



How do we feel about the loss of agricultural land?

FRAGMENTATION AND CONVERSION OF AGRICULTURAL LAND: ANALYSIS OF VALUES TO INFORM POLICY

INTRODUCTION

Alberta Land Institute's research "Fragmentation and Conversion of Agricultural Land: Analysis of Values to Inform Policy," investigates attitudes and values related to agricultural land loss in Canada, using Alberta communities as case studies. Across the province, different individuals and groups view agricultural land loss and land use policies differently based on their priorities. Ultimately, the research seeks to understand how these – often divergent – attitudes and values affect policy development, implementation, and effectiveness.

Why study agricultural land loss in Alberta?

The balance between agricultural land preservation and development is often at the heart of polarizing regional planning conflicts in Canada, particularly at the urban-rural margins. These conflicts are particularly acute in Alberta, where there is no comprehensive provincial policy to address agricultural land conversion and fragmentation.

Previous research (2016) provided insight into the magnitude and distribution of fragmentation and conversion, examined Edmonton residents' willingness to pay to conserve agricultural land, and highlighted the comparatively large role that municipal governments play in land use decisions in Alberta. As decisions to protect agricultural land, or slow development, continue to be met with controversy or fail to achieve desired goals, the research, led by Dr. Swallow and co-funded with the Alberta Real Estate Foundation and Max Bell Foundation, aimed to generate empirical and impartial information to inform this ongoing discussion.

Why study the attitudes and values related to agricultural land loss?

Studying the values provided by agricultural lands is imperative because, in Canada, it is largely unclear what stakeholders view as most important about agricultural land, despite public interest in the issue and local planning conflicts across the country. By examining values and attitudes, this research aims to improve municipal and provincial decision making and policy.

THE APPROACH

As a part of the research, Dr. Swallow and a team of faculty and graduate students undertook six specific studies focused on evaluating, qualifying, quantifying, and analyzing attitudes and values towards agricultural fragmentation and conversion in Canada. The studies use data from key informant interviews, surveys, satellite imagery, and housing transactions in multiple rural and urban municipalities in Alberta to illustrate the unique values and attitudes of the general public, landowners, and municipal workers towards land conversion.

THREE RESEARCH OBJECTIVES INFORM POLICY

1

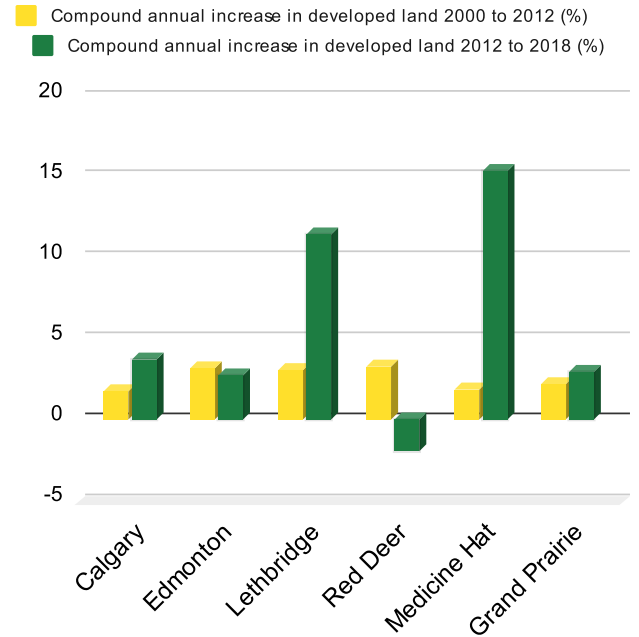
Update information on the state and trends of land conversion and fragmentation in Alberta.

Previous studies in Alberta revealed alarmingly high rates of agricultural land conversion between 1980-2012. In order to understand the ongoing development pressure on agricultural lands since 2012, the research team quantified the rate and amount of land converted from agriculture to residential and industrial uses.

Overall the six municipalities studied lost agricultural land to development at a higher rate between 2012-2018 compared to 2000-2012, as seen in the figure on the right. Edmonton and Red Deer also continued to lose agricultural land, but at a slower rate.

Having updated information on the state of land conversion is imperative because agricultural lands provide both monetary and non-monetary values to individuals and society.

Compound Annual Increase in Developed Land – 2000-2012 versus 2012-2018



2

Quantify the monetary and non-monetary values of agricultural land in Alberta that is at risk of conversion to developed uses.

All Albertans benefit from agricultural land, but their valuations and priorities are not uniform. Throughout the research, commonly cited public values included open space, food production, and ecosystem services – including clean air and water, as well as climate regulation.

Generally, the researchers found that Albertans value agricultural land and have a strong interest in preserving this land – through densification and conservation payments. This was especially true for those who reside far from farmland, as they are willing to pay more to conserve land from development pressures than are those located near agricultural land.

Compensation for the development of agricultural land was also seen as an acceptable measure by study respondents and may be utilized in policy when it is the most appropriate measure.

93%

of Albertan's agree or strongly agree it is important to preserve land in agricultural uses for future generations

65%

of Albertan's agree or strongly agree agricultural land helps to clear air and water and helps conserve the diversity of natural systems



Communicate information about the importance of agricultural land in ways that are meaningful for policy makers and planners.

Municipalities have the legislative power to approve rezoning and subdivision applications that result in agricultural land being developed into residential, commercial, or industrial uses. The researchers interviewed key stakeholders in order to better understand the social and cultural context in which municipal administrators and elected officials make land use decisions.

The results show that multiple compounding factors and interactions between formal and informal institutions influence land use decisions. Elected officials and municipal administrations spoke to fairness, relationships with surrounding municipalities, and concerns over a lack of confidence in existing measures of agricultural land quality, as factors affecting their decision-making process.

Municipal stakeholders also expressed concern that the pro-development path dependence in Alberta means there is not a strong provincial backstop to defend their decisions to reject rezoning applications.

NEXT STEPS

Dr. Swallow and his team find that it is imperative to understand how stakeholders value land used for agriculture, nature preservation, and development as the continued conversion and fragmentation of land across Alberta leads to concerns about rural landscape preservation, loss of food production capacity, high service costs, and conflicts between farmers and new rural residents.

Protection and development on agricultural land has costs, and who is going to bear these costs is a concern facing municipal administrations and elected officials. This research suggests that most of Alberta's residents not only value agricultural land – for its public and future benefits – but are willing to contribute to the conservation of this land through payments.

The research feeds into further academic analysis and lays out information that municipalities can draw from in setting agricultural land preservation and development policy.

Fragmentation and Conversion of Agricultural Land: Analysis of Values to Inform Policy was completed in 2021.

Backgrounder V.01

Research Team

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Alberta Land Institute

The Alberta Land Institute (ALI) is an independent research institute based at the University of Alberta. We are committed to research that supports and enhances land use policy in the province of Alberta and beyond. ALI's work focuses on the changing landscape and the ways that planning and policy design can ensure the long-term sustainability of Alberta's agricultural sector, its water and its natural areas.

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