Agricultural Diversification Opportunities
in the GROWTH Alberta Region

Submitted to:
GROWTH Alberta

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Executive Summary

GROWTH Alberta is an economic development alliance that serves the citizens of nine communities in North Central Alberta: the County of Barrhead; County of Thorhild; Town of Barrhead; Town of Swan Hills; Town of Westlock; Village of Clyde; Village of Thorhild; Westlock County; and Woodlands County. The project described in this report was undertaken by the alliance in 2007 to identify the region's small-scale agricultural businesses, and to understand the agricultural diversification opportunities available to them. As discussed herein, the research has identified many opportunities to pursue.

Key Findings

The GROWTH Alberta region has varied opportunities to diversify its large and productive agricultural base. Research by GROWTH Alberta has, to date, identified 82 small-scale agricultural businesses in four main product areas:

- Food Products: processes from crops and livestock – 29 Businesses
- Agricultural Tourism: including bed and breakfasts, golf courses – 27 Businesses
- Industry Products: from agricultural materials – 17 Businesses
- Consumer Products – 9 Businesses

These SMEs (small- and medium-sized enterprises) have some legitimate needs. From calls placed during the study, as well as prior experience, other studies and work sessions with the committee, we make the following observations of the needs of these SMEs:

- Marketing is a common challenge for these small-scale value-adding agri-businesses owners.
- Advertising undertaken by these SMEs is limited, costly, and generally focused only on local markets.
- E-commerce use by these SMEs is generally low. The use of email, e-newsletters and Web sites, while currently very low, could be a very powerful means to extend the market reach and general promotion of these SMEs.
- Navigating government regulations is a challenge for many of the region's small businesses. In the case of these "micro" businesses, regulations can pose a large and financially costly challenge. However, for those businesses desiring to expand and export out of the region, provincial regulations are useful when working to become a qualified supplier. Those businesses that wish to grow need to have adequate business systems and practices in place to fulfill regulated standards and adequately manage risk (ex. HACCP).
- Product development assistance is an important need of most SMEs. Successful businesses must offer a well-packaged product at a reasonable price in order to retain customers over time. As such, many SMEs in the GROWTH Alberta region could use product development assistance to address: packaging, pricing, product form/colour, product experience, etc.
• Most SMEs in the GROWTH Alberta region do not have access to, or do not make use of technical and professional support. Those businesses contacted during the study operate largely in isolation, doing things by a “trial and error” method of development, which is not efficient. Many businesses in the GROWTH Alberta region could benefit from workshops to provide technical and professional support.
• Road access to the farm site for customers is poor, in some cases. A number of comments indicated that roads are not adequate to allow people to travel easily.
• Peer support amongst the region’s SMEs is low. Most of these operators are strongly independent and not easily identified. This means that there is potential for GROWTH Alberta to develop a “peer support” system, but doing so would be slow. Linkages to the Chambers of Commerce and various Industry Associations would be useful in doing so.
• Economic development is a key responsibility for each County within the GROWTH Alberta region, and needs more leadership to help the agricultural diversification efforts continue.

Recommendations
The GROWTH Alberta region can harness its agricultural diversification opportunities through several means:
• Regional cuisine features;
• Farmers’ markets;
• Farm-direct purchases;
• On-farm/ranch activities; and
• Rural agricultural tourism activities.

Some Edmonton-area efforts for agricultural diversification are already being made by the Country Soul Stroll (Sturgeon County), Drive in the County, and several brochures that have been made available in the region to encourage increased visits from the urban population.

The goal for GROWTH Alberta in following-up on this study should be to:
• build the local capacity and readiness of the region’s small-scale agricultural businesses;
• undertake regional marketing efforts with a common theme;
• use events to support awareness and education efforts;
• and, use this research for further investment attraction and business growth.
Acknowledgements

We would like to acknowledge the kind assistance and project participation of the following committee members:

- Bert Dening, Business Development Officer, Alberta Agriculture and Food;
- Garry Krause, Regional Director, Alberta Employment, Immigration and Industry;
- Marilyn Flock, Agricultural Fieldman, County of Barrhead;
- Kyle Meunier, Assistant Agricultural Fieldman, County of Barrhead;
- Ray Sauer, Economic Development, County of Thorhild;
- Henry Zolkewski, Reeve, County of Thorhild;
- Jodi Goebel, Manager, GROWTH Alberta;
- Jacolyn Tigert, Agricultural Fieldman, Westlock County;
- Dawn Fortin, Agricultural Fieldman, Woodlands County;
- Dale Kluin, Deputy Reeve, Woodlands County.

The committee provided guidance on the study process, helped to verify names and issues, and were important to developing a sound plan for the next steps in assisting the small-scale agri-businesses to develop further.
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Introduction

The GROWTH Alberta region comprises nine municipalities in four counties North of Edmonton, Alberta, with a stable population base of about 30,000 people. In a market of this size, agri-businesses must be innovative, developing new products and services to compete and grow beyond the local market.

Figure 1 – Map of the GROWTH Alberta Region

This project was developed to help identify and understand the small-scale ag-diversification businesses in the region. The two main parts of the work involved developing an inventory of the region’s relevant businesses, and developing recommendations for their support and growth. The region is profiled on the GROWTH Alberta Web site at www.growthalberta.com, and additional specific information on each municipality is available at www.albertafirst.com.

There are a total of about 2,800 farms in the GROWTH Alberta region, with over 838,000 acres of crops in production. In addition, there are over 308,000 head of cattle; 650,000 poultry; 129,000 hogs; 18,000 sheep; 6,100 horses; and much other livestock including bison, elk, and bee colonies.

Project Objectives

GROWTH Alberta issued a terms of reference for a project to assess:
- The inventory of agricultural value-adding and niche businesses in the region; and
- Recommendations for GROWTH Alberta to provide long term support for local diversification opportunities.

The project involved working under the guidance of a steering committee of knowledgeable people from the region involved in the project. It was completed between January and April, 2007.

The next section provides a background on diversification opportunities, followed by the findings of the study and recommendations for GROWTH Alberta. As evidenced, many opportunities exist for the region to pursue additional agricultural diversification.
Agricultural Diversification Opportunities for the GROWTH Alberta Region

The agricultural sector is facing a number of changes and forces that are causing people to both enter and exit the industry. In general, some of the key forces on our agricultural sector are:

• Increasing global demands for high quality food products, as well as increasing global competition of food value chains;
• Evolving consumer expectations for safe and low-cost foods;
• World Trade Organization (WTO) and government policy effects; and
• Continued rural-urban migration.

These and other changes to the agricultural sector force producers to innovate with new products and marketing approaches in order to succeed.

The main drivers of change for successful agricultural businesses include:

• New approaches to engaging customers: using information resources to incorporate ecological, environmental, and social dimensions into the product or service experience;
• New farm business models: including pro-active farms and collaborations; and
• New products and applications: such as ag tourism, regional cuisine events, e-commerce, direct sales, food for health products and bio-energy opportunities.

Foods – One of the main product areas serving agricultural industry growth is the food business. Many Alberta products, including a large number from the GROWTH region, are food industry products including meats, processed meats, grains and oilseeds, bakery products, beverages, and other food ingredients. The markets for these products are well established and the GROWTH Alberta region has a number of these products in its business base.

Food for Health Products/Functional Foods – Functional foods have been defined by Health Canada as foods that are similar in appearance to conventional foods and are consumed as part of a usual diet. A nutraceutical is a product that has been isolated or purified from foods and is generally sold in a medicinal form (Health Canada, 1998). Both functional foods and nutraceuticals can demonstrate to have physiological benefits and/or reduce the risk of chronic disease beyond basic nutritional functions. These products are derived from natural sources such as crop and livestock commodities and, in the case of nutraceuticals, are purified into active ingredients for directed uses. The demand for these products is increasing and Canadian consumers are aware of the benefits of several of these products.

Greenhouses – Greenhouses offer an expanding market opportunity for the province of Alberta as a whole. The industry is growing at a high rate (4-7%/yr) in response to demographic changes and significant population increases in Western Canada. The main drivers of this growth are: demands for higher fibre diets, ethnic food products, and fresh food meals; as well as the need for more horticultural products and related ornamental crops for new housing development. As incomes rise in Western Canada, landscaping and
housing investments will continue. Greenhouse crops for the retail HRI (hotel, restaurant, institution) trade are in high demand, and many vegetable and herb crops are imported at a high rate. Meeting this demand and replacing imports with domestic products offer many opportunities for greenhouse production in Alberta.

**Bio-Diesel** – Bio-diesel was first used in 1900, with a Rudolph Diesel engine that burned peanut oil at the World’s Fair in Paris. During World War II, Brazil, Argentina, China, and India used vegetable oils in response to conventional oil shortages. In the USA in 1998, a bill was passed to encourage the use of bio-diesel, with estimated savings to the government of $40 million over 5 years.

In 1998, the USA DOE (Department of Energy) designated neat (100 percent) bio-diesel (B100) as an alternative fuel and established a credit program for bio-diesel use. Bio-diesel is an ester-based fuel oxygenate derived from renewable resources (ex. soybeans, rapeseed, peanuts, other vegetable oils such as cooking oil, beef tallow, etc.). Bio-diesel can be used in pure form (100 percent bio-diesel) or blended in any ratio with petroleum diesel (petrodiesel) for use in compression-ignition (diesel) engines.

Blended bio-diesel, the most common of which is B20 (20 percent bio-diesel; 80 percent petrodiesel), is not designated as an alternative fuel. In the USA during the 1990s, the bio-diesel industry spent several years lobbying intensively to seek approval for B20 to be categorized as an alternative fuel. Finally, in 1998, a USA credit program was enacted. It allows B20 users to claim credits for consuming bio-diesel that can be applied against their alternative fuel purchase requirements.

Canada currently produces some bio-diesel. Milligan Biotechnology (SK, 400k-500k l/y) uses canola as a feedstock ([www.milliganbiotech.com](http://www.milliganbiotech.com)). Biox, a spin-off company, operates a JV plant in Ontario that produces about 1 million litres of bio-diesel per year from animal renderings and waste fast food oils/fats ([www.bioxcorp.com](http://www.bioxcorp.com)).

The concept of using canola oil and other such feedstocks to produce bio-diesel is gaining massive popularity. Acton estimates that 800 acres of canola can produce 240,000 litres of bio-diesel on the prairies. Some industry estimates indicate the break-even point for a canola oil feedstock is about $350 per tonne ($7.93/bu). If bio-diesel is to be developed in Alberta, it will very likely be a blended fuel, and would need the active interest/participation of oil and gas industry retailers. Further, the bio-diesel supply would need to be near a refinery (likely Edmonton – Fort Saskatchewan) – or have an alternate supply chain plan - for blending and marketing efforts to be economical.

**Ethanol** – Ethanol is another bio-fuel that can be produced in Canada. Forecasts illustrate an increased use of ethanol in Canada and the USA as demand for clean fuels and overall fuel use increases. In Canada, an estimated 1,000 retail locations sell ethanol-blended gasoline and 7% of all gas is blended with ethanol. Current annual Canadian production is 240 million litres from 6 plants (27% for industrial use, 73% for fuel use - Acton, 2002). In addition, Canada imports about 100 million litres of ethanol per year from the United States. Alberta has one ethanol production plant, Permolex in Red Deer, which fractions wheat for food and co-product ethanol (26 million l/y).
Two key influences on ethanol production are the technology base and the supply of feedstock. Current proven technology involves the fermentation of starch to sugars for ethanol. A novel and emerging approach uses new technology to perform a cellulosic conversion from straw and wastes (logen).

The Alberta Government and the Government of Canada both have a number of programs in place to assist the industry to complete feasibility studies and business plans around new industry opportunities relating to ethanol production.

**Bio-Gas** – Bio-gas co-generation is a proven technology that can be adapted to Alberta for use as a cost-reducing technology for many types of operations. It needs to be scaleable, affordable, linked to the power grid, and easy to maintain and service. Alberta is in the process of learning how the de-regulated markets are performing, but long-term price forecasts for power are rising, which may make bio-gas co-generation a feasible technology option for the Alberta marketplace. A number of large global plants exist in Alberta, which could employ co-generation and bio-gas technologies (such as potato, beef, pork).

Co-generation can be developed through several technology platforms and has a possible benefit of carbon dioxide offsets. It is a cost-reducing technology, can be adapted to Alberta conditions, and has a demonstrated private sector interest in the province. It is estimated that 780 MW of electricity can be generated from livestock waste in Canada. However, more technology development and transfer is necessary to realize this potential.

Co-generation of electrical power and heat from agriculture and forestry residuals is an emerging possibility in Alberta. Markets are seeking power from alternative sources, which includes waste residuals. This is driven by the climate change agenda and by a need for renewable sources of energy in the face of increasing demand and high prices. In Alberta, wood waste and manure are two common residuals for consideration in the co-generation area. Manure from beef cattle feedlots, dairy operations and other intensive livestock operations can provide a sustained feedstock on a regional basis. Manure management (and related public concerns) is a problem in many areas of Western Canada due to a variety of reasons affecting soil, water and air quality.

This area is of interest to the GROWTH Alberta region and several government programs exist to assist in these developments. Of course, it does require feasibility assessments and a proper business planning process prior to any direct investment.

**Ag Tourism** – The market niche of agricultural tourism in a rural community is a very viable and expanding product area. This can include rural “experiential” products like paintballing, river canoeing, camping, bed and breakfasts, and petting zoos. It is a very diverse niche, and several GROWTH Alberta region businesses already offer a variety of products and services in this range.
Research Findings
The findings of the research on current agri-businesses in the GROWTH Alberta region are presented below. We used available lists, completed direct calls, and had the committee members verify known agri-businesses in the region. The committee decided to focus on small-scale businesses as they have potential to grow and likely need the most help.

Four final categories were developed to classify the region’s businesses:
- Food Products: processes from crops and livestock – 29 Businesses
- Agricultural Tourism: including bed and breakfasts, golf courses – 27 Businesses
- Industry Products: from agricultural materials – 17 Businesses
- Consumer Products – 9 Businesses
- Total GROWTH Alberta Region – 82 Businesses

Many of these small-scale value-adding businesses have the potential to increase their size and level of sales by expanding their participation in the marketplace. However, some assistance would be needed to facilitate this expansion.

County of Barrhead
The County of Barrhead has a large number of small-scale ag diversification businesses. Our research identified 27 businesses of these businesses:
- Food Products – 14 Businesses
- Agricultural Tourism – 6 Businesses
- Industry Products – 7 Businesses
- Consumer Products – 0 Businesses
- Total – 27 Businesses

The County of Barrhead has a number of food product businesses that are selling direct to customers on the farm or through farmers’ market outlets. The County has seven small-scale meat businesses, four vegetable and honey businesses, several greenhouses, a number of bed and breakfasts, and two golf courses. It also has a farmers’ market. The diversity of these businesses can be the start of a cluster for a tour into the area that could lead to increased sales and other positive spin-offs.

County of Thorhild
The County of Thorhild has a good number of small-scale agricultural diversification businesses. Our research identified 16 of these businesses:
- Food Products – 4 Businesses
- Agricultural Tourism – 4 Businesses
- Industry Products – 3 Businesses
- Consumer Products – 5 Businesses
- Total – 16 Businesses

The County of Thorhild has several food product businesses, and a good cluster of consumer product businesses that are selling direct to customers on the farm or through farmers’ market outlets. In addition to local customers, businesses in the County benefit
from nearby highways that bring in other shoppers based on related growth in the Redwater and Sturgeon County areas, where 5-6 new oil upgraders and planned.

**Westlock County**

This study identified the highest number of small-scale agricultural diversification businesses in Westlock County. From the research, Westlock County includes the following 31 businesses:

- Food Products – 10 Businesses
- Agricultural Tourism – 14 Businesses
- Industry Products – 7 Businesses
- Consumer Products – 0 Businesses
- **Total – 31 Businesses**

Westlock County has a number of food product businesses that are selling direct to customers on the farm or through farmers’ market outlets. Westlock is a major agricultural service center, near both Edmonton and St. Albert with good road access from several highways.

**Woodlands County**

Woodlands County has a small number of small-scale agricultural diversification businesses. This research identified the following eight businesses:

- Food Products – 1 Businesses
- Agricultural Tourism – 3 Businesses
- Industry Products – 0 Businesses
- Consumer Products – 4 Businesses
- **Total – 8 Businesses**

Woodlands County has a small-scale meat business, a number of bison ranches and some specialty businesses. The area has the potential for additional experiential agricultural tourism with the “wild” aspects of its landscapes.
Needs of Small-Scale Producers/Processors

We placed a number of ads in the local newspapers, completed surveys of known small-scale agri-businesses and used existing directories to compile the final list of 82 agricultural diversification businesses in the GROWTH Alberta region. These businesses are small- and medium-sized enterprises (SMEs) with varied growth potential. However, they have some specific needs.

From calls placed during the study, as well as prior experience, other studies and work sessions with the committee, we make the following observations of the needs of these SMEs:

• Marketing is a common challenge for these small-scale value-adding agri-businesses owners.
• Advertising undertaken by these SMEs is limited, costly, and generally focused only on local markets.
• E-commerce use by these SMEs is generally low. The use of email, e-newsletters and Web sites, while currently very low, could be a very powerful means to extend the market reach and general promotion of these SMEs.
• Navigating government regulations is a challenge for many of the region’s small businesses. In the case of these “micro” businesses, regulations can pose a large and financially costly challenge. However, for those businesses desiring to expand and export out of the region, provincial regulations are useful when working to become a qualified supplier. Those businesses that wish to grow need to have adequate business systems and practices in place to fulfill regulated standards and adequately manage risk (ex. HACCP).
• Product development assistance is an important need of most SMEs. Successful businesses must offer a well-packaged product at a reasonable price in order to retain customers over time. As such, many SMEs in the GROWTH Alberta region could use product development assistance to address: packaging, pricing, product form/colour, product experience, etc.
• Most SMEs in the GROWTH Alberta region do not have access to, or do not make use of technical and professional support. Those businesses contacted during the study operate largely in isolation, doing things by a “trial and error” method of development, which is not efficient. Many businesses in the GROWTH Alberta region could benefit from workshops to provide technical and professional support.
• Road access to the farm site for customers is poor, in some cases. A number of comments indicated that roads are not adequate to allow people to travel easily.
• Peer support amongst the region’s SMEs is low. Most of these operators are strongly independent and not easily identified. This means that there is potential for GROWTH Alberta to develop a “peer support” system, but doing so would be slow. Linkages to the Chambers of Commerce and various Industry Associations would be useful in doing so.
• Economic development is a key responsibility for each County within the GROWTH Alberta region, and needs more leadership to help the agricultural diversification efforts continue.
In one of the committee meetings, we undertook a review of the strengths, weaknesses, and opportunities (partial SWOT Analysis) that characterize the GROWTH Alberta region. This analysis helps to understand the regional issues in assisting these small-scale businesses, and helps to review the forces that should be addressed in planning future activities.

**Figure 2 – Modified SWOT Analysis of the GROWTH Alberta Region**

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Established ag region, strong production base</td>
<td>• Demographics/infrastructure – aging</td>
</tr>
<tr>
<td>• Entrepreneurial and independent</td>
<td>• Perception of few opportunities for youth</td>
</tr>
<tr>
<td>• Strong business base and positive business climate</td>
<td>• Remote area, limited resources - $</td>
</tr>
<tr>
<td>• Great people, rural and friendly</td>
<td>• No innovation support</td>
</tr>
<tr>
<td>• Regional landscapes – varied and beautiful</td>
<td>• Need a “vision”</td>
</tr>
<tr>
<td>• Long history, many provincial points of interest</td>
<td>• Agricultural outlook, poor local response/attitude to change</td>
</tr>
<tr>
<td>• Active ag societies</td>
<td>• Small scale value-adding businesses lack readiness</td>
</tr>
<tr>
<td>• Good highways, main service centres</td>
<td>• Lack Web sites for marketing</td>
</tr>
<tr>
<td>• Several lakes, parks, farmers’ markets</td>
<td>• Provincial regulations (ex. meat processing) geared to large businesses, a hindrance to smaller ones</td>
</tr>
<tr>
<td>• 1 hour from Edmonton – 1 million people</td>
<td>• Poor understanding of licensing fees, risks, product liability, liability</td>
</tr>
<tr>
<td>• 4 hours from Ft. McMurray – major growth centre</td>
<td>• Lack of economic development staff, focus</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities (1-3 years)</th>
<th>Relevant New Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Grain-based opportunities, Bio-fuels</td>
<td>• Strategic Plan for Ag Diversification – GROWTH Alberta</td>
</tr>
<tr>
<td>• Ag Tourism: lake cottages, golf, drive-by</td>
<td>• Rural Development Fund – Alberta</td>
</tr>
<tr>
<td>• Forge links with Travel AB, Ag Entrepreneurship, AB Farm Fresh, Kalyna Country</td>
<td>• Ag Opportunities – Canada</td>
</tr>
<tr>
<td>• Others, as identified by GROWTH Alberta</td>
<td></td>
</tr>
</tbody>
</table>
The committee also discussed a number of threats that could cause these small-scale agri-businesses to fail. These reasons are noted below.

**Figure 3 – Possible Reasons for Agri-Business Failure**

<table>
<thead>
<tr>
<th>Reasons for Failures in Farm Businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lack of leadership and vision for the farm business</td>
</tr>
<tr>
<td>• Lack family/others buy-in to implement changes, innovate</td>
</tr>
<tr>
<td>• No market or product focus, too many markets/products, product is “me-too” not unique</td>
</tr>
<tr>
<td>• No collaborations, poor business relationships</td>
</tr>
<tr>
<td>• Poor management, no use of external expertise/advisors</td>
</tr>
<tr>
<td>• Weak financing/under financing, high debt level, dollars raised are spent poorly</td>
</tr>
<tr>
<td>• Lagging behind business cycle – ex. trend/market already going down</td>
</tr>
<tr>
<td>• Wrong business model, poor system of control/monitoring, unrealistic business plan/strategy</td>
</tr>
</tbody>
</table>

Fortunately, all of these problems can be avoided with adequate education and support.
Recommendations – What GROWTH Alberta Should Do

Based on the inventory of small-scale agri-businesses reviewed in this project, and the diversification needs discussed herein, we highlight a strategic focus for the next steps that should be undertaken by GROWTH Alberta to continue its activities in this area of economic development.

Figure 4 – Economic Development Strategy

GROWTH Alberta Economic Development Strategy

Three main elements:
• Communication and awareness, both internal and external
• Economic development agency cooperation, with common goals to create community and business “readiness”
• Marketing of regional businesses for sustained growth, service linkages, and market expansion

The more specific tasks identified with committee input are noted in the following figure.

Figure 5 – Specific Tasks for the Next 1-3 Years

GROWTH Alberta To-Dos

2007
• Promote: Foods, Products, Ag Tourism (B&Bs, Ski-hills)
• “Eat Local”: Communication theme, encourage municipalities and the general community
• Marketing: Web site, email, e-newsletters, brochures, directory
• Use virtual tours: County level, events, points of interest, assets
• Focus on small scale assistance: regulations, product development, common business issues

2008-2010
• Educate: workshops on marketing, how-tos, product development
• Attraction: conferences – 200 people size – ag tourism, food, etc. with local foods/sponsors
• Tours: create an inventory of interested businesses, help them prepare
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