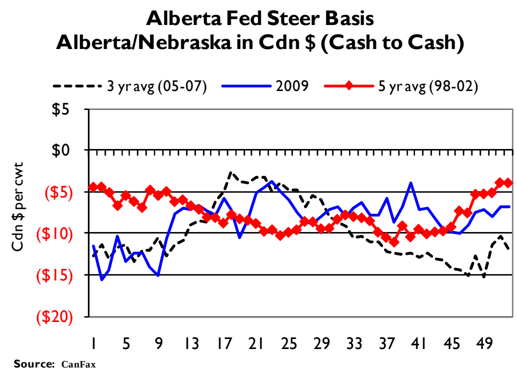
Market and Regulatory Factors Affecting the Canadian – U.S. Fed Cattle Basis

Background

The Canadian to Nebraska cash to cash basis is the difference between the Alberta or Ontario fed cattle cash price and the Nebraska cash price converted to Canadian dollar. The cash basis reflects local supply and demand situations as well as transportation and transaction costs incurred to get cattle from one destination to the other. This data series is followed closely as an indicator of the Canadian industries health in comparison to US counterparts. Prior to 2003 the North American market was highly integrated allowing prices to arbitrage between the two markets. At that time the AB/NE cash basis averaged $8/cwt ranging between $5 and $10/cwt with the basis being the widest in the summer months and narrowest in the winter months.



The AB/NE fed cattle cash basis saw significant variation from historical trends after the border reopened in 2005. The basis was been notably wider ranging from -$5 to -$20 and had a counter-seasonal trend, with a wider basis seen in the winter months versus in the summer months. There are several factors that have influenced Canadian fed cattle market dynamics in recent years, including increased transportation and labour costs, a stronger Canadian dollar and larger cow slaughter as well as numerous regulatory changes governing live cattle and beef entering the US, packer ownership, and new regulations affecting processing costs (e.g. different SRM removal and disposal requirements in Canada and the US). There has been significant uncertainty around the actual extent different economic and governmental factors have had on the cash basis and if they are permanent or temporary. Most recently, COOL has shifted the basis again. In an effort to identify market factors and other drivers influencing the fed cattle basis Canfax Research Services, with the support of the Ontario Cattlemen's Association, Alberta Beef Producers and Agriculture and Food Council, through the Agriculture and Agri-Food Canada's Advancing Canadian Agriculture and Agri-Food (ACAAF) Program, initiated a comprehensive research study to identify and measure the effect various drivers have had on the fed cattle basis.

Methodology

The study used two approaches. The first approach analysed the AB/NE and ON/NE cash basis using weekly live fed steer prices (CDN$/cwt) obtained from Canfax and the Livestock Marketing Information Centre controlling for the exchange rate, feed grains, local supply and demand situations, government regulations as well as structural changes that have occurred over the last 10 years. The second approach analyzed the AB/NE cash basis using lot close out data from 7 Alberta feedlots which included additional variables such as type of sale, pricing method, lot size (number of head), animal sex and weight, buyer, distance to packer, and export costs – a total of 4,067 useable sales records were obtained. The results from both approaches generally agreed with key economic and policy drivers showing similar impacts across both data sets. In addition, these two data sets with unique analytical models, tells us more than either data set alone.

Summary of Results

The factors that influence the basis also determine feedlot profitability and calf prices. Accurate basis information assists producers in making marketing decisions. Market Factors that were found to have a direct impact on the Alberta to Nebraska cash to cash basis included:

- US market influence – Due to trade and the ability to arbitrage prices US cattle prices are a significant driver of Canadian cattle prices. A $1/cwt increase in the Nebraska fed cattle price weakened the basis by $0.27/cwt. This suggests when fed cattle prices in general are high, the cash basis widens.
- Lot size – Packers prefer larger lot sizes to reduce search costs when buying. A transaction of 15 head had an approximately $1/cwt wider basis than a transaction of 500 head.

- Carcass weight – The basis narrowed as dressed weights increased from 600 lbs to 760 lbs by about $4/cwt, then widened as carcass weights moved beyond 760 lbs.
- Distance from the packer – As the distance fed cattle had to travel increased, prices decreased. However larger incremental changes in prices were seen over shorter distances. For example cattle shipped 300 km versus 100 km saw the basis widen $1/cwt, while the basis only widened $0.50/cwt for when cattle were shipped 700 km versus 500 km.
- Transportation costs – A $0.01/gallon increase in diesel price widened the basis by $0.01/cwt.
- Packer and feedlot Relationships – Which packer bought the cattle varied the basis by $7.50/cwt. In addition, the basis varied across feedlots by as much as $6.58/cwt.
- Slaughter ratios – In order to better understand the differences in local supply and demand dynamics a slaughter ratio was developed that looked at western Canadian fed cattle slaughter divided by western US fed cattle slaughter. When the ratio increased 1% it indicated tighter supplies in the US or stronger demand in Canada and when the ratio decreased 1% it indicated tighter supplies in Canada or stronger demand in the US. A 1% increase in the ratio of western Canadian fed cattle slaughter to western US fed cattle slaughter widened the basis by $0.12/cwt.
- Packer Utilization Levels - A 1% increase in slaughter capacity utilization in western Canada narrowed the basis by $0.07/cwt.

Figure 21. Effect of Lot Size on Transaction Basis

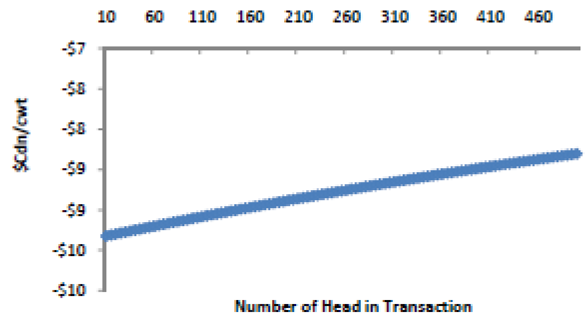


Figure 22. Effect of Animal Carcass Weight on Transaction Basis

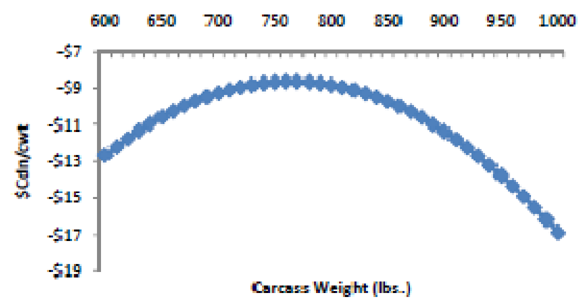
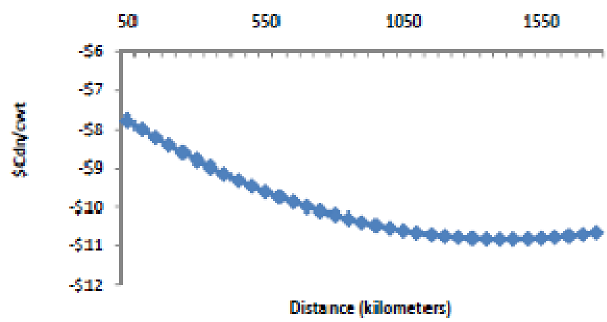


Figure 23. Effect of Distance from Feedlot to Packer on Transaction Basis



Government regulations that were found to have an impact on the fed basis included:

- The enhanced feed ban which increased Canadian slaughter costs compared to US packers widened the basis by $0.79/cwt.
- Rule II which resumed cattle and beef movement between Canada and the US for over thirty month cattle and product narrowed the basis by $3.83/cwt.
- In isolating the impact of COOL from other market factors the research estimates that the impact of COOL on the fed cattle basis in Alberta and Ontario resulted in the basis widening.

Implications:

- Fed cattle basis in Canada has become more volatile in recent times as a result of more dynamic market fundamentals across the two countries affecting fed cattle prices. This means that monitoring opportunities to sell cattle to U.S. plants, relative to added costs to export animals, has increased in importance. Furthermore, the opportunities for cattle exports might best be monitored on a transaction level in addition to watching weekly aggregate cash basis quotes.

- Basis forecasting is going to be more difficult under current market conditions than it used to be.
- Policies affecting cattle and beef trade flows with the U.S.; domestic regulations affecting beef processing in Canada; and mandatory country of origin labeling in the U.S. have economically important effects on Canadian fed cattle cash market basis. Keeping trade unrestricted with the U.S. and minimizing domestic regulations are important drivers for supporting the fed cattle basis.

This summary is drawn from "Determinants of the Canadian – U.S. Fed Cattle Cash Basis and Impacts from Government Regulations" funded by the AAFC Advancing Canadian Agriculture and Agri-Food (ACAAF) Program, Alberta Beef Producers and Ontario Cattlemen's Association. The study was completed by Dr. Ted Schroeder (Kansas State University), Dr. Clem Ward (Oklahoma State University) and Lee Schulz (Kansas State University).