

REGIONAL FOOD PROCESSING FACILITY AND FOOD SCIENCES STUDIES

Viability Study

Final Report

Prepared for



In Partnership with



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Prepared by



In Partnership with



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EXECUTIVE SUMMARY

Opportunities exist to develop and supply local food products to the region that are of high quality and value. Terms such as “buy local”, “100 mile dining” and “100 mile diet” have evolved to represent the increased consumer demand to buy locally grown and processed food products. There are tremendous benefits from buying local, including increased quality and nutritional value, less environmental impact with lower transportation costs and a higher level of safety.

Many businesses are starting to see the benefit of buying local. For instance, Unilever, owner of Hellman’s mayonnaise, has recently released a marketing campaign that urges consumers to “commit to eat real food” in season. It encourages Canadian consumers to eat local food grown by Canadian farmers. In addition, large grocery retailers such as Loblaws have begun introducing locally grown food products on retail shelves to capture this \$1 billion dollar and growing consumer market. Consumers are demanding healthy, tasty and locally grown food products that are convenient and fresh. Locally developed fresh, ready-to-eat and home meal replacement food products can service local consumer needs through retail shelves, farmers markets or those of northern work camps. The food economy is changing to be more localized and less dependent on importing from other countries.

Demographic statistics have traditionally been key drivers in the food processing industry; however health and safety conscious consumers have become a major and on-going element in market trends in recent years. The challenge for this industry is in responding to the changing demands of consumer and food service markets, especially hotel, restaurant and institutional buyers. These customers have expressed a preference for regionally produced and healthy food products, but the food industry operators aren’t responding quickly enough. This presents an opportunity for small and medium scale food producers and processors, and as such, the first and most important step in this viability plan will be assessing the local market and regional demand for this facility as it is a key driver for determining scope, carrying capacity and project feasibility.

1. BACKGROUND

Located in Northeast Alberta, approximately 200 km from Edmonton, the town of St. Paul provides education, medical care, recreation, shopping and childcare services for this area. The Portage College St. Paul Regional Service Centre has recently expanded by moving into the former Glen Avon School location, enabling the possibility of increased programming. A new student residence is planned for opening September, 2012.

St. Paul campus serves an extensive area in the heart of the College's geographic region. Students travel from many communities surrounding St. Paul such as Elk Point, Saddle Lake, Myrnam, Ashmont, and Mallaig. Post-secondary programs and courses are available through both the Portage College and Blue Quills First Nations College.

Blue Quills programming includes Cree Language, Leadership and Management, Early Childhood Development, Social Work Diploma, Bachelor of Education University Transfer Program, Indigenous Artists Program, University Diploma in Arts, Bachelor of Arts Degree (Psychology), Information Technology Support, Pre-Trades Preparation Training, Teacher Assistant, Bachelor of General Studies, and Business Applications & Data Management Office Readiness.

Existing programming at Portage College include Academics for Careers and Education (ACE) programs, Accounting/Computer Applications, and Office Administration. The College provides easy access to the St. Paul Municipal Library.

The St. Paul Community Learning Association enhances and complements other parts of the learning system in Alberta. They provide support for identifying and meeting needs in the community that are not being met by others. Their Volunteer Tutor Adult Literacy Program also provides foundational skills such as literacy and English. St. Paul prides itself on its multi-cultural community because it includes cultural and arts organizations such as Mannawanis Native Friendship Centre, ACFA and St. Paul Visual Arts.

2. MARKET ASSESSMENT AND DETERMINATION OF REGIONAL DEMAND

Canadian Food Processing Models listed under the Canadian Association of Business Incubators lists only two shared-use food processing facilities in Canada. In September 2007, a study was completed for the Investment Agriculture Foundation (along with the federal and provincial governments) that indicated that a food research facility including small-scale food processing as well as educational and training courses and business advisory services had strong interest from agri-sector producers. Additional research shows that many non-food sectors would have beneficial interest as well.

Leduc's existing agricultural research centre recently added a new Agrivalue Processing Business Incubator – a 6,875 square-meter extension of the Food Development Processing Centre. This facility offers state-of-the-art processing technology, stork oven (steams, cooks or grills a range of products from whole chickens to cordon bleu – processing 500 to 3,000 kg in one hour), spiral freezer (can quick freeze 1,000 kg of cooked hamburger patties in one hour), eight fully serviced processing suites varying in size and design for a variety of food production needs (each serviced with power, compressed air, steam and water), offers a 24-hour private production facility with secured access, shipping and receiving bays with storage capacity, and a variety of other space to utilize for shared business use.

The Toronto Food Business Incubator, a registered NPO opened in July 2007, can accommodate as many as nine entrepreneurs who pay a registration fee of up to \$750 plus \$30/hour for kitchen use. There are many benefits offered to facility clients which include a phased-in entrepreneurial course to take clients from the beginning phases onward. This facility offers a walk-in cooler and walk-in freezer, ice-omatic machine, deli-style meat cutters, Garland 8-burner stove and ovens, Garland grill and flat grill, industrial capacity dishwasher, Cleveland gas kettle, Varimixer 20 qt. Mixer, MCO convection oven and various packaging machinery.

Salmon Arm's Shushwap Business Development Centre, a 7,000 square foot facility utilized manufacturing bays, business offices, a conference room and a 1,800 square foot commercial kitchen. The kitchen operated as a provincial government-inspected shared-use food production facility. In addition, the local University offered 10-week cooks training courses and there were some successful food companies that emerged from this endeavour. In this location, the overall demand did not justify the available capacity and it has closed in 2004.

The College of the North Atlantic operates a successful incubator located in Carbonear, NL which was built from federal and provincial contributions. This community is smaller than the Salmon Arm facility by 2/3, and was once smaller than St. Paul.

The Town of St. Paul's economic base is defined primarily by agriculture and the oil and gas industry. Other natural resources in the area include salt. Major agricultural food products include poultry, canola seed/legume seed, goat products, beef, honey, coarse grains and dairy products.

3. PORTAGE COLLEGE FOOD PROCESSING FACILITY SURVEY RESULTS

Attempts have been made to contact the following:

- Bear Lake Honey, Smoky Lake
- Bison Ranch - D&V Pratch Holdings Ltd., St. Paul
- Bob's Custom Cuts Ltd. Bonnyville
- Hamel's Meat Market Ltd., Bonnyville
- Lakeland Meat Processors, Elk Point
- Kitscoty Meats, Kitscoty
- Lakeland Poultry Processors, St. Paul
- Humeniuk's Meat Cutting, Vegreville
- Love's Custom Meats Inc., Vegreville
- Prime Cuts Meat & Deli Ltd., Vegreville
- Vermilion Packers Ltd., Vermilion
- Barrhead Custom Meat Packers, Barrhead - Additional Contact
- EnSante Winery, Brosseau
- Downhome Comfort Foods Inc., Two Hills
- Baba Jenny's Ukranian Foods, Vermilion
- Mundare Sun Spot Greenhouse, Mundare
- Triangle Greenhouses Ltd., St. Paul
- Alberta Vegetable Growers
- Alberta Greenhouse Growers Assn.
- Alberta Farmers Market Assn.
- Alberta Food Processors Assn
- Alberta Farm Fresh Producers Assn.
- Alberta Organic Producers Assn.
- Organic Alberta
- Flying Rabbit Fruit Farm

We have identified 1 winery, 2 ethnic food processors, 10 meat processors, U-Pick fruit farm and a honey processor in the HUB region. We have also contacted two greenhouses, and 6 associations for fresh and organic produce in Alberta.

Winery: The winery grows its own fruit and honey in-house, and is meeting current demand and expects to continue to do so. Extra fruit is sold if any is available after wine is made but wine is the main product. They sell locally to farmers markets and across Alberta and Saskatchewan, as well as direct to retail and restaurants through Connect Logistics. They would like access to training/skills development and feel that access to

skilled labour is a current barrier in their business. It may utilize lab testing equipment but would not be interesting in leasing space long-term.

Ethnic Food Processors: Two producers of Ukrainian foods were identified in the region. Processing is currently done in-house. One purchases fresh ingredients at the local grocery store after their growing season while the other purchases from the Hutterites or ships from a large wholesaler. Processed products are sold locally to a large chain grocery store and work camps in the North as well as directly to a local restaurant. Direct to retail sales locations include Edmonton, St. Paul, Cold Lake, and Wainwright with some cross-provincial and some direct to consumers. One is increasing the number of large chain grocery chain stores they sell to and will purchase any equipment needed and increase staffing to increase production accordingly. One produces 300 Litres (Borscht) per run and this meets their current production and expected future production needs. One would utilize food safety certification courses (specifically requested). The other would utilize commercial equipment, freezing/storage capacity and cold storage for raw vegetables along with bench top scale processing equipment. Barriers cited include transportation costs (they need access to refrigerated trucks), skilled labour and one cites specifically needing a julienne cutter and packaging and labelling equipment. Current geographic markets include 100 mile radius of St. Paul region, Alberta (specifically including Calgary), up North as far as Wabasca and Fort McMurray as well as some inter-provincial markets. Baby Jenny's Ukrainian Foods would specifically like to look at future markets to include exports. Of the two interviewed - Downhome Comfort Foods Inc. would utilize this facility through food processing equipment/services and would be willing to lease space for three years if it met their needs.

Meat Producers: *Bob's Custom Cuts* in Vegreville has indicated he will be closing up shop due specifically to the local inspector and government regulations and was not interested in speaking with us.

Humeniuk's Meat Cutting in Bonnyville has also been closed down - cited as due to the local inspector and HACCP regulations. Gerald Humeniuk indicated that current regulations require small business owners to spend 50% of their work day filling out paperwork. It is possible that HACCP Regulation Training courses could help with this. He currently is now only processing during hunting season so the HACCP regulations no longer apply. He has indicated that there were a large number of abattoirs that have dramatically reduced now numbering 30-40 in this region. Another barrier he feels is access to skilled labour. He believes that 50% of the local processors are closing down (due to local inspector issues) and he was personally quoted that it would cost him

\$50,000 per year in upgrading costs (over the long term) to keep up with changing regulations. He indicated that changes that he has made last year to meet regulations were not acceptable this year and need to be changed again - small processors can't afford this cost. Mr. Humeniuk provided the following quote, "*Regulations and labour at current levels - the little guy can't survive - closed down by the one-man show*".

Hamel's Meat Market in Bonnyville did not mention the local inspector or troubles with HACCP regulations. They produce sausages (fresh/smoked), ham, bacon, beef jerky, poultry, lamb, veal, fish, loaves, custom sausages, and fresh and frozen meats in-house. They purchase their meat locally from Alberta farmers. Most of their processed foods are sold in their own store with very few exports in Alberta and Saskatchewan and have sausage fundraisers in North Battleford, Saskatchewan that they export sausage to. Hamel's Meat Market is meeting current production needs and anticipates this to continue. They would utilize training/skills development, commercial equipment, business coaching, freezing/storage capacity, distribution and packaging and labelling at this facility and would lease space for 3 years if the facility met their needs. Hamel's Meat Market would like lab testing equipment including nutritional labelling and labelling for shelf life as well as processing equipment for sausages, ham, bacon and other meats. They have bench top scale equipment now that can produce 100 pound batches but he would like to see commercial scale that would process/smoke 500 pound batches. Barriers include transportation costs and access to skilled labour (Hamel's Meat Market is currently hiring Leduc or Lacombe facility students which have been found to be lacking in necessary skills). Current markets include 100 mile radius of St. Paul region, Alberta (including Edmonton and Calgary) and inter-provincial including Lloydminster, Cole Lake, Bonnyville and Fort McMurray. In the future, Hamel's isn't looking at going into restaurant or institutional sales but to individuals and some out-of-province and isn't looking at export markets. It was indicated that there is a lab in Saskatoon that can process Red Clover flowers into syrup and processes 1 million jars at a time. It was also suggested that this facility would be good for more than meat processors and would like this facility/study to look at training highly skilled workers / students in this industry and to look at innovative ways to produce unique products (like the syrup). Hamel's Meat Market provided the following quote: "*I feel there is appeal for meat and agricultural processing and would like to see some highly skilled workers come out of the school.*"

D&V Pratch Holdings Ltd. (Bison Ranch) in St. Paul currently process their Bison meat at Love's Custom Cuts in Vegreville and sell their products provincially. D & V Pratch Holdings currently have 17 head of bison to process and is meeting current demand and anticipates meeting future demand. They don't intend to increase capacity at this time.

They would utilize training/skills development, commercial equipment, business coaching, freezing/storage capacity and distribution equipment or services at this facility. They would like to see commercial scale processing equipment for bison jerky and sausage. Current geographic markets include 100 mile radius of St. Paul region, and Alberta (including Edmonton and Calgary). They would be willing to lease for 3 years if space in this facility met their needs and they provided the following: *"If local food production is to become available to the consumer, proactive steps such as a processing facility are a major step to the direction of a socio-economic conscience for food production and consumption."*

Prime Cuts Meats in Vegreville currently purchase their raw materials directly from Maple Leaf and Vermillion Packers to produce garlic sausage, ham sausage, kuburgers, pepperoni, jerky and fresh meats - currently processed in-house. They use a smokehouse and can currently process 200 lbs at a time which is meeting current demand. They have a smaller processor that can process 5 lbs at a time that they use for their fresh sausage. Currently selling within Alberta to grocery stores including the Co-op and IGA as well as one fast food restaurant called Grassland. Earl Grier, President, indicated that if demand were to increase and this facility were available he would consider using larger-scale commercial equipment. Current geographic markets are Athabasca, Lloydminster, Drumheller, Edmonton and a 100 mile radius of St. Paul. The only barrier indicated here was in financing.

Poultry Processor: A local poultry processor processes whole and wholesale poultry manually using small processing equipment such as meat grinders and vacuum packaging machines and doesn't outsource. The processor uses wholesale live chickens sourced from registered quote farmers in Alberta. Custom processing is provided for farmers for personal use or re-sale at farmers markets or direct from the farm gate sales. Products are sold locally and direct to restaurants. Current processing is 10,000 birds/week during June to December which is their busy season. They are meeting demands of custom processing since it is off-season but they are not meeting demands of wholesale customers due to a lack of available live poultry since there's a provincial shortage at present. If this shortage is corrected they expect future capacity for wholesale needs to be an additional 7,000 birds monthly. Live sourcing is the issue for meeting demands and the province is under a regulated quota system, so they can only wait out the shortage and currently buy already processed poultry to supply their existing wholesale customers. They would utilize training / skills development and commercial equipment in the new facility, with the most beneficial being the processing equipment. They would like to see bench top and commercial scale equipment. Current

barriers are cited as access to raw materials, access to skilled labour and access to financing. Their current geographic markets are 100 mile radius of St. Paul, and the St. province of Alberta including both Edmonton and Calgary. Future markets could grow to include more inter-provincial. They are unsure at this time if they would be interested in leasing but believe it is quite possible they could use services or access to food processing equipment if available at this facility. They would like their name not to be included in this report.

U-Pick Fruit Farm: Flying Rabbit Fruit Farm of St. Paul is a U-Pick farm with a variety of fruit and vegetables. They are interested in producing fruit spreads on a large scale, however require coaching. Currently their products are sold to local farmers markets as well as directly to customers (farm gate). They are currently meeting demand from customers however the weather since 2007 has created instability with some of their fruit trees. Services that could be utilized in a facility would include training or skills development as well as commercial equipment and they would benefit from processing equipment. Access to a facility and assistance on commercial processing has been identified as a barrier for this company. Their current market is 100 mile radius around St. Paul, however they have indicated that future markets could also expand to the Edmonton market. The owners would need the services of food processing equipment and would possibly lease space in a facility for one year at a time, depending on the crop year.

Honey Producer: Bear Lake Honey of Smoky Lake processes honey, beeswax and candles using honey from their home site. Products are sold locally, to farmers markets and direct to retailers in Smoky Lake. They are currently producing approximately 25,000 lbs of honey - 6,000 sold retail with the balance sent to the Honey Co-op in barrels. If demand increased, more could be packaged in retail containers for sale with less going to wholesale. Services that could be utilized in a new facility would include training/skills development, commercial equipment and business coaching. The most beneficial equipment for their business would be both lab testing and processing equipment in bench top or pilot scale, however barriers to growth of their business is cited as access to commercial scale equipment. Current and future anticipated markets are 100 mile radius of St. Paul and within Alberta, specifically Calgary. They would be interested in new product development, and would be willing to lease space for an undetermined length of time if the facility met their needs.

Attempted Contact:

- Lakeland Meat Processors - phone # and fax # not in service
- Kitscoty Meats – left message and received owners' cell # - left one message on cell and faxed twice.
- Lakeland Poultry Processors left two messages and was given owners personal email - emailed
- Love's Custom Meats Inc. - left message and emailed
- Mundare Sun Spot Greenhouse - left message and mailed survey
- Alberta Farmers Market Assn - emailed
- Vermillion Packers - faxed, left 2 messages, emailed
- Alberta Food Processors Association - emailed. Website shows a membership directory with many types of processing businesses. All addresses were checked in the following categories and none found that weren't already on our HUB region list: Bakery, All Meats (Beef, Elk, Lamb, Poultry, Fish and Alternates), Beverages, Butter, Cheese, Co Packer, Condiments, Confections, Dairy, Eggs, Ethnic, Frozen Entrees, Fruit, Gluten Free, Grains & Cereals, Herbs, Home Meal Replacement, Honey, Ice Cream, Ingredients / Seasonings, Jerky, Kosher, Meat Processors, Mushrooms, Oil Products, Organics, Pasta, Perogies, Pizza, Salt, Sauces, Snack Foods, Specialty Foods, Value Added Products and Vegetables.
- Alberta Greenhouse Growers Association - emailed. The website shows only four vegetable growers not in St. Paul region.
- St. Paul Farmers Market representative Ken Yettaw planned to survey the April 1st market attendees and this information has not been received at the time of this report.

4. ALBERTA HUB REGION

The Alberta HUB region is a partnership of 34 communities located in Northeast Alberta, Canada. The Region accounts for approximately 3.2% of Alberta's population, with over 127,800 residing in the area. The young population is evident as the median age for the Alberta HUB region is 34.3 compared to Alberta's median age of 35.5 (2006).

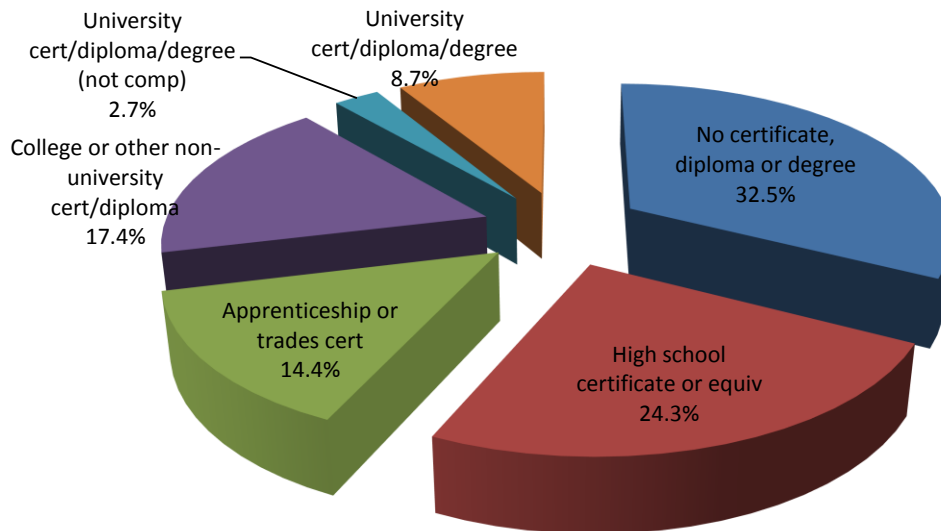
Figure 1 - Age of Population



Source: Alberta Hub Regional Profile

As indicative to rural Alberta trends, the Alberta HUB region maintains a lower number of residents with formal education however contains a higher number of people with apprenticeship or trades certificate/diploma (14.4% compared to 10.9% in Alberta).

**Figure 2 - Highest Level of Education for Alberta HUB Region
15 Years and Over**



Source: Alberta Hub Regional Profile

Although the majority of the workforce in the Alberta HUB region works in the sales and service (21.5%) and trades, transport, equipment operators (21.7%) occupations; the region contains a large number of people employed in occupations unique to primary industry. Historically, rural Canada has been identified with primary sector employment and has relied on the primary sector industries and contains a higher percentage than Alberta who is employed in this occupation (15% compared to 6.1% in Alberta).

Table 1: Alberta HUB Region Workforce by Occupation Group (2006)

	% of Total	% Total in Alberta
Sales and Service	21.5%	22.7%
Trades, transport, equipment operators	21.7%	18.2%
Occupations unique to primary industry	15.0%	6.1%
Business, finances and administrative	14.0%	17.7%
Management	8.4%	9.7%
Social science, education, government/religion	6.8%	2.3%
Health occupations	4.7%	5.4%
Unique to processing, manufacturing/utilities	2.7%	3.4%
Natural and applied sciences and related	4.0%	7.5%
Art, culture, recreation and sport	1.2%	2.3%

Source: Alberta HUB Labour Force Capacity Study Rural Communities, 2010

The Alberta HUB region employed a quarter of the workforce in 2007 in agriculture and other resource based industries, while Alberta employed 12% in comparison.

While the majority of sectors increased employment, agriculture showed a substantial drop of 27%, dropping from 5,500 to 4,000 employees. This drop is largely due to the increased mechanization and increasing farm size. The shift is a result of the challenges faced by Alberta's farmers which is forcing many operations to increase efficiency if they want to thrive. Consequently, farmers have been investing in new machinery and equipment. In 2007, an increase in capital investment in the industry allowed farmers to take advantage of low prices on imported machinery created by the strong Canadian dollar.

The agricultural base is evident in the Alberta HUB region, however needs innovative ideas and opportunities to entice the younger generation to get involved.

Table 2: Alberta HUB Region Workforce by Select Industry Groups (2007)

	% of Total	Employed in 2007	2002-2007 Increase
Agriculture	7.1%	4,000	-27.0%
Mining, oil and gas	17.9%	10,100	87.0%
Construction	11.9%	6,700	14.0%
Manufacturing	4.1%	2,300	0.0%
Wholesale and retail trade	18.5%	10,400	2.0%
Transportation and warehousing	7.8%	4,400	29.0%
Finance, insurance, real estate	5.3%	3,000	20.0%
Professional, scientific and technical services	3.9%	2,200	47.0%
Health care and social assistance	12.8%	7,200	24.0%
Accommodations and food services	4.8%	2,700	-18.0%
Public administration	5.9%	3,300	32.0%
		56,300	

Source: Alberta HUB Labour Force Capacity Study Rural Communities, 2010

4.1 Aboriginal Demand

Demographics

The Alberta HUB region contains a significant number of aboriginal people, representing over 12% of the region's population. There are seven Métis and First Nations Settlements, with a total population of over 7500.

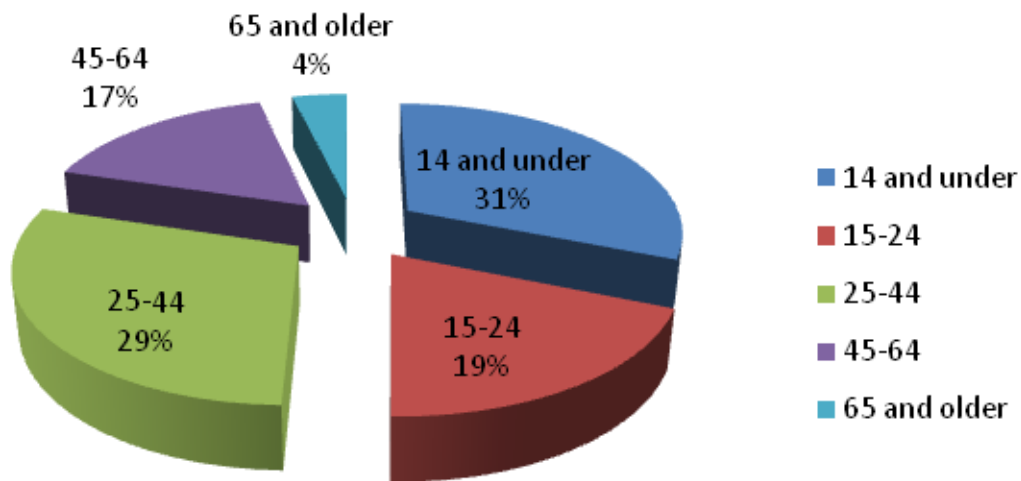
Table 3: Alberta Hub Region First Nations Population and Métis Settlements

Cold Lake First Nations	1,260
Kehewin Cree Nation	1,076
Whitefish Lake First Nation	1,136
Buffalo Lake Métis Settlement	1,206
Elizabeth Métis Settlement	820
Fishing Lake Métis Settlement	952
Kikino Métis Settlement	1,113
Saddle Lake First Nations	5848
Total	13,411

Source: Alberta Aboriginal Relations and Statistics Canada

The Aboriginal population in Alberta has grown by 23% from 2001-2006, reaching almost 250,000. Representing the third largest Aboriginal population in Canada, Alberta also maintains a young Aboriginal residential base, with almost 80% under the age of 45 (see graph below). While not even 6% of Alberta's population report being Aboriginal, this number is much higher in the northern and western areas of the province. In northwest Alberta, the Aboriginal share of the population is 38%, while the northeast ranges from 15 to 21%.

Figure 3 - Population Reporting an Aboriginal Identity Alberta by Age Group



Source: Statistics Canada, 2006 Census

Demand for Food and Beverage Products

Although the diet of aboriginal people in Alberta has changed from the traditional diet made up of the animals and plants found on the land and in the lakes and waters around them, they still strive to reinforce ties to their indigenous food system and territories by harvesting and eating traditional foods. Modern-day First Nations and Métis people have added processed foods and convenience foods to their traditional diet. However, now many are experiencing the health problems that come from consumption of foods rich in sugar and additives. Traditionally, their diets consisted of wild game, different types of fish and many species of bird as well as fresh vegetables, berries and dried seeds. Their traditional food remains an important aspect of their social and cultural lives with many events centered around what they eat.

The aboriginal population continues to eat wild meat, often prepared in a number of different ways, such as: roasted on a spit, boiled in a skin bag, cut into thin slices and hung to dry, made into sausages and made into pemmican. Also instrumental in their diets are many kinds of berries, eaten fresh or dried, such as: chokecherries, blueberries, raspberries, strawberries and saskatoons. The main plants usually consumed by aboriginal people are: wild rice, bitter root, onions and prairie turnips. A traditional mainstay in their diet is flatbread and bannock.

Many companies have attempted to capitalize on the growing aboriginal community and have developed niche products. For instance, a company name Pemmican makes dried meat snacks and jerky promoting the idea of the outdoors and hunting and fishing. The logo is that of a traditional Indian. Another company Bear Valley Pemmican makes energy bars. They have endorsed the idea of Pemmican as "travel food made for long trips" and a "compact source of concentrated energy needing no preparation on the trail".

4.2 Alberta HUB Agriculture

The agriculture sector in the Alberta HUB region is strong and makes a significant contribution to Alberta's production of crops, vegetables and berries. As shown by the table below, the main crops produced in the region are oats (18% of Alberta's total) and canola (15% of Alberta's total). The Alberta HUB region also produces substantial vegetables and fruit, producing 14% of Alberta's total of cucumbers and 11% of Alberta's total of raspberries.

Table 4 – Crop Totals

Acres	Total AB HUB Region	Alberta	% of Alberta
<i>Hay and Field Crops</i>			
Total wheat ¹	534,711	6,467,628	8%
Oats	222,422	1,269,229	18%
Barley	434,427	4,094,689	11%
Mixed grains	63,292	373,005	17%
Total corn ²	6,933	74,737	9%
Total rye ³	5,133	118,399	4%
Canola (rapeseed)	613,011	4,068,511	15%
Dry field peas	65,263	587,263	11%
Alfalfa and alfalfa mixtures	554,678	3,935,022	14%
<i>Vegetables</i>			
Total vegetables	371	13,193	3%
Sweet corn	94	4,582	2%
Tomatoes	3	49	6%
Cucumbers	21	146	14%
Carrots	37	1,003	4%
Beets	4	67	6%
Radishes	2	111	2%
Shallots, green onions	4	72	6%
<i>Fruits, Nuts and Berries</i>			
Total area (producing and non-producing) of fruits, berries and nuts	216	2,934	7%
Strawberries	18	317	6%
Raspberries	26	239	11%
Saskatoons	91	1,587	6%

Notes:

¹ "Total wheat" includes "Spring wheat," "Durum wheat" and "Winter wheat."

² "Total corn" includes "Corn for grain" and "Corn for silage."

³ "Total rye" includes "Fall rye" and "Spring rye."

**Vegetables, Fruits and Nuts and Berries (except Total area Fruits, Nuts, Berries) contains some Municipalities with suppressed values when totaled into the AB Hub region

Source: Statistics Canada, 2006 Census of Agriculture.

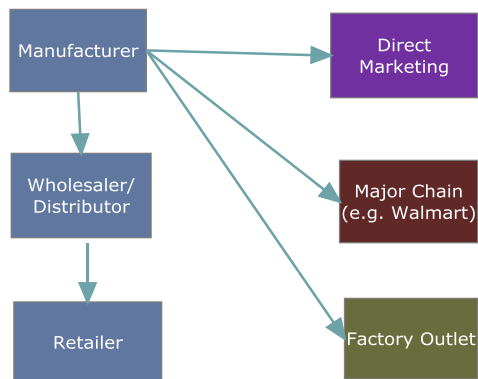
5. SELLING THE PRODUCT

5.1 Retail Chain

Getting a product into the retail chain can involve various methods depending on the type of product, volume produced and capital available. Most products flow through the traditional manufacturer -> wholesaler/retailer-> consumer route, however, many large chains buy goods directly from the manufacturer. The following diagram shows a simplified chain of the distribution of goods.

Figure 4 – Distribution of Goods

Distribution of Goods



Although many manufacturers would like to eliminate the “middle-men”, retailers and wholesalers tend to add efficiency as they have the ability to do specialized tasks better than the manufacturer. The consumer is able to buy a smaller amount of goods when wholesalers and retailers exist, compared to buying bulk from a distant factory.

For many manufacturers, it is often difficult to get shelf space in both convenience and retail stores. Sales are often heavily aided by product placement in the store which is at a premium. Most of the decisions about where and which products appear on the shelves are made in corporate head offices, with the move towards a more unified look. It is also very difficult for small manufacturers to penetrate grocery stores as these retailers look for certain brands with a proven track record in sales. Generally, a brand can expect less distribution if it's in the early stages of development as fewer retailers are willing to carry it.

5.2 Farmers Market

Alberta's farmers markets are continuing to grow, with over 100 approved farmers' markets and close to 3000 vendors across the province. This is in a large part due to consumer's preference for local food. Benefits of buying local include: increased quality and nutritional value, less environmental impact with lower transportation costs and a higher level of safety. Sixty percent of Albertans shop at farmers' markets, spending on average \$45 per visit. Of that \$45, \$38 is spent on local food (Source: Alberta Farmer's Market Association).

The top three products consumers come to farmers' markets to buy are vegetables, fruit and baking.

Food bought at farmer's markets is perceived as fresher and of a higher quality. Many consumers are also interested to learn "the story" of how that product was grown or made and want to know the person who grew or made the food they are buying. They want to have a better understanding of fertilizer, pesticide and herbicide use as well as the animal welfare. Consumers are also interesting in supporting their local economy, the community and the local producer and are enticed by farmer's markets due to the social atmosphere and unique shopping experience for the whole family.

Farmers' markets are the most popular of the farm direct marketing channels, with many benefits to the vendor such as the following:

1. Incubator and testing ground: Farmers' markets are a venue where small businesses can "test the waters" to see how popular their products are with customers. It is a place where a vendor can receive immediate feedback from customers with regards to taste, quantity, packaging, price, additional product ideas, salesmanship, etc.
2. Guaranteed crowd and location: Farmers' markets tend to attract much larger crowds than individual businesses, making your potential customer base much larger. In addition, the farmers' market provides a stable location with adequate parking and other amenities that customers demand.
3. Group advertising: Farmers' markets provide group advertising for the market as a whole which benefits all vendors. This is typically paid for from the table fees or by the sponsoring body.

4. Learning opportunities: Vendors can develop and hone entrepreneurial skills at a farmers' market as well as learn from others who may have been in the business for many years.
5. Price maker: Farmers' market vendors set their own price, eliminate the middleman and receive immediate payment for their product sales. Studies indicate that farmers' market vendors receive between 40% - 80% more than selling their products through wholesale channels.
6. Minimal start up costs: Costs for selling at a farmers' market are typically much lower when compared to setting up your own retail operation either on-farm or in the local community.

Source: The Alberta Farmer's Market Association

Although selling products via a farmer's market is relatively inexpensive, all vendors must be aware of associated costs. A marketing strategy should also be considered such as how to display the products, if samples will be offered, how to portray the right image and if value added products will be offered. Another important consideration is which farmer's market is best for the product being sold as the closest farmer's market may not necessarily be the best option.

To become a vendor at a farmer's market, a producer should contact the location they are interested in selling at to see if there is space available. Also, it is important to note that although there is no legislation specific to farmers' market sales, there are many pieces of provincial and federal legislation and related regulations which impact farmers' market sales. It is the responsibility of each farm direct marketer to research and ensure full compliance with all legislation.

5.3 Online Marketing

Online marketing and retail sales of many snacks and grocery items is becoming increasingly popular as a way to reach customers and save on costs. Many manufacturers are realizing the potential of online marketing, primarily to the younger demographic and many companies are looking for innovative marketing ideas to target this group. For instance, Frito Lay enlisted the resources of Decision Insight to develop custom, 2-D, virtual shopping scenarios. Through these shopping scenarios, Frito-Lay could see how shoppers reacted to different placement, pricing and packaging opportunities online in a variety of store setups.

Online marketing has been transitioning to include children. Many snack and soft-drink brands such as Haribo and Jelly Belly are adding cartoons and games to their websites that are specifically targeted towards children. In research carried out by Intuitive Media for New Media Age (NMA), 43% of children said they would buy or eat more of a food brand because they have seen it online or played a game about it.

5.4 Online Retail Sales

Eliminating costs is of primary importance for small manufacturers. Many are looking for other options to sell their products as hiring a broker or distribution company is often very costly. Some manufacturers, however, don't have the marketing capability or expertise to sell their products online. A marketing plan is required and building a client base takes time as simply putting the product on the website will not result in sales.

Online retail marketing has become an extremely large business for many manufacturers; however companies require the marketing expertise or must employ intermediaries that have the knowledge and expertise they are lacking. A marketing campaign that connects with customers where they shop or other channels where they can be reached is essential. Although brand image is crucial, it is just as important to supply details about the product attributes, such as pricing, title and description. Creativity is key in reaching the customer, getting the message out and establishing a connection. Being able to communicate the product's uniqueness and knowing what sets the product apart from the competitors makes it easier to establish consistency.

Online shoppers are becoming more skilled at assessing competing products and merchants on the web. Consumer's perceptions of a product are often based on the selection, service level, quality of information and brand image of their online experience. Buyers are often more informed with substantially more options for where and how to buy. Therefore, any online marketing campaign must understand how and where to gain consumer trust.

5.5 Alberta HUB Livestock

The Alberta HUB region produces a large number of livestock as indicated by the table below. Total cattle and calves account for 11% of Alberta's total. Other livestock is also prominent in the region, especially with bison (15% of Alberta's total) and Elk (17% of Alberta's total). The region does not produce as much pigs and poultry as other areas of the province.

Table 5 - Number of Livestock in Alberta HUB Region

Number	Total AB HUB Region	Alberta	% of Alberta
Total cattle and calves ¹	682,119	6,369,116	11%
Beef cows	262,064	2,035,841	13%
Total pigs ²	73,890	2,052,067	4%
Other livestock			
Wild boars	255	2,608	10%
Bison (buffalo)	15,006	97,366	15%
Deer (excluding wild deer)	430	8,965	5%
Elk	5,779	33,783	17%
Poultry			
Total hens and chickens ³	328,794	11,757,860	3%
Turkeys	3,748	703,462	1%
Other poultry	12,378	211,749	6%

Note(s):

¹ "Total cattle and calves" includes "Calves under 1 year," "Steers 1 year and over," "Heifers for slaughter or feeding," "Heifers for beef herd replacement," "Heifers for dairy herd replacement," "Beef cows," "Dairy cows" and "Bulls 1 year and over."

² "Total pigs" includes "Boars," "Sows and gilts for breeding," "Nursing and weaned pigs" and "Grower and finishing pigs."

³ "Total hens and chickens" includes "Broilers, roasters and Cornish hens," "Pullets under 19 weeks intended for laying" and "Laying hens 19 weeks and over."

Source: Statistics Canada, 2006 Census of Agriculture.

6. POTENTIAL FUNDING SOURCES

Possible funding sources for this project (or to provide assistance to future clients of the facility):

Table 6 – Potential Funding Sources

Funding Program	Details
Rural Secretariat-Community Development Program	Limited funds for community development in rural and northern regions
Canadian Agricultural Adaptation Program	Support for industry-led initiatives to facilitate agriculture, agri-food and agri-based products
Community Economic Development Program (CEDP)	Financial support for First Nation communities for economic development activities
Community Economic Opportunities Program (CEOP)	Project-based support for First Nation communities: business opportunities & community economic infrastructure.
Aboriginal Business Canada (ABC)	Support for Aboriginal entrepreneurs in business development.
Alberta Aboriginal Relations Grants & Funding	First Nations application to support economic, employment and educational opportunities.
Alberta Hazard Analysis Critical Control Point (HACCP) Advantage (AHA!) program	Non-federally registered food processors in Alberta - financial support to improve food safety systems
Alberta Technology Innovation Program (ATIP)	Financial support for Alberta companies to attend industry events
Growing Forward: Agri-Foods Marketing Assistance Program	Support for agriculture and agri-foods industry
Agrivalue Processing Business Incubator (APBI)	Provides support to new food processors
Alberta Culture and Community Spirit Grants & Foundations	Community Facility Enhancement Program - financial assistance to renovate / improve existing facilities
Alberta Real Estate Foundation	Grants for Education and Research
AVAC - Agrivalue Fund	Capital for agriculturally based businesses
AVAC - Ag Research Fund	Invests in R&D in food projects and other Alberta-based Agricultural industries
Canada Foundation for Innovation (CFI)	Funding research infrastructure - strengthening the capacity of Canadian colleges for research and technology development
Aboriginal Community Enterprises (ACE)	Project to form strategic alliances between Aboriginal and non-aboriginal partners
Aboriginal Peoples' Program	

7. ABORIGINAL CULINARY ARTS

Research shows that there is no Culinary Program aimed specifically at Aboriginals at St. Paul's two campuses: Blue Quills First Nations College and Portage College-St. Paul Campus. This provides a unique opportunity in a niche market that is not currently being utilized. This would also offer up many additional funding opportunities aimed specifically at First Nations. Some other Colleges have included Aboriginal Culinary Arts in their programming: NAIT's highly acclaimed culinary arts school catered the Aboriginal Day celebrations several times at the Alberta Legislations with a menu including venison, salmon and bison. Northern Lakes College has been working to bring instructors to north-western Alberta communities from NAIT or offer courses via distance learning - otherwise liaising with other post-secondary institutions. Vancouver Community College has a Culinary Arts - Aboriginal Specialty 11 month program - with courses presented using guest speakers, case studies, lectures and onsite visits to traditional Aboriginal harvest areas. A British Columbia Aboriginal Culinary Team had teamed up with the 2010 Winter Games to provide local flavour in aboriginal cuisine. Metis Crossing is a National Historic Site that shares this evolving culture and also sells authentic foods, so could be an outlet for aboriginal processed foods from Portage College.

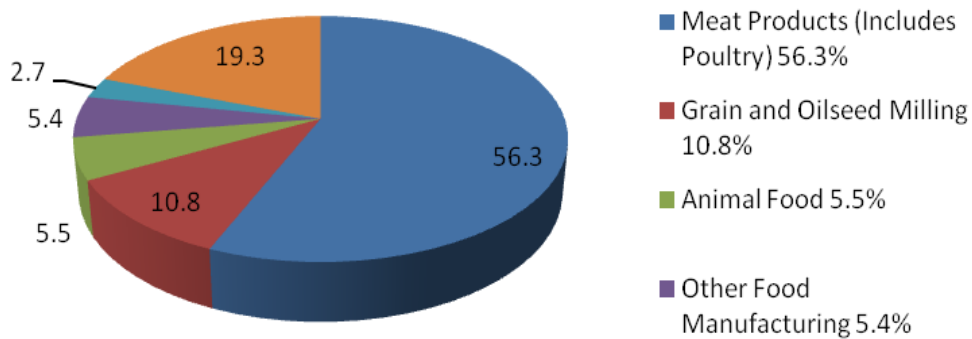
Per Bruce Rutley, director of the Centre for Research and Innovation (PREDA): Many food producers have expressed the desire to process food locally, keeping the value in the region. Grande Prairie Regional College is meeting with producers and micro-processors working out of their kitchens and garages and assessing their needs. RADF funding of 3.4 million over 3 years is expected here. Locally held meetings represent an opportunity for producers and processors to meet and support each other with speakers, courses, strategy sessions and networking.

Alberta's food & beverage products meet high standards with an international reputation for quality. Food and beverage processing industries represent Alberta's third largest manufacturing sector with Alberta as the third largest producer and exporter of agrifood products in Canada.

- Nationally, Alberta represented over 21% of Canadian total agrifood exports of \$35.5 billion in 2009, and was the third largest agrifood exporter after Ontario and Saskatchewan.
- Alberta's manufacturing industries employed 123,100 persons in 2009. The largest segment was made up of food and beverage manufacturing workers at 21,200 or 17.2% of the total.

- In 2009, Alberta’s food and beverage processing industries was the province’s largest manufacturing sector accounting for 22.3% or \$12.3 billion of total manufactured goods (\$55.3 billion). Alberta is the third largest food and beverage producing province (13.6%) in Canada.
- Alberta’s food and beverage products have high standards and a global reputation for safety and quality.
- Just over two-thirds of Alberta’s agrifood and beverage manufacturing industry in 2009 was concentrated in two segments: meat products and grain and oilseed milling.

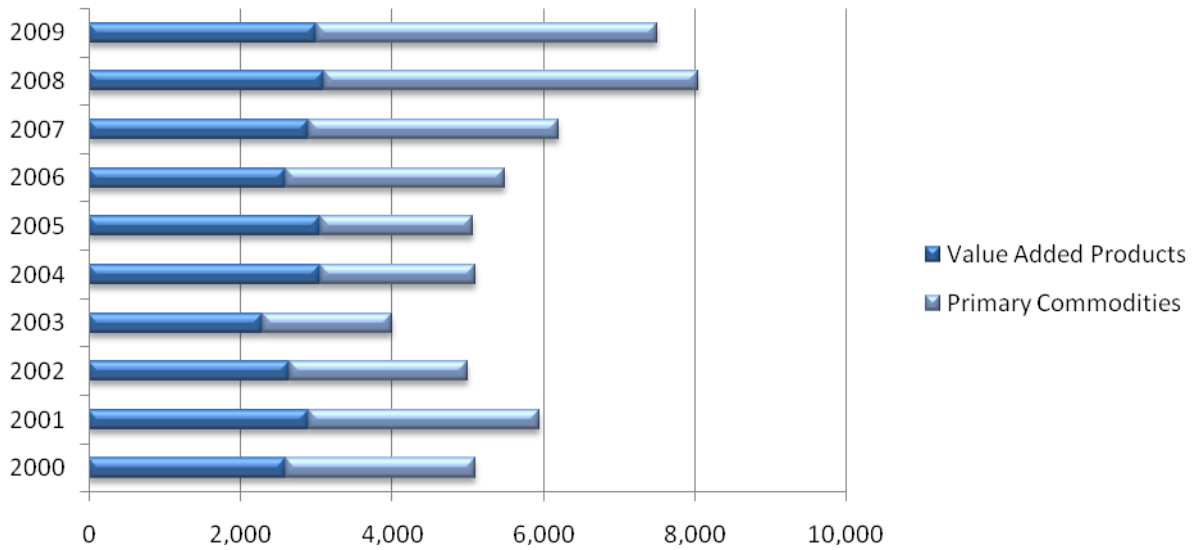
Figure 5 - Alberta Food Beverage Manufacturing Sales by Type 2009



Source: Statistics Canada and Alberta Finance and Enterprise

In 2009, Alberta agrifood exports declined by 9.5% to \$7.6 billion, from a record high of \$8.4 billion in 2008. Declines in export values were recorded for both value added processed products and primary commodities (animals and crops). However, exports of primary commodities, worth \$4.4 billion, continued to be higher than value-added exports at \$3.2 billion. The proportion of value-added exports as a percentage of Alberta's total agrifood exports was 42%.

**Figure 6 – Alberta Agri-Food Exports
2000-2009**



Source: Statistics Canada and Alberta Finance and Enterprise

8. COMPARISON OF TRADITIONAL COMMODITY SALES VS. AGRICULTURAL VALUE CHAIN

Table 7 – Traditional Commodity Sales vs. Agricultural Value Chain

Traditional	Value Chain
Producers paid a standard price for ag-base products	Focus is on a particular market and responds to demand
Farmer sells wheat at pre-determined price and value leaves the region	Food producers and others work together to enhance their products - if farmer sells to local mill to make flour and processors sell products made from the flour to stores and restaurants and export the final products instead of the wheat - value along the chain stays in the region
Supply source is anonymous so quality is less of a factor	Value added through processing, services and marketing to bring higher quality and differentiated products to the market
Market and price are risks	Relationships are risks
Producers drive this system	Consumers drive this system

9. FOOD SCIENCES STUDIES AND COMPLEMENTARY TRADES' COURSES

Food Sciences Courses and Technical Trades can range from introductions to the topic to advanced level courses. Some courses listed in Food Sciences and Food Processing at some sample Colleges and Universities in Canada are:

- Functional Foods and Nutraceuticals
- Bio-Process Engineering
- Toxicological Aspects of Nutrition
- Nutrition
- Agricultural and Resource Economics
- Food Business Management
- Physical Principles of Food Structure and Functionality
- Cultural Ecology of Food and Health
- Food Engineering
- Unit Operations in Food Processing
- Brewing, Enology and Fermentations
- Biology, Phytochemistry and Processing
- Nutritional Toxicology and Food Safety
- Product Development
- Unit Operations in Food Preservation
- Innovations in Food Science
- Service Systems Management
- Chemistry
- Analysis Methodology
- Safety and Quality Assurance
- Microbiology

Additional Courses could offer certification and real-world experience in the following integrated areas within the Food Processing Industry:

- Butchers
- Bakers
- Production Workers
- Machinist and Maintenance Workers
- Shipper/Receivers
- Packaging Technicians
- Sales and Marketing Representatives

- Research and Product Development
- Administration Workers
- Quality Assurance
- Engineering and Management
- Human Resource Personnel
- Plant Manager
- Supervisors in specialized areas

A shared-use processing facility can provide small-scale food processors with the opportunity to use modern equipment for their processing needs, without needing to purchase expensive equipment they can't afford. Utilizing a college for the facility also provides a unique opportunity to support students and help them find work in this or many related fields and possibly to start a business of their own, providing future business opportunities within the community.

10. FOOD TRENDS

Major food industry trends that continue to affect the market for small-scale food processing include the following:

- Population growth and demographic change
- Health and safety
- Changing ethnic, household and labour force composition has led to greater demand for new and different food commodities. These food products are not currently readily available. Aboriginal Culinary Arts could be a unique area of study offered at Portage College. This unique area would also open up additional funding sources.
- Product innovation has produced healthier versions of existing commodities.
- Demand has surged for organically locally grown and produced products.
- The competitive price challenges in the industry remain intense, with large, multi-national companies in the US and Mexico controlling organic production.
- There is a need to exploit market niches (e.g. frozen products to preserve quality and freshness at the source).
- The seasonality of crop production is a significant factor limiting processing competitiveness and introduces the need for year- round greenhouses or importation of raw produce.
- Fuel costs have also increased significantly in the last five years, which has effectively increased the cost of imported products and created an advantage for locally processed products.
- The rapid appreciation of the Canadian dollar in relation to the US dollar in the last five years has reduced the competitiveness of Canadian products.

Opportunities exist for Alberta companies considering exporting their products abroad, for companies from around the world interested in investing in Alberta, and for all agrifood companies looking at taking advantage of current and future industry trends.

11. GROWTH DRIVERS IN THE FOOD INDUSTRY

In terms of agricultural trade, Alberta is the third largest exporter of primary and processed agricultural and food products in Canada. In 2009, Alberta's agrifood exports totalled \$7.6 billion. Of the total, nearly 36% was exported to the United States (\$2.7 billion), followed by 14% to China (1 billion), 13% to Japan (\$954 million) and 6% to Mexico (\$455 million).

For Alberta companies, the benefits of exporting are many, including increased profits and sales, increased size and scope of their business and increased security as a result of spreading risks over a variety of markets.

Key drivers of growth for the agrifood sector include:

- Increased access to international markets through liberalization of trade agreements.
- Growth in demand for consumer-oriented, value-added agrifood products.
- Changes to the domestic regulatory framework in response to international market demands, such as age verification and traceability changes in the livestock sector, organic certification, etc.
- Research and investment into the functional properties of foods that can fight or prevent disease.
- Research and investment in the industrial sector, such as bio-lubricants, composite materials, and bio-fuels.

Global trends that will impact food exports include:

- Rapid economic growth in populous countries such as China and India is leading to increased demand for meat and dairy products and driving up overall grain prices.
- It is estimated that by 2050 there will be billions more mouths to feed, exacerbating the demand for food (from 6.1 billion people in 2000 to an estimated 9.2 billion in 2050).
- Extreme weather, such as drought, floods, and cold snaps, are affecting harvests and food availability. Global demand for water has tripled in the last 50 years, and high rates of soil loss to erosion and desertification could diminish the capacity to produce enough food.

- Food supply decreases as crops are shifted to the fuel market. Currently 20% of the United States corn crop goes into ethanol production – a figure likely to rise to 32% by 2016.

The rapidly changing global economy is creating many new opportunities for Alberta's agrifood industry. Trade agreements, modern technology, transportation, and sophisticated communications systems are resulting in greater international access to goods and services. The demand for food and other agricultural products will increase as populations rise.

World trade in agricultural products is continuing to grow. Demand is shifting dramatically from bulk commodities to consumer ready foods. Value-added products and niche markets are anticipated to grow rapidly. Markets for new products including functional foods, food ingredients, and industrial and other non-food uses are also expected to grow. Environmental issues are becoming increasingly important and there is a market differentiation for clean, wholesome, and safe products.

12. MEAT PROCESSING

The Alberta meat and livestock processing industry is in an unprecedented state of change, with several opportunities and challenges being presented for establishing new market access and direction. Some of the opportunities within these priorities include strategies for coordination and collaboration between processors and producers in the effective and efficient slaughter and processing of red meat livestock, maintaining a skilled workforce, implementing automation technologies, value adding product to meet market demands, offsetting imported products, and effectively utilizing processing capacity. Some challenges include the increasing costs for meeting regulatory requirements, ensuring food safety and traceability, and obtaining domestic market access. A large processing and production segment is still learning how to adapt and effectively manage these challenges and opportunities while maintaining profitability. Fortunately, several processors, producers, equipment vendors, industry advisors, and educational institutions have been contributing to attaining new market access through industry development; value added enhancements, research, and training.

Over the past 15 years, consumers have increasingly begun purchasing value added retail and food service products versus stocking the freezer with full animal carcasses. Although several meat processors have maintained custom processing services, the trend has moved to wholesaling and retailing plant owned or co-processed products to consumers in dense population areas. With the unfortunate discovery of Bovine Spongiform Encephalopathy (BSE) in Canada in 2003, the export market for Canadian ruminant products was required to undergo drastic and immediate changes in order to compete within the global marketplace. With the inability for several producers to adequately market all forms of ruminant livestock to export markets, especially cattle over 30 months and sheep, focus changed to domestic consumption. To meet these markets demands and to provide the full slaughter, cutting and value added services required to manufacture meats to consumable cuts, the provincially inspected abattoirs across Canada significantly increased production, staffing, and product output. A rapidly growing trend for farm direct sales is also predominant- with several producers marketing their own livestock products directly to consumers, restaurants, and retailers. This provides more gross profit/animal unit for producers- with an increase in processing tolls for processors. These trends have created new market opportunities with sustainable revenue while increasing production capacity and marketing capabilities for producers and processors alike.

Meat processing is a highly regulated industry that requires advanced education to ensure safe food handling, profitability, and product development to gain access to new markets. The capital cost requirements for new plant start up are also prohibitive for

marketers and small companies. With careful consideration for mitigating these challenges, the development of the Portage College Regional Food Processing facility provides a unique opportunity for advanced meat processing training and co-processing operations. The agricultural communities of the St. Paul- Smoky Lake region have an immediate opportunity to promote skill development and expertise in the marketing of locally grown livestock products while enhancing employment opportunities for citizens.

13. FOOD PROCESSING OPPORTUNITIES

Initial recommendations would include a summary of the following main items with possible fit and application in the proposed food processing facility.

To satisfy local demand and reduce major renovation costs it is recommended a regional food processing facility focus on the development of fresh vegetable and local fruit and berry processing and related food products such as jams, jellies, pickling and baking such as pies, in addition to co-processing meat opportunities. This approach would build upon existing agri-food processing in the region and may fit with the strategy of the centre becoming a feeder into the Leduc Food Processing Development Centre.

13.1 Food Processing Equipment Scale

The following provides a typical scale-up of small food processing:

- *Low Volume Processing:* this would typically include less than 40 lbs per day of processing and would most likely be done manually.
- *Food Service Volume:* Volume of food processed would range between 50-150 lbs per day and would supply local restaurants and institutions. Restaurant and cafeteria scale equipment would be utilized.
- *Food Processing Volume:* This is a typical description of small food processing and would include more than 200 lbs per day of food processed. Equipment is made of food grade, often stainless steel materials due to durability and ease of cleaning.

13.2 Facility Upgrades for Kitchen and Processing Bays

In order to keep costs down it is recommend that the existing food processing kitchen be retrofitted for fresh vegetable processing, bakery and wet processing equipment including protein and moisture testing equipment. Removal of all materials would be required and replaced with new food processing equipment, sanitary stations, stainless steel counters, ovens and coolers.

It is also recommended all potential regional food processor sign a minimum of a three year lease for use of any developed processing bays. To keep costs down and improve success processing bays would be developed on an as needed basis with consideration

for conversion of 2-4 existing classrooms into processing bays for food processors willing to sign a lease with expansion of bays based on confirmed demand.

It is felt that there is more potential for business incubation on the non-meat processing side. The existing boardroom could be refurbished into business development and training centre offering services such as market research, business plan development and access to funding programs through St. Paul-Smoky Lake region Community Futures with training focused on the meat side.

13.3 Processing Equipment

The following section provides a description of food processing equipment that could be found in a small scale processing facility.

Preparation Equipment

- Size Reduction: cutters, grinders, slicers; types include vertical cutter-mixer for chopping, mixing, blending, puree.
- Mixers: dough mixers from 12 to 140 quarts; Suppliers: Hobart, Kitchen Aid, Univex
- Pulper/finisher: puree fruit/vegetables, separates skins and seed
- Juice extractor (from puree): Provides a compressing action, models include hydraulic plate, belt and screw press
- Peeler: for potatoes or round food products

Cooking, Heating and Cooling Equipment

- Kettles: Steam kettles are available in a range of sizes with the preferred option 316 stainless steel that tilts with a bottom discharge valve and agitator.
- Ovens: for baking and roasting food; forced air convection is preferred due to increase cooking time.

- Cooling Equipment: refrigerator with built-in temperature control is preferred
- Freezer: a blast freezer gives the best quality for quick freezing.

Packaging and Filling Equipment

- Bag Sealers: types include manual, gas flushed, vacuum sealers
- Wet Products: products are filled by volume or weight and if pumpable can be filled with piston fillers.
- Dry Products: filled by weight manually or with auger type fillers.
- Tray/Cup Sealers: film or lid is heat sealed to a container and can be done manually or automatically.
- Steam or Vacuum Capper: typically used with glass jars to reduce oxygen in headspace and to provide vacuum.

Table 8 – Estimated Capital and Operating Requirements

Estimated Capital and Operating Requirements

Estimated building improvements	\$100,000
Estimated equipment purchases	\$149,304
Total	\$249,304

Average Operating Budget

Operating revenues	\$ 72,500
Operating expenses	\$ 100,082
Annual cash flow (deficit) before debt service	(27,582)

Breakeven analysis (before debt service)	Projected	Breakeven
Hourly rate	\$ 62.50	\$ 81.25
Average client hours per month	42	55
Salaries	\$20,000	\$20,000

Note: Economic projections are only a high level estimation of capital and operating costs and should not be construed as statements of fact. Further work is required to refine capital and operating cost estimates, equipment requirements and facility upgrades and design.

Table 9 Processing Equipment List

Equipment List	Cost
Cleveland Electric Skillet	\$ 7,110
Cleveland Elec. Skillet Accessory - Food Steamer	\$ 300
Cleveland Elec. Skillet Accessory - Poaching Set	\$ 540
Dean Gas Economy Fryer	\$ 1,150
Varimixer	\$ 2,340
Jackson Dishwasher	\$ 5,740
Garland Convection Oven	\$ 7,700
Delfield Fridge/Freezer	\$ 7,940
Hobart (Ohio) Food Cutter (14" Stainless Bowl)	\$ 5,474
12 Quart Axis Mixer (Florida)	\$ 1,367
Univex G- Peeler Portable 20 LB Commercial Vegetable Peeler	\$ 1,359
TC-280F Vacuum Packaging Machine	\$ 1,695
Desna Liquid Filling & Sealing Equipment semi-automatic 30 pkg/minute	\$35,000
EHQ Lidding Machine (one stock heater set)	\$ 2,500
Electromagnetic Induction Cap Sealers	\$ 430
PH Tester Waterproof Combo single unit	\$ 151
Globe Chefmate Meat Chopper (250 lbs / hour) Florida	\$ 600
Lab Equipment Estimate	\$20,000
Used Super Pulper and Finisher (2 Tons / hour) also is a juice extractor	\$ 6,800
12.2 Quart Dito Vertical Cutter-Mixer	\$ 2,191
Cleveland Steam with no accessories	\$ 5,740
Blast Freezer - under counter	\$13,177
Dry Products filler by auger - Estimated	\$20,000
TOTAL	\$149,304

13.4 Typical Testing Required by Food Category

Table 10 – Typical Testing required by Food Category
Food Produced

Typical Testing

Low acid foods- fruit and fudge dessert toppings and cream based soups	pH, Water Activity (Aw)
Cold filled products- dressings and condiments	pH, Aw
Dairy products	pH, Coliform Testing, Aerobic Plate Count, Titratable pH
Specialty preserves-low sugar fruit preserves, vegetable preserves	pH, Aw
Standard Fruit Preserves-jams and jellies	Usually no testing required
Baked goods-breads, most cakes, fruit pies	Usually no testing required
Dried products	pH, Aw
Acidified Foods-pickles, pickles vegetables, pickled polish sausage, pickled eggs and meats	pH of both solids and brine
Acid food-tomato based products, fruit based products such as preserves or chutneys, fermented products such as sauerkraut	pH
Smoked and Salted Foods-hot smoked/air or vacuum packaged; cold smoked/air or vacuum packaged	pH, Water Phase Salt (wps)
Meats-jerky, smoked, sausage, fermented, hot smoked, dry/semi-dry	pH, Aw, Moisture, Moisture:Protein Ratio (M:P)

14. OPPORTUNITIES FOR PORTAGE COLLEGE

14.1 Training

There are currently two retail meat cutting and one value added abattoir educators in Alberta that include, NAIT, SAIT, and Olds College. Industry conditions and economic environments create fluctuations in class enrolments and job placement. Although meat processing is physically demanding and provides moderate pay, it can be a steady and rewarding career opportunity. Graduates of these programs have potential to work as retail meat cutters, sausage makers, butchers, and quality assurance personnel. Product development resources are available through the Alberta Agriculture Food Development Centre, the Lacombe Meat Research Station, Food Laboratories, and Ingredient Supply kitchens.

An increasing educational component that may provide opportunity for Portage College is for; food safety, food analysis, marketing, communications, advanced sausage making, and extension to new and existing processors. A state of the art processing facility coupled with theory instruction can provide valuable resources to the development of meat processing, quality assurance, and business development techniques. An online certification component would also benefit existing processing personnel across western Canada. Technician training for meat processing automation, equipment maintenance and installation could also be included. The meat products developed could be marketed or incorporated into culinary/food service programs.

14.2 Co-Processing

Co-processing in Alberta is a growing opportunity where a centralized facility produces products for individual and/or independent marketers. The facilities are generally designed for efficiency, safety, and technical superiority. With advanced traceability, shelf life, and labeling capabilities, a variety of products can be produced and stored for distribution throughout the province. A processing toll per kilogram is charged, generating revenue to support facility operations and a highly technical resident staff. Co-processing operations can also be utilized for educational training of curriculum commitments for meats and scientific programming.

14.3 Incubators

An incubator style program where new processors utilize facilities for their own processing at an identified charge rate can be extremely challenging for meat processing. Increasing requirements for Hazard Analysis Critical Control Point (HACCP) based food safety programs, technical evaluation, sanitation, personal hygiene, recording of ingredients, and maintaining operational efficiency can be limiting factors that prove detrimental to businesses without processing experience. Co-processing may provide capacities for marketers without the need for growth limiting investment and capital output.

14.4 Facility Upgrades

The Portage College facility will require significant upgrades to become eligible for meat processing. Initial estimated meat facility upgrades once structure/site improvement is made are approximately \$300- \$500/square foot, with refrigeration and storage space being determined by the scope of the project. Approximately \$1.5 million (preliminary-scope to be determined).

Site Upgrades include but not limited to:

- Floor removal, re-pour with appropriate plumbing, drains, and temperature control
- Removal of all wood in overhead and supporting structures
- Power upgrades
- Water supply
- Site Plan
- Traffic Flow
- Alberta Building Code will Dictate additional construction requirements
- Potable Water
- Utilities

Facility upgrades include but not limited to:

- Antimicrobial floor treatment
- Rail structured
- Shipping and receiving docks
- Personnel welfare

- Air exchange/regulated pressure flow
- Cooling and freezing capacity
- Dry Storage
- Raw storage
- Processing
- Cooking
- Packaging
- Finished Product Storage
- Spice Room
- Waste Storage and Removal
- Waste Water
- Chemical Handling and Storage

Initial equipment requirements of approximately \$529,000 plus installation and training will include:

- Forced air smokehouse oven with microprocessor controls
- Vacuum Tumbler
- Pickle injector
- Grinder
- Mixer
- Silent Cutter
- Slicer
- Skinner
- Band Saw
- Vacuum/gas flush packager and/or Rollstock
- Shrink Tunnel
- Vacuum Stuffer
- Label Scales
- Inventory Management System
- Clipper
- Ice Machine

14.5 Staffing- Initial Estimates

It is estimated that a co-processing operation with a capital cost of \$1.5 million year would require up to 6 staff.

Educational components within the facility would require up to 4 additional staff based on 24 students/year.

14.6 Co-Processing Plant Description

With a review of the area demographics and potential clients, it has been determined that a small scale co-processing facility could assist local area producers and meat marketers in bringing safe, wholesome, and quality products directly to consumers. It is estimated that a modern facility with advanced regulatory and operational considerations could generate approximately \$325,000 in co-processing charges- assuming that the facility provides a fee for service versus purchasing and reselling meats. Seasonal variations, holidays, and client turnover have been considered to establish facility down time that reflects realistic revenues. In contrast, Cost of Sales and Expenses are estimated to be \$365,000.

A variety of meat products and meat snacks can be processed with several different flavor profiles and packaging options. Capacity is estimated at 2500kg of product/week, providing flexibility for client batch sizes, number of products, and labeling/packaging requirements. Operational scheduling for capacity utilization will provide optimum facility performance within scheduling of training and educational opportunities. To maintain effective processing, four full time staff would be required; one quality assurance/food safety, two instructional/production staff, and one technician for equipment operation, sanitation, batching, and miscellaneous activities. All maintenance activities would be completed by outside technicians or campus facilities personnel.

Equipment selections can provide for the production of jerky, pepperoni, single serving wieners/smokies, rings, coils, deli meats, hams, and bacons. Processing instruction from skilled and master sausage makers can improve product yields, quality, and presentation. Extensive food safety, quality assurance, and ingredient technology will establish food safety and shelf life parameters. More revenue will be generated from fewer clients with higher production volumes than what can be generated from frequent changes for more clients with lower volumes. Purchasing, storing, and rotating non-meat ingredients,

packaging materials, and labels will also vary within each business model. Processing charges will require calculation based on each individual product and its volume.

Table 11 - Estimated Processing Charges

Product	Estimated charge
Jerky	\$8.80/kg
Cold Cuts	\$4.40/kg
Smoked Sausage	\$4.40/kg
Pepperoni	\$5.50/kg
Hams/Bacon	TBD on yield
Fresh Sausage	\$3.90/kg

Design Elements

The facility will incorporate efficiency with comprehensive food safety and sanitary design. Further developments will incorporate a process flow diagram, market assessment, and regulatory determination. It is recommended that facility design/layout is one of the last steps in the market determination process. However, projected facility operations can be conducted in a 3200 ft² to 5000 ft² facility by increasing freezer and cooler space to accommodate products and volumes.

Receiving

Design considerations should be made for receiving chilled or frozen raw materials from an outside facility in either boxed, palletized, or binned formats. Sufficient space should be incorporated to store adequate supply for upcoming operations while maintaining segregation between product owned by clients. Rollers, rails, and adequate height are required if carcasses are to be received. Boxed and swinging product can be held in the same cooler with a temperature $\leq 4^{\circ}\text{C}$ is maintained.

Processing

Process flow will be designed to ensure an efficient flow of products, personnel, waste materials, packaging supplies, and finished product. Operational efficiency will be maximized with space requirements for all products being produced. Products can be thawed or stored in the receiving cooler. Frozen products may also be cut into smaller pieces with the band saw or frozen food chopper. Fresh primal such as loins, steaks, roasts can be processed, packaged and chilled appropriately. Product for freezing is boxed or racked and placed in the freezer. Baskets or spacers will be considered to ensure appropriate air flow and rapid chilling.

Products destined for value added processing will be batched and manufactured according to established recipes and approved operational controls.

Packaging can include, vacuum packaging, boxing, brown paper wrap, or bulk formatting.

All processing areas will maintain a temperature $\leq 4^{\circ}\text{C}$.

Chilling/Freezing

All products will be appropriately chilled to maintain shelf life, prevent in house spoilage, and eliminate potential safety risks. A temperature $\leq 4^{\circ}\text{C}$ is required for coolers and $\leq -18^{\circ}\text{C}$ is required for freezers. Packaging materials and product placement that permits air flow can be achieved through expanded floor space and cooler capacity. Optional pallet stacking and overhead storage racks may be explored. Coolers and freezers will be appropriately insulated, with consideration for the requirement of rapid chill times and freezing capabilities.

Thermal Processing

Smokehouse and kettle cooking capabilities will provide for preparation of partially cooked (bacon) and Ready to Eat products. Calibrated processing controls will be required to ensure shelf life and safety is maintained. Forced air ovens and boiler fed kettles are appropriate for even temperature distribution and monitoring capabilities.

Sanitation

Effective sanitation of the facility and equipment can be achieved by cleaning in place with a Sanitation Standard Operating Procedure using degreasing agents and sanitizers as deemed appropriate for the products being processed. The processing areas of the facility should be designed with smooth and impervious materials that facilitate cleaning. Meat industry approved construction materials and equipment are required.

Chemicals will be stored in designated dry storage areas within an appropriate Workplace Hazardous Materials Information System (WHMIS)

Shipping

Shipping access will permit the shipping of individual boxes or containers as well as palletized product. Shipping areas must be designed and located as to not interfere with sanitary processing operations. Outside access must not open directly into any processing areas.

Waste Disposal

Approximately 35% cutting waste will be created from carcass processing. Minimal meat product waste from sausage production will be created. Although bins or tubs within the cooler can be stored until product is delivered or picked up for appropriate disposal, a waste collection room at a temperature $\leq 4^{\circ}\text{C}$ is highly recommended. Landfill or rendering of inedible materials can be explored. Non meat waste can be disposed of in town collection services.

Structural Design Parameters

It is recommended that all architectural and engineering design be completed by qualified individuals. Considerations for site preparation, weight bearing capacity, foundations, finishes, doors, and personnel areas must be made. Adherence to the Alberta Building Code will dictate requirements for fire, safety, public health, and structural integrity.

Permitting for the facility may be required pending the chosen location.

Mechanical Requirements

The site development will require sufficient capacity for 3 phase power with distribution throughout the facility. Any price estimations are based under the assumption that appropriate power upgrades are at site. All power receptacles within processing areas will be of water resistant type.

Sufficient cooling and freezing capacity must be discussed with the equipment vendor and mechanical engineers. Rapid temperature reduction is required.

Sufficient hot and cold water potable will be required.

Wastewater considerations will be required.

Ventilation will provide sufficient air exchanges to prevent the accumulation of condensation, smoke, aerosols, and contaminated air. Vent hoods will be required over cooking and smoking operations. The direction of prevailing winds and location of neighboring inhabitants should be considered to ensure protection from objectionable odours and contaminated air.

14.7 Educational Components

Maintaining educational components within a production facility will have several operational challenges. Production utilization may not match curriculum requirements for processing technologies, etc. Possible product lines and distribution could be created for in-house production to ensure all curriculum components are addressed.

Sanitation training will require timelines post and prior to processing operations. These training opportunities may be required outside normal work hours. This process will allow for full facility operations while replicating real industry conditions.

14.8 Revenue

With estimated revenue of \$325,000/year, the facility will not be capable of providing a positive return on investment. Educational components and service to the community will need to be considered in determining feasibility of operations.

Table 12 – Co-Processing

Co-Processing 2,000 lb/week Utilization of Capacity	Per Year
Total Sales	\$325,000
Cost of Sales/Expenses	\$365,000
Gross Margin	(40,000)

15. CHALLENGES

15.1 Raw Material Sourcing

Meat products can be sourced from a variety of wholesalers throughout Alberta. However, producers wanting to value add their own produce will be limited to the slaughter capacity within the local area. This may be a limiting and cost prohibitive factor due to scheduling, slaughter charges, ageing times, rail space, and the level of breakdown prior to reaching the co-processing facility. Optional slaughter can be arranged throughout the province- however, transportation costs may become cost prohibitive.

15.2 Staffing

There is an ever-increasing challenge to find qualified processing personnel, especially at a level dedicated to educational and product development. Complex and operational variances may require extensive personnel training prior to co-processing ramp up.

15.3 Regulatory and Inspection Requirements

Federal Meat Inspection

In 1997, the Canadian Food Inspection Agency (CFIA) was formed by combining Agriculture and Agri-Food Canada, Fisheries and Oceans Canada, Health Canada, and Industry Canada. The creation of the CFIA consolidated all federal food inspection systems under the legislative authority of 12 Acts, including the Meat Inspection Act, Consumer Packaging and Labelling Act, and the Food and Drugs Act, with the mandate to carry out inspections and enforcement of food safety and nutritional quality standards.

Part of CFIA's responsibility is for the registration and inspection of slaughter and processing establishments, approving/verifying processes, formulations, and labelling policies through plant specific written programs, and enforcing applicable legislation that provides for safe and wholesome food products and the humane treatment of animals.

The Canadian Food Inspection System, with the cooperation between the CFIA and federally registered establishments, is an internationally respected standard for food

safety that provides for the inter-provincial trade, export to other countries, and imports of meat and meat products in Canada. Strict standards for facility design and construction, food safety, product flow, and program verification have been established to protect consumers and the livestock and meat industries. All meat and meat products originating under federal inspection designation, either as a product of Canada or as an import, automatically lose federal inspection designation once it is removed from the control of a federal establishment. For example, a federally inspected lamb immediately becomes a provincially inspected product once it is transferred to a provincial abattoir or through a non-certified carrier.

Health Inspection

The Food Protection Program from Alberta Health Services provides food safety information, investigates food-related complaints, assesses and determines the risk status of all food establishments to ensure compliance with the Public Health Act Food Regulation 31/2006 for commercial food establishments, farmers' markets, bed and breakfasts, and commercial caterers. There are approximately 300 non-slaughtering meat processing facilities in Alberta that are inspected by Health Services. These facilities range from retail stores with meat rooms, stand alone "butcher shops", and secondary processing facilities. These operations source raw material meats from a variety of avenues that include meat brokers, federally inspected establishments, and provincially licensed abattoirs. Even though federally inspected meat products may be used as an ingredient, all produce of a Health inspected facility remains with provincial designation and must only be sold within the provincial borders of Alberta.

Provincial Inspection

At the request of the non-federally registered establishments, the Alberta Meat Inspection Act and Meat Inspection Regulations came into effect in March, 1973. This legislation provided for structure and guidance in the safe production of meat products for the "traditional" style abattoir and poultry slaughter facilities. These abattoirs consistently offer unique services of slaughter, custom processing, co-packing meats for farm direct marketing ventures, wholesale marketing, and retail. The facilities range in size from approximately 3500 sq. ft. to 15,000 sq ft and employ between 3 and 60 employees. The size and locations of these facilities provide for service to specific livestock production areas and local agriculture communities. Poultry slaughter facilities are traditionally Hutterian Brethren operated, with the exception of two facilities.

All meat facilities that slaughter livestock under provincial legislation must be approved for and obtain a license to operate an abattoir. These licensed facilities are categorized into 4 inspection regions; Edmonton/Grande Prairie and Vermillion, which are managed by the Area Manager- North of the Meat Inspection Branch ARD, and Airdrie, Lethbridge which are managed by the Area Manager- South of the Meat Inspection Branch ARD. Approximately 50 meat inspectors are on staff to meet the inspection requirements and schedules of the licensed facilities.

General provisions for provincial meat inspection require the presence of an inspector rightfully appointed under legislation, to be present at an abattoir prior to the commencement of any slaughter activities. The responsibilities of the inspector include the ante and post mortem inspections of livestock, application of the Alberta Approved logo for carcasses fit for human consumption, and condemning carcasses and/or meat products that appear to be unfit for human consumption.

Recent regulatory amendments also provide for the inclusion for inspection of any facility that processes meat products (converts to consumable products). Inspectors undertake duties to verify the meat facility's written programs and records, ensure cleanliness of the facility and monitor safe food production practices. Alberta Agriculture and Rural Development also conduct facility audits to verify that legislated requirements have been met.

All three inspection options require facilities to be constructed for sound and hygienic operations with documented standards for equipment, structures, and operating parameters. However, provincial and Health standards provide for more flexibility of small processing operations that sell direct to consumers and/or small markets. Unlike federally inspected products, provincially and Health inspected products are only eligible for sale within the borders of Alberta. All products processed in Alberta are subject to Health Canada requirements for Operational Controls and Safety.

16. CRITICAL RISKS

- Area may be too small to support the products
- Local retail outlets may not buy in
- Individual companies may spoil the brand if they become disgruntled and/or put out inferior products
- Too few suppliers/companies get on board.
- Salmonella, e coli or other food safety issue
- Unable to secure enough processors to utilize the facility to optimum capacity
- Processors may conduct development or processing at other facilities
- Risks associated with putting investment into infrastructure based on processors needs and processors not utilizing facility.

17. RECOMMENDATIONS

Initial recommendations are for Portage College to further explore co-processing and education programs within an advanced meat processing operation at the provincially inspected level. This includes curriculum development, conceptual facility design, and preliminary equipment selection. Client assistance in the creation of marketing plans, assessing opportunities, and creating access to processing services could also be provided by the facility.

It is also recommended that the overall project and concept is not feasible to proceed if proponents are unable to reserve significant demand for utilization of the facility on an ongoing forward basis. Initial economic projections outline a loss for both the co-processing and food processing facilities that would need to be offset by training or other sources of funding. Further, work is required with regional processors to determine actual usage, design and needs of the facility including business plan development, preliminary and detailed engineering and design, equipment and operational costing and analysis.

**REGIONAL FOOD PROCESSING FACILITY AND FOOD SCIENCES STUDIES
VIABILITY STUDY**

CONTACT LIST

Bob's Custom Cuts Ltd. Box 6189 Bonnyville, AB T9N 2G8	Bonnyville, AB	Phone: 780-826-2627 Fax: 780-826-2138
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# of Employees:	1 to 25
President:	Robert Belanger
Products:	Beef, Buffalo, Beef Jerky
Brands:	Bob's Custom Cuts Ltd.

Hamel's Meat Market Ltd. 4918 - 50 Ave., Box 5242 Bonnyville, AB T9N 2G4	Bonnyville, AB	Phone: 780-826-3081
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# of Employees:	1 to 25
Owners:	Joffre & Janis Hamel
Products:	Sausages (Fresh & Smoked), Hams, Bacon, Beef Jerky, Poultry, Lamb, Veal, Fish, Loaves, Custom Sausage Making, Fresh & Frozen (Beef, Pork, Poultry, Lamb & Products)

Kitscoty Meats Box 269 Kitscoty, AB T0B 2P0	Kitscoty, AB	Phone: 780-846-2755 Fax: 780-846-2726
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# of Employees:	1 to 25
Owner:	Len Lage
Products:	Custom Meat Cutting, Sausages, Jerky

Lakeland Poultry Processors Box 129 St. Paul, AB T0A 3A0 Email: poultry1@telus.net or janna@lakelandpoultry.com www.lakelandpoultry.com	St. Paul, AB	Phone: 780-645-4799 Fax: 780-645-5908
--	---------------------	---

# of Employees:	26 to 100
President:	Mike Parenteau
Production:	Janna Parenteau
Products:	Custom Poultry Processing

Downhome Comfort Foods, Inc.

Box 445
Two Hills, AB T0B 4K0
Email: edmytriw@mcsnet.ca
www.Beetnik.ca

Two Hills, AB**Phone: 780-657-3556**

Fax: 780-657-2455

President: Eugene Dmytriw
Products: Borscht
Brand: Beetnik Borscht

Humeniuk's Meat Cutting

Box 676
Vegreville, AB T9C 1R7

Vegreville, AB**Phone: 780-658-2154**

Fax: 780-658-2090

of Employees: 1 to 25
President: Gerald Humeniuk
Manager: Line Humeniuk
Products: Sausages, Smokies, Pepperoni, Weiners, Jerky (Extruded & Sliced),
Cottage Rolls, Ukrainian-Styled Products
Brands: Grannie's

Love's Custom Meats Inc.

Box 953
6328
Vegreville, AB T9C 1S1
Email: lovemeat@telus.net

Vegreville, AB**Phone: 780-632-2700**

Toll Free: 1-888-969-

Fax: 780-632-2740

of Employees: 1 to 25
President: Lambert Love
Products: Fresh & RTE Products

Prime Cuts Meat & Deli Ltd.

Box 2035
Vegreville, AB T9C 1T2
Email: primecut@telus.net

Vegreville, AB

AFPA Member

Phone: 780-632-6149

of Employees: 1 to 25
President: Earl Grier
Manager: Brian Siebold
Products: Garlic Sausage, Ham Sausage, Kuburgers, Pepperoni, Jerky, Fresh Meats
Brands: Vegreville Sausage

Bison Ranch **St. Paul, AB** **Phone 780-645-3919**
Valerie Pratch
Box 434
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EnSante Winery **Brosseau, AB** **Phone 780-657-2275**
Zena Chrapko
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Email: info@ensantewinery.com

Alberta Greenhouse Growers Association **Edmonton, AB** **Phone: 1-800-378-3198**
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Edmonton, AB T5S 1R5
Email: admin@landscape-alberta.com
www.agga.ca
Fax: 780-444-2152

President: Rob Van Dam
Administration: Cheryl Carbert

Alberta Food Processors Association **Calgary, AB** **Phone: 403-201-2513**
100W, 4760-72 Ave S.E.
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Email: info@afpa.com
www.preparedwithpride.com

President/CEO: Ted Johnston
General Manager: Melody Pashko

Alberta Vegetable Growers (Processing) **Taber, AB** **Phone: 403-223-4242**
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Email: avgp@telusplanet.net
Fax: 403-223-3130

Chair: Ian Harris
Secretary: Kyla Ross

Barrhead Custom Meat Packers

PO Box 4488 Stn Main
Barrhead, AB T7N 1A3

Barrhead, AB**Phone: 780-674-3121**Fax 780-674-6894

Alberta Farm Fresh Producers Association Kelsey, AB

Box 56
Kelsey, AB T0B 2K0

Phone: 1-800-661-2642Fax: 780-373-2297

Alberta Organic Producers Association**Morinville, AB**

RR 1
Morinville, AB T8R 1P4
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President: Terry Sheehan Email: sheehan@telus.net**Vice President:** Randy Gubersky

Organic Alberta

4709 - 44 Ave
Stony Plain, AB T7Z 1N4
Email: info@orginicalberta.org
www.goingorganic.ca

Stony Plain, AB**Phone: 780-271-1116**Fax: 780-434-1616

Flying Rabbit Fruit Farm

Box 917
St. Paul, AB T0A 3A0
Email: kyettaw@mcsnet.ca
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Alberta Farmers' Market Association Edmonton, AB

PO Box 67071
13040 - 137 Avenue
Edmonton, AB T5L 5E3
Email: info@albertamarkets.com
www.albertamarkets.com

Phone: 1-866-754-AFMA(2362)

REFERENCES

- "A National Skills Initiative for the Food Processing Industry in Canada". *National Seafood Sector Council*. Web. 1 Feb 11. <http://www.nssc.ca/food/careers_education_e.html>
- "About Lakeland Poultry Processors". *Lakeland Poultry Processors*. Web. 1 Feb. 2011. <http://lakelandpoultry.com/index.php?option=com_content&view=article&id=23&Itemid>
- Alberta Farm Fresh Producers Association* Web. 22 Feb. 2011. <<http://www.albertafarmfresh.com/>>
- Alberta Finance and Enterprise. "Food Processing". *Alberta Finance and Enterprise Search*. Web. 21 Jan 11. <<http://www.finance.albera.ca/>>
- Alberta Food Processors Association. "Alberta Food Processors Association Membership Directory". *Alberta Food Processors Association*. Web. 22 Feb. 2011. <<http://www.afpa.com/directory.cgi>>
- Agri-Food and Bio-Tech Solutions and Keith and Associates. "An Opportunity Assessment Regarding Food Park Creation in Alberta Report". April 2004.
- Blue Quills First Nations College. *Blue Quills*. Web. 24 Jan 11 <<http://www.bluequills.ca>>
- "Culinary Arts Program, Aboriginal Specialty". *Vancouver Community College*. Web. 24 Jan 11. <http://www.vcc.ca/programs-courses/detail.cfm?div_id=7&prog_id=224>
- Drive Solutions Corp. on behalf of Alberta Community and Co-operative Association (ACCA). "Alberta Farm and Ranch Directory". *Alberta Farm and Ranch Directory*. Web. 22 Feb. 2011. <<http://www.farmandranchdirectory.com/view-directory.php>>
- "Food Processing Equipment Supplies". *FoodProcessing.Com Home Page for the Food and Beverage Industry* Web. 22 Mar. 11. <<http://community.foodprocessing.com/equipment-suppliers>>
- "Food Safe Sanitation". *Lethbridge College*. Web. 1 Feb. 11. <<http://www.lethbridgecollege.ca>>
- Government of Alberta. "Aboriginal Relations". *Government of Alberta*. Web <http://www.aboriginal.alberta.ca/> 20 Nov 10.

Government of Alberta, Agriculture and Rural Development. "Fee Schedule, Food Science and Technology Centre". *Government of Alberta, Agriculture and Rural Development*. Web. 16 Dec. 10. <[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/fst6821](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/fst6821)>

Government of Alberta, Agriculture and Rural Development. "Food Processing Centre Equipment". *Government of Alberta, Agriculture and Rural Development* Web. 16 Dec. 10. <[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/fpdc12702](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/fpdc12702)>

Government of Alberta, Agriculture and Rural Development. "Information Sheet: How to be a Farmers' Market Vendor" Sept. 09.

Government of Alberta. "Agrifood". *Alberta's Economic Development*. Web. 21 Jan 11. <<http://alberta-canada.com/about-alberta/agrifood.html>>

Government of Alberta, Agriculture and Rural Development. "Alberta Municipality Profiles - 2006 Census of Agriculture". *Government of Alberta, Agriculture and Rural Development*. 24 Jan 11 <[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/sdd13103](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sdd13103)>

Government of Alberta. "Alliances – Regional Economic Development Alliances in Alberta Report". *Alberta's Economic Development*. Web. 21 Jan 11. <www.albertacanada.com/regionaldev>

Government of Alberta. "Directory of Directories". *Alberta's Economic Development*. Web. 21 Jan 11. <<http://alberta-canada.com/about-alberta/directory-of-directories.html>>

Government of Alberta, Municipal Affairs. "Official Alberta Populations". *Government of Alberta, Municipal Affairs*. Web. <http://www.municipalaffairs.alberta.ca/> 8 Dec 10.

Government of Alberta. "Tourism, Aboriginal Tourism". *Government of Alberta, Tourism Parks and Recreation*. Web. 24 Jan 11. <<http://www.tpr.alberta.ca/tourism/tourismdevelopment/aboriginalturism/default.aspx>>

Government of Canada, Agriculture & Agrifood. "Producers Economic and Market Information" *Agriculture & Agrifood Canada*. Web. 22 Mar. 11. <<http://www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1165871799386&lang=eng>>

Government of Canada. *Canada Service Plan*. Web. 1 Feb. 11.
<<http://www.cps.gov.on.ca/english/frameindex.htm>>

Government of Canada. "Cultural Diversity and Rights, Aboriginal Peoples, Aboriginal Peoples' Program" *Government of Canada Canadian Heritage*. Web. 24 Jan 11.
<<http://www.pch.gc.ca/eng/>>

Government of Canada, Statistics Canada. 5 Nov 10. <http://www.statcan.gc.ca/start-debut-eng.html>

"Inventory of Major Projects in Alberta" *Alberta's Economic Development*. Web. 21 Jan 11.
<<http://alberta-canada.com/about-alberta/inventory-of-major-projects.html>>

"Kanata Cuisine – Aboriginal Fine Feasting". *Edible British Columbia* Web. 24 Jan 11.
<<http://www.edible-britishcolumbia.com/amuse-bouche-food-blog/bc-wines/kanata-crusin>>

"List of agricultural universities and colleges" *Wikipedia The Free Encyclopedia* Web., 1 Feb 11.
<http://en.wikipedia.org/wiki/List_of_agricultural_universities_and_colleges>

Northeast Alberta Information HUB Ltd. "Alberta Hub Regional Profile". *Alberta Hub Where Opportunities Come to Life*. Web. 2010.

"Opportunities". *Alberta's Economic Development*. Web. 21 Jan 11.
<<http://alberta-canada.com/about-alberta/agrifood-opportunities.html>>

Outlook Market Research and Consulting Ltd. "Regional Cluster Development Report For: Northeast Alberta HUB". May 14, 2009.

"Products & Services". *Food Processing Technology*. Web. 22 Mar. 11. <http://foodprocessing-technology.com/contractors>

Schollie Research & Consulting. "Alberta Hub - Labour Force Capacity Study Rural Communities". June 30, 2010.

"St. Paul Campus". *Portage College*. Web. 10 Nov. 2010.
<http://www.portagecollege.ca/Our_Campuses/Campus_Locations/St_Paul.htm>

"St. Paul Community Profile". *AlbertaFirst.com*. Web. 24 Jan. 2011.
<<http://www.albertafirst.com/profiles/statspack/20465.html>>

"St. Paul, Smoky Lake Region". *Community Futures*. Web. 24 Feb. 11. <<http://www.cfspsl.ca>>

Town of St. Paul. Web. 10 Nov. 2010. <<http://www.town.stpaul.ab.ca/>>

"Welcome to Métis Crossing". *Métis Crossing*. Web. 24 Jan 11.
<<http://www.metiscrossing.com/visit.html>>

Western Sky Management Associates Ltd. "Lesser Slave Lake Regional Food Processing and Business Incubator Opportunity Assessment, Business Plan and Preliminary Engineering". Dec. 2009

"White Papers by Category". *Food Processing Technology*. Web. 22 Mar 11.
<<http://www.foodprocessing-technology.com/downloads/whitepapers>>

Zbeetnoff Agro-Environmental Consulting and Lions Gate Consulting Inc. "Hope Small-Scale Food Processing Facility: Feasibility Analysis Final Report". June 2008.