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Summary

Price Discovery and Captive Supply Implications for Alberta Beef Producers and Feeders

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Concerns about potential impacts of captive supply on fed cattle prices have been present for several years. In Canada, the magnitude of concern escalated during closure of the US border to fed cattle trade and has remained at an elevated level. **Many producers in both Canada and the US argue that presence of captive supplies results in lower cash fed cattle prices**. These concerns have motivated policy proposals targeted toward controlling how fed cattle can be marketed and who can own and feed cattle. **However, captive supply arrangements evolved out of economic incentives of cattle producers and beef packers to engage in new business arrangements**. Therefore, policies that may curtail such practices are met with considerable opposition by those who enjoy direct benefits from these arrangements. **This study was designed to assist Alberta Beef Producers in their assessment of captive supplies and possible action paths**. We summarize what we know about the impacts of captive supply on fed cattle markets and identify market information and research needs related to fed cattle markets and captive supply in Canada.

The impact of captive supplies in the US fed cattle market has been investigated in several published research studies. Results generally confirm a statistically significant negative relationship between captive supply levels and cash fed cattle transaction prices. **However, these studies also consistently find very small magnitudes of economic impact of captive supplies on cash fed cattle prices. Furthermore, a sizeable body of literature identifies a variety of benefits associated with captive supplies for both cattle producers and beef packers**. Benefits include reduced costs, opportunities for quality premiums, and market access/plant utilization assurances.

The published empirical research regarding captive supply impacts on fed cattle markets have been completed in US fed cattle markets using US data. As with any empirical work, results are sensitive to market fundamentals, levels and mixtures of captive supply, market structure, and related market conditions. Our assessment is that findings from US studies are generally applicable to Canada, but important differences in the markets also make the findings of past research not completely applicable. In particular, especially when

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the US border is closed, captive supplies could place increased downward pressure on Canadian cash fed cattle prices. However, this is also the time when those who have marketing agreements likely garner the most benefit from a marketing agreement or contract with a packer in terms of assured market access.

Captive supply levels present in Canada are greater now than during the time most past studies in the US were completed. Recently captive supplies have comprised about 50-60% of total reported sales in Canada. **This could suggest greater impacts of captive supply in Canada on cash fed cattle market prices than found in previous work, especially if the US border is closed to fed cattle trade, but how much greater is uncertain**. Furthermore, packer-owned feeding of cattle tends to be more common in Canada than in the US, ranging from 15-23% recently (compared to about 10% or less in the US). Packer-owned cattle might have different impacts on cash fed cattle transaction prices than cattle secured under marketing agreements. This is because **packer-owned cattle could be more easily used strategically by packers since the packer has total control over delivery timing**.

In contrast to packer-owned cattle, for cattle under marketing agreements delivery timing (the week of delivery) is at the discretion of the cattle feeder. In our assessment of the Canadian fed cattle markets, **we did not find evidence that packer-owned cattle were being used strategically to depress cash market fed cattle prices (but an empirical test of this was beyond the scope of this study)**. Instead packer fed cattle appeared to be used recently to provide a relatively steady flow of cattle to the plant. Another slant to this issue is that cattle feeders indicated that packer feeding of cattle increased feeder cattle prices relative to what they would be if packers were not in that market. The issue of **packer feeding deserves on-going assessment and industry surveillance because potential exists for packers to use packer-owned cattle (and perhaps to some extent, other captive supplies) for leverage in cash market fed cattle purchases**. Thus, level and variability of packer-owned cattle feeding and associated price impacts deserve empirical analyses.

Based on our research for this study we offer a few generalizations regarding captive supply in Canada:

- **Negative cash market effects are likely to increase with an increase in proportion of captive supplies** (especially packer-owned fed cattle) to total harvested fed cattle, giving buyers increased opportunities to use captive supplies as a leveraging tool.
- **Negative cash market effects from captive supplies are likely to increase with an increase in the week-to-week variability of captive supplies**, giving buyers increased opportunities, or the appearance, of using captive supplies as a leveraging tool.
- **Negative cash market effects from captive supplies are likely to be associated with a specific type of pre-committed supply and specific firm if key buyers tend to rely on a single, respective type of captive supply method consistently**; e.g. one buyer primarily using packer ownership of cattle and one primarily using contracts.
- **Negative cash market effects from captive supplies are likely to increase as buyer market structure becomes increasingly concentrated, as when a major market intervention occurs such as**

the border closing. However, this is also when the benefits are greatest for producers involved in marketing agreements with packers.

Despite potential negative price impacts, **it is important to recognize there are clearly both identified benefits and drawbacks for cattle producers associated with captive supplies**. As such tradeoffs exist for any potential policy action regarding captive supplies. **Quantification of net and differential impacts of various captive supply methods is necessary before policies that might regulate these activities can be adequately assessed**. Without doubt, legislation that somehow controls or limits who can own and feed cattle or how cattle can be marketed will be detrimental to at least some cattle producers and other beef industry participants.

Most marketing agreement base prices are tied to plant-average cash market fed cattle prices. **When cash fed cattle markets become thinly traded, as they have during some weeks in Canada, this can result in making it easier for packers to influence the plant-average price with a relatively small number of cash market fed cattle purchases**. Comparing the plant average price to a CanFax price quote as a check of whether the base is reflective of market conditions is useful. However, the packer's own prices paid for cash cattle (i.e., the plant-average price) is part of the CanFax price quote so one is somewhat comparing the packer's price to itself when comparing it to the CanFax price. **This may support reasons for mandatory price reporting in Canada to increase the confidence that cash price summary market information is representative.** Further support for mandatory price reporting is to increase information and reliability regarding types and levels of captive supply fed cattle marketings each week. **Considerable work is required regarding the details of how mandatory price reporting would work in Canada.** For example, what and how data would be collected, what and how it would be reported, whether or not exported cattle would be included, cost, funding, and responsible organization, etc. **However, we do not expect mandatory price reporting, if enacted, to increase fed cattle price by any noticeable amount.**

Fed cattle prices in Canada have experienced considerable volatility in recent times and relatively predictable historical relationships between Canada and US cash fed cattle prices have become highly variable. A thorough understanding and quantification of the determinants of, and dynamics associated with these price relationships is critical to understanding the relevant geographic market for fed cattle which has implications for price competitiveness and for monitoring fed cattle prices in Canada. **We recommend formal research into the cash-to-cash basis levels between Canada and US fed cattle markets. In addition, development of an on-going market or industry economic surveillance model is recommended.** The model would be of the entire Canadian beef industry and be designed to be used on a continual basis to monitor market behavior and performance.