



**Edmonton Metropolitan Region Board  
Regional Agriculture Master Plan**

**Situation Analysis  
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# Executive Summary

## Introduction:

The agriculture and food industry is a major economic driver in the Edmonton Metropolitan Region (EMR) and it is by far the single largest land user (approximately 1.7 million acres). Within the province, it is the second largest processing industry surpassed only by the energy sector; agriculture production and food processing together generate over \$4.5 billion in direct annual revenues. The industry is a reliable and stable source of employment – it generates over 10,500 jobs and produces a sustainable source of locally produced food. Overall, the agriculture and food industry provides the EMR considerable economic activity as well as food security.

The sector is also a major contributor to the environmental well-being of the region with its inherent ability to sequester carbon, contribute to the local water table and foster biodiversity. What's more, the growing global demand for agriculture and food products suggests that significant potential growth is possible. For example, should the EMR achieve growth targets set by the Province of Alberta, it would double its food and value added processing in terms of economic outputs and employment. Underlying all of these activities is land as the foundation - an irreplaceable resource and essential for the future growth of the region's agriculture and food system.

The Edmonton Metropolitan Region Board (EMRB) identified the agriculture and food sector in 2017 as a key economic growth sector. To this end, the recently approved Growth Plan *Re-Imagine. Plan. Build* clearly articulates that agricultural land is an essential resource and needs to be conserved. From 2002 to 2012, a total of 38,250 hectares of farmland in the EMR have been converted to non-agricultural uses, with over 60% of that loss being prime agricultural lands.

Additionally, Edmonton Global, the newly formed regional economic development agency has targeted agriculture and food as a priority for growth. Both the EMRB and Edmonton Global recognize the significant diversity and growth potential in the EMR but to ensure the long-term sustainability of the sector, a clear definition of success and a plan is required.

This situation analysis is the first step towards the development of the Regional Agriculture Master Plan (RAMP). The primary purpose of this analysis is to clarify the definition of success by: providing a common base of information; summarizing the opportunities and issues facing the EMR agriculture and food community; and formulating a preliminary set of directions from which to build the RAMP. Indeed, the RAMP development process must address several fundamental questions including:

- *What is the future of agriculture both globally and regionally?*
- *What are the resource and policy requirements for the EMR both at the municipal and regional levels?*
- *What agricultural land should be preserved and how?*
- *What decisions need to be made across the EMR to support the agriculture and food sector as a vibrant and growing industry into the future?*

## Objectives:

The objectives from the Growth Plan for the RAMP are stated as follows:

1. Identify and conserve an adequate supply of prime agricultural lands to provide a secure local food source for future generations;

2. Minimize the fragmentation and conversion of prime agricultural lands for non-agricultural uses; and
3. Promote diversification and value-added agricultural production and plan infrastructure to support the agricultural sector and regional food system.

## Global Trends

The agriculture and food industry in Alberta (including the EMR) does not operate in isolation. Rather it is impacted by trends and dynamics that continuously change in terms of issues, structure and direction. What's important is to understand how these larger trends will shape the future of the sector. The major trends include:

1. **Growing Global Food Demand** – driven by increasing global populations and incomes. Few countries have the long-term ability to supply the food necessary to support this growth. In fact, numerous indicators suggest that Canada is one of six countries worldwide projected to be a net food exporter into the future. Within Canada, most of the supply response potential lies in the West and in regions like the EMR;
2. **Industry and sector consolidation** - the phenomena of fewer but larger farms in the crop and livestock sectors, as well as fewer but more capital-intensive processors is dramatically altering the size and scale of businesses including farming operations. Today, it is not unusual for individual farm businesses to encompass anywhere from 4,000 to 20,000 hectares (there are several such farms based in the EMR). Additionally, major consolidation is taking place in the processing, farm input, wholesale and retail sectors putting pressure on small scale processors or startups who face overcome enormous challenges to becoming larger regional or national suppliers;
3. **Technology and Automation** – game-changing technologies such as sensors, robotics, machine learning and artificial intelligence are having dramatic impacts on operations and efficiencies across all businesses big and small. These dynamics couple with supporting regional research institutions provide EMR stakeholders with the potential advantages that could lead to the region being a food and feed centre-of-excellence;
4. **Changing Food Economy** –comprising a host of disruptive factors that present both opportunities and challenges for current players as well as for new entrants. For example, the rapid demand for direct delivery and the technologies that enable such services are changing the nature of relationships between consumers and suppliers. One such example developing rapidly in the EMR is the burgeoning hemp and cannabis sector which has the potential to offer an array of edible and fibre products;
5. **Climate Change** – greater extremes such as heat, drought, flooding leaving the entire food system more vulnerable thus requiring new management practices and mitigation strategies. However, given the region's location, it is expected to have a comparative advantage over traditional production areas with shortages of water and higher average temperatures; and
6. **Land Use and the Conservation of Agricultural Lands** – the result of rapid urbanization worldwide, and a trend seen in the EMR, which is turn reducing the supply of a productive land base for food production. Protecting the agriculture land base is becoming a foremost public issue in Canada - Ontario and British Columbia being notable examples where specific action has been taken to ensure the sustainability of the sector. The EMR has a highly productive land base and if protected, can be the foundation of long term economic growth and prosperity.

## Importance of Agriculture in the EMR

The Situation Analysis identifies several key attributes, characteristics and advantages that strongly position the EMR as a highly competitive agriculture and food region listed as follows:

- **EMR has productive soils:** The EMR is in fact the most productive agricultural region in Alberta. It is home to high quality black soils – 35% of the top producing soils in Alberta are found in the Region. Furthermore

69% of the region is comprised of prime agricultural soils (LSRS 2, 3, 4)<sup>1</sup>, and a favourable climate – some areas in the region have never experienced a crop failure in 100 years<sup>2</sup>.

- **EMR has a vibrant food processing sector:** An estimated 25% of the province’s food and beverage processing industry is situated in the EMR. The sector is comprised of two major poultry processors, several dairy processing plants, and a large oil seed crusher, a feed milling sector as well as numerous speciality food and beverage processing businesses which have grown to become major national and international players. This sector generates an estimated \$3.7<sup>3</sup> B in annual revenues and employs over 6,000 people.
- **EMR has the skilled people:** The region is replete with innovative, experienced, progressive and talented individuals including: farmers who are rapidly expanding their operations; food processors who have developed successful businesses supplying customers both nationally and internationally; and an emerging class of entrepreneurs who are developing new food businesses and events.
- **EMR has world leading research and development infrastructure:** The EMR is home to several world leading institutions and special purpose facilities established to support the agriculture and food industry. These include: the University of Alberta with the Faculty of Agriculture, Life and Environmental Sciences including several research stations such as the Edmonton Research Farm; the St. Albert Research Farm; the Botanical Garden and Agri-Food Discovery Place; Alberta Agriculture & Forestry with the Food Processing Development Centre in Leduc and the Crop Development Centre in northeast Edmonton; NAIT and the Culinary Program; and the Pioneer DuPont Seed Research Farm in Strathcona County. In addition, the region is replete with high quality supporting infrastructure including a superior set of roadways, rail-lines and the Edmonton International Airport equipped with the necessary facilities and logistics to ship fresh or frozen food products to destinations both nationally and internationally. It will be important to ensure that the provision of high quality infrastructure continues to be a priority.
- **EMR boasts a productive agricultural sector:** EMR farms are highly productive and on average, generate 40% more revenue per acre than their Alberta counterparts (\$499 vs. \$352 per acre). Over the 15-year period (2001-2016) farm size in terms of acres farmed has grown by 30%. Farms in the EMR while smaller in size compared to the provincial average (523 acres vs. 1,237 acres), have rates of invested capital per acre that is almost twice the Alberta average (\$5,581 vs. \$2,863 per acre). Since 2001, the biggest changes have occurred in two financial indicators: (a) **Average Capital per Farm** (\$811,000 in 2001 and increasing to \$2,919,000 in 2016) – an increase of 250% and (b) **Total Gross Sales** (\$476.6 M in 2001 versus \$838.2M<sup>4</sup> in 2016) – up 75%. In total, the EMR farm community has 4,655 operators.

Perhaps the most notable feature is the resilience and the adaptive nature of the sector. In this region, agriculture has historical, cultural, economic and environmental significance, and is often taken for granted. For an important food producing region with over 100 years of history, the time has come to develop a plan that will ensure it continues to be such for the next 100 years.

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<sup>1</sup> Land Suitability Rating System (LSRS) Classes 2, 3 and 4 is highly correlated to Canada Land Inventory (CLI) 1, 2 and 3. These land classes, often referred to as prime, provide farmers the greatest flexibility with respect to the choices of crops to be grown and resilience with respect to variable weather conditions.

<sup>2</sup> Comments received from individual farmers during the consultation process.

<sup>3</sup> The economic multiplier (Alberta Treasury Board and Finance) for food and beverages – direct, indirect and induced is 2.308. Thus this revenue multiplies to \$8.5 billion in total economic impact.

<sup>4</sup> The economic multiplier (Alberta Treasury Board and Finance) agriculture – direct, indirect and induced is approximately 2.0 –it differs for crops vs. livestock. Thus the direct revenues to farmers multiplies to \$1.6 billion in total economic impact.

## Critical Success Factors:

**Agriculture as a Priority** - To date, much of the success of EMR's agriculture and food industry has taken place in the absence of it being a regional priority. Arguably the success and resilience of the agriculture and food sector has occurred largely by default and generally functions without supportive policies. Given the regional assets, the strength of the sector and the opportunities that it now faces, it is time to make agriculture and food a priority and identify the necessary support requirements if the region is serious about the long term sustainability and prosperity of the sector for future generations.

**Supportive Land Use Policies** - Currently, land use policies across the EMR appear to operate at cross purposes with the diversity of development opportunities across the region. More specifically, land use policies which allow for the conversion of prime agricultural land as well as fragmentation and encroachment in rural areas, contribute to an undertone of uncertainty among farmers – which in turn results in increased conflicts between rural and urban interests. These uncertainties undermine long term investment plans by farmers to continue farming in the region.

**Conservation of Agricultural Land** – The EMRB Growth Plan calls for regional growth that includes a healthy and expanding agricultural sector which depends upon conserving a supply of prime agricultural land. However, the issues and concerns raised by farmers in the EMR regarding the long-term availability of land, the ability to assemble land parcels and the rising cost of land strongly suggests that current land use policies at the regional and municipal levels are not sufficiently strong or definitive enough to arrest this undertone of uncertainty.

In summary, these three core issues need to be addressed in order for the EMR to realize its full potential as a thriving, robust agriculture and food centre.

## The focus of the RAMP:

The analysis of trends, issues and comparatives to other jurisdictions in this Situation Analysis confirms that an effective RAMP capable of shaping a new future for the agriculture and food sector must address four core issues:

1. **An assured long-term agricultural land base with a clear vision for agriculture and food in the EMR.** The question to be addressed is straightforward: *How can agriculture and food play an increased role in the economic, cultural and environmental future of the region?* To be clear, the long term assurance of land is critical and cannot be half-hearted or in doubt. When addressing this fundamental issue, it will be important to recognize that not all agriculture land requirements are the same – it differs by production sector. For example, the large commodity sector requires large areas of contiguous farmland; the specialty sector requires smaller plots that are typically high-quality soils in relative proximity to urban markets, transportation and water infrastructure. Most importantly, any vision for agriculture and food must provide the assurance of a productive land base and allow for flexibility to respond to changing dynamics of the agriculture and food sector or it will not be successfully realized.
2. **Agricultural zoning and effective land use policies.** Effective zoning and land use policies will be critical to the realization of the EMR as a thriving and robust agriculture and food region. These will differ by area or sub-area across the region and reflect the requirements of clearly defined production sectors and intended uses. Furthermore, urban or non-farm encroachment and land fragmentation must be addressed – the greater the level of fragmentation allowed to occur in rural areas, the greater the conflicts. Finally, the permanence of agricultural area boundaries and correspondingly, urban growth boundaries are exceedingly important to support the long term management of agricultural land and cannot be understated. Clearly, the more enduring and definitive urban growth boundaries can be established, the greater the degree of stability provided for adjacent or nearby agriculture lands.

3. **Mitigation measures.** To address current expectations with respect to land values and expectations implicit to current land use policies. Many farmers and land owners expect the ability to monetize the value of lands which are now implicit to rural property values as result of the ability to sub-divide. In this regard, the application of such planning tools as the transfer of development credits and the purchase of conservation easements may serve to address these expectations.
4. **Supportive and targeted economic development programs.** To recognizes the unique market, access and infrastructure requirements of the differing agriculture and food sectors operating within the EMR. This will require clear targeting and the selection of key infrastructure investments (hard and soft) to support identified growth opportunities.

### Moving Forward:

This Situation Analysis provides the start from which to continue the RAMP planning process. Agriculture is a critical economic driver for the region; it can be an even greater contributor to the region's economic prosperity but only if it is treated as a priority area.

A targeted approach to prioritizing agriculture and recognizing the critical importance of land preservation is foundational for the long-term sustainability of the industry. With an effective policy framework that responds to and supports the current and future needs of the agriculture and food sector, it can be the catalyst for significant additional economic growth - including all the benefits associated with employment, trade, food security, environmental stewardship economic prosperity and social well-being.

*“The key to a robust agricultural industry is the same everywhere: the protection of the land base on which to farm and to carry out farm related activities.” ... A fresh perspective is needed of farmland .... one that sees agriculture as a permanent feature of the regional landscape and farming as an essential component of our economy and cultural heritage.”<sup>5</sup>*

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<sup>5</sup> Farmland at Risk: Why land-use planning needs improvement for a healthy agricultural future in the Greater Golden Horseshoe, November 2015. Ontario Federation of Agriculture and Environmental Defense

## 1.0 Purpose of the Situation Analysis

The purpose of the Situation Analysis is to: (a) present an overview of the major global trends and dynamics impacting the agriculture and food industry; b) provide a common ‘fact base’ from the statistical review of the changes that have taken place in the Edmonton Metropolitan Region (EMR) from 2001 to 2016; (c) summarize an overview of the opportunities, issues, facing the EMR agriculture and food community including the food processing and value-added sector; (d) review the varying municipal plan and policy framework within which the EMR operates ; and (e) formulate a preliminary set of directions from which to continue the process of building the Regional Agriculture Master Plan (RAMP) which is due to be completed by April, 2020. The development of a RAMP was identified as the first implementation priority of the Growth Plan by the EMRB.

## 2.0 Background and Objectives

### 2.1 Background to the RAMP

The EMRB's Growth Plan, “*Reimagine. Plan. Build.*” approved by the Province on October 26, 2017, articulated the key challenge for the RAMP, namely to “clarify the role of agriculture in the EMR and in particular to define what and where the disposition and protection of agricultural lands is appropriate.”<sup>6</sup> The Growth Plan presents a central guiding principle specific to this broad challenge:

*Ensure the wise management of prime agricultural resources.*

The Request for Proposal (RFP) for the RAMP states: “The conversion of prime agricultural lands to non-agricultural uses is a significant issue for the region and a fundamental challenge to a thriving agricultural sector.” The Growth Plan goes on to say:

*“ Agriculture is the largest single land use in the Region, a key economic sector and an irreplaceable resource for local food security. During the region’s recent period of rapid uncoordinated growth, neither the Province nor municipalities considered ways to conserve prime agricultural lands for farmland. Existing and planned urban development is encroaching on high quality agricultural soils and placing pressure on the region’s agricultural land base. From 2002 to 2012, a total of 38,250 hectares of farmland have been converted to non-agricultural uses, with over 60% of the loss being prime agricultural lands. The agricultural sector is experiencing significant change—with a decrease in the overall number of farms and operators, but an increase in farm productivity and profits. Although region-wide, agriculture represented only 1% of all jobs in 2014, it provides 10 to 20% of employment in many regional municipalities. This Plan recognizes the importance of a viable agricultural sector as a key asset, economic sector and strategy for enhancing local food security.”*

Agriculture and food is a major industry in the EMR. In its entirety (including farm production and food processing), it is Alberta’s second largest industry, surpassed only by the energy sector. Furthermore, it is by far the largest user of land in most rural municipalities in Alberta including the EMR. In the context of growing global food demand<sup>7</sup>, it is apparent that Alberta has a healthy future as a major food/agricultural commodity supplier. It is also important to point out that the EMR contains approximately 35% of Alberta’s Class 1 soils.

The challenge of managing growth for rural municipalities adjacent to urban or industrial development results

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<sup>6</sup> Growth Plan Review: Findings and Recommendations Report; Urban Strategies/ISL Engineering and Land Services, September 4, 2014

<sup>7</sup> FAO estimates that the global population increases 85 million each year, the size of Germany.



in stress on the agriculture sector and on agricultural land. This is an issue for the EMR given the high percentage of agricultural land, including both highly-productive and some more marginal areas. This presents both opportunities and challenges that require careful consideration in the EMRB's planning process. The task will not be easy - it takes place within the context of issues that are exceedingly difficult and fundamental to address including such questions as:

- *What is the future of agriculture?*
- *What does this mean for resource and policy requirements at the municipal and regional level?*
- *What agricultural land should be preserved?; and*
- *What decisions need to be made across the EMR to sustain the agriculture food sector as a vibrant and growing industry?*

## 2.2 The RAMP Objectives

The Growth Plan *Re-Imagine. Plan. Build.* provides more agriculture-based policy than the previous plan *Growing Forward*. To this end, the RAMP must address three key objectives:

1. Identify and conserve an adequate supply of prime agricultural lands to provide a secure local food source for future generations;
2. Minimize the fragmentation and conversion of prime agricultural lands for non-agricultural uses; and
3. Promote diversification and value-added agricultural production and plan infrastructure to support the agricultural sector and regional food system.

And to assist with the implementation of the RAMP a land evaluation and site assessment tool (LESA) will be developed. The LESA tool is described as a “critical and objective method to assess, qualify and quantify the prime agriculture lands in the Region.” Until the RAMP is approved incorporating LESA, the EMRB will continue to apply the policies and use *Schedule 11* in the Growth Plan to identify prime agricultural lands.

Current policies state that, in the rural area, identified prime agricultural lands will be conserved, including encouraging opportunities to conserve areas currently defined by municipalities for non-agricultural uses. In the metropolitan area, the intent is that agricultural lands will be used for agriculture for as long as possible but will ultimately be converted when required to accommodate urban growth.

## 3.0 Global Trends and Industry Dynamics

### 3.1 Introduction

The agriculture and food industry in Alberta including the EMR does not operate in isolation. Rather it is impacted by trends and dynamics that continuously change in terms of structure and direction. Forecasting the future is always a tenuous exercise. Nevertheless, what's important is to understand the larger trends to provide both context to inform the development of the RAMP.

### 3.2 Global Trends and Developments

Several major trends are identified and listed as follows:

1. **Growing global food demand** - multiple sources forecast the world population to exceed 9.5 billion by 2050 and accordingly project an increased demand for food. Not only will there be more 'mouths' to feed, income levels as evidenced by a rapidly expanding middle class (notably India and China) is driving demand for higher quality foods such as meat proteins and prepared foods. Much of this growth will take place in the world's major urban centres which are also the location of the best agricultural production areas.

Significantly, food demand will grow as the production capacity to produce food is on the decline. On the surface, this bodes well for Alberta as a major source of agricultural commodities, foods and ingredients. Canada has been identified as one of only six countries who will be net food exporters by 2025<sup>8</sup> - Alberta and the EMR are well positioned to respond to this growing demand.

2. **Industry and sector consolidation** - the phenomena of fewer but larger farms in the crop and livestock sectors, as well as fewer but more capital intensive processors is dramatically altering the size and scale of farming operations. Today, it is not unusual for individual farming operations to cover anywhere from 10,000 to 50,000 acres (there are several such farms based in the EMR).

Additionally, major consolidation is also taking place in the processing, farm input, wholesale and retail sectors. In the case of the latter, large-scale retailers with national sourcing and distribution requirements make it extremely difficult for small scale food processors or start ups to overcome the enormous 'gap' from operating as a niche player to becoming a regional or a national supplier. This trend contributes to the phenomenon termed as the 'vanishing middle' leaving two types of operations: a) large scale enterprises that compete on the basis of volume and competitive pricing; and b) highly specialized smaller scale enterprises that compete on the basis of differentiation (product and/or service) with premium pricing.

3. **Technology and automation** – the availability and adoption of technology is profoundly impacting how businesses operate as well as the very structure of the industry itself. Today's equipment is bigger, faster and easier to operate as machine automation becomes more dominant; livestock operating systems are also increasingly more automated with such innovations as robotic milkers; feeding and housing systems that require little or no labour. In both the crop and livestock production sectors there is a clear substitution of capital for labour.

According to Successful Farming<sup>9</sup>, the top technologies impacting agriculture include:

- (a) Robots as 'fieldworkers of the future' driven by machine learning algorithms;
- (b) Drones that can monitor and respond to a wide range of production scenarios including the ability to seek out and spray individual weeds;

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<sup>8</sup> CIA Handbook, 2012

<sup>9</sup> A major US based farm publication.

- (c) Superior sensors able to monitor a host of production conditions including moisture and nutrient levels;
- (d) big data that can be used to power digital services leading to improved management decisions;
- (e) Data control systems for precision (or smart) farming;
- (f) 3-D printing that will enable the on-site production of machine parts or even foods; and
- (g) Artificial intelligence that will drive decision making and optimization to new levels of efficiency.

Furthermore, farm operators are becoming sophisticated business managers (referred to in some circles as CEO farmers). These farmers typically lease large areas of land, employ a range of services such as agronomists, custom applicators, satellite tracking services and can manage their farms remotely using cellular technologies.

Technology advancements also benefit smaller-scale operations. For example, greenhouse and/or warehouse productions systems can be completely automated. Small-scale orchards (apple trees growing much like grapes), can be operated by employing automated systems including harvesting – this vastly reduces the amounts of pesticides and labour required. With the deployment of such enabling technologies, the emergence of smaller enterprises in response to local food demand and specialized markets becomes much more feasible.

4. **The changing food economy** – the food economy and the food system are in state of rapid change. Several dynamics are at play including:

- a) **The rise of new market channels** – with changing lifestyles, new technologies (employed by the likes of Uber Eats, Skip the Dishes, etc.), new players such as SPUD, The Organic Box and Amazon, as well as mainline retailers, all provide delivery and on-line services. Consequently, more and more prepared foods, specialty products and/or meals are now being delivered direct to the consumer. Some estimates suggest that nearly 50% of all meals within certain demographic groups such as the ‘millennials’ are being served this way. These developments pose a major challenge for traditional marketers. However, at the same time, they represent new opportunities for entrepreneurs and offer the potential to disrupt established distribution channels as well as mainline retailers.
- b) **Alternative proteins** – there is a growing interest and potentially, a significant shift to food products made from alternative proteins driven by the desire to improve or manage health outcomes and growing concerns with animal welfare. Most of these new proteins are coming from plants (pulses) but there is also activity with such novel sources as insects (crickets) and ‘meat’ being produced through the propagation of synthetic proteins. Just recently, Maple Leaf Foods re-positioned itself as a ‘protein’ company, moving away from its historical roots as a meat company – this is a harbinger of the scale and significance of this movement.

Within the food industry, a newly formed organization called *The Good Food Institute* has emerged – many of its members are mainstream food companies. This rapidly growing sector is working to change the current food system to reduce impacts on climate and the use of resources such as water and grains for livestock feeding. Some of these members are committed to seeing the complete transformation of protein sourcing away from livestock within the next 30 years.

- c) **Local food and food experiences** – on the cultural front, there is an increased interest in growing, sourcing and supplying local foods and related services - a trend which is also very evident in the EMR with the growth of new niche food processing companies, new restaurants and events (such as the What the Truck Food Festival). Edmonton is replete with start-ups and interested persons who are bringing new ideas to the market including a commercial food hub that will be offering shared facilities, equipment and marketing services to several compatible companies.

5. **Climate Change** – there is no industry that is more ‘weather’ dependent than agriculture and food production. Without question, climate change is a growing concern – the phenomenon has both positive and negative impacts.

On the positive side, warmer temperatures lengthen the growing season and increase the choice of crops a farmer can consider. As a result, crops such as corn and soybeans are more commonly grown in Alberta including the EMR. Also, on the positive side, the emphasis on carbon capture affords farmers the opportunity to earn carbon credits through improved (reduced) tillage practices, the growing of ‘green’ crops such as pulses and alfalfa crops capable of fixing nitrogen directly into the soil. It should be noted that this market which was initially established in 2006 continues to emerge. An estimated 15% of producers in Alberta are engaged in carbon capture programs.

On the negative side the impacts range from: increased weather volatility including drought, hail, excessive rains, and soil micro biome, etc. All these factors increase the risk associated with production. In response, mitigation strategies become increasingly important including: the choice of crop and varieties better able to withstand stress; land management (for example, minimum or no-till practices have become standard practice); variable rate inputs (the right amounts of seed/fertilizer at the right place at the right time); crop and risk insurance programs, etc. In this regard, the advent of ‘smart’ agriculture is a major enabling factor in responding to the impacts of climate change.

6. **Land use and the issue of conserving agricultural lands** - by 2030, the FAO<sup>10</sup> estimates that urban and industrial areas throughout the world (Asia and Africa in particular) will grow dramatically, expanding onto cropland and undermining the productivity of agricultural systems that are already stressed by rising populations and climate change.

Approximately 60% of the world’s irrigated cropland lies in relative proximity to major cities which is a major concern, since this peripheral habitat is on average, twice as productive as land elsewhere on the globe. “We would expect peri-urban land to be more fertile than average land, as mankind tends to settle where crops can be produced,” says Felix Creutzig from the Mercator Research Institute on Global Commons and Climate Change in Berlin, and principal author of the paper<sup>11</sup>; “However, we were ignorant about the magnitude of this effect.” The agricultural losses they calculated in the study, published in the proceedings of the National Academy of Sciences, translates to a 3 to 4% dip in global agricultural production.

At first glance this loss may not appear to be a huge figure but on the regional scale the picture changes. Across countries and different crops, the effects of these losses vary and become more intense. In Africa and Asia especially—which together bear 80% of the projected loss due to rising urbanization in these regions—urban expansion will consign farmers to an even tougher agricultural reality. A major worry surrounding the disappearance of this productive land is the impact it will have on staple crops such as maize, rice, soya beans, and wheat, which are cornerstones of global food security.

Closer to home, the movement to address agricultural land conservation has been slowly growing and intensifying. Significant provincial initiatives in British Columbia, Ontario and Quebec reflect the recognition that a relatively small proportion of their respective land base is suitable for agriculture. This realization for example, led to establishment of the BC’s Agricultural Land Reserve in the 1970s. More recently, the protection of agricultural land has been front and centre in Ontario with the implementation

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<sup>10</sup>Food and Agriculture Organization (FAO), United Nations

<sup>11</sup> Future Urban Expansion & Implications for Global Croplands, December 2016; Proceedings of the National Academy of Sciences of the USA

of the Greenbelt in 2005.

The issues of land use and the preservation of agricultural land continue to grow as a public concern. Within Canada several recent developments bear noting including:

- **A recent Standing Senate Committee on Agriculture and Forestry (March 2018)** - the report entitled “GROWING CONCERN, How to Keep Farmland in the Hands of Canadian Farmers” is in response to growing concerns about the future of farmland, its availability and tenure. Among its several recommendations, two are particularly relevant to the EMR: a) to establish a national research project on farmland protection; and b) work with federal and provincial governments to protect and promote the use of land for agricultural purposes.
- **British Columbia** – the B.C. government is in the midst of revitalizing the Agricultural Land Reserve (ALR). Two objectives have relevance for the EMR: a) preserve the productive capacity of land in the ALR; and b) encourage farming of land in the ALR for uses related to agriculture and food production. In the case of the latter, there is a strong push to limit (prohibit) the use of agricultural properties as building sites for large residences while little or no agriculture activity is taking place – a current loophole that is being addressed.
- **Ontario and Greater Golden Horseshoe** – while strong measures to preserve agricultural land in the ‘Greenbelt’ (or the inner ring surrounding the Greater Toronto Area as it is referred to) have been taken, there are major concerns about the area referred to as the ‘outer ring’ and located in the Greater Golden Horseshoe (GGH).

A recent study<sup>12</sup> led by the Ontario Federation of Agriculture states unequivocally that the key to a robust agricultural industry is the same everywhere: the protection of the land base on which to farm and to carry out farm related activities. While the Greenbelt Plan has taken steps to provide permanent protection to the agricultural land base (an area of 2.3 million acres), the next ring (another 5.2 million acres) is subject to a “weaker planning framework that leaves farmland vulnerable to urbanization.” The report pulls no punches and advocates for stronger land preservation measures to be taken in this outer ring and makes this statement: “A fresh perspective is needed on farmland in the GGH, one that sees agriculture as a permanent feature of the regional landscape and farming as an essential component of our economy and cultural heritage.”

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<sup>12</sup> Farmland At Risk: Why land-use planning needs improvement for a healthy agricultural future in the Greater Golden Horseshoe, November 2015. Ontario Federation of Agriculture and Environmental Defence.

## 4.0 Agriculture in the EMR

### 4.1 Introduction

This chapter presents a detailed analysis of trends and changes that have taken place across the EMR during the period 2001-16. More than 70 variables, encompassing a wide range of farm business indicators, the cropping mix, livestock populations and speciality enterprises (greenhouses, fruits, vegetables and nursery products), were reviewed. Specifically, the analysis focused on identifying and understanding three dynamics when comparing the EMR to the Province of Alberta:

- Changes similar to the broader trends taking place across the province;
- Positive changes occurring at a greater rate than in the province; and
- Negative changes occurring at a greater rate than in the province.

### 4.2 EMR Compared to Alberta

#### 4.2.1 EMR Trends Similar to the Provincial Trends

Changes in the structure of farming within the EMR are very similar to the broader trends taking place in Alberta. To summarize: there is a prevailing trend to fewer but larger farms (see Table 4.1), which illustrates that the number of farms has declined by approximately 25% over the 15-year period; at the same time, farm size in terms of average acres farmed has grown by 30%. The biggest changes have occurred in the two financial indicators: (a) Average Capital per Farm – up approximately 250% (invested capital per acre is almost twice the Alberta average at \$5,581 vs. \$2,863 per acre); and (b) Total Gross Sales – up 75%. The crop mix has also changed, namely a significant increase in canola acres – a reflection of this crop's relative profitability to other crops. Provincial canola acreage grew by 132% while it grew by 92% in the EMR.

One major difference between EMR farms and the average Alberta farm is size (523 acres vs. 1,237 acres in 2016). This disparity can be explained by major differences in soils and climate. EMR lays in the black soils zone – the most productive soil zone on the Prairies allowing farmers to consider a wide range of crops. By comparison, many Alberta farms and ranches are located in dry land, brown and light brown soil zone areas which are much less productive requiring farms to be larger in order to generate similar incomes.

**Table 4.1 Business Indicators Where Changes for EMR and Alberta are Similar: 2001-2016**

Indicator	EMR 2001	EMR 2016	Change	Alberta 2001	Alberta 2016	Change
Number of Farms	4,736	3,209	-22.2%	53,652	40,638	-24.3%
Average Farm Size (acres)	394	523	+32.7%	970	1,237	+27.4%
Average Capital per Farm	\$811,000	\$2,919,000	+260.1%	\$1,030,000	\$3,542,000	+243.9%
Total Gross Sales	\$476.6 M	\$838.2 M	+75.8%	\$9.9 B	\$17.73 B	+78.7%
Canola acres	160,164	307,690	+92.1%	2,660,509	6,165,746	+131.8%

#### 4.2.2 Positive Changes

Areas where the EMR is ‘outpacing’ the rest of Alberta in terms of agriculture include:

- **Number of farms over 1,120 acres** – the EMR saw an increase in this category (up 10%), where the provincial number is down 11.8%. Simply, EMR farms on average are smaller than their provincial counterparts, thus the jump in size in this particular category is more pronounced.
- **Potatoes acres** – in relative terms, potato acreage in the EMR increased by 1.5% compared to a provincial decrease of 7.6%. Arguably this increase can be attributed to unique soil characteristics and micro-climates suitable for this type of crop.
- **Number of vegetable farms** – the number increased by 60% in the EMR vs. the Province where it increased by 24%. It should be noted however, while numbers increased, acreages did not.

**Table 4.2 EMR Indicators Increasing at Faster Rates than Alberta: 2001 – 2016**

Indicator	EMR 2001	EMR 2016	Change	Alberta 2001	Alberta 2016	Change
Number of Farms over 1,120	339	373	+ 10.0%	12,552	11,073	-11.8%
Potato Acres	4,004	4,064	+1.5%	58,341	53,912	-7.6%
Number of Vegetable Farms	29	49	+ 60.0%	241	299	+24.1%

#### 4.2.3 Negative Changes

The most significant negative changes within the EMR compared to Alberta are taking place in two areas:

- **Livestock populations** (see Table 4.3) – in all major livestock areas, the reduction rate of EMR’s livestock numbers exceed that of the province. Most notable is the poultry category: overall provincial numbers are up 16% while the EMR saw a 28% decline. Cattle, dairy cow and pig numbers are in decline across the province. This trend is accentuated in the EMR– particularly in dairy cows and pigs where the rate of decline is substantially higher than in the province.
- **Specialty enterprises** (see Table 4.4) – five categories are listed: nursery products<sup>13</sup>; greenhouse area; fruits, nuts & berries; vegetables and bees. Three enterprises – nursery products, greenhouse areas and bees have shown increases in Alberta (up 11.7%, 14.7% and 45.7% respectively). However, all these enterprises including fruits, nuts & berries, vegetables and bees have been on the decline in the EMR.

**Table 4.3 EMR Livestock Populations Decreasing at Faster Rates than Alberta: 2001 – 2016**

Measure	EMR 2001	EMR 2016	Change	Alberta 2001	Alberta 2016	Change
Pigs (hd)	81,659	19,887	-75.4%	2,027,533	1,462,247	-28%
Poultry (hd)	2,350,845	1,685,508	-27.9%	12,175,246	14,125,401	+16%
Total Cattle	265,323	155,129	-41.5%	6,615,201	5,206,999	-21.3%
Dairy Cows	12,514	6,888	-45%	84,044	80,014	-4.8%

<sup>13</sup> Nursery products typically include shrubs, ornamental plants, trees, hedges. Greenhouses tend to supply either vegetables or bedding plants.

**Table 4.4 EMR Specialty Enterprises Decreasing at Faster Rates than Alberta: 2001-2016**

Measure	EMR 2001	EMR 2016	Change	Alberta 2001	Alberta 2016	Change
Nursery (ac)	1,838	1,450	-21.1%	6,642	7,420	+ 11.7
Greenhouse area (sq. ft) <sup>14</sup>	1,559,772	1,340,397	-14.1	11,029,753	12,647,517	+ 14.7
Fruit, Nuts, Berries (ac)	479	302	- 36.9	2,515	2,164	-14.0
Vegetables (ac)	793	342	-56.9	14,194	10,108	-28.8
Bees (colonies)	30,329	24,917	-17.8	209,821	304,846	+45.3

#### 4.2.4 Regional Assets and Infrastructure

The EMR is home to a host of world leading institutions and facilities specifically established to support the agriculture and food industry. These include: the University of Alberta with the Faculty of Agriculture, Life and Environmental Sciences (ALES) as well as several research stations including the Edmonton Research Farm, the St. Albert Research Farm, the Botanical Garden and Agri-Food Discovery Place; Alberta Agriculture & Forestry with the Food Processing Development Centre in Leduc and the Crop Development Centre in northeast Edmonton; the NAIT Culinary Program; and the Pioneer DuPont Seed Research Farm in Strathcona County. In addition, the region has a superior set of roadways, rail-lines plus the Edmonton International Airport equipped with the necessary facilities and logistics to ship fresh or frozen food products to destinations around the globe.

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<sup>14</sup> The areas listed reported here do not include the rapidly emerging cannabis sector. In 2017 and 2018, an 800,000 square foot facility is being built in Leduc County at the airport. Parkland County will also be the base for 2 million square feet of new cannabis production.



### 4.3 Trends within the EMR

Table 4.5 provides a comparative analysis of the EMR to the Province (2001-2016). Using “**Total Land in Crops**” as a base for comparison (line 4,) any relative percentage that is higher (above 4.4% in 2016) illustrates relative strength for the EMR while percentages below 4.4% illustrates below average for the EMR compared to the rest of Alberta. The most significant trends include:

- The number of farms in the EMR, as a percentage of all farms in the province is down to 7.9% from 8.8% in 2001; or a decline of 32.2% in the region itself.
- The total area farmed as a percentage of all farm area is down to 3.3% compared to 3.6% in 2001;
- Total gross sales are down to 4.6% compared to 4.7% in 2001. Actual gross sales increased by 75.8%;
- The total number of cattle and calves is down to 3.0% vs. 4.0% in 2001 – an actual decline of 41.5%

		EMR		EMR		EMR: 2016 vs 2001
	Unit	2001	% of AB	2016	% of AB	% Change
<b>Indicators</b>						
Number of Farms	Number	4,736	8.8%	3,209	7.9%	-32.2%
Total Area of Farms	Acres	1,866,751	3.6%	1,678,983	3.3%	-10.1%
Total Gross Sales (all farms)	\$'000	476,686	4.8%	838,221	4.7%	75.8%
<b>Crop Acreages</b>						
<b>Total Land in Crops</b>	<b>Acres</b>	<b>1,146,959</b>	<b>4.8%</b>	<b>1,119,179</b>	<b>4.4%</b>	-2.4%
Alfalfa	Acres	289,199	7.4%	154,834	5.1%	-46.5%
All Other Hay	Acres	128,292	5.6%	61,132	5.3%	-52.3%
Nursery Products	Acres	1,838	27.7%	1,450	19.5%	-21.1%
Barley	Acres	211,832	4.3%	158,915	4.7%	-25.0%
Canola	Acres	160,164	6.0%	307,690	5.0%	92.1%
Peas	Acres	20,789	3.4%	51,411	2.7%	147.3%
Greenhouse Area	Square Feet	1,559,772	14.1%	1,340,397	10.6%	-14.1%
Mixed Grains	Acres	14,621	3.6%	8,461	3.5%	-42.1%
Oats	Acres	69,803	5.1%	47,103	5.7%	-32.5%
Potatoes	Acres	4,004	6.9%	4,064	7.5%	1.5%
Fruit, Berries, Nuts	Acres	479	19.0%	302	14.0%	-36.9%
Vegetables	Acres	793	5.6%	342	3.4%	-56.9%
Wheat	Acres	232,579	3.4%	290,913	4.2%	25.1%
<b>Livestock Populations</b>						
Number of Bison	Head	6,496	8.1%	1,638	3.0%	-74.8%
Number of Colonies of Bees	Colonies	30,329	14.5%	24,917	8.2%	-17.8%
Number of Goats	Head	4,998	11.8%	2,273	8.1%	-54.5%
Number of Horses/Ponies	Head	14,477	9.1%	9,247	8.5%	-36.1%
Number of Beef Cows	Head	98,952	4.7%	50,475	3.2%	-49.0%
Number of Cattle and Calves	Head	265,323	4.0%	155,219	3.0%	-41.5%
Number of Dairy Cows	Head	12,514	14.9%	6,888	8.6%	-45.0%
Number of Hens/Chickens	Birds	2,350,845	19.3%	1,695,508	12.0%	-27.9%
Number of Pigs	Head	81,659	4.0%	19,887	1.4%	-75.6%
Number of Sheep	Head	21,276	6.9%	13,837	7.1%	-35.0%
<b>Business Structure</b>						
Sole Proprietorships	Number	2,731	9.0%	1,798	8.4%	-34.2%
Partnerships	Number	1,481	9.2%	749	8.3%	-49.4%
Corporations	Number	520	7.6%	657	6.5%	26.3%

A series of graphs and charts highlighting the changes within the agricultural sector from 2001 – 2016 within the

EMR are found in *Attachment 1*. A summary of these graphs and charts are presented below:

- **Farm Business Indicators (Figures 1.1 to 1.3)** – illustrates the clear trend to fewer but larger farms across the EMR, while gross sales for the region have increased by 75% from 2001 to 2016.
- **Area Farmed and Selected Crops (Figures 1.4 to 1.7)** – the total area in crops within the region has declined by 28,000 acres over the 15-year period.<sup>15</sup> Canola has grown to be the major field crop (over 307,000 acres in total) followed by barley (160,000 acres). Peas have also become a major field crop (51,000 acres in 2016 vs. 18,000 acres in 2001). Potatoes grown mostly in Parkland and Sturgeon Counties (just over 4,000 acres in 2016), now represent 7.5% of the overall Alberta potato acreage – a slight increase but indicative of the favourable soils and climate required by this crop and found within the EMR.
- **Livestock Enterprises (Figures 1.8; also see Table 4.5)** – overall livestock numbers are on the decline led by major decreases in inventory from 265,000 head to 155,000 head in 2016 – a decline of 41.5% vs. 21.3% decline for the province. Much of this decline can be attributed to the 2003 BSE crisis in the beef industry and an extended period of poor returns that persisted for almost 10 years.
- **Specialty Enterprises (Figures 1.9 and 1.10)<sup>16</sup>** - the 15-year trend for specialty enterprises illustrate that both vegetable acres and greenhouse area have decreased. For example, greenhouse area has dropped from 1.56 million square feet to 1.34 million square feet – a decline of 14% as of 2016. Note: these statistics do not capture the new greenhouse areas currently being constructed for the emerging cannabis sector.
- **Food Processing and Employment (Table 1.1)** - employment trends in the agriculture production and manufacturing (agriculture and food processing sectors) are illustrated in Table 1.1 (see Attachment 1). Of note are the employment estimates for the food and beverage processing in the EMR – highlighting the increase in the number of employees from 4,000 to 6,000 during the 2001-2016 period. It is estimated that 25% of the provincial food and beverage processing takes place in the EMR – comprised of two major poultry processors, a large oil seed crushing plant, a feed milling sector as well as numerous speciality food processing businesses that have grown to become major national and international players. Total annual revenues (or shipments) are in the order of \$3.75 billion to \$4 billion annually. By comparison, total food and beverage processing shipments for Alberta in 2016 were \$14.6 billion, up from \$9.3 billion in 2001 – an increase of 57 percent over the period.
- **Urban Agriculture** - both the City of Edmonton and Strathcona County have committed to the development and implementation of urban agriculture plans. In both cases, interests and activity levels are high. For example, the Edmonton bee keeping program is fully subscribed with 130 applicants; in addition, 50 licenses for backyard hens have been issued. Our interview findings affirm that a new generation of new small-scale food processors, food service providers and food centred events is emerging. As well, the number of Farmers Markets in the region continues to grow: Edmonton has 18 such markets (up from 12 just 6 years ago); there are another 10 or more markets in other communities including Stony Plain, Spruce Grove, St. Albert, Ft. Saskatchewan, Leduc, Devon and Morinville.

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<sup>15</sup> We advise caution with this statistic in view of how Statistics Canada collects crop acreages and assigns these to the address of the originating producer. Thus, anyone who farms in municipalities out of the region will have that acreage attributed to his or her home municipality. For example, both Strathcona and Sturgeon show actual increases in crop acreage – both municipalities are also home to several large crop producers who farm in other municipalities both in Alberta and Saskatchewan.

<sup>16</sup> Specialty enterprises include fruits, nuts & berries, vegetables, greenhouses, nursery products, bee keeping/honey as well as new emerging crops such as hemp and cannabis.

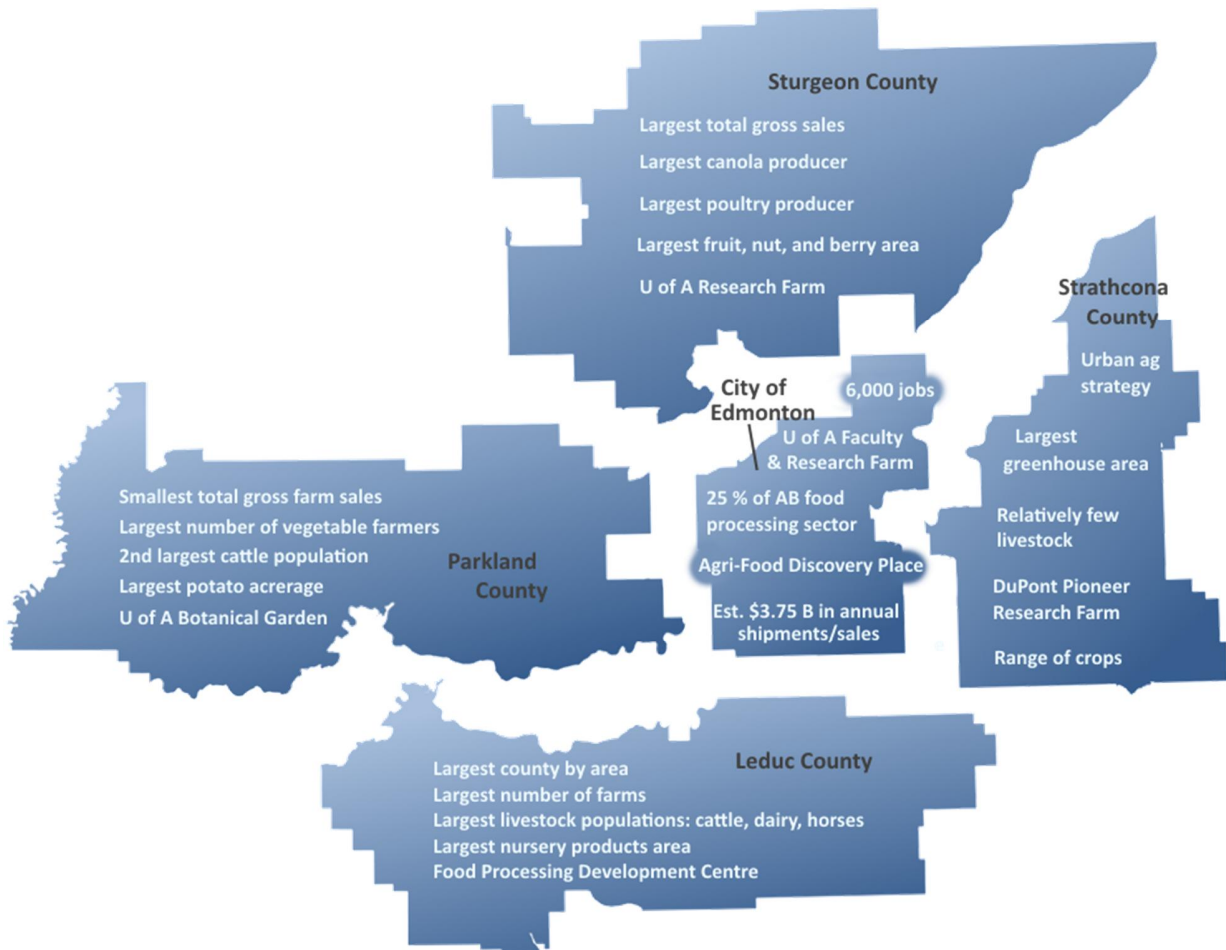
## 4.4 EMR Profile – An Overview

An overview of the five major municipalities in terms of relative strengths and differences is summarized in Table 4.6 and the accompanying Schematic Profile (see Figure 4.1).

**Table 4.6 Profile of the EMR by the Five Major Municipalities**

Municipality	Unique Features/Differences
<b>Strathcona</b>	<ul style="list-style-type: none"> <li>• Smallest county in terms of area farmed, number of farms</li> <li>• Has lost nearly 32,000 acres in area farmed since 2001.</li> <li>• Smallest cattle population (15,000 head); few dairy cows; no pigs)</li> <li>• Second largest poultry population (488,705 birds)</li> <li>• Third largest horse population (2,100 head)</li> <li>• Largest greenhouse area in the EMR (443,000 square feet)</li> <li>• Home of the Pioneer-DuPont seed research site</li> <li>• Urban agriculture strategy has been adopted and in early stage</li> </ul>
<b>Leduc</b>	<ul style="list-style-type: none"> <li>• The largest county in terms of area farmed; number of farms; the number of farmers under 35</li> <li>• Second largest canola producer (81,000 acres); largest barley producer (60,000 acres)</li> <li>• Largest cattle population (58,000 head); largest dairy herd – 4,600 head</li> <li>• Largest horse population (2,800 head)</li> <li>• Largest area growing nursery products (585 acres)</li> <li>• Home of the Food Development Processing Centre (City of Leduc)</li> </ul>
<b>Parkland</b>	<ul style="list-style-type: none"> <li>• Smallest county in terms of total gross sales</li> <li>• Has lost the largest area (100,000 acres) since 2001.</li> <li>• Largest potato producer (2,700 acres)</li> <li>• Second largest cattle population (47,000 head); 1,000 dairy cows; very few pigs; largest sheep population (8,300 head)</li> <li>• Second largest horse population (2,600 head)</li> <li>• Largest number of vegetable producers (14)</li> <li>• Home of the Devonian Garden – U of A Research Facility</li> </ul>
<b>Sturgeon</b>	<ul style="list-style-type: none"> <li>• Similar to Leduc in terms of area, but largest in terms of overall gross sales, average capital per farm and land in crops</li> <li>• Largest canola producer (129,000 acres)</li> <li>• Second largest barley producer (48,000 acres)</li> <li>• Largest poultry population (969,000 birds)</li> <li>• Only county with a hog operation (20,000 head)</li> <li>• Largest area growing fruit, nuts and berries (149 acres)</li> <li>• Second largest area growing nursery products (447 acres)</li> <li>• Home of the U of Alberta Research Farm</li> </ul>
<b>City of Edmonton</b>	<ul style="list-style-type: none"> <li>• Base of a large food and agriculture processing sector (estimated product sales of \$3.75 billion to \$4 billion annually)</li> <li>• Estimated 6,000 employees working in the sector</li> <li>• Adopted the Edmonton’s Food &amp; Urban Strategy in 2013 (<i>fresh</i>)</li> <li>• Urban agriculture plan is gaining momentum – focus on community gardens (75 sites), access to vacant lots, bee keeping (130 participants), backyard chickens (50 licenses issued)</li> </ul>

**Figure 4.1: Schematic Profile of the EMR**



## 4.5 Regional Issues

Over the past three years and in the course of preparing agriculture plans or strategies, numerous consultations and individual interviews have been conducted across all the EMR Counties (Strathcona in 2015; Parkland in 2016; Leduc in 2016; and Sturgeon in 2018). Significantly, the concerns raised were strikingly similar. The issues that are most prevalent and common across the Region<sup>17</sup> are summarized as follows:

1. **Agriculture as a low or non-priority** – there is a strong and overriding sense among the farming community that agriculture as an industry has had little to no priority for municipal governments and for the Provincial Government, and accordingly is not valued or even appreciated in terms of its contribution to the economy, to the community or to the environment. This sentiment varies – the view is stronger in some municipalities and less so in others. This concern was raised repeatedly during the course of discussions in every county. According to the farm community, the prevailing focus on the part of counties has been to attract industry, commercial interests and/or more residents. This focus has left the farmers and those involved in the agriculture industry feeling that their sector is a very low priority if it is a priority at all.
2. **Uncertain long-term future for agriculture in the region** – agriculture as a low priority coupled with the steady and the seemingly inevitable expansion of urban development throughout the EMR, is leaving many producers questioning the future of agriculture and indeed their own farm businesses. In other words: “The writing is on the wall!” Livestock producers exhibit the greatest concern – in many cases, expansion is either exceedingly difficult or impossible due to minimum distance requirements and the emergence of non-farm rural residents that has taken place in recent years. Some crop producers have already begun the process of transition by purchasing and/or leasing farmland in more distant municipalities. Many are of the view that it is only a matter of time before the land being farmed in the EMR will be bought and sub-divided for development purposes.
3. **Ongoing rural-urban frictions** – the growing number of non-farm rural residents juxtaposed to fewer but larger farm operations is leading to increased tension between farmers and non-farm residents. The major complaint heard is the lack of appreciation for and understanding of agriculture. Thus, the range and intensity of complaints is on the rise and include issues pertaining to dust, noise, odours, operating hours and dangerous traffic conditions when farmers are transporting large pieces of equipment on local roads as they move from site to site or haul input supplies or harvested grain.
4. **The ‘Right to Farm’** – a growing sense of vulnerability is rising within the farming community specific to their ability to farm and perform a range of necessary operations. The concerns are especially evident during such intense seasonal periods as seeding and harvesting. Simply put, the agriculture community feels outnumbered and undervalued. A major concern is their declining political influence in a changing community. Some are openly questioning: “Are we going to face a movement (or an anti-farm Council) that may actually restrict our ability to farm?”
5. **The need to conserve agricultural land** - no issue is more contentious than or as potentially divisive as the subject of preserving agricultural land. Two major questions prevail: (a) should agricultural land be preserved? And (b) if yes, how should this be done?

There are two very distinct points of view with respect to the land preservation issue.

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<sup>17</sup> Well over 500 people contributed to these consultations over the course of the various planning projects undertaken across the EMR.

- a) On the one hand, farmers who plan to farm for the long term, support the principle of preserving good agricultural land – which means the need to limit fragmentation and small land parcels amid farming areas as well as the encroachment of non-farm rural residents.; and
  - b) On the other hand, there is considerable support to maintain the current subdivision policies and not restrict land owners from realizing the financial benefits from their ability to sub-divide. This ability remains a potential source of revenue – strongly supported by farmers who are approaching retirement.
6. **Land Use and Zoning** – the issue of zoning is inextricably related to the land preservation issue. Generally, there is agreement that agriculture requires areas or zones that are designated as priority areas for the long term. Some municipalities have already begun to move in this direction.

Two major questions underlie this issue however:

- a) How to reduce and/or mitigate land fragmentation? and
  - b) How to manage expectations now that the ability to subdivide properties is seen as a ‘right’ and in many cases may already have been capitalized into the value of the land?
7. **Top soil removal and reclamation** – the continued expansion of urban development on agricultural land ultimately results in the removal of top soil from the source lands. Top soil is a non-renewable resource and should not be wasted - a sentiment expressed by numerous rural stakeholders during the course of recent consultations and area meetings. Given this reality and in view of continued development in the EMR, there is both the opportunity and the need to develop a pro-active top soil removal and reclamation best practices plan for the region. Such a plan would address the manner in which top soil is removed, stored, and ultimately placed on lower productivity areas or sites. To be clear, this is a highly technical process – it requires carefully stripping practices to ensure that soil layers are removed and stored separately; soils must also be stored in such a manner that organic and micro-organism loss is minimized; and finally receiving sites need to be prioritized and prepared in advance to ensure maximum advantage that can be gained by top soil reclamation.
8. **Opportunities and challenges with value added/diversification** – there is considerable interest and good intentions to develop opportunities in the areas of local food, food experiences, value-added food and agriculture processing opportunities. Nevertheless, the pathways for success remain unclear. While there are several examples of successful ventures that have developed over the past twenty years, overall progress in value added development has been limited. The barriers are considerable:
- a) The challenges associated with start-ups;
  - b) Business management – particularly sales and marketing experience;
  - c) Accessing existing market channels; and
  - d) Creating new market opportunities either domestic or export.

Furthermore, attracting and/or training the required business and management skills are identified as a significant challenge. There is a growing interest among a new generation of local food advocates to produce food locally. However, the cost of land in the EMR for most of these proponents is prohibitive. (Note: we conducted 23 interviews with individuals either working in or very familiar with food processing/value added sector. More detailed comments are found in *Attachment 3*).

9. **Complex Regulatory Environment** – the regulatory requirements for agriculture and agri-food/business are viewed as complex and, in many cases, onerous. There were numerous concerns about the multiple

and different levels of regulation (municipal, provincial and federal). As well as, questions about basic definitions: What is defined as agriculture? What is considered agri-business? What is agri-tourism? What is permitted? And what is not permitted and why? The regulatory challenge is complicated by several factors:

- a) the changing face of agriculture resulting in new people wanting to do new things that have not been traditionally viewed as 'agriculture' and certainly not traditional farm production;
- b) well-meaning proponents who are generally unfamiliar with the nature and degree of the regulations that must be addressed - particularly the case with food processing or preparation requiring a host of health, sanitation and facility standards which are either provincial and/or federal (CFIA) depending on the marketing objectives of the proponent; and
- c) the general ethos and style of regulatory bodies or planning departments – typically proponents deal with staff that are neither particularly helpful nor able to provide the full or 'one stop' solution that is being sought. Thus, the levels of frustration in dealing with regulations can be very high.

This is a complex area requiring a lot of special attention to address. The key point to be made at this stage of the RAMP development process is: the need for a more 'customer service' orientated regulatory environment to enable the emergence and-growth of new value added and diversification agri-food/ businesses. Furthermore, the need for a 'one-stop' regulatory shop imbued with a service culture and willing to pro-actively deal with proponents would go a long way to deal with this general barrier.

10. **The lack of a 'Voice' for the Agriculture and Food Industry** – a key concern to advance any strategies or initiatives for food and agriculture in the EMR is the need for advocacy and support. The lack of a voice for agriculture or for the food industry has been consistently identified. The comments repeatedly stressed, how fragmented and disconnected the sector really is. The reasons are many. For example, the actual numbers of farmers are few; most are aligned with commodity groups or marketing boards which typically have provincial mandates and generally are not integrated. Food processors meanwhile are running flat out just to stay on top of their businesses. Thus, few farmers or food industry personnel have the time or energy to devote to broader industry concerns. Overall, no organization exists to provide this leadership.
11. **Other issues** – several additional issues raised by individuals or small groups emerged over the course of the consultation process. These include such concerns as:
  - **Water** - the availability and timing of water for agriculture production is expected to grow into the future. These concerns are being driven by climate change and the increased incidence of weather extremes (drought and heat). In those areas of Sturgeon, Parkland and Leduc Counties where potatoes and other specialty crops are being grown, the need for irrigation systems and the associated infrastructure is frequently mentioned.
  - **Annexation** - currently, several annexation processes are underway in the EMR. We are not in a position to comment on the need or rationale for these applications. Based on input received from rural stakeholders, these annexations send a clear message to the agriculture and food community – any agricultural lands near to urban development regardless of quality, can be consumed by urban municipalities at any time.
  - **Ecological Goods & Services** – as the major steward of the land, farmers are major carbon sequesters, managers of soil quality, and the guardians of large forested areas, wetlands, the water table, and biodiversity in general. Yet they receive little or no reward for their

contributions for these efforts in what is commonly referred to as “ecological goods & services.”

Indeed, farmers can be major contributors and mitigators on climate change through tillage practices, planting ‘green’ crops, maintaining wetlands as well as other conservation or preservation activities. Note: Alternative Land Use Services (ALUS) and Ducks Unlimited are examples of such initiatives. ALUS remains in the early stage and modest in terms of the financial incentives that are being provided.

- **Property rights** – the issue of property rights is complex and deeply embedded in the rural zeitgeist. There are strong views among farmers who feel that they have the ‘right’ to do with their property as they please and the ‘right’ to sell to the highest bidder for whatever purpose when they are ready to sell. In actuality, this is not the case. While many industrialized countries including the USA have guaranteed property rights within their constitutions, Canada has not done so. Further while common law tradition recognizes outright expropriation (or the change in zoning or bylaws within an existing zone) should never occur without compensation, Canadian governments have given themselves the power, through the passage of laws and regulations, to expropriate private property without consultation or compensation.

This differs markedly from the USA whereby The Fifth Amendment to the U.S. Constitution, passed in 1791, provides that no person shall be deprived of life, liberty or property without due process of law, nor shall private property be taken for public use without just compensation. The courts in the United States have interpreted "property" within the meaning of this constitutional provision to include the traditional types of property, such as tangible assets like real property or land. Thus, compensation in the event of expropriation or a change in land use zoning is standard practice. Compensation may also occur on rare occasions for a change in land use zoning.

That being said, the prevailing view of property rights in rural Canada along with expectations regarding what can be done with farm property is a complicating and contentious factor with rural land use planning. This issue will need to be addressed as the RAMP planning process moves forward.



## 5.0 Municipal Policies and Planning Context

### 5.1. Introduction

The current planning framework in the Edmonton Metropolitan Region and how agriculture fits in requires an understanding of the provincial, regional, and municipal policies which influenced its evolution over time to the present. A detailed review beginning with the Edmonton Metropolitan Regional Planning Commission (established in 1950) to the recently approved Edmonton Metropolitan Regional Board growth plan is presented in *Attachment 2*. This review includes the provincial land use framework and the North Saskatchewan Regional Plan.

### 5.2. Comparison of Regional and Municipal Policies

As part of the Situation Analysis, a matrix has been completed which compares the municipal agriculture related policies of the four counties (Leduc, Parkland, Strathcona, and Sturgeon) and the City of Edmonton (see *Attachment 2*.) The urban municipalities within the counties were not included.

The plans were compared across 22 factors to identify similarities and differences for the purpose of developing a comprehensive view of the sector is supported across the EMR. Below are some of the key points of comparison across the municipalities.

#### Vision

The respective 'visions' for each of the major agricultural municipalities and the City of Edmonton are presented below:

#### Visions for Agriculture Across the EMR

**Strathcona County** as 'Canada's most livable community' is distinguished by its agricultural heritage that builds on history and responds to opportunities as a leader in the Capital Region in the provision of a broad range of agricultural and food opportunities as well as services to one of Canada's fastest growing metropolitan regions.

**Leduc County:** A vibrant and resilient agri-food future built on a proud agriculture history.

**Parkland County:** A vibrant agriculture and food community characterized by its diversity, creativity and entrepreneurship, focused on sustainability as well as new opportunities.

**Sturgeon County:** The 'Heart' of Agriculture for the Region

**COE Fresh:** Edmonton has a resilient food and agriculture system that contributes to the local economy and the overall cultural, financial, social and environmental sustainability of the city.

## Guiding Principles

Overall, the guiding principles for agriculture across the municipalities are generally quite similar both in terms of intentions and tone. There are subtle differences between the major thrusts of each of the various plans. In some cases, the difference is more one of emphasis (focusing more narrowly on managing land vs. a broader view of community) or from perspective (urban vs. rural), or different historical perspectives. Differences are mostly by omission, not by opposing viewpoints.

Overall, at this high level of policy, there is acknowledgement that there are important "agricultural resources" in the region and efforts should be made to ensure and enhance its diversity and vibrancy, resiliency and sustainability, creativity and entrepreneurship.

There are several key principles that should comprehensively drive the regional agricultural master plan:

- The diversity of agriculture can make an important economic contribution in the local to global marketplace.
- The historical and cultural/social aspects are important in maintaining a high quality rural lifestyle and community character.
- Environmental sustainability of the rural landscape is important.
- The food system is an important perspective to consider.

**Implications for the RAMP:** Developing a 'shared vision' for agriculture and the future role, look and 'feel' of agriculture and food within the region is the critical starting point. Once this is in place and agreed to, the planning process becomes much easier.

## Prime Land

There is acknowledgment of the differing qualities of soil throughout the region although different rating concepts are used: Land Suitability Rating System (LSRS), Canada Land Inventory (CLI), and Farmland Assessment Rating (FAR). Regardless of the relative merits of each system, the planning policies focus attention on the higher capability lands (sometimes referred to as 'prime'). However, it should be noted that attention should be given to 'unique farmlands' that have usefulness to produce specific high-value food and fiber crops because of characteristics.

**Implications for the RAMP:** The EMRB will need to provide clear direction on which rating system(s) will be used and for what purposes and the role of different land areas within the overall agricultural and food sector.

## Land Use Zones

There are a variety of agricultural zones defined across the EMR. Generally, there is one all-purpose agricultural zone that has been used to support traditional agriculture--sometimes different zones for larger and smaller agricultural holdings. The multiple-purpose zones are sometimes supplemented by a 'holding' zone generally designed to limit subdivision and uses that would interfere with future urban development. These zones tend to have a very broad range of uses (either permitted or discretionary), including residential uses or others that aren't really soil based, which tend to have inherent differences with agriculture and, perhaps, are not consistent with long term priority agricultural areas. In addition, there is a question about the range of agricultural-related uses (support, service, agri-tourism, etc.) that should be provided for.

**Implications for the RAMP:** The implications are like the previous two sub-sections. There may be a case to agree to a common set of agricultural zones across the Region. However, there may be a need for special zones (or overlays) that might apply to unique or special locational circumstances.

## Conversion of Agricultural Lands

There are several approaches:

1. A recognized intent to permanently designate large contiguous agricultural areas so agriculture can thrive on both large and small holdings;
2. Development of better lands should only be where there are no reasonable alternatives (as a last resort) and the impact on agriculture is minimized;
3. Pressure can be taken off these areas by requiring higher densities, directing development to other suitable locations (lower capability lands, existing urban centres) where possible, transferring development rights and clustering;
4. Development of agricultural areas should be phased so that agriculture remains as long as possible; and
5. Some lands that are currently designated for non-agricultural uses (such as large areas of country residential) could be re-designated to agriculture.

**Implications for the RAMP:** The protection and preservation of agricultural lands requires a broader range of tools than what has been employed in other jurisdictions to date. The most decisive of these would be a policy to 'freeze' lands like approaches taken in British Columbia's Agricultural Land Reserve (ALR) and Ontario (Greenbelt). Such measures are politically challenging. Other more nuanced tools include transfer of development credits; conservation easements; establishing farmland trusts; and clustering development in areas of lower land quality. There is legislation in Alberta, such as the Land Stewardship Act (ALSA) to facilitate this. Specific to a policy enabling the transfer of development rights, a major issue to consider will be the ability and/or the desirability to allow transfers from municipality to municipality.

## Lots and Sizes

Traditional zoning practice throughout the region is that 80 acres is an acceptable minimum size for most agriculture, although some municipalities propose or allow smaller agricultural holdings. Approaches range from Strathcona where a quarter section can be split into halves or a smaller residential parcel can be subdivided out; other Counties allow the creation of up to four parcels per quarter section, in a variety of formats (Parkland for example allows 4-40-acre parcels or 4 smaller residential parcels).

**Implications for the RAMP:** The impact on agriculture and farming operations of differing lot sizes will need to be addressed. Lot sizes should be addressed in accordance to associated land use (i.e. Ag Acreages). For example, if a lot is being used as a residence only, then a maximum size may be prescribed. However, if the lot is being used for agricultural or food production purposes, a larger size may be allowed.

## Economic Development

There is widespread support for increasing the economic development potential of the agricultural sector. Most plans are supportive of "value-added agriculture" and the "diversification of agriculture" as major goals. The suggested opportunities are extensive—from agri-tourism and to energy creation to specialized livestock and local food initiatives. However, there are little in the way of concrete initiatives and implementation strategies for this economic development goal.

**Implications for the RAMP:** A major challenge facing the EMRB will be to adopt and implement an economic development plan that can stimulate and enable the growth of the regional food and agriculture industry.

Three distinct strategies will be required:

1. Ensuring the ability of traditional forms of production to continue (grains, oilseeds, dairy, beef, pork, poultry etc.);
2. Stimulating and/or supporting new ventures that are emerging in response to local food demand; and
3. Building the core of regional and nationally focused agri-food enterprises that have successfully emerged over the past 20 years.

## Current State of Plans and Policies

A comparison of the current zoning, any changes (or proposed changes) to the MDP, and the sub-division policies for each of the Counties is presented in Table 5.1. This summary provides important background and context as the RAMP planning process moves forward to ascertain common zones or sub-areas across the region.

In addition, Table 5.2 outlines policy directions and plans for each of the counties. It can be seen that several counties are currently in the process of completing plans, reviewing zones or sub-areas or in some cases reviewing their MDPs.

Two municipalities, namely the City of Edmonton and Strathcona County have developed and implemented urban agriculture strategies. In both cases, the strategy remains early stage and focuses on community gardens, bees and chickens (Note: Strathcona County has made the decision not to allow backyard chickens in view of the disease risk these may pose to the County's poultry sector). An overview of the urban agriculture plans are presented in Table 5.3.

The remaining urban centres have not yet taken any specific strategies or plans specific to urban agriculture or are in the very early stages. Many of these centres however, host very active Farmers' Markets. Further input and discussion will be received from the urban stakeholders during the next stage of the RAMP development process.

**Table 5.1 Comparison of Agriculture Land Use Policies by County**

<b>Policy Area</b>	<b>Leduc</b>	<b>Parkland</b>	<b>Strathcona</b>	<b>Sturgeon</b>
<b>Current Agriculture Zoning or Sub-Areas</b>	As per existing MDP, two designated areas: <ul style="list-style-type: none"> <li>Area A: generally east of Beaumont, Nisku and Leduc</li> <li>Area B: the remainder of the County.</li> </ul> Agriculture areas are rated based on FAR scores: 41% and over and under 41%.	Three Prime Agriculture Areas: <ul style="list-style-type: none"> <li>South East for large parcels</li> <li>West for large parcels</li> <li>Small Holdings (10 to 40 acres).</li> </ul> Current zoning includes: <ul style="list-style-type: none"> <li>Agriculture Restricted</li> <li>Agriculture/Nature Conservation</li> <li>Agricultural Industry Development</li> <li>Agriculture General</li> </ul>	The MDP identifies two areas: <ul style="list-style-type: none"> <li>Agriculture Small Holdings</li> <li>Agriculture Large Holdings</li> </ul> As well, the Beaver Hills Policy Area also provides opportunities for agriculture.	Agriculture –General encompasses 80% of the County’s lands. <p>Overall the County is divided into 10 neighbourhoods primarily defined by soil classification.</p>
<b>Proposed Changes to MDPs (planned or in progress)</b>	Proposing four agricultural areas: <ul style="list-style-type: none"> <li>Area A - broad range of ag. (crop &amp; grazing)</li> <li>Area B - extensive field crops</li> <li>Area C - focus on CFOs (dairy) but also includes crops and grazing</li> <li>Area D – small holdings (16 ha [40 acre] parcels) for agricultural use.</li> </ul>	In the process of exploring implementation tools for these areas: <ul style="list-style-type: none"> <li>Large parcels for grazing</li> <li>Large parcels for crops</li> <li>Agriculture areas that are sensitive to environment areas</li> <li>Small holdings areas for specialty and horticulture.</li> </ul>	The MDP adopted in September of 2017 has numerous agriculture related policies (both rural and urban), including expansion of agriculture definitions. <p>Implementation are now being worked on, a number of which relate to agriculture.</p>	MDP review is in progress further to the completion of the Agriculture Engagement Strategy. <p>Currently no formal planned/in progress changes.</p>
<b>Sub-division policy (general overview)</b>	As per existing MDP: Limited to one lot on high capability land (over 41% FAR). <p>As per draft MDP: One parcel per quarter – 32 ha (80 acre) split; farmstead (size limited to 1 ha or buildings and shelterbelt assoc. with residence); or residential (bare land 1 ha in size) depending on Agricultural Area.</p>	Each 160 acre parcel can be subdivided into 4 titled areas in a variety of formats.	In the Agriculture Large Holdings and Beaver Hills Policy Areas – a first parcel out of an un-subdivided quarter section can be considered, consisting of: an equal split; a residential parcel; or a split along a natural or man-made severance. In the Agriculture Small Holdings Policy Area, the minimum parcel size is 8.0 ha (20 acres) with a 200 m minimum width.	Maximum density for 160 acres is 4 parcels. Policy shall ensure that subdivision layout contains 2 Agricultural Parcels and 2 acreage lots (usually 2 x 80 acres and 2 residential lots).

**Table 5.2 Policy Directions and Programs by County**

<b>Leduc</b>	<b>Parkland</b>	<b>Strathcona</b>	<b>Sturgeon</b>
<p>Agricultural Strategy approved by Council July 5, 2016.</p> <p>Agri-business encouraged county-wide in agricultural hubs (concentrated nodes) AIA generally required for non-ag development proposals.</p> <p>Reduced number of dwellings per quarter.</p> <p>Minimize conversion and/or fragmentation of ag through site design.</p> <p>County also offering ALUS (Alternative Land User Services) – an incentive program for farmers to provide ecological goods &amp; services.</p>	<p>Future of Agriculture Plan received for information in September 2016.</p> <p>County offers ALUS (Alternative Land User Services) – an incentive program for farmers to provide ecological goods &amp; services.</p>	<p>Agriculture Master Plan (AMP) adopted in 2015.</p> <p>Planning and Development Services and Agricultural Services work closely together on policy updates such as the MDP and on the implementation of AMP items.</p> <p>Agriculture Services is referred on all planning related applications for input.</p> <p>There is an increased role of Agriculture Services as technical experts when developing agriculture related planning policies.</p> <p>Urban Agriculture Strategy developed and accepted in 2016 is now being implemented</p>	<p>Agriculture Engagement Strategy endorsed by Council on June 12, 2018.</p> <p>Agricultural Support Strategy report scheduled to be completed in Q4 2018. Also currently assessing ALUS program and applicability to Sturgeon County.</p> <p>All proposed subdivision applications within the municipality are reviewed by Agriculture Services for input.</p> <p>Established Agricultural Services Board Serves as an advisory body to Council on agriculture-related matters with a goal to promote, enhance and protect the viability of the agricultural industry in Sturgeon County.</p>

**Table 5.3 Urban Agriculture Policies and Strategies: City of Edmonton and Strathcona County**

Policy Area	City of Edmonton (2013)	Strathcona County (2017)
<b>Strategic Directions/Strategy Areas</b>	<ol style="list-style-type: none"> <li>1. Establish the Edmonton Food Council</li> <li>2. Provide Food Skill Education and Information</li> <li>3. Expand Urban Agriculture</li> <li>4. Develop Local Food Infrastructure Capacity</li> <li>5. Grow Local Food Supply and Demand</li> <li>6. Enliven the Public Realm Through a Diversity of Food Activities</li> <li>7. Treat Food Waste as Resource</li> <li>8. Support Urban Farms and Ecological Approaches to Farming</li> <li>9. Integrate Land for Agriculture</li> </ol>	<ol style="list-style-type: none"> <li>1. Community Gardens</li> <li>2. Public Agriculture and Edible Landscaping</li> <li>3. Urban Farming</li> <li>4. School Agriculture Program</li> <li>5. Urban Livestock</li> <li>6. Home Gardens</li> <li>7. Education and Coordination</li> </ol>
<b>Progress to Date</b>	<p>Edmonton Food Council was established in 2013. The focus to date has been largely on developing by-laws to enable urban agriculture – particularly bees and backyard chickens. The Council is working to support more local markets as well as assisting new entrants to obtain licenses and permits. It is also working to support urban famers and ecological approaches to farming.</p> <p>Significantly, the City of Edmonton has made “Food and Urban Agriculture” one of the 9 strategic goals in the MDP. The stated goal is to develop “A Resilient Food and Urban Agriculture System.” The MDP outlines several requirements:</p> <ul style="list-style-type: none"> <li>• Prevent premature fragmentation of agricultural lands in the urban growth areas prior to expansion.</li> <li>• Preparation of Area Structure Plans in the Northeast, Southeast and Southwest Urban Growth Areas that adhere to the Citywide Food and Agriculture Strategy. These plans are to include a peri-urban agricultural section.</li> </ul>	<p>Agriculture Strategy was adopted by Council in 2016. Implementation has begun. A Community Garden Policy was accepted in 2017 and 10 new gardens have been established since. Other projects underway include school agriculture and edible landscaping.</p>

## 6.0 Suite of Principles

The analysis of regional and municipal plans and policies reveal that a common 'suite of principles' to build the RAMP are in place albeit with differing emphasis or priorities across the region.

First, addressing the opportunity to grow the agriculture and food industry including the requirement to conserve agricultural land is generally comprised of four elements:

- Exploring opportunities to grow the economic contribution of agriculture and food
- Incorporating historical & cultural aspects for the agricultural community
- Sustaining the environmental quality of the rural landscape
- Emphasizing the agriculture and food system perspective (food security).

The major and consistent thrust of current regional and municipal policy is that a supply of land (with subtle differences about quality, prime, long term, contiguous size, large and small parcels, etc.) should be maintained (or protected, preserved or conserved, used only as a last resort etc.) and not developed for other uses for a period of time (from development, long term, etc.).

Second, the common elements that can be used to build a guiding suite of principles are as follows:

1. Recognize the importance of a long term assured land base on which the agriculture and food sector can operate without undue hindrance or limitations. This in turn requires policy direction in three critical areas:
  - a. Identify the actual areas that define the long term secure agricultural land base
  - b. Minimize fragmentation of agricultural land in the defined areas
  - c. Minimize conversion of agricultural land to other uses
2. To promote the economic development, value-added and diversification of the agriculture and food sector as a major economic driver
3. To accommodate compatible and supportive land use in agricultural areas including wetlands, environmentally sensitive areas and woodlands.
4. To support agriculture with appropriate hard and soft infrastructure—including physical assets, economic development programs, and leadership development
5. To manage and reduce issues between agriculture and other uses

**Implications for the RAMP:** It will be critical to define and subsequently agree on a 'suite of principles' that are common across the Region. Again the 'shared vision' and the long-term intentions to be achieved by the shared vision serve as the key starting point.



## 7.0 Observations and Implications

### 7.1 Observations

1. **The Agriculture & Food Sector is valued within the EMR** - agriculture, food production and the visible presence of farming operations as an integral part of the EMR community fabric appears to be highly valued by all the regional stakeholders. The position is supported by the 'Vision' statements that have been generated by all four major agricultural municipalities and the City of Edmonton. The vision statements reflect an extensive body of input and consultation from a wide range of stakeholders and residents across the Region.
2. **Agriculture and Food in the EMR has strong growth potential** - input received from twenty-three food industry representatives strongly support aspirations that the EMR can become a bigger player in terms of being a 'Food and Agriculture' centre. Many of the interviewees expressed optimism specific to numerous opportunities regarding export demand, interests in local food, examples of companies that serve as 'success' models, and an emerging entrepreneurial class actively developing new ventures in this space.

In addition, the legalization of cannabis has stimulated major new investments in greenhouse production and the processing of hemp. It should also be noted that many of those interviewed expressed frustration that 'Agriculture and Food' has not received more focus as a strategic industry sector capable of generating economic growth and employment – a foremost objective for the Province of Alberta.

3. **Agriculture and Food Sector is positioned to be an Economic Generator and GDP Growth** - perhaps one of the Region's biggest strengths is the size of the food and agricultural processing industry. Approximately 25% of the total provincial industry (as measured by the number of employees working in the sector) is located within the Region. The EMR is home to two major poultry processors (Sofina, Maple Leaf Foods) a large feed milling sector, a major oil seed crushing plant, a major terminal elevator well as several specialty food processors including Alyia's, Capital Packers, Champion Pet Foods, Heritage Foods, Hempco, Kinickinick, Kitchen Partners, Little Potato Company and Siwin Foods. Several of these companies exceed \$100 million in annual revenues.
4. **Resilience and Sustainability of Agriculture Sector** - agricultural production in the EMR is undergoing rapid change. Like the province (and elsewhere) the trend is to fewer but larger farms. Overall, the changes in the region's crop mix reflect the changes taking place in the province. Two indicators differ (a) livestock populations and the actual number of farms are decreasing more rapidly; and (b) specialty enterprises are also on the decline.

The reduced levels of livestock (particularly pigs) are not surprising in view of proximity to urban development and the major restructuring that has taken place within the pork sector. However, the relatively small acreages of vegetables, fruits and greenhouse production are indicative of the challenges that local operators are facing with respect to viability, accessing current market channels and/or in developing direct market opportunities.

5. **Need for Certainty** - based on the consultations, many farmers themselves feel less certain about their long-term future in view of the growing development pressures coming both from industry, commercial and residential growth. Not surprisingly, this viewpoint varies by proximity to urban developments. The closer these farms are, the greater the concern. But this concern is not limited to those farmers located near to urban centres or industrial developments. Rural sub-divisions and the encroachment of non-farm

rural residents located in agricultural areas are also a major concern. In response, some of these farmers have already begun transitioning their operations and land base out of the EMR. The steady decline in livestock populations over the past 15 years is further testimony of this transition to the extent that large tracts of land are required for forage/silage production and the spreading of manure free from obstructions and complaints.

6. **Rural – Urban frictions** - a major and growing concern among the farming community is the increase in rural-urban frictions. There are strong feelings that agriculture is not understood and at best is ‘misunderstood.’ As the non-farm rural population increases, so do the issues and concerns. Furthermore, farmers are concerned about being outnumbered. Consequently, there is considerable support for ‘Right to Farm’ policies that assure farmers of their ability to undertake the necessary and timely operations fundamental to their farms.
7. **Increasing Land Values** - the long-term availability and affordability of land and the ability to operate are major concerns to many farmers in the EMR. In many cases, the value of the land exceeds the value of the agricultural operations taking place on it. Availability and affordability are also major barriers for new entrants – both established producers who are seeking to continue conventional farming operations and potential entrants who are interested in establishing new operations to supply the growing demand for local food and food experiences.
8. **Need to Build Consensus among stakeholders** - measures taken to preserve agricultural land will receive mixed support from most farmers and landowners. While many support efforts to preserve good agricultural land, at the same time, there are concerns that overly restrictive policies may impact property values – a concern for those farmers who are planning to retire soon.
9. **Need to remove Barriers to enable growth in Value added Agriculture** - while new agricultural, food and value-added enterprises such as food processing, equine operations, market gardens, horticultural, specialty crops or agri-tourism offer potential within the EMR, the path forward to success remains unclear and replete with risks and barriers.

Overall, value added and new enterprise development in the Region (and the Province) has been modest. Furthermore, despite the strong interest in food and sourcing locally, the statistics illustrate that growth of the local food sector to date has been modest at best. Nevertheless, it remains a future opportunity for the Region.

## 7.2 Implications

1. **Agreed to definition of Agriculture** - the review of the trends combined with a review of the literature, the changes in technology and first-hand input from the food and agriculture sector affirms that agriculture is changing, and it is changing fast. Thus, a first step to be taken in the planning process is to ensure that a broad definition of agriculture is defined, understood and applied. Agriculture is now far more than the traditional family farm – it ranges from large scale family corporations farming thousands of acres to small scale service-based speciality enterprises that may be involved in production and focus on the provision of customer experience.
2. **Ongoing Education and Awareness** - the agriculture and food industry tomorrow will be markedly different from what it has been in the past. Several of the changes have been noted earlier. However, two areas warrant further attention: “Smart Agriculture” and “Smart Food.”

- **Smart Agriculture** can be summarized by one driving imperative: “*No Molecule is Wasted*”. Driven by economics and enabled by technology, smart agriculture is effectively bringing what has been referred to as “Precision Agriculture” to a new level. Technical and management systems are now available to deal with every farm, every field and indeed every square meter uniquely. All of this is data driven – top down using satellite imagery; yields maps; imagery; drones; the use of sensors, monitoring; as well as bottom up – the continuous flow of data from the soil, topography and local weather. The consequences are significant: improved economic performance; and reduced environmental impacts. Nutrient run-off or pesticide drift will become concerns of the past.
  - **Smart Food** involves the development and selection of foods that have been validated to provide desired health effects or performance. This includes: targeted nutrition research that identifies compounds in foods that interact with longevity genetic pathways (smart food compounds); validates the effects of “smart food compounds” and “smart foods” in disease prevention and cure; and develops “smart food compounds” into dietary supplements or pharmaceutical drugs.
3. **Raise the Profile and Instil a higher Value for Agriculture** - the EMR has the opportunity to “establish itself” as a major centre for agriculture and food. In this regard, the Region is replete with numerous assets to actualize this opportunity: excellent soils; a favourable climate; a high performing farming sector; a strong processing sector with several players who have developed unique products and markets; excellent supporting infrastructure including the University of Alberta (Faculty of Agriculture Life and Environmental Sciences with several regional based research facilities such as the Research Farm in Sturgeon County and Devonian Garden in Parkland County and an internationally renowned nutrition research group), NAIT with its culinary program, and Alberta Agriculture & Forestry including the Food Product Development Centre and Crop Development Centre (CDC North). In addition, several initiatives are emerging to build momentum in this area such as the Food and Agri-Business Initiative led by the City of Edmonton, the Local Food Act led by the Province of Alberta and the Supercluster Initiative supporting Protein Industries Canada led by Industry Science and Economic Development (ISED), Government of Canada.
4. **A commitment to Agricultural Land Preservation to meet future needs** - a major limiting factor to the realization of the Food and Agriculture opportunity for the EMR is the long-term availability of agricultural land. However, the specific requirements and issues pertaining to land vary by the differing segments. For example:
- Crop Producers who produce forages, grains, oilseeds and pulse crops require large areas of contiguous agricultural land to operate efficiently. Furthermore, they require that these lands are available in the long term. The shorter (or the more uncertain) the term, the less attention is paid to soil quality and maintaining long term fertility.
  - Specialized crop producers such as potato growers require specialized soils and micro-climates. For example, potatoes perform best when grown on sandier soils and with access to water (irrigation).
  - Vegetables, fruits and other specialized produce for local food demand require high quality, well drained soils and access to water for irrigation. Much of these can take place on small parcels (1 to 10 acres). Many of these growers (or would be growers) are simply unable to afford the purchase of such lands nor are such parcels readily available on a lease basis close to the City of Edmonton.

5. **An undertone of uncertainty** - at first glance, agriculture in the region appears to be holding its own. However, the consultation process across the EMR while conducting the four municipal agriculture plans clearly indicates that the agriculture and food system is less than stable and may be reaching a tipping point. It is already evident that livestock production is exiting from the EMR. Furthermore, speciality enterprises even in the shadow of a large urban market are not showing signs of growth, rather the reverse. Finally, and perhaps most importantly, crop producers expressed strong concerns about the ability to operate their businesses in view of the increasing encroachment by non-farm rural residents and urban based issues (traffic, theft, complaints regarding dust, noise, sprays, manure etc.). Some have already begun to secure lands for farming outside the EMR. Should encroachment and issues increase and the size and shape of available lands becoming limiting, these operators will choose to farm outside of the region. Thus, the prospect that significant tracts of land not being cropped or underutilized is foreseeable.
6. **Enabling the Growth of Value added Food Sector** - the emergence of new value-added enterprises whether these are production, processing or service based will not come easy. The barriers are substantial. History has shown that successes have been few; the many initiatives applied to this area have yielded modest results. However, it should also be said that food and agriculture has never been a strategic focus for the City of Edmonton or the Edmonton Metropolitan Region. The question remains: what can be accomplished with a vision, focus and the long-term commitment of resources?
7. **Consistent Decision – making** - the process of developing the EMR Land Evaluation and Site Assessment process, one of the key deliverables for the RAMP, remains early stage. However, much can be learned from Lancaster County, Pennsylvania (see Text Box next page). Lancaster County has successfully preserved 110,000 acres (nearly one-third of the arable acreage – much of this is located in close proximity to urban development).

The County takes a comprehensive approach to agricultural land preservation and applies several tools that work together:

1. agricultural zoning and clear urban growth boundaries;
  2. prioritization of parcels to be preserved using the Land Evaluation and Site Assessment program that is customized for Lancaster County;
  3. the purchase of conservation easements by the Agriculture Preserve Board or the Lancaster Farmland Trust;
  4. the trading of development credits from farms to designated urban growth areas (towns, villages and ‘qualified crossroads’).
8. **Establishing Limits on Urban Growth** - Finally, the analysis and recommendations offered by a recent review<sup>18</sup> of the Ontario Greater Golden Horseshoe area are very instructive. First it is noted that the growth pressures, issues and industry dynamics which operates outside the Greenbelt are very similar to the EMR. The review makes some very clear statements with respect to agriculture and its importance as a major driver of the Ontario economy. For example:
    - The key to a robust agricultural industry is the same everywhere: the protection of the land base on which to farm and to carry out farm related activities.

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<sup>18</sup> Farmland at Risk: Why land-use planning needs improvement for a healthy agricultural future in the Greater Golden Horseshoe, November 2015. Ontario Federation of Agriculture and Environmental Defence.

- As urban development encroaches on agricultural land and the urban envelope expands onto farmland without adequate buffers or when non-agricultural uses are permitted in rural areas, normal farm practices are disrupted, and the long-term viability of farming is impacted.
- Planners and key decision makers are often “deaf” to the concerns of the farming community. Furthermore, there is little to no understanding of the agricultural systems that are in place and spatially specific and how new developments or infrastructure projects can irreparably damage these systems to the detriment of the farming community.
- The current planning framework is weak and leaves farmland vulnerable to urbanization. Currently farmland in this critical agricultural area of Ontario is considered “tarmac in waiting.”

As stated earlier in this document, the report calls for a new approach to planning in this region summed as follow: “A fresh perspective is needed on farmland ..... one that sees agriculture as a permanent feature of the regional landscape and farming as an essential component of our economy and cultural heritage.”

**Figure 7.1 Aerial View of Lancaster County, Pennsylvania**



### **Lancaster County, Pennsylvania, Case Study**

1. A municipality that generates an estimated \$1.5 billion annually in farm gate sales (the most productive agricultural county in the USA east of the Mississippi; similar in size to Lethbridge County, Alberta in terms of sales).
2. Home to 530,000 people – comprising 41 townships; 18 boroughs and one city (Lancaster City). Each of these municipalities has its own council but operates within the framework of the Lancaster Planning Commission and the Comprehensive Plan for Lancaster County.
3. Contains a farm acreage base of 425,000 acres (much like Leduc County which has 375,000 acres in crops).
4. Has achieved a preserved agricultural land base in excess of 110,000 acres since 1988 – all with conservations easements.
5. Significant areas are designated for urban growth delineated by urban growth boundaries and able to accommodate projected growth for 20 year periods. These are reviewed every 10 years and can be expanded or contracted.

Lancaster County takes a comprehensive approach to agricultural land preservation and involves an interesting application of several tools: 1) agricultural zoning and clear urban growth boundaries; 2) prioritization of parcels to be preserved using the Land Evaluation and Site Assessment program that is customized for Lancaster County; 3) the purchase of conservation easements by the Agriculture Preserve Board or the Lancaster Farmland Trust; and 4) the trading of development credits from farms to designated urban growth areas (towns, villages, 'qualified crossroads');

The concerted effort to preserve agricultural land began in the 1980's and was led by a small group of farmers concerned about the future. Now 30 years later, almost one-third of the productive land base has been preserved. Furthermore, the success of the Lancaster County approach has been copied by several neighbouring counties located in the states of Delaware, Maryland and Pennsylvania wherein a total more than 600,000 acres have been preserved.

To be sure, Lancaster is different from Alberta – farms are much smaller (average size is less than 100 acres) and the County is home to a distinct cultural group – the Amish which comprise approximately 35% of the farming population. But the real lesson from Lancaster County is what can be accomplished when a small group of motivated people work together toward a clear objective.

## 8.0 Creating a New Future for Agriculture and Food in the EMR

The essence of the RAMP is to shape a future for agriculture and food in the EMR. It can be argued that the agriculture and value added food sector has largely functioned in the region without much attention and largely by default.

That is, the sector has not been the focus of a clear set of land or sector specific economic development policies. Nor has agriculture and food been the focus and beneficiary of a concerted public relations or communications strategy. Thus, the vast majority of the population in the region know little about the sector, what it does, what is being produced, the nature of the farm or food processing businesses at play, or even the disproportionate amount of high quality soils that are actually found in region. The real opportunity facing the EMR is this question: *what can be achieved by design?*

It must also be clearly stated (and perhaps repeated) that the agriculture and food sector is far from a “one size fits all” sector. There are at least three distinct sub-sectors:

- a) **Large scale commodity production sector** that is focused on production for provincial, national or export markets;
- b) **Specialized local food and emerging products** sector that focus on distinct markets which may be local, provincial or beyond; and
- c) **Value added/food and beverage processing** sector which in turn ranges from the very small to the very large. Each must be considered distinctly.

And accordingly three overriding questions prevail:

1. What needs to be done to provide an assured future for farmers who produce grains, oilseeds, forages, pulse crops, potatoes, livestock etc. who are by far the largest land owners and stewards of the land in the region?
2. What can be done to facilitate the growth of and the opportunities for the specialty and food producing producers who typically operate on small land parcels or special purpose facilities?
3. How can the food and agriculture sector become an even larger and growing economic driver for the Region?

To seed the response to these questions, we begin by providing a profile of two agriculture businesses that are currently operating in the EMR. (See the short story lines on the Little Potato Company and Kalco Farms – next two pages). These profiles provide a glimpse of what is happening and most importantly what the future could hold.

The question of the future and what this might look like is predicated on a clear understanding of differing sectors, each with differing needs. We identified three:

1. **Commodity Production Sector** – producing largely for regional, national or export markets;
2. **Specialty Products/Local Food/Emerging Sector** – producing largely for the local and regional markets; and
3. **Value-Added Food and Beverage Sector** – producing for any and all markets. A brief summary of what each of these sectors may look like and what their requirements are presented in Tables 8.1 to 8.3.

**Table 8.1: Commodity Production Sector: Future Picture and Requirements**

Picture of the Future	Requirements
<ul style="list-style-type: none"> <li>• Few but large operations</li> <li>• Large areas of farming/field – contiguous agriculture land</li> <li>• Minimal encroachment</li> <li>• Extensive use of professional, operational and technical services</li> <li>• Technology driven</li> </ul>	<ul style="list-style-type: none"> <li>• Long term assured land base</li> <li>• Priority areas for commodity agriculture</li> <li>• ‘Right to Farm’ legislation and regulations</li> <li>• Good infrastructure – roads, rails, air and irrigation (in some areas)</li> </ul>

**Table 8.2: Local Food/Emerging Sector: Future Picture and Requirements**

Picture of the Future	Requirements
<ul style="list-style-type: none"> <li>• Small plot production</li> <li>• Large number of small producers – multiple products</li> <li>• Soil and facility based production</li> <li>• Extensive automation</li> <li>• Excellent economics - competitive</li> </ul>	<ul style="list-style-type: none"> <li>• Affordable land close to market</li> <li>• Land use policy that provides small plots for agriculture (not residences)</li> <li>• New local markets and channels to market</li> <li>• Extension and technical services</li> </ul>

**Table 8.3: Value-Added Diversification: Future Picture and Requirements**

Picture of the Future	Requirements
<ul style="list-style-type: none"> <li>• Local products are competitive and preferred – significant market share</li> <li>• New generation of processors, co-packers, supporting services</li> <li>• Robust production of products and ingredients for the multiple markets</li> <li>• Advanced technical, nutritional and business management services</li> </ul>	<ul style="list-style-type: none"> <li>• Targeted market strategies – dedicated supply chains serving local, regional and export markets</li> <li>• New infrastructure supporting retail, wholesale and processing – incubators, co-packers, logistics</li> <li>• Entrepreneurship and mentoring support</li> </ul>





## The Little Potato Company

In 1996 Angela Santiago with her father, who missed the delicious little “Creamer” potatoes of his youth in the Netherlands co-founded *The Little Potato Company*. Their plan: grow a few potatoes in the backyard, wash them in the family’s bathtub, pack two pounds into a paper bag, set up at the Strathcona Farmers Market and hope for the best. It didn’t take long to realize that the ‘test’ was successful. People loved their product. And the idea for a specialty produce company was born.

Twenty years later, the Little Potato Company (LPC) has grown to be one of Alberta’s largest and fastest growing fresh produce companies. Three years ago, it surpassed \$100 million in annual sales; this year it will reach \$200 million. And it is not stopping here. Development of the US market remains early stage and \$1 billion in annual sales is not out of the question.

The company operates out of three facilities: the ‘home’ plant based in Edmonton; a co-packer in Prince Edward Island; and a newly constructed plant which just opened in Deforest, Wisconsin. The Edmonton plant alone has more than 300 employees and the total workforce exceeds 600. More than 25 growers supply over 100 million pounds of potatoes annually from several provinces and states including Alberta, Saskatchewan, Manitoba, PEI, Georgia, Florida, Wisconsin, Illinois and California. But the original potato supply began in Parkland County where it continues to this day.

The LPC story is truly inspirational. It is a story of a visionary, a cull product and a passion to supply a tasty nutritious branded product. And a readiness to surround herself with the expertise necessary to manage, operate and grow a company. Today the Little Potato Company stands tall in most major grocery retailers in Canada and the USA. As Angela would say: “We may be ‘little’ but we are getting bigger!”



## Kalco Farms – A New Generation

Just 4 years ago, Mike Kalisvaart, who owns and operates Kalco Farms – had 8,000 acres under his watch. This year, he planned to farm 14,000 acres. By the time he finished seeding, he had over 16,000 acres of crops.

Mike Kalisvaart is an example of a new generation of CEO farmers. They are young, business minded, focused on efficiency and ready to employ any technology or expertise to improve their operations. And expanding rapidly.

Mike's home base is near Gibbons. But his farming operation now covers three municipalities: Sturgeon, Strathcona and Thorhild Counties. The majority of his land is rented - over 14,500 acres. And the opportunity to add another 2,000 acres to his production base this spring came unexpectedly. Word got around that Mike was in the area and before long several farmers turned over their properties to him. Ten years ago, it took a month to seed 2,500 acres. Now he can seed the entire 16,000 acres in 3 weeks.

A second generation farmer, Mike took over from his father who had been a long time hog producer and an active member of the Western Hog Exchange. But the hog business changed - positive margins were more the exception than the rule and it was time to move on. Since then Mike is totally focused on learning and adopting best practices for cropping. For example, he employs over 10 full time employees including a full time agronomist to oversee all the crops in production. During seeding and harvest, this work force doubles with the addition of contractors.

The farm uses a tablet based record keeping system. Employees enter data on the tablet while in the field. It is Cloud based, allowing analysis and the pulling of real-time reports on input supplies and inventory for sale at any time.

How big will Mike's farm become? His response: "I know farmers who are two or three times larger than me. So I guess there's still some room to grow yet."

## 9.0 Toward the Regional Agriculture Master Plan

### 9.1 The Core Issues

The preceding analysis of trends, issues and comparatives to other jurisdictions strongly suggest that an effective RAMP capable of shaping a new future for the agriculture sector must address the following core issues:

1. **Provide assurance for an agricultural land base that is long term.** It is important to recognize that land requirements differs by production sector – the large commodity sector requires large areas of contiguous farmland; the specialty sector requires smaller plots and in many cases high quality soils that are in relative proximity to urban markets and infrastructure.
2. **Agricultural zoning** differs by area or sub-area across the EMR and reflects the requirements of defined production sectors and intended use. Furthermore, urban or non-farm encroachment and land fragmentation must be addressed. Finally, the permanence of agriculture zone boundaries and correspondingly, urban growth areas are exceedingly important.
3. **Mitigation measures** to address current expectations with respect to land values and ‘rights’ implicit to current land use policies. In this regard, the application of such planning tools such as the transfer of development credits and the purchase of conservation easements may serve to address these expectations.
4. **Supportive and targeted economic development programs** that recognizes the unique market, access and infrastructure requirements of the differing agriculture and food sectors operating within the EMR.

### 9.2 The Path Forward

The Situation Analysis provides the starting base for the continuation of the RAMP planning process. The following responses are provided to the fundamental questions posed in the introduction:

- *The growing demand for food and agricultural products presents a bright future for agriculture both regionally and globally.*
- *Land use policies that provide access, affordability and long term assurance to farmers are critical.*
- *Prime agricultural land is in short supply and diminishing – every effort should be made to protect this valuable resource.*
- *The EMR needs to declare that agriculture and food is a strategic industry for growth given the rich resource base and the supporting production, processing and research asset base situated.*

As next steps in the development of the RAMP, it is recommended that the EMRB consider the following areas of focus and sequencing over the next 18 months:

1. **Developing a Shared Vision for Agriculture and Food in the Region** – in other words, what is the desired state to be achieved? What will the EMR ‘look and feel’ like as a community in 50 years? Can a clear picture be created and articulated? A clear vision with the support of guiding principles is the first and most important step.

Currently the Counties and the City of Edmonton have similar visions and aspirations to the extent that agriculture is explicitly valued. A clear articulation of and commitment to agriculture and food as a

strategic industry for the Region and capable of increasing its economic, cultural and environment contributions a critical starting point. Such a commitment will enable this all important visioning process.

*This process which will be led by the EMRB Task Force should be a foremost priority and be completed by the fall of 2018.*

- 2. Land Use Policies** – land use policies are critical to the realization of the EMR as a thriving and robust food and agriculture centre. The ‘Vision’ will drive this process and influence the decisions regarding choices specific to agricultural land and the priorities given to agricultural lands.

Several questions will need to be addressed:

- Will some areas for agriculture be zoned as permanent? If so, what policies could enable this?
- Will there be different priority areas to reflect differing types of agriculture?
- How to minimize the impact of urban growth on agricultural lands?
- Where should growth not take place?
- When growth requires the use of good agriculture land, or any agricultural land such as areas for grazing - how can this be done while minimizing disruption to the agriculture and food system?
- What considerations should be given to the value of the environmental goods and services that agricultural is able to provide a community? Where should this be done?
- How to deal with permanent agriculture lands vs. transition lands that are clearly earmarked for future urban development?
- What tools can be used to deal with land speculation?
- How do we take a regional planning approach and not just cater to land owners who want to sell for the highest price?

Many of the above questions specific to priority areas, choices and tradeoffs will be addressed through the process of developing the LESA tool.

The LESA development process began on June 15<sup>th</sup>, 2018 and will inform the land use policy questions and vice versa. This process will take place over the course of the next year.

*The Task Force will be in a position to evaluate and make recommendations regarding a specific set of land use policies by the fall of 2019.*

- 3. Economic Development and Diversification** – it is apparent that economic development policies directed to the food and agriculture industry need to be strengthened. The question of how to foster agricultural and food business viability is a difficult one.

- What types of agricultural activities/food related enterprises can thrive?
- How can agriculture and food become an even larger economic driver within the Region in the future? If so, how and what must be done differently or better than past efforts?
- How can economic development strategies enhance the full spectrum of the agri-food system – production, processing, and marketing?
- What needs to be done to address new and emerging initiatives?

The question of how to sustain and support the food and agriculture industry for the next 30 to 50 years is an important one. Simply preserving agriculture lands especially those in close proximity to urban

development without a strong a growing food industry would be sub-optimal.

*This process will begin in parallel to the Land Use Policy development. Again, the Task Force will be in a position to consider recommendations in the fall of 2019.*

The three components listed above are highly inter-related. The vision will drive a definitive land use policy that is seen to value and support agricultural land and in turn foster the conditions that enhance or lead to economic diversity and viability.

Conversely, a land use policy in the metropolitan context that regards any and all lands (including prime agricultural lands) as merely 'lands in waiting' for future development, will create conditions that undermine the economic viability and the vision for a growing and robust agriculture and food sector will not be attained.

In closing, the Situation Analysis remains a working document that will continue to be reviewed, revised and updated as the RAMP process continues.

## Report Attachments

- 1: **Charts and Graphs**
- 2: **Policies and Planning Context**
- 3: **Value Added Interview Highlights**

# Attachment 1: Charts and Graphs

## Farm Business Indicators

Figure 1.1: Number of Farms by County, 2001-2016)

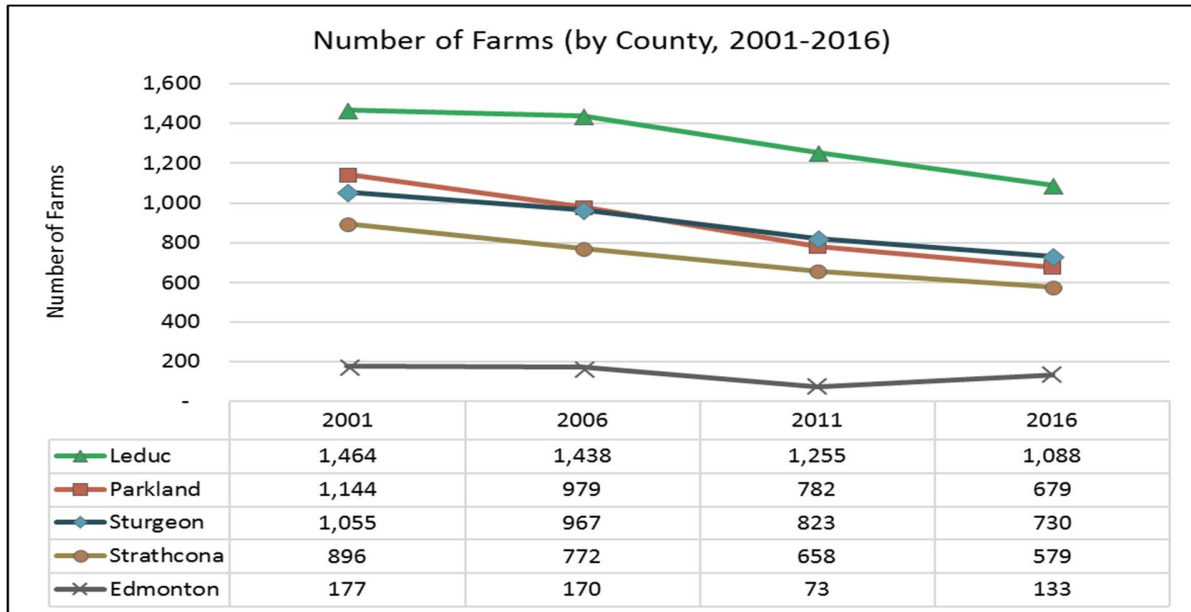


Chart 1.1 Schematic Comparisons of Farm Numbers by Municipality: 2001-2016

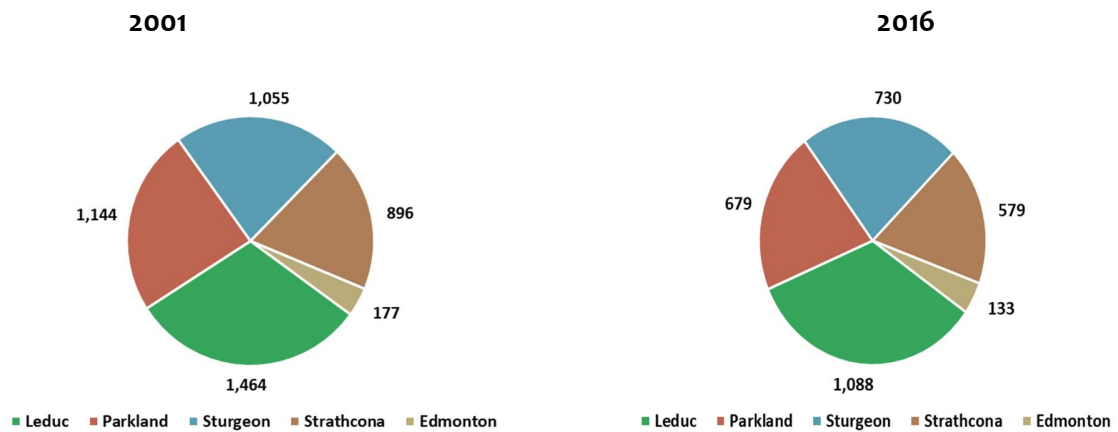
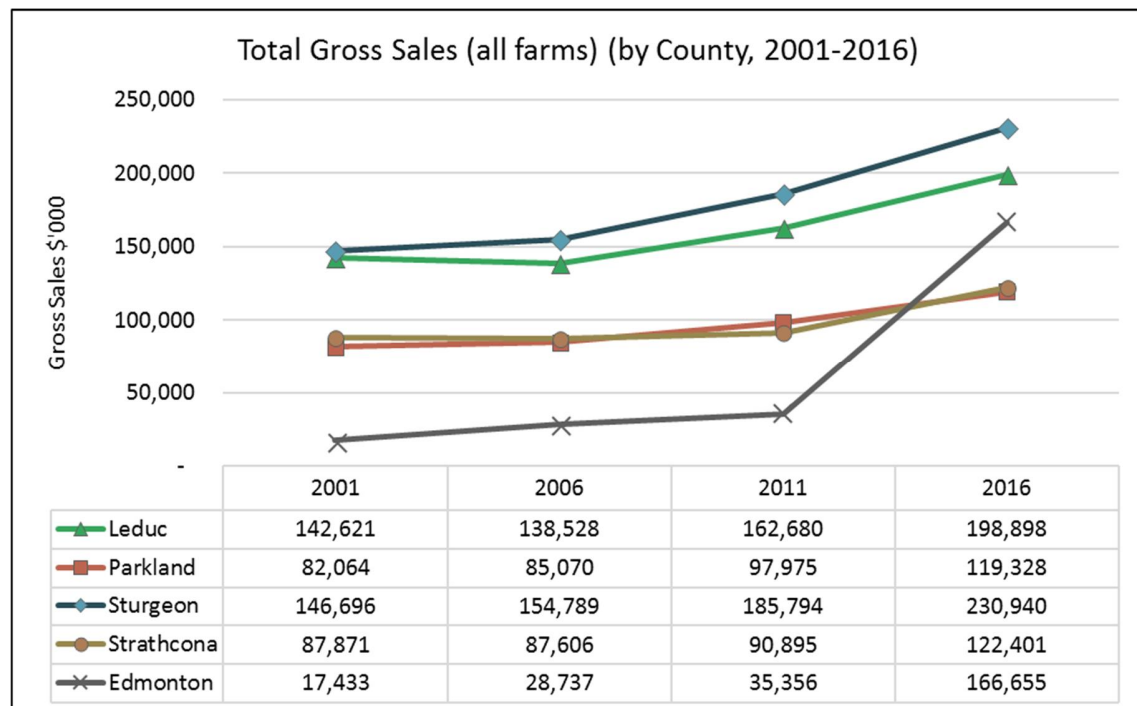


Figure 1.2: Average Farm Size (Acres, by County, 2001-2016)<sup>19</sup>



Figure 1.3: Total Gross Farm Sales (by County: 2001-2016)



<sup>19</sup> It is assumed that the 2011 Edmonton statistic is an anomaly due to the way data was collected.



## Area Farmed and Selected Crops

Figure 1.4: Total Area of Farms (by County: 2001-2016)

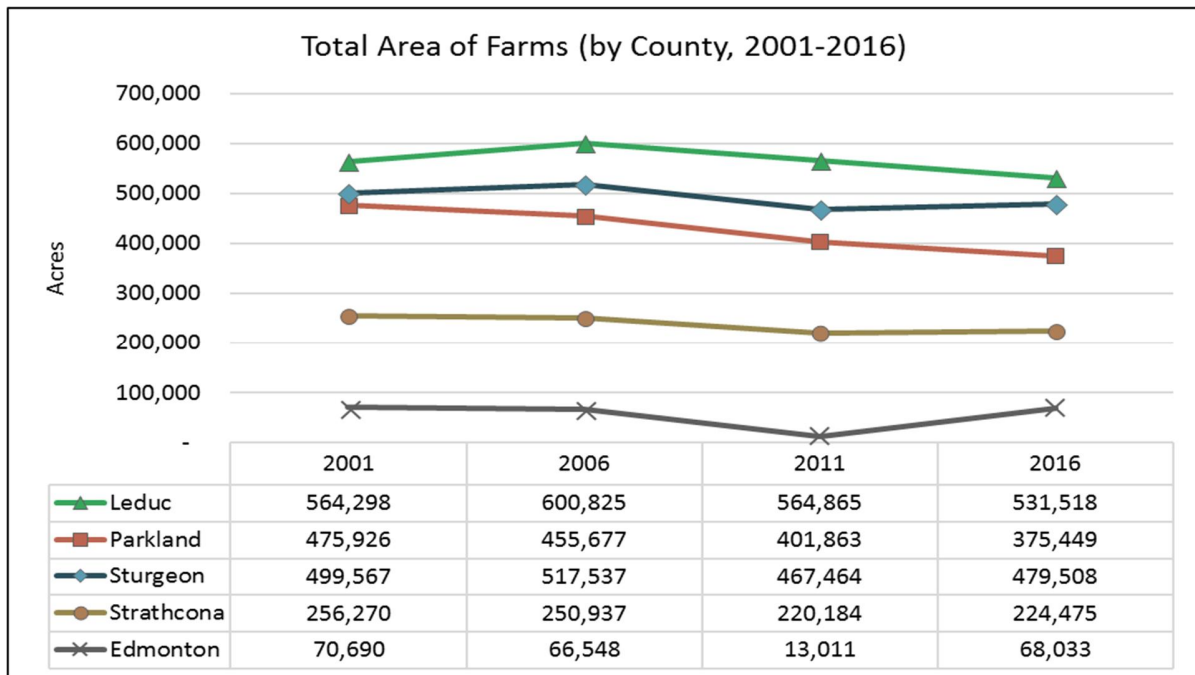


Figure 1.5: Total Area of Crops (by County: 2001 – 2016)

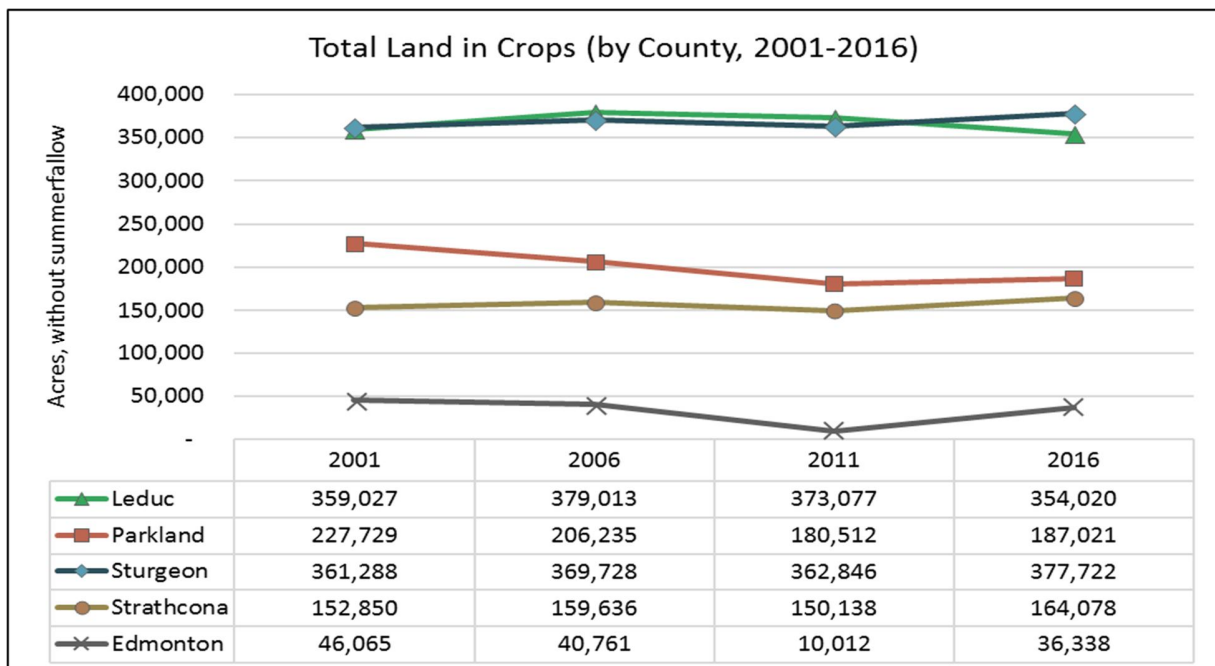


Chart 1.2 Schematic Comparison of Crop Mix in the EMR: 2001-2016

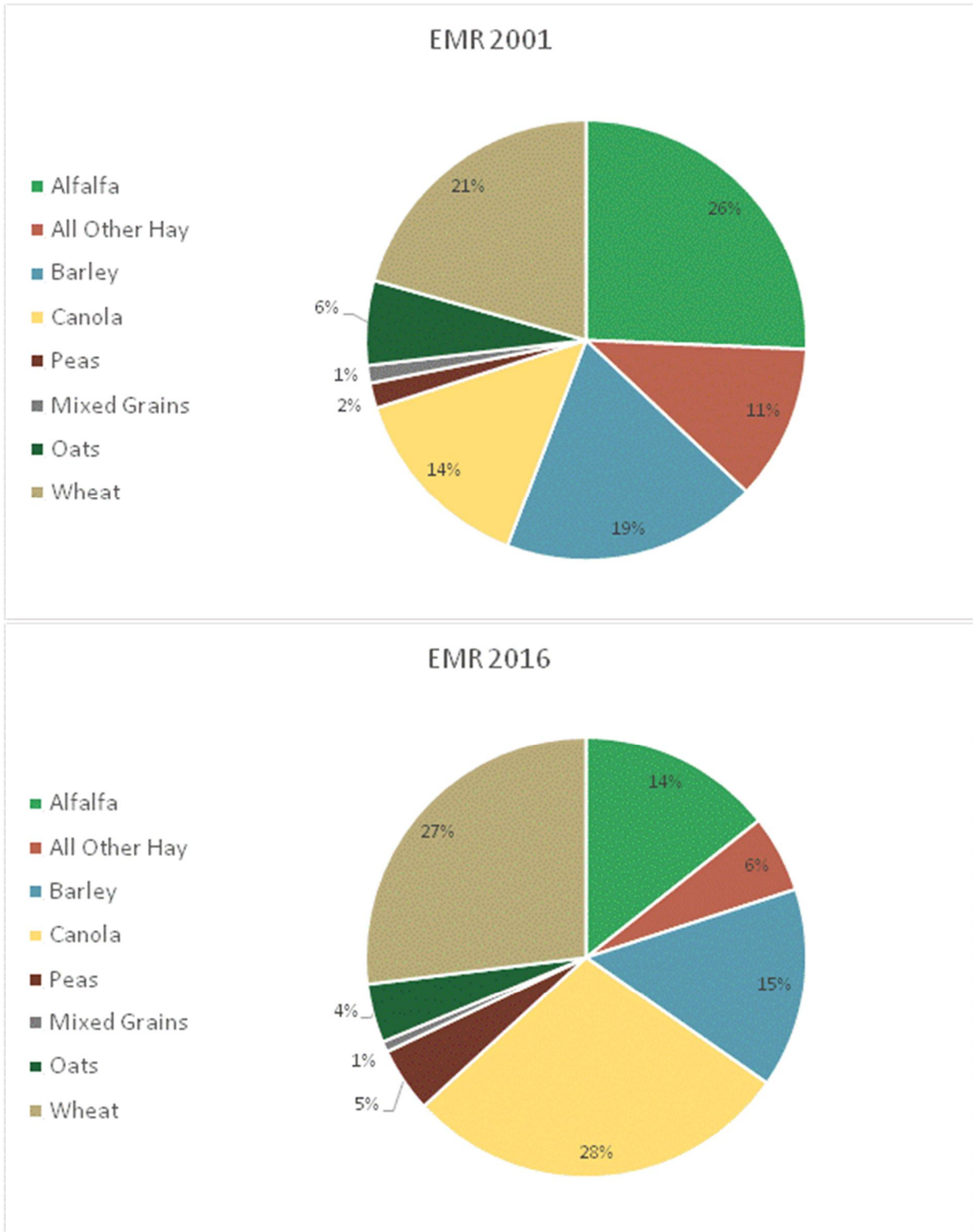


Figure 1.6: Canola Acreage (by County, 2001-2016)

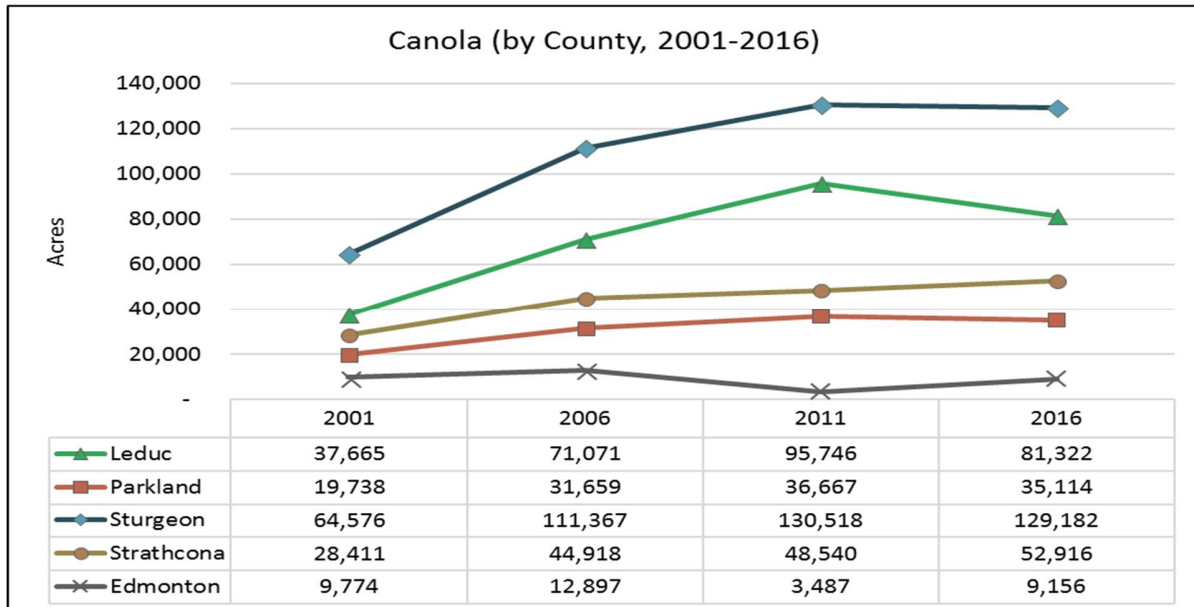
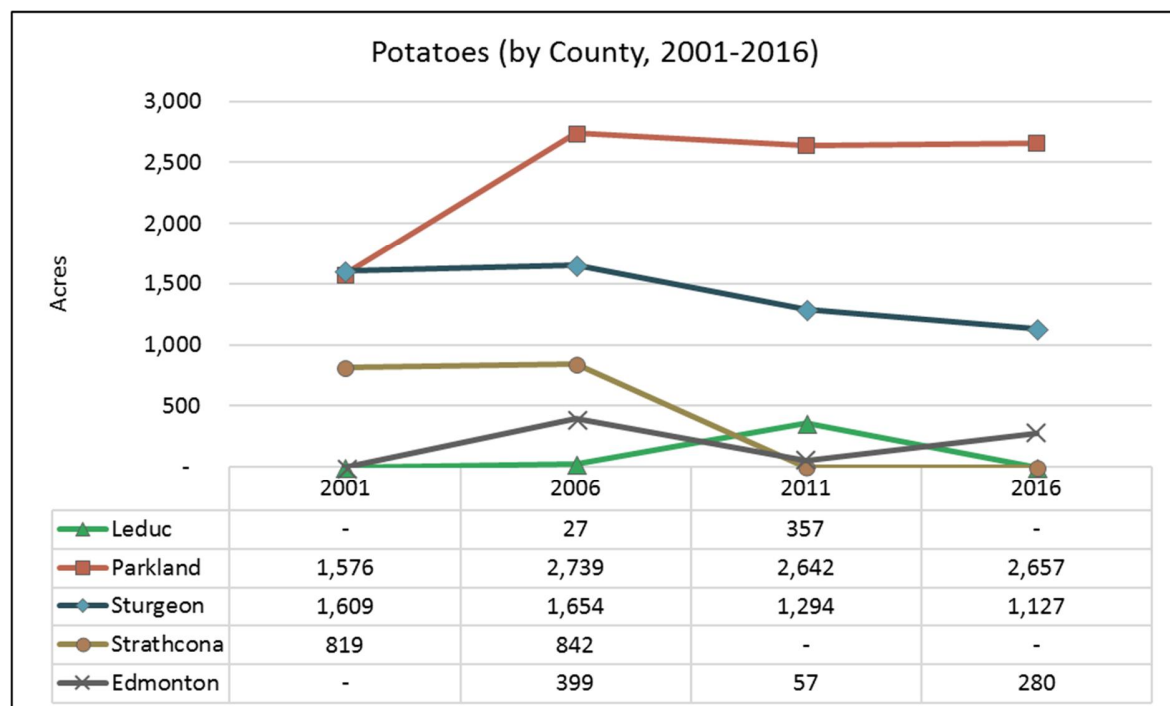
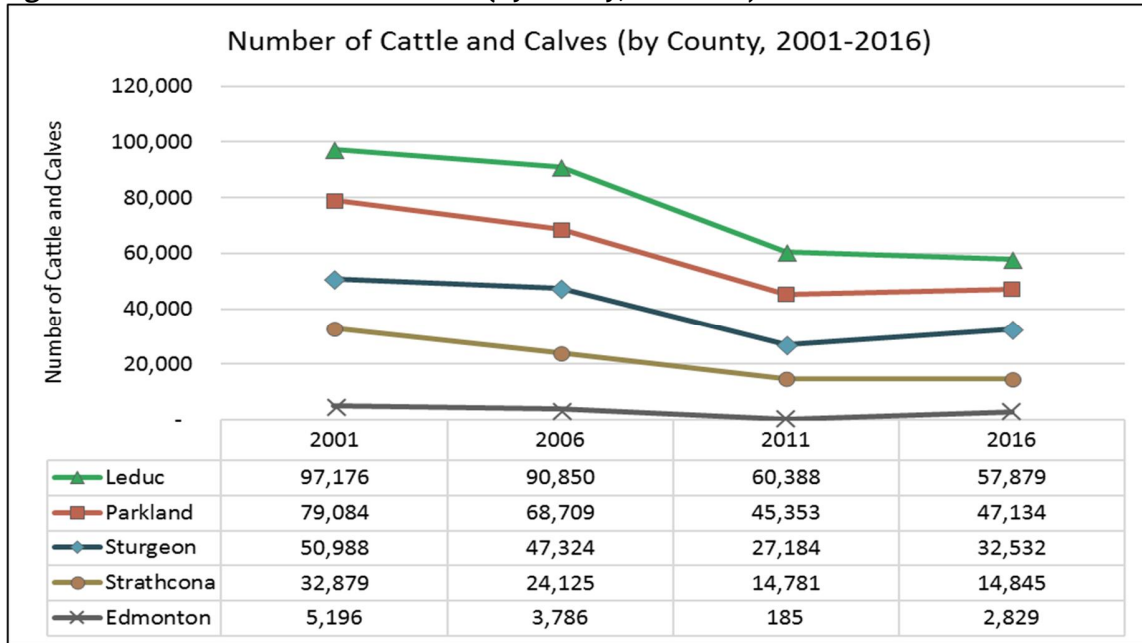


Figure 1.7: Potato Acreage (by County, 2001-2016)



## Selected Livestock Statistics

Figure 1.8: Number of Cattle and Calves (by County, 2001-2016)



## Specialty Enterprises

Figure 1.9: Acres of Vegetables (by County)

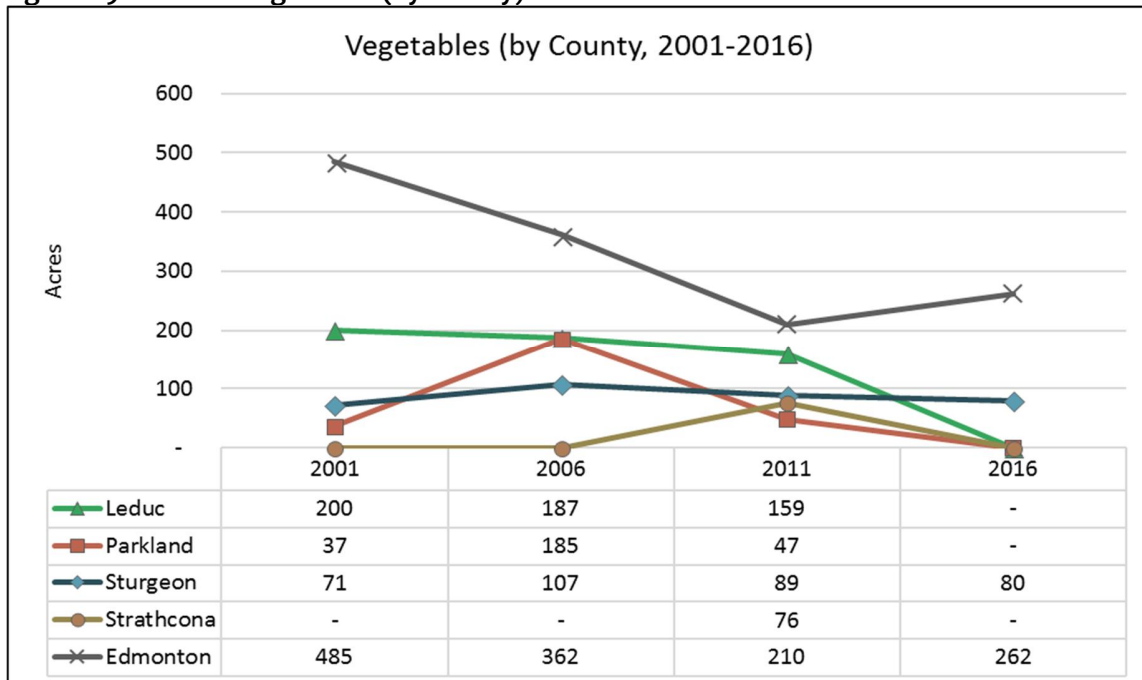
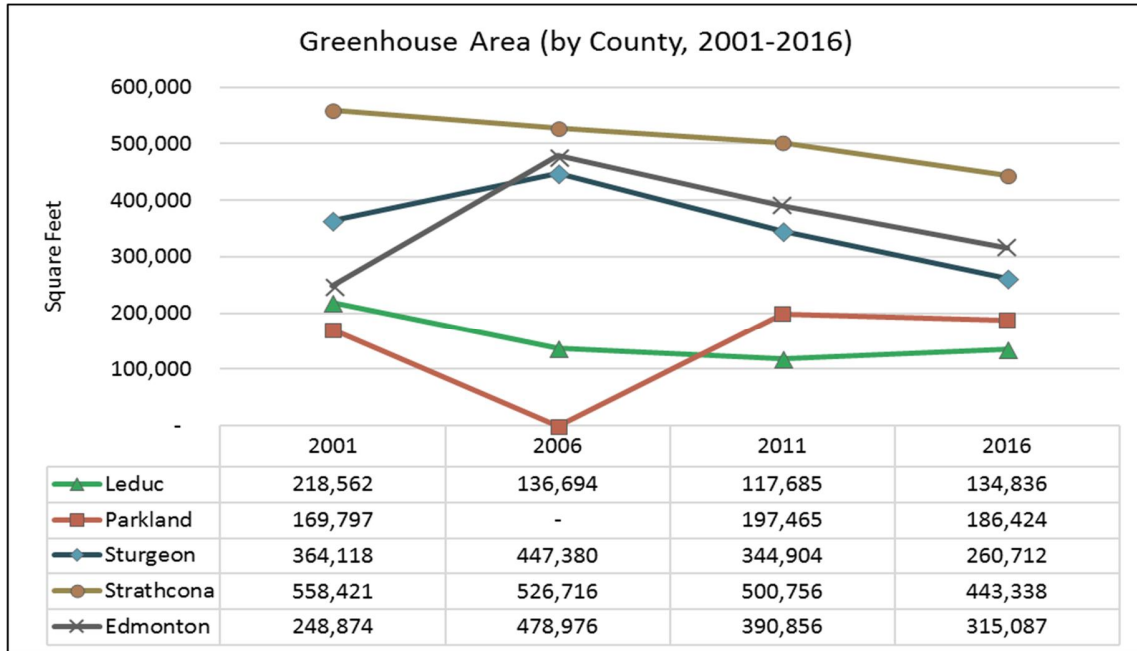


Figure 1.10: Greenhouse Area by Square Feet (by County, 2001-2016)



**Table: 1.1 Profile of Agriculture/Food Processing Employment in Alberta and the EMR**

REGION	INDUSTRY	2001	2014	2015	%: 2001-14
	<b>Measure</b>	,000	'000	'000	
<b>ALBERTA</b>	<b>Total All Industries</b>	1,627.4	2,274.6	2,301.1	<b>40%</b>
	<b>Agriculture Industries</b>	59.50	60.60	62.80	<b>2%</b>
	1100 - Mixed Farming (N.E.C)	8.60	5.40	6.80	-37%
	111 - Crop Production	16.50	24.80	18.60	50%
	112 - Animal Production	33.00	28.20	33.80	-15%
	<b>Total Support Activities for Crop and Animal Prod.</b>	1.50	2.20	3.70	<b>47%</b>
	1151 Support Activities for Crop Prod.	-	-	2.60	n/a
	1152 Support Activities for Animal Prod.	-	-	-	n/a
	<b>Manufacturing</b>	139.20	144.50	139.90	<b>4%</b>
	312 -Beverage and Tobacco Product Manufacturing	1.50	2.80	1.80	87%
	311 - Food Manufacturing	20.60	22.70	24.60	10%
	3121 - Beverage Manuf.	1.50	2.80	1.80	87%
<b>EDMONTON REGION</b>	<b>Total All Industries</b>	526.90	765.30	780.10	<b>45%</b>
	<b>Agriculture Industries</b>	2.80	5.00	7.90	<b>79%</b>
	1100 - Mixed Farming (N.E.C)	-	-	-	n/a
	111 - Crop Production	-	2.30	1.70	n/a
	112 - Animal Production	-	2.00	5.20	n/a
	<b>Total Support Activities for Crop and Animal Prod.</b>	-	-	-	<b>n/a</b>
	1151 Support Activities for Crop Prod.	-	-	-	n/a
	1152 Support Activities for Animal Prod.	-	-	-	n/a
	<b>Manufacturing</b>	50.10	58.10	53.30	<b>16%</b>
	312 -Beverage and Tobacco Product Manufacturing	-	-	-	n/a
	311 - Food Manufacturing	4.00	6.00	6.00	50%
	3121 - Beverage Manuf.	-	-	-	n/a

Source: Statistics Canada, Labour force survey, custom tabulation G0108\_12\_Tab1.ivt

Note: The statistics for Edmonton Region in 2015 appears suspect. For example, employment in the Animal Production category is reported to 5,200 – a marked increase over the 2014 reported number of 2,000. We have used the 2014 numbers as a more accurate estimate of employment.

## Attachment 2: Policies and Planning Context

### Introduction

To understand the current planning framework in the Edmonton region and how agriculture fits in, it is important to consider the provincial, regional, and municipal policies which influenced its evolution over time to where we are now.

### Edmonton Metropolitan Regional Planning Commission

The Edmonton Regional District Planning Commission was established in 1950 and first adopted a regional plan for the metropolitan area in 1958, which sought to maintain compact communities and prevent ‘unwarranted’ fragmentation of good agricultural land. The Commission adopted other policies as early as 1975:

- *The Commission aims to ensure that agriculture will remain a valuable component of the regional economic base.*
- *The Commission opposes the unwarranted fragmentation of prime agricultural land for non-agricultural purposes*

In 1979, the Commission prepared policies stating that ‘Prime agricultural land... shall not be subdivided for country residential uses except...’ In 1980, the Commission wrote that ‘the competition for the use of the basic land resource of the region has created major problems for the agricultural community...’

A new Metropolitan Regional Plan was approved in 1984—driven by: (1) Provincial policies in favour of the conservation of ‘better’ agricultural land and other policies such as the first parcel out; (2) development patterns based on continued contiguous growth regardless of soil conditions; and (3) soil quality and the dividing line between Classes 1 & 2 and Class 3 in ‘rural areas’ as a major determinate.

### Provincial Land Use Policies

In 1996, the Provincial Government adopted Provincial Land Use Policies (PLUPs) pursuant to the Municipal Government Act. With a goal to contribute to the maintenance and diversification of Alberta’s agricultural industry, four policies were adopted. Municipalities were ‘encouraged’ to: (1) identify areas for extensive and intensive agriculture, (2) limit the fragmentation of agriculture lands and their premature conversion, (3) direct non-agricultural development to areas where they will not constrain agriculture, and (4) minimize issues arising from intensive agricultural operations. The policies were only discretionary and non-binding.

### Provincial Land Use Framework and ALSA

The Land Use Framework (LUF), released in 2008, outlined a new Provincial approach to managing land and resources. The Alberta Land Stewardship Act (ALSA), proclaimed in 2009, enabled, not only regional planning, but it also provided tools for implementation: conservation directives, conservation easements and transfers of development credits that could be aimed at the protection, conservation, and enhancement of agricultural lands and lands for agricultural purposes. To date, these new tools have not been utilized to any extent.

## North Saskatchewan Regional Plan

The Lower Athabasca Regional Plan, the first provincially approved regional plan, merely repeats the PLUPs as its agricultural policies. This regional plan is currently under preparation, but the Terms of Reference (TOR) for the planning process state the plan is to ‘provide advice on maintaining a viable agricultural land base to support growth and diversification of the agricultural industry.’ In its discussion of biodiversity, the TOR notes that the trade-off discussion related to the settled area revolves around the value of the land in terms of its agricultural productivity and the ecosystem services that the private land base provides versus the value of the land if used for other purposes (e.g. residential development). The plan is required to address the use of the various conservation tools.

In summary, the language of these Regional Plans to date have moved from the term ‘encouraged’ to ‘expected’ to limit fragmentation and the premature conversion of agricultural lands. Although there is no requirement per se in the first two regional plans, the North Saskatchewan Regional Plan may be more directive in the conservation of agricultural lands if desired by stakeholders and municipalities.

## Capital Region Board Growth Plan

The primary purpose of the Capital Region Land Use Plan was to manage sustainable growth in a manner that protects the region’s environment and resources, minimizes the regional development footprint, strengthens communities, increases transportation choice and supports food and agricultural sector development. The Capital Region Growth Plan: *Growing Forward* was approved by the Government of Alberta in 2010.

The plan had the following acknowledgement about agricultural land:

*Agricultural land is a limited, non-renewable resource which is competing with other forms of development. If the land is not protected in the long-term for food production, the land will be converted to another use and lost forever. Agricultural land has significant value, both at the local and regional levels, beyond its pure economic capacity, including green space, aesthetics, community character, lifestyle, air quality, wildlife habitat, as well as a risk management measure in the event of future food shortages. In order to ensure agriculture lands are complementary with policies to reduce the regional footprint, further collaboration on implementing agricultural land policies is required.*

Specific to agriculture, the CRB Plan did little else other than to identify those areas that have been designated for agricultural purposes by municipalities. However, the CRB took the position that it would wait until the Province took further policy decisions relative to agricultural land fragmentation and preservation. Since that time, the Alberta Government wrote the CRB in August 2014, stating that the Province ‘determined that the economic, environmental and social evidence did not currently support the need for a provincial-level policy on agricultural fragmentation and conversion, though we recognize the issue as a growing concern throughout Alberta, particularly within the Edmonton-Calgary corridor.’ The letter goes on to state that ‘municipalities are now expected, rather than encouraged, to follow the direction provided through the PLUP on this important issue.’

## Growth Plan Update

The CRB went through an extensive process to update the Growth Plan. In its review, the CRB acknowledged the pressure on agricultural land. It noted that 80% of land within the primary growth areas is classified as best or better agricultural land; 56,000 ha of lands would be consumed within the urban growth shadow; the total number of farms and area of farmland in the region is declining; and there is a need to optimize the potential for value-added agriculture. The CRB noted that currently “there is no policy



direction concerning the encroachment of urban development on high quality agricultural lands in the region.”

The ‘Agriculture Working Paper’ for the plan update identified policy gaps specific to the preservation of agricultural land: (1) A lack of leadership and direction from the Province; (2) No differentiation with respect to which agricultural lands are more suitable for preservation or development; (3) lack of a robust analytical framework; and (4) differing approaches being taken by municipalities.

The ‘Metropolitan Regional Growth Structure Working Paper’ said that protecting land areas for agricultural use can be done in numerous ways and a suite of other policy tools is recommended to protect prime agricultural land, including the introduction of a LESA system. But, one of the principles of the plan update was to “wisely manage prime agricultural resources. In the context of metropolitan growth, we will ensure the wise management of agricultural resources to continue a thriving agricultural sector.’ It included the following key strategy:

Growth needs to be carefully managed in the region to ensure the long-term viability of the agricultural sector. The policies of this Plan are designed to address this issue from multiple standpoints including our cultural heritage, future need for food production and for its contribution to the region’s economic prosperity. Maintaining agricultural viability requires managing growth to protect prime agricultural lands from development, preventing fragmentation of the land base, recognizing the important role of agriculture in the global and regional economy and fostering growth and diversification and the potential for value added products within the agricultural sector.

The draft plan stated that ‘a supply of prime agricultural lands will be identified and preserved.’ This was to be accomplished through the future development of a Regional Agriculture Master Plan using a Land Evaluation and Site Assessment (LESA) analysis and be informed by municipal agriculture master plans. The CRB’s expectation was that “policies will be included to implement the regional agricultural policy directions at the municipal level and identify priority and prime agricultural lands in municipal statutory plans on a map.” The new Growth Plan prepared by the Edmonton Metropolitan Region Board was approved by the Minister of Municipal Affairs in October 2017.

The plan was based on six guiding principles, one of which addressed agriculture—this is a new policy area in the Growth Plan. The guiding principle for agriculture is *Ensure the wise management of prime agricultural resources to continue a thriving agricultural sector*. Further, *in the context of metropolitan growth, we will ensure the wise management of prime agricultural resources to continue a thriving agricultural sector*.

Three objectives were identified in the *Growth Plan*, each with a set of policies:

- **Identify and conserve an adequate supply of prime agricultural lands to provide a secure local food source for future generations**
- **Minimize the fragmentation and conversion of prime agricultural lands for non-agricultural uses**
- **Promote diversification and value-added agriculture production and plan infrastructure to support the agricultural sector and regional food system**

Several of the implementation techniques suggested earlier in the planning process were not carried forward into the approved Growth Plan. These include conservation easements; alternative land use services (ALUS); and a capital region transfer of development credits program.

## Comparison of Regional and Municipal Policies

As part of the RAMP process, a matrix that compares the agriculture and agriculture related policies for the EMRB, the four counties (Leduc, Parkland, Strathcona, Sturgeon) and the City of Edmonton (the smaller municipalities have not been included). The plans were compared across numerous attributes starting with their visions.

### Visions for Agriculture Across the EMR

**Strathcona County** as 'Canada's most livable community' is distinguished by its agricultural heritage that builds on history and responds to opportunities as a leader in the Capital Region in the provision of a broad range of agricultural and food opportunities as well as services to one of Canada's fastest growing metropolitan regions.

**Leduc County:** A vibrant and resilient agri-food future built on a proud agriculture history.

**Parkland County:** A vibrant agriculture and food community characterized by its diversity, creativity and entrepreneurship, focused on sustainability as well as new opportunities.

**Sturgeon County:** The 'Heart' of Agriculture for the Region

**COE Fresh:** Edmonton has a resilient food and agriculture system that contributes to the local economy and the overall cultural, financial, social and environmental sustainability of the city.

## Guiding Principles for Agriculture

Overall, the guiding principles for agriculture across the municipalities are quite similar both in terms of intentions and tone. There are subtle differences between the major thrusts of each of the various plans. Sometimes this is one of emphasis (focusing more narrowly on managing land vs. a broader view of community) or from perspective (urban vs. rural), or different historical perspectives. Differences are mostly by omission, not by opposing viewpoints. Overall, at this high level of policy, there is acknowledgement that there are important "agricultural resources" in the region and efforts should be made to ensure and enhance its diversity and vibrancy, resiliency and sustainability, creativity and entrepreneurship.

There are several key principles that should comprehensively drive the regional agricultural master plan:

1. The diversity of agriculture can make an important economic contribution in the local to global marketplace.
2. The historical and cultural/social aspects are important in maintaining a high quality rural lifestyle and community character.
3. Environmental sustainability of the rural landscape is important.

4. The food system is an important perspective to consider.

**Implications for the RAMP:** Developing a ‘shared vision’ for agriculture and the future role, look and ‘feel’ of agriculture and food within the region is the critical starting point. Once this is in place and agreed to, the planning process becomes much easier.

### Definition of Agriculture

Agriculture means many things and different things to different people as traditional agriculture evolves. There are key elements that should be addressed in the regional agricultural master plan:

1. In the broadest sense, agriculture includes the people, the community and the land.
2. Most of agriculture focuses on growing (whether traditional or new specialized crops) and raising (a wide range of animals).
3. Scale is a consideration—extensive farms to intensive operations.
4. Value-added (includes some processing of raw materials, etc.) is part of a new view of agriculture.
5. There are a wide range of commercial activities from export of raw product to farm gate sales and farmers markets.
6. A broader definition of agriculture often includes support services serving the agricultural sector.
7. Location enters in to it—for example, urban agriculture.
8. Another perspective is consideration of a ‘food system,’ ranging from production through to eating and composting.
9. Some definitions address motivation—not just for profit but acknowledging that it can also be motivated by lifestyle preferences.

**Implications for the RAMP:** There is a need to balance two different perspectives. (1) Work toward the broadest definition of agriculture possible recognizing that the sector continues to change and evolve as new enterprises and services emerge; and (2) not make it too broad that ‘anything goes’ and the door is left open to uses that might lead to the conversion of agriculture land. Agreement on a common definition for agriculture across the Region will impact the land use bylaw definition for each municipality. Consistency is inherently desirable, but there must be recognition of the different circumstances throughout the region.

### Sub Areas

The Regional Growth Plan has three tiers: Metro core with no provisions for agriculture; Metro area which provides for agriculture until required for urban development; and rural which includes large areas of potentially long-term agriculture. These areas all have different policies related to agricultural land. It’s also important to note that there is a ‘commuter shed’ designation that is particularly relevant to policies about the designation and conversion of land for country residential.

While Edmonton currently has significant agricultural lands, it has not designated large areas for permanent agriculture. Outside of their proposed growth areas in the Metro area tier, the Counties are recognizing the need to address soil quality and locational factors.

**Implications for the RAMP:** It will be critical to determine and agree on an overall coherent strategy for priority agriculture areas. Two different priority areas will need to be defined: (1) Long term or permanent priority areas – lands that will be designated for agriculture uses only; and (2) Short or medium term permanent priority areas – land that will be designated as areas that may be transitioned to other uses over time.

## Prime Land

There is acknowledgment that there are differing qualities of soil throughout the region although different rating concepts are used: Land Suitability Rating System (LSRS), Canada Land Inventory (CLI), and Farmland Assessment Rating (FAR). Regardless of the relative merits of each system, the planning policies focus attention on the higher capability lands (sometimes referred to as 'prime'). However, it should be noted that attention should be given to 'unique farmlands' that have usefulness to produce specific high-value food and fibre crops because of characteristics.

**Implications for the RAMP:** The EMRB will need to provide clear direction on which rating system(s) will be used and for what purposes and the role different areas in the overall agricultural and food sector.

## Other Values

While the major policy emphasis is on agricultural production and economic values, there is some recognition of the importance of other values in the agricultural setting, such as those relating to culture, history, lifestyle, recreation, community, environment, etc.

**Implications for the RAMP:** Currently land, regardless of its agricultural value has no acknowledged value or priority relative to urban development. Historically, agricultural land for the most part has been considered 'land in waiting' for development when this is needed. Other factors may need to be considered including ascribing value to prime agriculture land in a manner like values associated with clean air and water; food security; aesthetics; environment benefits; etc.

## Policies

There are indications that there is a need to use a variety of tools to protect and preserve the better agricultural lands, outside what is 'required' for urban development, on a certain and long-term basis.

**Implications for the RAMP:** The protection and preservation of agricultural lands requires a broader range of tools than what has been employed to date. The most decisive of these would be a policy to 'freeze' lands like approaches taken in British Columbia (ALR) and Ontario (Greenbelt). Such measures are politically challenging. Other more nuanced tools include transfer of development credits; conservation easements; establishing farmland trusts; and clustering development in areas of lower land quality. There is legislation (ALSA) to facilitate this. Specific to a policy enabling the transfer of development rights, a major issue to consider will be the ability and/or the desirability to allow transfers from municipality to municipality.

## Conversion

There are several approaches: (1) a recognized intent to permanently designate large contiguous agricultural areas so agriculture can thrive on both large and small holdings; (2) development of better lands should only be where there are no reasonable alternatives (as a last resort?) and the impact on agriculture is minimized; (3) , pressure can be taken off these areas by requiring higher densities, directing development to other suitable locations (lower capability lands, existing urban centres) where possible, transferring development rights and clustering; (4) development of agricultural areas should be phased so that agricultural remain as long as possible; and (5) Some lands that are currently designated for non-agricultural uses (such as large areas of country residential) could be re-designated to agriculture.

**Implications for the RAMP:** The implications on the issues of conversion are like the 'Policies' – see previous sub-section.

## Land Use Zones

There are a variety of agricultural zones. Generally, there is one all-purpose agricultural zone that has been used to support traditional agriculture—sometimes different zones for larger and smaller agricultural holdings. The multiple-purpose zones are sometimes supplemented by a 'holding' zone generally designed to limit subdivision and uses that would impact future urban development. These zones tend to have a very broad range of uses (either permitted or discretionary), including residential uses or others that aren't really soil based, which tend to have an impact on agriculture and, perhaps, are not consistent with long term priority agricultural areas. In addition, there is a question about the range of agricultural-related uses (support, service, agri-tourism, etc.) that should be provided for.

**Implications for the RAMP:** The implications are like the previous two sub-sections. There may be a case to agree to a common set of agricultural zones across the Region. However, there may be a need for special zones (or overlays) that might apply to unique or special locational circumstances.

## Fragmentation

The general policy 'understanding' is that fragmentation is not conducive to effective agricultural practice because it reduces the area of agriculture, may introduce inefficient property patterns, or create potentially conflicting (and limiting) land uses. However, policy has been to allow at least limited subdivision in agricultural areas for other uses (residential farmsteads, a new first parcel out, recreation or resource development, etc.)—perhaps with a requirement for some mitigation. Those favouring subdivision raise questions of equity and the need to 'subsidize' the purchase of already expensive agricultural land through the ability to subdivide at least one parcel.

**Implications for the RAMP:** Given existing rules, there is a tremendous amount of potential future subdivision throughout the agricultural areas of the region. Long term priority agricultural areas may have considerably more restrictions. However, the impact of these restrictions could be mitigated by the ability to transfer development credits to address the equity question.

## Lots and Sizes

Traditional zoning practice throughout the region is that 80 acres is an acceptable minimum size for most agriculture, although some municipalities propose or allow smaller agricultural holdings. Approaches range from Strathcona where a quarter section can be split into halves or a smaller residential parcel can be subdivided out; other Counties allow the creation of up to four parcels per quarter section, in a variety of formats (Parkland for example allows 4-40-acre parcels or 4 smaller residential parcels).

**Implications for the RAMP:** The impact to agriculture and farming operations of differing lot sizes will need to be addressed. Lot sizes should be addressed in accordance to associated land use. For example, if a lot is being used as a residence only, then a maximum size may be prescribed. However, if the lot is being used for agricultural or food production purposes, a larger size may be allowed.

## Economic Development

There is widespread support for increasing the economic development potential of the agricultural sector. Most plans are supportive of "value-added agriculture" and the "diversification of agriculture" as major goals. The suggested opportunities are extensive—from agri-tourism and to energy creation to specialized livestock and local food initiatives. However, there are little in the way of concrete initiatives and implementation strategies for this economic development goal.

**Implications for the RAMP:** A major challenge facing the EMRB will be to adopt and implement an economic development plan that can stimulate the regional food and agriculture industry. Three distinct strategies will be required (1) ensuring the ability of traditional forms of production to continue (grains, oilseeds, dairy, beef, pork, poultry etc.); (2) stimulating and/or supporting new ventures that are

emerging to respond to local food demand; and (3) Building the core of regional and nationally focused agri-food enterprises that have successfully emerged over the past 20 years.

## Urban Agriculture

The Regional Growth Plan promotes urban agriculture in the metropolitan tier. Both Edmonton and Strathcona have urban agriculture strategies and Leduc includes policy in support.

**Implications for the RAMP:** Urban agriculture remains in a nascent stage. Nevertheless, there is a strong and growing interest in urban agriculture as a response to local food demand and food security. To date, limited resources have been committed to this area. However, it fits with the previous initiative particularly the new and emerging enterprise group but does not have major significance on the regional land base.

## Infrastructure

Most policies are general and in support of physical infrastructure (roads, drainage, irrigation, etc.) needed to support the growth and diversification of agriculture, but implementation rests with the strategic and budget plans of the municipalities. There are also 'soft' infrastructure suggestions in other areas (market development, education, etc.).

**Implications for the RAMP:** There may be key infrastructure investments to be considered that can effectively increase the viability and growth of the emerging food and services sector.

## Advocacy

There is some recognition that one of the requirements in promoting agriculture is that the sector needs a voice and leadership to champion and advocate on its behalf. Suggested efforts include leadership development, marketing, education, an industry institute and/or agricultural forums. The regional agriculture master plan process will have to determine what initiatives might be appropriate at the regional scale to advance food and agriculture.

**Implications for the RAMP:** The lack of a voice or 'leadership' coming from the agriculture and food community is a major concern. While many producers and processors are member of organizations, no organization speaks for issues pertaining to the sector in the EMR. This will be an important issue to address.

## Land Use Conflict

Land use conflict is closely associated with fragmentation. It is accepted that different land uses can impact agricultural areas and are generally undesirable insofar as it may limit efficient agricultural production. Examples include increased country residential development in agricultural areas or CFOs impacting on residential. Leduc's draft MDP states that 'agricultural uses shall take precedence within the Agricultural Area.' Two other Counties refer to the concept of 'right to farm.' What is an appropriate regional response and what is appropriate at the municipal level—to be determined through the process?

**Implications for the RAMP:** Perhaps one of the most significant outcomes of the RAMP is a clear articulation of and support for 'Right to Farm' legislation. Currently long-established farms are concerned about their long-term future and their ability to operate. The enactment of such legislation would send a very clear message to farmers in the region as well as those residents who make the choice to live in an agricultural area.

## Agricultural Impact Assessments

The concept of agriculture impact assessments (and what they are) as a contribution to better decision making is certainly gaining ground. The question is where and when they should be applied—on prime

lands, on all agriculture lands, adjacent to these lands, etc.?

**Implications for the RAMP:** To date, the use Agricultural Impact Assessments (AIA) is in the very early stages within the region. A clear vision for agriculture for the region and supporting policies will clarify what the AIA needs to assess.

### Other Strategies

Preserving agricultural land and promoting the agricultural economy can be enhanced using new and/or innovative strategies in the Edmonton region. These include best practices such as ALUS, transfer of development rights, conservation easements, growth boundaries, permanent agriculture priority areas, etc. They will have to be explored through the planning process.

**Implications for the RAMP:** Perhaps the most significant point to make now is this: an effective RAMP will require the integration of several strategies and policies to be effective. There will be no one policy alone that will lead to a successful outcome. For example, changes in land use policies must be supported with effective communications plans and pro-active economic development strategies all working together to achieve the vision for the region

### Indicators & Monitoring

Most agencies are committed to monitoring and developing key indicators to measure changes in the agriculture sector, including addressing a range of planning measures (land conversions, fragmentation etc.), and business measures (market development achievements, agricultural trends, etc.).

**Implications for the RAMP:** The selection of a key set of practical as well as easy to obtain indicators will be key to the RAMP.

### Implementation

The RAMP and the LESA tool are key to implementing the Growth Plan's agricultural objectives. The municipalities, of course, will have a key role in implementation.

**Implications for RAMP:** The best plan without the will or the capacity to implement achieves little or nothing. Structure, strategy and accountability will be key to the required implementation plan.

## Attachment 3: Value Added Interview Highlights

### 3.1 Profile of the People Interviewed

Interviews have been conducted with 23 individuals. These are categorized as follows:

Background/Sector	Number
Economic Development	3
Industry	8
Industry Organization/Association	3
Investment/Venture Capital	2
Government or Agency (Alberta)	4
Education Institution	3
Total	23

### 3.2 Discussion highlights

Area of Discussion	Summary of Comments
Edmonton Region as Major Centre for Agriculture & Food- is this possible?	<ul style="list-style-type: none"> <li>• There is a growing realization that solutions and growth opportunities will be found locally or within the Region.</li> <li>• Agriculture within the region is very misunderstood; very little understanding of economic development and what it will take to grow this sector.</li> <li>• Currently a lot of buzzwords and good intentions but very little capacity.</li> <li>• Agriculture if very low priority: industrial; commercial and residential have been the priorities.</li> <li>• The demand for more local products from major institutions is there!! But!!! There are significant barriers.</li> <li>• There is a very real demand for local food – baby boomers who are health conscious and ‘millennials’ who are value based buyers and committed to supporting the local economy.</li> <li>• We hear of the need for space to incubate businesses. Things are popping up all over – a critical mass of interest is forming.</li> <li>• The Region has numerous valuable assets: Leduc Food Centre; U of A; NAIT; a core group of successful companies. Very strong institutional capacity.</li> <li>• There is a real entrepreneurial spirit in Edmonton – a group of like-minded food industry entrepreneurs that have built successful businesses and support each other.</li> <li>• Edmonton region has some very significant players who have developed very successful businesses! Actually the whole highway 2 corridor (Lethbridge, Calgary, and Edmonton) could be a significant force nationally and internationally.</li> <li>• Leduc has a thriving dairy sector; cropping across the Region is strong. There is lots of opportunity and with the airport we can box or containerize specialty products for export.</li> <li>• Alberta should be the Food Province. The opportunities are will young companies developing novel products (see the Barton report to the Competitiveness Council. Plus develop ‘Smart Agriculture’.</li> </ul>



Area of Discussion	Summary of Comments
<b>Examples of Businesses or Initiatives within the Region moving in this direction</b>	<ul style="list-style-type: none"> <li>• Growth of the 104 St. Market; new start-ups such as Honest Dumplings; Moho Jojo Pickles; the 124th Market; ‘What the Truck’ Food Festivals.</li> <li>• Establishment of the Community University Partnership (CUP).</li> <li>• The Food &amp; Agribusiness Diversification Initiative led by Councillor Paquette.</li> <li>• The Alberta Flavour Learning Lab that is working to source/aggregate products for institutional buyers.</li> <li>• Emergence of several regional/national food processing companies including: Heritage; Little Potato Company; Crust Craft; Alyia’s; Siwin; Kinnikinnick Foods Kitchen Partners, Ceapro, Capital Packers, Champion Pet Foods etc. show that it can be done! (Note: these were mentioned by several respondents). “It can be done!!”</li> <li>• Interest in urban agriculture – bee program is fully subscribed.</li> <li>• There are several natural health product companies that are emerging: Bionutra; From the Earth Naturally; Ceapro; Radient; also the hemp industry – Hempco.</li> <li>• Recent Supercluster initiative – although the Alberta proposal (Smart Agri-food Supercluster) was not successful, Protein Innovations Canada (PIC) based in Saskatchewan has potential positive repercussions for Alberta and the Edmonton region.</li> </ul>
<b>Cities or Regions that Serve as Models for Edmonton Region</b>	<ul style="list-style-type: none"> <li>• Ottawa region is focusing an “Food First” Strategy – focusing on food quality and more of a life balance</li> <li>• Portland as a ‘foodie’ city; other big cities such as San Francisco, New York, Toronto</li> <li>• Austin, Texas</li> <li>• Netherlands Food Valley (several mentions)</li> <li>• Calgary has multi-day Farmers Markets which become destinations</li> <li>• The Fraser Valley, Lower Mainland</li> <li>• Detroit – a real focus on urban agriculture</li> <li>• Look at the Milan Urban Food Policy Pact – this is a framework where food is a drive – something that Edmonton should become part of.</li> <li>• Quebec has a strong focus on local food and supporting agri-food industry</li> <li>• Lisbon, Portugal</li> <li>• Agro-Food Parks in Denmark</li> <li>• Denver – there are 13 municipalities that are working together.</li> <li>• Food South Australia in the Adelaide area</li> <li>• Saskatchewan keeps growing in stature. They had strong support from the provincial government for the Protein Industry Canada Super-Cluster proposal – something that Alberta did not have.</li> </ul>

Area of Discussion	Summary of Comments
<b>Significant Strategy or Initiative that would move the Edmonton Region Forward</b>	<ul style="list-style-type: none"> <li>• Establish a Farm-Food Institute that supports (trains) new entrants, led by passionate energetic and experienced people.</li> <li>• A food hub that could connect/aggregate smaller suppliers to match with the larger demand of institutional and larger buyers.</li> <li>• There has to be a multi-dimensional approach – not just a local food strategy. That would not be sustainable.</li> <li>• We need a focussed committed long term strategy – we are not good at sustained efforts – we do things half-***ed.</li> <li>• We need a MECHANISM that can bridge promising ideas and small companies to connect to retail and food service. This gap is great!!</li> <li>• We need a co-packing facility as part of the eco-system. This is lacking. Take Baby Gourmet – a company founded and formed in Alberta. But all their processing, marketing and distribution is done in Ontario. Why? No facilities!</li> </ul>
<b>Significant Opportunities</b>	<ul style="list-style-type: none"> <li>• The Region has incredible infrastructure and capacity – the U of A; industrial parks; Aerotropolis; 15 municipalities coming together; Leduc Food Processing Development Centre, the availability of labour ...</li> <li>• There are a lot of new players (immigrants, young people, entrepreneurs) who are keen to start new things: small farms; businesses; new services; new food opportunities – restaurants, food trucks, pop up etc.</li> <li>• Older farmers/land owners without succession plans may be prepared to rent land to younger/new/first time individuals.</li> <li>• In the speciality crop areas, there are processing opportunities – two new plants are being built on the prairies – one in Manitoba; one in Saskatchewan.</li> <li>• The market for ‘ready to serve’ meals or products is growing fast. 50% of meals are now eaten this way.</li> <li>• The market is changing fast – look at the growth of Uber Eats or Skip the Dishes.</li> <li>• China has to be a long term focus – but it needs a very targeted approach led by people who know how to put deals together.</li> <li>• Smart Agriculture is an opportunity that can be addressed with such players as AMII (Alberta Machine Intelligence Institute at the U of A).</li> </ul>
<b>The Most Significant Barriers</b>	<ul style="list-style-type: none"> <li>• Convincing the Region to look at agriculture in a strategic way. Now there are so many piecemeal approaches.</li> <li>• The Government of Alberta does not appreciate how important agriculture is to our economy. I find this so frustrating.</li> <li>• Alberta has no focus – it is all over the place!</li> <li>• The Hubris is incredible. But it is based on rhetoric, faint hope and little substance.</li> <li>• We talk a good game but we are not so good at getting things done.</li> <li>• Edmonton Food Council has very limited resources – a Board of volunteers and a part time staff person.</li> <li>• COE has a challenging permitting and licensing process – “an almost hostile environment.”</li> <li>• We talk about diversifying but we keep doing business in a very traditional some old way.</li> <li>• There are no clear pathways for the person with an idea or even someone at early state to move a business forward. There are so many barriers: food safety; sufficient volumes; insurance/liability issues; distributors who take too big of a cut to make it profitable for the small processor.</li> </ul>

	<ul style="list-style-type: none"> <li>• Alberta (and Edmonton) lacks a robust business culture that spins out people with marketing and sales experience! We have lots of oil and gas expertise but these people don't market. Growing businesses especially in the area of food, agriculture and related technologies requires real marketing and professional sales experience. We see this lacking again, again and again!! There is no real solution until we address this skills or talent gap.</li> <li>• Transportation system is a limitation.</li> <li>• Carbon tax puts us at a disadvantage; the government is not business friendly</li> <li>• The 'Right to Farm' is a growing issue</li> <li>• Alberta has been only 'Oil and Gas'</li> <li>• Logistics and distance to market is a real barrier</li> <li>• For local food, the cost of land is the most significant barrier. Capital is also limiting; land and capital are linked.</li> <li>• There are few specialty retailers – it is very difficult to move from a small scale to be able to supply mainline retail – the gap is prohibitive.</li> <li>• Extension on how to grow and how to run a business is a gap – a lot of new Canadians are interested in growing food. They are looking for help.</li> <li>• There is a real lack of incubator space. Also a lack of cold storage.</li> <li>• The big gaps for many start-ups is the lack of co-packing space where small companies can work and actually share a lot of equipment since so many processes and requirements are similar. Plus the opportunity for mentor, marketing, co-ordinating logistics etc.</li> <li>• The regulatory process is a problem – we are no longer a business friendly place. Many municipalities are not very inviting to do business – the first response is “No”. Or “we can't do that!” Rather, it should be: how can we help?</li> <li>• Helping entrepreneurs on how to build a business – this is critical</li> <li>• Do we have entrepreneurs with the energy, the knowhow and the right connections to people? I see people with good ideas but lacking a critical piece to move the idea forward to becoming a business.</li> </ul>
<p><b>Where does the Leadership Come From?</b></p>	<ul style="list-style-type: none"> <li>• We have assets but no champions!!</li> <li>• There are so many small groups; everyone doing their own thing – they don't accomplish much</li> <li>• The CEO Club has been an effective group</li> <li>• Calgary has an Agri-Business Committee – there is nothing like that here</li> <li>• There is not one voice for the local food industry</li> <li>• The industry is so fragmented.</li> <li>• Who has the time? Everyone is so busy just running their businesses!</li> <li>• No one is championing the industry.</li> <li>• Leadership? I don't see any.</li> </ul>

Area of Discussion	Summary of Comments
<b>The Importance of Land</b>	<ul style="list-style-type: none"> <li>• My members see land as important – it will be a long time before you can convince us that agricultural land is not important.</li> <li>• Specific to local food, access to land in the peri-urban area is critical.</li> <li>• There is a new generation of millennials who are interested in value based buying and value based enterprises – specifically local food.</li> <li>• Food production within the region is more and more important as economics becomes more important.</li> <li>• Vertical and urban farming will always be limited – they will have a place but not replace mainstream production systems.</li> <li>• If you develop the land, it is gone forever.</li> <li>• There are other reasons: economic – does it make sense to service ‘lazy sprawl’: food security or resilience is something to consider; environmental reasons.</li> <li>• Preserving prime ag land is about preserving the opportunity for agriculture to operate on the most productive land in the future. This ensures that a resource that we know is valuable will be available for future generations.</li> <li>• The ancillary benefits of protecting prime ag land in close proximity to Edmonton also stack up such as connecting urbanites to food production (both in understanding and in physical food), aesthetics of open spaces, ecological values of agricultural landscapes, and possible recreation value though including these values in the justification opens up too many fissures in the value proposition.</li> </ul>
<b>Role of Technology</b>	<ul style="list-style-type: none"> <li>• Automation both in field and internal operations are changing everything.</li> <li>• Now there are drones that can seek out and spray individual weeds.</li> <li>• Technology will play a key role. But in the case of vertical farms, there are a lot of things that you cannot grow in them – it is also very costly.</li> <li>• Food will always have a story – vertical farms will have their place but people are still looking for authentic, wholesome food</li> <li>• Technology won’t remove field crops and cattle.</li> </ul>
<b>Other Comments</b>	<ul style="list-style-type: none"> <li>• Attracting new businesses is important but don’t forget our current ones. Retention is key!!</li> <li>• RAMP needs to recognize what agriculture does in terms of its contribution to the economy.</li> <li>• It’s not just about local – we must recognize the global nature of this industry</li> <li>• If RAMP could come up with a plan and political will, you may attract leaders who might see value in getting involved.</li> </ul>

### 3.3 Additional Analysis

Growing the value added food and agricultural processing sector has been a foremost objective of the Government of Alberta since 1997. Since that time, numerous initiatives have been implemented and considerable resources have been committed. However, progress as measured by the ratio of food and beverage outputs relative to the farm gate sales has shown little change and remains in the range of 1:1<sup>20</sup>.

In 2015, Alberta Innovates Bio-Solutions (AIBS) addressed the value added challenge based on the observation that relative to other provinces, the Alberta agri-food sector was slow to adopt innovation and new technologies – a conclusion reached by a 2013 study which stated:

***“ Alberta’s food businesses motivation to innovate is in many cases much less than motivation in B.C. and Quebec.”***<sup>21</sup>

In response AIBS commissioned Serecon Inc. to undertake a detailed review of the Alberta food processing sector to determine the reasons why the willingness to innovate, grow current businesses or even start new businesses was low. To address this central issue, Serecon conducted over 50 interviews and review several successful innovation systems in detail. The presented this conclusion:

One key issue mentioned by some, but not universally agreed to, relates to the lack of management capability. It is our opinion that while not a universal problem in a general way - there are many managers that are excellent in ensuring profitable production - that there is a **limitation of the capability of those in the sector to focus on innovation and growth**. More importantly, there is a lack of understanding of appropriate governance requirements necessary in order to access the capital required for expansion and innovation. Current stakeholders do not know how best to approach/develop these types of relationships so are missing out on the complementary strategic opportunities they would provide.

In summary, the business environment and culture for food processing is not regarded as favourable. As on respondent stated:

*“ There is no incentive to be in the food industry in Alberta – there is no single vision for agriculture and food in the province; no incentives; no critical mass; no centers or hubs; no appeal to be in that business! And what’s more while there are opportunities the sector suffers from a severe “Brain Drain.” The best and the brightest are all attracted to the energy sector.”*

Serecon concluded that that the fundamental barriers leading to low motivation to pursue innovation among Alberta food processing sectors can be explained by two main factors:

- **Leadership and related capacity** – it is critical to recognize that most (if not all) of the businesses that have shown rapid growth in Alberta, are being led by a single individual or driver that is going ‘flat out.’ Quite simply, these individuals do not have the time or the capacity (a dedicated non-operational staff person) to link to the ‘research community and/or

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<sup>20</sup> Alberta is a major agri-food jurisdiction and is now Canada’s largest primary producer. By comparison, Alberta’s food processing sector remains relatively modest in comparative terms. For example, the revenue ratio of Ontario food processing to farm production is approximately 3:1 while Alberta’s ratio is just over 1:1 – a ratio that has remained unchanged for more than 20 years.

<sup>21</sup> Alberta Unbound: Research and Innovation Opportunities in Alberta’s Food Sector, Conference Board of Canada, November 2013

explore new innovations that might be beneficial. (Note: multi-nationals have capacity elsewhere – not in Alberta).

- **Unwillingness/inability to accept the RISK** – the competitive nature of the food business is such that margins are tight and growing tighter. Thus there is little if any financial capacity to add to the current risk profile which testing a new unproven product or process would represent – even though this is precisely where the benefits from innovation are likely to occur. While part of this is the risk associated with product acceptance by consumers, perhaps the more important element is the financial risk associated with the actual cost of getting the new products onto grocery shelves given the significant listing fees in place in Canada.

Simply put, the business class that typifies the entrepreneurial Alberta food processors in the best position to grow strongly believes that they have neither the TIME nor the MONEY to pro-actively innovate. This creates a significant barrier to the monetization of technology and/or innovation.

A recently released 2017<sup>22</sup> study of the challenges of stimulating value added enterprises within the Agriculture Land Reserve (ALR) in Kelowna made the following conclusions:

1. The ability to enhance farming (in this case, small plot farms) is key. If the economics of farming in the inner fringe (within or in close proximity to urban development) is suffering, the speculation will continue to rise in response to the adjacent pressures of urbanization. Simply, if lands cannot be farmed economically, they will sit idle.
2. Provincial legislation is protecting the land but not helping farmers with the viability of their farms... there has been no creation or encouragement of a new generation of farmers. The lack of a comprehensive approach to agriculture is also impacting Kelowna's fringe areas.
3. Based on quantitative findings and feedback from farmers, there is considerable logic to supporting the concept of small lot farms. Business cases are being made for small lot farms and the arguments support the viability of the local food movement.
4. The link between emerging agriculture practices and urban food security policies is only beginning to materialize.
5. Successful strategies have to be more than just preserving the most fertile lands; it is about advancing a strategy for urban agriculture, green space and livability where urban and peri-urban agriculture practices can coexist.
6. To address the barrier to entry of young and new farmers, alternative land tenure in the urban shadow is an important factor in sustaining or building an agriculture sector. Some of these include incubator farms, land linking, cooperative farming, farmland trusts, life estate leases and community farms. Each of these models have pros and cons that would need to be investigated to determine what is most suitable (or practical) for individual cities.

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<sup>22</sup> Agricultural Land Preservation and Urban Development in the New Fringe: A Case Study of Small Lot Farming in Kelowna, BC. Thesis submitted for Master of Arts, UBC. Edward Grifone. 2017