

ECONOMIC IMPACT OF AGRICULTURE ON SOUTHEAST ALBERTA (2024)

Heather Stahl and Katheryn Gething,
School of Business

Centre for Innovation
Medicine Hat College

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Economic Impact of Agriculture on Southeast Alberta (2024)

Executive Summary

Agriculture is a cornerstone of Southeast Alberta's economy, contributing significantly to both local livelihoods and the provincial economy. In 2023, agriculture generated over \$23 billion in Alberta's economy (Statistics Canada, 2023). Despite this, accurately assessing the specific impact of agriculture on Southeast Alberta poses challenges due to limited data. This report aims to bridge this gap by extrapolating data from Statistics Canada and the Government of Alberta, providing insights into the region's agricultural significance.

Agriculture's contribution to Alberta's GDP was \$6.50 billion in 2023 (Government of Alberta, 2023), yet specific economic data for Southeastern Alberta remains scarce. This study identifies and emphasizes the region's vital role within Alberta's agricultural landscape, offering data to support ongoing agricultural growth and development in the area.

Overview

As you drive on the highways of Southeastern Alberta, you are surrounded by crops and ranches on all sides. It is a clear testament to the significance of agriculture in the province's landscape and economy. To further demonstrate the significance, agriculture generated more than \$23 billion dollars into Alberta's economy in 2023 (Statistics Canada, 2023). Given this impact, it's essential to recognize the role agriculture plays in driving economic growth.

However, due to limited data, accurately assessing the specific impact of agriculture on Southeastern Alberta remains a challenge. By extrapolating existing data from Statistics Canada and the Government of Alberta, a clearer picture of its economic significance in this region can be developed. A summary of impressive agricultural statistics has been generated, underscoring the importance of this sector to our local economy. This highlights the critical need to continue nurturing and supporting this industry in our area to sustain its role as a vital economic driver.

The methodology employed includes analyzing data from the 2016 Agricultural Census and extrapolating trends to 2023. The study includes a comprehensive overview of the agricultural profile of Southeastern Alberta, covering land size, crop production, livestock, revenue generation, and workforce statistics.

Key findings reveal that Southeastern Alberta encompasses over 10 million acres of farmland, accounting for over 20% of Alberta's agricultural land. The region contributed over \$2.6 billion in agricultural revenue from 2021 to 2023, marking a 24% increase. Notably, Southeastern Alberta is a leader in greenhouse farming, with nearly 7 million square feet of greenhouse space.

The report concludes by underscoring the importance of agriculture in driving economic growth in Southeastern Alberta and the necessity for ongoing support and development in this sector to ensure its sustainability and prosperity.

Problem

Agriculture is a fundamental component of the Canadian economy, with Alberta playing a significant role due to the vast amount of agricultural land. In 2023, agriculture, forestry, fishing and hunting contributed \$6.50 billion to Alberta's GDP (Government of Alberta, 2023).

Extensive research is available on the economic impact of agriculture at both the national level in Canada and the provincial level for Alberta. However, there is a notable gap in the data available concerning the specific economic impact of agriculture specifically in Southeastern Alberta.

Through a comprehensive analysis of the economic impact of agriculture in Southeastern Alberta, this study seeks to close this gap and in doing so will provide insightful information about the region's contribution and role in Alberta's agricultural economy. Providing valuable data that can be used to support and enhance the agricultural growth and development in Southeastern Alberta.

Methodology

Statistics Canada mandates an Agricultural Census every 5 years. The 2016 Census included comprehensive data from all counties in Canada, while the 2021 Census data was limited to provincial reporting. Due to the lack of direct data from 2021, data was extrapolated from previous years to current time frames.

Data Collection and Initial Analysis

The study began with the Agricultural Census from 2016. This report also provided data for the entirety of Alberta and counties within Alberta. Specifically, data from Cypress County, County of Newell, County of Forty Mile, and Special Areas 2, 3, and 4 were compiled to summarize the impact on Southeast (SE) Alberta.



Extrapolation Methodology

To project the data to 2023, the following methods and assumptions were applied:

1. Percentage Calculation of Southeastern Alberta Farms: Using 2016 data, the percentage of Southeastern Alberta farms was calculated relative to the total number of farms in Alberta.

$\% \text{ of farms in SE Alberta} = \# \text{ farms in SE Alberta} / \# \text{ of farms in Alberta} \times 100\%$

2. Extrapolation of 2021 Census Data: The 2021 Census data for Alberta was used to estimate the number of farms specific to Southeast Alberta by applying the percentages calculated from the 2016 data.

$\# \text{ of farms in SE Alberta} = \# \text{ of farms in Alberta} \times \% \text{ of farms in SE Alberta}$

3. Revenue Calculations: The gross farm receipts for 2023, including receipts from crops, livestock, and direct payments, were obtained from Statistics Canada for Alberta. To estimate Southeastern Alberta's share, the percentage of its receipts relative to Alberta's total receipts in 2016 (11.35%) was used.

$\text{Gross farm receipts from SE Alberta for 2023} = 11.35\% \times \text{Gross farm receipts Alberta 2023}$



4. Division of Receipts Between Crop and Livestock: Dividing receipts between crops and livestock required a different allocation due to Southeastern Alberta's unique distribution. This was based on land usage.

$\% \text{ of land in crops in SE Alberta} = \text{land used in crops} + \text{summer fallow land (SE Alberta 2016)} / \text{total land (SE Alberta 2016)} \times 100\%$

$\% \text{ of land in livestock in SE Alberta} = \text{land used in pasture (SE Alberta 2016)} / \text{total land (SE Alberta 2016)} \times 100\%$

It was assumed that land usage patterns had not changed significantly since 2016.

5. Assumptions for Extrapolations: For all calculations, it was assumed that there had not been significant changes in land usage, number of farms, crop and livestock types, and other key data. This assumption is supported by the minimal changes observed between the 2016 and 2021 censuses.

6. Renewable Energy Sources Data: Current data (2021) on the number of farms with renewable energy sources was reported by Statistics Canada and included in the analysis.

7. Data Reporting Accuracy: The data collected by Statistics Canada is based on voluntary reporting, which can result in inaccuracies. For example, there were instances where crop production was reported, but total receipts from the crop were not provided by the reporters.

This methodology ensures a systematic approach to extrapolating and analyzing agricultural data for Southeastern Alberta using the most recent available data and logical assumptions.

Results

The first section provides a comprehensive overview of Southeastern Alberta's agricultural landscape, emphasizing its role as a key agricultural hub within Alberta. The second section summarizes the impressive statistics gathered from the research methodology.

1. Agricultural Profile of Southeastern Alberta

Land Size:

Southeastern Alberta is a major agricultural hub of Alberta, encompassing over 10 million acres of farmland, accounting for more than 20% of Alberta's total agricultural land. The region's agricultural areas include notably large farms with an average size exceeding 3000 acres and more than 16% of the farms spanning over 1600 acres each (Alberta Agriculture and Forestry, 2016). This vast amount of land provides expansive opportunity for agricultural activity, making Southeastern Alberta a cornerstone of the province's agricultural economy.

Crop production:

The 2016 Census of Agriculture for Alberta highlights the extensive crop production in Southeastern Alberta. Wheat, alfalfa, and lentils are the top three crops being produced with 1 million acres of land dedicated to wheat production and more than 500,000 acres being used for spring wheat. Southeastern Alberta is home to more than 65% of Alberta's lentil farmland, making it an important part of the lentil-growing industry. Also significant to the area is the cultivation of mustard seed, with over 70,000 acres devoted to growing it (Alberta Agriculture and Forestry, 2016).



Greenhouse farming:

Greenhouse farming is a large component of Southeastern Alberta's agricultural sector, boasting nearly 7 million square footage of greenhouse space, representing over 45% of Alberta's total greenhouse area. Within this, Southeastern Alberta has more than 24% of the province's vegetable greenhouses, with 85% of the greenhouses producing vegetables and 15% cultivating flowers (Alberta Agriculture and Forestry, 2016).

Livestock

Equally crucial to Southeastern Alberta's agricultural industry is livestock farming. More than 60% of the land is dedicated to livestock production (Alberta Agriculture and Forestry, 2016). The region is home to over 10% of the province's cattle farms. With more than 700,000 head of cattle, representing approximately 14% of Alberta's total cow and calf population. In addition to this, Southeastern Alberta is home to a diverse range of livestock, including, pigs, sheep, goats, rabbits, chickens, and turkeys, and even includes more than ten Bison farms as

well as supporting almost 30,000 colonies of honeybees and produces over 60,000 gallons of pollinating bees (Alberta Agriculture and Forestry, 2016).

Revenue, market value, and alternate revenue

Southeastern Alberta contributes significantly to the province's agricultural industry, bringing in over \$2.6 billion in agricultural revenue. This climbed by almost 24% between 2021 and 2023 (Statistics Canada, 2023; Statistics Canada, 2024). Revenue from crops is close to \$1 billion, while the revenues from livestock production are almost \$2 billion with the market value of farms in this area valued at more than \$20 billion (Alberta Agriculture and Forestry, 2016). Nearly 50% of the farmland within Southeastern Alberta is owned by these farm operators with the market value of land and buildings exceeding \$8 billion.



In addition to direct sales contributing to farm revenue an increasing number of farms are now operating farm kiosks and u-pick services. More than 25 farms are selling their products at farmers' markets.

Workforce

Agriculture in this area supports a sizeable workforce, employing over 3700 paid farm workers who are not family members. This includes over 2000 full-time and over 1000 seasonal workers (Alberta Agriculture and Forestry, 2016). Farm operators in Southeastern Alberta on average are 54 years old, with a marginally lower percentage of female operators (29%) compared to the provincial average (31%) (Alberta Agriculture and Forestry, 2016).



Sustainability

Renewable energy and sustainable development are becoming an integral part of Southeastern Alberta's agricultural industry, with over 300 farms now supplying energy through solar panels, wind turbines, and geothermal energy. In addition to this, more than 7% of farms in the area are choosing to use manure instead of chemical fertilizers, reflecting a commitment in the region to environmentally sustainable farming practices.

2. Agricultural Statistics for Southeastern Alberta (2024)

Table 1 presents key agricultural statistics for Southeastern Alberta in 2024, highlighting the region's significant contribution to the province's agricultural landscape.

Table 1

2024 Southeastern Alberta Agricultural Statistics

Southeastern Alberta boasts over 10 million acres of farmland, which is more than 20% of the province's total.
More than 16% of Southeastern Alberta's farms have more than 1,600 acres each.
Southeastern Alberta contributes significantly to the provincial agricultural economy. Agriculture revenues in Southeastern Alberta totaled over \$2.6 Billion.
Southeastern Alberta agriculture includes almost 7 million square feet of greenhouse space in use.
More than 24% of vegetable greenhouses in Alberta are in Southeast Alberta.
Southeastern Alberta has over 45% of Alberta's greenhouse square footage.
From 2021 to 2023, farm revenue in southeastern Alberta increased by approximately 24%, nearly 15% higher than the overall revenue increase for Alberta.
There is over 6 million acres of pastureland in Southeastern Alberta.
Southeastern Alberta encompasses approximately 20% of Alberta's agricultural land.
Southeastern Alberta has an average farm size of over 3,000 acres.
Wheat, barley, and canola are Alberta's top three crops, with Southeastern Alberta contributing more than 25% of the land dedicated to these crops.

<p>Wheat, alfalfa, and lentils are the top three crops in Southeastern Alberta.</p>
<p>Southeastern Alberta dedicates more than 1 million acres to Wheat production.</p>
<p>Southeastern Alberta contains over 65% of Alberta's lentil farmland.</p>
<p>Southeastern Alberta has more than 70,000 acres of farmland devoted to mustard seed cultivation.</p>
<p>Southeastern Alberta has more than 500,000 acres of farmland allocated to growing spring wheat.</p>
<p>More than 7% of farms in Southeastern Alberta use manure rather than chemical fertilizers.</p>
<p>Southeastern Alberta has more than 10 Bison Farms.</p>
<p>Southeastern Alberta is home to over 700,000 head of beef cattle.</p>
<p>Southeastern Alberta accounts for over 10% of Alberta's cattle farms.</p>
<p>Southeastern Alberta accounts for approximately 14% of Alberta's total cows and calves.</p>
<p>Southeastern Alberta produces more than 60,000 gallons of pollinating bees</p>
<p>Southeastern Alberta's farms have a market value of farm capital exceeding \$20 billion.</p>
<p>Over 300 farms in Southeastern Alberta supply renewable energy including solar panels, wind turbines, and geothermal energy. More than 80% of these farms have solar panels.</p>
<p>In addition to direct sales from Southeast Alberta farms, more than 15 farms sell value added products, at least 85 farms sell products through kiosks and u-pick, and more than 25 sell their products at farmers' markets.</p>
<p>Southeastern Alberta has over 3,700 paid farm workers that are not family members.</p>

Southeastern Alberta farms employ over 600 seasonal workers.
Southeastern Alberta farms employ more than 2000 full-time, year-round workers.
Southeastern Alberta revenues from livestock production are almost \$2 billion.
The percentage of female farm operators is marginally lower in Southeastern Alberta at 29%, compared to 31% across the province.
Over 3000 of the Farm operators in Southeastern Alberta are Male.
There are a variety of livestock raised in Southeastern Alberta including cattle, pigs, sheep, goats, bison, rabbits, chicken, and turkeys.
Southeastern Alberta raises almost 30,000 colonies of honeybees.
Southeastern Alberta revenues from crop production are nearly \$1 billion.
Around 50% of the farmland is owned by farm operators in Southeastern Alberta.
The average age of farm operators in Southeastern Alberta is 54.
More than 40% of triticale production occurs in Southeastern Alberta.
More than 65% of lentil production occurs in Southeastern Alberta.
Over 85% of the greenhouses in Southeastern Alberta produce vegetables. The other 15% produce flowers.
The market value of the owned land and buildings in Southeastern Alberta is over \$9 million.
Southeastern Alberta contains more than 10% of the cattle ranches in Alberta.

Conclusion

Southeastern Alberta is undeniably a vital contributor to Alberta's agricultural sector, providing significant economic value and sustaining a robust agricultural landscape. With its extensive farmland, thriving crop and livestock production, and leading role in greenhouse farming, the region plays a crucial part in shaping the province's economy. The findings of this study underscore Southeastern Alberta's substantial share in crop production, livestock farming, and innovative agricultural practices, which collectively contribute over \$2.6 billion to Alberta's agricultural revenue.

Despite the limitations in directly available data, our methodology has allowed us to estimate the region's economic impact with reasonable accuracy. The results demonstrate that Southeastern Alberta's agricultural output not only surpasses growth rates of the broader province but also highlights the need for continued support, investment, and sustainable development in this area.

Southeastern Alberta's agricultural industry does more than drive economic growth; it supports a significant workforce, fosters innovative practices like renewable energy use, and promotes sustainable farming. To maintain this momentum, it is essential to address data gaps, continue investing in agricultural infrastructure, and prioritize environmentally responsible farming techniques. By doing so, Southeastern Alberta will not only sustain its position as a key player in Alberta's economy but also set an example of resilience and innovation in the face of evolving agricultural challenges.



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