

Logistics Value Chain for the British Columbia Beef Products

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Abstract

Statistics regarding the world meat production indicate that approximately 200 million metric tons of meat is produced worldwide of which 25 percent is beef. Currently, the largest producer of beef is the USA at 24 percent of total beef production, while Canada is the tenth largest producer of beef. Canada has several regional centers for beef production with 71% of feedlot production happening in Alberta alone and the rest in other provinces. The beef produced in British Columbia (BC) provides certain unique attributes. For example, the finest variety is carefully hand-picked from BC's interior ranchers and nurtured in a limited stress environment and fed an optimum diet. The stress-free environment of the open range lands allows the animals to be healthy in a natural fashion while preserving the natural environment of interior rangelands. Reasonably priced ranch lands and sufficient quantity of forage makes Cariboo region as one of the largest beef producing regions in BC. This allows these producers to capitalize on the value the health conscious consumers place on this beef. British Columbia beef production industry mainly comprise of family sized operations which face significant financial challenges. However, as mentioned above, there is a segment of the market that prefers to buy locally grown healthy beef with certain valued attributes and the distribution systems must respond to this market. Niche market beef producers such as the ones under this study, have high production, distribution and processing costs as compared with the commodity beef products. Therefore, they carry a higher price tag for their products. However, very few consumers are willing to pay this price differential. As a result, the market size and segmentation is limited and it acts as an obstacle in achieving production, distribution and processing economies of scale. Since this is a permanent problem, several participants in these supply chains find it difficult to stay in these types of alliances. For the long term sustainability of the supply chain program and to stay competitive in the market place, the alliance needs to devise ways to sell higher volumes and to lower the costs. Under the first option, the alliance needs to increase the market size for high cost niche products where they can sell larger volumes of smaller-margin products. This will allow the supply chain to achieve the production, processing and distribution economies of scale. The second option is to lower the overall costs (i.e. production, processing and distribution costs) of the supply chain. This paper emphasizes on the lowering the costs to stay competitive. While lowering the production and processing costs needs a micro-level approach as it falls under the domain of individual beef growers and processing facilities, the lowering of distribution costs requires a joint effort from various appliance partners and logistics providers. The present paper

does not deal with improving the production and processing efficiencies, but it mainly focuses on the distribution part.

The two beef supply chains considered under the scope of this study includes Okanagan's Finest Angus Beef (OFAB) and the Healthy Steppes (HS) Grass-fed Beef. All the cattle are delivered free-on-board (FOB) to the meat processing facility by the beef producers. The processor delivers the beef products FOB to Clark's Cold Storage in Williams Lake, where it enters in the market distribution system. For the OFAB products, the current distribution is a mixed one with a logistics provider and self-distribution as the two main channels. The distribution system is somewhat problematic one due to the logistic provider's inability to haul certain product types and the chefs preferring a more hands on service. For the HS market, the alliance currently doesn't have an established distribution system and mainly depend on self-delivery or combine with the other distribution options.

The present paper analyzes various distribution options and makes recommendations to reduce the distribution costs. The analysis explores one option based on a 100% self-distribution strategy where the alliance can either own or lease a one-ton reefer van and hire a driver for the self-distribution. The self-distribution delivery option besides giving the beef supply chain with lot of operational flexibility, also serves the whole range of products and can access any newer restaurants, lodges, stores or other buyers that are currently inaccessible using the existing distribution system. The second option analyzes a freight-ways' company for longer haul and self-delivery within the cities. The paper also considers two options for the shipment frequencies i.e. weekly shipments and bi-weekly shipments depending on the vehicle capacity and product shelf-life. Under each option, various leasing and owning arrangements are explored and the best course is recommended for the supply chain partnership. Overall, the recommendation is to deliver most of the products using a 100% self-distribution by leasing a Mercedes van and hiring a driver with bi-weekly frequency. This option results in the lowest distribution cost. For the direct-purchase house-hold orders, they are not large enough in sizes to warrant a dedicated distribution channel. Furthermore, the delivery locations are quite diverse. Therefore, it is not advisable to dedicate an entire distribution channel for them. The suggested strategy is to use a BC wide courier service that provides temperature controlled haulage.