JOURNAL OF FARM MANAGEMENT VOL.13 NO.1 . PAGES 23-45

REFEREED PAPER

VERTICALLY INTEGRATING A NETWORK OF SMALL AND MEDIUM ENTERPRISES TO PURSUE STRATEGIC MARKETING: THE CASE OF NATURAL VALLEY FARMS INC.

Ronald D. Camp II and Sylvain Charlebois

The purpose of this paper is to provide a better understanding of strategic marketing management principles for cattle producers through case study of vertical integration and strategic marketing that will be of interest and utility to both theorists and practitioners. Although many vertical integration projects led by cattle producers have failed in the past, one project has prevailed: Natural Valley Farm, an abattoir owned and operated by cattle producers based in Wooseley, Saskatchewan Canada. Through an analysis of NVF and a review of key concepts in relevant literature, this paper discusses vertical integration and channel relationships and how they are critical to strategic management for the beef industry and cattle producers. The paper concludes with a discussion of implications for strategic management in the beef industry and future research.

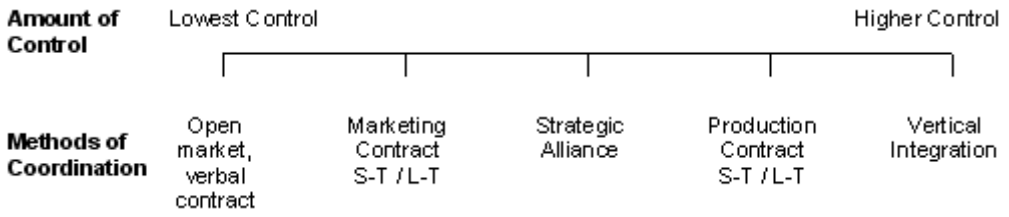
Key Words Marketing channels, strategic marketing, vertical integration, strategic networks, production contracts; small and medium enterprise; beef industry; cattle producers; BSE crisis.

Introduction

Strategic marketing and management are becoming increasingly important in agriculture and agribusiness marketing channels. In part this seems to reflect a need to be more strategically focused to survive in increasingly competitive sectors that are catering to increasingly demanding consumers. Family farms have become agribusinesses: more professionalized and increasingly vertically integrated throughout their marketing channels.

However, in spite of the fact that customer demand in the meat market has been changing for several years, cattle producers from North and South America (Charlebois & Camp, 2006; Conejero, Saab & Martinelli, 2006; Saghaian, Meyer, & Spaulding, 2006), Europe (Dautzenberg & Hanf, 2006) and elsewhere have continued to operate as price takers selling a traditional commodity in an open market setting rather than recognizing market heterogeneity (Alderson, 1965) and strategically marketing differentiated beef products. Poultry and pork producers, on the other hand, have long been involved in strategically focused efforts to gain more control within their oligopsonistic market channels. These efforts by producers to increase control within the market channel include strategic marketing and production contracts, strategic alliances, and vertical integration (see Fig. 1).

Figure 1. Producer control in an Oligopsonistic market.



In many significant ways, the poultry, pork, and beef industries are similar. Producers in these three industry sectors face economic factors that seem to encourage vertical integration that supports strategic marketing. However, beef producers significantly lag producers in the other two sectors in terms of both vertical integration and strategic marketing, raising the following question:

- What barriers prevent cattle producers from vertically integrating within their market channels and taking a more strategic approach to beef marketing?

In 2005 a group of beef producers in Saskatchewan, Canada overcame the barriers to vertical integration to form Natural Valley Farms (NVF). This presented the authors of this paper with a unique opportunity to study (a) factors that had previously hindered producers from vertically integrating and (b) factors that uniquely allowed the NVF producers to overcome those barriers to integration. Current events suggested that the Bovine Spongiform Encephalopathy (BSE) crisis played a role in this process.

In 2003 the BSE crisis in Canada led to an array of cattle industry initiatives that were more strategic in nature, including cattle producer-initiated vertical integration into slaughtering and packing plant facilities. However, while more than 350 of these projects were reported across Canada between May, 2003 and October, 2005, only three federally licensed[1] ventures were successful to that time[2], suggesting that more than crisis was involved in successful vertical integration cases. One of these successful ventures was Natural Valley Farms Inc. The development of this venture led to a second, general research question:

- What factors allow cattle producers to overcome barriers to vertical integration within their market channels and take a more strategic approach to beef marketing?

Many strategic projects led by cattle producers to increase control over marketing channels through vertical integration have failed in the past and many strategic initiatives that went ahead after BSE will most likely never be realized. However, the existing body of literature and theory provides inadequate guidance for improving the outlook for beef producers. This project was intended to improve our theoretic understanding of strategic marketing and channel management issues for beef producers. Our paper lays out the qualitative approach used to address the general research questions above. It then presents an overview of the current literature as it applies to increasing control within a market chain in order to allow producers to market more strategically. From this overview we developed a set of more specific research questions that were presented to the research subjects. The six semi-structured interview questions (presented at the end of the literature review section) were used to develop our conceptual model of vertical integration and

1. (i.e. allowed to export abroad)
2. At least one project, Rancher's Beef Ltd., in the Canadian province of Alberta, started its operations in the summer of 2006 (Calgary Herald, 2006).

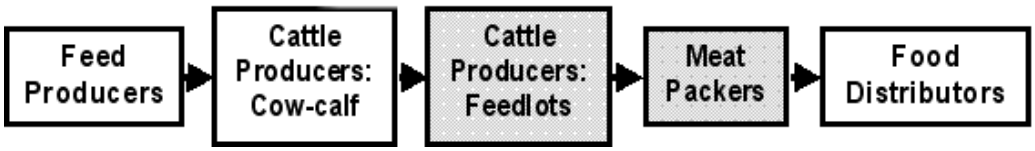
strategic marketing in the beef industry.

In order to build our model for the reader, we present some of the key elements of the beef industry, an outline of the important events that occurred during the Canadian BSE crisis that struck the beef industry in 2003, and a brief description of the NVF business model. We then draw out key factors associated with channel relationships, vertical integration, and strategic networks through iterations between existing literature and data from interviews with the NVF principals, explain how these factors are critical to strategic management for the beef industry and cattle producers, and develop a table of theoretical factors for vertical integration and strategic marketing in the beef industry. The paper concludes with a discussion of implications for future research and theory development.

Literature Review and Overview of the Canadian Cattle and Packing Industry

The beef industry is composed of multiple segments (see Fig. 1) that extend from feed producers to food distributors. Two of these segments, feedlots and meat packers, were analyzed for this case study. Feedlots are confinement-feeding operations where the animals are essentially fed finishing rations before slaughter (Katz & Boland, 2000). Feedlots are the main production segment that interacts with packers on a regular basis. The following sections explain these two industry segments.

Figure 2. Beef production chain.



Cattle Producers.

The intrinsic structure of cattle production works against coordination and collaboration between cattle producers. Cattle ranchers are geographically dispersed small business operators[3], making horizontal coordination between them difficult (Lamb & Beshear, 1998). Feedlots are also geographically dispersed. Geographic isolation has been shown to make vertical coordination and strategic management difficult. In New Zealand, small, dispersed dairy operations were found to lack "the collegiality of colleagues with whom to explore or reframe ideas… [or the ability to absorb] negative outcomes or time dependent solutions" (Sligo, Massey & Lewis, 2005: 459) that are necessary for long-term strategic decision-making. This suggests that geographic dispersion and a general lack of collegiality may be endemic barriers to communication, coordination and control for producers in the beef industry.

Long-term strategic decision-making is critical for meeting the changing demands of consumers. Most cattle producers appear to conceptualize beef as

3. For example, feedlots in Saskatchewan are supplied by more than 20,000 cow-calf operations. Most of these operations have less than 150 head in capacity, and are often considered hobby farms.

a more or less uniform, traditional commodity. To become strategically focused, therefore, cattlemen running small operations need help to look at marketing problems in a different way, especially if they are to effectively deal with the imbalances created through their small size and industry context (Sligo, Massey & Lewis, 2005). However, geographic dispersion makes it more difficult to regularly exchange extensive quality information, to discuss options to current systems and structures, or to develop the trust necessary for collaboration (Sligo, Massey & Lewis, 2005). These factors may limit potential collaboration that could lead to extensive projects between cattlemen and strategic marketing of beef products. These factors may also militate against the development of a long-term strategic vision of products or markets by cattle producers, if information exchange regarding product quality, consumer preferences, etc. is a prerequisite for the development of strategic vision.

The individualistic culture of American and Canadian cattlemen further limits coordination at the production level. Cattle producers have traditionally resisted "all efforts to cooperate and to develop either horizontal or vertical coordination mechanisms" (Kularantna, Spriggs & Storey, 2001: 12). Lack of coordination precludes bringing together information that would indicate either common goals or market trends that indicate a need for change within the industry. For example, prior to the Canadian BSE crisis, cattle producers seem to have perceived neither a significant threat nor a common, super-ordinate set of goals that would have encouraged a high level of collaboration or strategic thinking (Charlebois & Camp, 2006). Goal compatibility between cattle producers is uncommon and Canadian cattle producers' individual goals are rarely based on strategic consumer concerns.

Meat Packers.

The next segment of the supply chain is the packing industry. It is highly competitive, with difficult-to-manage, variable margins (Hursh, 2004). The industry primarily buys cattle from producers to slaughter, cut, and package as beef for sale to food distributors. Market dynamics facing packers are different from those facing producers (Joshi & Campbell, 2003). For packers, market demand is critical. Unlike cattle producers, food distributors (the customers of the packers) base their marketing strategy on market demand (Charlebois & Camp, 2006). In this segment it is important to manage market cycles for beef, as beef prices are relatively inelastic. Furthermore, the packing industry is dominated by daunting, publicly traded conglomerates that have access to seemingly unlimited resources (Charlebois & Camp, 2006) requiring new entrants to have major financial resources. In this environment, packers must have significant knowledge of branding (Hermann, Thompson & Krischik-Bautz, 2002), must be responsive to food safety issues and concerns (Spriggs & Isaac, 2001), and have professionalized management capabilities in order to be competitive.

Across the world, a handful of large meat packers are able to dictate how livestock producers must behave to participate in the market (Harvard Law Review, 2004). Through vertical integration and consolidation, these meat

packers have created an oligopsonistic market, with the top four packers in Canada and in the USA controlling 85% and 70% of their respective markets (Grier, 2005), distorting power relations between producers and packers.

The normal state for the cattle industry, on the other hand, is a low degree of vertical integration of cattle production and meatpacking, with cattle producers being in an inferior position[4]. Competing with publicly traded, integrated conglomerates requires substantial economic surplus. The capital requirements for vertical integration into packing operations exceed $40 million, creating a barrier to entry for small and medium-sized cattle producers. In addition, different segments of the supply chain require different managerial skills and practices that may have been beyond the entrepreneurial knowledge, skills and abilities (KSAs) acquired through the management of most small and medium enterprises. Few cattle producers are believed to have the KSAs necessary to manage a professional packing operation. Because of these differences, beef safety scares impact cattle producers and packers differently (Saghaian, Meyer, & Spaulding, 2006) with disparities in access to resources within the feedlot-packer dyad favouring packers (Grier, 2005).

When beef prices increase, cattle producers benefit. However, when there are too many cattle on the market, excess cattle are essentially worthless to packers (Grier, 2005). Cattle producers are therefore pressured to lower prices, while the meat packers realize high profit margins due to an inelastic supply curve for beef (Katz & Boland, 2000) and are subject to financial disincentives to reduce retail beef prices. As Boame, Parsons, and Trant reported to the Canadian government, "Food processors and retailers are normally reluctant to reduce the price of a particular meat product, such as beef, in relation to pork or chicken, as shoppers are quick to substitute one meat product for another" (2004: 6). Reducing beef prices would put pressure on processors to reduce prices for pork and poultry as well.

While livestock prices may vary wildly in the short term due to these types of shocks, operating costs tend to be sticky (Saghaian, Meyer & Spaulding, 2006). During the Canadian BSE crisis this situation resulted in an oversupply at the level of the producers who continued to accrue costs as they waited to sell their cattle. In this type of situation the financial impact on cattle producers can become grave.

Changing Market Demand

In countries around the world cattle producers and packers are losing market share to other producers in the meat complex, such as poultry and pork (Conejero, Saab, & Martinelli, 2006). In Canada over the past 20 years beef has lost 25 percent of the meat market share to poultry and pork (Charlebois & Camp, 2006). This lost market share has been attributed to several causes, including cost (beef is often the most expensive meat at the counter), responsiveness, and safety.

The beef industry's failure to achieve a greater vertical coordination and its associated communication benefits has kept it from transforming itself into a more consumer-driven industry (Lamb & Beshear, 1998). Although

4. Unlike the beef industry, most vertical integrators in the hog and poultry industry have long been profitable (Jensen, *Kehrberg, & Thomas, 1962*) and have been able to reduce opportunistic behaviour.

consumers are increasingly concerned about chemical residues and food attributes that relate to health, "the traditional beef marketing system fails to transfer information about what is considered to be the best product to the producer" (Kularantna, Spriggs, & Storey, 2001: 119).

Consumers are increasingly concerned with the physical, convenience and informational product attributes of food (Ubilava, 2006). During times of food scandals, such as the BSE crises, consumers become increasingly aware and concerned about food safety, quality and transparency in the system that provides that food (Dautzenberg & Hanf, 2006). Historically, cattle producers have been somewhat unresponsive to these changing concerns (beyond compliance with changing government safety regulations). This lack of responsiveness by producers to these concerns may have been a function of a lack of access to channel information regarding customer concerns or a lack of information regarding consumers' willingness to pay "for various meat attributes and about the long run market share potential of products with or without these attributes in the grocery store and in the market as a whole" (Ubilava, 2006). The dominant packer-producer sales schemes, in which prices are set before specific cattle are sent to packing plants, neither communicate the genetic improvements (in terms of weight gain, conformation, and herd productivity) required to affect cattle's performance (Conejero, Saab & Martinelli, 2006) nor compensate producers for making these improvements.

Kadirov and Varey (2005) have argued that marketing systems should strive for marketplace wisdom, where participants (beef producers) are always focused on future goals, not just on surviving in a hostile or uncertain environment. Marketplace wisdom that allows a marketing system to recognize uncertainty will eventually lead to an incremental progression of greater market knowledge and the understanding of consumer demand, that can lead to the attainment of a sustainable existence. The understanding of consumer demand is not necessarily about survival to become sustainable, but it is rather the process of realizing a true purposiveness of a marketing system by attaining marketplace wisdom (Martin, Stewart & Matta, 2005). Overcoming market uncertainty may require the formation of integrative relationships with counterparts from the same network.

This initial assessment of the beef industry suggested several refinements on the two general research questions raised at the beginning of our paper. Questions were clustered in five general content areas:

- What were the issues associated with communication with and between beef producers?
- What were the trust, scepticism and uncertainty issues among beef producers and how did the founders address them?
- What were the issues pertaining to goals and Goal compatibility?
- What investment and financial issues were associated with the formation of NVF?

- What were the issues pertaining to levels and methods of integrating beef producers?

Methodology

This article is meant to identify and explain key managerial principles for vertical integration and strategic management in the cattle industry. Using Yin's (1994) methodology for exploratory theory development, this study builds on existing theories through a case study that explores the execution of vertical integration in the cattle industry. This study analyzes holistic data referring to Natural Valley Farms, a successful vertical integration by a network of cattle producers. This case study then develops a theoretical perspective through a discussion of vertical integration and strategic marketing for a network of small and medium enterprises (SMEs) and links these theoretical constructs with NVF's business model and actions. Moreover, this analysis makes use of multiple sources of evidence, including archival data, recorded guest speaking notes, and in-depth personal interviews. Key informants from NVF answered open-ended questions.

Subjects

In-depth interviews were conducted with the six principal officers of NVF. These officers included: Ken Piller, President; Harold Smith, V.P. Administration, Finance & I.T.(CFO); Cam Taylor, V.P. Operations; Eric Kasko, V.P. Business Developement & Corporate Affairs; Kathy Martin, Producer Relations; and Melissa Baran, Human Resources.

Semi-structured Interview Questions

Each of the subjects was presented with the same set of semi-structured interview questions outlined above. They then reviewed a draft of the case study report prior to completion.

Analysis Techniques

Given the exploratory, rather than confirmatory, nature of this research, content analysis was chosen for analysing data collected from the subjects. Raw, qualitative data from the interviews was analyzed for recurrent themes, using both inductive and deductive approaches to categorize factors and variables. In the inductive phase, interview transcripts were scanned for recurring themes to develop labels and categories. The deductive phase produced a model of factors and variables that incorporated both findings from the interview subjects and elements of existing theory on networks, trust, and vertical integration. After reviewing the literature in these theoretical areas, the factors, variables and links developed from the interview data were revisited. All factors and variables were then combined in tabular form. Additional elements were incorporated from the literature in order to develop the combined model of Systematic Managerial Principles for Vertical Integration in the Cattle Industry.

Findings and Analysis

The Canadian BSE crisis

On May 16, 2003, a 6-year-old Angus cow in Alberta Canada was tested and found positive for BSE[5], igniting an industry-wide crisis. Exports of Canadian beef and cattle were immediately affected as non-tariff trade barriers were enacted across the world (*Le boeuf canadien*, 2003). Most importantly, the United States (accounting for more than three quarters of Canadian beef exports) Japan, Mexico, Thailand, and other countries closed their borders to Canadian beef. Although the Canadian Food Inspection Agency (CFIA) immediately tested and ultimately destroyed 2700 cattle in Western Canada (*Le plan d'aide*, 2003), and no other cases of BSE were found, the Canadian beef industry lost access to its major markets.

The price of Canadian beef cattle plummeted. In spite of this shock, many channel members, notably cattle producers, insisted they could maintain the situation that existed prior to the crisis (Charlebois & Camp, 2006). However, the sudden, critical financial situation associated with the uncertainty of future cattle sales caused many cattle producers to feel vulnerable (Monchuk, 2003). Cattle producers blamed abattoirs, meat packers, and the government for a failed system as they realized that the current system favoured mainly mass production and exports (Pauchant & Mitroff, 2002).

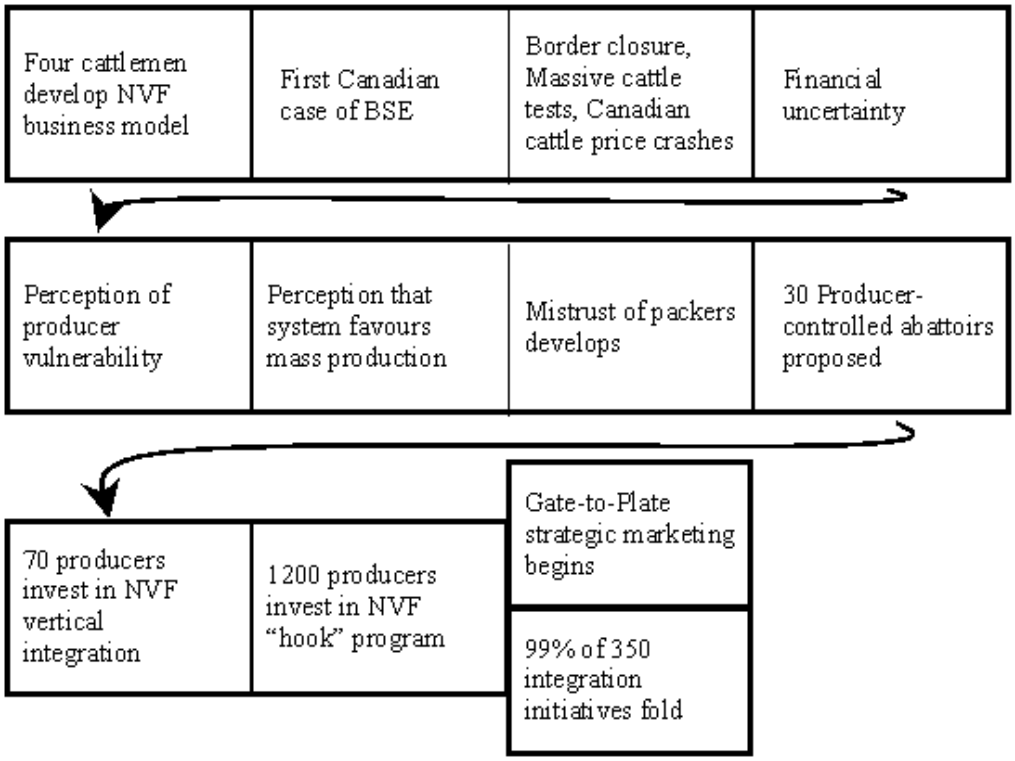
This realization led to multiple initiatives to build producer-controlled abattoirs across Canada, with 31 initiatives in Saskatchewan alone (Canfax, 2005). However, only three projects (less than 0.02% of projects initiated Canada-wide) were reported to have successfully started construction and/or operations in Canada. Only two of these were fully financed by cattle producers.

Several underlying factors may have contributed to the failure of most of these initiatives. Many smaller cattle producers seem to have been driven more by mistrust of packers than by either a strategic vision for a packing operation or connections to alternative buyers. While this mistrust provides a powerful motivation to mobilise human capital and financial resources in the short term (Williamson, 1975), it creates continuing management problems (Anderson & Weitz, 1986).

Two factors seem to have contributed to the failure of these initiatives. First, these types of small start-up operations would have had very little bargaining power relative to existing packers (Dahl, 1957). Second, mistrust coincided with an absence of communication in the exchange relationships within the vertical integration. Under conditions of great uncertainty market performance is largely a function of collaboration and communication focused on prioritizing and implementing adaptation goals (Achrol & Etzel, 2003). However, aside from food traceability systems, where channel members were compelled to work jointly (Loader & Hobbs 1996), little collaboration by cattle producers was noted prior to the formation of NVF. It is likely that many of these initiatives, unlike the NVF case, failed to develop super-ordinate coordinating goals that would have allowed them to make the adaptations necessary to compete with the existing packers. (See Figure 3 for a sequence of events leading to the development of NVF's start up.)

5. This was seven years after the 1996 British report that linked BSE to the Variant Creutzfeldt-Jakob Disease.

Figure 3. Sequence of events in NVF development.



Natural Valley Farms Inc.

Natural Valley Farms is headquartered in Wolseley, Saskatchewan, a small town of 850 people. It was founded in 2003 by Cam Taylor, Greg Larson, David Fiddler and Ken Piller with an initial investment of C$19 million. All of the founders had been involved with the cattle industry in some capacity prior to founding NVF. To fund this project, 70 additional cattle producers each invested a minimum of $70,000. Another 1200 cattle producers financially committed to supply the plant. Essentially this represents a vertically integrated organization coordinating and buying from a strategic alliance (see figure 4).

A processing plant adjacent to NVF's headquarters began operations in June 2005. This packing facility has a design capacity of 1200 head per week. NVF also operates a slaughtering plant with a weekly capacity of approximately 1000 head and neighbouring feedlot in Neudorf (see figure 5), a small town located about 30 kilometres northeast of Wolseley. The feedlot reduces stress for animals prior to slaughter and thereby both increases beef quality and addresses concerns raised by animal rights activists about the treatment of livestock. From Neudorf, beef products go directly to customers, but most carcasses go to the processing facility in Wolseley where they are transformed into meat products and packaged for wholesale retailers (NVF,

Figure 4. NVF strategic coordination.

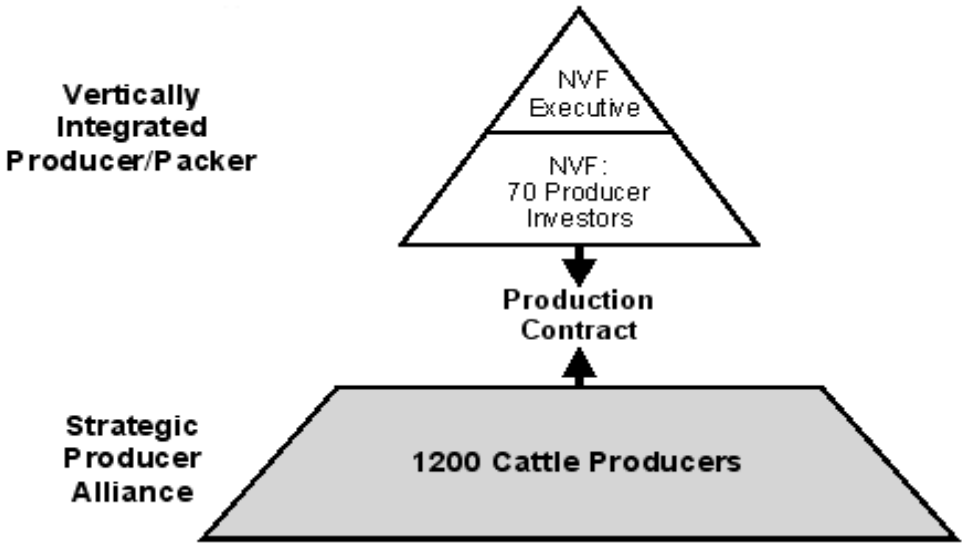
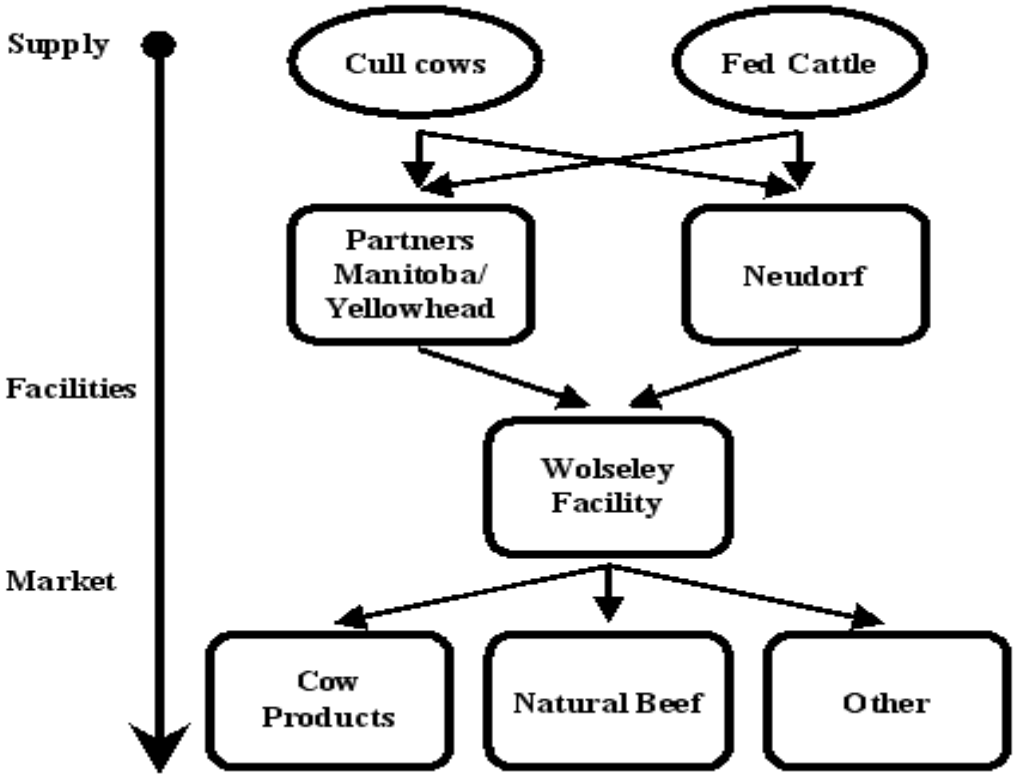


Figure 5. Natural Valley Farms business model.



2005a). NVF has developed and implemented a distinctive "Gate to plate" approach to marketing beef products in which cattle producers have extended their focus beyond simply supplying livestock to slaughterhouses[6]. The "gate to plate" concept allows cattle producers to trace their beef products from the farm of origin to the consumer.

Since its inception, NVF has marketed "natural beef" even though there is no recognized definition for natural beef in Canada. NVF calves go from maternal feeding onto a grain and forage diet without growth hormones, animal by-products or antibiotics. In cases where animals need to be treated with antibiotics, etc., they are marketed through standard distribution channels. Producers that pool resources with NVF also follow on-farm food safety practices of the Canadian cattle industry's "Quality Starts Here" program (NVF, 2005a).

For cattle supply, NVF relies on what they refer to as the *Cull Cow Marketing Alliance*, a business liaison between the 1200 independent cattle producers who have purchased hooks at NVF. The producer leases a "hook" from NVF for $200-300. A "hook" simply describes space (or capacity) allocation for the slaughter plant. Each hook entitles the producer to bring one cow per year for five years (NVF, 2005b). NVF suggests that its model is financially beneficial for feedlots. These benefits include additional avenues to market, reduced risk for feedlot operators, and improved connections to markets, allowing operators to better meet long-term market needs and concerns, as through "Natural beef" marketing (Charlebois & Camp, 2006).

For cattle producers, the hook program has a number of important benefits over traditional buy/sell arrangements. For one, it guarantees a volume of supply for the marketing of animals to the customer. Second, according to NVF, the hook program allows the producer to participate in the profits of processing determined by a predefined percentage split between the producer and NVF. The actual price is a function of beef quality, market conditions, *et. cetera*. Finally, the program significantly reduces working capital requirements, which optimizes the potential for company viability and improves profitability for all those involved through reduced interest costs (Charlebois & Camp, 2006).

The domestic market is NVF's initial target, but future plans provide for getting Hazard Analysis Critical Control Points (HACCP) certification for the American market, and European Union (EU) certification for food safety standards (NVF, 2005c). NVF is also focusing on branding to market its products in both domestic and foreign markets as having a unique set of product benefits in both the retail and food service marketplace (NVF, 2005a).

The cattle industry and vertical integration

Perry (1989) has argued that vertical integration is a function of technology, the nature of transactions, and market imperfections presented to managerial decision-makers. Vertical integration, often defined as the combination of two or more stages of a production-marketing chain under a single ownership (Williamson, 1989), is the extent to which a firm transfers risk and controls the production of its supplies and the distribution of its

6. While leaders of the project argue that NVF would have been created in spite of the political and economic impact of BSE, they have admitted that BSE altered NVF's business model.

finished products (Carlton, 1979; Mpoyi, 2003). Vertical integration can have many organizational benefits: reduced transaction costs within a supply chain (Williamson, 1989), economies of scale, bargaining power counterbalances, enhanced information sharing that can lead to innovation and differentiation, better defense mechanisms against foreclosures, and more evenly distributed risk allotment across the supply chain (Lawrence, Rhodes, Grimes & Hayenga, 1997). Key integration issues raised by the respondents in relation to the research are summarized in Table 1, below.

Table 1. Key responses to primary research questions re beef producer vertical integration and strategic marketing.

Research question	Source Interview subjects	Literature
Investment / Financial Issues	Mistrust leads to financial stake in integration and on-going management problems in many start-up producer initiatives Tiered investment: $70,000 plus for NVF investors, $300-500 per Hook for network producers Business model leads to reduced working capital requirements for packing operation (annual funding through "Hook" program)	Tremendous financial barriers to entry for packing operations (Charlesbois & Camp, 2006; Katz & Boland, 2000)
Integration Issues	Vertical integration of 70 + producers to create NVF. Strategic network of 1200 producers for funding, marketing coordination, and production. Network forms after creation of mistrust for existing packing operations as producers bear financial brunt of BSE crisis. NVF and network linked through production contracts.	Vertical integration is a function of technology, the nature of transactions between channel members, and market imperfections (Perry, 1989) Mistrust leads to ongoing management problems for new vertical integrations (Anderson & Weitz, 1986)
Government & Trade Association Involvement	Government regulation and response to BSE crisis seen as part of problem. System does not protect producers.	
Communication with Producers	In pre-BSE context, no market signalling through beef pricing to producers. NVF production contracts split beef profit with producers. Market price based on beef quality. Price differentials signal value of producer product differentiation.	Vertical integration leads to enhanced information sharing between channel members involved (Lawrence, Rhodes, Grimes & Hayenga, 1997) Mistrust leads to absence of information exchange between channel members (Achrol & Etzel, 2003)
Goal Compatibility & Strategic Marketing	Non-NVF initiatives plagued by mistrust and ongoing management problems with producers. Producer / interests not seen as being aligned with abattoirs/packers. Lack of communication prevents attaining goal compatibility for many producer initiatives. Profit-sharing between NVF and network producers distributes risks and rewards, creates perception of mutual fate. Gate-to-plate marketing strategy provides strategic focus for producer network: natural beef, food safety practices. NVF profit sharing with producers aligns producers with market demand and focuses producers on the benefits of a more strategic approach to beef production.	Vertical integration leads to bargaining power counterbalance (Lawrence, Rhodes, Grimes & Hayenga, 1997) Vertical integration leads to more equally distributed risk allotment within market channel (Lawrence, Rhodes, Grimes & Hayenga, 1997)
Overcoming Scepticism & Uncertainty	Most post-BSE producer initiatives driven by mistrust rather than strategic vision. Producer participation in profits (pre-defined percentage split of market price for beef). NVF founders long-time involvement in cattle industry. Financial involvement of NVF and network producers.	

Barriers to Vertical Integration by Cattle Producers

Although feedlots did not control the transaction process with packers, they seemed to be at ease with this arrangement prior to the 2003 BSE crisis, even though the feedlot / packing intersection is the point "in the entire production and distribution chain where [vertical integration] would have the greatest chance of reducing risk and uncertainty and enhancing profits or gains" (Jensen*, Kehrberg, & Thomas,* 1962: 380). The following section explains why vertical integration may not have been a natural strategic option for cattle producers. As stated by Charlebois and Camp (2006), traditionally, cattle producers have operated essentially as price takers, meaning that altering their rate of production and sales does not affect the market price of their product (Spriggs & Isaac, 2001). Cattle producers transact with a few oligopsonistic packers who dominate the market. This concentration often leads to collusion among packers so that prices are set by agreement rather than by the operation of the supply and demand mechanism.

There are also significant barriers to entry for new competitors. Food safety concerns create major financial, environmental, and bureaucratic barriers to starting a federally licensed beef packing plant (Charlebois & Camp, 2006). The capital required for starting a federally inspected slaughterhouse and packaging plant in North America can be prohibitive. In 1996 a large[7] cooperative partnership between all segments of the beef industry value chain in the United States needed $100 million USD to start US Premium Beef Ltd (Katz & Boland, 2000). In addition, both provincial and federal governments in Canada frequently revise food safety regulations, making the task even more difficult.

Prior to the BSE crisis cattle producers did not appear to perceive their level of asymmetric market dependence on meat packers, the financial risks associated with that dependence (Beier & Stern, 1969; Heide & John, 1988; Kumar, Scheer & Steenkamp, 1998; Stern & Reve, 1980) or possible alternatives to that dependence. The BSE crisis may have led cattle producers to an increased perception of that dependence and its associated financial risks. This perception in turn seems to have encouraged cattle producers to enhance performance by creating Natural Valley Farms and thereby improve their dependency position within the market chain (Heide & John, 1988).

Dependency may be implicit for cattle producers. Prior to the BSE crisis they appeared to be oblivious to systemic dependencies, which might be a function of cattle producers' role as price takers. Interviews with ranchers indicated that most cattle producers tender to the highest bidders, or auction directly to the purchasers that form an oligopsony. Neither these trading practices nor the interview results necessarily imply that cattle producers perceive themselves to be dependent upon interorganizational relationships within a supply chain. However, prior to BSE cattle producers exported the majority of their livestock to one foreign market, the United States, increasing their dependency. Until the BSE crisis there were no plans in place to focus on other markets to lessen dependence on one foreign market (Charlebois & Camp, 2006).

7. NVF is a relatively small operation. In 2006, the cost to open the new Rancher's Beef Ltd. packing plant in Balzac, Alberta was approximately $40 million (Calgary Herald, 2006).

Table 2. Perceived barriers to vertical integration by beef producers.

Market Factor	Producer Perception
• ALTERING rate of production / sales does not affect market price of their product	• Low producer efficacy to affect change
• MAJOR financial, environmental, and bureaucratic barriers to starting a federally licensed beef packing plant	• Capital requirements for market entry beyond means of cattle producers
• Dependency on packers implicit	• Lack awareness of dependency and risk • vis-à-vis packers

Managing cattle industry vertical integration to promote strategic marketing

While the BSE crisis seems to have triggered efforts to decrease dependency on pre-existing channel relationships, NVF and its members were focused more on long-term strategic objectives than on the uncertainties created specifically by BSE. Domestic consumers were their core marketing priority at the outset. In addition, future plans were set in motion to create a strategy to seek other foreign markets, including the European Union (Charlebois & Camp, 2006). Plans for a natural beef operation were made well before May 2003. This suggests that the influence of BSE crisis might have had a greater impact on NVF's strategic network of cattle producers who purchased hooks in advance than on the producers directly involved in the vertical integration, such as NVF's founders (Charlebois & Camp, 2006).

This impact on the network of cattle producers may have enabled NVF's founders to implement their more strategic approach to cattle production and marketing. This factor is important because NVF is more than just a single company vertically integrating cattle production and meatpacking. Instead, it appears to be a focal firm (Dautzenberg & Hanf, 2006) coordinating a network of over 1200 small businesses (see Fig. 3). Human and Provan (2000) found that forming and maintaining such multi-firm networks is a very complex, little understood process, requiring "direct interactions among many member organizations that may never have interacted with one another before" (2000: 327) and who may not initially see the value of such collaboration. As they observed,

In SME networks, many member firms are themselves young and evolving and often are reluctant to establish a web of cooperative but uncertain external commitments…. The firms in our networks had to learn to accept the idea that cooperative interaction could create benefits for them and for the network as a whole (Human & Provan, 2000: 340).

In industry cultures prizing independence, competitiveness, and a belief that "sharing is bad," the benefits of horizontal collaboration are not intuitively obvious (Human & Provan, 2000). Without focusing participants on these benefits, networks tend to disintegrate in a relatively short time. In the BSE situation, the crisis seems to have focused cattle producers on an unambiguous set of benefits associated with a more strategic approach, allowing them to overcome traditional barriers to collaboration and cooperation and to participate in the formation of NVF and its producer network. Through the

information contained in the BSE crisis, NVF overcame many managerial hurdles that are inherent to the cattle industry and collaborative networks of small and medium-sized firms, making this case study atypical for small businesses (see Table 1).

However, as prior researchers and theoreticians have pointed out, the multiple relationships within these networks need to be managed in order for the network to remain intact (Golicic, Foggin & Mentzer, 2003). The benefits of these strategic networks can only be realized if the participants believe that the network relationships will last (Golicic & Mentzer, 2006). Relationship continuity, in turn, is a function of the belief that the participant's needs will be fulfilled by the actions of other parties in the network and that these other parties have integrity and benevolence (Golicic & Mentzer, 2006). To achieve this, members of the focal firm need to help network members manage relationship magnitude (Dautzenberg & Hanf, 2006), the extent to which relationships between network members are close (Golicic & Mentzer, 2005). This management involves increasing members' awareness of the resources and capabilities available to members through the focal firm and other network members, benefits to be received from participation in the network, the availability of increased consumer information from the network, the importance of members to the network, interpersonal relationships between members, and the similarity of goals and strategies for network participants (Golicic & Mentzer, 2005).

Basic marketing functions of cattle producers are ritualistic in nature, relying on routinized behaviours such as daily coffee meetings, trips to the store, *et cetera*. In addition, marketing literature (Alderson, 1965) tends to assume that the managerial and socio-economic processes of markets progress in a relatively steady state. However, environmental uncertainties mandate that marketing functions and processes be dynamic and affect markets. NVF established itself early on as a solution to market uncertainty, even before the crisis started in 2003. Our data suggest that the behavioural rituals piloted by NVF (e.g., standard behaviours across the network, such as feeding cattle at 11:00 a.m. and annual shareholder meetings) offered an adaptive mechanism those cattle producers used to overcome market knowledge deficiencies. With knowledge versatility, founders were able to draw many cattle producers to one common endeavour. In this way they were also able to manage relationships between producers within the strategic alliance.

Our analysis of this case suggests several elements for successfully leading networks of SMEs to pursue a more strategic marketing orientation. One is that crises can be used as leverage for goal compatibility. NVF started its project prior to May 20, 2003, but it astutely used the BSE crisis to have individual small businesses commit to a common goal. Time was of the essence, and NVF put forth a plan that was quickly executable. Capital magnetism also played a major role in the short-term accomplishments of NVF. Even though many cattle producers were in financial distress, NVF had an accessible financial plan that could draw small businesses with various pecuniary resources. Its start-up costs were meagre compared to other initiatives, where the initial costs often exceeded $50 million. Also, many investors and prospects were comforted in looking at long-term objectives

concurrent to the project to alleviate supply concerns and uncertainty. One supply alleviation practice included in the program was the hook program, as previously discussed. Finally, NVF focused on developing domestic niche markets and building brands for the future as a first step.

NVF will eventually decrease its domestic market dependence by being HACCP and EU certified and diversifying its targeted foreign markets when it is ready to export. At that time, NVF will be certified to export to more markets around the world than any other meat processing plant in Canada. NVF's business model is not dependent upon Canada's trade partners, and adopts a marketing approach on predictable and controllable parameters only.

As for vertical integration, with its business model, NVF was also able to contain the impact of mistrust and market dependence within the supply chain. It first built a business model adapted for a mature industry by planning to sell a brand such as "Natural Beef" that provides premium products with added value. Other cull cows and beef parts will be marketed to fit new niche markets. Second, NVF tailored its corporate structure to the industry: cattle producers themselves established NVF in rural Saskatchewan, with facilities next to feedlots to reduce stress for animals prior to slaughter. Segments within the production part of the current supply chain are reflected in the NVF model. Third, producers involved with NVF raise beef without the use of growth hormones or animal by-products, thus creating meaningful market heterogeneity based on product attributes desired by consumers from the meaningless heterogeneity associated with a market based on more than 1200 independent cattle producers. Finally, revenue sharing programmed by NVF reduced the potential for mistrust among dyadic relationships within the supply chain. The "gate-to-plate" adage was pushed to the limit, thus increasing control and building trust across the supply chain.

Conclusion

Cattle producers always have had to cope with market failures. BSE made market imperfections more apparent. The creation of NVF is a result of a well-groomed strategic marketing scheme designed to attain a higher degree of vertical integration. It became an adaptive mechanism for strategic change. Although many cattle producers wanted to facilitate the production of consumer-oriented products while at the same time achieving cost reductions through more efficient production before the BSE crisis, the achievement of such a project came after May 20, 2003, when the Canadian beef industry was hit by international embargoes on its products.

Although this paper describes the case of a particular venture situated in the context of the Canadian cattle industry, the lessons and conclusions drawn from this case appear to be relevant to cattle producers in many countries. Issues regarding strategic marketing of beef have been raised in the context of the United States (Saghaian, Meyer & Spaulding, 2006), New Zealand (Sligo, Massey & Lewis, 2005), Germany (Dautzenberg & Hanf, 2006), Georgia (Ubilava, 2006), and Brazil (Conejero, Saab & Martinelli, 2006), among other countries in recent years. In addition, most of these authors describe situations in which most cattle producers work as SMEs who are dealing with limited market information and the lesser end of asymmetric power relationships

within their market channels.

In this case study, we have identified some key strategic and managerial principles that can be applied to a thriving vertical integration endeavour in the cattle industry. History has proven that such an undertaking is taxing. Nevertheless, the evidence of NVF's business model shows that environmental uncertainty can facilitate vertical integration projects in the cattle industry, given the right strategic doctrine. A common goal or purpose amongst network participants is far more powerful than the spirit of survival in an uncertain environment. Evidence also shows that marketplace wisdom can perhaps lead to less dependency within a marketing system.

In considering the case of NVF, it would then seem that the analysis of the grounds for vertical integration are formally indistinguishable from the concept of strategic marketing. However, it is very unlikely that the structural realignment caused by BSE in the Canadian cattle industry will ultimately result in fewer, larger feedlots with closer marketing ties to packers and consumers. Vertical integration will create winners and losers among traditional cattle producers. Feedlots with larger scale operations and the technical know-how to meet rigorous product requirements with current packers will thrive in the new beef market. Many smaller businesses will be crowded out. Since more food safety crises are likely to happen again in the future, clear challenges become apparent. Small feedlots might learn from the NVF experience and become more efficient by driving a consumer-oriented agenda for higher quality with added value. Key lessons are summarized in Table 3, below.

Implications for Future Research

NVF offers a unique perspective in a case study where cattle producers were successful with their vertical integration strategy. This case study, however, does not include cases where cattle producers were not so successful. Key informants for those cases are difficult to contact, as many have gone on to other endeavours and business operators rarely want to recollect failures. Micromanagement facets like leadership, and capital and risk management that might have had an impact on the overall project, were also not considered in our survey due to the nature of our macro approach.

In addition, a dyadic relationship in times of uncertainty cannot be analysed in isolation. To analyse only one small business, making a strategic decision of compelling magnitude such as vertical integration in times of uncertainty can be arbitrary. Such a punctuated context creates temporal sampling problems. With food safety and relational exchange, we would need to consider other relationships within a supply chain. Instead of only considering environmental uncertainty in a dyadic relationship, the macro-environment of the supply chain should also be incorporated, as well as ways for communicating market information through that chain. Future research should be developed to address these concerns. In addition, studies should be conducted that test the conclusion that increasing cooperation between beef producers outside the context of a vertical integration would increase information exchange, awareness of market issues, and the strategic focus of beef producers.

Table 3. Systematic managerial principles for vertical integration in the cattle industry.

Conceptual elements	Managerial principles for vertical integration in the cattle industry	Natural Valley Farms
Increased Producer Control through Vertical Integration, Strategic Alliances, and Production Contracts	Use environmental uncertainty as a leverage for goal compatibility (Celly & Frazier, 1996)	BSE provided a context favourable to goal compatibility amongst members
	Create capital magnetism and proper sharing of financial risks for members in financial difficulty (Perry, 1989, Lawrence et al., 1997)	NVF was a financially modest project. Over 1300 cattle producers invested in the project
	Focus on long-term objectives to alleviate supply concerns and uncertainty (Sturdivant, 1966; Achrol & Stern, 1988, Achrol, Reve, & Stern, 1983, den Ouden, Dijkhuisen, Huine & Zuurbier, 1996)	Each hook entitles the producer to reserve space for one cow per year for five years
	Have a marketing approach on predictable parameters only (Achrol & Etzel, 2003)	Business model not dependent upon the U.S. border reopening or staying permanently closed to foreign markets; focus on domestic markets. Seeking HACCP and EU certifications to diversify aimed foreign markets, lessening market dependence with U.S.
	Manage the constriction of time provided by a crisis (Elliott, Smith & McGuines, 2000)	Time was of essence, and NVF put forth a plan that was quickly executable
	Align incentives to increase guarantees of appropriating final economic gains from improved beef to cattle producers	NVF established a profit-sharing scheme for all participants
	Manage multiple relationships within the network (Golicic & Mentzer, 2005)	NVF had knowledge versatility
Strategic Marketing	Build a business model adapted for a mature industry (Mpoyi, 2003)	NVF plans to sell premium products with added value, and use branding as a central marketing strategy
	Adapt the culture and structure of the business to those of the industry (Mpoyi, 2003)	NVF's facilities are near one another, in rural areas, and the design corroborates with the current supply chain of the industry. NVF is managed and financed by cattle producers
	Create meaningful market heterogeneity from meaningless heterogeneity (Alderson, 1965; Priem, Rasheed & Amirani, 1997)	Producers raise beef for NVF without the use of growth hormones or animal by-products. They have also implemented the Farm gate to plate concept, as they are able to trace their beef products right back to the farm of origin
	Share profitability amongst segments of the supply chain, and eliminate the potential for mistrust and dependence perceptions (Reve & Stern, 1979; Heide & John, 1988)	The hook program at NVF allows the producer to participate in the profits of processing. In NVF's model, profits are symmetrical with producers. "Gate-to-plate" concept allows for more control throughout the supply chain
	Establish a web of cooperative but uncertain external commitments by creating a beneficial network (Human & Provan, 2000).	Horizontal collaboration creates an unambiguous set of benefits for participative cattle producers.
	Realize a true purposiveness of a marketing system by attaining marketplace wisdom (Kadirov & Varey, 2005)	NVF offers better access to strategic information related to the marketplace

References

Achrol, R., Reve, T. and Stern, L. (1983). "The environment of marketing channel dyads: A framework for comparative analysis." *Journal of Marketing, 47*(4), 57-67.

Achrol, R. and Stern, L. (1988). "Environmental determinants of decision-making uncertainty in marketing channels." *Journal of Marketing Research, 25*(1), 36-47.

Achrol, R. and M. Etzel, (2003). "The structure of reseller goals and performance in marketing channels." *Academy of Marketing Science Journal*, *31*(2), 146-164.

Alderson, W. (1965). *Dynamic Marketing Behavior: A Functionalist Theory of Marketing*. Homewood, IL: Richard D. Irwin, Inc.

Anderson, E. and B. Weitz, (1986). "Make-or-buy decisions: Vertical integration and marketing productivity." *Sloan Management Review*, *27(*3); 3-20.

Beier, F. and L. Stern, (1969). "Power in the channel of distribution." *In* L. Stern (Ed.), *Distribution Channels: Behavioral Dimensions*. Boston: Houghton-Mifflin Company.

Boame, A., W. Parsons, , and M. Trant, (2004). "Mad cow disease and beef trade: An update." Ottawa, ON: Statistics Canada, Agriculture Division Analytical Paper 11-621-MWE.

Le boeuf canadien se retrouve exclu des marchés les plus importants. 21 may 2003. *National News*. Saisie le 29 juin 2005 de Biblio Branchée database: <www.biblio.eureka.cc/Biblio/Frames/FrameMain.asp>.
Calgary Herald. (July 17, 2006). "$40M beef processing plant opens." Calgary Herald, 65(7): 6.

Canfax Research Services. (July 2005). *Market Situation and Update*. Calgary, AB: Canadian Cattlemen's Association.

Carlton, D. (1979). "Vertical integration in competitive markets under uncertainty." *The Journal of Industrial Economics*, 27(3): 189-196.

Celly, K. S. and Frazier, G. (1996). "Outcome-based and behaviour-based coordination efforts in channel relationships." *Journal of Marketing Research*, *33*(2), 200-211.

Charlebois, S. and R. D. Camp II. (2006). "Environmental uncertainty and vertical integration: The case of Natural Valley Farms Inc." *Proceedings of the International Food and Agribusiness Management Association's 16th Annual*

Forum and Symposium. Buenos Aires, Argentina. June 10-13.

Conejero, M. A., M. S. B.L.de M. Saab, and D. P. Martinelli "The Cattle Beef Negotiation in the Agribusiness System." *Proceedings of the International Food and Agribusiness Management Association's 16th Annual Forum and Symposium*. Buenos Aires, Argentina. June 10-13.

Dahl, R. (1957). "The concept of power." *Behavioral Science*, *2*, 201-215.
Dautzenberg, K. and J. H Hanf. (2006) "David and Goliath" – What kind of Managerial Concepts can SME Use? *Proceedings of the International Food and Agribusiness Management Association's 16th Annual Forum and Symposium*. Buenos Aires, Argentina. June 10-13.

den Ouden, M., Dijkhuizen, A., Huirne, R. and Zuurbier, P. (1996). "Vertical cooperation in agricultural production-marketing chains, with special reference to product differentiation in pork." *Agribusiness, 12*(3), 277-291.

Elliott, D., Smith, D. and McGuines, M. (2000). "Exploring the failure to learn: Crisis and the barriers to learning." *Review of Business*, *21*(3/4), 17-23.

Golicic, S. L., J. H. Foggin, and J. T. Mentzer. (2003). "Relationship magnitude and its role in interorganizational relationship structure." *Journal of Business Logistics, 24*(1): 57-76.

Golicic, S. L. and J. T. Mentzer. (2005) "Exploring the drivers of interorganizational relationship magnitude." *Journal of Business Logistics. 26* (2): 47-71.

Golicic, *S. L., and J. T. Mentzer.* (2006). "An empirical examination of relationship magnitude." *Journal of Business Logistics, 27*(1): 81 – 109.

Grier, K. (2005). "Analysis of the Cattle and Beef Markets Pre and Post BSE: Final Report to the Competition Bureau." George Morris Centre. Accessed 28 Feb. 2006. http://www.competitionbureau.gc.ca/PDFs/Cattle%20and%20Beef%20Markets_Industry%20Report.pdf.

Harvard Law Review. (2004). "Challenging concentration of control in the American meat industry." *Harvard Law Review, 117*(8): 2643-2653.

Heide, J. and G. John, (1988). "The role of dependence balancing in safeguarding transaction-specific assets in conventional channels." *Journal of Marketing*, *52*(1), 20-35.

Hermann, R., S. Thompson, and S. Krischik-Bautz, (2002). "Bovine spongiform encephalopathy and generic promotion of beef: An analysis for Quality from Bavaria." *Agribusiness*, *18*(3), 369-385.

Human, S. E. & K. G. Provan, (2000) "Legitimacy building in the evolution of

small firm mutilateral networks: A Comparative study of success and demise." *Administrative Science Quarterly, 2*(45): 327-368.

Hursh, K. 2004. "One benefit from mad cow crisis." *Leader Post*, Regina, SK, Canada, May 5, pg. B4.

Jensen, H. R., E. W. Kehrberg, , and D. W. Thomas. (1962). "Integration as an adjustment to risk and uncertainty." *Southern Economic Journal, 28*(4): 378-385

Joshi, A. and A. J. Campbell, (2003). "Effect of environmental dynamism on relational governance in manufacturer-supplier relationships: A contingency framework and an empirical test." *Academy of Marketing Science Journal*, *31* (2), 176-189.

Kadirov, D. and R.J. Varey (2005). "Marketplace wisdom and consumer experience: redefining sustainability." *Journal of Research for Consumers, 9*, www.jrconsumers.com.

Katz, J. and M. Boland. (2000). "A new-added strategy for the US beef industry: The case of US Premium Beef Ltd." *British Food Journal*, 102(9): 711-725.

Kularantna, H. D., J. D. Spriggs, , and G. G. Storey, (2001). "Beef producer attitudes for industry coordination: Empirical evidence from Canada**."** *Supply Chain Management***,** *6*(3/4): 119-127.

Kumar, N., L. Scheer, and J.-B. E. M. Steenkamp, (1998). "Interdependence, punitive capability, and the reciprocation of punitive actions in channel relationships." *Journal of Marketing Research, 35*(2), 225-236.

Lamb, R. and M. Beshear. (1998). "From the plains to the plate: can the beef industry regain market share?" *Economic Review – Federal Reserve Bank of Kansas City*, 83(4): 49-61.

Lawrence, J. and J. Rhodes, G. Grimes, and M. Hayenga. (1997). "Vertical coordination in the US pork industry: status, motivations, and expectations." *Agribusiness*, 13(1): 21-31.

Loader, R. and J. Hobbs. (1996). "The hidden costs and benefits of BSE." *British Food Journal*, 98(11): 26-36.

Martin, I., D. Stewart, and S.Matta (2005). "Branding Strategies, Marketing Communication, and Perceived Brand Meaning: The Transfer of Purposive, Goal-Oriented Brand Meaning to Brand Extensions". *Academy of Marketing Science Journal*, 33 (3), 275-295.

Monchuk, J. (June 2003). Les producteurs de bœuf canadien ont besoin d'une

aide.*National News*. Saisie le 29 juin 2005 de Biblio Branchée database: <www.biblio.eureka.cc/Biblio/Frames/FrameMain.asp>.

Mpoyi, R. (2003). "Vertical integration: Strategic characteristics and competitive implications." *Competitiveness Review*, 13(1): 44-55.

Natural Valley Farms Inc. (2005a). *Natural Valley Farms – Business / launch plan,* Corporate documents, revised February 25th, 39 pages.

Natural Valley Farms Inc. (2005b). *Schedule A – Natural Hook protocols*, Corporate documents, 2 pages.

Natural Valley Farms Inc. (2005c). *Natural Beef marketing alliance,* Corporate documents, 2 pages.

Pauchant, T. and Mitroff, I. 2002. Learning to cope with complexity. *The Futurist*, *36*(3),68-69.

Perry, M.K. (1989). "Vertical integration: determinants and effects." in *Handbook of Industrial Organization*, 1. R. Schmalensee and R.D. Willig, Eds. North Holland, New York, p.183.

Le plan d'aide pour le secteur bovin inclura des compensations et des prêts. (13 juin 2003). *National News*. Saisie le 29 juin 2005 de Biblio Branchée database: <www.biblio.eureka.cc/Biblio/Frames/FrameMain.asp>.

Priem, R., A. Rasheed, and S. Amirani. (1997). "Alderson's transvection and Porter's value system: A comparison of two independently-developed theories." *Journal of Management History*, *3*(2), 145-165.

Reve, T. and L. Stern, (1979). "Interorganizational relations in marketing channels." *Academy of Management Review, 4*(3), 405-416.

Saghaian, S., L. Meyer, and A. D. Spaulding. (2006). "Beef Safety Shocks and Dynamics of Vertical Price Adjustment: The Case of BSE Discovery in the U.S. Beef Sector." "David and Goliath" – What kind of Managerial Concepts can SME Use? *Proceedings of the International Food and Agribusiness Management Association's 16th Annual Forum and Symposium*. Buenos Aires, Argentina. June 10-13.

Sligo, F X., C. Massey, and K. Lewis, (2005). "Informational benefits via knowledge networks among farmers**."** *Journal of Workplace Learning, 17* (7/8): 452-466.

Spriggs, J. and G. Isaac, (2001). *Food safety and international competitiveness: The case of beef*. Wallingford, Oxon, UK: CABI Publications.

Stern, L. and T. Reve, (1980). "Distribution channels as political economies: A framework for comparative analysis." *Journal of Marketing, 44*(3), 52-64.
Sturdivant, F. D. (1966). "Determinants of vertical integration in channel systems." *In* R. M. Hass (Ed.), *Science, technology and marketing* (pp. 472-479). Chicago: American Marketing Association.

Ubilava, D. (2006). "Consumer consciousness on meat products - Incentive for higher quality production and basis for marked-up pricing [Case of Georgia (Country)]." *Proceedings of the International Food and Agribusiness Management Association's 16th Annual Forum and Symposium*. Buenos Aires, Argentina. June 10-13.

Williamson, O.E. (1975). *Markets and hierarchies: Analysis and Antitrust Implications (A study in the economics of internal organization)*. New York, Free Press.

Williamson, O.E. (1989). "Transaction cost economies", in *Handbook of Industrial Organization*, 1. R. Schmalensee and R.D. Willig, Eds. North Holland, New York.

Yin, J.D. (1994). *Case study research: design and methods*. Thousand Oaks, CA: Sage Publications.

About the authors

Ron Camp is Associate Professor (on July 1 2007) of International Business and Organizational Behaviour in the Faculty of Business Administration at the University of Regina. His research interests include the areas of intra and inter -organizational collaboration, community and Indigenous economic development, and cross-cultural leadership and management.
Email Ronald.Camp@uregina.ca

Sylvain Charlebois is Associate Professor (on July 1 2007) of Marketing in the Faculty of Business Administration at the University of Regina. His research interests lie in the area of food distribution and safety, including marketing boards and supply chain management, inter-organizational relationships and environmental uncertainty, and food distribution and crisis management.
Email sylvain.charlebois@uregina.ca