BRANDON UNIVERSITY

CASE STUDY

True North Foods

Strategies for Growth of Bulk Food Processing in Manitoba

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RURAL DEVELOPMENT INSTITUTE

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Manitoba
Agriculture, Food
and Rural Development

RURAL DEVELOPMENT INSTITUTE

Rural Development Institute, Brandon University

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Executive Summary

This applied research project answers the question: *Where are the opportunities for growth in bulk food processing?*

This case study is one of eight conducted to describe successful bulk food processing companies in Manitoba and give insight into opportunities for growth and innovation in these industries.

True North Foods is a privately owned ruminant processing facility located north of Carman, Manitoba, currently the largest provincial beef processor. Following recent upgrades to the facility the company is pursuing federal certification for slaughter and processing of cattle, bison and elk to "block ready" cuts.

Their small, flexible federal plant is designed to serve the needs of producers and marketers who wish to export without trucking their animals long distances to slaughter. When the facility is operating at full capacity in 2019 it is projected to process 1000 head a week, 5 times the number of cattle processed in the entire province 2013.

In the wider industry, producers are continually innovating to increase efficiency, through improving genetics and livestock management practices. New uses of technology are being developed to improve animal welfare and profitability.

The establishment of True North's federal processing facility in the province is seen as a positive development for the industry, giving opportunities for producers, marketers and processors to expand their markets outside Manitoba without having to ship their animals long distances.

Introduction

PURPOSE OF STUDY

Growth in food processing to produce bulk ingredients represents a major opportunity for Manitoba to increase economic activity in the province. This research follows from a preliminary study into the opportunities for growth that come from innovation in the bulk food processing industry in Manitoba. For the purpose of these studies a bulk ingredient processor is defined as a company that sells to manufacturers, bulk wholesalers, distributors, businesses and food service. Private label sales are also included as a type of bulk sale in this research; in addition some processors also sell their own branded products. The unit of sale will be in most cases significantly larger than the retail size.

For the second year of the study, the notion of health benefits associated with ingredients was an additional factor examined with the majority of companies selected.

RESEARCH METHODS

The main research method was interviews with company and association leaders through the supply chain, together with researchers and other innovation partners.

This research uses "Instrumental Case Studies": eight Manitoba bulk food ingredient processing companies and their associated supply chains are examined to provide insight into growth and innovation within the bulk food processing industry.

The studies gather data on: history, activities (describe chain processes), setting (product & industry), and other contexts and informants (chain). Beyond this description, the focus of the study is growth and innovation in each company and supply chain.

The "Oslo Manual" guidelines[1] for collecting and interpreting innovation data were used to formulate the interview tool for the semi-structured interviews conducted in this study.

An innovation is defined as the implementation of a significant change in product, process, marketing or organization that is new (or significantly improved) to the company.

The interviews covered several areas of focus:

- Overview: a description of the company, industry and supply chain, and how they work together
- An investigation of innovation in the companies, supply chain and industry:
  - Past innovations that lead to this industry
  - Innovation opportunities for the future
  - Factors that affect ability to innovate
  - Linkages to outside innovation resources

INTERVIEW PARTICIPANTS

Participant	Role
Calvin Vaags - CEO True North Foods	**Processor**
Art Petkau Beef Producer	Producer
Ian Thorleifson Elk & cattle producer, elk procurer President, Manitoba Elk Growers Assn	Producer & Customer / Distributor
Roger Provencher Bison marketer, Canadian Prairie Bison	Customer / Distributor
General Manger Foodservice Distributor	Distributor
Janet Honey University of Manitoba (retired)	Researcher
Melinda German Manitoba Beef Producers	Producer Organization
Dave Shambrock Manitoba Food Processors Association	Processor Industry Association

1 Oslo Manual Source: OECD & Eurostat Agri-Food. 2005: Guidelines for collecting and interpreting innovation data

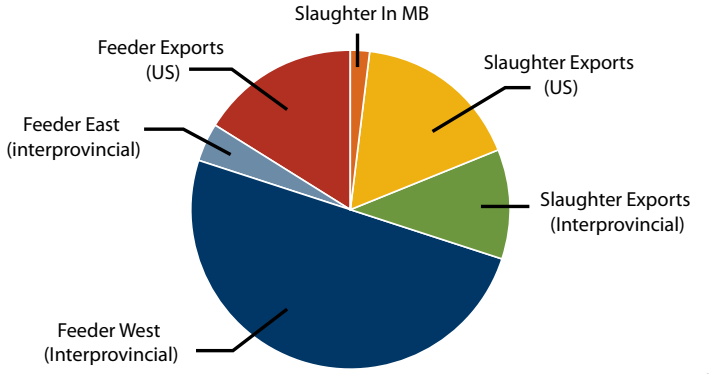
MEAT PROCESSING INDUSTRY

Beef is the third most widely consumed meat in the world (about 25%), behind pork and poultry, at 38% and 30% respectively. The three largest consumers of beef are the United States, Brazil, and China. The world's largest exporters of beef are Brazil, India, Australia and the United States.[2]

FAO (Food and Agriculture Organization of the United Nations) predicts food consumption will increase by 60% by 2050, due to increased population but more importantly income growth, more middle class in developing countries. "Beef is one of the few commodities where the growth rate is expected to grow over the next decade". [3]

Historically Manitoba has a strong cattle industry peaking at 581,000 head slaughtered in the province in 1976. Currently the Manitoba beef slaughter capacity is about 10,000 head, in provincially registered plants. In 2013 Manitoba's cattle industry sold about 400,000 head of slaughter or feeder cattle out of the province; mostly to Alberta (about 2/3) or south to the US. In 2013, over 2 million head were slaughtered in Alberta. The Manitoba cattle industry was hit hard by export restrictions during "BSE years" and in the late 2000's by a stronger Canadian dollar and US mCOOL regulations.[4]

All Cattle Exiting in Manitoba - 2013



Derived from 2013 estimates[4]

2 http://www.indexmundi.com/agriculture/?commodity=beef-and-veal-meat&graph=domestic-consumption

3 https://www.fcc-fac.ca/en/ag-knowledge/money-and-finance/what-growing-global-demand-means-for-canadian-ag-markets.html

4 Manitoba Cattle and Beef Industry, 2013 – 2014, Janet Honey, University of Manitoba

Manitoba bison and elk production in Manitoba operates on a much smaller scale, with 75 bison producers (about 15,000 head). About 2000 bison are slaughtered in-province each year, but most are shipped to the US for slaughter. The elk industry started with ranches in the 1970's, expanded with the market for antler velvet, now have meat and trophy hunting as additional sources of income. Manitoba has about 20 elk producers (about 2000 head).

Health Benefits of Beef, Bison and Elk

All red meat (beef, bison and elk) is a very good source of complete protein, iron and B vitamins. Bison and elk both give leaner meats than beef or pork. Bison, elk and some specialty cattle are marketed as "natural" foods, as they are raised with no antibiotics, growth stimulants, hormones or steroids.

TRUE NORTH FOODS

The Company

Beef producer and feed lot owner Calvin Vaags established Carvers Knife, a retail meat store, in 2004 as a solution to lack of market for his cattle due to the US border closure (BSE) in May of 2003. Carvers Knife later expanded to include wholesale. Plains Processors, located north of Carman, a provincially registered plant was purchased in 2008, and True North Foods was incorporated in 2012 and currently employs about 25 people.

The application process for federal licenses is underway. Licenses are country specific and species specific; the first will be beef to the US, then moving to other species (bison and elk) and markets, e.g. the European Union and China.

Processing

The plant has been modernized and enlarged in preparation for federal certification; it is now capable of handling very large animals, e.g. bull cattle, bison and elk.

True North is currently processing cattle under a provincial license. Animals enter the facility, where they are slaughtered humanely. The carcasses are cooled overnight then processed using a "pod-based" system, individual processing which enables each cut to be traced to the animal's CCIA tag.

True North's facility has HACCP certification; and is planning to certify for Kosher and Halal.

Products

True North's end product is boxes of "block ready" meat, cut to the customers' specifications. To be ready for sale to the consumer this meat needs further processing by a butcher, retail store or food service distributor.

Markets / Customers

The business model for True North will be largely "custom processing" where they will contract to provide a service: process live animals and deliver "block ready" packages of meat.

Many customers will serve niche markets, for example: Halal or Kosher, organic or grass fed beef, bison or elk, these markets demand a high degree of traceability for identify preservation. Their products will be sold both nationally and internationally, access to these markets depends on a federally inspected plant.

Position in Industry

True North Foods will be the only federally licensed beef and ruminant processing facility in Manitoba and Saskatchewan. They will be very small relative to the large facilities in Alberta where most Canadian beef is processed.

Competitive Advantages

- Federal license enables international marketing for processing customers
- Geographic advantage – shorter shipping distances for live animals
- Flexibility – small enough to meet customers' needs and can serve large markets
- Diversification – serving multiple markets – beef, bison and elk
- Strong traceability

Supply Chain

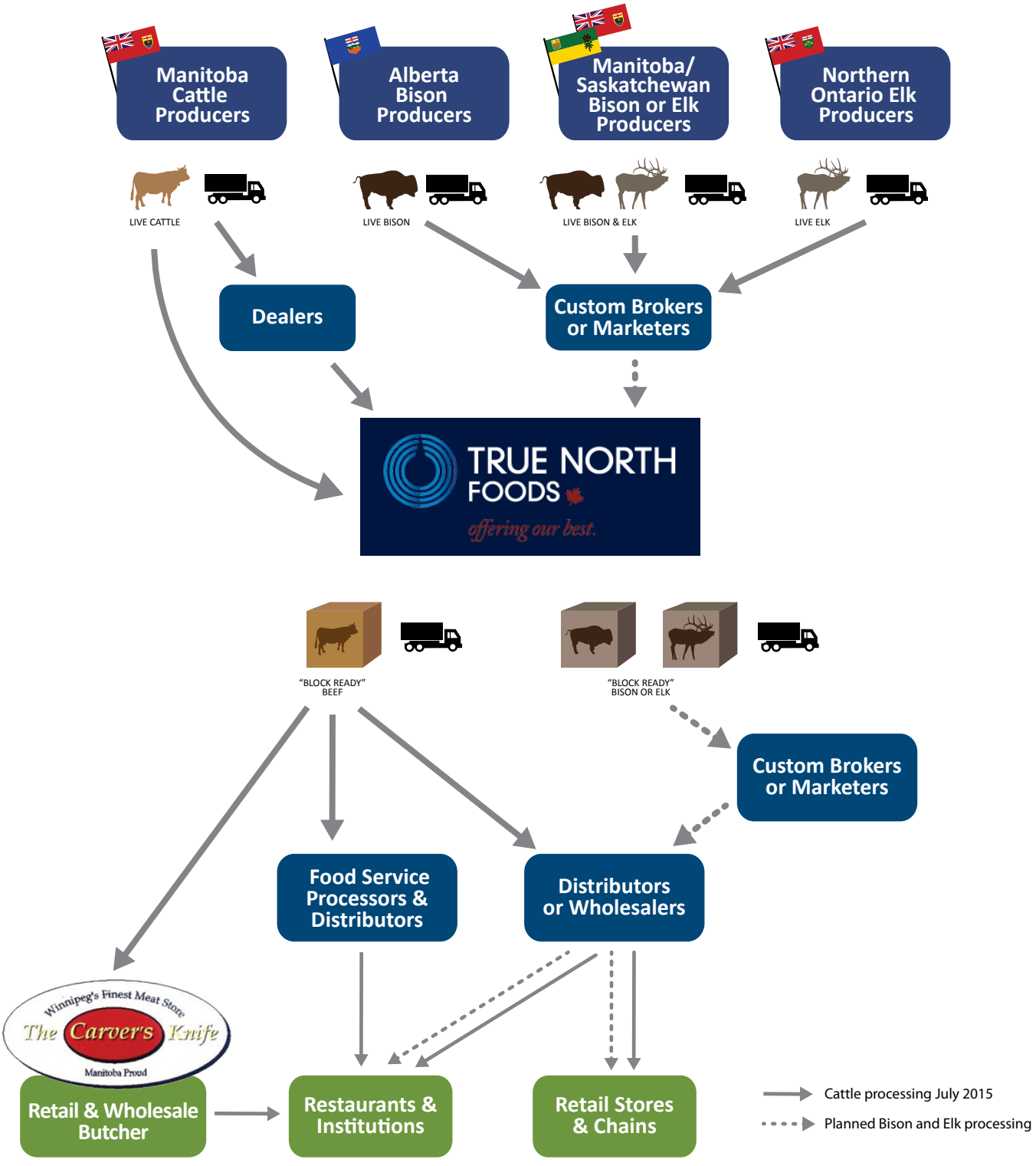
The supply chain given is a projection of the supply chain following federal certification.

True North Foods will sell a "service" to producers, brokers, marketers and dealers. Taking in live animals and delivering boxes of "block ready" meat ready for distributors, retail stores and chains. So, in many cases the "supplier" will also be the "customer".

A significant proportion of the business will be custom processing of beef, bison and elk, Most of the "block ready" product will be exported to the US or other provinces through retail and food service distributors, procurers and marketers.

Currently a portion of their business is vertically integrated from the Vaags feedlot to True North processing to Carvers Knife retail and wholesale, with additional processing options for local producers.

True North Foods Supply Chain



Innovation

True North Foods' business model is an innovative one for the Canadian industry and the first federal plant in Manitoba for over 30 years. They will provide a slaughtering and processing service to Manitoba beef, bison and elk producers, targeting in particular those who have niche and export markets. Innovations have centred on setting up the business and facility with the capacity, flexibility, food safety certification and traceability that these customers need. Two process innovations are directly related to the new larger facility; processing using a pod-based system and the development of a novel water treatment process. These producers and marketers are leading the way in move towards meat industry paying attention to what customers want in terms of knowing where their food comes from, food safety and animal welfare.

Industry wide producers, with support from the research community, are continually innovating to improve the genetics of their herds and refine livestock management systems to increase efficiencies and animal welfare. Looking to the future it is possible that the establishment of a viable federal ruminant processing facility in Manitoba will encourage producers to increase herd sizes; and lead to more value added meat processing for export markets.

TNF 1 Innovation: Federal facility	True North will be the first large federally licensed ruminant processing facility in Manitoba since the 1980s. In cooperation with partners and regulators the facility was expanded and modernized to meet federal standards. Federal certification will enable TN to process larger, more cost-effective volumes; it will also provide a valuable service to Manitoba producers. New markets will open up as they will have the option of processing their stock in Manitoba, and marketing and exporting to other provinces (and chain stores), the US and overseas.
Type: Organizational ➡ Product & Marketing	
New to: Province	
Part of supply chain: Processor	
When: 2012 -2015/16	
Time Line: multiple small steps	
Developed: with consultants, equipment suppliers & regulators	

TNF 2 Innovation: Size of facility	The facility will have a maximum capacity of about 200 head/day, or about 50,000/year. This is large compared to provincial processors (Plains Processing was 15/ day), and at capacity will result in a 5 times increase in ruminant processing in Manitoba. It is however, much smaller (and less efficient) than larger Alberta plants (about 6000 head/day, from 1000 mile radius). TN's efficiency advantage is being closer to their supply (100-200 miles); this reduces travel cost, weight loss and stress on the animals. A smaller plant will also be more flexible, able to accept smaller loads, even single animals, which will be an advantage for smaller producers. This innovative approach is going against the "bigger is better" philosophy, towards "local food" and quality control.
Type: Organizational ➡ Product	
New to: Company	
Part of supply chain: Processor	
When: 2012 into future	
Time Line: one-step	
Developed: In-house with producers, distributors and customers	

TNF 3 Innovation: Individual "pod" processing, trace-ability	True North Foods is using a novel pod-based processing system taking full advantage of modern metal detection and monitoring technology. The whole carcass is processed into boxes of block ready meat at several stations in one "room"; each box will have primal cuts from just one animal. A major advantage of this is traceability, the meat is tracked to the CCIA tag of the animal, and hence to its life history. Pod processing also increases flexibility, with the capacity to process multiple species, large breeds and bulls, and enable customers to specify how the animal is processed. Enhanced traceability builds on industry-wide efforts to track produce from field to plate; giving better disease control and food safety, and giving producers the ability to evaluate the quality of meat from individual animals. Traceability will also satisfy consumer preference taking advantage of the trends of "knowing where your food comes from" and "know your producer".
Type: Process / Product	
New to: Company / Industry	
Part of supply chain: All	
When: 2012 - 2015	
Time Line: One-step	
Developed: In-house with partners and equipment manufacturers	

TFN 4 Innovation: Custom processing – multi species	TNF will be selling a service rather than a product and targeting niche markets. Producers, brokers or marketers will bring live animals and take away boxes of block ready meat. The target customers are producers, marketers or brokers, such as grass-fed beef, or organic beef; other species (bison and elk) and Kosher and Halal customers. Country specific cuts and hormone free traceability will be important for export markets. Marketing and selling meat will be a minor part of TNF business, because each niche has its own established market, methods and marketers. There is established demand for this service in Manitoba (and adjoining provinces), especially for bison and elk that have large potential export markets and are currently shipping animals long distances to the US for slaughter.
Type: Organizational	
New to: Province	
Part of supply chain: All	
When: 2015 to future	
Time Line: Multiple step-wise	
Developed: In-house with producers, distributors, brokers and customers	

TNF 5 Innovation: Waste water	The expanded facility needed to meet modern standards for the disposal of specified risk materials (SRMs) and waste water. The company developed an innovative method that met environmental approval by adapting common agricultural practices and technology. This environmentally friendly and low cost solution removed a potential stumbling block to the establishment of the company, as conventional solutions would have been prohibitively expensive.
Type: Process	
New to: Industry	
Part of supply chain: Processor	
When: 2012-2015	
Time-Line: one step	
Developed: In-house with consultants and regulators	

TNF 6 Innovation: Livestock breeding Type: Product New to: Company / Industry Part of supply chain: Producer When: Continuous to future Time Line: Incremental Developed: In-house, and with researchers	All three livestock industries are continuously selectively breeding for desirable qualities such as consistent tenderness. 70% of cattle production costs are feed, so selection is made on the basis of efficient conversion of feed to muscle; sophisticated genetic monitoring is replacing traditional "feed them and weigh them" studies. The recent formation of the Beef Cattle Research Council is resulting in improved collaboration between producers and all researchers. Plains and wood bison are cross-bred to give faster growing animals. Selective elk breeding has increased antler velvet production by 50%. As elk meat production increases in importance, producers are also breeding for feed efficiency to reduce feed costs.
TNF 7 Innovation: Livestock management and technology Type: Process New to: Company / Industry Part of supply chain: Producers & distributors When: Continuous to future Time Line: Incremental Developed: In-house, and with researchers	Bison and elk are naturally able to cope with the Manitoba climate all year; innovations have concentrated disease prevention and livestock management and handling, e.g. tight-lock fencing brought in from New Zealand. Cattle producers are constantly experimenting with different feeds and management practices, e.g. intensive and rotational grazing, and winter bale and swath grazing. Technology is being adopted to improve animal welfare and food safety, e.g. needle free injections and heat cameras to speed diagnosis of sick cattle. In the future cattle monitoring on range may be aided by drones and remote monitoring of Radio Frequency ID tags. Distributors are upgrading equipment and facilities to keep up with advances in technology and increase efficiency.
TNF 8 Innovation: Marketing healthy meat Type: Marketing New to: Industry Part of supply chain: All When: 2000 into future Time Line: Step-wise Developed: Whole industry, with government and others	The bison and elk industries made concerted and successful efforts to market their "low fat, natural, no antibiotics or hormones" meat in the 2000's. At present here is no need for active promotion as, if anything, demand exceeds supply. In the cattle industry there is a developing recognition that the whole industry, including producers need to move marketing more towards consumer demand, (e.g. Certified Angus Beef). This means paying attention to and communicating effectively around animal welfare, management practices and the quality and advantages of their products. True North Foods' facility and business plan is set up with this in mind; with the flexibility and traceability to enable producers and brokers to sell to multiple niche markets.

TNF 9 Innovation: Value - Added	Once True North is up and running with federal certification there will be the possibility of value added processing in Manitoba. At present Manitoba slaughtered ruminants cannot be sold outside the province or to many retail chains. Federal certification will give opportunities for value added processing. The block ready product coming out of True North plant could be further processed and cut for domestic markets such as retail chains in Manitoba and other provinces. Burger or steak packages could also be processed for export markets. “Made in Manitoba” or “Saskatchewan Grown Beef” are possible marketing approaches that feed the consumer desire to know where their food comes from.
Type: Organizational ➡ Marketing	
New to: Company	
Part of supply chain: Processors	
When: Future	
Time Line: Step-wise	
Developed: In house and with distributors and retailers	

Innovation Methods

Factors that Affect Ability to Innovate

The **incentive to innovate** for members of this supply chain was often to increase efficiencies and remain competitive. Growing their sector and profits were also factors, together with increasing animal welfare. For TNF innovations were to solve problems related to establishing a new larger company, and meet the needs of their markets.

For producers, innovation is generally very "grass-roots", they **generate ideas** in-house and follow-up with discussions with other producers and "knowledgeable people. A proportion is actively engaged with researchers and government through workshops, direct contact and the internet. Producers and processors innovate by following-up on ideas by consulting equipment suppliers and specialists. For distributors and marketers, food shows are an important venue to generate ideas and form relationships to promote their product.

Obstacles to innovation were the usual "money, time and expertise". Another significant obstacle was resistance to change, unwillingness to try something new. This was sometimes on the part of producers, and also relating to regulation. The general view was that regulation is a good and necessary thing, but that it should be consistent, reasoned and scientifically justified – regulations that don't meet those criteria or are slow to change with new advances will slow the pace of innovation and growth. An example is uncertainty about international regulation around disease in elk; this discourages producers who may be considering entering the industry.

Innovation Linkages

Innovation linkages were seen as **business linkages** in this industry, these tended to be open and informal; trust was developed over time. There was little concern over proprietary information or intellectual property; though this may change as technology progresses.

The bison industry is vertically integrated (collaborative) with a marketing arm of the producers association selling a significant portion of prairie bison to established customers. Cattle and elk are generally less integrated with strong, stable relationships to the next person in the chain, fragmented to cooperative **relationships**. There is room for improvement in the meat industry becoming more of a "value-chain" rather than a "supply-chain", with members from producers to researchers to distributors working together to promote the industry and their products. There is a trend towards more coordinated or even collaborative relationships as producers and marketers look to serve the retail customers' needs.

External information sources were industry media, both printed and web-sites. For producers peer-to-peer interactions and industry events were also important. Several mentioned listening and reading widely, taking ideas from other species or industries; and surrounding themselves with a broad spectrum of professionals

Limits to Growth

True North Foods as a company is in the process of getting established as a federal processor. They are projecting about 3 years to reach full production, giving a 5-fold increase Manitoba ruminant processing to about 50,000 per year. The industry participants thought that the facility will meet pent-up demands of Manitoba producers and marketers, especially those who are seeking niche and export markets (within and outside Canada). Bison and elk producers will be able to export their animals without trucking them long distances, with significant benefits in terms of bottom-line and animal welfare. Beef producers seeking niche markets and exports out of the province will also have the opportunity to have significantly shorter trucking distances to slaughter.

When everything is taken into account True North will have to be price competitive with the Alberta and US processors who are currently processing Manitoba ruminants. In terms of the total Manitoba beef industry; even at full capacity True North will process less than 12.5% of Manitoba beef production, so it should not negatively affect other Canadian businesses significantly.

Looking to the future, the establishment of a federal ruminant processing facility in Manitoba is seen to be very positive for the beef, bison and elk industries, as the diversity of marketing opportunities will increase. Stability and capacity of

the industry is also a factor; Manitoba was particularly hard-hit by the BSE export restrictions because the provincial processing industry was so small. These two factors may encourage Manitoba producers to take advantage of current tight supplies and increase production for all three species. With a larger processing facility close by, an increase in "finishing" feeder cattle in the province is possible. There are however, challenges to expanding herds, most notable being the large investment required in equipment and stock, prohibitively large for many potential young producers; the older demographics of current producers and difficulties in financing large investments at current high prices.

Conclusions

True North Foods is the largest provincial ruminant processor in Manitoba; it plans to expand capacity to 1000 head a week in the next 3 years once federal registration is complete. This is in comparison with about 10,000 for the whole province in all 2013. They offer a processing service, taking in live animals and delivering boxes of block ready meat. Their innovations have centred on tailoring the facility to the needs of customers who serve niche markets; with flexibility in terms of number of head, species and size of animal, and attention to traceability, food safety and individual customer requests.

With the current tight supply of beef, bison and elk there is an opportunity to expand production in Manitoba. The addition of an option for federal processing and the associated easier access to inter-provincial, US and overseas markets, is considered to be positive for the Manitoba industry as a whole. It will provide another option for producers and marketers who are moving in a more "consumer oriented" direction, and those who want shorter trucking distances for their animals. There may also be opportunities for value added processing of TNF's block ready cuts for retail and food service markets.

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