

AGRICULTURAL INVENTORY AND IMPACT IN SOUTHGROW

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Executive Summary:

The SouthGrow region is a major producer and supplier of agricultural and food products. The region has over one million acres under irrigation, boasts one of the longest growing seasons and has the most hours of sunshine in Canada. The region has well-developed water management systems, expertise and availability of water. In fact, the total land assessed as suitable for irrigation is 1.45 million acres with the SouthGrow region including seven of the Province's thirteen Irrigation Districts. The region produces over 60 percent of the Province's vegetable crop plus large quantities of sugar beets and potatoes are grown in large quantities in the region, mainly due to irrigation.

In general, agriculture in Southern Alberta is thriving and growing. That is not to say that it is without its issues, problems and challenges. The disparity between returns to the investor in the agricultural sector and other major industries has become even more apparent in the present booming economy of Alberta. The participants in this study brought several issues forward to illustrate this:

- **Labour** - The issue of labor was a major topic. This included the full gamut of the labor force from unskilled to skilled to the trades and to professionals. Suggestions to resolve this ranged from the importation of labor from foreign as well as domestic sources, which importation of that labor may be temporary or permanent. Other suggestions were directed to the colleges and universities to adapt their programs to better prepare graduates in areas such as custom meat cutting, with the needed skills to address the needs of the prospective employers.
- **Transportation and Logistics** - The need for a local container yard is an important priority for many. It is an issue that has significant repercussions on the economy, our infrastructure and the environment. In addition, frequent rail strikes have given Canada the international reputation of being an unreliable supplier. We have several businesses that are capable of operating in global markets but must deal with supporting infrastructures that are "bush league" players. Our major international competitors have solved this problem but Canada seems to be either incapable or unwilling to do so. If Southern Alberta businesses are going to be successful in the global marketplace, this needs to be resolved, perhaps through an ad hoc committee that includes representatives across the industry that investigates and lobbies various levels of government for assistance in this area.
- **Bio-fuels** - Bio-fuels have become a significant issue recently, influencing virtually all sectors of the industry. Like agriculture itself, it is a complex issue with no simple answers but it is going forward and a plan needs to be developed. Some study participants indicated aptly that "*we are all going to be able to afford gas to go to the grocery store, but we won't be able to afford the groceries once we get there.*" There is potential for the bio-fuels movement to negatively impact many sectors of the agriculture industry.
- **Regulations** - Many small processors brought up the issue of nutritional labels. This is a consumer driven issue that brings an added cost to the processor, creating challenges in the ability to recover those costs. Some have resolved the issue by discontinuing operations while others struggle with compliance. Businesses need assistance with finding creative ways to cover the increased costs, which, if complied with, often induce greater efficiencies in the operations.
- **Commercial Kitchen** - The idea of a commercial kitchen has been discussed for many years and it is still a topic of interest. While the facility at Leduc is state of the art and qualifies as a federally inspected facility, the cost of using the facility has become a major challenge for some operations. Therefore, the feasibility of such a

facility needs to be investigated further in order to enable more small-scale value-added processing in the region.

As with other industries, the agriculture industry in the region faces many opportunities. In this region, a handful of opportunities have arisen that can be investigated further for feasibility:

- **Greenhouse and Organic Vegetables** – The population of Alberta is projected to increase and much of this population is concerned with health and diet. As a result, the greenhouse and organic vegetable market can be investigated for feasibility in order to replace imports and serve niche markets. It is interesting to note that the organic foods market is growing to such an extent that the large supermarket chains have now set aside organic food sections in their stores. This is not to say that organic is better, safer or more nutritious but it is perceived by the consumer to have an advantage and they are willing to pay extra for that.
- **Red Skin Potatoes** – Only 25 percent of the potatoes consumed in Alberta are actually grown in Alberta. Most potato producers are focusing on white skinned potatoes and other products required for the processing (chip, fry and powdered) industry. This has left a gap in the table potato market, which although not as stable as the processing market needs investigation.
- **Pulse Processing/Canning** – A significant amount of the pulse crops grown in the area is being shipped out of the region and in fact the country for further processing into a variety of canned goods. Canada has the potential to be a leader in pulse crops and with a value-added component located close to the geographical area where these pulse crops are grown, perhaps growers can realize the confidence, stability and prices required to increase the number of acres devoted to this crop.
- **Essential Oils and Related Specialty Products** – A cluster that has the potential to grow in the region is the essential oils and related (hemp, flax, etc.) products. The bio-fuels issue is currently affecting prices in a positive manner and therefore provides an opportunity to not only develop this niche market for export but also to expand it and take advantage of the area's advantages.
- **Pet Products** – The study only investigated this area on fringe basis. That is, it was covered under bird seed and cat litter using clay. However, the pet food industry is growing due to the increased population of domestic animals. As a result the bird seed, cat litter and pet foods products market may warrant further study. Given the strength of the livestock feed and the agricultural by-product potential in the area, detailed investigation may be worthwhile.

Of course, the opportunity for a candy or confectionary maker in the region has already been identified in previous studies and should still be considered. In addition, the viability of a commercial kitchen should continue to be investigated seriously as this will help start value-added agriculture ventures.

About SouthGrow:

The SouthGrow region encompasses twenty-six communities with a total population of over 140,000. The member municipalities include:

Village of Barons	Town of Milk River
Blood Tribe	Village of Milo
Town of Cardston	Village of Nobleford
Cardston County	Town of Picture Butte
Village of Carmangay	Town of Raymond
Village of Champion	Village of Stirling
Town of Claresholm	MD of Taber
Town of Coaldale	Town of Taber
Town of Coalhurst	Town of Vauxhall
Village of Coutts	County of Vulcan
City of Lethbridge	Town of Vulcan
County of Lethbridge	County of Warner No. 5
Town of Magrath	Village of Warner

The SouthGrow region is a major producer and supplier of agricultural and food products. The region has close to one million acres under irrigation, boasts one of the longest growing seasons and has the most hours of sunshine in Canada. The region has well-developed water management systems, expertise and availability of water. In fact, the total land assessed as suitable for irrigation is 1.45 million acres with the SouthGrow region including seven of the Province's thirteen Irrigation Districts. The region produces over 60 percent of the Province's vegetable crop, plus large quantities of sugar beets and potatoes are grown in large quantities in the region, mainly due to irrigation. Other advantages include:

- A strong agricultural economy and farming base that has led to a substantive export-oriented food processing industry.
- A strong research cluster including the University of Lethbridge, Agriculture and Agri-Food Canada (AAFC) Research Centre, Alberta Agriculture and Food (AF) and Lethbridge College.
- Large and diverse local supply of ingredients/food product inputs.
- A number of local food producer entrepreneurs.
- An established institutional market.
- A diverse ethnic community. Many southern Alberta producers are only second generation Canadians whose predecessors came to the area with a wealth of knowledge in agriculture production, resulting in a risk taking nature. In southern Alberta, the Dutch are prominent in the pork and cattle feeder group, the Japanese in the vegetable production area, especially potatoes. Each of these groups brought something special to Alberta which is not typically seen in other irrigated areas like Saskatchewan. Much of the diverse ethnic community in the area consists of risk takers who will not hesitate to jump into new crop production if they think there is potential for long-term success.

Objectives of Study:

The main objective of the study is to detail exactly who the major players are in the Agri-Food sector, how the locally produced foods can be utilized within the region, possibly replacing much

of the food exported from outside of the region, and identify economic investment opportunities in the region. Specifically, the objectives are to:

- (a) Develop an inventory of existing agriculturally based producers, processors, suppliers and other businesses within the SouthGrow region. The inventory should include home-based, small, medium sized and large enterprises as well as niche businesses in the region and span the value chain in agriculture sector.
- (b) Quantify the impact of the agriculture economy as it relates to these businesses and enterprises in the area. Specifically, what dollar value/tonnage contributed to the economy.
- (c) Identify the channels that the raw materials go through in order to quantify export, import and re-import data.
- (d) Identify existing and new markets (local, provincial, national, and international), and value chains for each identified business sector and/or product produced within the regional as well as direct marketers.
- (e) Identify challenges and issues that face various producers and/or other value chain players.
- (f) Identify consumer trends that contribute to opportunities and challenges.
- (g) Identify potential opportunities in the area based on the information gathered and contractor knowledge of consumer and cultural trends, domestic and international markets, and challenges and issues faced by the players in the sector.

Study Area:

The designated study area is all of the area under the jurisdiction of SouthGrow Regional Initiative, which includes the Counties of Vulcan, Lethbridge, Cardston, Warner, and the M.D. of Taber as well as the member communities in those jurisdictions plus the Town of Claresholm. For the purposes of this study the irrigated portions of the Counties of Newell, Forty Mile and Cypress and the communities contained therein were also included.

Background and Understanding:

Although only about 30% of the agricultural study area is irrigated, these lands have a major influence on much of the activity in the region. Irrigation affects many aspects and plays a significant role in the well being of the entire economy of Southern Alberta. That, combined with the number of growing days or heat units of the area, even outside the irrigated areas, allows the district to grow a wide variety of agricultural crops, including vegetables, herbs and spices. According to the Alberta Irrigation Projects Association, the irrigated area of Southern Alberta constitutes 5% of the arable land base in Alberta but produces 20% of the agricultural Gross Domestic Product (GDP) of the Province, making a significant impact on the economy of the study area as well as on the economy of the Province.

From a Pre-Feasibility Study report prepared for Alberta Agriculture, Food and Rural Development in March 2004, the Southern Prairie of Alberta is described as a semi-arid desert with hot days, cool nights and low rainfall. Growing season precipitation ranges from 200-300 mm (8-11.8 in.) annually in the southeast (Medicine Hat and Bow Island districts), to 300-400 mm (11.8-15.7 in.) in the mid-south region (Taber and Lethbridge districts). The soil in these regions is generally brown loam to loamy sand. Generally the region has low humidity (15-40%) during the main growing season from late April into early August. This deters the growth of molds, mildews, fungus, and blights. While the humidity may rise during rain events, it will drop immediately after the moisture cell has passed. This is a great advantage for crops that require a period of field drying at harvest. The issue of humidity is modified under irrigation as the regular

application of water to a crop creates a microclimate in the canopy, which at times offsets the naturally dry conditions.

The number of frost-free days ranges from 120-135, with 2200-2400 Corn Heat Units (CHUs) in the mid-south to greater than 2400 CHUs in the southeast. A unique phenomenon, which naturally occurs in this area of Alberta, features hot days and cool nights. The hot days promote growth while the cool nights help develop the flavor and set the sugars and oils in vegetables, spices and herbs. Many other areas of North America have equivalent or higher growing degree-days but all remain quite warm overnight, thus not developing as much flavor as do those same crops in Southern Alberta. This is particularly advantageous when combined with the extended hours of sunshine Southern Alberta receives during the growing season. These extended hours of sunshine support the development of photosensitive crops like carrots in order to develop size and flavor. This phenomenon is known as "northern vigor" and is a registered trademark that may be used in promoting the extra quality of vegetables, herbs and spices grown in the Prairie Provinces.

Methodology:

The project began with the compilation of a list of initial contacts. The Alberta Agriculture & Food website was researched for an additional list of agriculture related value-added businesses. Every SouthGrow member jurisdiction was contacted to inquire about agricultural related businesses located in each of its jurisdiction to pick up any possible operations that may have been missed. In addition, as the study progressed, if the researcher was made aware of additional contacts, these "players" were contacted for information.

Based on the objectives of the study, a questionnaire was prepared and then used to develop a database that was populated based on interviews conducted in person and by phone. Information gathered from the contacts was offered willingly. As part of the introduction, the interviewee was briefed on the purposes of the project. The introduction included a directive that although information about the operation was being requested, that any proprietary information did not need to be disclosed. For the most part, contacts were willing to give information that they felt would not compromise their positions or operations, and in many cases, they also added a variety of worthwhile comments.

Study Constraints:

One of the study objectives was to:

- (b) Quantify the impact of the agriculture economy as it relates to these businesses and enterprises in the area. Specifically, what dollar value/tonnage contributed to the economy.

For the most part, the contacts interviewed did not provide specific tonnage or dollar value information. Large players provided the information as usually this was public knowledge (published in print or web materials). Smaller players did not reveal the information as they felt it was proprietary and did not want to give competitors any information which may adversely impact operations. Therefore, objective (b) was not met through this study.

Data Gathered:

In total, 102 contacts were made as part of this study. Of those, 16 were outside the SouthGrow area, of which seven were in the County of Cypress, including the City of Medicine Hat, four in the County of Forty Mile and five in the County of Newell, leaving 86 that were located in the

SouthGrow jurisdiction. The breakdown for that data is 37 in the City of Lethbridge, 14 in the County of Lethbridge, 22 in the MD of Taber, five in the County of Warner, one in the County of Vulcan, one in the Cardston County and four in the Town of Claresholm.

NOTE: The analysis and conclusions are based on interviews held with a sample of organizations in a cross-section of clusters in the agriculture industry. The following discussion does not assume to represent the industry entirely, but rather identifies some challenges and opportunities for further investigation. Therefore, recommendations are made to provoke further investigations of challenges and issues and to encourage consideration of the feasibility of opportunities prior to seizing them.

Analysis:

The data gathered is presented in Appendix A, aligning with the first objective. That is, Appendix A includes the inventory of agriculturally based producers, processors, suppliers and other businesses in the SouthGrow Region that were contacted. These are organized by value-chain clusters, including home-based, small, medium sized and large enterprises as well as niche businesses in the region.

The value-chain clusters studied are:

- Livestock Feed and Supplements
- Field Vegetables and Fruits
- Greenhouse Vegetables and Fruits
- Potatoes
- Corn
- Beets
- Pulse Crops
- Special Seeds, including Safflower
- Mustard
- Canola
- Essential Oils
- Meats
- Egg
- Dairy
- Wheat
- Wool
- Forage

In addition to these, water, clay and specialty foods are included under Miscellaneous.

The data was analyzed by value-chain clusters and is summarized below, with a description of:

- The channels that the raw material goes through
- Products produced
- Markets (Existing and New/Potential)
- Import and re-import information if appropriate
- Players
- Challenges or issues faced
- Potential opportunities
- How can SouthGrow Assist

Livestock Feed and Supplements

Channels

Companies in the Livestock Feed and Supplements sector supply nutritional supplements, vitamins and minerals as well as feed and feed ingredients to consulting nutritionists and feed mills for the livestock industry. Basic ingredients are brought in and mixed or blended to meet customer needs.

Companies interviewed include:

- ADM Animal Health and Nutrition (Lethbridge)
- Cargill Animal Nutrition (Lethbridge)
- CB Constantini Ltd. (Lethbridge)
- Daco Western Canada (Lethbridge)
- East-man Feeds (Lethbridge)
- New Life Feeds (Lethbridge)
- Puratone Corp. (Bassano)
- Unifeed (Lethbridge)
- Westway Feed Products (Lethbridge)

Products Produced

These companies produce macro and micro feed mixes, minerals, starter, poultry and livestock feed supplements, and liquid animal feed supplements.

Markets

Markets served include southern Alberta, the Western Provinces, Central Canada and Montana. The United States used to be a larger market, but since the BSE crisis, some companies have found that the regulations deter the sale of much of the feed south of the border. In addition, the strength of the Canadian dollar is impacting US sales as well.

Hutterite colonies are of interest as they are expanding their land base, the number of colonies is increasing and the colonies serve as a strong customer.

Import/Re-Import Information

The majority of the ingredients used for products are within Canada and in fact, within the region. For example, the companies that use canola as a base are getting it from the region. Corn, however, in some cases comes in from as far as Manitoba. In general, vitamins, trace minerals, soybean meal and amino acids are all imported as they are not available locally. These are not seen to be good candidates for import replacement due to the economies of scale required as well as the competition a processor would face on a global scale in a market that is mature and already highly competitive.

Players

Major players noted by interviewees in the sector include:

- Eastman Feeds (Lethbridge)
- Master Feeds (Lethbridge)
- Standard Nutrition (Lethbridge)
- United Feeds (Lethbridge)

Challenges/Issues Faced

The market is seen as mature with competition growing and the number of producers shrinking with amalgamation occurring. It is said to be a consumer's market with the

customer base shrinking and suppliers having fewer market options and tighter margins. Other challenges faced include the strength of the Canadian dollar and labour shortages. Also of a distant worry is the impact that the bio-fuels industry will have on farmers and their options and alternatives on the farm.

Potential Opportunities

Opportunities are deemed to be limited in a mature market.

How Can SouthGrow Assist?

Interviewees noted that assistance was required with the labour shortage that the region and the province are facing.

Field Vegetables and Fruits

Channels

The SouthGrow region produces 61% of Alberta's vegetable crop. Local producers grow field vegetables that are harvested, cleaned, and either packaged for sale, utilized in small restaurant operations or canned and jarred products such as preserves, sauces, etc. or shipped to processors for further value-added processing. For produce destined to processors, the Alberta Vegetable Growers Association negotiates contracts on behalf of farmer members with processors, serving as a mediator in disputes between the farmer members and the processors. The processors then take the products, process them (freeze or another value-added process) and package them for distribution. Some small fruit and vegetable producers have store front cafes or small restaurants that they utilize their own produce in and add value to supply their own operations. Larger vegetable producers provide the region with bagged fresh produce through distribution channels ranging from small farmers markets to larger distribution companies.

Organizations contacted include:

- Alberta Vegetable Growers – Processing (Taber)
- Broxburn Vegetables & Café (Lethbridge)
- Courtland Hill Farms (Bow Island)
- El Dorado Vegetable Farms Ltd. (Redcliff)
- Gouw Quality Onions Ltd. (Taber)
- Jensen Onion Farms (Purple Springs/Taber)
- Lucerne Foods (Taber)
- Sudo Farms (Broxburn)
- Sunrise Berry Farm (Lethbridge)
- Triple D Produce (Purple Springs)
- Van Guissen Growers Inc. (Coaldale)
- W.B. Alberta Produce Co. Ltd. (Brooks)

Products Produced

Products include field fruit and vegetables such as strawberries, raspberries, black currants, red currants, pumpkins, squash, spinach, radishes, peppers, lettuce, tomatoes, cauliflower, broccoli, cabbage, and onions at the primary level and breads, pies, lunches and dinners at the value-added farm café/store level.

According to "Alberta Irrigation Information 2006", Alberta processed vegetable acreage (seeded acres) increased (using carrots, corn and peas as a base) in 2006.

Year	Carrots	Corn	Peas
1995	740	3,884	3,163
96	710	3,869	2,775
97	367	3,044	3,125
98	856	2,818	2,983
99	1170	2,442	2,646
2000	854	2,577	2,563
01	994	3,992	3,967
02	479	3,712	4,053
03	441	4,329	4,534
04	1009	3,365	4,534
2005	647	2,068	3,346
06	817	3,055	4,675

Notes: – data are obtained from the Alberta Vegetable Growers (Processing)
– processing is defined as fresh, canned, or frozen vegetables for human consumption
– all acres are irrigated

Markets

Smaller producers serve the local region, including Calgary, while larger producers that use marketing and distribution intermediaries serve the province of Alberta and in some case the western Provinces. A few producers are able to get their products into larger centres in Canada such as Winnipeg, Toronto and Vancouver through extensive distribution channels.

Import/Re-Import Information

All products are grown within the region using inputs that are readily available in the region. In terms of the region's needs from a consumer perspective, products that are not available through a greenhouse market are "imported" in the off season or when storage is not deemed possible. For example, consumers enjoy a lot of produce in the off season that is not produced through a greenhouse in the region due to availability. On a larger scale, while the region has large onion producers, they acknowledge that onions cannot be stored beyond June and at that point the region's customers may be consuming onions from another location. In addition, there are some varieties of onion (yellow) that are easily and consistently grown in the region, while white and red onions are not, requiring "imports" to maintain the customer base and meet consumer demand.

Players

Major players noted by interviewees in the sector include:

- Lucerne Foods Ltd. (Lethbridge/Taber)
- Eldorado Farms (Redcliff)
- Gouw Quality Onions (Taber)
- Jensen Brothers (Taber)
- Itzke River Farms (Marquette, Manitoba)
- Thomas Fresh (Calgary)
- Courtland Hill Farms (Bow Island)
- Tanner Farms (Barnwell)
- Valgardson Farms (Taber)

Challenges/Issues Faced

From the perspective of the vegetable processing sector, the industry seems to be mature with vegetable sales dropping off and competition being stiff. Farmers are

faced with low international commodity prices, keeping processors competitive and raising concerns for dumping in the market by U.S. processors. The Alberta Vegetable Growers Association faces a major challenge in that farmers need to be aware that while they are growing locally, they are competing in the North American and sometimes a world market.

The fresh vegetable sector is facing downward pressures on prices, partially due to Mexican produce. Not only does Mexico have the advantage of abundant labour and lower labour costs, it does not face the disadvantage of higher input costs such as rising energy (fuel and utilities) costs. Vegetable picking is labour intensive and unfortunately, Alberta's booming economy serves as a challenge in this respect. Transportation costs also add to the costs for the producer.

One producer noted that California's water issues may dramatically impact Alberta as producers from the United States realize that Alberta has water at reasonable rates and it may make more sense to move growing and production operations here. Therefore, the sector may see more foreign ownership in the sector on the landscape in the near future.

Most producers noted weather and disease as challenges as well.

Potential Opportunities

The Alberta Vegetable Growers Association seems to think that there are sufficient acres, crop rotational opportunities and willing growers to accommodate another processor in the area. On the fresh and greenhouse produce front, population growth and increased health concerns will fuel the demand for fresh produce. In addition, the demand for organic produce is increasing in Canada. In fact, producers recognize that niche markets may provide opportunities. Smaller operations have indicated that agri-tourism can be exploited if operators were to get creative in the value-added products that can be offered to consumers.

How Can SouthGrow Assist?

From the small producer aspect, more promotion and development in the agri-tourism was cited as a possible area for SouthGrow's involvement. In addition, an awareness campaign where consumers are buying locally/regionally grown produce was also cited.

Greenhouse Vegetables and Fruits

Channels

Local producers grow greenhouse vegetables that are harvested, cleaned, and either packaged for sale, utilized in small restaurant operations or canned and jarred products such as preserves, sauces, etc. or shipped to processors for further value-added processing. Growers may produce the vegetables according to contract and deliver them to an intermediary such as Red Hat Co-operative, where the products are graded, bagged and shipped to wholesalers and grocery retailers throughout Canada and parts of the United States. Some small fruit and vegetable producers have store front cafes or small restaurants that they utilize their own produce in and add value to supply their own operations. Larger greenhouse vegetable producers provide the region with bagged and ready-to-eat produce through distribution channels ranging from small farmers markets to larger distribution companies.

Organizations contacted include:

- Broxburn Vegetables & Café (Lethbridge)
- Red Hat Co-operative Ltd. (Redcliff)

Products Produced

Products include greenhouse long English cucumbers, beefstake tomatoes, tomatoes on the vine, bell peppers (red, green, yellow, orange) as well as herbs. Breads, pies, lunches and dinners are produced using the field and greenhouse vegetables at the value-added farm café/store level.

Markets

Smaller producers serve the local region, while larger producers supply the three prairie provinces, with some occasionally going to Ontario and Quebec.

Import/Re-Import Information

All products are grown within the region using inputs that are readily available in the region. In terms of the region's needs from a consumer perspective, products that are not available through a greenhouse market year-round are "imported" in the off season.

Players

Major players noted by interviewees in the sector include:

- B.C. Hot House (British Columbia)
- Red Hat Co-op (Medicine Hat)
- Pick N Pack (Innisfail)

Challenges/Issues Faced

The greenhouse vegetable sector is facing downward pressures on prices, partially due to Mexican produce. The mature market is slowly expanding with the strength of Mexico's greenhouses providing competition. Not only does Mexico have the advantage of abundant labour and lower labour costs, it does not face the disadvantage of higher input costs such as rising energy (fuel and utilities) costs. Vegetable picking is labour intensive and unfortunately, Alberta's booming economy serves as a challenge in this respect. Transportation costs also add to the costs for the producer. British Columbia has also increased production and is becoming more aggressive into Alberta.

Potential Opportunities

On the greenhouse produce front, population growth and increased health concerns will fuel the demand for fresh produce. In addition, the demand for organic produce is increasing in Canada. In fact, producers recognize that niche markets may provide opportunities. Smaller operations have indicated that agri-tourism can be exploited if operators were to get creative in the value-added products that can be offered to consumers. Larger operations see the need to expand into niche vegetable markets such as mini cukes and cocktail tomatoes, both of which can be grown in greenhouses.

How Can SouthGrow Assist?

From the small producer aspect, more promotion and development in the agri-tourism was cited as a possible area for SouthGrow's involvement. In addition, an awareness campaign where consumers are buying locally/regionally grown produce was also cited.

Potatoes

There are 90 different varieties of potatoes grown in Alberta. The combination of Alberta's high altitude, long warm summer days and cool nights, with an abundant supply of water, consistently produces a high quality potato. SouthGrow is the prime potato growing region, due mainly to

irrigation. Due to the dry climatic conditions within the potato production area, this crop requires 400 to 450 mm of irrigation (16 to 18 inches) during the season.

The following table from "Alberta Irrigation Information 2006" shows the Alberta Potato Acreage (seeded acres):

Year	Process	Seed	Table	Total
1990	15,383	5,117	7,882	28,382
91	12,300	5,735	6,509	24,544
92	9,700	5,515	6,970	22,185
93	13,115	5,850	6,115	25,080
94	13,210	7,390	6,075	26,675
1995	13,450	7,400	5,765	26,615
96	13,870	8,485	5,085	27,440
97	12,225	9,430	5,025	26,680
98	12,800	10,250	5,100	28,150
99	24,616	10,886	4,698	40,200
2000	32,563	12,037	4,331	48,931
01	34,877	12,595	3,883	51,355
02	37,296	14,644	3,241	55,181
03	40,960	13,690	4,125	58,775
04	38,077	11,062	3,508	52,647
2005	37,541	10,531	2,567	50,639
06	36,282	11,878	1,615	49,775

Notes: – data are obtained from the Potato Growers of Alberta
 – the above acreage is from the whole province of Alberta, but does not include the potato acreage from market gardens of less than 5 acres
 – typically, the processed and the table potatoes are irrigated

Channels

Different varieties of potatoes are grown by farmers and destined to tables or processors (chips, fries, dehydrated potatoes). Tables potatoes, including Norland, Russet Burbanks and white or yellow fleshed potatoes are picked, washed and packed for the Alberta fresh market. Potatoes to be delivered to chip and fry processors are grown under center pivot irrigation by contract, washed, cut and prepared for processing for various products. Potatoes that are dehydrated are first washed, peeled, graded, sliced, dehydrated and then dried into granules according to specifications.

Organizations contacted include:

- Potato Growers of Alberta (Taber)
- Agristar Inc. Dehy (Vauxhall)
- Agristar Star Produce (Vauxhall)
- Frito-Lay Canada (Taber)
- Hostess Frito-Lay Canada (Lethbridge)
- Lamb Weston Inc. (Taber)
- Maple Leaf Potatoes (Lethbridge)
- McCain Foods Canada (Chin)
- Shimbashi Farms (1997) Ltd. (Taber)

Products Produced

A variety of products are produced in the region, including:

- Table potatoes
- Seed potatoes
- Processing potatoes
- French fries, hash browns, potato patties, potato wedges, potato puffs
- Potato chips, hickory sticks, etc.
- Dehydrated potato granules

Markets

Markets range from southern Alberta to Canada, United States and Mexico.

Import/Re-Import Information

It is easier to market white skin potatoes to the large processors in the region and therefore, red skin potatoes are often "imported" into the region from Saskatchewan. Therefore, red potatoes are a natural candidate for import replacement. However, the challenge is to get growers to grow these red potatoes due to insecurity in prices.

Players

Major players listed include:

- Frito-Lay (Taber/Lethbridge)
- Lamb Weston (Taber)
- Maple Leaf (Lethbridge)
- McCain (Chin)
- Old Dutch (Calgary)
- Hostess (Taber)

Challenges/Issues Faced

The world market has hit a plateau at present and this is not expected to change in the next several years. In fact, according to the Potato Growers of Alberta, the acres peaked at 59,000 acres in 2003, and has been shrinking ever since. The table potato industry is shrinking and production efficiencies are increasing at the same time, causing an overall reduction in acres required to produce the needed product. According to a representative at Lamb Weston, there has been a reduction in consumption of potato products on a global basis.

A representative of Potato Growers of Alberta indicated that there is presently an overproduction of product. In fact, there are about 4,000 acres of capacity that is readily available. There may be some opportunity on the processing side to move to prepared products as is the case in the European market, but in order for this to happen, the consumer needs to be made aware and create the market demand.

As with other farmers, labour shortage, weather, disease and fluctuating markets and prices also pose challenges.

Potential Opportunities

In Alberta, only 25 percent of the table potatoes consumed is grown in Alberta. The rest is imported from Manitoba, Saskatchewan and Washington. White potatoes are more suited for the processing market and the red are more suited to the table market. Therefore, there is an opportunity to grow more red potatoes. Having said this, the table market is less stable than the processing contract market. In addition, the table market requires flawless potatoes whereas the processing market can eliminate defects in the potato prior to processing.

Opportunities also exist in developing additional varieties of healthier snacks in order to increase consumption.

How can SouthGrow Assist?

While assistance with creating consumer demand through advertising and education was requested, eliminating the labour shortage was seen as more pressing.

Corn

Channels

Corn is grown by various growers in the area and destined to feedlots for livestock feed, to fresh corn stands and grocery stores, to be milled for use in snack foods or to the distillery.

Organizations interviewed include:

- Alberta Corn Committee
- The Black Velvet Distilling Company
- Del Comal Foods Ltd.

Products Produced

Products produced from corn include corn for fresh consumption, silage and grain corn, livestock feed, corn chips and spirits including whiskey.

Markets

The markets for the products range from southern Alberta to all over Canada and the world (distillery).

Import/Re-Import Information

Silage corn is either grown by the feedlot operator or by a neighbour and all of it goes into livestock feed. Some grain corn is grown, some of which goes to the distillery in Lethbridge, but the bulk of it is silaged for livestock feed.

Although grain corn is grown in southern Alberta, the varieties needed to produce the corn flour required for corn chips cannot be grown here. Therefore, corn that meets product specification is brought in from Nebraska. For the distillery, initially, all the corn was purchased from growers in the Bow Island area, however, the plant has expanded while the acres of corn grown has dropped due to other cropping options. As a result, a lot of the corn destined for the distillery is imported from the United States.

Challenges/Issues Faced

Challenges include attracting growers to the market due to prices, weather, and receiving sufficient heat units. Generally, there is competition from eastern Canada and the United States as the corn in these areas is grown under non-irrigated circumstances due to the abundance of rain, resulting in lower costs.

In the snack food industry, a challenge in addition to labour is the paper work associated with doing business in the United States. The regulations are time consuming to get to know as well as can be expensive if not followed properly.

On the distillery end, the industry is flattening out and there is a consolidation of companies. Taxation on the product is making the distilleries uncompetitive on world

markets. Natural gas prices are high and the bio-fuels issue could pose a problem if product availability becomes tight. Labour is also an issue, especially technical people.

Potential Opportunities

Growth for corn is centered around the distillery industry (however, pricing has to be structured properly) and the bio-fuels industry, which could impact agriculture in general. That is, if more and more corn goes to the ethanol industry, then prices will rise making value-added agriculture such as corn chip manufacturing un-competitive. In the same token, about 30 percent of the corn grown in the United States is being fed into the ethanol market, providing an opportunity to replace this corn.

The organic market provides opportunities as does the healthier snack food alternatives sector. People are looking for healthier foods and these two markets need to be investigated.

How Can SouthGrow Assist?

SouthGrow's assistance is requested in the areas of labour, utilities and taxation.

Sugar Beets

Alberta is the only province that produces sugar from sugar beets. Sugar beets are one of main irrigated crops grown the SouthGrow region.

Channels

Sugar beets are grown based on the acres that are contracted with the processor through the Alberta Sugar Beet Growers Marketing Board, which represents all sugar beet growers. Prices and acres to be grown are negotiated with Rogers Sugar, and the board helps develop support programs with the government for the industry. The growers are responsible for growing the product under the supervision of the sugar factory field staff, harvesting the product and delivering it to designated stations. The beets are then hauled to the plant as needed for the operations. In the case of sugar, the beets are sliced and cooked to extract the juice which is then boiled to crystallize the sugar that is separated through a spinning process. Raw sugar is further processed to produce liquid sugar and icing sugar, both of which are used in specialty applications.

Organizations contacted were:

- Alberta Sugar Beet Growers Marketing Board (Taber)
- Rogers Sugar Ltd. (Taber)

Products Produced

Rogers Sugar is the main client for the sugar beets in southern Alberta. The beets are processed to produce granulated sugar, liquid sugar, and icing sugar, as well as related by-products such as molasses and beet pulp. As another by-product, molasses is added to beet pulp to produce a quality livestock feed.

Markets

The plant in Taber reaches the western Canadian market place for granular, liquid and icing sugar. Small amounts of granular sugar reach the United States and Mexico.

Import/Re-Import Information

Most inputs are sourced locally. Sometimes, products available locally are imported due to quality. For example, lime is required to extract juice from beets. These, while

available locally, are imported from Montana as they meet specifications required for operations.

Challenges/Issues Faced

The industry is dynamic and local production is impacted by several factors. The primary factor is market availability and since sugar can be obtained from various sources, it is a very volatile market place. At this point, the acres have been capped until demand increases. However, with corn prices increasing and potential reductions in corn syrup volumes, the liquid sugar market is more competitive and positions local operations well. In addition to market dynamics, weather and storage risks pose challenges.

Potential Opportunities

Opportunities are related to bringing in operations that can utilize sugar or beets, such as candy processors.

How Can SouthGrow Assist?

Both Rogers Sugar and the Alberta Sugar Beet Growers Marketing Board noted that SouthGrow could assist by attracting related ventures such as candy makers or other sugar users to the region.

Pulse Crops

Channels

The product is grown and harvested by farmers and delivered to plants in Bow Island, Taber, and Lethbridge to be cleaned, graded and bagged. These products are then traded, shipped for processing or processed.

Organizations contacted include:

- Alberta Pulse Growers
- Agricore United – Beans & Specialty Crops
- Columbia Seed Company (Vauxhall/Taber)
- LA Grain
- Greeley Trading Co. Ltd.

Products Produced

A variety of products are included in this category, including dry beans, chick peas, lentils, yellow peas, field peas, pinto beans, and faba beans. One company has developed a new snack pack idea – Crispeas – peas in three flavours (BBQ, Salted and Ranch).

Markets

Products are shipped in Canada as well as specialized areas of the world such as Turkey, Columbia, Spain, India, Pakistan, and China. Pinto beans produced by one organization are shipped exclusively to Greeley, Colorado. There seems to also be a growing market in Mexico.

Import/Re-Import Information

A lot of the product once cleaned, graded and packaged is sent to processors and canners elsewhere in North America and the World. It is then re-imported in the form of canned goods. Therefore, they may be an opportunity for a processor in the region.

Players

Main players noted are:

- Demeter Agro (Lethbridge)
- Dixson's (Foremost)
- Greeley Trading Co. (Fincastle)
- LA Grain (Lethbridge)
- Parrish & Heimbecker (Lethbridge)
- Agricore United (Taber/Bow Island)

Challenges/Issues Faced

The bio-diesel industry may pose the greatest challenge. Because many of the crops are limited acres, a change by a few growers can really have a big impact in the amount of product available at the end of the season. It is already affecting prices and potentially may impact these fringe crops even more.

The acres allotted to these crops are also limited by geography. That is, these crops can only be grown in certain areas. Therefore, these are small acre crops that are at the mercy of market influences.

Other challenges noted were market variability, drought, disease, increasing energy and transportation costs, and availability of shipping containers.

Potential Opportunities

Canada has the potential to be the leader in pulse crops because the products are of high quality. The market needs to be more predictable to guarantee the number of continuous growers and meet the potential demand. In addition, a processor in the area would help attract growers.

How Can SouthGrow Assist?

Existing in a small acre commodity market is a real challenge for some growers. Therefore, if SouthGrow can attract operations that utilize similar products, it may provide better markets for all, thereby having a stabilizing impact on all players. In addition, attracting a processor to the area may assist as well.

The industry relies on shipping containers and therefore, the container terminal needs to be brought back to Lethbridge.

Special Seeds, including Safflower

Channels

Crops are grown, harvested, cleaned, processed (in the case of snack foods or bird seed) and sold to end users.

Organizations interviewed include:

- Alberta Safflower Growers (Lethbridge)
- Chin Ridge Seed Processors Ltd. (Taber)
- Dahl Farms Seed Plant Ltd. (Claresholm)
- Rowland Seeds Ltd.
- Spitz International Inc. (Bow Island)

Products Produced

Products include pedigreed seed, safflower, bird seed, cereal seed, sunflower seed, and pumpkin seeds. Seeds are grown, cleaned and processed for the snack food or bird seed/pet industry. The pedigreed seed is available to those who are looking for a quality and reliable seed source.

Markets

Markets range from Southern Alberta and across Canada to the United States and all over the world.

Import/Re-Import Information

For bird seed blended products, some oil seeds and specialty crops are brought in from western Canada and the Pacific Northwest due to availability.

For the snack foods, Spitz brings in pumpkin seeds from China as the climate in Canada is not conducive to growing seeds to the proper size. Flavourings are also imported to the region. Sunflower seeds are grown all over the western provinces and brought in for value-added processing.

Challenges/Issues Faced

Safflower is really hard on the soil. It has large tap roots that suck moisture from deep in the soil profile and leaves very little trash. Therefore, it has an overall effect of reducing soil organic matter as well.

There seems to be an overall consolidation effect in the industry with smaller operators selling to larger, more aggressive and progressive operators. Other challenges mentioned included labour shortages and increased competition, especially in the seed cleaning business.

Potential Opportunities

The safflower market is mature, but there may be opportunity in the pharmaceutical industry. However, this is still in the preliminary stages.

Mustard

Channels

Mustard is contracted, grown, harvested, marketed, shipped by truck and rail to be cleaned and further processed. The mustard may be cooked or milled depending on the end product desired. In the cooking process, the "heat" is removed, with byproduct being ground into a meal and being used in the meat packing industry as a binder.

Contacts included:

- Alberta Industrial Mustard Co. (Warner)
- Sakai Spice (Canada) Corporation (Lethbridge)
- Demeter Agro, A Division of Agricore United (Lethbridge)

Products Produced

Products include mustard seed (whole, ground, deactivated), yellow mustard, brown mustard, oriental mustard, wasabi, and horseradish.

Markets

The markets for the end product are limited to Vancouver and Toronto, especially for the wasabi. The primary markets are therefore Japan and Korea.

Import/Re-Import Information

Horseradish is a product that can be replaced. That is, more can be grown in the area, but the price is very competitive making it less palatable for growers.

Players

A main player noted is located in the east:

- G.S. Dunn (Hamilton, Ontario)

Challenges/Issues Faced

The market is very volatile because of the small acreages seeded. When other commodity prices go up, mustard acres tend to go down as it is fussier to grow. Also when mustard prices go up, while it is good for the farmers, it is challenging for the operations to remain competitive.

Other challenges mentioned include exchange rate fluctuations, strikes by freight handlers and delays by U.S. Customs.

Potential Opportunities

There is always a demand for mustard and Canada grows a quality product that sells well on the world market, but the area has a limited number of growers with acres who are willing to grow it.

According to Alberta Agriculture and Food, ethnic foods and fusion flavours are showing strong growth and enormous potential in processed foods both at home and for export around the globe. Fusion flavours are popular as consumers experiment more with ingredients and products from around the world. Wasabi and other condiments are used to fuse flavours, increasing the potential opportunity in the ethnic foods market.

How Can SouthGrow Assist?

SouthGrow can assist by getting the container yard back in Lethbridge. All container shipments must now go to Calgary.

Canola

Channels

Canola is purchased from growers, cleaned, graded and crushed to extract the oil. The oil is then refined and processed and made into cooking and salad oils, margarine, and shortening. The meal is used as protein livestock feed supplement. The oils are also used to make environmentally friendly and food-safe lubricants.

The contact consulted was Canbra Foods Ltd. (Lethbridge).

Products Produced

Products produced from canola include salad and cooking oils, canola margarine, canola shortening, and canola protein by-products.

Markets

Canola products are marketed across Canada and in fact, world wide.

Import/Re-Import Information

Canola used in processing is purchased from producers in Western Canada and the Northern U.S.

Challenges/Issues Faced

The bio-fuels issue is creating new demand, mostly in the United States and Europe. However the effects are beginning to be felt in Canada. Skilled and unskilled labour is also an issue as there is a struggle to maintain production volumes.

Potential Opportunities

The trans-fat issue is creating new opportunities at the same time that acres are continuing to be seeded without decline. Canola is seen as a healthier oil and consumers are making it the oil of choice. Aging demographics, obesity and cholesterol challenges are helping to create opportunities.

How Can SouthGrow Assist?

Continued attention to the issues mentioned would be of assistance.

Essential Oils

Channels

Crops are harvested and put through a still to extract the oils, with the residues being used for livestock feed.

Contacts interviewed include:

- Corraini Essential Oils (Bow Island)
- Nature's Nutraceuticals (Brooks)
- G. Thacker & Sons (Bow Island)

Products Produced

Essential oils are produced from crops such as mint, dill, spearmint, catnip, flax, hemp, etc. In addition, hemp and flax can be grown according to organic protocols and harvested, cold pressed, bottled and marketed. Products include flax meal, hemp meal, and hemp nuts. Other related products are catnip herb, catnip tea leaf, and French tarragon.

Markets

Products are shipped throughout Canada and in some cases are predominantly shipped to the United States.

Import/Re-Import Information

All ingredients are locally produced.

Players

Main players noted are:

- Bruce Corraini (Bow Island)
- Summertime Farms (Carmangay)

Challenges/Issues Faced

The strong Canadian dollar makes the Canadian products less competitive; warmer weather is bringing more pests into the scenario; and there is an inability in some cases to access irrigation water early when crops such as mint require it. Turning water into canals earlier may address the needs of essential oil crops.

With regards to the American market, there is a concern that the use of products that are not registered to control pests and other issues associated with mint crops may result in artificial trade barriers being put up. As there is not a large selection of chemical controls, this is an on-going fear.

Potential Opportunities

This is a stable industry. For example, there are about 10,000 acres of spearmint in the world, with 1,000 of it in Alberta. The oils market is a niche market that serves the United States well. There has been a decrease in acres in Washington State, which has created more opportunity. The bio-fuels issue is affecting the prices positively. The United States can't grow dill due to disease problems creating a shortage and increasing prices. The ethanol production in the States is also placing a premium on acres for corn production and therefore reducing the acres for other crops, making the whole industry more profitable.

The organic market also provides opportunities for products such as hemp and flax. The organic concept which has been popular in the States is now gaining ground in Canada.

How Can SouthGrow Assist?

The facility in Leduc is a state of the art facility but disadvantages small operators due to the costs associated. Perhaps SouthGrow can assist with a commercial kitchen in the region.

Meats

Channels

Animals are brought into an abattoir where they are custom slaughtered, aged, dressed and cut according to orders. Some operations process the meat further into smoked products, sausages, and jerky. Abattoirs are provincially inspected facilities.

Organizations included in the interviews are:

- Alberta Prairie Meats Ltd. (Duchess)
- Bar Al Beef & Bison (Taber)
- Ben's Beef Jerky (Lethbridge)
- Ben's Quality Meats (Picture Butte)
- Brooks Meat Packers (1995) Ltd. (Brooks)
- Cypress Meat Packers Inc. (Medicine Hat)
- Goldridge Meats (Claresholm)
- Lethbridge Meats & Seafoods Ltd. (Lethbridge)
- Maple Leaf Pork, A Division of Maple Leaf Foods (Lethbridge)
- Mike's Meats Inc. (Medicine Hat)
- Old Country Sausage Shop (Raymond)
- Prairie Meats (Coaldale)
- Premium Sausage (Seven Persons)
- Vauxhall Meats (Vauxhall)
- Wiebe Sausage Works (Coaldale)
- Windy Ridge Exotic Meat Co. (Lethbridge)

Products Produced

A variety of products are produced in the region: custom cut meats (beef, pork, lamb, bison, elk, etc.), cut meats (beef, pork, lamb, bison, elk, etc.) for wholesale to other outlets, beef burgers, beef jerky, beef sticks, sausage, ham, pepperoni, bacon, among other meat products.

Markets

In general, consumer confidence is at times shaky with beef due to the BSE crisis. Many consumers have switched to pork or poultry. The overall consumption of animal protein is down and people are eating smaller portions.

With the exception of Maple Leaf Pork that markets outside of Canada to Japan, all businesses market primarily in the southern Alberta area and within the Province.

Smaller scale shops that have filled the custom cutting niche markets are doing well as a result of rationalizing in the industry due to provincial inspections. The province has instituted Meat Facility Standards (MFS), ensuring food safety. That is, those operations that don't pass inspection have closed, leaving a small group of operators filling the niche nicely. However, these operators are struggling with lack of skilled labour.

Import/Re-Import Information

Sausage casings from Texas are used for the finished product. These casings are cheaper, stronger and have less odor than the ones from Canada.

Challenges/Issues Faced

Large scale pork processing is shrinking with Maple Leaf plant actually up for sale while the company restructures.

The Meat Facility Standards (MFS), while good for food safety reasons, may have the effect of driving sub-standard operators to continue operations as un-inspected "garage" based operations. Unless the public is educated, food safety concerns may actually increase.

The lack of traceability of meats is making it difficult to get consumer confidence higher. Growth outside of the province is also difficult as it would require federally inspected facilities.

Labeling is also a challenge. While regulations require that each product needs proper labels, this drives the cost of each new product up by \$1,000, making it more difficult for smaller operations to continue or introduce a variety of products.

Accessing skilled labour is a challenge. Post-secondary institutions such as NAIT and SAIT are teaching cutting geared towards big box stores rather than the custom market. This is making it difficult for the niche market to hire qualified cutters for an expanding market.

Other challenges cited include exchange rates, bio-fuels driving up feed prices, and escalating labour and utility rates.

Potential Opportunities

China and Vietnam are emerging as markets for processed pork products.

With standard cuts available at the big box stores and super markets and diminishing services at these stores, consumers are enjoying the services and skills at custom cutting shops and therefore they are thriving. Those that address the needs of the niche market will have the opportunity to continue to grow, limited only by availability of skilled labour. The niche market is growing as consumer look for healthier meats.

How Can SouthGrow Assist?

Assist with labour shortage and training of skilled workers. In addition, food safety information can be disseminated to the public so that un-inspected meat is not purchased.

Egg

Channels

Eggs are produced, gathered and shipped to Calgary to the grading plant where they are washed, graded and placed in cartons with the producer's information on it. Some larger producers (especially in the past) have grading facilities on site, but sometimes economics don't warrant this. Coaldale Egg Farms Ltd. was the only contact made in this sector. It is interesting to note that all of the other egg operations in southern Alberta are Hutterite Colonies.

Products Produced

Eggs

Markets

Primarily the southern Alberta market is served by Coaldale Egg Farms. All of the Egg production in Canada is controlled by a quota system with the Egg Marketing Board and while this provides a guaranteed market, it also controls growth.

Import/Re-Import Information

Nothing was noted as being imported by the farm or candidates for import replacement.

Players

Major players cited in the sector include:

- Melfort Colony
- OK Colony
- Wilson Colony

Challenges/Issues Faced

The major challenge noted was labour shortage.

Potential Opportunities

Growth opportunities are limited due to the quota system imposed by the Egg Marketing Board.

How Can SouthGrow Assist?

Advertising was the main area mentioned when asked how SouthGrow could assist with growth.

Dairy

Channels

Milk is brought in from the dairy farmer to either a dairy farm for pasteurizing or goes to another value-added processor through the Alberta Milk Board. A culture is added to the milk to produce desired milk products such as yogurt, cottage cheese, and sour cream, which are then packaged and shipped according to orders. Milk is also processed into powdered milk, cheddar and specialty cheeses in the region.

Organizations included in the interview process are:

- Anderson's Creamery (Claresholm)
- Crystal Springs Cheese (Coalhurst)
- Parmalat Canada (Lethbridge)
- Saputo Inc. (Glenwood)
- Sunnyrose Cheese, a Division of Agropur (Diamond City)

Products Produced

Dairy products produced in the region include fluid milk, powdered milk, whey powder, yogurt, cottage cheese, sour cream and other cultured dairy products, specialty cheeses such as white and orange cheddar, heat treated cheddar, colby, mozzarella, provolone, edam, farmer's cheese, brick, parmesan, havarti, gouda, smoked gouda, marble, Monterey jack, spiced cheeses, and feta.

Markets

With the exception of fluid milk, products are marketed across Canada.

Import/Re-Import Information

Milk proteins for cheeses are imported from New Zealand because products of similar quality are not available through local/regional suppliers. Flavourings and jalapeno peppers are brought in to the region as they are not available locally with the same quality.

Players

The only major player cited by the group interviewed is:

- Parmalat (Calgary)

Challenges/Issues Faced

Issues related to milk include changing milk prices and protectionism. That is, milk prices have increased three times over the last six months, reportedly because of raw milk prices. A related issue concerns the milk protein market. Those interviewed felt that it was protected and unfair to domestic users. Canadian businesses pay \$13/kg for milk protein, even from Canadian suppliers, whereas foreign buyers pay \$3/kg. This makes it difficult for Canadian companies to compete in the global marketplace.

Other challenges include rising transportation costs due to increasing fuel costs and labour shortage, especially maintenance people.

Potential Opportunities

The industry is facing sustained growth with increased growth in population and consumer attitudes towards consuming healthy products such as dairy products. Niche markets provide opportunities for growth through specialty products such as cheeses. In fact, Sunnyrose Cheese is planning to expand 100% by 2010.

How Can SouthGrow Assist?

None of those interviewed had requests for assistance from SouthGrow.

Wheat

Channels

Winter and Soft Wheat are grown by individual farmers, harvested, delivered to grain handlers or the elevator system and then sold to those who process them further. Product is milled mainly at Ellison's Milling. Rockport Flour Mills also mills pancake flour.

Organizations consulted are:

- Alberta Winter Wheat Producers Commission (Lethbridge)
- Alberta Soft Wheat Producers Commission (Lethbridge)
- Ellison Milling Company (Lethbridge)
- Grainworks Inc. (Vulcan)
- Kirchenman Farms (Medicine Hat)

- Let's Pasta Food (Lethbridge)
- Prestige Panko (Lethbridge)
- Rockport Flour Mills Inc. (Magrath – Hutterite Colony)

Products Produced

Products include flour (semolina, bread flour, pasta flour, pastry flour, cake flour, etc.), pancake flour, feed, pasta, pastries, specialty breads, soup extender, Japanese style bread crumbs (Panko), as well as organic in most of these.

Markets

Milled flour is marketed all over the world; soup extender is marketed to the Campbell Coup Co. in Aylmer, Ontario; specialty pastas and pasta based foods are marketed in southern Alberta, throughout Canada and in five States in the United States; Panko's market is limited to Japanese restaurants in Canada; and pancake flour is marketed throughout western Canada and eastern Ontario through Safeway stores.

Import/Re-Import Information

Select ingredients in the value-added pasta products are imported. For example, select spices and seasonings as well as plum tomatoes and Tuscan vegetables are brought into the region as they are not grown here. Also specialized pasta machinery is imported as it is not available in Canada.

Players

Major players cited are:

- ADM Flour Mills
- Cargill Flour Mills
- Robin Hood Flour Mills
- Hydroblend (Nampa, Idaho)

Challenges/Issues Faced

The market is mature in Canada. There are only 25 flour mills in Canada, with Ellisons being the only mill that can mill three kinds of wheat. The only other semolina mill is in Saskatoon.

The smaller value-added pasta producers are struggling with the new nutritional labeling requirements. Smaller operations are contending with costs that may make them lose their competitiveness.

Changing commodity prices, weather and crop diseases all pose challenges. High energy costs and logistics are also an issue. Lastly, shortage of skilled labour (trades) is creating headaches.

Potential Opportunities

There may be real opportunities with ethanol production, resulting in more acres grown and rising prices, especially given that soft white spring wheat is a better fuel choice than corn. Wheat malt is also a new market that is developing with Canada Malt in Calgary. Also a new plant breeder has been hired at the Lethbridge Research Station who may be able to develop a new variety with higher yields.

How Can SouthGrow Assist?

SouthGrow is asked to join the local government so that cooperatively, skilled labour can be brought to the area. In addition, assistance with lobbying grain commission and wheat board to recognize kernel visual distinguish ability(KVD) is requested.

Bio-fuels continues to be mentioned and SouthGrow is advised to play a role in educating consumers of the advantages of bio-fuels.

Wool

Channels

Raw wool is delivered to the Canadian Co-operative Wool Growers Ltd. (a non-profit organization of wool producers) in Lethbridge (for western Canada) where it is received, graded and measured. The wool is then shipped to a central handling facility in Ontario and marketed throughout the world.

Products Produced

Raw wool.

Markets

While Canada produces a considerable volume of wool, it does not compare to Australia, United Kingdom or New Zealand. Canada is an intermediate player in the global market. Selling the wool that is produced in Canada is a challenge because the market is diminishing. As a result, the processing industry is small in Canada. All of the wool that is received and shipped from Lethbridge is destined to overseas markets.

Import/Re-Import Information

All wool is produced in Alberta, Saskatchewan, British Columbia and Manitoba. Products imported are the sheep and sheering supplies. In terms of final products, all wool that is received and shipped from Lethbridge is destined overseas. Once it is made into clothing or other products overseas, a small portion is shipped back to Canada. At this time, it is not deemed to be economical to establish a secondary wool industry in Canada due to a lack of market for it.

Challenges/Issues Faced

Not only are sheep numbers down resulting in decreasing wool production, but the demand for wool is down worldwide. Sheep are labour intensive and people are more apt to wear clothing and use products made from wash and wear type of material.

For the product that is shipped from Lethbridge, transportation is an issue since the wool is now loaded on a container on a truck destined to Calgary which is then put on a train. Therefore, costs can be reduced if a container yard were located in the region.

Potential Opportunities

None at this point.

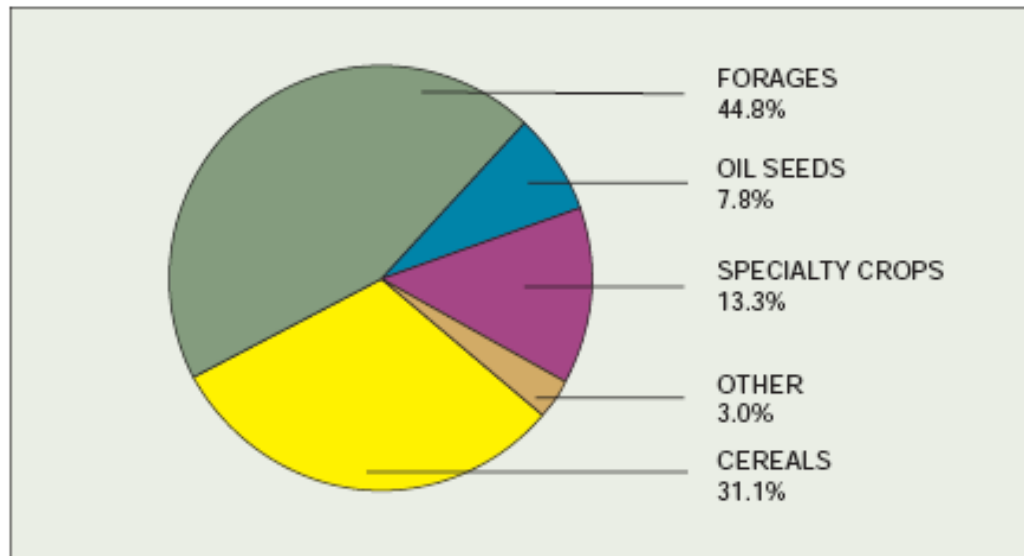
How Can SouthGrow Assist?

SouthGrow can assist in getting a container yard located in Lethbridge.

Forage

In terms of the irrigated crop mix within the 13 Irrigation Districts in southern Alberta, forages constitute 44.8% according to "Alberta Irrigation Information 2006". The irrigated area of southern Alberta lies within the Brown Soil Zone of Alberta; mainly in a triangle from Lethbridge in the southwest to Bassano in the north and Medicine Hat in the southeast. This area has an extended, warm growing season, and marginal amounts

of precipitation, but through the use of irrigation has optimized the cropping potential of the area.



Channels

Alfalfa hay, timothy hay, and oat straw are purchased from local producers and brought to a plant to be either compressed into bales or dehydrated into cubes or pellets. The product is then graded, and loaded onto a container for shipment.

Organizations consulted include:

- Canadian Hay Association (Lethbridge)
- Green Prairie International (Lethbridge)
- NAFTAAC Commodities Inc. (Lethbridge)
- Sun Cured Alfalfa Cubes Inc. (Coalhurst)
- Welling Alfalfa Cubing Inc. (Welling)
- Wilbur Ellis Company of Canada (Lethbridge)

Products Produced

The products include hay, alfalfa, timothy, oat straw and mixed hay in compressed bales, pellets and cubes.

Markets

There are limited markets in Canada, with the bulk being in the Pacific Rim (Japan and Korea are strong with Taiwan having some potential). Some products go to United States and Europe.

Import/Re-Import Information

None cited.

Players

Main players noted are:

- Peace River Hay (Peace River)
- Wilbur-Ellis (Lethbridge)
- Green Prairie International (Lethbridge)

Challenges/Issues Faced

The industry has matured in the last few years, with markets being more difficult to find. Specifically, cubing is becoming a niche market with compressed hay being favoured by the majority. The strength of the Canadian dollar has also limited some markets. The costs of inputs as well as the transportation and logistics costs are deemed to be challenging. Transportation and logistics also hinder the reputation of local suppliers as reliable. Labour shortage, of course, is an issue as well.

Bio-fuels are creating more pressure as it gives farmers more options. It has increased the price of commodities against which the hay market has to compete. Forage requires higher input costs than cereals and oilseeds and therefore returns must be higher in order to attract growers.

Potential Opportunities

There is still a strong demand for quality hay and diversifying into non-traditional geographic markets may provide opportunities. The Middle East is a great opportunity because of the prominence of the Arabian Horses and the suitability of timothy hay for the market. Other markets with potential are China and Vietnam.

How Can SouthGrow Assist?

SouthGrow is asked to continue to support efforts to get a container yard in Lethbridge.

Miscellaneous

This category includes organizations contacted in clay, water, honey and small scale value added agriculture processing.

Channels

The channels differ for each type of product:

- Processed clay is brought in and manufactured into cat litter.
- Water is taken from an underground spring through sand, carbon filtered, put through a reverse osmosis process, carbon filtered again, stored and micro filtered prior to bottling. Producers typically have a license to bottle a certain quantity of water per year.
- Honey is gathered from hives and processed for the local market.
- Raw products are purchased and processed into finished products either through a commercial kitchen in Leduc or small kitchens in homes or on commercial premises,

Products Produced

Products include:

- Cat litter
- Custom bottled purified spring water
- Natural honey
- Specialty foods such as cookie doughs, meat pies, pizzas, anti-pasto, salsa, hot sauces, peanut brittle, pickles, pastries and fudge among other related items.

Markets

With the exception of the cat litter, which is shipped throughout western Canada and the western United States, the primary market for the products is southern Alberta. Some products have a wider reach due to specialized channels and the internet and therefore extend throughout the Province and beyond in limited quantities. Farmers markets are seen as valuable means of getting to the end consumer.

Import/Re-Import Information

The import/re-import scenario is different for each type of product:

- Cat litter – clay is brought in from the United States as nobody in the area processes it. (LINDA: This seems odd with Medicine Hat area having clay deposits)
- Custom bottled purified spring water - none
- Natural honey - none
- Specialty foods – flavourings and specialty ingredients that are not available regionally.

Challenges/Issues Faced

- Cat litter – lack of processed clay, labour shortage
- Custom bottled purified spring water – competing against larger companies
- Natural honey – depressed bulk honey prices for the fourth year in a row; dumping in the Canadian markets by Chinese and Argentine producers.
- Specialty foods – in some cases the market opportunities are enormous, but limited raw material supply and labour shortage prohibits expansion. There are increasing production costs, especially if it involves using the commercial kitchen in Leduc and transportation/shipping costs. Labeling was also mentioned as a challenge. If the products were to be available outside of Alberta, not only would the kitchens have to be federally inspected, but the nutritional and other labels would have to be bilingual which increases the costs associated with the production of each product.

Potential Opportunities

- Cat litter – there is an increasing demand for cat litter as the domestic cat population is increasing.
- Custom bottled purified spring water – partnering with companies such as Arrowhead in Calgary or Pure and Simple and Culligan.
- Natural honey – No addition opportunities were mentioned
- Specialty foods such as cookie doughs, meat pies, pizzas, anti-pasto, salsa, hot sauces, peanut brittle, pickles, pastries and fudge among other related items.

How Can SouthGrow Assist?

The honey producer noted that while there is a now a honey commission instead of a bee keeping association, which has helped with marketing, it would be nice to have assistance in protecting the industry against foreign producers who dump in the market.

Some specialty foods processors indicated that if there was a commercial kitchen available locally, it would help reduce production and transportation costs.

Conclusions:

Agriculture in Southern Alberta is thriving, but it is not without its challenges. For many years, the margins on the farm and for agricultural based products have continued to shrink, encouraging operations to either become larger or to get out. This has also encouraged the development of value added operations on the farm or in farm related businesses. These range from the small one person or one family cottage industry operations to large corporate businesses. The nature of these operations covers a wide range of activities, some of which are very unique. The general consensus is that there is still a lot of opportunity available for further development and growth in the region.

Opportunities

Opportunities that can be further investigated include:

- **Greenhouse and Organic Vegetables** – The population of Alberta is projected to increase and much of this population is concerned with health and diet. As a result, the greenhouse and organic vegetable market can be investigated for feasibility in order to replace imports and serve niche markets. It is interesting to note that the organic foods market is growing to such an extent that the large supermarket chains have now set aside organic food sections in their stores. This is not to say that organic is better, safer or more nutritious but it is perceived by the consumer to have an advantage and they are willing to pay extra for that.
- **Red Skin Potatoes** – Only 25 percent of the potatoes consumed in Alberta are actually grown in Alberta. Most potato producers are focusing on white skinned potatoes and other products required for the processing (chip, fry and powdered) industry. This has left a gap in the table potato market, which although not as stable as the processing market needs investigation.
- **Pulse Processing/Canning** – A significant amount of the pulse crops grown in the area is being shipped out of the region and in fact the country for further processing into a variety of canned goods. Canada has the potential to be a leader in pulse crops and with a value-added component located close to the geographical area where these pulse crops are grown, perhaps growers can realize the confidence, stability and prices required to increase the number of acres devoted to this crop.
- **Essential Oils and Related Specialty Products** – A cluster that has the potential to grow in the region is the essential oils and related (hemp, flax, etc.) products. The bio-fuels issue is currently affecting prices in a positive manner and therefore provides an opportunity to not only develop this niche market for export but also to expand it and take advantage of the area's advantages.
- **Pet Products** – The study only investigated this area on fringe basis. That is, it was covered under bird seed and cat litter using clay. However, the pet food industry is growing due to the increased population of domestic animals. As a result the bird seed, cat litter and pet foods products market may warrant further study. Given the strength of the livestock feed and the agricultural by-product potential in the area, detailed investigation may be worthwhile.

Challenges

Challenges identified include labour (shortage, training and cost), transportation and logistics, bio-fuels, regulations and a lack of commercial kitchen in the region:

- **Labour Shortage** - There is a severe shortage of labor in the province and although it is not as serious in the outlying areas as it is in the major centres, it is still a problem. Several contacts made mention of the need for labor, both skilled and

unskilled. The foreign worker program works well for some but not for others. Suggestions included having the colleges and universities focus more on preparing students for the market place by teaching them about the industry and how it functions in addition to learning the basic skills required to be a "line worker". As the "big box" operations continue to expand, more people are needed to fill those labor slots but the career opportunities are limited in these situations, resulting in high turnover in the labor force. In comparison, many of the smaller operations are looking for skilled people who understand the business, who have some business management skills and who can help develop the operations, and some with the view of eventually having someone who can take over the business.

- **Container Handling Facility** - A request by several contacts was the need for a container handling facility. Since Lethbridge lost its container yard a few years ago, anyone shipping by container is required to transport the containers to Calgary by truck. Not only does this increase the shipping costs to the shipper, it also puts more trucks on the road, increases the need for more professional drivers and equipment, and produces a significant impact on the environment. The possibility of reopening a container yard in Lethbridge is rather remote at the present but Green Prairie is looking at trying to establish an interval container yard for the area. This may be a workable option and reduce the pressure of truck traffic on the highways between Lethbridge and Calgary, thereby reducing the pressures on the infrastructure. All of the hay producers that ship overseas know about each other and their use of containers but there are other shippers such as Sakai Spice and the Canadian Co-operative Wool Growers that also ship by container. It would be advantageous to their cause if they were able to get together and pool their energies and resources to achieve the objective of a workable alternative such as an interval yard. SouthGrow may be able to play a role here by facilitating the organization of an industry wide ad hoc committee that can focus its efforts to solving this challenge.
- **Rail** - One issue that was brought up on several occasions was by those who ship by rail. The continued threat of strikes and labour issues at shipping ports may disrupt market potential and shipments. It would seem to be a frustration when a producer is able to sell a product based upon its quality, availability, and its ability to meet the needs of the customer, and then to not be able to deliver it as agreed to because of a rail strike. Internationally, it seems we have lost several markets to the Americans and Australians, not because of lack of quality or value but because of unreliable deliverability. Competitors seem to have solved this problem but it has yet to be resolved in Canada, and this has been a problem for far too long.
- **Bio-Fuels** - The one issue that affected the most number of businesses is in regard to bio-fuels. Two years ago, hardly anyone had heard of bio-fuels. Now, it is a very prevalent topic in most circles. The challenge with bio-fuels, like most issues, is that it is very complex. There are many sides to it and it is so interrelated with everything around it that each change in the program affects several other issues. On the producer/farmer side, it has been a long time since we have seen this much optimism because now there are options with competition. Bio-fuels can make use of distressed grains and oilseeds, giving them a value that they have not had before. In the past, virtually all substandard product was sold for feed at whatever price could be found or it was discarded. Now instead of being sold well below production cost, distressed grains and oilseeds can actually be sold at a profit.

For the last few years, producers and marketers have expressed concern about the diminishing global market for Canadian grains. This is because countries like Brazil

and Argentina, who formerly were buyers, have entered the export market and countries that were once large importers of Canadian grain, like China and India, have become more self-sufficient. The concern was over what to do with the excess production that was anticipated. The bio-fuels issue has not only taken care of that excess production but has created a demand of its own. Ethanol production in the U.S. has moved forward to where corn is now in short supply and the competition for acres is intense. To make up the shortfall, the U.S. feeders are beginning to source Canadian barley. This has begun to put pressure on Canadian feed grain availability and prices, resulting in increased costs to feeding operations and increased competition for acres.

The big advantage to bio-fuels is that they are produced from a renewable energy source. Many consider this to be a positive but it also puts pressure on available acres, which are becoming more of a premium, so the debate becomes one of food versus fuel. Another consideration is that it only requires a small work force to run a large scale ethanol or a bio diesel plant. In a major centre, this is a small factor but to a small rural community, it may have a significant impact on the local economy, particularly if the investment funds are from local sources. The downside of this issue is that there may be layoffs in the livestock sector as a cost cutting measure to offset rising feed costs, or as a result of reduced demand for higher priced meat. The question needs to be addressed as to whether the increased employment opportunities of a bio-fuels operation are sufficient to counter the potential reduced employment in the feeding industry, and if indeed this is a valid issue. With bio-fuels being such a complex issue, the pros and cons need to be studied from all aspects of the industry to properly assess the value.

- **Nutritional Labeling** - For smaller operators, the challenges bring about some serious soul searching. The latest in external forces is the requirement by the federal government to include nutritional information on all labels. This is a positive consumer driven move to help make healthier choices when buying food. The difficulty is that this new labeling costs upwards of \$1,000 per label and for small operations, this can be a serious detriment to continuing operations as it is sometimes difficult to recapture or cover these costs. The industry was given two years to comply, the conclusion of which is the end of this year. For a few small businesses, this has led to the decision to cease operations, except perhaps for farmer's markets or seasonal trade shows. The Alberta Food Processors Association does have a program to help defray some of the costs of upgrading. This is just another item in a long list of government regulations that are meant to improve food safety but are also seen as deterrents to small cottage industries working with smaller markets and limited margins. These businesses need to find creative ways to cover the increased costs, which if complied with, often induce greater efficiencies in the operations.
- **Commercial Kitchen** - A theme among the small processors was the desire for a local commercial kitchen. At the present time, they are using the Alberta Agriculture and Food facility at Leduc, but being a government operation, it seems to reinvent itself every few years, making it frustrating for the small producer to deal with it. The facility at Leduc is state of the art and qualifies as a federally inspected facility but the cost of using this facility has become a major challenge for some operations. The idea of having a commercial kitchen locally is not a new idea. To determine the feasibility of such a facility, the potential users would need to indicate how much they would use such a facility and how much it would be worth to them. To operate properly, such a facility would need someone to oversee scheduling and operations

as well as someone who could run and maintain the machinery. Ideally, these requirements would be found in one person but that may be another challenge. It would also need to be someone with a flexible schedule to accommodate the various users if this is not a full-time position. Another issue to consider is the need for temporary labor as well as a cleanup crew and how that would be provided. Some possible options were suggested, which included the old Picture Butte hospital. Another possible solution was to help someone like Heritage Creamery in Stirling or Saucy Ladies in Lethbridge to expand their kitchen and operate it in conjunction with their facility. One Hutterite Colony indicated that they had space in an existing building that is only being partly used at present that they would like to develop into a production type facility. Such a setup would have some advantages in that the Colony has some flexibility in its operations and could even provide a temporary labor force to help with production and cleanup.

As the "big box" operations go more and more to shelf ready products and chains cut back on local operations, becoming more centralized, the consumers have fewer options. This cost-cutting program also lacks the personal touch. Among consumers, there is an increasing demand for specialty items and niche market products, encouraging small operations to address this growing demand, creating some great opportunities. It is impossible to underestimate the effect that the Food Network has had on consumers. The philosophy of the Food Network and the increasingly popular food magazines such as *Gourmet* and *Bon Appetit* has elevated the status of local artisan type producers. Local producers are finding consumers more willing to break from the traditional meal preparations that for years have begun by visiting the large supermarkets and taking home the pre-packaged and shelf ready products found there. Because of busy lifestyles, consumers may continue with the more convenient food items during the week but on the weekend, they prefer cooking from scratch with fresh items. The cooking shows have also shown people how to cook simple nutritious meals that can be prepared quickly, using local fresh ingredients. Market gardeners, home based specialty food processors, Farmers Markets and independent butchers and bakers are the new heroes of food production. People see them as specialists in their field and realize that these "artists" take great pride in producing superior products. Consumers now realize that "local" means fresher, tastier and often healthier food. They want to know where the food was produced, how and by whom. The knowledgeable consumer wants to avoid the middleman whenever possible and get their food right from the source. In so doing, they can often economize on their food bill while providing better returns for the primary producer. They also like the idea of supporting their neighbors.

APPENDIX A:
AGRICULTURAL INVENTORY

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