solutions

- Ongoing and improved regulation
  - GIPSA changes will help
- Better information flow
  - Mandatory Price Reporting can help
  - Need more timely source of information
- Utilize professional marketers
- Electronic markets

Captive Supplies

The Grain Inspection Packers and Stockyards Administration (GIPSA) defines captive supply as livestock that is owned or fed by a packer more than 14 days prior to slaughter, livestock that is procured by a packer through a contract or marketing agreement that has been in place for more than 14 days, or livestock that is otherwise committed to a packer more than 14 days prior to slaughter.

Captive Supplies

Average Percent of Fed Steer and Heifer Slaughter by the 4 and 15 Largest Packers that was Captive Supply, 1990-98

	4 Packers	15 Packers
Cattle owned by packer	4.2%	4.2%
Forward contract or marketing agreement	16.7%	15.7%
Total captive supply	20.9%	19.9%

Grid marketing cattle

- **Fall into gray area**
  - Not negotiated price
  - Not scheduled 14 days in advance
- **AMS treated as “additional movement”**
  - Any non-cash transaction
  - Lumped grids, packer fed or financed, forward contract and marketing agreement together
  - Climbed from 19.6% when first reported to 32.4%, 34.9%, and 41.3% for 1998, 1999, 2000

GIPSA report 2002

- Reviewed 1999 reports and data
  - Examined individual transactions of the four largest beef packers
  - Interviewed the 15 largest packers regarding how they complete the required GIPSA reports.
  - Revised 1999 estimated of captive supplies up from 25.2% of their total slaughter to 32.3%.

GIPSA report 2002

- GIPSA discovered no evidence suggesting that the packers' errors in reporting captive supply were other than good-faith errors arising from the vagueness of GIPSA category definitions.
- GIPSA is proposing actions to ensure that such errors do not arise again.

Concerns over captive supplies

- Reduces competition for fed cattle on the spot market and reduces the aggressiveness of bidding for fed cattle when packers hold a captive supply of cattle and thus decrease prices they pay for cattle on the spot market.

Summarized in appendix to the GIPSA 2002 report

Concerns over captive supplies

- Because prices for many captive supply arrangements are calculated from formulas derived from spot market prices, some believe prices paid for all cattle are decreased by packers’ strategic use of captive supply to meet their slaughter needs.
- Packers may discriminate among producers by not offering captive supply agreements to all producers.

Summarized in appendix to the GIPSA 2002 report

Motivations for captive supplies

- Captive supply arrangements provide benefits to both producers and packers.
- They reduce transactions costs, better reward cattle of higher quality, reduce market risk, and increase access to financing.

Summarized in appendix to the GIPSA 2002 report

Captive supplies and prices

- **Elam, 1993**
  - Individual states varied from no price difference to lower prices ranging from \$0.15 to \$0.37/cwt.
- **Schroeder et al, 1993**
  - Small, \$0.15-0.31/cwt, but statistically significant negative relationship between captive supplies and cash prices.
- **Hayenga and O'Brien, 1992**
  - No conclusive evidence of a relationship between captive supplies and price

Captive supplies and prices

- **Ward, Koontz and Schroeder, 1998**
  - For the total inventory of captive supplies, the relationship was consistently negative. However, the impact was small and not economically significant. A 1,000-head increase in the total inventory of captive supply cattle was associated with a $0.01 per cwt or smaller decrease in spot market prices.

Captive supplies and prices

- **Ward, Koontz and Schroeder, 1998**
  - Impacts of different captive supply methods, were mixed.
  - The inventory of forward contracted cattle was associated with a ***generally positive*** effect on spot market prices.
  - For packer fed cattle, the inventory-price relationship was ***mixed negative and positive***.
  - The relationship for marketing agreement cattle was ***consistently negative*.**

Captive supplies and price

- **Parcell, Schroeder and Dhuyvetter 1997**
  - A 1% increase in captive supply shipments was associated with a $0.02/cwt and 0.03/cwt reduction in basis in Colorado and Texas.
  - Did not find a statistically significant impact for Kansas or Nebraska.

GIPSA: the *known* effects of captive supply on markets

- Negative statistical relationship between levels of captive supply and spot market prices paid by packers for fed cattle.
- *However, the studies* ***have not shown that increases in the use of captive supply cause spot market prices to fall****, or that packers' use of captive supply causes spot market prices to change.*

See GIPSA pp. 60-61 for summary

GIPSA: the known effects of captive supply on markets

- Relationship between captive supply and spot market prices differs according to the type of captive supply arrangement
  - Forward contracts mixed: negative, no effect, and positive
  - Marketing agreement generally negative
  - Packer fed mixed: negative and positive

See GIPSA pp. 60-61 for summary

GIPSA: the known effects of captive supply on markets

- The available research does not support the perception that packers decide the weekly levels and timing of captive supply deliveries.
  - Schroeter and Azzam found that under a marketing agreement, the feedlot chooses which week to deliver the cattle and how many cattle to deliver.
  - Then the packer chooses the specific day or days of the week for delivery.

See GIPSA pp. 60-61 for summary

Impact of captive supplies

- Price distortions of 3% or less were found in most studies, well short of regulatory agency standards related to non-competitive behavior
- However, small price impacts are magnified in narrow margin industries
  - $0.15-0.31/cwt on a 1200# steer in a $70 market is $1.80 to 3.72/head on $840 gross revenue.
  - It represents 12-25% of long run cattle feeding profits

Refernces

- Captive Supply of Cattle and GIPSA's Reporting of Captive Supply
  - http://www.usda.gov/gipsa/pubs/captive_supply/captive.htm
- Packer Concentration and Captive Supplies
  - http://agweb.okstate.edu/pearl/agecon/marketing/wf-554.pdf
- Fed Cattle Price Discovery Issues and Projections
  - http://agweb.okstate.edu/pearl/agecon/marketing/wf-550.pdf
- Summary of Results from USDA's Meatpacking Concentration Study
  - http://agweb.okstate.edu/pearl/agecon/marketing/wf-562.pdf