Agricultural Gentrification in Saskatchewan:

An Exploration of Landscape Transformations within the Rural Agrarian Locale

by

Richard Grant

A thesis

presented to the University of Waterloo

in fulfilment of the

thesis requirement for the degree of

Master of Environmental Studies

in

Planning

Waterloo, Ontario, Canada, 2023

Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public

Abstract

Due to the gradual shift from productivist-oriented activities, towards more multifunctional activities, landscape transformations are more visibly noticed within rural communities. The growing transition towards post-productive agricultural land uses raises questions about the future use of rural land in the face of sustainably developing rural communities. More importantly, it begs the question of how land use planners can fairly contextualize the nature of growth in rural communities while reacting to the different facets of gentrification.

Within gentrification research, there is a heavy focus on urban gentrification. More importantly, of the gentrification research conducted in rural communities, there is little focus on gentrification within the agricultural locale. The objective of my research is to examine the role that agricultural gentrification plays in facilitating landscape transformations in rural communities in Saskatchewan. My research looked at the agricultural restructuring occurring in rural Saskatchewan communities as a precondition of agricultural gentrification. Using a case study approach, three municipalities were selected to explore the phenomena of agricultural gentrification in Saskatchewan.

My research found that the province of Saskatchewan operates under an agro-industrial paradigm that utilizes a productivist-oriented form of farming as a means of determining the highest and best use of farmland. Three case studies selected to explore the relationship between landscape transformation and the emergence of agricultural gentrification utilized Neil Smith's Rent Gap theory as a means of interpreting the gap between the farmland sale price and farmland value. The rent gap represented in the ratio studies of the three municipalities reflects the disparity between the farmland value and the corresponding farmland sale price. The value of farmland under this framework views the productive capacity as the highest and best use, which translates to its "value", and ultimately influences the sale price. The disparity between the farmland sale price and its value reflects how the "highest and best use of" farmland is determined under an agro-industrial paradigm in Saskatchewan. More importantly, the emergence of agricultural gentrification and its impact on the price of farmland has far reaching effects on land use decisions and rural community development.

Acknowledgements

I want to thank my academic advisor, Dr Jeremy Pittman, for his great guidance, support, and mentorship during this leg of my academic journey.

Dedication

This study is wholeheartedly dedicated to my beloved parents, who have been my source of inspiration and gave me strength when I thought about giving up, they continually provided their moral, spiritual, emotional, and financial support.

TABLE OF CONTENTS

List of Figures

List of Tables

List of Abbreviations

Abbrv.	Abbreviation
NCP	Nature's Contribution to People
FCC	Farm Credit Canada
FLSB	Farm Land Security Board
SPI	Statements of Provincial Interests
RS	Ratio Study
RM	Rural Municipality
AL	Arms Length
Und	Undetermined
SFSA	Saskatchewan Farm Security Act
CAGR	Compound Annual Growth Rate

1.0 Introduction

1.1 The Impact of Rural Gentrification on Rural Community Development

Landscape transitions occurring within rural communities due to the latent effects of agricultural restructuring demonstrate the gradual shift from productivist-oriented activities towards activities of a more multifunctional nature (Åberg, 2021; Abrams & Bliss, 2013; Sutherland, 2012). Sometimes characterized as rural restructuring, the movement towards more multifunctional activities is being witnessed in rural communities throughout the post-industrial world in increasingly more prominent forms (Gosnell & Abrams, 2011). Byson and Wyckoff (2010) attempt to articulate the tension between traditional economies and emerging amenity-based economies witnessed in the rural American West as a transitional process, whereby these shifts interact with a wide array of growing cultural and environmental changes in rural communities. Within the realm of rural land use planning and development, this transition intersects between various rural planning decisions representing a myriad of complex land use conflicts that emerge from our shared need to protect the natural environment while balancing the needs of our community. Issues attributed to exurban residential development have had varied impacts on the use of farmland, farm viability, and the ecological services provided by “working landscapes” that affect the development of a rural community (Ahmed & Jackson-Smith, 2019). Hines (2012) articulates that rural gentrification worsens pre-existing social, environmental, and geographic inequities within rural communities, whereby the shifts in landscapes of production to landscapes of consumption are based upon classed-oriented dynamics of the continuing capitalist-modernity, within and without the locale of rural communities.

Halfacree (2007) joins the discourse on rural development within the global North, a narrative that in various ways attempts to understand and contextualize the nature of rural change by asserting his notion of a radical “rural future" in which to explore and challenge the spatial change occurring in the British countryside, as a counter-narrative against the dominant mode of agricultural production. The emergence of gentrification within the discourse on rural development is but one inherent feature of post-productivism. Gentrification then can be understood as one complex manifestation of these emerging land use conflicts. As a symptom of late-stage capitalism, gentrification disrupts and augments the process of growth and development in rural communities, requiring a re-examination and recontextualization of growth regarding the use of rural planning and landscape management principles to ensure the sustainable development of our natural environment.

Gentrification is recognised not as a uniform and singular phenomenon, but rather as a series of complex interrelated processes that can be evidenced by the change that occurs within the built and natural environment (Phillips et al., 2021). Simply put, gentrification results in landscape change. Gentrification can thus be characterized by how it alters and redefines the environment and our relationship to it: the reinvestment of capital, the locale social upgrading, displacement of lower-income residents, and landscape change (Sutherland, 2012).

The academic literature on gentrification focuses favourably on the urban form of gentrification. Issues of metrocentricity and urbanormativity, common mainstays within the gentrification discourse (Phillips & Smith, 2018) colour one's understanding of rurality. Bernt (2018) argues that shifts witnessed within rural communities should be conceptualized as a reconfiguration of rurality emitting from urban spaces, however, such a position unfavourably removes the notion of agency occurring within rural communities (Phillips & Smith, 2018). Agency and mobility are the central tenants to understanding the nature of gentrification.

Regardless, the research on rural gentrification is steadily growing. Sutherland (2012) conceptualizes another form of gentrification that occurs within the agricultural spaces of rural communities, adding further nuance to the discussion on landscape transformations influenced by gentrification. Agricultural gentrification is a result of the migration of affluent newcomers outside the locale and the social upgrading of already existing farming households (Sutherland, 2012).

Sutherland's (2012) conception of agricultural gentrification views agricultural land as a productive resource, being thus a 'gentrifiable space' (by estate agents, property developers, the State and other actors as 'gentrifying agents') to be enjoyed by those in search of a particular rural lifestyle. Through the consumption of land by rural gentrifiers, 'accumulation by dispossession' occurs as new migrants gradually outnumber and displace the longer-term residents. The creation of economic, cultural, and social capital produced by the land is a result of increased multifunctional land uses in rural areas. The critical distinction between rural gentrification and gentrification occurring within agricultural spaces is where the change is happening (Sutherland, 2012).

However, much of the discussion on gentrification has been focused primarily on the housing stock in rural communities; anything related to agricultural land use consists of ideas centred around the nature of rurality such as recreational land use on farmland, the desire for a farming lifestyle by wealthy in-migrants, or farm building revalorization for commercial and residential use (Sutherland, 2012). Very little research has been reserved for the discussion on the preconditions of gentrification that result in landscape transformations. Gentrification research focusing on the agricultural locale of rural communities often examines the after-effects of these processes, without an explicit focus on the landscape transformations.

When analysing the indicators of gentrification such as the shift in population demographics of the new in-migrants, the landscape itself and the use of the land are often not considered as a basis for determining gentrification, the preconditions of which hardly get explored (Åberg, 2021). Sutherland (2012) writes that the land is viewed as a productive resource, so when analysing the gentrification indicators, the productive capacity of the land can form the basis for this analysis. So far, what has been discussed concerning the management of rural land use relates to its ability to generate capital. And it is through the generation of capital through varied means that agricultural gentrification can be understood. The gentrification process in agricultural spaces views the use of land as a means of generating "ground rent" where profit is generated from the use of farmland for recreational and commercial purposes (Sutherland, 2012).

The landscape and how it is being used can help one analyse rural gentrification preconditions manifested within a community's agricultural rural locale.

1.1.1 Research Focus and Objectives

Problem Statement

This growing transition towards post-productive agricultural land uses raises questions about the future use of rural land in the face of sustainably developing rural communities. More importantly, it begs the question of how land use planners can fairly contextualize the nature of growth in rural communities while reacting to the different facets of gentrification. **Simply put, the central question of my thesis asks, what is the nature of Saskatchewan's agricultural sector: productivist or multifunctional?**

Research Gaps

Within gentrification research, there is a heavy focus on urban gentrification. More importantly, of the gentrification research conducted in rural communities, there is not sufficient research done within Canada, as most case studies feature areas in the Global North such as the United Kingdom and the United States. The interest in focusing on Canada, as opposed to relying on research conducted in other areas of the Global North for a comparative analysis of gentrification, despite agro-industrial complexes being homogenous in nature, has to do with the rich data derived from site-specific geographic analyses of gentrification. Canada is varied in its agricultural productive capacities; therefore, the use of the land is different, resulting in a site-specific expression of gentrification.

Therefore, for the growth of gentrification research, there is a growing need for more research that focuses on the impact rural gentrification is having on rural communities in Canada. Often, rural gentrification research focuses on socio-economic impacts, without a look at the tangible impacts of the phenomenon on the landscape (Åberg, 2021). Land use transformations happening in rural communities tend to happen on a smaller scale while having a larger impact due to the size of the population and other exogenous factors. Research focusing on rural landscape transitions occurring within the agricultural locale will further solidify the conception of agricultural gentrification within the context of multifunctional landscape literature. More importantly, exploring the relationship between land use transitions and agricultural gentrification in rural communities will gain greater academic legitimacy in gentrification research, thus informing future land use decision-making processes.

My research attempts to fill the theoretical gap that exists between rural landscape dynamics and land use transitions by exploring the possibility of rural gentrification in Saskatchewan.

More specifically, my research asks:

1. What is the nature of Saskatchewan's agricultural sector: productivist or multifunctional?

2. Is there a relationship between rural land use and multifunctional transitions in Saskatchewan?
3. Is there evidence of agricultural gentrification occurring in Saskatchewan?

Research Objectives

The long-term goal of this thesis is to widen the conception of agricultural gentrification in gentrification literature with the utilization of the rent gap theory applied to farmland prices, and in doing so determine if a relationship between land use transitions and agricultural gentrification in Saskatchewan's rural communities exists.

Specifically, I propose:

1. Examine the current state of Saskatchewan's agricultural sector;
2. Determine if there is evidence of agricultural gentrification in Saskatchewan's agricultural sector; and,
3. Explore the relationship between farmland use and agricultural gentrification.

2.0 Literature Review

2.0 Introduction

My thesis broadly focuses on the role that rural gentrification plays in the transformation of rural landscapes and the rise of multifunctional landscape transitions. The structure of this chapter is designed to give a brief overview of the main bodies of literature about rural gentrification, and multifunctional land use transitions in rural communities. Firstly, there is an examination of gentrification in rural areas, highlighting the two distinct approaches to understanding the phenomena. Additionally, there is a subsection that describes how nature, natural amenities, and by extension, the rural landscape are understood within rural gentrification research. Thirdly, there is an emphasis on agricultural gentrification, which is an examination of the rural landscape dynamics as it pertains to changing livelihoods, and the use of the land within agricultural areas in rural communities. Fourthly, amenity migration and rural restructuring are introduced to give a deeper perspective on the shifting demographics of rural communities. Lastly, the notion of multifunctional landscapes and working landscapes are discussed to give a different viewpoint on landscape change occurring in rural communities.

2.1 Gentrification

The word “gentrification” since its inception has been both viewed as an apt yet contested word, utilized within a wide range of interpretations and place-based conceptualities that fluctuate between the rural to urban dichotomy (Guimond & Simard, 2010; Hamnett, 1991; Pilgeram, 2019). A shift in housing tenure, from rental to owner-occupation was witnessed as the shift from lower to higher socio-economic status residents during the divestment of the 1950s and 1960s occurred- a pattern of class gentrification (Shaw, 2008). Within contemporary research, the first instance of the term ‘gentrification’ is found in Ruth Glass’ 1964 essay on the socioeconomic impacts of urban migration by the upper class, who first introduced the term to describe the displacement of residents in lower-class districts by the arrival of middle-class members who sought to buy and renovate the cheaper homes in low-income neighbourhoods (Glass, 1964; Sutherland, 2012). Pioneering the concept of gentrification, Glass, a sociologist, utilized this terminology to explain the social shifts and physical changes that occurred in the depreciated areas in London due to the gradual arrival of newer, wealthier tenants who eventually displaced these lower-income residents (Glass, 1964; Guimond & Simard, 2010). The ‘gentry’ were identified as being wealthier and more educated than their working-class counterparts who bought and renovated old homes in certain parts of inner London during the 1950s and 1960s (Shaw, 2008).

Researchers studying the effects of gentrification have emerged from two distinct approaches to properly define and contextualize the phenomena: an economic analysis or a cultural analysis (Hamnett, 1991). The economic analysis takes a structural productivist approach that is heavily influenced by theoretical economic analysis and focuses on the economic structures of place, and the production of space (Guimond & Simard, 2010).

However, it should be noted that either theoretical framework is sufficient to contextualise the nature of gentrification (N. Smith, 1979), albeit the penchant for scholars to utilize a blend of the two perspectives to better characterize the nature of gentrification. Scholars such as Argent and Holmes (2016) in examining the rural transitions in the Nambucca Valley utilize a blend of both the structural productivist and cultural analyses when contextualising the multifunctional rural transitions occurring in the region. Uzun (2003) examines the effects of the urban restructuration process in Turkey, identifying both the physical and socio-cultural residential transformations at the neighbourhood level. An approach that blends the two perspectives can offer a more 'holistic' view of gentrification, drawing from the two main theoretical and ideological perspectives: production and profitability vs. consumption and choice (Hamnett, 1991).

Under the production theory approach, gentrification is framed by a cycle of property devaluation that results in the subsequent population displacement as people of lower socioeconomic status who can relocate, are pushed towards more economically advantageous areas (Guimond & Simard, 2010; N. Smith, 1979) leaving behind their community. The process of refurbishment and renovation occurs once these depreciated areas are newly redeveloped by developers and investors who hope to turn a profit from this exodus of lower-income residents (Guimond & Simard, 2010; Phillips, 2005). In the Global North during the 1970s, displacement resulting from gentrification was framed as symptomatic of the process of industrial restructuring occurring where knowledge-based industries such as IT and financial services converged in post-Fordist cities (Zhang & He, 2018). This 'back to the city' movement ushered by the emergence of the "new middle class" was viewed by Smith as the movement of productive capital returning from the suburbs to the city (N. Smith, 1979).

Production-side theorists frame gentrification as a means of realizing profit through the productive investment of capital to fill rent gaps (Phillips, 2005), (which is defined as the difference between a site's actual value and its potential value at 'best use')(Darling, 2005). By investing capital into a site through refurbishment, there is an opportunity for increased capital gains, hence, gentrification is a cyclical process of investment and disinvestment of capital (Phillips, 2005). Scholars utilizing a productivist framework adopted the notion that gentrification is an expression of the uneven movement of capital, shifting away from earlier conceptualizations that framed gentrification as the displacement of the lower-class population by wealthier in-migrants (Phillips, 1993).

He and Zhang (2018) attempt to de-territorialize the phenomena of gentrification by addressing the commonalities between the Global North and the Global South and the Global East, building upon Peter Marcuse's typologies of displacement and its adaptions by exploring the different typologies of displacement caused by gentrifications occurring in the Global South and the Global East. Gentrification under this lens is viewed to be produced through the political, economic structures, and legal institutions put in place, often specific to a particular region (Guimond & Simard, 2010), i.e., a product of late-stage capitalism occurring in that part of the world. He and Zhang (2018) examine the evidence of displacement through a racialized and class-based lens with post- modernist perspectives on the impacts of gentrification in the Global South and the Global East.

Planning and land-use policies guided by state-led intervention, and the active role of the private sector according to production theory are also important actors in the phenomenon of gentrification occurring in urban and rural areas (Sakarya & Başaran Uysal, 2018). Neil Smith's 1979 Journal article, "Toward A Theory of Gentrification" articulated the productivist theory of gentrification best by stating that gentrification was a movement of capital, not people (N. Smith, 1979).

Instead of focusing on the productivist forces of gentrification, the cultural theory approach examines the cultural and socio-economic characteristics of the individuals who participate in this process of consumption (i.e., gentrifiers) (Guimond & Simard, 2010; Stockdale, 2010). Gentrification under this paradigm emphasizes consumption, whereby the patterns of consumption influence the nature of production (N. Smith, 1996). Some scholars have taken to view gentrification then as an expression of our postmodern society (Halfacree, 2018; N. Smith, 1979, 1996). A postmodern society, that since the 1970s prioritized the emerging 'middle class', or the so-called 'creative class' who took to the inner city, attracted to redeveloped socially heterogeneous neighbourhoods in central locations (Zhang & He, 2018).

By examining the actors of the new cultural class that came from these gentrified neighbourhoods, researchers attempted to understand the underlying causes of gentrification (Guimond & Simard, 2010). Gentrification then can be understood to be the movement of people, rather than the flow of capital, an examination of more than just the displacement of persons and social classes, but also a study of the change in consumption habits by the new cultural class (Solana-Solana, 2010).

These actors are individuals who reject the offerings of the suburban lifestyle for the glamour and thrill of the city, being characterized as counter-culturalist in their lifestyle choices and behaviours (Guimond & Simard, 2010). Being viewed as a drive back to the city, a subversion of the ideals that supported the prior suburbanization, especially within the US (N. Smith, 1996).

Moreover, this category of consumers were often young, white-collar middle to upper-middle-class professionals who moved to the city (inner-city resurgence) and were viewed as another new form of consumption (N. Smith, 1979). The emergence of this new middle class during the 1970s and onwards demonstrated the dislocation of the existing working class in the inner cities in the Global North, often being consumers who preferred the accessibility and convenience that the city provided (Zhang & He, 2018). The rampant consumerism that manifests as gentrification displaced the working-class members of the city.

In an ideal sense, the city is considered an attractive choice because it purports to offer an array of diverse amenities and many conveniences, being a place that supports and prioritizes the affluent members of the "new" cultural movement, comprised of varied groups of gentrifiers, individuals who are often socially and culturally diverse, seeking a balance between cost of living, and quality of life, and other aspects of city living (Guimond & Simard, 2010). The urban and residential landscape shifts because of the changing consumption habits and lifestyle choices of these urban gentrifiers (Sakarya & Başaran Uysal, 2018).

2.2 Rural Gentrification

Since the 1970s, the socio-economic and demographic reconstruction of the countryside, characterized as a “rural renaissance” by experts is seen as a distinct expression of gentrification (Guimond & Simard, 2010; Halfacree, 2018; Phillips, 1993). Researchers studying the resurgence of ex-urban migration to rural communities demonstrated that similar socioeconomic and cultural impacts associated with urban gentrification such as rising housing prices, displacement of socially and economically marginalized communities, and the creeping urban sprawl also occur in rural communities (Golding, 2016) just in a smaller scale. Researchers have witnessed a shift in the demographic makeup of rural communities in the West since the 1970s, reflecting the rising population growth in some of those rural areas (Guimond & Simard, 2010). The notion of rural gentrification has been critical to theorizing the population shifts in rural communities (Pilgeram, 2019).

Much of the theoretical foundation that has informed rural gentrification has been influenced by studying its urban counterpart, and continues to be a dominant force in how rural gentrification research is understood, being considered its intellectual predecessor (Phillips, 1993). Rural gentrification research focuses largely on the material transformations that occur within rural landscapes, particularly dealing with housing markets and socio-demographic change and the flow of capital framed under a post-productivist view of change (Golding, 2016). Phillips (1993) delves into exploring the commonalities between rural and urban studies concerning the phenomena of gentrification, with academic research that demonstrates the similarities between the two principle geographies.

As a result of a post-productivist economy, wealthier in-migrants have the propensity to change the rural landscape, desiring to retain certain idyllic characteristics of their newfound rural community (Solana-Solana, 2010), accompanied by ex-urban sprawl, and increased urbanization (Sakarya & Başaran Uysal, 2018). Earlier conceptions of rural gentrification articulated class-based analyses of the structural and socio-economic shifts occurring in rural communities, viewing these shifts as ‘class-dictated population movements’, contextualized as the re-composition of the societal class structure- a form of class-based colonization (Phillips, 1993). The movement from urban to rural spaces can also be understood using Harvey’s ‘spatial fix’ theory, which articulates the notion that the destructive forces of capitalism necessitate the creation of new spaces within the built environment through which consumption can be further facilitated (Pilgeram, 2019). In other words, gentrification occurring in rural communities is another form of consumption that occurs due to the nature of capitalism’s destructive expansionism.

2.3 Rural Gentrification in Nature

Within the current understanding of rural gentrification, different representations of the natural environment play an important part in understanding how gentrifiers (ex-urban individuals) consume rural space (e.g., history, cultural values, heritage etc.) (Phillips et al., 2020). Phillips (2018) articulates the notion that landscapes are places imbued with cultural and symbolic meanings, being more than a variant ‘social space’ or a place operating under a ‘materialist’ perspective.

The central cultural representations in the Global North, specifically North America of “western” rurality depict life in rural communities as rustic pastoral environments, being idyllic and romantic expressions of rural life influence how gentrifiers view rural landscapes, thus being a significant factor in the nature and degree of their consumption (Phillips et al., 2020). Pahl (1965) made connections to class structures, social interaction patterns, and ideas and representations of rural life, arguing that wealthier in-migrants (termed the salariat) arrived with notions of rurality and rural living in the English countryside, and with these ideas altered their new space. Halfacree (1994) expands upon Pahl’s idea, attempting to reconcile the various explanations for counterurbanization by exploring the attraction to living in a rural environment, (which is largely influenced by cultural representations of rural environments).

Individuals who view the rural landscape with this level of escapism, and sometimes exoticism have been largely influenced by the popular representations of rural environments in the West, and as such, these processes of commodification and consumption have been termed “rural greentification” or “greentification” to characterize those who desire rural environments for its green space (Richard et al., 2014). Being driven primarily by a desire to consume rural green spaces for access to rural life, and its environmental amenities, the term “greentification” has been used to specify that specific form of consumption that occurs in the natural environment (Richard et al., 2014). This definition fits largely within the perspective of the cultural theory approach as it frames the consumption of rural living as an identification of the commodified values found within rural living by these newcomers. Values and terms such as rugged individualism, hard work ethic, and freedom are found within the ideal of “free enterprise” often exemplified in America’s rural communities (Bryson & Wyckoff, 2010). The terminology of ‘greentification’ lacks any class-based analysis, as opposed to gentrification, understood as (gentry-fication, which is to produce more gentry-the reproduction and movement of the middle class) (Phillips, 2005).

Hines (2012) articulates a class-based analysis of rural gentrification with the notion that it is best described as a class conflict between the residents and the new-migrants. The tension between the in-migrants and the residents is a socio-cultural conflict, with persons who have an ‘industrial perspective’ and those with a ‘post-industrial worldview’ (Hines, 2012). However, this tension between ‘gentrifiers’ and locals regarding land use within rural communities reflects the competition between consumptive and protective interests and values concerning the social representations of the rural environment (Abrams & Bliss, 2013). In the UK, tranquil representations of rurality have been associated with rural gentrification and counterurbanization processes occurring within European rural spaces (Phillips et al., 2020). Differences in green gentrification processes reflect the differences in the cultural representations of nature and varied consumption habits of in-migrants (Richard et al., 2014). In Russia, the biggest attractor for rural life is the access to nature, space, and tranquillity, with residents being seasonal and mobile, as opposed to permanent relocation to the countryside (Mamonova & Sutherland, 2015).

Housed within the tenants of neoclassical residential land use theory, suburbanization is viewed as a preference for space, and the growing ability to pay for it. Urban forms of gentrification were understood as a desire for change, a shift away from suburbia, epitomised as, the “back to the city” movement (N. Smith, 1979). Phillips et al. (2020) utilize Jon Caulfield’s argument that gentrification represents the desire by people to fight against the “institutionalized patterns of dominance and suppressed possibility” often made manifest and experienced in the form of suburban living, to frame their discussions on the possible motivations for ex-urban migrations to the rural English countryside. Upon Caulfield’s thesis, they made an argument for the influential role the idyllic presentation of nature played in the processes of rural gentrification, by assessing the contrasting emancipatory and exclusionary aspects of gentrification within rural spaces by wealthy gentrifiers who want access to nature (Phillips et al., 2020).

Looking through the cultural theory lens Richard et al. (2014) write that gentrifiers migrating to the French countryside were gradually transforming the Limousin mountains, attracted to the idealistic representations of the alpine region and its unique environmental amenities. The newcomers, with their different cultural values and higher spending power, changed the landscape (through consumption), demonstrating their different conceptions of rurality and identity (Richard et al., 2014) in contrast to the “original” locale. Ghose (2004) found that in America, similar patterns of migration were found, as in-migrants attracted to the rural way of life caused increased urbanization and rural sprawl, visible consumption of open spaces and increased housing prices. The transformation of the rural landscape comes through the consumption habits of wealthy in-migrants who attempt to instil their idealized conception of rurality onto their environment, thus the commodification of rurality and rural landscapes is associated with an appropriation of rural living expressed in the form of a nostalgic desire for a ‘quaint’ rural life (D. P. Smith & Phillips, 2001). Between local people and wealthy in-migrants, land management conflicts can arise over the planning and protection processes and mechanisms of natural resources, however, newcomers have been found to have a beneficial impact on the conservation of cultural heritage and natural resources (Sakarya & Başaran Uysal, 2018).

2.4 Agricultural Gentrification

Gentrification within agriculture is defined as both the in-migration of wealthy newcomers to rural areas, and the shifting social dynamics found within the rural environment because of these newcomers (Sutherland, 2012). This process of agricultural gentrification sees both the changing cultural values and shifting economic forces inherent within a system designed to realize capital (Sutherland, 2012). Post-productivism and pluriactivity have been used to understand the process of agrarian change within rural landscapes, as it concerns the de-valorization of buildings and lands relating to agricultural production that has been viewed as unproductive or irrelevant to generating farming capital (Phillips, 2005).

The process of rural space and resource revaluations results in its reuse for leisure or non-agrarian activities as traditional production activities no longer form the backbone of rural economies resulting in farmland consolidation or farmland fragmentation (Gkartzios & Scott, 2012; Phillips, 2005).

In the reorganizing of agrarian activities from production to consumption, the process of agricultural gentrification happens from 'without' the locale due to the presence of in-migrants, emphasizing the shift in cultural and economic capital, and resulting in the displacement of existing farmers (Sutherland, 2012). However, farmers have the potential to 'self-gentrify' through pluriactivity, the diversification of economic capital through the development of non-farm business on the farm as well as off-farm investments of economic capital or labour (Sutherland, 2012).

Post-productivist policies concerning rural land use also encourage gentrification within rural communities, as the state is an 'agent of gentrification' with the introduction of policies that reduce production-oriented activities and encourage the enhancement of the agro-environment (e.g., sustainable farming approaches) (Sutherland, 2012). Gkartzios & Scott (2012) explore the impact of rural gentrification through the effects of state-led policies by examining the effectiveness of land-use planning and housing policies contextualized within Ireland's rural housing market. They found that within a laissez-faire rural planning system, rising housing prices and displacement were encouraged (or rather not discouraged due to de-regulation) enabled by pro-development-oriented policymakers and state-supported housing development agendas.

Evidence of post-productivist transition in the rural countryside can be seen in instances where there are changes to agricultural production systems, especially in areas with mechanization and agricultural intensification which would have furthered the obsolescence of underutilized farm buildings obsolete- this phenomenon is referred to as agricultural restructuring (Sutherland, 2019). Therefore, the smaller scale, low density, and picturesque appearance of the farmland communities present an attractive opportunity to ageing farmers for potential housing development, thus agricultural gentrification via land use development (Sutherland, 2019). A 'rent gap' is produced through the process of the farming building conversion, as there is a greater potential to make more money converting these farm buildings into buildings for residential use as opposed to continuing to farm in a 'productive' capacity (Sutherland, 2019).

2.5 Amenity Migration

Migration to rural areas within amenity migration literature is often considered an important subset of counter-urbanization research (Argent et al., 2014). The movement of mostly wealthy affluent urban and/or suburban populations to rural communities for particular lifestyle amenities, such as participating in outdoor recreation, enjoying the natural scenery/ landscape vistas, cultural richness, or having an appreciation of rural living is defined generally as 'amenity migration' (Phillips et al., 2021).

At its core, amenity migration research is concerned with the various push and pull factors intersecting at varying levels that result in drawing certain people to specific rural locales (Phillips et al., 2021). When investigating the intersecting push and pull factors of a rural locale, two main qualitative aspects are considered: (a) the attractiveness and/or appeal of the environment, i.e., locational attributes, and (b) specific and/or unique attributes of the place, i.e., site attributes (Argent et al., 2007). Argent et al. (2014) defines the implicit combination of environmental, locational, economic, and sociocultural variables that operate as critical push and pull factors as the Amenity principle.

Amenity being a cumulative concept, time is an important component in trying to determine the amenities within a given area. Immediate site factors play a bigger role in determining a site's amenities, while wider locational factors play a larger role as the timescale increases (Argent et al., 2007).

Moreover, the nature of an amenity is best understood as a complex of different anthropocentric indicators, rather than a single indicator, being a subjective interpretation of the physical and cultural aspects of one's environment in the creation of an "attractive" and "livable" place to be (Argent et al., 2007). Abram et al. (1998) write that amenity migration is not simply the movement of people, but rather involves the "recreation of the rural" due to the material (and immaterial) transformations of the rural environ driven by the resistance of the imported ideals and imperatives of the wealthier newcomers (Phillips et al., 2021).

Focusing on the temporality of amenity migration on permanent and semi-permanent residential mobility, Argent et al. (2007), developed an 'amenity complex, which is a measure of a rural area's amenities utilized as a quantitative measure of rural restructuring occurring in rural Australian communities. The work done by Argent et al. (2007) builds upon McGranahan's (1999) amenity index which was devised using the Z-score of independent variables (the locational and site-specific attributes of an area). By having a model based on using simple indicators as means of predicting in-migration rates in rural Australia (Argent et al., 2007).

Argent et al (2007) were able to utilize seven variables within their amenity complex. They found that out of the seven locational and site indicators, beach distance, employment in recreational and related services, and irrigation water resources were the greatest indicators of amenity migration. This led them to conclude that the convenient access to excellent surfing and swimming beaches; coastal views and riverine areas for recreational fun, and the necessary services and facilities to support these amenities were important aspects for Australians moving to rural communities (Argent et al., 2007). Argent et al (2007) suggest that the amenities in these areas promote more consumptive desires as these areas undergo shifts towards more amenity-driven migration, thus demonstrating that select rural areas of this nature are entering a wider multifunctional transition compared to other rural areas counterparts in that region of Australia.

2.6 Rural Restructuring

Rural restructuring, broadly speaking, is a shift in a rural community's economic framework, political responsibility, and government (Oncescu, 2015), characterized as a transition towards a post-productivist system. When attempting to understand the significant transformations affecting rural landscapes that primarily were previously dedicated to commodity production activities such as logging, mining, or farming, amenity migration research has been utilized by geographers, demographers, rural sociologists, and planners attempt to contextualize the nature of these rural restructurings (Abrams & Bliss, 2013). The impacts of rural restructuring differ by community, region, industry, and location (Oncescu, 2015). Rural restructuring has been associated with the shift from Fordism to post-Fordism, from modernism to postmodernism, and from a Keynesian model to a neoliberal state (Hoggart & Paniagua, 2001).

Amenity migration research attempts to understand how the consumptive behaviours and interests of in-migrants influence the use and consumption of various rural amenities, and how they differ from production-oriented land users. Reshaping the western landscape, the contemporary research literature on rural restructuring is often described as a rural restructuring triad, one being a shift in economic sectors, secondly, evidence of in-and-out migration and lastly, a transformed human-land relationship (Nelson, 2001).

Rural restructuring alters rural communities both ideally and materially. The transformation of the rural economy (materialist) alongside the rural community's sociocultural (idealist) transformation due to the in-migration of newcomers and displacement of the locale, a key feature of multifunctional transition is symptomatic of rural gentrification (Frank & Hibbard, 2016). Within amenity migration research, there is consensus that higher levels of growth are associated with places that have scenic amenities (Olson & Munroe, 2012).

Most of the amenity migration literature frames the process of rural restructuring as a transitional process for rural environs, where the transition from "landscapes of production" to "landscapes of consumption" results in the "recreation" of these areas by the newer urban elite (Abrams & Bliss, 2013). This "change" however is not a precise transformation, being, in reality, a highly variable process operating across different contexts, where the boundaries between what constitutes activities of production, consumption or protection are not fixed, but rather a negotiation between the production of place and space.

2.6 Multifunctional Landscapes

Landscapes, for much of human history, were multifunctional, however, the rise of commodity production resulted in the normalization of monofunctional farming where the primary goal is to maximize material outputs (Frank & Hibbard, 2016). Multifunctional landscapes represent a shift away from the dominance of production values and monofunctional farming (Frank & Hibbard, 2016), whereby notions of the productivist rationale for land use, agricultural production have shifted to include landscape or ecological protection values and urban-driven recreational use (Mendham et al., 2010). The 'productivist' model of agricultural rural development is focused on the intensification and increase of agricultural production in rural communities. Often, the productivist model has been accused of being reliant on subsidies and policy decisions of 'detached' organizations, myopic development that prioritizes specific sectors, enabling the gradual destruction of the cultural, and environmental diversity of rural communities because of 'destructive' development and rural development influenced by urban planners and external experts (Kizos, 2010).

Post-productivist transition is defined as the substitution of society and landscape oriented predominantly towards an extractive, resource, or land-based industry such as farming or logging, to one where other uses of a consumptive nature rather than a productive one determine the value of the rural space (Argent et al., 2007).

Multifunctionality means a redefinition of the dominant land use in rural environs, a shift that incorporates activities of production, consumption, and production purposes (Frank & Hibbard, 2016). Multifunctional landscapes experiencing a post-productivist transition are different from 'genuine' agricultural regions due to the rise of non-productive purposes (e.g., landscapes, leisure, and residential amenity) (Butt, 2014). The composition of multifunctionality reflects the overlapping and intersecting landscape uses, a mixture of commodity and non-commodity uses (Frank & Hibbard, 2016).

Shaped by the "trade-offs" that result from the multiplicity of landscape functions which are determined in part by humanity's relationship with the natural environment, multifunctional landscapes, as an emerging concept attempts to bridge the divide between humans and nature (Peng et al., 2019). Moreover, multifunctional landscapes represent the future potential for rural environments via the simultaneous holistic approach whereby the economic activity of rural environments has multiple outputs due to land use diversification strategies (Frank & Hibbard, 2016).

Multifunctionality as an emerging concept also represents a paradigm shift in agri-food and rural development, often undergoing three critical processes: (1) an increase in the legislation and regulation of farm production techniques driven by an intent to address environmental and welfare concerns; (2) diminishing support from the agricultural sector; and (3) the gradual presence of in-migrants in rural communities who influence local social and economic development by challenging the existing hegemony of farmer operators (Argent, 2011).

Marsden and Sonnino (2008) problematize this concept by rejecting the notion that multifunctional agriculture is uniformly conceptualized, or understood, and propose three competing concepts. The first concept comes from the agro-industrial paradigm that is connected with a neo-liberal way of thinking on scale and specialization that brings together the power of industrial agricultural science and farms in rural communities (Marsden & Sonnino, 2008).

With the modernizing effects of industrial agricultural science and technology, the intent of agricultural multifunctionality aims to guarantee efficiency and profit growth within the agricultural sector (Kosenchuk & Shumakova, 2020). Within the agro-industrial paradigm, the agricultural sector seeks to decrease the cost of production and competitiveness (Knickel et al., 2017). Agricultural multifunctionality is defined by the multiplicity of landscape functions within the agricultural locale. Pluriactivity in this post-productivist framework describes a farm operator who generates incomes from both agricultural and non-agricultural activities (Bergmann et al., 2006). Under this paradigm, pluriactivity is utilized as a means of assisting the least productive farms in surviving the difficult market conditions in the face of farmland consolidation (Marsden & Sonnino, 2008).

The second concept is derived from the post-productivist paradigm where multifunctionality is seen as a process of removing agriculture as the main economic mode of production within rural communities. The land is viewed mainly in terms of its landscape value (consumptive good) (Marsden & Sonnino, 2008).

Post-productivism is a move towards activities oriented towards consumptive agricultural activities, suggesting a process of de-agriculturalization with the withdrawal and gradual substitution of agriculture, with a transition from 'agrarian' living to 'rural' living (Kizos, 2010). Some have argued that under this paradigm, multifunctional farming is another form of protectionism, due to the desire to safeguard particular landscapes and ways of farming for their cultural/ aesthetic value (Spataru et al., 2020). Instead of utilizing a farm-based approach that prioritizes pluriactivity as seen in the first concept, a land-based approach relies instead on farmland diversification as a means of shaping rural land use (Marsden & Sonnino, 2008).

The third concept is established within a rural development paradigm, which seeks to reassert the socio-environmental role of agriculture as the main engine of sustaining rural economies and culture through the combination of agroecology and food production (Marsden & Sonnino, 2008). The critical distinction between this paradigm from all the others is the goal of increasing the interconnectedness of farms within their locale, moving beyond a means of survival for farmers caused by a loss of livelihood (Marsden & Sonnino, 2008). Within this framework, agriculture is no longer the socio-economic, cultural, and environmental centre, but rather forms part of an interrelated linkage of agricultural activities that attempts to holistically support the community (Kizos, 2010)). Marsden and Sonnino (2008) further articulate the goals of the third paradigm of multifunctionality as an "integrated development mechanism and a critical assessment tool".

2.7 Working landscapes

There is a growing new perspective that asserts that the concept of multifunctionality can be widened beyond focusing on the positive externalities of agriculture as a means of reconstituting rural space (Frank & Hibbard, 2016), the idea of 'working landscapes' is one such concept (Abrams & Bliss, 2013). Working landscapes can be considered a combination of productive activity, and ecological services, reflecting a synergistic ideal of the two components whereby humanity and the natural environment "work" together, inherently defined by the nature of its multifunctional capacity value (Huntsinger & Sayre, 2007).

Working landscapes represent a paradigm shift in the sustainable management of the environment, an alternative model of society's relationship to nature (Diekmann et al., 2007). Within the blurred lines of consumptive and productive land uses, the concept of "working landscapes" was developed to better contextualize rural multifunctionality to imply a mixture of both non-market and market social benefits (Abrams & Bliss, 2013). Often within rural gentrification and amenity migration research, the idea of post-productivist transition, whereby a "landscape of production" has been replaced by a "landscape of consumption" (Abrams & Bliss, 2013). Framing agricultural landscapes in multifunctional spaces comes with the notion that its development and management come with an understanding of its ecological functions and shift in land use practices (Schümann et al., 2022). The agricultural environment under this new perspective is considered more heterogenous, being reminiscent of the rural change that is rural gentrification (Mendham et al., 2010).

Abrams and Bliss (2013) researching amenity migration in Wallowa County, found that amenity owners (owners who own land primarily for its amenities) had a significant influence on the shift in land use management practices of previously traditionally productivist landscapes. Reconciling the diverse and contradictory landscape ideals occurring in these rural communities between amenity landowners and producers. Abrams and Bliss (2013) raise interesting questions about emerging new forms of land use and environmental management approaches in the face of differing landscape visions and conceptions. The hope of utilizing the "working landscapes" concept is to reconcile agrarian and modern capitalist political economies of land use occurring in rural areas. Conceptualizations of the "working landscape" have come largely from a North American romanization of pre-industrial, traditional rural living- a version of rurality that is defined by virtues of self-reliance, independence, and hard work, springing from Leo Marx's "middle landscape" as its newer reiteration (Abrams & Bliss, 2013). A working landscape is best defined as the characterization of agricultural lands that demonstrate a balance between human and natural forces (Abrams & Bliss, 2013).

2.8 Conclusion

Examining the role that agricultural gentrification plays in facilitating landscape transformations, my research looks at the agricultural restructuring occurring in rural Saskatchewan communities as a precondition of agricultural gentrification. The literature review of this chapter offers a brief overview of multifunctional transitions and rural gentrification described through two distinct approaches, with a subsection that discusses the role that nature and the built environment play in rural gentrification. Secondly, there is an exploration of the different facets of gentrification, specifically agricultural gentrification. Thirdly, rural restricting and amenity migration are examined to offer a deeper perspective on possible mechanisms for rural landscape transformation. Lastly, within the context of land use governance, the concept of multifunctional landscapes and working landscapes are discussed to give a better understanding of landscape change in the Global North.

3.0 Research Design and Methodology

3.0 Introduction

This chapter describes the research design and methodology utilized to complete this study. It starts by describing the strategies of inquiry, data collection and analysis techniques used. Overall, the research design follows a quantitative research design for the intended purpose of performing a landscape assessment by identifying the gentrification indicators in rural Saskatchewan communities.

3.1 Strategies of Inquiry

Throughout this thesis, I utilized two main strategies of inquiry. The first strategy of inquiry that I used was a systematic literature review to ascertain the nature and scope of gentrification within Saskatchewan's rural context. The systematic literature review informed my method of inquiry by providing the theoretical background to my thesis development, answering the initial inquiry concerning rural gentrification and land grabbing. The primary intent of the systematic literature review was to determine if there was a possible connection between the global phenomenon of land grabbing and rural gentrification and if so, how that affects land use management approaches. Land grabbing is defined as large-scale land acquisitions (LSLA) or the acquisition of land-associated rights and resources by industrial entities for a variety of uses. Not all land purchases are a single large acquisition, some acquisitions can be comprised of smaller purchases that result in an enormous 'grab' (Ndi, 2017). A secondary narrative review was performed after the initial literature review to further expand upon rural gentrification literature on related topics such as amenity migration, working landscapes and multifunctional landscapes. The secondary review was completed to gather more information on the dynamics of rural landscape transformations as it relates to rural gentrification which is presented here in the background literature review. The information gleaned from both reviews helped determine the scope of research on rural gentrification and further illuminate any research gaps within rural gentrification literature on gentrification occurring within the agarin locale.

Secondly, a case-study approach was adopted to gather empirical data to examine the conditions and mechanisms that contribute to rural gentrification in Saskatchewan. The use of the case-study approach was appropriate for studying gentrification from a quantitative perspective because material landscape transformations occur at different levels, and at the local municipal level, the dynamics of rural gentrification are much more visible at this level due to the available data. A quantitative approach to understanding the material transformations of rural landscapes would give a better opportunity for contextualizing the impact rural gentrification has had on the land itself, the land operating as evidence of change. Farmland prices would be used as empirical data for understanding the nature of agricultural gentrification by operating as an indicator of 'ground rent' derived within the agrarian locale.

3.2 Data Collection

Case studies are designed to examine a phenomenon within its context (Roland W. Scholz, 2002).

Utilizing a case-study approach and performing a landscape assessment by identifying the gentrification indicators was made possible by developing selection criteria.

Rural Municipality Selection Criteria:

- Must be a rural municipality in Saskatchewan as recognized by the Government of Saskatchewan
- Have corresponding population census data provided by Statistics Canada
- Have corresponding agricultural census data provided by Statistics Canada
- Displaying one or two of the gentrification indicators within the agrarian regions of the rural locale e.g., rising land prices or farmland parcellation/ fragmentation or increased farmland loss (conversion to residential areas [rezoning])
- Have corresponding land use data that describe farmland sales transactions provided by the Government of Saskatchewan

Case Study Selection

The selected three municipalities fit within the rural municipality selection criteria outlined above. Further to that point, the three selected municipalities were also pre-selected based on anecdotal and personal information about the rural municipalities of Saskatchewan. Each municipality demonstrated the highest rate of population change amongst all the rural municipalities in Saskatchewan, being a precursor to demographic change (which is reflected in the population census data).

3.3 Data Sources

This portion of my thesis will outline how the various data sources were used throughout my research, detailing the methodological approach taken with the census population data used for demographic population analysis on the respective rural Saskatchewan municipal case studies, and the Saskatchewan farmland and farm operator data, and the farmland sales data filtered through Aberg's (2021) Rural Gentrification Indicator matrix for land assessment comparisons. Rural population data, farmland and farm operator data sourced from Statistics Canada were compiled from several agricultural and population census data reports, and farmland sales data was sourced from the Government of Saskatchewan's farmland sales data database.

Farmland and Farm Operator Data Sources

Farmland and farm operator data was sourced from the Census of Agricultural Data provided by Statistics Canada. From this data set, I compiled the:

1) The average age of farm operators in Saskatchewan compared with the national average from 2001-2021
2) The gender breakdown of farm operators in Canada and Saskatchewan
3) Total number of farms, with the total farm area and cropland, with a time-range of 1991-2021 in Saskatchewan
4) Total number of farms, with the total farm area and cropland, with a time-range of 1991-2021 in Canada
5) Historic farmland and building values of Saskatchewan and Canada (1996-2020)

6) Realized net income to cash receipts ratio in Saskatchewan (2001-2021)
7) Farmland value per acre from 1995 to 2020 for both Canada and Saskatchewan
8) Farming industry statistics of the case study subjects from 2006-2020.
9) Demographic data of the case study subjects from 1996-2021

Saskatchewan's farmland and farm operator data were collected to understand the nature of the province's agricultural sector and to determine any trends occurring by using the national data sets on farmland and farm operator demographics as a comparator. From the farmland and farm operator data, I determined the number of farmers, their average age, and their self-reported gender, which presented some quantitative insight into the farmers' population in Saskatchewan in contrast with the rest of Canada. A time-period of nearly 2 decades, starting from the year 2001 was used to determine if time as a variable could further distinguish any patterns among the farmer population through an analysis of their demographic data.

The rationale for using a 2-decade time frame was due to the available comparable data. Datasets prior to 2000 were archived. The available census of agriculture datasets (2001-2021) on farm and farm operator data were only comparable by geographic regions, either at the provincial level or further subdivided by Census Agricultural Region (CARs). Statistics Canada defines CARs as a composite of a cluster of adjacent census divisions. In Saskatchewan, CARs are comprised of neighbouring census consolidated subdivisions, however, it should be noted that these CAR groups may not necessarily respect established census division boundaries. census data also revealed the farmland statistical data as well (CAR).

A 3-decade time-period was used, starting from 1991 to 2021, which was chosen to explore rates of change between the total number of farms, farmland acres and cropland acres. To determine the rate of change from 1996 to 2021, census reports from 1991 were used. In establishing the rate of change concerning the total number of farms, with their total farm area and cropland area, I was able to determine approximately, the change in the number of farms relative to their total farm area and cropland for roughly the last 3 decades, to offer further insight into the nature of the Saskatchewan's agricultural sector concerning Canada as a whole. Canada was used as a comparator against Saskatchewan, to better contextual the nature of the province's agricultural sector regarding agricultural gentrification within Canada.

The historic farmland and building values in Saskatchewan and Canada from 1996 to 2021 were compared to determine if there were any trends in the value of farmland and building values and to see how they might correlate with other farm operator data of that same period. The data on farmland and building values were collected to determine if they increased, and possibly determine if there were any links with the other farmland and farm operator data. In essence, looking at how the value of farmland and building has changed with respect to other related agricultural demographic data. The time range chosen for this dataset was 25 years, starting from the year 1996 The intent was to have a consistent period to have a more comparable set of data that could be compared almost annually.

The realized net income compared to cash receipts was another component explored to determine how the financial profitability of farm operators both in Saskatchewan and on a national level relates to the presence of agricultural gentrification. Farmland value per acre was also aggregated by year and graphed to visually represent the change from 199-2021. The next component of the farm operators and farmland profitability, the farmland value per acre was examined in Saskatchewan, with Canada used as a comparator. These two were the main component used to explore the financial profitability of farmland and farm operators.

The farming industry statistics of each municipality were collected from 2006-2020 to explore in-depth the productive capacity of the region's farming industry. In essence, this aims to ascertain if agricultural production has changed overtime and attempts to contextualise that change within the narrative of agricultural gentrification. The longest available timeframe that displayed comparable agricultural census data was from 2006 to 2021. Data on each region's farming industry was collated by the discontinued consolidated census region. In 2011 and 2016, farms were classified by farm type and the North American Industry Classification System was archived.

Another component that was explored in the case studies was its demographic profile for over 25 years. Population change is a rural gentrification indicator, and this dataset range was used to determine its relationship to the presence of agricultural gentrification. 25 years was chosen because it represents at minimum one generation. A review of the demographic profile and the farming industry profile of a rural municipality was used together to further explore the nature of agricultural gentrification on the rural town scale.

Farmland Sales Data Sources

The farmland sales data was sourced from the Farm Land Security Board, and made available by the Saskatchewan government in their Comparable Land Sales Database. It is organized per transaction by the date of sale. For the three municipalities: Aberdeen No. 373, Dundurn No. 314 and Touchwood No. 248, the dataset contained the following variables: sale date, legal land description (lld), rural municipality (rm) soil class (a,b,c, with a being the highest class), sales code (fam = family sale, arm = arm's length sale), acres, municipal assessment (100% of the assessed value), price and the price/acre. With these data, I determined the:

1) The total amount of farmland sold annually compared to its price per acre
2) The total sum of farmland sold annually
3) Farmland sales by sales code
4) Ratio study: Farmland Sales vs Municipal Assessment Values

Farmland Sales by Sales Code

The farmland sales transactions data sourced from the Comparable Land Sales Database have the farmland data differentiated by sales code which is presented here below (Government of Saskatchewan, n.d.-d, n.d.-b):

- **Arms** (Arms-Length): the sale occurs between a purchaser and vendor wherein the same last name is not found (non-familial connection).
- **Debt** (Debt settlement): this sales code is no longer active but was in use since the 1990s to indicate that the vendor was a banking institution and the property sold was to recover debts.
- **Fam** (family sale): the sale occurs between a vendor and purchaser that shares a familial connection.
- **Und** (undetermined or blank): this sale type was not recorded in the database.

This was performed for each municipality to quantitatively assess the different dimensions of the farmland data, and to explore the various trends in farmland sales transactions to determine the relationship between the different variables. To determine the total amount of farmland sold annually, the data were aggregated by year and with a comparison to its price per acre, to explore the relationship between the amount of farmland sold and its price per acre. The same process was used to determine the total sum of farmland sold, by aggregating the total sum, with an exponential curve trendline to illustrate the nature of its growth. Farmland sales transactions were differentiated by their sales code.

Sales transactions were aggregated by sale code type and by year to illustrate which transactions were the most frequent. The different sale code types are Arms, Debt, Fam and Und. The rationale for differentiating by sale code type was to graphically illustrate the nature of the farmland sales transactions. The nature of these transactions implicitly describes the state of the agricultural sector and the general regional trends. Sales Code 'Debt' and 'Und' were removed from the dataset because they had low and nominal values that did not contribute significantly to the dataset as a whole, and their inclusion created additional confusion when interpreting the data. The ratio study was completed by aggregating both the assessed municipal land value by year, and the farmland price, and performing a ratio calculation that was illustrated by year. A ratio study is typically used to show if the properties in question are above or below the area's assessed value, being a ratio of the sale price and the assessed value. The ratio study was performed to explore the relationship between the price of farmland and its assessed land value. From the farmland sales data, the soil class was not utilized due to an inability to reconcile its data discrepancies and insufficient information provided to explain its methodology and application.

3.4 Research Ethics

The research collated, analysed, and synthesized is primarily derived from secondary data sources, and filtered through a quantitative methodological framework. The ethical dimensions of using secondary data sources via quantitative research methods will be discussed here. The ethical considerations in utilizing secondary research depended entirely upon its providence. The secondary data used in my research were farmland sale prices sourced from the Farm Land Security Board through the Saskatchewan government website, and the census data collected by Statistics Canada for statistical research purposes. The farmland sale prices had a wealth of information.

Starting with the sale date, legal lands description, name of the rural municipality, soil class, transactions by sales code, number of acres, municipal assessment value, price of land, and price/ acre. The farmland database had access to every farmland sale since 1993 in Saskatchewan. The study followed the University of Waterloo's ethical guidelines and the Tri-Council Policy Statement on Ethical Conduct for Research Involving secondary data sources. The research was reviewed and approved by the University of Waterloo’s Office of Research Ethics (ethics #42680).

4.0 Saskatchewan Agricultural Context

4.0 Agricultural Sector Overview

The agricultural sector in Canada is largely export-oriented and regionally diversified. Saskatchewan itself has developed a reputation globally as a major exporter of high-quality grains, oilseeds, pulses, livestock, and other agri-food products (Government of Saskatchewan, n.d.-a). The overview of Saskatchewan's agricultural sector presented in this chapter will help frame the nature of the province's agricultural production within the context of rural gentrification. Firstly, by illustrating the province's agricultural sector, the primary use of its agricultural land can be further outlined, either as a means of production or indicate an emerging multifunctional nature. Moreover, the nature of the agricultural gentrification within Saskatchewan's agricultural sector can be better understood by having an overview of the sector, and the land use planning policies and legislation that facilitate it.

In 2021, Saskatchewan had a total of $17.5 billion in food sales globally. Since 2012, agricultural exports have risen to 56%, accounting for nearly half of the province's total exports in 2021 (Government of Saskatchewan, n.d.-a). Data from the 2021 Census of Agriculture demonstrate that Saskatchewan continues to be Canada's breadbasket, accounting for 43% of Canada's cropland (Government of Canada et al., 2022). Additionally, of the province's total cropland, oilseed and grain makeup 90.2%. The largest crop grown by the province (crop name) makes up 29.7%, followed by spring wheat (17.6%), durum wheat (11.6%), lentils (9.3%) and barely (9.0%) (Government of Canada et al., 2022). Apart from grain and oilseed, in 2021, Saskatchewan has the largest number of cattle and calves (2.7 million), accounting for over one-fifth of the total livestock in Canada (Government of Canada et al., 2022).

4.1 Minimum Legal Farmland Ownership Requirements

The *Saskatchewan Farm Security Act* empowers the Farm Land Security Board (FLSB) to administer and enforce farmland ownership legislation in Saskatchewan (Government of Saskatchewan, n.d.-c). Understanding the legislative powers required to authorize the purchase of farmland better frames the means of producing space by an identification of the tools used- a viewpoint housed within the productivist perspective.

The Farm Land Security Board has the power to give out land divestment orders to non-eligible parties, administer fines and penalties and permit ill-eligible parties to hold farm property (Government of Saskatchewan, n.d.-c). As it concerns farmland ownership, *The Saskatchewan Farm Security Act* permits only Canadian citizens, permanent residents of Canada and non-publicly traded 100% Canadian corporations to buy and own farmland (Government of Saskatchewan, n.d.-c). Non-residents are only allowed to purchase up to 10 acres of farmland in Saskatchewan. Purchases of farmland parcels exceeding 10 acres must be obtained through a special exemption (Government of Saskatchewan, n.d.-c).

The restrictive nature of the 1974 *Saskatchewan Farm Security Act* operated for three main reasons. First, local farmers may be outbid by foreign investors who can take advantage of tax advantages (Carlberg, 2002).

Second, there is a great likelihood that local farm operators may be more concerned than foreign investors about land stewardship than profitability. The possibility of farm expansion or the rationalisation of existing production units increases with the occurrence of absentee ownership, resulting in an unstable environment for farm operators who lease farmland (Carlberg, 2002).

Critics of the *Saskatchewan Farm Security Act* have articulated that it is responsible for depressed farmland values (Carlberg, 2002), promoting the call for loosening some of its restrictive requirements. Since January 4th, 2016, the amendments to *The Saskatchewan Farm Security Act* offered further clarity on who can and cannot own farmland in Saskatchewan (Government of Saskatchewan, 2015).

The amendments to *The Saskatchewan Farm Security Act* stipulated that those arranging pension plans, executors of pension fund assets and larger trusts are unable to purchase farmland. Also, the amendments defined "having an interest in farmland" to include any kind of benefit or interest, whether it is direct or indirect, that is typically connected with the ownership of the farmland. Lastly, any financing related to the purchasing of farmland must be done through a Canadian citizen or a registered Canadian financial institution (Government of Saskatchewan, 2015). In addition to the amendments to *The Saskatchewan Farm Security Act,* the Farm Security Board has received increased authority to enforce the amended legislation. The range of new powers given to the FLSB requires anyone who buys farmland at the FLSB's discretion to complete a statutory declaration (Government of Saskatchewan, 2015). Also, the burden of compliance is placed upon the individual buying the land. Lastly, for contravening the amended legislation fines were increased up to $50,000 per individual and $500,000 per corporation, and the FLSB has expanded its authority to impose administrative penalties up to an upper limit of $10,000 (Government of Saskatchewan, 2015).

4.2 Land Use Planning Context

The Planning and Development Act, 2007

The primary intent of *The Planning and Development Act (*2007) is to encourage environmental stability, the development of a municipality's social, cultural, and economic capacity and to promote its sustainable growth by providing a cohesive framework for community planning (Government of Saskatchewan, n.d.-f). Moreover, *The Planning and Development Act, (*2007*)* grants the province the legislative authority to establish and execute the intent of the Statement of Provincial Interest (SPI) (Government of Saskatchewan, n.d.-f). The Planning and Development Act in tandem with the Statement of Provincial interest form another component of the legislative foundation upon the land is understood. From a land use perspective, these tools are the means by which land use is rationalized, and consequently consumed. Without an understanding of these legislative instruments, the nature of Saskatchewan's land use will not be fully understood.

By providing a cohesive framework to conduct community planning at the municipal level, *The Planning and Development Act,* (2007) offers municipalities a set of effective community planning tools designed to foster cooperation and partnerships between governments, municipalities, First Nations and Metis communities, businesses and citizens who desire to contribute to society in a meaningful manner (Government of Saskatchewan, n.d.-f).

Lastly, *The Planning and Development Act,* (2007) is designed to ensure that a meaningful relationship between the public and the municipality is maintained, while also ensuring that planning is implemented effectively and consistently (Government of Saskatchewan, n.d.-f). The goals and intent of Saskatchewan's interpretation of the SPI mirror those found in other Canadian provinces, contributing to a cohesive legislative framework through which planning is executed Canada-wide. Through the Planning and Development Act, Canada maintains control and access to land use development as legitimised by a form of democracy.

Statements of Provincial Interests

The Planning and Development Act, (2007) empowers the Lieutenant Governor in Council to adopt the Statements of Provincial Interests in Saskatchewan. The Statements of Provincial Interests are designed to act as an organizing framework for the policies governing the development of municipalities by following the interests of the province. The primary intent of the SPI is to first determine the provincial interests, and then prescribe a means of aligning provincial and municipal planning objectives, to achieve sustainable, self-reliant, safe municipalities. Land use planning goals and objectives at both the provincial level and municipal levels are governed by the Statements of Provincial Interests, directly influencing the environmental stewardship, economic growth, and community development of these municipalities (The Statements of Provincial Interest Regulations, 2012). Through a variety of tools, methods, and processes such as official community plans, subdivision bylaws and development standards, the SPI facilitates growth by offering guidance on a complex series of development and land use issues (The Statements of Provincial Interest Regulations, 2012).

Agriculture and Value-Added Agribusinesses

The province of Saskatchewan has written a Statement of Interest for Agriculture and Value-added Agribusinesses. Concerning agriculture and value-added agribusinesses, the province defines the goals and interests outlined in the SPI. The primary goal of the province is to maintain and encourage the growth of a sustainable and ever-evolving agricultural sector in a manner that best utilizes the agricultural land, positioning the sector for continued growth and diversification (Government of Saskatchewan, n.d.-g). The SPI outlines in further detail the practical contours of the province's goals in seven different ways. (1) Concerning the pursuit of sustainable growth in the agricultural sector, the value of agricultural land must be recognized. (2) Provide the means for continued growth and diversification within the agricultural sector (The Statements of Provincial Interest Regulations, 2012).

(3) The compatibility of new developments must be assessed with the context of the already existing infrastructure of the agricultural sector such as intensive livestock operations (The Statements of Provincial Interest Regulations, 2012). (4) Plan non-agricultural development in a way that reduces the possibility of agricultural land fragmentation and farmland conversion to land uses. (5) In each rural municipality, intensive livestock will be classified as a permitted or discretionary use. (6) Within rural municipalities, identify areas that are not appropriate for agricultural operations; this includes intensive livestock operations and other value-added agribusinesses (The Statements of Provincial Interest Regulations, 2012). (7) Concerning provincial regulatory requirements, ensure that there are no duplicates or conflicts with municipal permit requirements for agricultural operations and value-added agribusinesses (The Statements of Provincial Interest Regulations, 2012).

Saskatchewan's Growth Plan 2020-2030

Saskatchewan employs a variety of land use policies that are designed to give further direction to the growth and development on both the provincial level and municipal levels of governance. Saskatchewan's Growth Plan 2020-2030 is the province's regional growth plan for the next decade that is focused on a "strong economy, strong communities and strong families" all to "build a stronger Saskatchewan" (Government of Saskatchewan, n.d.-e). As it relates to the growth and sustainability of the province's agricultural sector within the next decade, there is the intent to grow Saskatchewan's agricultural economy, expand the province's capacity to process its agricultural products, promote the sustainability and value of the province's agricultural and natural resource exports, and reducing the trade barriers both interprovincially and internationally (Government of Saskatchewan, n.d.-e). More concretely, in 2030, the province hopes to expand its agri-food exports to $20 billion, increase crop production to 45 million metric tons and livestock cash receipts to $3 billion, and expand the revenue from value-added agriculture to $10 billion (Government of Saskatchewan, n.d.-e). In other words, the province has plans only to increase its production capacity through a variety of means to become a global leader in the production and export of agri-foods. Additionally, the province has efforts to diversify the agricultural sector and expand the value-added agribusiness market opportunities (Government of Saskatchewan, n.d.-e).

4.3 Farmland and Farm Operator Data

Farm Operator Demographics

In Saskatchewan, the age of farm operators has continued to increase over time, mirroring the national trend of increasing among other Canadian farmers (see Table 4.3-1). Data compiled from Statistics Canada demonstrates that across Saskatchewan, the age of farm operators continues to increase over time, with the average age being 55.8 years old. In Table 4.3-1, the average age of a farm operator in Saskatchewan closely follows the national average of 56 years old.

More importantly, across the age categories, the oldest age cohort, 55+ has the largest proportion of farmers across the five census periods as can be seen in Figure 4.3-1.

Looking deeper into Saskatchewan's farmer demographics, the gender disparity between farm operators has roughly remained the same despite the steady decline of farmers in Saskatchewan. Currently, women operators make up 37% of the total number of farm operators in Saskatchewan since 1996, the rate of change for women operators has seen a continual increase of 4.4-5% each census period. Regardless male operators maintain the largest proportion of farm operators in the province.

Table 4.3-1 Average Farm Operator Age in Saskatchewan and Canada from 2001-2021

Year	Average Age of Farm Operators in Saskatchewan	The ratio of Men to Women Farm Operators	Average Age of Farm Operators in Canada	The ratio of Men to Women Farm Operators
2001	50.5	3.9:1	49.9	2.9:1
2006	52.6	3.5:1	52.0	2.8:1
2011	54.2	3.2:1	54.0	2.6:1
2016	55	3.0:1	55.0	2.5:1
2021	55.8	2.7:1	56.0	2.3:1

(Statistics Canada, 2022b, tbls. 32-10-0230–01)

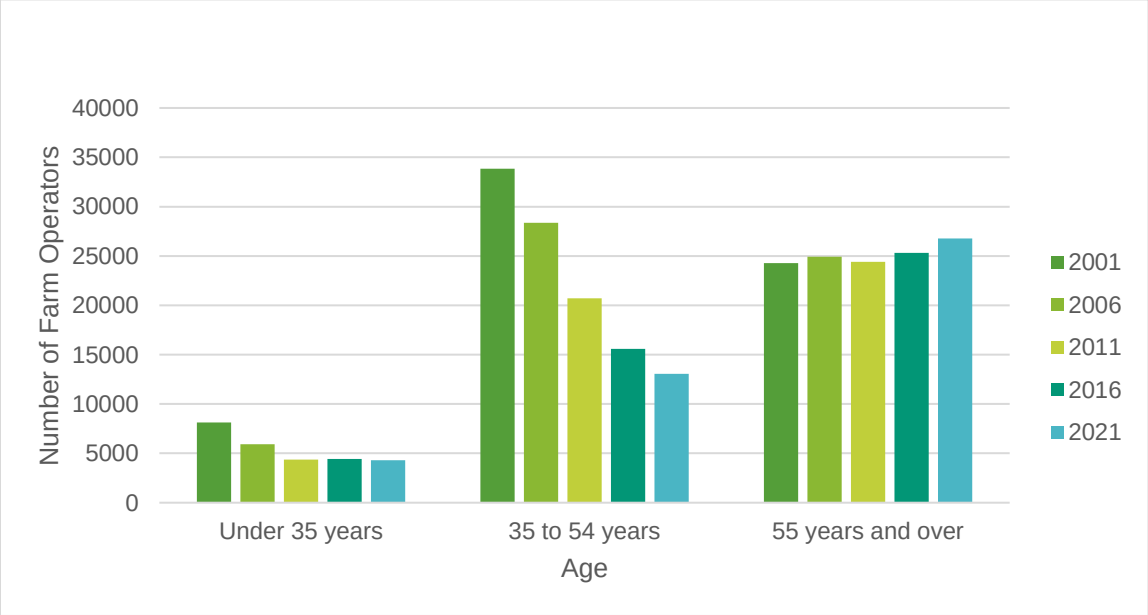

Figure 4.3-1 Farm Operator Age (2001-2021)

(Statistics Canada, 2022b, tbl. Table: 32-10-0230-01)

Farmland Statistics

In Saskatchewan. the total number of farms has declined, with a Compound Annual Growth Rate (CAGR) of -2%, measured every 5 years across nearly three decades (1996-2021) as demonstrated in Table 4.3-2, which compares Saskatchewan's farmland statistics to Canada as a whole. The CAGR indicates the growth rate over a period of time, traditionally used to measure investment growth or decline (Wall Street Oasis, n.d.). The CAGR is used to determine the rate of growth of farms in Saskatchewan. From 1996 to 2021, the number of farms in Saskatchewan has nearly halved from 60840 to 34128 farms. Moreover, the number of farms in Saskatchewan is decreasing at a faster rate compared to the national CGAR of -1%.

The total area of farms in Saskatchewan has continued to gradually decline, with a CAGR of -0.32%, however, with a CAGR of 1%, the total area of cropland has increased every 5 years, With the total area of cropland increasing every 5 years, the data suggests that even though the total area of farms is slowly decreasing, the total size of the cropland has increased. It is plausible to suggest that with a declining farm area and the increasing cropland area more land is being used for farm operations. Moreover, Figure 4.3-2 demonstrates that the prevalence of larger-sized farms becomes more common every 5 years despite there being fewer farms in operation. The data may also suggest that the increased prevalence of larger-sized farms, farms ranging in size from 2880 to 3519 acres and more represent the trend of farmland consolidation within Saskatchewan's agricultural sector.

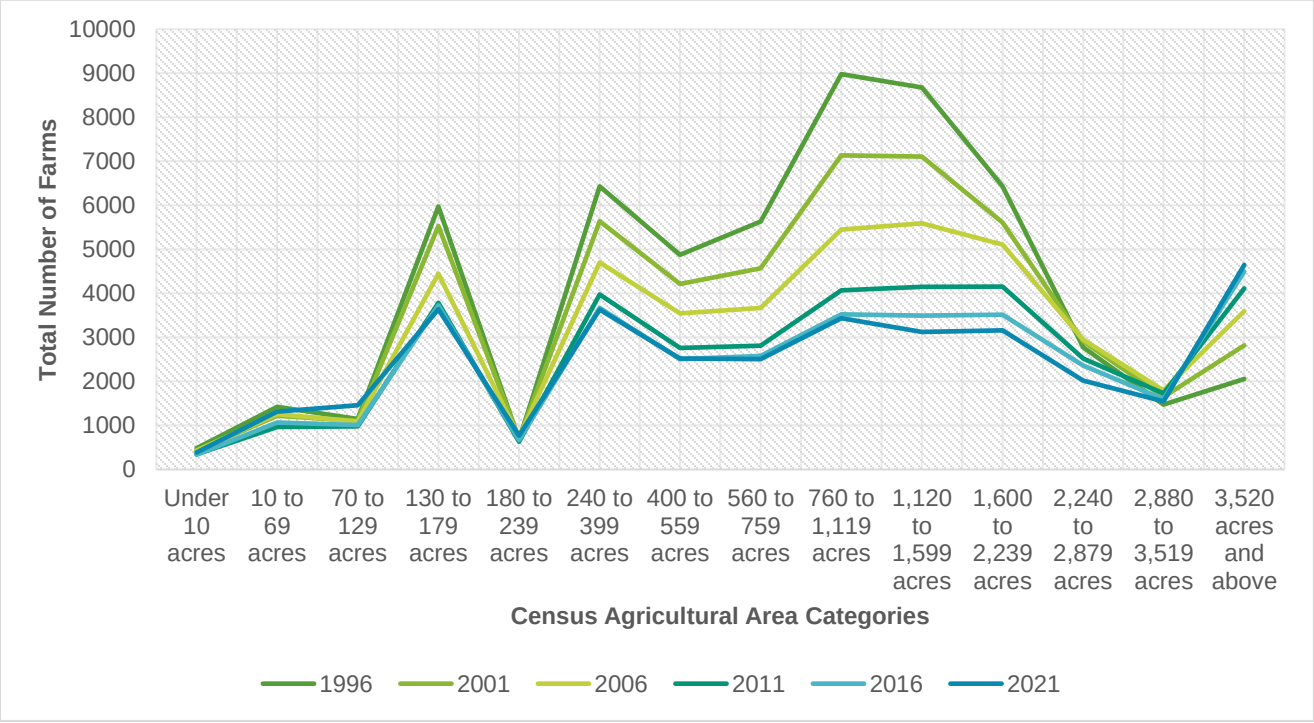

Figure 4.3-2 Farmland Area (1996-2021)

(Statistics Canada, 2022b, tbls. 32-10-0230–01)

Table 4.3-2 Saskatchewan Farm (1991-2021)

SASK	Year	Total number of farms	% Change	Total Area of Farms (Acres)	% Change	Total Cropland	% Change	AVG Area of Farmland (reporting farms)
	1991	60840		66386074		33257706		1091
	1996	56995	-6.3%	65653588	-1.1%	35579845	7.0%	1152
	2001	50598	-11.2%	64903830	-1.1%	37994752	6.8%	1283
	2006	44329	-12.4%	64253845	-1.0%	36967225	-2.7%	1450
	2011	36952	-16.6%	61628148	-4.1%	36395993	-1.5%	1668
	2016	34523	-6.6%	61585788	-0.1%	40489299	11.2%	1784
	2021	34128	-1.1%	60265339	-2.1%	40313311	-0.4%	1766
CAGR		-2%		-0.32%		1%		

(Statistics Canada, 2012d, tbls. 32-10-0153–01)

Table 4.3-3 Canada Farm Data (1991-2021)

CAN	Year	Total number of farms	% Change	Total Area of Farms (Acres)	% Change	Total Cropland	% Change	AVG Area of Farmland (reporting farms)
	1991	280043		167423057		82799535		598
	1996	276548	-1.2%	168167475	0.4%	86286078	4.2%	608
	2001	246923	-10.7%	166802197	-0.8%	89934387	4.2%	676
	2006	229373	-7.1%	167010491	0.1%	88741106	-1.3%	728
	2011	205730	-10.3%	160155748	-4.1%	87352431	-1.6%	778
	2016	193492	-5.9%	158723092	-0.9%	93382638	6.9%	820
	2021	189874	-1.9%	153687771	-3.2%	93595208	0.2%	809
CAGR		-1%		.0.28%		0.41%		

(Statistics Canada, 2012d, tbls. 32-10-0153–01)

Farm Assets and Income

Steadily, the total amount of farm value in Saskatchewan has increased annually over time. Figure 4.3-3 demonstrates that from 1996 to 2020, the value of farmland and buildings increased five times, from $20,000 to $100,000 (Government of Canada, 2022b). However, it should be noted that since 2010, the gradually increasing value of land and building began rising sharply, with much of the growth occurring right after 2010 (Government of Canada, 2022b). The remaining portion of Saskatchewan's farmland value is represented in its machinery and equipment, and livestock and poultry, which historically only made up approximately $20,000 annually combined (Government of Canada, 2022b). The value of farmland and buildings make up a significant portion of Saskatchewan's farm capital, which since 2010 has grown significantly (Government of Canada, 2022b).

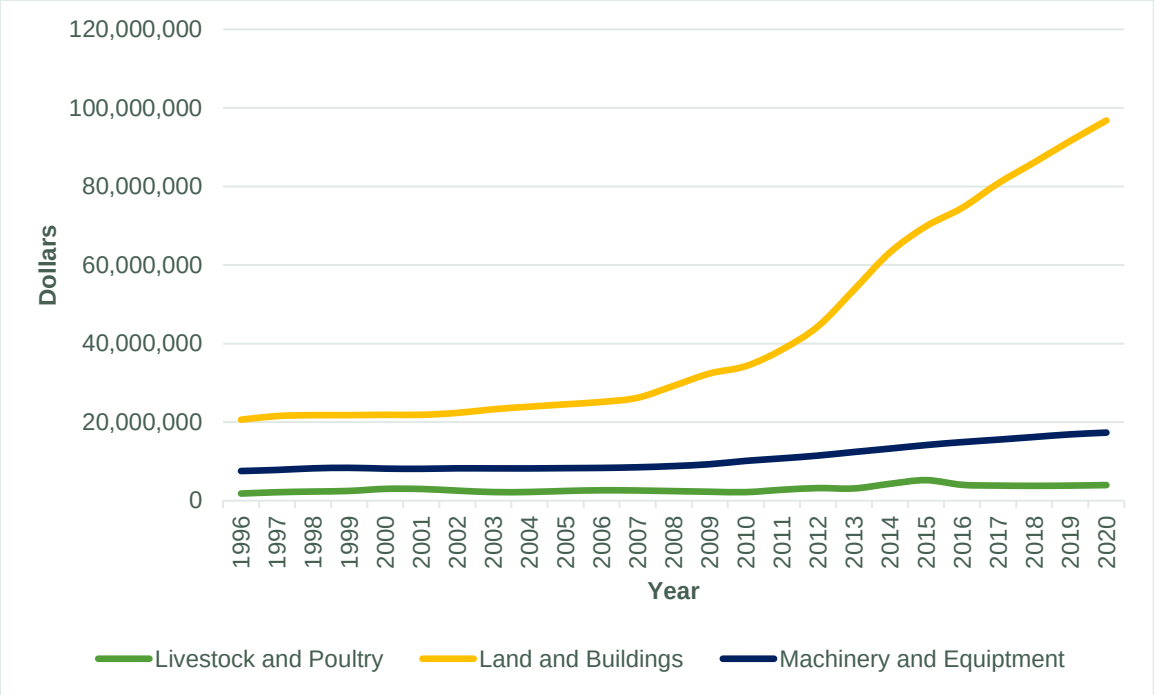

Figure 4.3-3 Saskatchewan Farm Value (1996-2020)

(Statistics Canada, 2012e, tbls. 32-10-0156–01)

Realized net income is a measure of the farm business income, not the farm household income (Government of Canada & Brian Biggs, 2019), measuring the farm operator's financial flows, both the monetary (farm income) and non-monetary (income-in-kind and depreciation) aspects of the farm business (Statistics Canada & Agriculture and Agri-Food Canada, 2000). Like the net cash income, realized net income represents the annual transactions from the agricultural goods produced without including the value of inventory change (VIC) (Statistics Canada & Agriculture and Agri-Food Canada, 2000). The measure of the physical change in producer-owned inventories represented in dollar value is defined as the value of inventory change (VIC).

The importance of the VIC is to determine the total value of economic production, which is calculated from the first and last month of the year multiplied by average annual crop prices or livestock value (Statistics Canada & Agriculture and Agri-Food Canada, 2000). Farm cash receipts are composed of the revenue from agricultural commodities sales, program payments from government agencies, and private crop and livestock insurance program payments (Statistics Canada & Agriculture and Agri-Food Canada, 2000). Figure 4.3-4 compares the realized net income to the cash receipts from Saskatchewan farms. Historically, relative to the realized net income the cash receipts have always been larger (within the given 25yr time frame).

A closer look at the ratio between the cash receipts and the realized net income in Table 4.3-5 demonstrates that in 1996 cash receipts were almost 15 times larger than the realized net income that year, a trend that fluctuated widely until 2008, however, cash receipts have largely remained six times larger than the realized net income with a few exceptions. This suggests that the gap between the realized net income and farm cash receipts in Saskatchewan is gradually closing. In other words, with a shrinking gap, Saskatchewan farms are seeing an increased realized net income. It should be emphasized that the realized net income does not consider the VIC, however, the realized net income represents the "real" earnings once depreciation and income-in-kind (which is a measure of the agricultural goods produced and consumed by the farm operator and their family) (Statistics Canada & Agriculture and Agri-Food Canada, 2000).

Table 4.3-4 Farmland and Building Values of Saskatchewan and Canada

Farmland and Building Value per Acre		
Year	**Canada**	**Saskatchewan**
1996	$ 689.00	$ 314.00
1997	$ 758.00	$ 329.00
1998	$ 796.00	$ 333.00
1999	$ 822.00	$ 334.00
2000	$ 844.00	$ 336.00
2001	$ 862.00	$ 337.00
2002	$ 918.00	$ 345.00
2003	$ 976.00	$ 360.00
2004	$ 1,038.00	$ 371.00
2005	$ 1,107.00	$ 381.00
2006	$ 1,184.00	$ 391.00
2007	$ 1,271.00	$ 411.00
2008	$ 1,421.00	$ 463.00
2009	$ 1,512.00	$ 517.00
2010	$ 1,608.00	$ 551.00
2011	$ 1,724.00	$ 624.00
2012	$ 1,899.00	$ 720.00
2013	$ 2,170.00	$ 872.00
2014	$ 2,367.00	$ 1,026.00
2015	$ 2,550.00	$ 1,134.00
2016	$ 2,696.00	$ 1,210.00
2017	$ 2,903.00	$ 1,318.00
2018	$ 3,072.00	$ 1,411.00
2019	$ 3,248.00	$ 1,508.00
2020	$ 3,415.00	$ 1,601.00
2021	$ 3,742.00	$ 1,656.00

(Government of Canada, 2022a, tbl. 32)

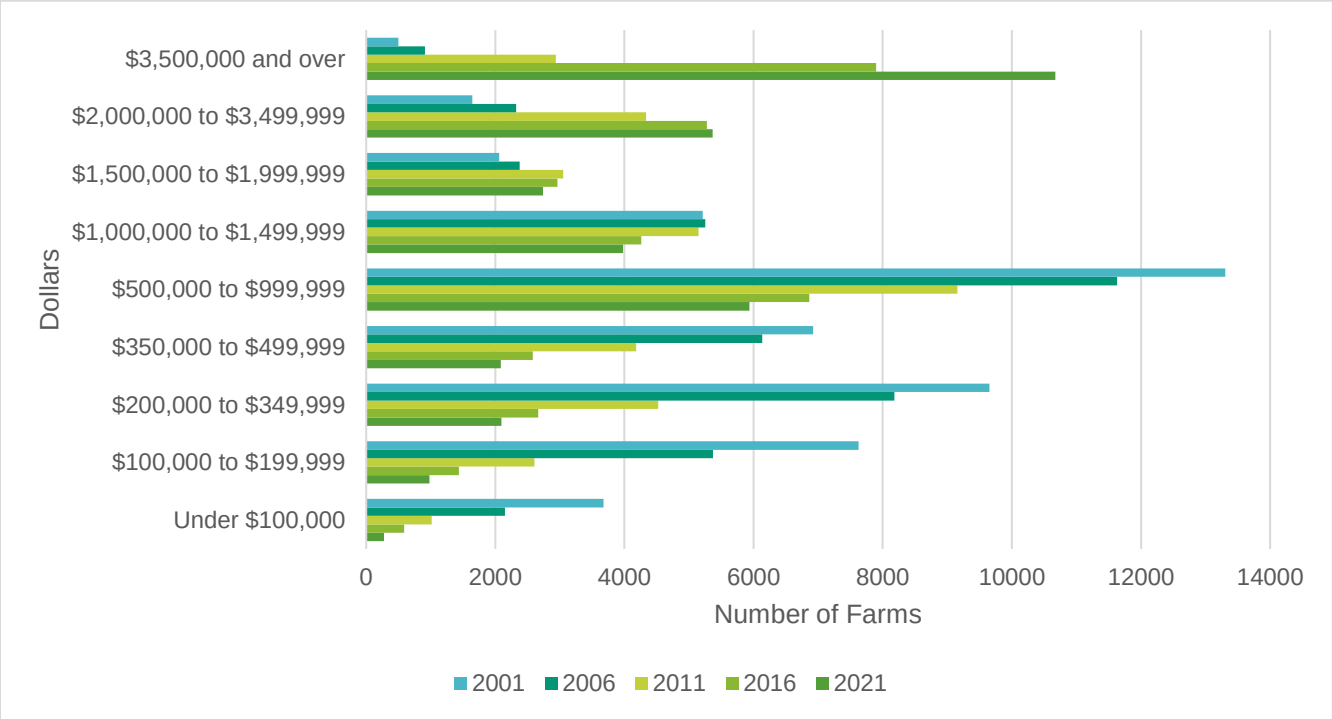

Figure 4.3-4 Gross Farm Receipts (2001-2021)

(Statistics Canada, 2012f, tbls. 32-10-0157–01)

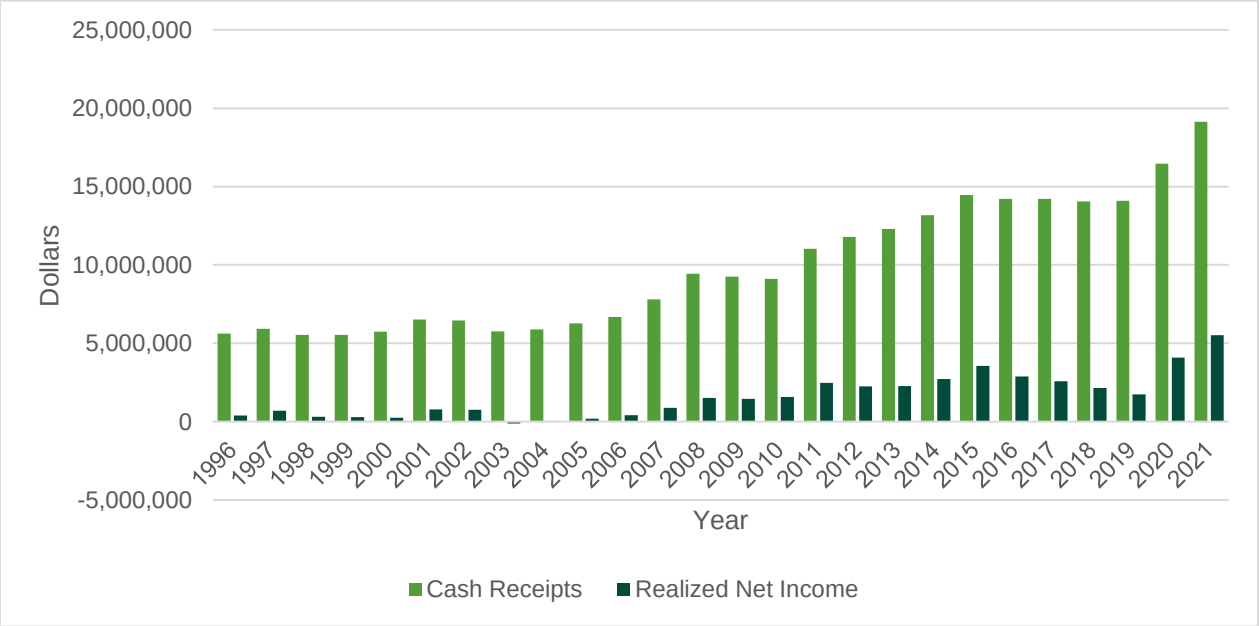

Figure 4.3-5 Realized Net Income and Cash Receipts of Saskatchewan Farms (1996-2021)

(Statistics Canada, 2022e, tbls. 32-10-0052–01)

Table 4.3-5 Net Income to Cash Receipts Ratio

Year	Ratio
2001	8.41:1
2002	8.42:1
2003	-46.29:1
2004	143.89:1
2005	34.99:1
2006	15.9:1
2007	8.96:1
2008	6.25:1
2009	6.35:1
2010	5.78:1
2011	4.45:1
2012	5.23:1
2013	5.43:1
2014	4.84:1
2015	4.07:1
2016	4.94:1
2017	5.51:1
2018	6.57:1
2019	8.12:1
2020	4.02:1
2021	3.47:1

(Statistics Canada, 2022d, tbls. 32-10-0052–01)

4.4 Farmland value Assessments

Regulated Property Valuation Standards

Saskatchewan's provincial legislation set out two valuation standards: market valuation standards and regulated property assessment valuation standards used by the Saskatchewan Assessment Management Agency (SAMA). Residential and commercial properties are reserved for the Market Valuation Standard method (Saskatchewan Assessment Management Agency, n.d.). Under the Regulated Property Assessment Valuation Standard set by the province of Saskatchewan, municipal property assessments for pipelines, railway roadways, agricultural land, and heavy industrial properties are determined using SAMA's Regulated Saskatchewan Assessment Manual (Saskatchewan Assessment Management Agency, n.d.). Provincial legislation stipulates that there must be an annual assessment performed by the municipality (Saskatchewan Assessment Management Agency, n.d.).

The Regulated Property Valuation Standard is the methodology employed by the Saskatchewan Assessment Management Agency and other assessment agencies for assessing the value of property such as agricultural land in Saskatchewan. Understanding how the value of land is determined will help set the stage for conceptualizing its relationship to the price of farmland.

Valuation Standards

Regulated property assessments are calculated using SAMA's Regulated Property Assessment Manual. Assessment values are determined based on the applicable base date. The base date is periodically adjusted forward every four years by provincial legislation to keep assessment values current. The Base Year Manual is used for four years at a time. For example, property assessments that will be performed in 2021-2024, will be assessed by the 2019 Base Year Manual (Saskatchewan Assessment Management Agency, n.d.).

When determining an assessment for either valuation standard, the assessment appraiser and the municipality's appraiser are given additional instruction by the provincial legislation to help guide the process as each assessment is unique, however, some notable components are a part of each assessment (Saskatchewan Assessment Management Agency, n.d.). Firstly, the municipality is required to complete a new assessment each year. Secondly, the assessment base date must be factored into the assessment. The base date is a legislated date related that periodically changes. Thirdly, all property attributes assessed will be considered from January 1st of each year. Additionally, the assessment base year needs to be considered. Improvements (on, to or below the land) and the land itself can be assessed either together or separately (Saskatchewan Assessment Management Agency, n.d.).

SAMA defines improvements as alterations to structures, or buildings erected on, over or under the land. This also includes pipelines, and the plant, equipment used to operate gas wells, oil wells or mines. Lastly, equity is considered the main and dominant factor in the assessment preparation by the appraiser (Saskatchewan Assessment Management Agency, n.d.). Equity is defined as the degree to which assessments have a "consistent" relationship to market value (Saskatchewan Assessment Management Agency, n.d.). However, it should be noted that property value assessments are influenced by a myriad of other factors such as tax policy applications, exemptions, and special circumstances (Saskatchewan Assessment Management Agency, n.d.).

Assessment Methods

The Productive Capacity Method

Municipal land assessments for agricultural land are subjected to Saskatchewan's regulated property assessment valuation standard. The critical assessment component for pastureland is determining its potential productivity (Saskatchewan Assessment Management Agency, n.d.). Ecoregions define the productive capacity of pastureland, which are unique geographic regions that are defined by climate, topography, and soil characteristics (Saskatchewan Assessment Management Agency, n.d.).

Arable Land

The main method of comparison for the valuation of cultivated (arable) agricultural land is its potential productivity. A soil classification system that correlated with long-term wheat yield is used to determine the productivity capacity of arable land (Saskatchewan Assessment Management Agency, n.d.). The yield comparison between different soil quality types is the critical factor when using the soil classification system as a measure of arable land's productive capacity (Saskatchewan Assessment Management Agency, n.d.). Additionally, the provincial factor (PF), which is the provincial average sale price for agricultural land use and economic adjustments for the cost of production factors influences the land's assessment value (Saskatchewan Assessment Management Agency, n.d.).

General valuation Formula:
Productivity Rating X Economic Factors X Provincial Factor = Assessed Value

Non-Arable Land (Pastureland)

The potential carrying capacity is the main feature of determining the productive capacity of pastureland, which is measured by the animal unity months (AUM). The AUM is an animal unit of measure that uses a 1000 lb. cow (with or without a calf) (Saskatchewan Assessment Management Agency, n.d.). Developed by the Saskatchewan Research Council, the methodology for determining the potential carrying capacity for pastureland takes into consideration the range of site traits (such as climate, soil texture and topography), the ratio of native vs seeded grass species and the total amount of tree cover. A land rating (productivity index) is assigned that the pastureland being assessed once the carrying capacity estimate has been determined. Similar to the arable land assessment process, there is a provincial factor that reflects the average sale price (Saskatchewan Assessment Management Agency, n.d.).

General valuation Formula:
Land Rating X Provincial Factor = Assessed Value

4.5 FCC Farmland Values

FCC Farmland Values Methodology

The FCC employs a methodology that monitors and compares the variations in cultivated farmland values within Canada against an established benchmark of farm properties (Farm Credit Canada, 2022). Farmland sales must be arm's length transactions, which are defined as sales that happen between a buyer and a vendor that does not share a familial connection (Government of Saskatchewan, n.d.-b). Additionally, trends in farmland sales data are utilized to supplement the analysis of farmland value. The average sales price in each region and the average value of each benchmark property is used to determine the reference value that is employed by the FCC (Farm Credit Canada, 2022). The data collected by the FCC is given to assist in understanding the dynamic changes in farmland values regionally in Canada.

Saskatchewan Farmland Values

FCC reports that Saskatchewan farmland values in 2021 were affected by neighbour-to-neighbour sales (arm's length transactions), buyers from out of province, and landlords selling land to their renters (Farm Credit Canada, 2023). Qualitative factors also such as the quality of land, location, and weather influence farmland values. Historically, the average farmland value is 7.9%, both on a national level and in Saskatchewan despite the province's values trending slightly above Canada's. Looking at the farmland value per acre in Figure 4.3-4, the current value for one acre of land is $1600, which has increased 5 times in value over the last 3 decades. Looking at the historic FCC farmland values from 1996 onward (demonstrated in Figure 4.5.1), the increase in farmland and building value is very similar to the data collected by Statistics Canada on farmland and building values.

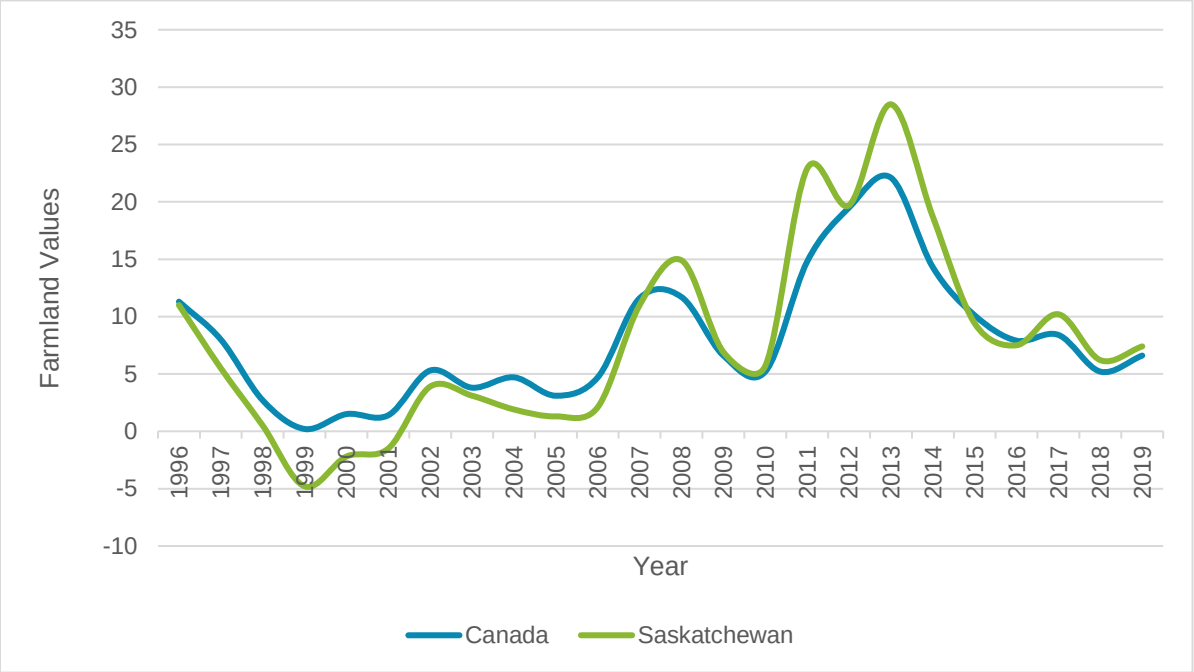

Figure 4.5-1 Saskatchewan and Canadian Farmland Values

(Canada, 2020)

5.0 Chapter Five: Case Studies

5 Rural Municipality of Aberdeen No. 373 Case Study

5.1.1 History

The rural municipality of Aberdeen No. 373, pictured in Figure 5-1, was incorporated on December 13, 1909, starting as an amalgamation of seven smaller full townships, and three partial ones. Saskatoon, the largest Saskatchewan city is just five miles from the Southwestern border of the rural municipality (RM of Aberdeen No 373, n.d.). Currently, there are a few residential areas (rural subdivisions) such as Strawberry Hills, and Cherry Hills Estates. The Town of Aberdeen houses the municipal office and shares a library, transfer station, firefighting station, and recreation facilities with the rural municipality (RM of Aberdeen No 373, n.d.).

Agriculture is the leading industry in Aberdeen, with four major businesses residing within the rural municipality (RM of Aberdeen No 373, n.d.). Along the CNR (Canadian National Railway) line Louis Dreyfus High Throughput Grain Terminal is located. Northland Logistics fertilizer storage plant also lies along the CNR line. Pulse crops are processed by Horizon Seed Processors, and Hold-ON Industries is a manufacturer of floating docks and plastic water tanks (RM of Aberdeen No 373, n.d.).

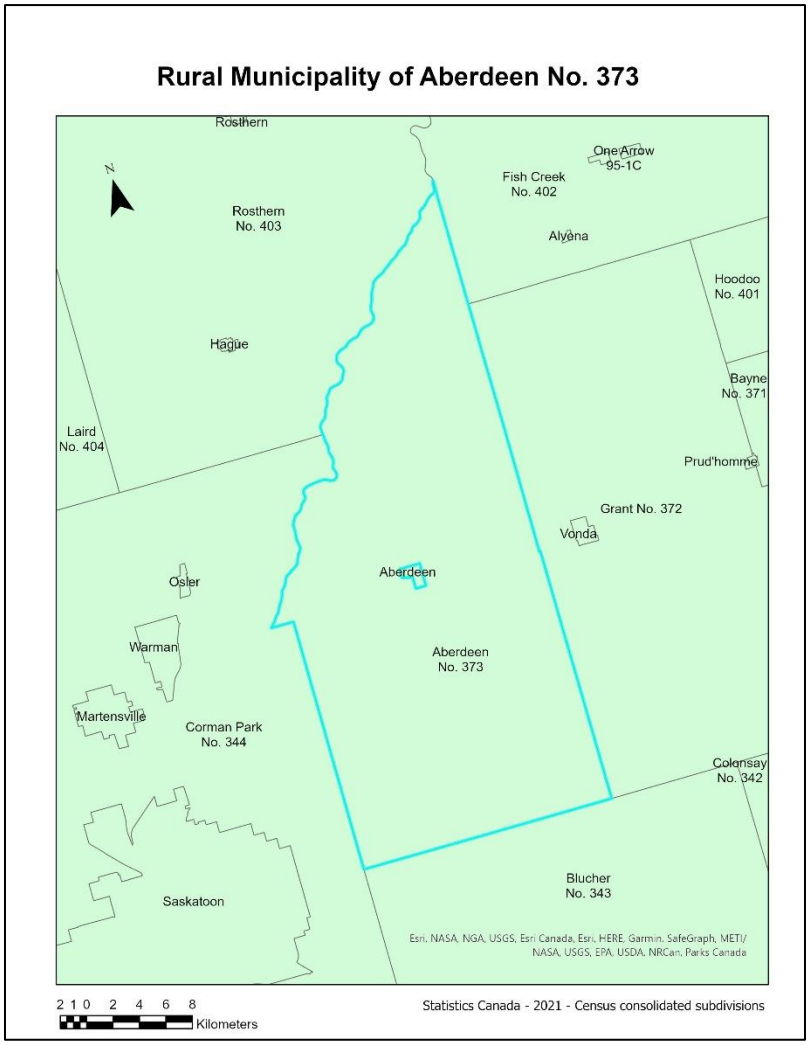

Figure 5-1 Rural Municipality of Aberdeen No. 373

5.1.2 Farming Industry Statistics

Oilseed and grain farming continue to be the largest form of farming that is done in the rural municipality, accounting for 65% of the reported farms in 2021 followed by cattle ranching and farming at 8%, as can be seen in Table 5-1.

However, over time the size of the farming industry has grown smaller in relation to the number of farms. Moreover, in the last two decades, vegetable and melon farming, fruit and tree-nut farming, and cattle ranching make up virtually 0% of Aberdeen's rural agricultural production in 2021, with hog and pig farming, and sheep and goat farming continuing to decline.

'Other animal production' refers to a combination of other miscellaneous animal production activities such as horse and other equine production, fur-bearing animal and rabbit production and other animal combination farms (Statistics Canada, 2022a). Farming such as hay, fruit and vegetable, and other miscellaneous crop farming is referred to as other crop farming in Table 5-1. Poultry and egg production has remained relatively consistent over the past two decades, accounting for 1% in 2021. However, it should be noted that despite changes to the farming industry suggesting a change in farming activity, they could also be interpreted as a shift in commodity prices.

Table 5-1 Farming Industry Statistics of RM Aberdeen No. 373

Farms Classified by NAICS Group	**2006**	**2011**	**2016**	**2021**
Cattle Ranching and Farming	14%	9%	10%	8%
Hog and Pig Farming	2%	1%	0%	2%
Poultry and Egg Production	1%	1%	0%	1%
Sheep and Goat Farming	1%	0%	0%	1%
Other Animal Production	11%	13%	9%	11%
Oilseed and Grain Farming	64%	64%	66%	65%
Vegetable and Melon Farming	0%	0%	3%	0%
Fruit and Tree-Nut Farming	1%	1%	1%	0%
Greenhouse, Nursery, and Floriculture Production	1%	1%	0%	0%
Other Crop Farming	5%	12%	10%	11%

(Statistics Canada, 2006, 2014, 2022c)

5.1.3 Rural Gentrification Indicators

Population Growth
Type of Change: Population
Indicator: Growing population
Metric: Number of Inhabitants
Timescale: 1996-2021

In three decades, from 1996-2021, the population of Aberdeen No. 373 has nearly doubled in size, from 758 to 1461 persons. Compared to the average rural municipality in Saskatchewan, Aberdeen No. 373 has twice as many residents as seen in Table 5.-2. Since 2011, there has been a significant rate of change, with at least 300 more persons in the following 2016 census report. Census agricultural data gathered from Statistics Canada suggests that the population of RM Aberdeen No. 373 is growing at a faster rate than the average rural municipality in Saskatchewan.

Table 5-2 Population Analysis: Aberdeen No. 373 vs Average Saskatchewan Municipality

	Aberdeen No. 373		Average Saskatchewan Rural Municipality	
Year	Population	Rate of Change	Population	Rate of Change
1996	758	-4%	781	4%
2001	816	-8%	758	3%
2006	765	6%	725	4%
2011	1016	-33%	725	0.04%
2016	1379	-36%	738	-2%
2021	1461	-6%	744	-1%

(Statistics Canada, 1998a, 2001, 2007a, 2012b, 2017a, 2023a)

Demographic Shifts
Type of Change: Demographic
Indicator: Increasing age over time
Metric: Median age
Timescale: 2001-2021

To understand the demographic shifts in the rural municipality of Aberdeen, a review of the population's census data from 2001-2021 was performed. Figure 5.2 shows the total size of age cohort groupings and their overall distribution. The age cohort of 0-4, 5-14 and 25-44 have been the highest in the last 20 years, with higher increases in the elderly population as well. The median age for the rural municipality of Aberdeen No. 373 has remained relatively stable, being around 38 to 43 years of age as seen in Table 5-3. The population demographic data suggests that the rural municipality of Aberdeen No. 373 has not aged significantly, but has rather grown, so far as being the biggest it's ever been in the last two decades.

Table 5-3 Median Age: RM Aberdeen No. 373
(Statistics Canada, 1998a, 2001, 2007a, 2012b, 2017a, 2023a)

Year	Median Age
2001	38.4
2006	42.6
2011	39.5
2016	37.6
2021	38.4

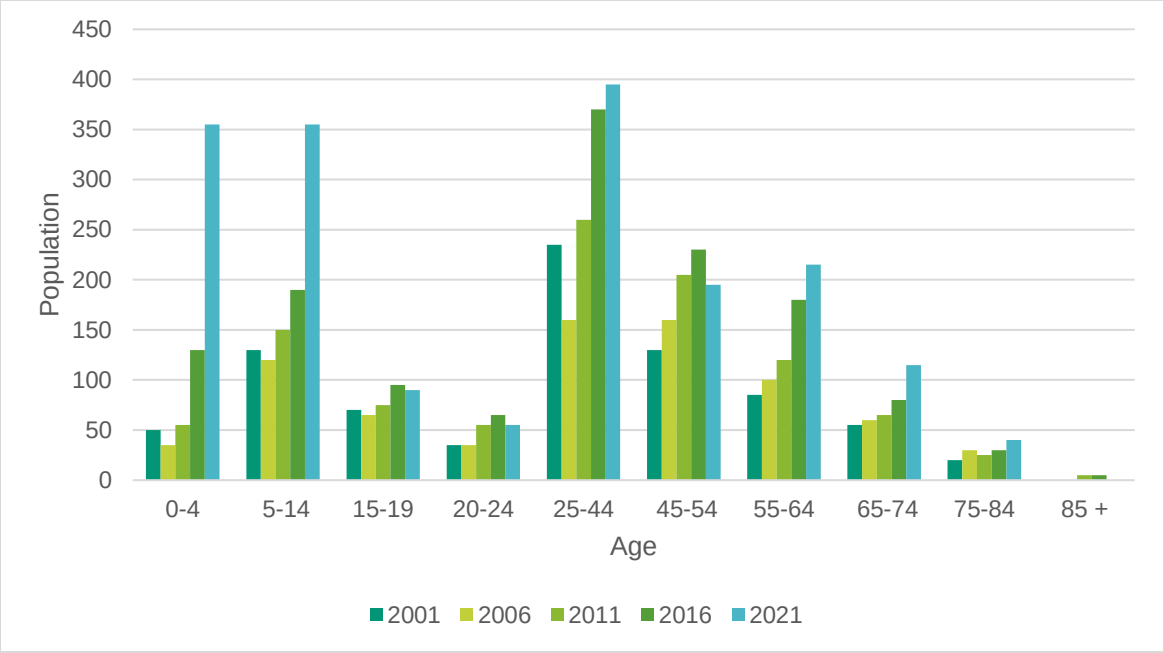

Figure 5-2 RM Aberdeen No. 373 Population Demographics (2001-2021)

(Statistics Canada, 1996, 2001, 2006, tbls. 98-316-X2021001, 2007, 2012)

Agricultural Change
Type of Change: Agricultural
Indicator: Increasing farmland prices
Metric: Comparison of farmland prices over time
Timescale: 1996-2021

Annual Farmland Prices

Figure 5-3 demonstrates the price per acre and the total sum of farmland sold. The price per acre since 1996 has remained relatively consistent, hovering around $400 per acre. Since 2010, the price per acre has increased significantly, peaking at $3500 per acre in 2019. Concerning the price per acre, the total amount of farmland sold annually has gradually decreased as visually represented in Figure 5-4, with a compound annual growth rate (CAGR) of -2%. This suggests that as the total sum of farmland decreased, the price per acre increased, indicating a potential relationship between these two variables. Figure 5-4 also compares the price of farmland and the total sum of acres sold annually, clearly illustrating the rise in farmland prices, which has a CAGR of 9%, in contrast to the number of acres sold each year. Before 2006, farmland prices annually remained below $40 million, proceeding to double in value in the following 10 years, and peaking at $100 million in 2018. Since 1996, the annual amount of farmland has gradually decreased in periodic cycles. The year 2020 saw one of the lowest numbers of acres sold, with almost 8000 acres.

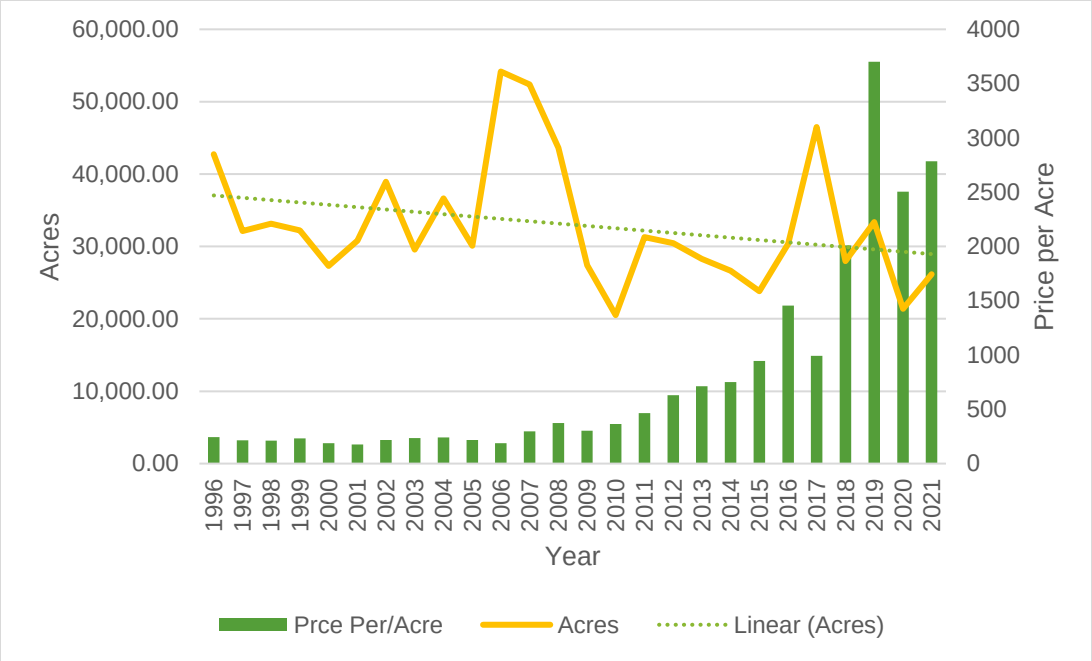

Figure 5-3 RM Aberdeen No. 373 Farmland Price per Acre and Total Sum of Acres

(Government of Saskatchewan, 2022)

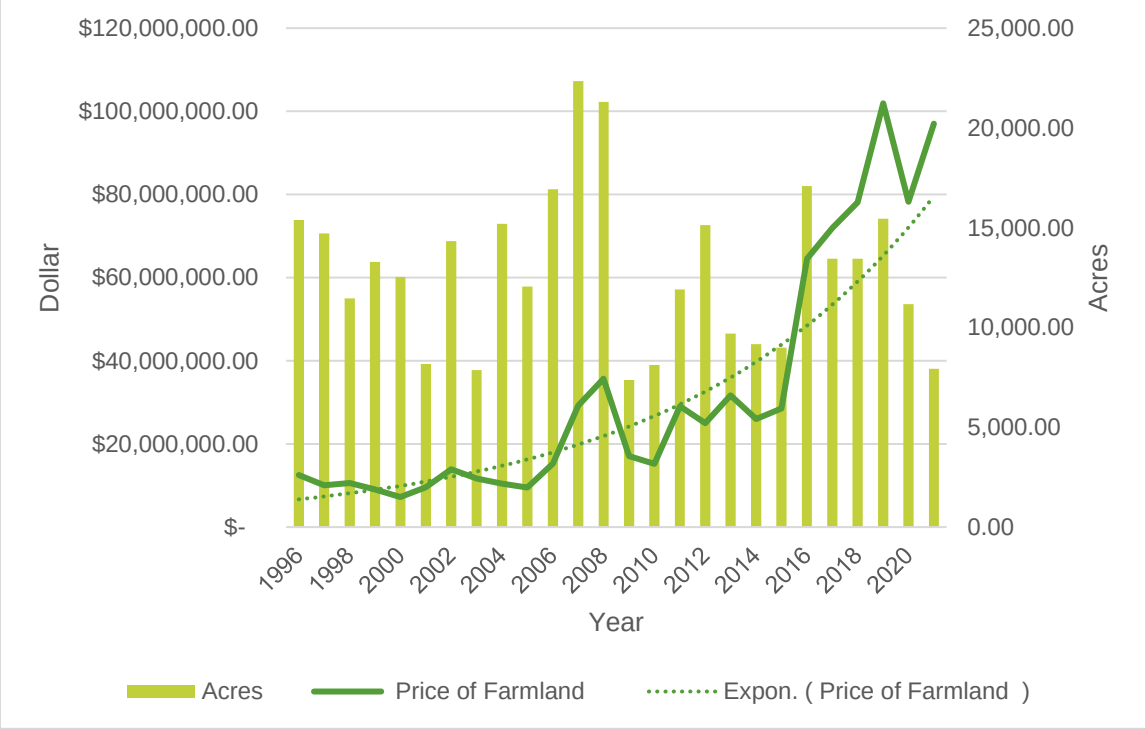

Figure 5-4 RM Aberdeen No. 373 Price of Farmland and Total Sum of Acres

(Government of Saskatchewan, 2022)

Another important aspect of farmland sales is the differentiation of farmland sales by sales code as demonstrated in Figure 5-5 over a 25-year period (1996-2021). The two most common types of transactions are arms-length (AL) and farmland transactions occurring between family members. Between the two dominant forms of transactions, AL is more than twice the size in the dollar amount of transactions between family members. AL transactions being the most frequent peaked at $75 million in 2018, with transactions by family peaking at roughly $30 million in the same year.

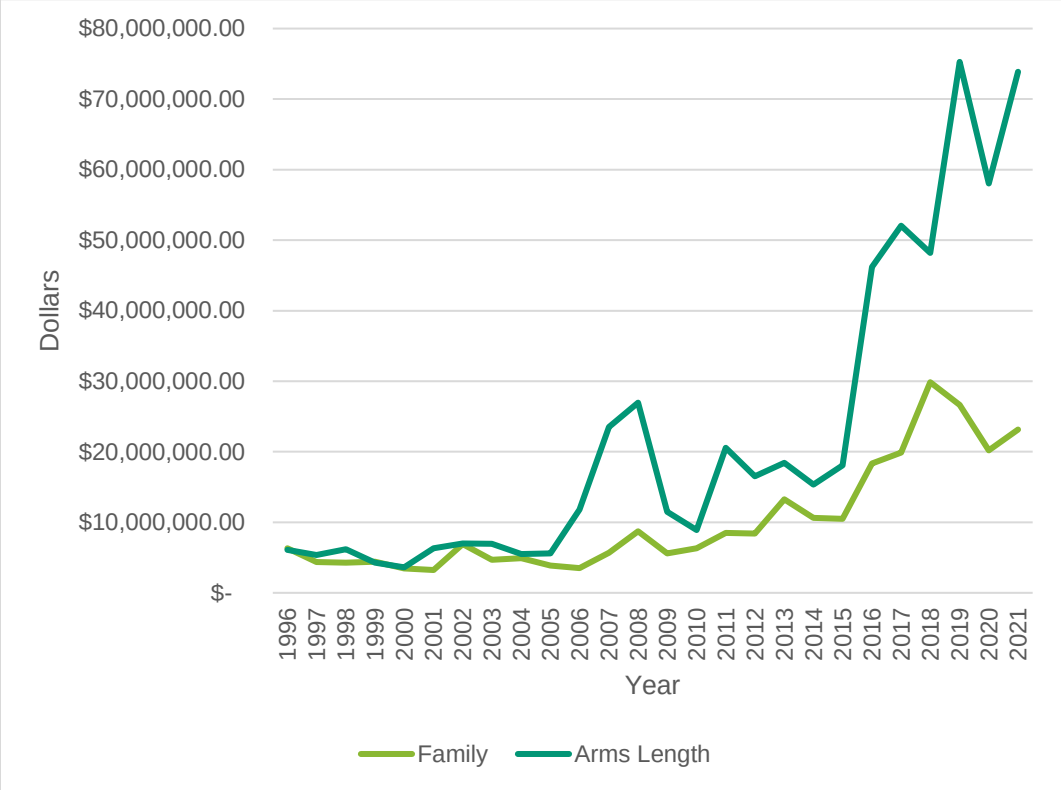

Figure 5-5 RM Aberdeen No. 373 Farmland Transactions by Sales Code (1996-2021)

(Government of Saskatchewan, 2022)

Comparative Assessment of Municipal Value Assessments of Farmland and Farmland Prices

A comparative look at the annual assessment of Aberdeen's farmland and its farmland value demonstrates that with rising farmland prices in Figure 5-6, the gap between the value of farmland and its price is shrinking. Between the 25-year period, the average municipal land assessment value is $49 million, peaking at $100 million in 2017. Farmland prices are averaging roughly $30 million over the same period, peaking at approximately $101 million in 2019. A ratio study (RS) was completed to understand the relationship between the municipal assessment values and farmland prices in Aberdeen No. 373 (see Table 5-4). Historically, the municipal assessment values have always been higher than the farmland sale price as seen in Figure 5-6.

Over time, however, the price of land has steadily grown to be on par with the municipal land assessment values, which suggests that other underlying factors are driving farmland prices. In 1996, the municipal land assessment value was 3.66 times more than the price of farmland, however, since 2016, that ratio has shrunk to 1.07 times, demonstrating that the assessed value of farmland is slowly less than the value of farmland.

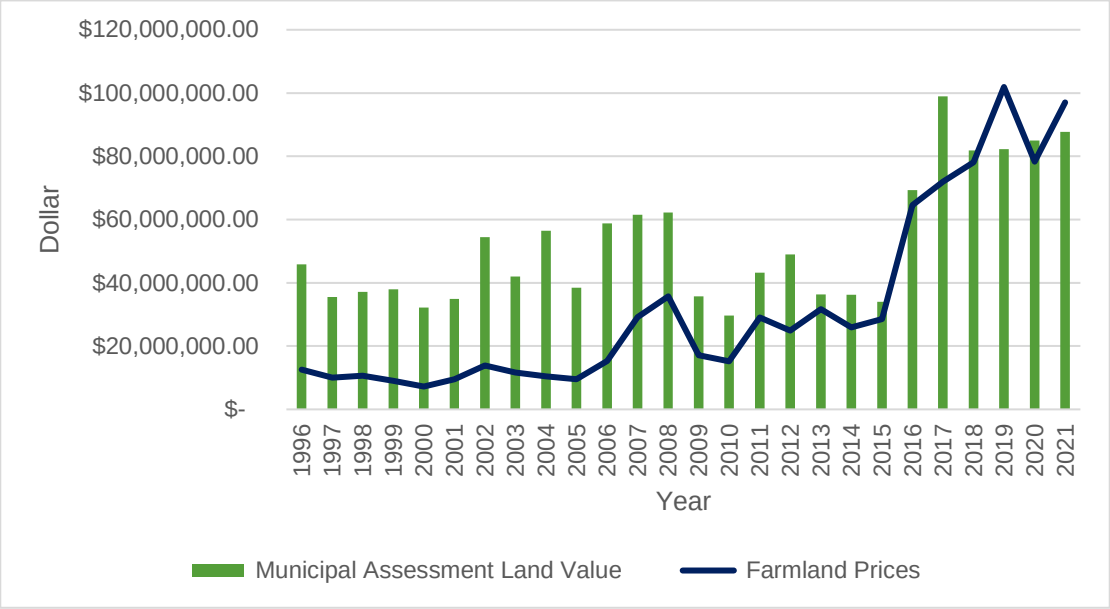

Figure 5-6 RM Aberdeen No. 373 Farmland Price and Municipal Assessment Land Value (1996-2021)

(Government of Saskatchewan, 2022)

Table 5-4 RM Aberdeen No. 373 Ratio Study

Year	RS
1996	3.66:1
1997	3.53:1
1998	3.51:1
1999	4.2:1
2000	4.46:1
2001	3.66:1
2002	3.91:1
2003	3.6:1
2004	5.41:1
2005	4.06:1
2006	3.84:1
2007	2.11:1
2008	1.74:1
2009	2.09:1
2010	1.95:1
2011	1.49:1
2012	1.96:1
2013	1.15:1
2014	1.39:1
2015	1.19:1
2016	1.07:1
2017	1.38:1
2018	1.05:1
2019	0.81:1
2020	1.09:1
2021	0.9:1

(Government of Saskatchewan, 2022)

5.2 Rural Municipality of Dundurn No. 314 Case Study

5.2.1 History

Located less than twenty minutes south of Saskatoon on Highway 11, and being roughly 807 sq. km in size, the Rural Municipality of Dundurn No. 314 is the fastest-growing municipality in Saskatchewan. The rural municipality of Dundurn No. 314 first reported settlers as far back as the 1860s. Established around the Round Prairie, on the east bank of the South Saskatchewan River (Dundurn, 2022), Chief Whitecap and his Sioux band had settled there in the mid-19th century. in the following decade, on what was previously known as Moose Woods Reservation, beside the South Saskatchewan River. Coming westward, ranchers settled along Brightwater Creek and Brightwater Lake in the 1880s (Dundurn, 2022). An influx of settlers arrived with the introduction of the Grand Truck Rail Line. The Rural Municipality of Dundurn was incorporated on December 13, 1909. Subsequently, the Townsite of Shield and Thode was established and fell under the jurisdiction of the rural municipality until obtaining village status in 1978 (Dundurn, 2022).

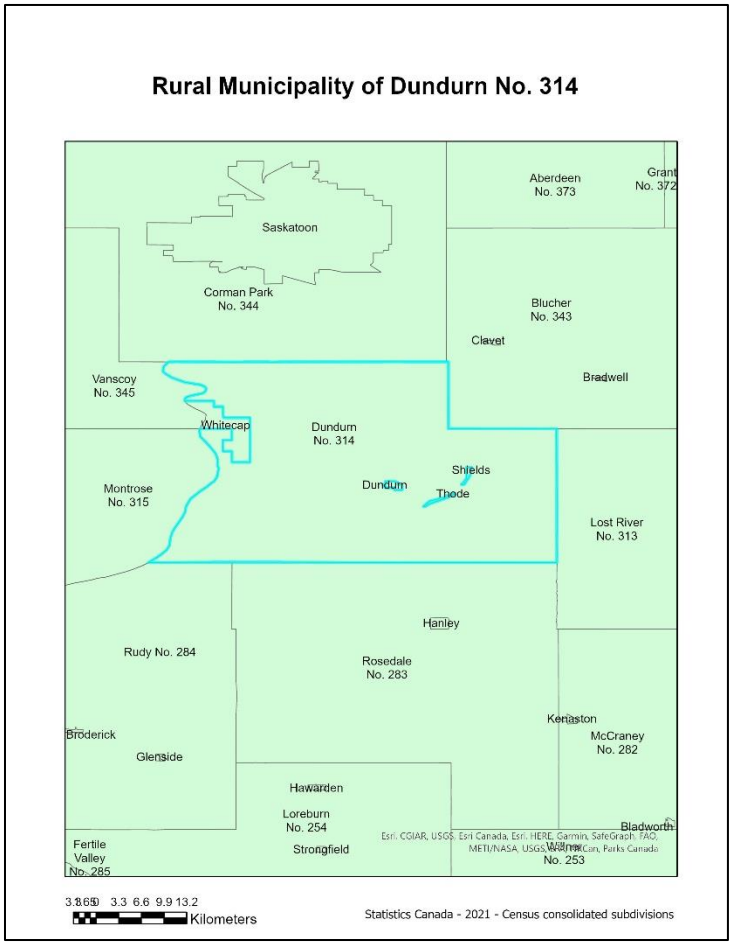

Figure 5.2-1 Rural Municipality of Dundurn No. 314

5.2.2 Farming Industry Statistics

In the rural municipality of Dundurn No. 314, oilseed and grain farming and cattle ranching remain the two dominant forms of agricultural production, accounting for 45% and 28% respectively in 2021. However, cattle ranching does continue to fluctuate, with a 5% decrease from 2016. Other forms of animal production and greenhouse, nursery, and floriculture production are the lesser forms of agricultural production being 10% cumulatively in 2021. Overall, the total percentage of farms operating in Dundurn's agricultural industry has fluctuated over time, with there being 82 farms, 10 more than there were since the last census period in 2016. Table 5.2-1 demonstrates that other forms of agricultural production such as fruit and tree production and vegetable and melon farming remain virtually non-existent in Dundurn. Oilseed and grain farming remain the only kind of agricultural production that has increased over time, rebounding from 39% in 2016 to 45% in 2021.

Table 5.2-1 Farming Industry Statistics of RM Dundurn No. 314

Farms Classified by NAICS Group	**2006**	**2011**	**2016**	**2021**
Cattle Ranching and Farming	34%	28%	33%	28%
Hog and Pig Farming	0%	0%	0%	0%
Poultry and Egg Production	0%	0%	0%	0%
Sheep and Goat Farming	0%	1%	0%	2%
Other Animal Production	15%	14%	6%	5%
Oilseed and Grain Farming	38%	33%	39%	45%
Vegetable and Melon Farming	0%	3%	0%	1%
Fruit and Tree-Nut Farming	0%	0%	0%	1%
Greenhouse, Nursery, and Floriculture Production	5%	0%	3%	1%
Other Crop Farming	9%	20%	20%	16%

(Statistics Canada, 2006, tbls. 95-629-XWE, 2014, tbls. 32-10-0403–01, 2022c, tbls. 32-0231–01)

5.2.3 Rural Gentrification Indicators

Population Growth
Type of Change: Population
Indicator: Growing Population
Metric: Number of Inhabitants
Timescale: 1996-2021

The population in the rural municipality of Dundurn No. 314 since 1996 has grown to 3.8 times its size, with the largest growth of 2404 individuals seen in 2016. In comparison to other rural municipalities in Saskatchewan, the rural municipality of Dundurn has by far surpassed the average population size. By having three times the average population size it remains the fastest-growing municipality in Saskatchewan. Table 5.2-2. demonstrates that the population grew significantly in 2011, with an 82% rate of change between the 2006 census report and the following report in 2011, while the average rural municipality only saw a rate of change of 0.15%. In summary, the population of Dundurn has seen significant growth within the last 2 decades.

Table 5.2-2 Population Analysis: Dundurn vs Average Saskatchewan Municipality

	RM Dundurn No. 314		Average Saskatchewan Rural Municipality	
Year	Population	Rate of Change	Population	Rate of Change
1996	555	2%	781	4%
2001	562	-1%	758	3%
2006	632	-12%	725	4%
2011	1148	-82%	725	0.04%
2016	2404	-109%	738	-2%
2021	2101	13%	744	-1%

(Statistics Canada, 1998b, 2002a, 2007b, 2012c, 2017c, 2023b)

Demographic Shifts
Type of Change: Demographic
Indicator: Increasing age over time
Metric: Median Age
Timescale: 2001-2021

Using the median age as an indicator of population growth, allows one to see how fast the rural population is ageing. The median age of Dundurn is currently 35.2, which closely follows the trend based on the historic data shown in Table 5.2-3. The median age has remained around 35 years old for the past 2 decades, with the median age dipping to 26.6 years old, due to an increased influx of residents aged between 25-44 years old in 2016. Figure 5.2-2 looks at the total size of the rural municipality over time, with the population size differentiated by age cohorts. In each age cohort, the population has grown steadily over the last 2 decades, with the largest increase seen in the 25-44 age cohort. Dundurn has seen the largest increase as seen in Figure 5.2-2, more to the point, that the 25-44 age cohort has roughly doubled in that year. The demographic population data suggests that the population of Dundurn is growing, with the largest influx of individuals aged 25-44.

Table 5.2-3 Median Age: RM Dundurn No. 314

Year	Median Age
2001	36.3
2006	35.1
2011	33.7
2016	26.6
2021	35.2

(Statistics Canada, 1998b, 2002a, 2007b, 2012c, 2017c, 2023b)

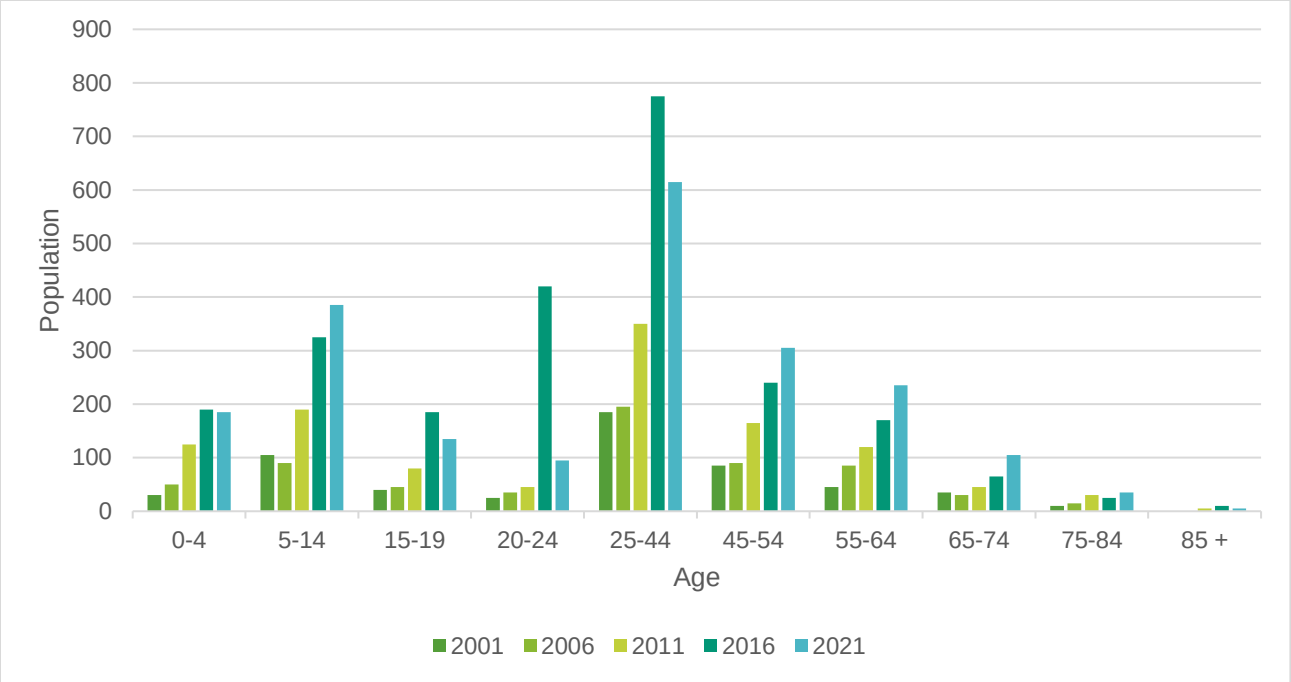

Figure 5.2-2 RM Dundurn No, 314 Population Demographics (2001-2021)

(Statistics Canada, 1998a, 2002a, 2012b, 2017c, 2023a)

Agricultural Change
Type of Change: Agricultural
Indicator: Increasing farmland prices
Metric: Comparison of farmland prices over time
Timescale: 1993-2021

Annual Farmland Prices

Farmland prices have quickly risen, being consistently under $1500 per acre for over two decades. In Figure 5.2-3, the price per acre is calculated, demonstrating a sharp and dramatic increase in price. A sharp increase occurred in 2016 at $29 thousand per acre as demonstrated in Figure 5.2-4. Figure 5.2-3 demonstrates the total amount of farmland sold annually. The total amount of farmland sold follows periodic cycles, peaking roughly every 10 years, with a CAGR of 12%. The highest peak occurs in 2017 at roughly 26 thousand acres. There does not seem to be a clear relationship between the total amount of farmland sold and the price per acre. The data suggests that there may be other factors affecting the price per acre. Looking at Figure 5.2-6, the municipal land assessment value confirms that as well, being just roughly $8000 more, at approximately $48 thousand.

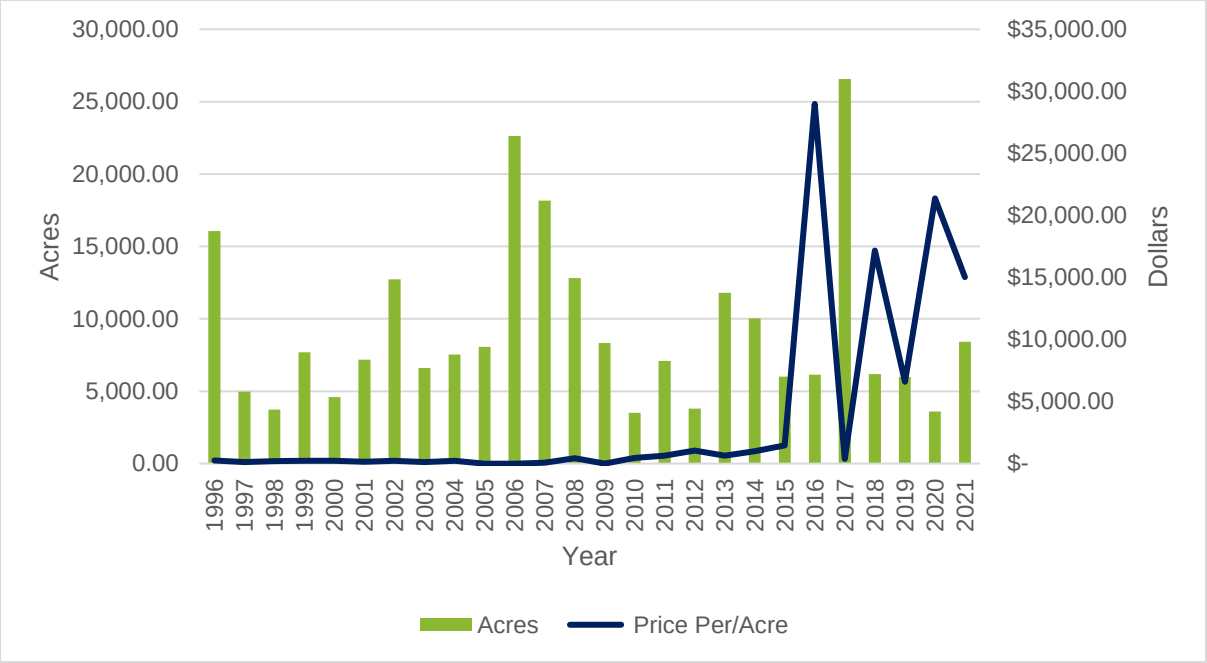

Figure 5.2-3 RM Dundurn No. 314 Farmland Price per Acre and Total Sum of Acres (1996-2021)

(Government of Saskatchewan, 2022)

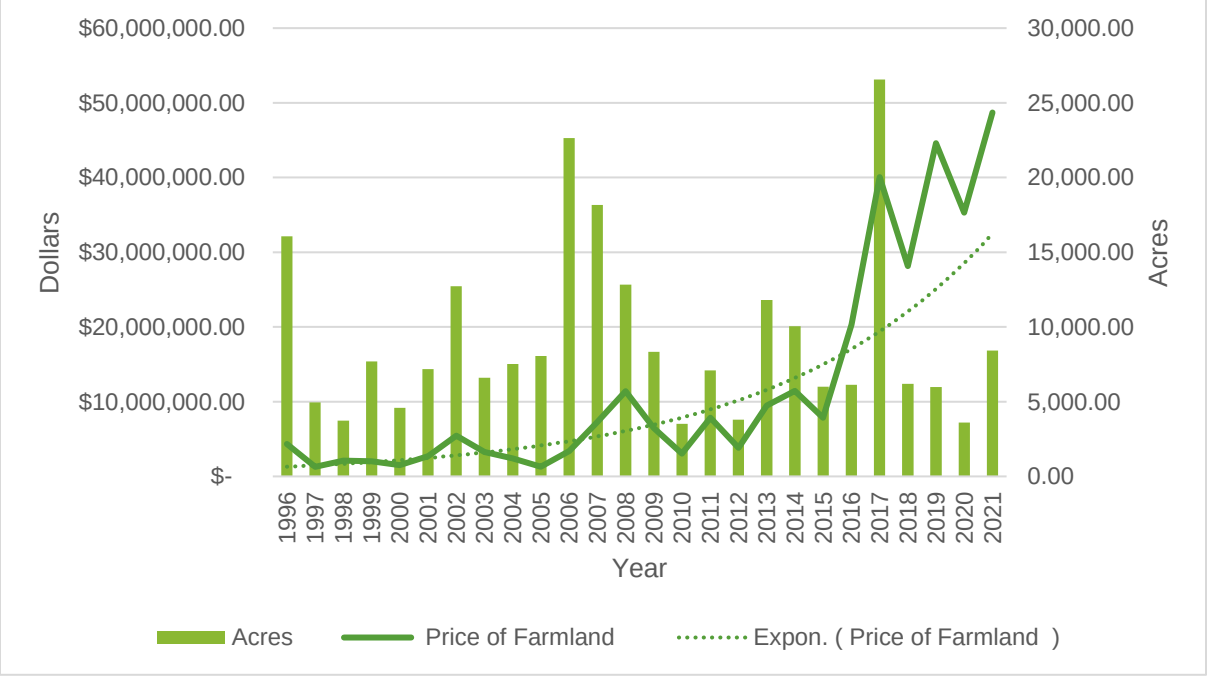

Figure 5.2-4 RM Dundurn No. 314 Price of Farmland and Total Sum of Acres

(Government of Saskatchewan, 2022)

Figure 5.2-2 compares the total amount of farmland price annually with the sum of farmland sold over a 25-year period. With a periodic 10-year cycle, the price of farmland rises exponentially, starting at $8 million and peaking at $49 million in 2021. Figure 5.2-3 demonstrates the number of farmland parcels differentiated by the type of sales code. The two most frequent types of sales codes are AL and farm sale transactions by family. AL transactions in comparison to family-sale transactions are the most frequent, and expensive, having some of the largest transactions. Family-sale transactions make is represented a quarter of the dollar value compared to AL.

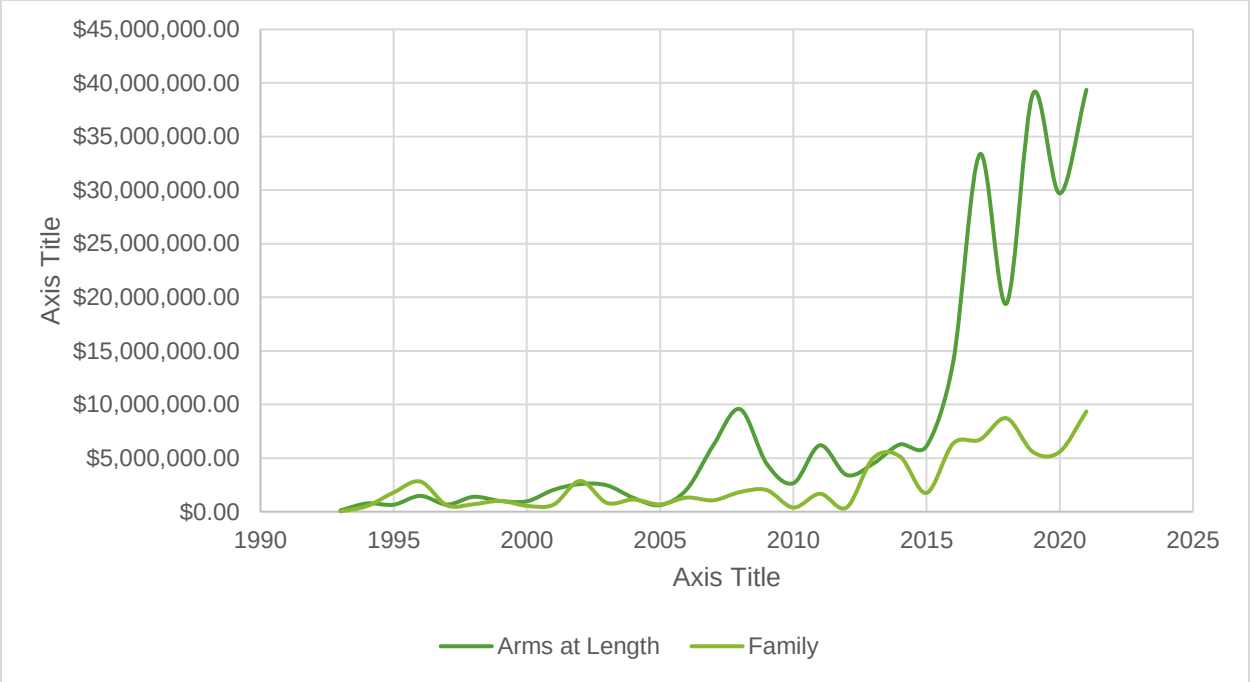

Figure 5.2-5 RM Dundurn No. 314 Transactions by Sales Code (1996-2021)

(Government of Saskatchewan, 2022)

Comparative Assessment of Municipal Value Assessments of Farmland and Farmland Prices

Historically, the municipal land value assessment value has always been higher than the respective farmland price, being sometimes 4 times higher. However, in 2008, the farmland price began to climb as seen in Figure 5.2-5, starting at approximately $8 million and peaking at roughly $28 million. The municipal land assessment values mirror the same movement as the farmland prices, often being marginally higher. The municipal land assessment value and price of farmland both have a CAGR of 26%. From 1996 to 2006, the municipal land assessment value ranges from 2-5 times more than the farmland price. From 2006 to 2021, the gap between the municipal land assessment value and its respective farmland price shrinks, with a smaller range of 0.80 to 1.

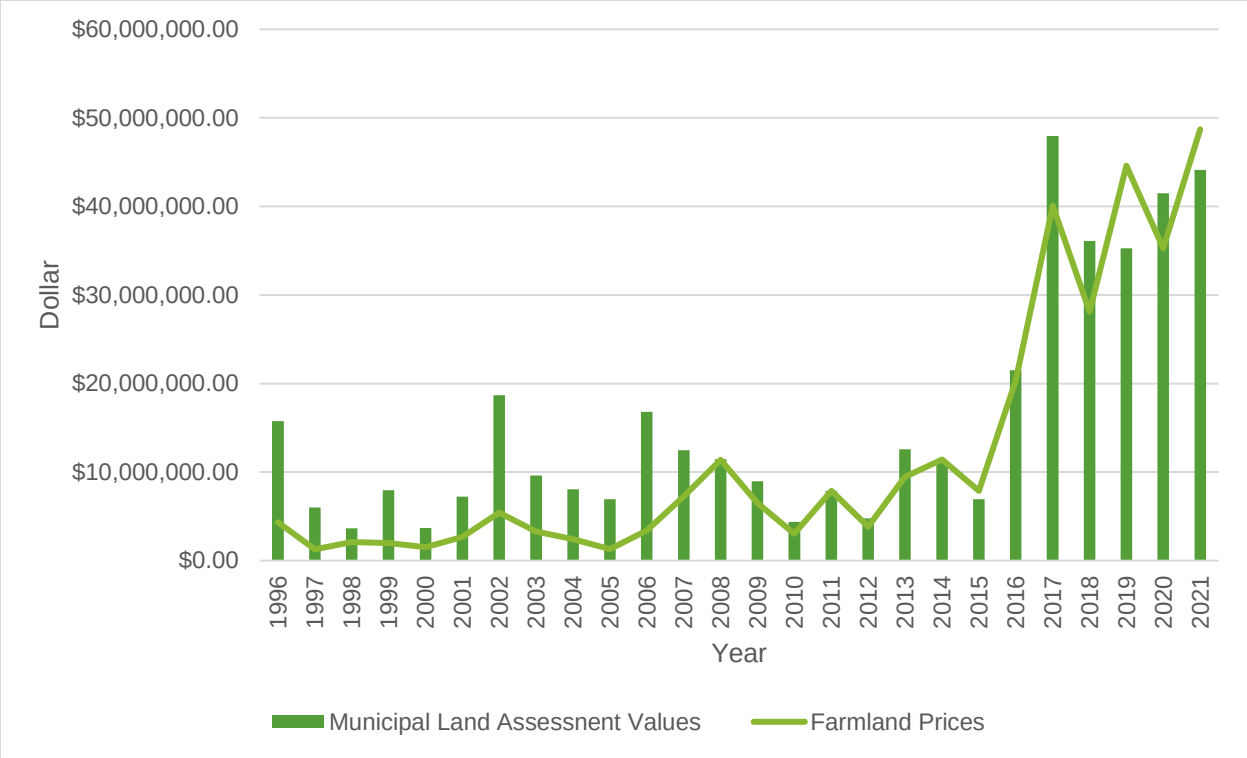

Figure 5.2-6 RM Dundurn No. 314 Farmland Price and Municipal Land Assessment Value (1996-2021)

(Government of Saskatchewan, 2022)

Table 5.2-4 RM Dundurn No. 314 Ratio Study

Year	RS
1996	3.65:1
1997	4.7:1
1998	1.75:1
1999	3.97:1
2000	2.44:1
2001	2.69:1
2002	3.44:1
2003	2.93:1
2004	3.33:1
2005	5.37:1
2006	4.94:1
2007	1.71:1
2008	1.01:1
2009	1.38:1
2010	1.45:1
2011	1:1
2012	1.25:1
2013	1.32:1
2014	0.98:1
2015	0.88:1
2016	1.06:1
2017	1.2:1
2018	1.28:1
2019	0.79:1
2020	1.18:1
2021	0.91:1

(Government of Saskatchewan, n.d.-b)

5.3 Rural Municipality of Touchwood No. 248 Case Study

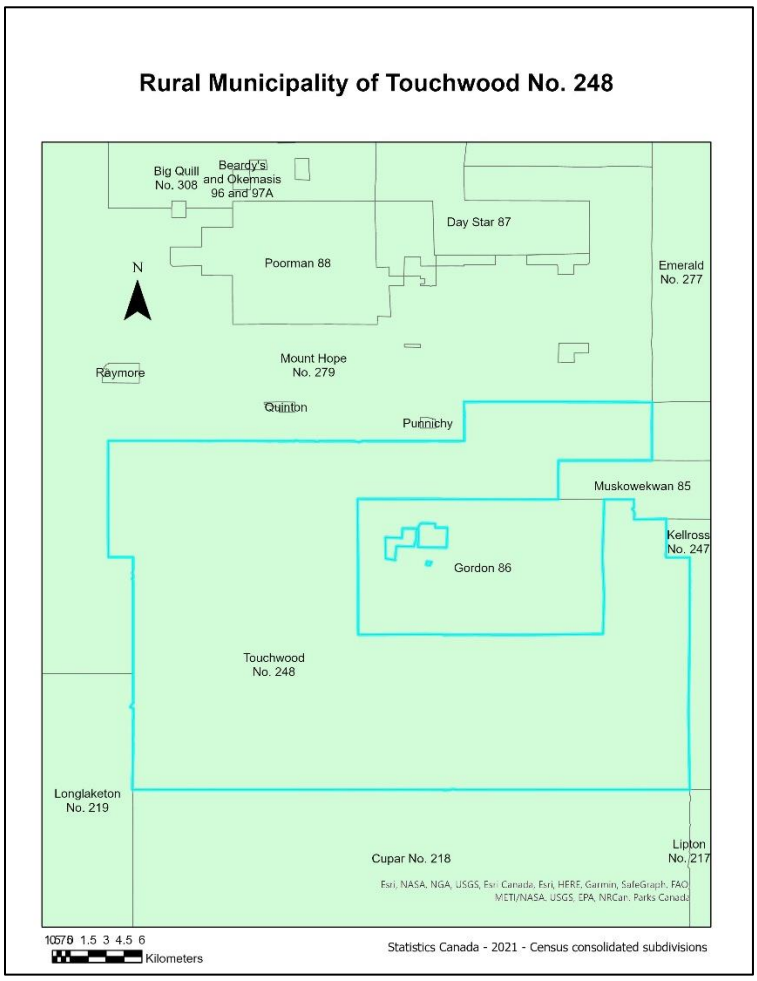

Figure 5.3-1 Rural Municipality of Touchwood No. 248

5.3.1 Farming Industry Statistics

In the rural municipality of Touchwood, No. 248 Oilseed and grain farming remain the dominant form of agricultural production in the rural municipality in the past decade. Cattle ranching and farming and other forms of crop farming such as hay farming, which makes up most of the other kinds of crop farming in 2021, accounting for 27% and 19% of the farms operating in 2021 respectively, are the other significant forms of agricultural production. In fact, hay farming is the only kind of agricultural production that has grown, more than doubling in the last decade. Sheep and goat farming has gradually decreased over the decade. All other forms of farming such as hog and pig farming or fruit and tree-nut farming are virtually non-existent as can be seen in Table 5.3-1.

Table 5.3-1 Farming Industry Statistics of RM Touchwood No. 248

Farms Classified by NAICS Group	2006	2011	2016	2021
Cattle Ranching and Farming	27%	23%	28%	27%
Hog and Pig Farming	2%	0%	0%	0%
Poultry and Egg Production	0%	0%	0%	0%
Sheep and Goat Farming	1%	1%	0%	0%
Other Animal Production	4%	5%	6%	1%
Oilseed and Grain Farming	62%	59%	52%	53%
Vegetable and Melon Farming	0%	0%	0%	0%
Fruit and Tree-Nut Farming	0%	0%	0%	0%
Greenhouse, Nursery, and Floriculture Production	0%	0%	0%	0%
Other Crop Farming	5%	15%	14%	19%

(Statistics Canada, 2006, tbls. 95-629-XWE, 2014, tbls. 32-10-0403–01, 2022c, tbls. 32-0231–01)

5.3.2 Rural Gentrification Indicators

Population Growth

Type of Change: Population
Indicator: Growing Population
Metric: Number of Inhabitants
Timescale: 1996-2021

Since 1996, the population in the rural municipality of Touchwood No. 248 has been in decline right up until 2016, with a total population of 343 individuals. Currently, the total population is 373, which is far less than the current average rural Saskatchewan population of 710 persons as demonstrated in Table 5.3-2. The significance of Touchwood is not the overall total size of the population, but rather the rate of change in its population. Between the two census periods of 2011, and 2016, the population has seen an increase of 100 persons, which continues to rise. In contrast to the average Saskatchewan rural municipality, Touchwood an increased population growth after years of population decline.

Table 5.3-2 Population Analysis: Torchwood vs Average Saskatchewan Municipality

	Touchwood No. 248		**Average Saskatchewan Rural Municipality**	
Year	Population	Rate of Change	Population	Rate of Change
1996	413	14%	781	4%
2001	346	16%	758	3%
2006	387	-12%	725	4%
2011	267	31%	725	0.04%
2016	343	-28%	738	-2%
2021	373	-9%	744	-1%

(Statistics Canada, 1998c, 2002b, 2007c, 2012a, 2017b, 2023c)

Demographic Shifts
Type of Change: Demographic
Indicator: Increasing age over time
Metric: Median Age overtime
Timescale: 2001-2021

Looking at Touchwood's age cohorts, the age cohorts of 5-14, and 25-44 make up the largest groups of the total population. Additionally, 2001 and 2021 represent the largest periods of growth for these two large groups, with the years in between demonstrating a gradual decrease in their total population. Table 5.3-3 represents the median age for the rural municipality, and in the census years 2006-2016, the median age ranged from 45-42, which demonstrates that the age cohorts 25-44, and 44-55 had the largest representation among the total population as demonstrated in Figure 5.3-2. It is interesting to note that age cohorts 5-14, 25-44 and 64-74 have seen the largest increase in the last two decades.

Table 5.3-3 Median Age: RM Touchwood No. 248

Year	Median Age
2001	41.7
2006	45.1
2011	45.9
2016	42.4
2021	38.0

(Statistics Canada, 1998c, 2002b, 2007c, 2012a, 2017b, 2023c)

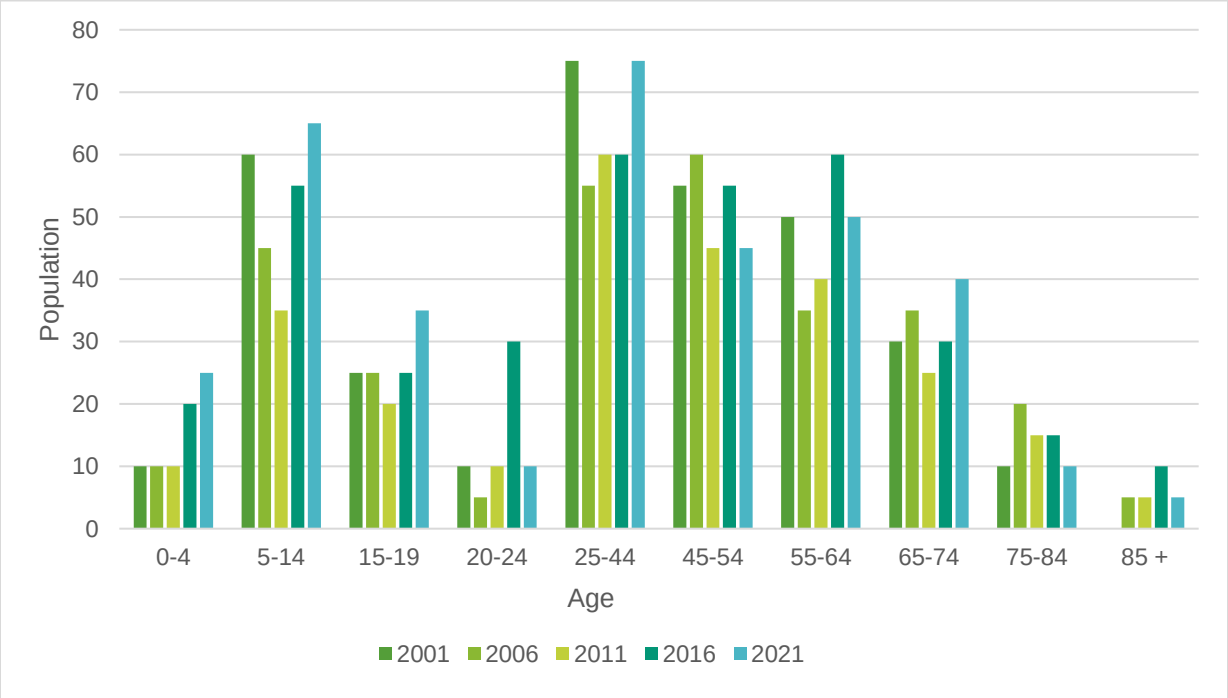

Figure 5.3-2 RM Touchwood No. 248 Population Demographics (2001-2021)

(Statistics Canada, 1998c, 2002b, 2007c, 2012a, 2017b, 2023c)

Agricultural Change
Type of Change: Agricultural
Indicator: Increasing farmland prices
Metric: Comparison of farmland prices over time
Timescale: 1996-2021

Annual Farmland Prices

Farmland prices per acre in the rural municipality of Touchwood have been gradually rising, punctuated with high peaks and valleys as seen in Figure 5.3-3, suggesting a change in market activity within Touchwood's agricultural sector. From 1996 to 2010, the price per acre remained around $20,000. After 2010, the rise is sharper, peaking in 2020 at roughly $168 thousand. In contrast, the total amount of farmland sold is gradually decreasing as demonstrated by the downward linear trendline in Figure 5.3-4. In 2021, the amount of farmland sold is 10,000 acres, from a peak of 18,000 acres in 1998, with a CAGR of -0.57%. Looking at the historic agricultural census data, the price of farmland in Figure 5.3-4, as demonstrated by the exponential trendline continues to climb, with a CAGR of 17%. The average price of farmland from the annual farmland price is $4 million, with prices consistently exceeding the average since 2011.

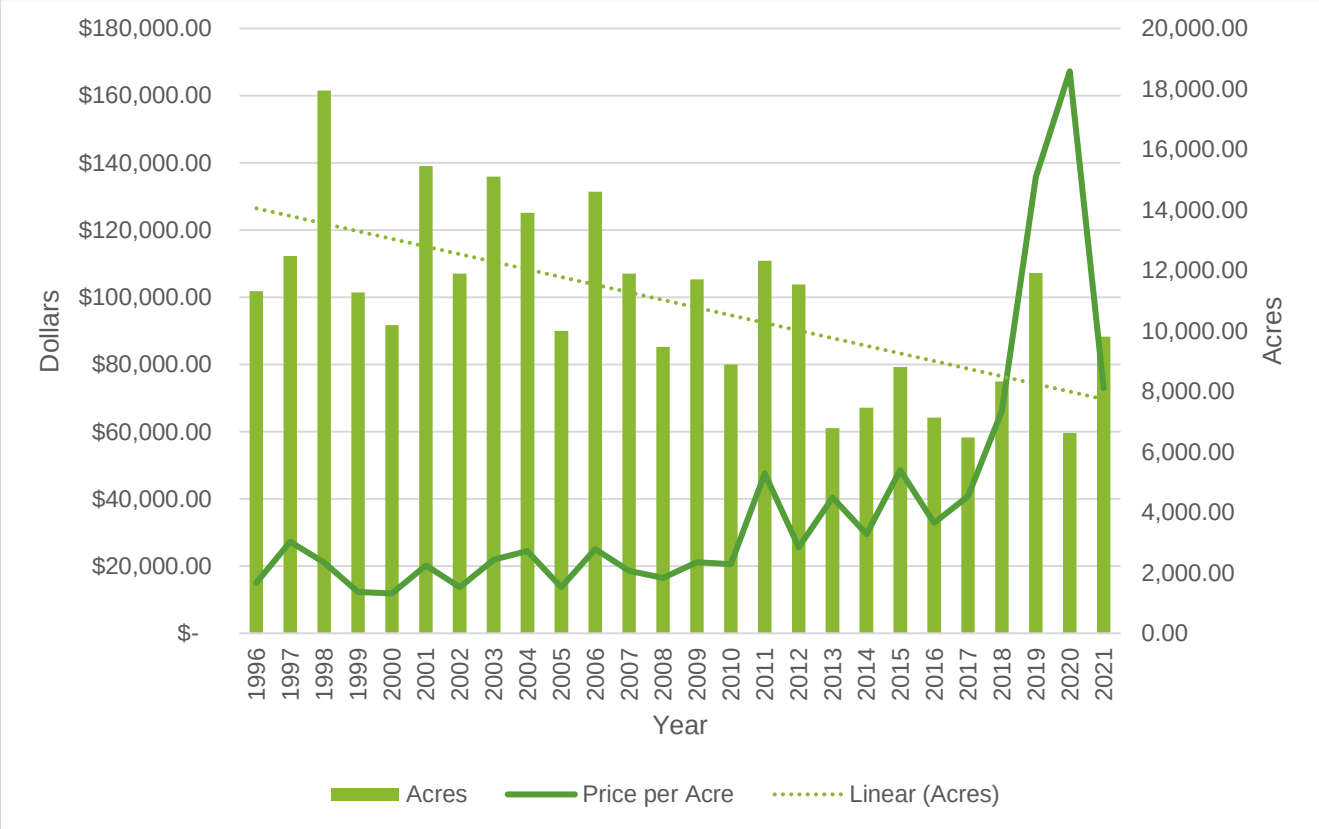

Figure 5.3-3 RM Touchwood No. 218 Price of Farmland and Total Sum of Acres (1996-2021)

(Government of Saskatchewan, 2022)

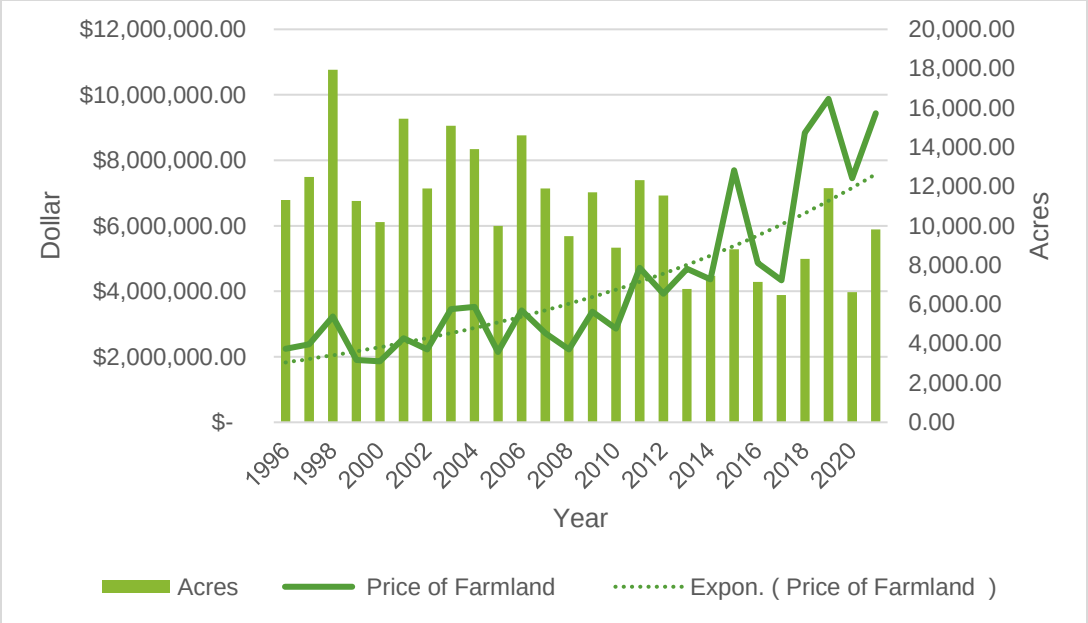

Figure 5.3-4 RM Touchwood No. 248 Price of Farmland and Total Sum of Acres (1996-2021)

(Government of Saskatchewan, 2022)

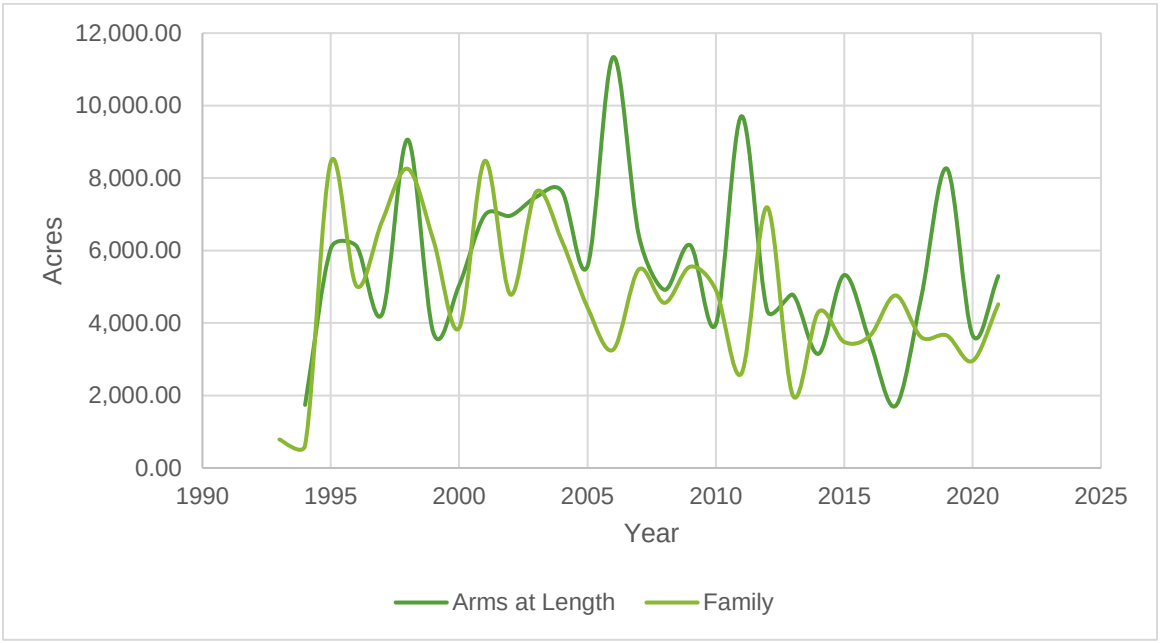

Figure 5.3-5 RM Touchwood Farmland Transactions by Sales Code (1996-2021)

(Government of Saskatchewan, 2022))

Figure 5.3-5 demonstrates the sales transactions differentiated by sales code represented in dollar amounts. AL and family-sale transactions are the two most frequent forms of sales transactions, with variable peaks and valleys, ranging from $2000 to $10,000.

Comparative Assessment of Municipal Value Assessments of Farmland and Farmland Prices

Over the last 25 years, the municipal land assessment values have gradually decreased with an average land assessment value of $ 11 million and a CAGR of 15%. Figure 5.3-6 demonstrates that since 2013, land assessment values are much higher than their average value, rising to a value of $12 million in 2021. The determination of land assessment values is composed of a variety of different factors such as the buildings and equipment found on the land itself, along with the land's equity. A decrease in land assessment values could be a result of various factors, such as a decrease in the land's equity.

Figure 5.3-6 demonstrates that historically, the municipal land assessment values have been much higher than the respective farmland prices, however, as time progresses, that gap seems to be shrinking. The price of farmland in comparison to the municipal land assessment values has historically been much lower, with the average value of the land being $4.23 million. Despite farmland prices being lower than municipal land value assessments, they have gradually risen as well with a CAGR of 17%; only in 2019 has the price of land risen above its respective land assessment. Table 5.3-4 demonstrates the RS for Touchwood, comparing the municipal land assessment value and its respective farmland value. The increase in farmland prices indicates an increased demand for farmland. By comparison, municipal land assessment values historically have been higher than the farmland price.

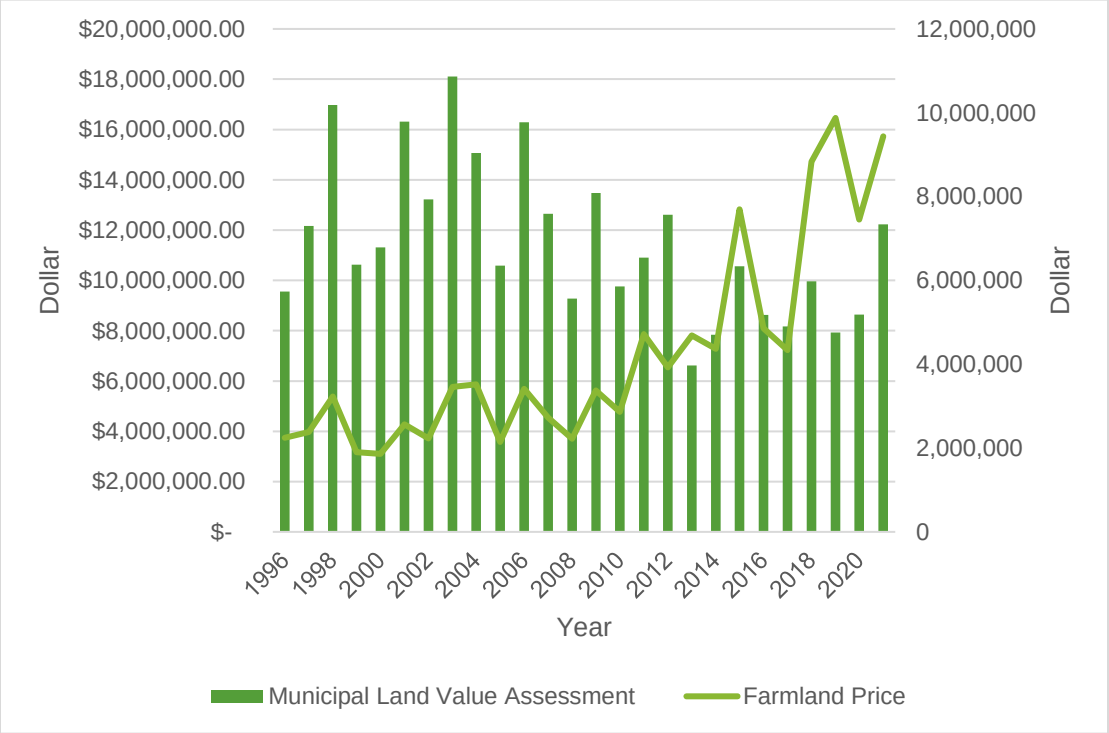

Figure 5.3-6 RM Touchwood No. 248 Farmland Price and Municipal Land Assessment Value

(Government of Saskatchewan, 2022)

Table 5.3-4 RM Touchwood No. 248 Ratio Study

Year	RS
1996	4.26:1
1997	5.1:1
1998	5.25:1
1999	5.58:1
2000	6.08:1
2001	6.36:1
2002	5.93:1
2003	5.24:1
2004	4.28:1
2005	4.94:1
2006	4.77:1
2007	4.65:1
2008	4.17:1
2009	3.99:1
2010	3.41:1
2011	2.31:1
2012	3.21:1
2013	1.41:1
2014	1.79:1
2015	1.37:1
2016	1.78:1
2017	1.88:1
2018	1.13:1
2019	0.8:1
2020	1.16:1
2021	1.3:1

(Government of Saskatchewan, 2022)

Chapter Six: Synthesis and Analysis

6.0 Introduction

The purpose of this chapter is to synthesize the results from the three previous case studies (Chapter 5) into a coherent body of work that clearly outlines the rural gentrification narratives playing out in rural Saskatchewan communities. Firstly, there will be a reiteration of the primary purpose and objectives of this master's research, followed by a summary of the key findings. Lastly, all the data collected will be contextualized within the rural gentrification research.

6.1 Purpose and Objectives

The primary goal of this research study is to understand the nature of Saskatchewan's agricultural sector and to determine if there is any evidence of agricultural gentrification occurring in rural communities. Secondly, to contextualize the changes occurring in Saskatchewan's agricultural sector within multifunctional land-use literature as evidence of agricultural gentrification. In effect, creating a link between agricultural gentrification and multifunctional landscape transformations. In bridging a theoretical gap between research on multifunctional landscapes and agricultural gentrification, a greater understanding of rural land use planning can occur.

Objective One

To expand the notion of agricultural gentrification within gentrification research in Saskatchewan, the first objective was to determine the nature of Saskatchewan's agricultural industry as a whole, and granularly with case studies.

Objective Two

Once the nature of Saskatchewan's agricultural sector has been established, then indicators of agricultural gentrification will be explored to determine if rural gentrification is occurring, and the extent of the phenomenon.

Objective Three

The second and first objectives share a similar intent in determining the phenomenon of agricultural gentrification in Saskatchewan. The final objective is to explore the relationship between farmland use and agricultural gentrification.

6.2 Key Findings

6.2.1 Saskatchewan Farm Statistics and Farm Operator Demographics

Ageing Farm Operators

In Saskatchewan, the average age of farm operators continues to increase, with the average age being 56 years old. Also, the average age of the farmer closely follows the national farm operator average. More importantly, 55+ aged farmers make up the largest proportion of the farm operator demographic in Saskatchewan, being the only age cohort (55+) that is growing with currently over 25000 reported farm operators in 2021.

Looking closer at the farm operator demographics, despite the increased presence of women operators in the agricultural sector, they currently only make up 37% as of 2021. Within the agricultural sector, there are fewer farm operators, the majority of whom are older men gradually reaching retirement age. This trend mirrors the same trend of an ageing population occurring in Canada, as the average age of the population continues to decline.

Saskatchewan Farmland Consolidation

The total number of farms in Saskatchewan continues to decline, with a compound growth rate of -2% measured across three decades. The number of farms since 1996 has halved, from 60840 to 34128. Also, compared to the national compound growth rate of -1%, the number of farms is decreasing at a faster rate. However, every 5 years, the total area of cropland is steadily increasing, with a 5-year periodic increase of 1%. It should be noted that the total area of farms has remained relatively the same, with a compound growth rate of -0.32%. The data compiled suggests that while the number of farms in Saskatchewan is getting smaller, relative to its total cropland, farms annually have a greater productive output potential due to increased cropland available (when all other factors remain the same). Moreover, the trend of decreasing number of farms with increasing cropland suggests farms in Saskatchewan are consolidating. Farmland consolidation then could be the result of other farmers attempting to expand their operations and capitalize on the increased yield potential and greater economies of scale provided by having more cropland per farm through farmland acquisition.

Increasing Farmland and Buildings Value

Annually, the total value of farmland and buildings have increased five times in value from $20,00 to 100,000 since 1996, increasing exponentially since 2010. Also, machinery and equipment and livestock and poultry in comparison only make up a smaller portion of the total farmland capital in Saskatchewan, both valuing less than $20,000 annually combined. The total value of farmland per acre has also increased, with one acre valued at $1600 per acre in 2021, an increase five times in value since 1996. Additionally, the gross receipts of farms have increased, with more farms grossing over $3.5 million in 2021. In 2001, there were approximately 1300 farms reported that grossed between $500,000 to $900,000 (the most in the last twenty years), however, that trend has been shifting, where the greatest proportion of farms grossed over $3.5 million (1100 reported farms).

Looking at the ratio between cash receipts and the realized net income, allows one to measure how much money farms are making in comparison to the farm operators. Historically, cash receipts are much higher than the realized net income. This suggests that Saskatchewan farms initially are generating more profit annually, however, the realized net income tells a different contradicting story. Without taking into consideration the value of inventory (VIC), the realized net income of Saskatchewan farms is gradually increasing,

6.2.2 Farm Production Statistics

For each case study, a statistical review of the agricultural production of each municipality was performed, with a focus on the state of the agricultural production and the changes in production, for changes from 2006-2021. Farms are classified by the NAICS Group (North American Industry Classification System), giving a historical view of the farming industry spanning more than a decade.

Rural Municipality of Aberdeen No. 373

Oilseed and Grain farming remain the largest type of farming, accounting for about 65% of the entire agricultural sector, with other types of crop farming and animal production both accounting for 11% and cattle ranching at 8% respectively in 2021 as shown in Table 6.2-1. These four parts of the industry were the largest components of the agricultural sector. However, over time the size of the farming industry in Aberdeen has grown smaller, shrinking to 2/3 of its size in 2021. Moreover, in the last two decades, other sectors of the industry have barely grown- historically, they have been stagnant. Vegetable and melon farming, fruit and tree-nut farming has virtually halved, with hog and pig farming, and sheep and goat farming continuing their steady decline, each sector accounting for no less than 4% of the industry in 2021. In Table 6.2-1, 'Other animal production' refers to a combination of other miscellaneous animal production activities such as horse and other equine production. Farming such as hay, fruit and vegetable, and other miscellaneous crop farming referred to as 'other crop farming' in Table 6.2-1 is the only sector that has grown, doubling in size in the last decade. The four sectors represent the major areas of activity in Aberdeen's agricultural sector, one of which is in-fact growing, while the other three steadily declining.

Rural Municipality of Dundurn No. 314

In the rural municipality of Dundurn No. 314, oilseed and grain farming and cattle ranching remain the two dominant forms of agricultural production, accounting for 45% and 28% respectively in 2021 as shown in Table 6.2-1. Other forms of animal production and greenhouse, nursery, and floriculture production are the lesser forms of agricultural production in Dundurn, representing a total of 10% of 2021's agricultural industry. Overall, the total number of farms has fluctuated over time, with there being 82 farms, 10 more than there were since the last census period in 2016. Table 6.2-1 demonstrates that other forms of agricultural activity such as fruit and tree production and vegetable and melon farming remain virtually non-existent in Dundurn. Oilseed and grain farming remain the only kind of agricultural production that has increased over time, accounting for 45% in 2021. Cattle ranching and farming remain relatively consistent numbers across four census periods since 2006. Declining agricultural sectors in Dundurn are captured under 'other animal production' which represents minor industries such as apiculture, horse and equine production and animal combination farming, being a third in size since 2006. Oilseed and grain farming, cattle ranching, and other crop farming are the most active parts of Dundurn's agricultural sector.

Rural Municipality of Touchwood No. 248

In 2021, Oilseed and grain farming remain the dominant form of agricultural production in the rural municipality of Touchwood No, 218, accounting for about 53% of the municipality's agricultural sector as demonstrated in Table 6.2-1. Cattle ranching and other forms of crop farming such as hay farming represent 27% and 19% respectively. In fact, the three most active forms of farm production are virtually the only active forms of agriculture. 'Other Animal Production' represent 1% of Dundurn's agricultural sector, which is gradually declining, at a faster rate than the three main agricultural sectors. All other forms of farming such as hog and pig farming or fruit and tree-nut farming are virtually non-existent. Overall, the total number of farms has steadily decreased over time, with 95 farms remaining, being ¾ of its size since 2006.

Table 6.2-1 Farming Statistics by Municipality Classified by NAICs Group

	RM of Aberdeen No. 373				RM of Dundurn No. 314				RM of Touchwood No. 248			
Farms Classified by NAICS Group	2006	2011	2016	2021	2006	2011	2016	2021	2006	2011	2016	2021
Cattle Ranching and Farming	14%	9%	10%	8%	34%	28%	33%	28%	27%	23%	28%	27%
Hog and Pig Farming	2%	1%	0%	2%	0%	0%	0%	0%	2%	0%	0%	0%
Poultry and Egg Production	1%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Sheep and Goat Farming	1%	0%	0%	1%	0%	1%	0%	2%	1%	1%	0%	0%
Other Animal Production	11%	13%	9%	11%	15%	14%	6%	5%	4%	5%	6%	1%
Oilseed and Grain Farming	64%	64%	66%	65%	38%	33%	39%	45%	62%	59%	52%	53%
Vegetable and Melon Farming	0%	0%	3%	0%	0%	3%	0%	1%	0%	0%	0%	0%
Fruit and Tree-Nut Farming	1%	1%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Greenhouse, Nursery, and Floriculture Production	1%	1%	0%	0%	5%	0%	3%	1%	0%	0%	0%	0%
Other Crop Farming	5%	12%	10%	11%	9%	20%	20%	16%	5%	15%	14%	19%

(Statistics Canada , 2022)

6.2.3 Population Dynamics

As discussed above, these three municipalities: Aberdeen No.373, Dundurn No. 314, and Touchwood No. 248, will be analysed as agricultural gentrification case studies. In this portion of the data synthesis and analysis review, their population dynamics will be explored to understand the nature of gentrification within the respective agricultural locale. Within the rural gentrification narrative, population dynamics can be viewed as a telling indicator of change, either by an influx of migrants (age plays a contextual role) or through the process of depopulation, each being a gauge of community displacement. These three municipalities were chosen because they demonstrated rapid growth within the last two census periods relative to their historical growth patterns. A time frame of nearly 3 decades was selected because it represents the succession of at least one generation, being thus one metric to measure the temporal aspects of gentrification.

Lastly, the compound annual growth rate was determined for each rural municipality's population to further enhance the data analysis of the farm sales, and farm operator demographics.

Rural Municipality of Aberdeen No. 373

In Aberdeen No. 373, compared to the average rural municipality in Saskatchewan its population is twice as large. And in nearly 3 decades, from 1996-2021, its population has grown to twice its size, seeing significant growth since 2011, growing larger at each successive census report. The biggest rate of change occurred between 2011 and 2016, when the population increased by 300 persons each census period, being roughly 62 to 91 personally annually between 2011-2016, increasing over time. To put that into perspective, in the average rural municipality, between the same period of 2011-2016, approximately 22 to 8 persons decreased over time. Furthermore, the CAGR for Aberdeen is 3%, which means that every 5 years, the population has grown by 3% roughly.

Rural Municipality of Dundurn No. 314

In Dundurn No. 314, compared to the average rural municipality in Saskatchewan, the current population is three times larger. Its population in nearly the last three decades is roughly four times its size in 1996. Between 2011 and 2016, the population increased significantly. In 2011, there was an approximately 82% rate of change, with a 109% rate of change the following census period in 2016, which means that in 2016, the population doubled. To put this into perspective, between 2011 and 2016, 129 to 314 persons annually. Between that same time frame, around 22 to 8 persons were counted. Furthermore, the CAGR of Dundurn is 5%, the most of the three municipalities, being almost 10 times that of the average.

Rural Municipality of Touchwood No. 248

Touchwood No. 248, since 1996, the population decreased gradually over time, losing a little more each census period till 2011, as can be seen in Table 6.2-2. In 2011, the population increased at a rate of 28.46%. Annually, from 2011 to 216, roughly 19 persons were migrating to Touchwood, between that same time frame, around 22 to 8 persons were migrating. Also, the population is currently, 373 persons, which is a third of the population in the average rural municipality of 710 persons.

Moreover, the rate of change, which measures how quickly something changes, was much faster than the average rural municipality, despite having the lowest population among the three municipalities, and lower than the average rural municipality. Comparing the three case studies, it becomes clear that despite each municipality having the highest rate of change in 2016 among all the municipalities in Saskatchewan, their pattern of growth is very different. Dundurn No. 314 has been classified as the fastest-growing municipality in Saskatchewan, as its population has quadrupled in the nearly the last 3 decades. Aberdeen No. 373, has the second highest rate of change since 2016, being able to double its population in nearly 30 years. Touchwood No. 248's population has had the third highest rate of change in the same period, but the population has in fact decreased, being lower than what it was in 1996.

In other words, despite these three rural municipalities demonstrating the most change within their population out of all the rural municipalities in Saskatchewan, they have had the most growth.

Table 6.2-2 Population Dynamics: Average Rural Saskatchewan Municipality compared to Aberdeen, Dundurn, and Touchwood

	AVG. Sask. Rural Municipality		Aberdeen No. 373		Dundurn No. 314		Touchwood No. 248	
Year	Population	Rate of Change Percentage	Population	Rate of Change	Population	Rate of Change	Population	Rate of Change
1996	780.78	-6.25%	**758**	**-4%**	**555**	**2%**	**413**	**14%**
2001	758.19	-6.30%	**816**	-8%	**562**	-1%	**346**	16%
2006	725.00	-8.02%	**765**	6%	**632**	-12%	**387**	-12%
2011	724.70	-2.87%	**1016**	-33%	**1148**	-82%	**267**	31%
2016	737.80	-0.23%	**1379**	-36%	**2404**	-109%	**343**	-28%
2021	744.40	-1.44%	**1461**	-6%	**2101**	13%	**373**	-9%
CAGR	-0.19%		14%		5%		-0.41%	

6.2.4 Farmland Prices

Over the 25-year period, from 1996-2021, the price of farmland is assessed and explored between the three municipalities, with the intent of determining the trends in farmland prices relative to the amount of farmland sold, and its assessed value. Farmland prices are used as an indicator of farmland activity, being an indirect measure of land value.

RM Aberdeen No. 373

For over a decade since 1996, the price per acre of farmland has remained under $500 per acre, roughly doubling every five years, peaking at almost $3000 per acre. In contrast, the total number of acres has shifted considerably, starting at 40,000 acres in 1996, gradually peaking in 2007 at 20,000 acres, and dropping sharply the following year to approximately 10,000 acres and staying under 15,000 acres for the next 10 years. The compound annual growth rate was calculated to determine the rate of decline over the following census periods. It was determined that the annual amount of farmland decreased over a rate of -2% every census period. A closer look at farmland prices in Figure 5-3, demonstrates that the price of farmland in contrast with the total amount of farmland sold is increasing gradually. demonstrated visually by the exponential trendline in Figure 5-3, the CAGR for the price of farmland is 9%.

RM Dundurn No. 314

In Dundurn, the price per acre of farmland since 1996, only increased dramatically in 2015, before the spike, the price remained below $500 per acre. In contrast, the amount of farmland sold moves in periodic cycles of 10 years, with a CAGR of 10%.

This means that for the entire period of 25 years, the price of farmland grew by only 10%. The rising price of farmland coincides with the amount of farmland sold. Each peak in the number of farms sold mirrors the price of farmland. However, Table 4.3-2 demonstrates that the amount of farmland is gradually decreasing, at a CAGR of -3 %.

RM Touchwood No. 218

The total amount of farmland sold in Touchwood over the 25-year period has decreased. The CAGR of the total farmland sold is -0.57%. This contrasts with the rise in the price of farmland. Since 1996, the price of farmland started at $2 million, with incremental rises, the highest peak occurred in 2010 at $10 million. The CAGR for the total amount of farmland sold annually is 17%. As the price of farmland increases by roughly 17% annually, the number of acres decreases by only 0.57%. Despite the slow rate of growth in the number of acres sold annually, the gradual price increase suggests a great demand for farmland that is either largely still plentiful or controlled sale of purchase.

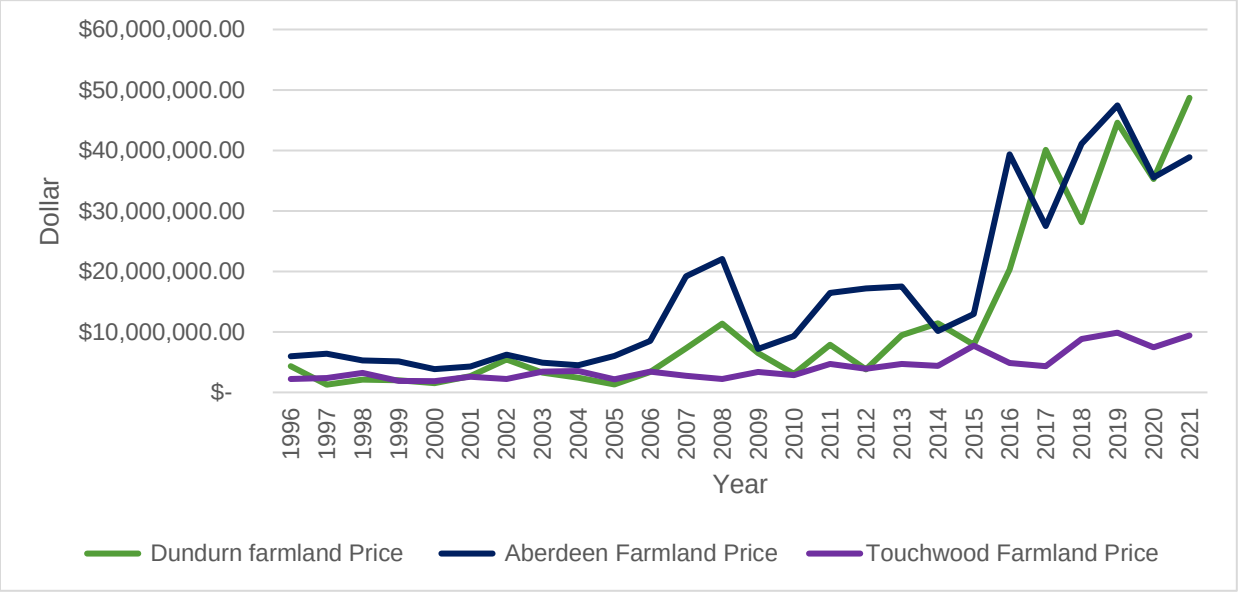

Figure 6.2-1 Case Study Comparison of Farmland Prices

Figure 6.2-1 demonstrates the rise of farmland prices in comparison to each other. On a large scale, it becomes clearer the level of growth between the three municipalities. Dundurn has had the largest compound annual growth rate at 26%, while also having the most expensive farmland, with the sharpest increase in 2015. Aberdeen has had the largest variability, with the most peaks and valleys, the most notable peak occurring in 2019. Both Dundurn and Aberdeen have seen a significant rise in farmland prices in 2015. The compound annual growth rate for the price of farmland in Aberdeen is only 9%. Touchwood by comparison to both Aberdeen and Dundurn has had the least amount of growth concerning the price of farmland, with a CAGR of 17%.

6.2.5 Ratio Study

Ratio studies are performed to explore the relationship between the assessed value and the price of the property (Alan Dornfest, 2023). In the case of exploring the relationship between the assessed value of the farmland and the price of farmland, ratio studies were completed for the entirety of the 25-year period. In Table 6.2-3, the assessed value is compared to the value of farmland, with farmland prices having a value of one. A common thread amongst all the case studies is that the municipal land assessment value is 3-4 times more than the respective farmland price.

The gradual decrease in the municipal land assessment value is a trend that continues at varying paces amongst the three case studies. Table 6.2-3 demonstrates this trend, comparing the municipalities for the entire 25-year period. Touchwood has the widest gap between the two variables, with the municipal land assessment value being 4-5 times more than the price of farmland. Compared with the other municipalities, Dundurn had the earliest case of the municipal land assessment value being on par with the farmland price. Starting in 2008 it was 1.01:1, while for Aberdeen, at that same time, it was 1.74:1, and for Touchwood, it was 4.17:1.

Table 6.2-3 Case Study Ratio Studies

Year	RM Aberdeen No. 373	RM Dundurn No. 314	RM Touchwood No. 248
1996	3.66:1	3.65:1	4.26:1
1997	3.53:1	4.7:1	5.1:1
1998	3.51:1	1.75:1	5.25:1
1999	4.2:1	3.97:1	5.58:1
2000	4.46:1	2.44:1	6.08:1
2001	3.66:1	2.69:1	6.36:1
2002	3.91:1	3.44:1	5.93:1
2003	3.6:1	2.93:1	5.24:1
2004	5.41:1	3.33:1	4.28:1
2005	4.06:1	5.37:1	4.94:1
2006	3.84:1	4.94:1	4.77:1
2007	2.11:1	1.71:1	4.65:1
2008	1.74:1	1.01:1	4.17:1
2009	2.09:1	1.38:1	3.99:1
2010	1.95:1	1.45:1	3.41:1
2011	1.49:1	1:01	2.31:1
2012	1.96:1	1.25:1	3.21:1
2013	1.15:1	1.32:1	1.41:1
2014	1.39:1	0.98:1	1.79:1
2015	1.19:1	0.88:1	1.37:1
2016	1.07:1	1.06:1	1.78:1
2017	1.38:1	1.2:1	1.88:1

2018	1.05:1	1.28:1	1.13:1
2019	0.81:1	0.79:1	0.8:1
2020	1.09:1	1.18:1	1.16:1
2021	0.9:1	0.91:1	1.3:1

6.3 Analysis

Farm Operator and Farmland Statistics

Multifunctionality as an emerging concept represents a paradigm shift in agri-food and rural development. Marsden and Sonnino (2008) articulate three different paradigms that multifunctional landscapes exist, each a mixture of commodity and non-commodity uses of rural environments. The current state of Saskatchewan's agricultural sector resembles the first conception of multifunctional landscapes: the agro-industrial paradigm. The agro-industrial paradigm is oriented around a neo-liberal way of thinking, symptomatic of the post-Fordism transition (Potter & Tilzey, 2005). This neoliberal regime of market productivism rationalizes the agro-industrial sector, intending to maximize its productive output, driven by the power of industrial agricultural science and technology, and farmers in rural communities (Wilson & Burton, 2015). The combination of agricultural and non-agricultural activities creates an environment where productivity or rather the productive use of the land defines the farmer's relationship to the land as largely super productivist. This relationship is made manifest in the confluence of factors such as the trend of ageing farmers, farmland consolidation, and the increase in farmland and buildings value evidenced by the current state of Saskatchewan's agricultural sector.

The logic of scale and specialization forms the basis for the agro-industrial hypothesis that underpins the state of Saskatchewan's agricultural sector. The productivist monofunctionality of this paradigm harkens to its earlier industrialist roots whereby a productivist approach to farming was valued more for its capacity to increase one's agricultural production than the benefits of multifunctional farming (Marsden & Sonnino, 2008). The manifestation of super-productivism is a defining characteristic of Saskatchewan's agricultural sector characterized by globalization, intensification, and profit maximization. Halfacree (2007) articulates the notion of super-productivism as a form of post-productivism where the traditional representation of the land as a purely productive resource is tied to the maximization of profit.

Paradoxically, within the agro-industrialized framework, there remain farmers who attempt to supplement their income through other farm-related activities. The practice of pluriactivity is one aspect of the agro-industrial paradigm that farmers have adopted as a survival strategy in the face of a dynamic commodity market (Marsden & Sonnino, 2008). In rural communities experiencing gentrification, pluriactivity occurs where farm operators attempt to generate additional or supplementary income from on-farm and/or off-farm income sources(Sutherland, 2012) such as hobby farms or operating petting zoos. Pluriactivity can be separated into two categories: industrial pluriactivity and wage-earning pluriactivity.

Industrial pluriactivity refers to individuals who are managing a business or are self-employed in multiple business ventures or enterprises. Wage earning pluriactivity refers to those who are both running a business or self-employed while earning an income as a wage earner (Eikeland, 1999). Engaging in farming oriented towards pluriactivity can be viewed as farming that is not geared towards the production of agricultural commodities, however, within the agro-industrial paradigm, farm operations oriented predominately around productivist monofunctional farming are rewarded when applying the logic of scale and specialization inherent within the paradigm. The rising case of farmland consolidation is one of the identifying markers of this model. Theoretically, by having a larger farm, the potential for productivity increases.

Intuitively one can suppose that the larger the farm, the greater the productive output, thus ensuring the farm's survival, however, the mechanics behind this assumption do not occur organically. In essence, 'families are gaining their livelihood from wages and the land'. Within the narrative of the agro-industrial paradigm, the adoption of pluriactivity amongst farm operators of marginal or "inefficient" agricultural operations as a survival strategy does not belie the notion that pluriactivity has become a norm in North America (Bessant, 2006). The increasing instances of pluriactivity are intermixed amongst those that postulate the fate of family farming within an agro-industrial paradigm.

Within the paradigm, there is a presumptive notion that large commercial farm operations are better equipped to capitalize upon efficiencies of scale, hastening the demise of smaller farm operations-albeit much of this discourse is founded upon Marx's writings on "the economic law of motion of modern society" (Bessant, 2006). The current state of Saskatchewan's agricultural sector very much follows this notion that farming under capitalism is an agricultural enterprise that craftily and carefully employs the logic of "survival of the fittest"- the "fittest" being the most profitable.

Regional Farmland Production Analysis

Taking a quick departure from exploring the agro-industrial paradigm that Saskatchewan's agricultural sector operates under, a review of the farm production data of the three case study municipalities will explore the impact of the agro-industrial paradigm on a smaller more granular scale. A closer look at the statistical data in Table 6.2-1 on the Oilseed and Grain farming section reveal other agricultural farming operations such as soybean, oilseed farming, dry pea and bean, wheat farming, corn and other grain farming were represented in the statistical data. Of those represented, a common thread found among the case studies is the dominance of oilseed farming.

In Aberdeen No. 373, despite the decreasing size of the municipality's agricultural sector, oilseed farming continues to maintain its size relative to the other sectors, commanding 65% of the sector in 2021. In Dundurn No. 314, oilseed farming has grown, accounting for about 45% of the sector in 2021, despite the relative decline of other parts of the agricultural sector, and the sector as a whole in the last decade. Touchwood's agricultural sector has also seen a steady decline in growth, being ¾ of its size in 2006. Oilseed farming in Touchwood, along with other parts of the sector has gradually decreased, however, it is the largest part of the town's agricultural sector, commanding 53% in 2021.

Secondly, captured in Table 6.2-1 is the emergence of other forms of crop farming growing in size over the last decade. Within the category of "Other Crop Farming", hay farming, tobacco farming, fruit and vegetable combination farming, maple syrup and products production, and all other miscellaneous crop farming are represented in the statistical data. Hay farming was the largest farming operation found across all case studies. In Aberdeen, hay farming has in fact doubled in size in the last decade, commanding 11% in 2021.

Hay farming in Dundurn has also almost doubled, representing 16% of the municipality's agricultural sector. In Touchwood, hay farming accounted for 19% of the municipality's agricultural sector in 2021, four times its size since 2006. Furthermore, hay farming has grown in the last recent years; in conjunction with oilseed farming, and cattle ranch farming, the other agricultural sectors are relatively minor in size across all case studies.

However, it should be noted that despite changes to the farm types suggesting a change in farming activity, they could also be impacted by a shift in commodity prices. Moreover, the extent to which each municipality's agricultural sector develops relates to the movement of various factors such as the agricultural resource capacity, commodity markets and demographic shifts in farm operators. In relation to the agro-industrialist paradigm in Saskatchewan, the size of the oilseed farming sector reflects its historical dominance in the province and its economic and productive value. Moreover, the emergence of hay farming within a dynamic commodity market suggests that farm operators can capitalize on commodity prices for hay. In short, the agricultural sector in Saskatchewan can be described as 'competitive productivism by gradually being unsubsidized, highly productive agriculture, thereby embodying a neoliberal market logic.

Farmland prices, Ground Rent, and Rent Gap

In the three municipalities presented above, farmland prices are being examined as an indicator of agricultural gentrification. In establishing the narrative of agricultural gentrification, farmland prices indirectly demonstrate the nature of the municipality's agricultural activity through the determination of the land's productive value. The productive value of the land is determined by the land's ability to generate a financial profit (Saskatchewan, 2017). To properly understand the nature of agricultural gentrification, the notion of ground rent is explored. Farmland and any investments poured into the farm building and equipment become commodities under a capitalist framework, and as such private property rights apply, granting near 'monopoly control' over the commodities in question to the owner (N. Smith, 1979). Ground rent then is the rent paid by the tenants leasing the land. If ground rent is the rent made by landowners from the use of their land by tenants, then the capitalized ground rent is the rent that is realized by the landowner, given the present use of the land (N. Smith, 1979). In the case of farmers who own the land, ground rent is realized when the farmland is sold, reflected in the farmland sale price. To determine the capitalized ground rent, the relationship between the farmland price and value must be explored in the following equation. The equation shown here is adapted from the original equation postulated by Neil Smith in *Toward a Theory of Gentrification: A Back to the City by Capital, not People* (1979).

Farmland sale price = farmland value + capitalized ground rent

The formula rearranged to solve for the capitalized ground rent as the unknown variable is presented as the following:

Capitalized Ground Rent = Farmland Sale Price – Farmland Value

The potential ground rent is defined as the amount that could be gained under the land's 'highest and best use' (N. Smith, 1979). The disparity between the potential ground rent and the capitalized ground rent is therefore the rent gap under the present land use (Darling, 2005; N. Smith, 1979). The rent gap demonstrates the potential for gentrification to occur within the urban landscape (Slater, 2011). Within the context of agricultural gentrification, farmland typically appreciates in value and does not require continual investments to maintain its value, unlike buildings and farm equipment (N. Smith, 1979; Sutherland, 2012). Gentrification within the agricultural locale of rural communities occurs when in-migrants buy their way into leisure-oriented farming practices and lifestyles through the consumption of agricultural-related activities to experience a form of rural living, such as operating a hobby farm or even barnyard conversions, or forms of pluriactivity where gentrification occurs from actors within the community (Sutherland, 2012).

Moreover, the determination of a land's productive capacity to generate ground rent reflects its ability to be "gentrified", being thus an indirect measure of the rate of gentrification. A 'rent gap' is produced through the process of converting farming buildings, as there is a greater potential to make more money converting these farm buildings into buildings for residential or commercial use as opposed to continuing to farm in a 'productive' capacity (Sutherland, 2019). A similar argument is being made concerning farmland prices, and the productive capacity to generate ground rent. In theory, the generation of land rent would facilitate localized transformations within the agrarian locale of local communities, as the shift in capital investments would precipitate in areas with the greatest rent disparity (N. Smith, 1979). This theory is driven by the assumption that competition driven by profit further influences capital accumulation (Darling, 2005) and capital moves where the rate of return is the highest (N. Smith, 1979). Darling (2005) asserts that within rural and urban spaces, the same process of gentrification is occurring where profit maximization by a class of gentrifiers, the only difference in the determination of "undercapitalized" ground rent.

Saskatchewan Farmland Prices Market Drivers

Smith (1996) theorizes that gentrification is likely produced mainly by capital devalorization, which reduces the amount of ground rent that can be realized. Within the agricultural locale, factors such as technological change occurring in the farming industry, pressures resulting from farmland consolidation, the growing demand for urban land, the nature and availability of government subsidies (Veeman et al., 1993), and the rate of inflation (Just & Miranowski, 1993) affect the price of farmland. The price of farmland could be viewed as a means of measuring the productive value of farmland. Saskatchewan's agricultural sector being a productivist-oriented industry competes on the global market and is subject to all these pressures to remain very productive.

This stands to reason that factors that contribute to the rise of farmland prices could potentially create a rent gap within the agricultural locale. The capitalized rent gap is thus a measure of the farmland sale price minus the farmland value. However, in this case, various determinants decrease the value of property in urban areas which precipitates a loss in value, resulting in a low price (N. Smith, 1979), which similarly occurs in rural communities where different expressions of multifunctionality that prioritizes pluriactivity and diversification of farm activities, within an agro-industrialist framework, the value of farmland operates differently.

The ideology of the free market perpetuates the desire for a productivist form of agriculture through capitalism whereby intensification, profit-driven production, and industrial mechanization are made manifest. Presented below are other factors that drive up the value of farmland, most of which are exogenous factors that alter how the value of farmland currently operates, ultimately having an impact on the price of farmland.

Low-Interest Rates

The FCC reports that due to the monetary policy actions taken by the Bank of Canada (BOC) at the beginning of the COVID-19 pandemic in 2019, the average business borrowing costs have reached very low levels to support the Canadian financial system and encourage the economy (Farm Credit Canada, 2022) as can be seen in Figure 6.3-1. The rate of inflation, in Canada and globally is driven largely by rising commodity prices for energy and food. Currently, the rate of inflation is 7.7% for May, the highest it's been in recent decades, despite the BOC's target of 2% (Bank of Canada, n.d.). As it concerns farmland prices, low-interest rates mean that individuals or corporations interested in purchasing farmland have very lost borrowing costs, creating the perfect opportunity to drive up the demand for farmland parcels. However, with the rising inflation, farmland prices may be affected.

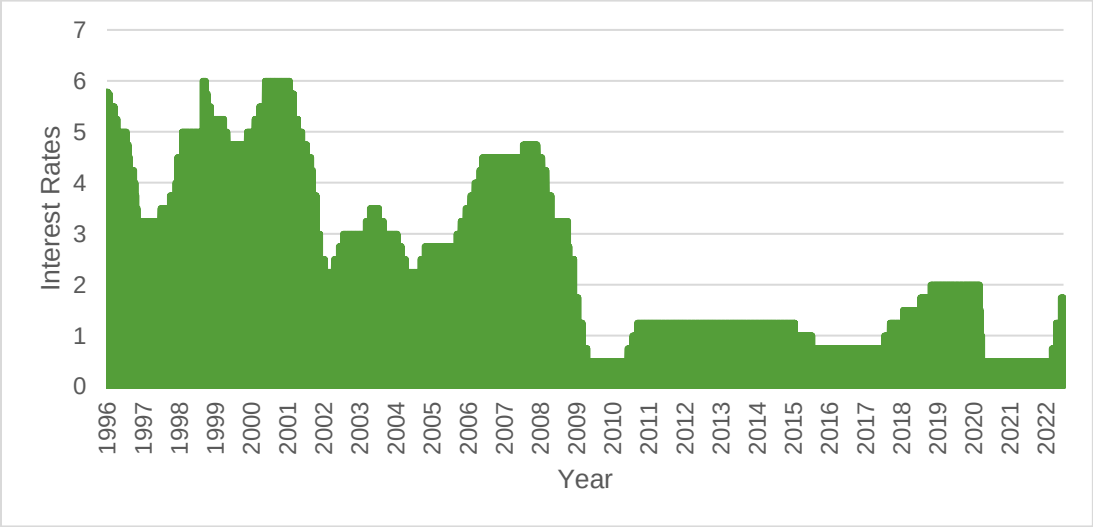

Figure 6.3-1 Canadian Interest Rates (1996-2022)

(WOWA, 2023)

Farmland Ownership Shift

Land ownership in Canada cannot be adequately discussed without addressing the nature of Canada's role in the displacement and dispossession of Indigenous peoples by settlers as an emerging colonial power. The introduction of the Dominion Lands Act of 1872 legitimized the commodification of land in the West, signaling a major shift in the role and utilization of land as a crucial determinant of economic and political power (Desmarais et al., 2015). By enabling the commodification of land through private ownership via the Dominion Lands Act (1872), the resettlement of the Canadian Parries established a relationship between farmland ownership and economic prosperity through an institutionalized patriarchal ownership pattern. The Dominion Lands Act established a dominant view of landownership within Canada, particularly in the West that was later made manifest in the creation of the 1974 Farm Security Act (Desmarais et al., 2015).

The Farm Security Act of 1974 helped solidify the relationship between the security of land tenure and land ownership, restricting farmland ownership to Saskatchewan residents and corporations, favouring the social investment, interests, and welfare of those in Saskatchewan over outside competition (Desmarais et al., 2015). What the 1974 statute did not do was prevent the ongoing phenomena of farmland consolidation where farmland ownership concentrates in the hands of the few. The provisions within the Farm Security Act did not have any restrictions on the size of the farm, or how much can be obtained by whom (Desmarais et al., 2015).

Following the 2002 amendment of the Farm Security Act, the nature of farmland acquisitions as means of capital investments was prioritized over its capacity to safeguard the social welfare of a community. Operating as a catalyst for increased farmland acquisitions, the 2002 amendment further followed the trend led by neighbouring jurisdictions to remove ownership restrictions within their province in a bid to remain economically competitive on an increasingly global stage (Desmarais et al., 2015). Pertaining to the long-term viability of Saskatchewan's rural communities, development within the livestock industry and the agricultural value-added sector, the Farm Security Amendment Act was amended to address these concerns and provide new opportunities for Saskatchewan residents. With a stable legal and political environment, modern industrialized agricultural infrastructure and a large supply of high-quality farmland, Saskatchewan is an attractive place for farmland investments (Desmarais et al., 2015). These factors coupled with a liberalized market; farmland values will continue to climb.

Neoliberal Reorientation of Agricultural Policy in Saskatchewan

Since the 1980s there has been an enormous reorientation of agricultural policy and market structures that favoured a neoliberal approach towards economic growth within the agricultural sector; providing the perfect condition for the phenomenon of large-scale farmland acquisitions occurring across Canada today (Desmarais et al., 2015).

With the privatization of grain handling cooperatives once owned by farm operators such as the Saskatchewan Wheat Pool (SWP) which became a publicly traded company in 1996, farmers have witnessed the diminished capacity of the WSP's advocacy role on agricultural policies that affected the preservation of their livelihood, both economically and politically (Kathy Lang, n.d.).

Coupled with the adoption of free trade agreements such as the North American Free Trade Agreement (NAFTA) and the World Trade Organization (WTO) which influenced Canada's access to international markets, and the removal of grain transportation subsidies such as the Crow Benefit (Desmarais et al., 2015) which was repealed under the introduction of the Western Grain Transportation Payment program by the 1993 Jean Chretien's Liberal government as a one-time payment to prairie farmers (Ken Norrie & T.D Regehr, 2006), the economic condition's farms (Desmarais et al., 2015) that supported farmers gradually eroded. Additionally, cuts to essential farm programs, farm income stabilization program overhauls and the removal of single-desk barley and wheat marketing via the Canadian Wheat Board also contributed reorganization of Canada's agricultural sector in the West (Desmarais et al., 2015). The neoliberal reorientation of agricultural policy that emerged in the 1980s contributed to the process of farmland consolidation that has occurred as fewer family farmers operate in the industry (Desmarais et al., 2015).

Ratio Study and Municipal Assessment Values

With the definition of rent gap explored in some detail, the ratio study will be used as a means of demonstrating empirically the gap between the farmland value as assessed by the municipality, and the farmland sale price as determined by the free market. A ratio study is an annual statistical sales-based study designed to evaluate the assessment performance of comparable properties (Alan Dornfest, 2023). It is a study of the relationship between the property's market value and its appraised value (Deliverance Bougie & Barry Wood, 2021). Properties are first organized together, where the ratios are analyzed to determine how the assessments reflect the market value of the property (Wood & Bougie, 2021). The ratio study is utilized as a means of determining the accuracy and efficacy of the mass appraisal models used (Alan Dornfest, 2023). They are a demonstration of how close the assessment value of the assessed property is to its sale price and the overall university of that assessment (Deliverance Bougie & Barry Wood, 2021).

$$\textit{Ratio Study} = Assessed\ value \div Sales\ Price$$

In this instance, it will be used as an indirect measure of the rent gap by using the appraised value of the farmland to its market value as the difference between the farmland's actual value and its potential value at its 'best use'. Using the ratio study as a correlative equivalent in determining the potential rent gap in farmland value, one will be able to measure the rise of farmland prices in relation to their assessed value. Moreover, the disparity between the two values could be seen as an indicator of possible gentrification. The gap between the price of farmland and the value of farmland, whereby the price of farmland is greater, demonstrates indirectly the attempt to capitalize on the decreased value of farmland in rural communities.

In Table 6.3-1, farmland prices are indicated with the value of one (on the right), compared to the assessed value of the land. In Aberdeen, the assessed value of farmland was 3-4 times more than the price of farmland between 1996 to 2008, after which the assessed value remains relatively stable, being twice as much as the price of farmland in the preceding years. In short, the assessed value of farmland continued to decrease over the 25-year period, being on par with the price of farmland. The decreasing assessed value of farmland relative to the price of farmland in Aberdeen demonstrates that the assessed value over time continues to decline as the price of farmland increases. With the decreasing value of farmland relative to the price of farmland, the emerging rent gap suggests that gentrification may be occurring in the agricultural locale.

In Dundurn, from 1996 to 2008, there was some variability in the range of values for the assessed land value, peaking at 5.37 times more than the price of farmland. Since 2008, the assessed value of farmland does not go above 1.48 times the farmland price, demonstrating that the assessed value of farmland continues to be lower than the price of farmland. Moreover, increased farmland prices in Dundurn relative to its assessed value demonstrates the shrinking gap between the two variables, also suggesting agricultural gentrification. Touchwood has maintained the gap between the farmland prices and the assessed value of farmland, however gradual decrease. Between 1996 and 2008, the assessed value of farmland was 6-4 times more than the price of farmland. After 2008, the assessed farmland value decreases.

Table 6.3-1 Three Case Studies Rent Gap

Year	*Aberdeen*	*Dundurn*	*Touchwood*
1996	3.66:1	3.65:1	4.26:1
1997	3.53:1	4.7:1	5.1:1
1998	3.51:1	1.75:1	5.25:1
1999	4.2:1	3.97:1	5.58:1
2000	4.46:1	2.44:1	6.08:1
2001	3.66:1	2.69:1	6.36:1
2002	3.91:1	3.44:1	5.93:1
2003	3.6:1	2.93:1	5.24:1
2004	5.41:1	3.33:1	4.28:1
2005	4.06:1	5.37:1	4.94:1
2006	3.84:1	4.94:1	4.77:1
2007	2.11:1	1.71:1	4.65:1
2008	1.74:1	1.01:1	4.17:1
2009	2.09:1	1.38:1	3.99:1
2010	1.95:1	1.45:1	3.41:1
2011	1.49:1	1:01	2.31:1
2012	1.96:1	1.25:1	3.21:1
2013	1.15:1	1.32:1	1.41:1
2014	1.39:1	0.98:1	1.79:1
2015	1.19:1	0.88:1	1.37:1
2016	1.07:1	1.06:1	1.78:1
2017	1.38:1	1.2:1	1.88:1
2018	1.05:1	1.28:1	1.13:1
2019	0.81:1	0.79:1	0.8:1
2020	1.09:1	1.18:1	1.16:1
2021	0.9:1	0.91:1	1.3:1

6.4 Synthesis and Analysis Conclusion

The argument is thus if agricultural gentrification defines our relationship with the land used for agricultural (re)production, then the agro-industrial paradigm is the ultimate manifestation of this phenomenon, whereby the productivist-oriented form of farming is seen as the best method to determine the highest and best use of the land.

The rent gap represented in the ratio studies of three municipalities reflects the disparity between the farmland value and the farmland sale price. The determination of the highest and best use of this land is its ability to be productive. Within the agro-industrial paradigm, the value of land can be derived from its capacity to be “productive”. Utilizing Sutherland’s conception of land value within the context of agricultural gentrification, the productive value of the land is determined through its ability to generate ground rent (Sutherland, 2019). The price of farmland then would function as an indirect measure of its ability to generate ground rent through its productive capacity under a productivist-oriented agricultural sector. This is a departure from Sutherland’s thesis that was focused on the rise of pluriactivity as the measure of the lands’ ability to generate ground rent. Within Saskatchewan’s agricultural sector, the force of super-productivism is a feature of the agro-industrialist paradigm.

Using the three case studies, rural gentrification indicators were utilized as a landscape assessment tool in rural communities in Saskatchewan. The three indicators used to assess the nature of agricultural gentrification are as follows: (1) population growth; (2) increasing population age; (3) an increasing price of farmland, with a period of 25 years as a temporal factor. In determining the nature of agricultural gentrification, these rural gentrification indicators were assessed within the context of Saskatchewan’s agricultural sector. The rationale is that evidence that the population is growing, with growth in certain age cohorts, and rising farmland prices would demonstrate the emergence of a new class of consumers and producers attracted to the rural communities. However, the data collected using the three case studies demonstrated a different expression of rural development. Trends witnessed in Saskatchewan’s agricultural sector indicate it to be super-productivist. Within Saskatchewan’s agricultural sector, there is a rise in farmland consolidation and the rising age of farmers that demographically are shrinking. Coupled with land use legislation and economic development policies that encourage agricultural intensification, growing outside investment from neighbouring provinces and foreign investors, and restructured federal financing programs and subsidies, super-productivism attempts to maintain Canada’s agricultural sector as highly competitive on the global stage.

Within the three case studies, varying degrees of population growth demonstrated evidence of rural gentrification. Each municipality identified demonstrated the highest rate of change in their population over the 25-year period in the last census report, with significant growth in the 24-44 age cohort compared to the average rural municipality in Saskatchewan. The phenomenon of rising farmland prices was indirectly measured by determining the ground rent via ratio studies performed for each municipality. Ground rent is determined by using the same technique used for ratio studies, exploring the disparity between the price of farmland and its assessed value (Alan Dornfest, 2023). The instances of the price of farmland being less than or equal to its assessed value increase over time in each municipality, especially within the last 5 years. Within the context of super-productivism, the emerging class of consumers and producers are presumed to be farm operators who are focused on increasing efficiency, albeit there are examples of pluriactivity as well.

7. Conclusion

Contributions to Agricultural Gentrification Research

Within agricultural gentrification research, the determination of the farmland's productive capacity by using Neil Smith's understanding of the Rent Gap theory to gauge the land's multifunctionality is my contribution to Agricultural Gentrification research. Sutherland made a connection with the farmland's productive value and the emerging pluriactivity that occurs. Exploring the personal choices of the farm operators to participate in forms of pluriactivity and the shifting land use management practices. Identifying the nature of Saskatchewan's agricultural sector within the post-productivist paradigm, and how the farmland prices and its assessed municipal value are affected by agricultural gentrification is part of my larger contribution to rural gentrification research.

Contributions to Rural Planning and Land Use Management

From a larger, more abstract perspective, my contribution to rural planning and land use management comes from the determination of the performance of the farmland's productive value by using ratio studies as a means of indirectly gauging agricultural gentrification. Within the context of agricultural restructuring, rising farmland prices reflect the shifting value of farmland.

Study Limitations and Priorities for future research

Concerning agricultural gentrification research, limitations were found in research methodology and data sources. The two main primary sources used for this research were Statistics Canada and farmland sales data from the Farm Land Sales Database. The farmland sales data had a rich source of information; however, the classification of soil data was not clear. Clarity was needed to interpret the classification of soil information, to further understand how soil types are related to the municipal land assessment value and farmland price. The data collected from Statistics Canada ranged from farm operator data to financial farmland data. Limitations arose in assessing the data collected from Statistics Canada, which had changed its data collection methods over the 25-year period. The shift in Statistic Canada's data collection methods affected the interpretation of farmland data and farm operator data. From 1996 to 2001, and from 2016 to the present, census data collection methods changed, with different questions added to the survey questionnaire, to the definition of farming and farmland, and a new approach to data collection started. Shifts in data collection methods resulted in challenges to data interpretation as it was difficult to perform an apples-to-apples comparison.

Priorities for future research in agricultural gentrification research point to more research in determining the effect multifunctional transitions are having on rural communities in Canada. Multifunctional landscape transitions occur within a spectrum, further research should be performed to determine the full spectrum of these transitions, and the nature of the relationship between the agricultural sector in Canada, and the rural community that supports it. The phenomenon of agricultural gentrification is an emerging research field that deserves further academic study, particularly as it affects the development of rural communities and their agricultural sector.

Concluding Remarks

My research attempts to fill the theoretical gap that exists between rural landscape dynamics and land use transitions in addressing the nature of rural gentrification in Saskatchewan. The exploration of agricultural gentrification using three case studies in Saskatchewan demonstrated that as farmland prices increased, the value of the land increased, however, the “highest and best use” of the land represented its productive capacity as not significantly changed. By design, Saskatchewan’s agricultural sector operates on a super-productivism model, however, with the restructuring of the agricultural sector, the price of the farmland only leaves it available to increasingly fewer farm operators.

References

Åberg, H. E. (2021). Indicators for Analysing Rural Gentrification for Landscape Assessment. *Innovation in Urban and Regional Planning*, 469–475. https://doi.org/10.1007/978-3-030-68824-0_50

Abrams, J., & Bliss, J. C. (2013). Amenity Landownership, Land Use Change, and the Re-Creation of “Working Landscapes.” *Society and Natural Resources*, *26*(7), 845–859. Scopus. https://doi.org/10.1080/08941920.2012.719587

Ahmed, S., & Jackson-Smith, D. (2019). Impacts of Spatial Patterns of Rural and Exurban Residential Development on Agricultural Trends in the Intermountain West. *SAGE Open*, *9*(3). https://doi.org/10.1177/2158244019871037

Alan Dornfest. (2023). *Idaho Ratio Study Manual*. Idaho State Tax Commision.

Bank of Canada. (n.d.). *Key inflation indicators and the target range*. Bank of Canada. Retrieved April 3, 2023, from https://www.bankofcanada.ca/rates/indicators/key-variables/key-inflation-indicators-and-the-target-range/

Bergmann, H., Dax, T., Hovorka, G., & Thomson, K. J. (2006). Multiplicity and Pluriactivity across Europe- a comparison between Scotland an Austria. *ÖGA Tagungsband*, 1–2.

Bessant, K. C. (2006). A Farm Household Conception of Pluriactivity in Canadian Agriculture. In *The Canadian Review of Sociology and Anthropology* (Vol. 43, p. 51).

Bryson, J., & Wyckoff, W. (2010). Rural gentrification and nature in the Old and New Wests. *Journal of Cultural Geography*, *27*(1), 53–75. Scopus. https://doi.org/10.1080/08873631003593232

Butt, A. (2014). DEVELOPING A TYPOLOGY OF CHANGING MULTI-FUNCTIONAL REGIONS. In *Australasian Journal of Regional Studies* (Vol. 20, Issue 2).

Canada, F. C. (2020). *1985-2019 Historic FCC Farmland Values Repot* (pp. 1–3). https://doi.org/10.3%

Carlberg, J. G. (2002). Effects of ownership restrictions on farmland values in Saskatchewan. *Journal of Agricultural and Applied Economics*, *34*(2), 349–358.

Darling, E. (2005). The city in the country: Wilderness gentrification and the rent gap. *Environment and Planning A*, *37*(6), 1015–1032. Scopus. https://doi.org/10.1068/a37158

Deliverance Bougie & Barry Wood. (2021). *Department of Local Government Finance Ratio Studies*. Ratio Study and Teams Overview, Indiana.

Desmarais, A. A., Qualman, D., Magnan, A., & Wiebe, N. (2015). Land grabbing and land concentration: Mapping changing patterns of farmland ownership in three rural municipalities in Saskatchewan, Canada. *Canadian Food Studies / La Revue Canadienne Des Études Sur l'alimentation*, *2*(1), 16–47. https://doi.org/10.15353/cfs-rcea.v2i1.52

Diekmann, L., Panich, L., & Striplen, C. (2007). Native American Management and the Legacy of Working Landscapes in California. *Rangelands*, *29*(3), 46–50.

Dundurn. (2022). *Welcome to Dundurn*. Rural Municipality of Durndurn No. 314. https://dundurnrm.ca/p/history-of-dundurn

Eikeland, S. (1999). New Rural Pluriactivity? Household Strategies and Rural Renewal in Norway. *Sociologia Ruralis*, *39*(3), 359–376. https://doi.org/10.1111/1467-9523.00113

Farm Credit Canada. (2022). *2021 Farmland Values – Canada's farmland market shows strength amid production challenges*. Farm Credit Canada. https://www.fcc-fac.ca/en/knowledge/economics/2021-farmland-values.html

Farm Credit Canada. (2023). *2022 FCC Farmland Values Report* (FCC Farmland Values Report, p. 25). https://www.fcc-fac.ca/fcc/resources/2022-farmland-values-report-e.pdf

Frank, K. I., & Hibbard, M. (2016). Production, consumption, and protection: Perspectives from North America on the multifunctional transition in rural planning. *International Planning Studies*, *21*(3), 245–260. https://doi.org/10.1080/13563475.2016.1188685

Gkartzios, M., & Scott, M. (2012). Gentrifying the Rural? Planning and Market Processes in Rural Ireland. *International Planning Studies*, *17*(3), 253–276. Scopus. https://doi.org/10.1080/13563475.2012.696476

Glass, R. (1964). *London, Aspects of Change*. MacGibbon & Kee.

Golding, S. A. (2016). Gentrification and Segregated Wealth in Rural America: Home Value Sorting in Destination Counties. *Population Research and Policy Review*, *35*(1), 127–146. Scopus. https://doi.org/10.1007/s11113-015-9374-9

Gosnell, H., & Abrams, J. (2011). Amenity migration: Diverse conceptualizations of drivers, socioeconomic dimensions, and emerging challenges. *GeoJournal*, *76*(4), 303–322. https://www.jstor.org/stable/41308577

Government of Canada, S. C. (2022a, November 28). *Table: 32-10-0047-01- Value per acre of farm land and buildings at July 1*. Statistics Canada. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210004701

Government of Canada, S. C. (2022b, November 28). *Table: 32-10-0050-01-Value of farm capital at July 1 (x 1,000)*. Statistics Canada. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210005001

Government of Canada, S. C. & Brian Biggs. (2019, November 12). *A Statistical Glance at the Recent History of Farm Income*. Statistics Canada. https://www150.statcan.gc.ca/n1/pub/21-004-x/2019001/article/00002-eng.htm

Government of Canada, S. C., Michelle St. Pierre, & Saneliso Mhlanga. (2022, June 15). *Saskatchewan continues to live up to the title of the breadbasket of Canada*. Statistics Canada. https://www150.statcan.gc.ca/n1/pub/96-325-x/2021001/article/00008-eng.htm

Government of Saskatchewan. (n.d.-a). *Agriculture Sector Overview*. Government of Saskatchewan. Retrieved April 5, 2023, from https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/agribusiness-farmers-and-ranchers/saskatchewan-import-and-export-information/resources-for-importers/agriculture-sector-overview

Government of Saskatchewan. (n.d.-b). *Comparable Land Sales—User Agreement (Land Sales Database)*. Government of Saskatchewan. Retrieved April 3, 2023, from https://farmlandreports.saskatchewan.ca/Identity/Account/PolicyDisclaimer

Government of Saskatchewan. (n.d.-c). *Farm Ownership*. Government of Saskatchewan. Retrieved April 5, 2023, from https://www.saskatchewan.ca/government/government-structure/boards-commissions-and-agencies/farm-land-security-board-and-farm-ownership/farm-ownership

Government of Saskatchewan. (n.d.-d). *Learn more about using the database | Farm Land Security Board and Farm Ownership*. Government of Saskatchewan. Retrieved April 3, 2023, from https://www.saskatchewan.ca/government/government-structure/boards-commissions-and-agencies/farm-land-security-board-and-farm-ownership/learn-more-about-using-the-database

Government of Saskatchewan. (n.d.-e). *Saskatchewan's Growth Plan 2020-2030* (p. 4). file:///C:/Users/Richard%20Grant/Downloads/Saskatchewan%2527s%252BGrowth%252BPlan%252BExecutive%252BSummary.pdf

Government of Saskatchewan. (n.d.-f). *The Planning and Development Act, 2007*. Government of Saskatchewan. Retrieved April 5, 2023, from https://www.saskatchewan.ca/government/municipal-administration/community-planning-land-use-and-development/planning-and-development-act

Government of Saskatchewan. (n.d.-g). *Value-Added Strategy and Unit Overview*. Government of Saskatchewan. Retrieved April 6, 2023, from

https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/agribusiness-farmers-and-ranchers/value-added-processing-in-saskatchewan-agriculture/value-added-strategy-and-unit-overview

The Statements of Provincial Interest Regulations, § Chapter P-13.2 Reg 3 (2012).

Government of Saskatchewan. (2015, December 21). *New Laws for Farmland Ownership Proclaimed*. Government of Saskatchewan. https://www.saskatchewan.ca/government/news-and-media/2015/december/21/farmland-ownership-laws

Government of Saskatchewan. (2022). *Comparable Land Sales*. Government of Saskatchewan. https://farmlandreports.saskatchewan.ca/

Guimond, L., & Simard, M. (2010). Gentrification and neo-rural populations in the Québec countryside: Representations of various actors. *Journal of Rural Studies*, *26*(4), 449–464. Scopus. https://doi.org/10.1016/j.jrurstud.2010.06.002

Halfacree, K. (2018). From Ambridge to the world? Class returns to rural population geographies. *Dialogues in Human Geography*, *8*(1), 26–30. Scopus. https://doi.org/10.1177/2043820617752003

Hamnett, C. (1991). The blind men and the elephant: The explanation of gentrification. *Transactions - Institute of British Geographers*, *16*(2), 173–189. https://doi.org/10.2307/622612

Hines, J. D. (2012). The post-industrial regime of production/consumption and the rural gentrification of the New West Archipelago. *Antipode*, *44*(1), 74–97. Scopus. https://doi.org/10.1111/j.1467-8330.2011.00843.x

Hoggart, K., & Paniagua, A. (2001). What rural restructuring? *Journal of Rural Studies*, *17*(1), 41–62. https://doi.org/10.1016/S0743-0167(00)00036-X

Huntsinger, L., & Sayre, N. F. (2007). Introduction: The Working Landscapes Special Issue. *Rangelands*, *29*(3), 2–4.

Just, R. E., & Miranowski, J. A. (1993). Understanding Farmland Price Changes. *American Journal of Agricultural Economics*, *75*(1), 156–168. https://doi.org/10.2307/1242964

Kathy Lang. (n.d.). Saskatchewan Wheat Pool. In *The Encyclopedia of Saskatchewan*. University of Saskatchewan. Retrieved April 3, 2023, from https://esask.uregina.ca/entry/saskatchewan_wheat_pool.jsp

Ken Norrie & T.D Regehr. (2006). *Crow's Nest Pass Agreement* [Encyclopedia]. The Canadian Encyclopedia. https://www.thecanadianencyclopedia.ca/en/article/crows-nest-pass-agreement

Kizos, T. (2010). Multifunctionality of farm households in Greece. *Norsk Geografisk Tidsskrift*, *64*(2), 105–116. https://doi.org/10.1080/00291951.2010.481137

Knickel, K., Ashkenazy, A., Chebach, T. C., & Parrot, N. (2017). Agricultural modernization and sustainable agriculture: Contradictions and complementarities. *International Journal of Agricultural Sustainability*, *15*(5), 575–592. https://doi.org/10.1080/14735903.2017.1373464

Kosenchuk, O., & Shumakova, O. (2020). The Modernization of the Multifunctional Agrarian Sector and Development Outlooks in the Region. *Advances in Social Science, Education and Humanities Research*, *393*, 146–151.

Mamonova, N., & Sutherland, L.-A. (2015). Rural gentrification in Russia: Renegotiating identity, alternative food production and social tensions in the countryside. *Journal of Rural Studies*, *42*, 154–165. Scopus. https://doi.org/10.1016/j.jrurstud.2015.10.008

Marsden, T., & Sonnino, R. (2008). Rural development and the regional state: Denying multifunctional agriculture in the UK. *Journal of Rural Studies*, *24*(4), 422–431. https://doi.org/10.1016/j.jrurstud.2008.04.001

Mendham, E., Gosnell, H., & Curtis, A. (2010). Agricultural Land Ownership Change Ownership Change and Natural Resource Management: Comparing Australian and US Case Studies. In G. W. Luck, R. Black, & D. Race (Eds.), *Demographic Change in Australia's Rural Landscapes: Implications for Society and the Environment* (pp. 153–187). Springer Netherlands. https://doi.org/10.1007/978-90-481-9654-8_7

Ndi, F. A. (2017). Land grabbing, local contestation, and the struggle for economic gain: Insights from Nguti village, South West Cameroon. *SAGE Open*, *7*(1). https://doi.org/10.1177/2158244016682997

Nelson, P. B. (2001). Rural restructuring in the American West: Land use, family and class discourses. *Journal of Rural Studies*, *17*(4), 395–407. https://doi.org/10.1016/S0743-0167(01)00002-X

Olson, J. L., & Munroe, D. K. (2012). Natural amenities and rural development in new urban-rural spaces. *Regional Science Policy & Practice*, *4*(4), 355–371. https://doi.org/10.1111/j.1757-7802.2012.01077.x

Oncescu, J. M. (2015). Rural restructuring: Community stakeholders' perspectives of the impact of a pulp and paper mill closure on community relationships. *Rural Society*, *24*(2), 177–199. https://doi.org/10.1080/10371656.2015.1060719

Peng, J., Hu, X., Qiu, S., Hu, na, Meersmans, J., & Liu, Y. (2019). Multifunctional landscapes identification and associated development zoning in mountainous area. *Science of the Total Environment*, *660*, 765–773. https://doi.org/10.1016/j.scitotenv.2019.01.023

Philips, M. (1993). Rural Gentrification and the Processes of Class Colonisation. *Journal of Rural Studies*, *9*(2), 123–140.

Phillips , M. (1993). Rural gentrification and the processes of class colonisation. *Journal of Rural Studies*, *9*(2), 123–140. Scopus. https://doi.org/10.1016/0743-0167(93)90026-G

Phillips , M. (2005). Differential productions of rural gentrification: Illustrations from North and South Norfolk. *Geoforum*, *36*(4), 477–494. https://doi.org/10.1016/j.geoforum.2004.08.001

Phillips , M., Duer, H. B. M., & Smith, D. (2020). Idyllic ruralities, displacement and changing forms of gentrification in rural hertfordshire, England. *Documents d'Analisi Geografica*, *66*(2), 259–287. Scopus. https://doi.org/10.5565/rev/dag.604

Phillips , M., Smith, D., Brooking, H., & Duer, M. (2021). Re-placing displacement in gentrification studies: Temporality and multi-dimensionality in rural gentrification displacement. *Geoforum*, *118*, 66–82. Scopus. https://doi.org/10.1016/j.geoforum.2020.12.003

Phillips , M., & Smith, D. P. (2018). Comparative approaches to gentrification: Lessons from the rural. *Dialogues in Human Geography*, *8*(1), 3–25. https://doi.org/10.1177/2043820617752009

Pilgeram, R. (2019). "How Much Does Property Cost Up There?": Exploring the Relationship between Women, Sustainable Farming, and Rural Gentrification in the US. *Society and Natural Resources*, *32*(8), 911–927. Scopus. https://doi.org/10.1080/08941920.2018.1530818

Potter, C., & Tilzey, M. (2005). Agricultural policy discourses in the European post-Fordist transition: Neoliberalism, neomercantilism and multifunctionality. *Progress in Human Geography*, *29*(5), 581–600. https://doi.org/10.1191/0309132505ph569oa

Richard, F., Dellier, J., & Tommasi, G. (2014). Migration, environment and rural gentrification in the Limousin mountains. *Revue de Geographie Alpine*, *102*(3). Scopus. https://doi.org/10.4000/rga.2561

RM of Aberdeen No 373. (n.d.). *A Brief RM History*. RM of Aberdeen No 373. Retrieved April 3, 2023, from http://www.rmofaberdeen.ca/History.html

Roland W. Scholz; (Ed.). (2002). Types of Case Studies. In *Embedded Case Study Methods* (pp. 9–15). SAGE Publications Inc.

Sakarya, İ., & Başaran Uysal, A. (2018). Rural gentrification in the North Aegean Countryside (Turkey). *Iconarp International Journal Architecture and Planning*, *6*(1), 99–125. https://doi.org/10.15320/ICONARP.2018.40

Saskatchewan Assessment Management Agency. (n.d.). *Methods of Assessment*. SAMA. Retrieved April 3, 2023, from https://www.sama.sk.ca/property-owner-services/understanding-assessment/methods-assessment

Saskatchewan, G. of. (2017). *Establishing the Value of Land*. Government of Saskatchewan.

Schümann, H., Knierim, A., Bellingrath-Kimura, S. D., & Kernecker, M. (2022). Working with or against multifunctional landscapes? A case study of land users' local knowledge of grassland–forest transition zones in northeastern Germany. *Ecology and Society*, *27*(1). https://doi.org/10.5751/ES-12970-270138

Shaw, K. (2008). Gentrification: What it is, why it is, and what can be done about it. *Geography Compass*, *2*(5), 1697–1728. https://doi.org/10.1111/j.1749-8198.2008.00156.x

Slater, T. (2011). Gentrification of the city. *The New Blackwell Companion to the City*, *1*.

Smith, D. P., & Phillips , D. A. (2001). Socio-cultural representations of greentrified Pennine rurality. *Journal of Rural Studies*, *17*(4), 457–469. Scopus. https://doi.org/10.1016/S0743-0167(01)00014-6

Smith, N. (1979). Toward a Theory of Gentrification A Back to the City by Capital, not People. *Journal of American Planning Association*, *45*(4), 538–548. https://doi.org/10.1080/01944367908977002

Smith, N. (1996). *The new urban frontier: Gentrification and the revanchist city* (pp. 1–246). Taylor & Francis e-Library.

Solana-Solana, M. (2010). Rural gentrification in Catalonia, Spain: A case study of migration, social change and conflicts in the Empordanet area. *Geoforum*, *41*(3), 508–517.

Spataru, A., Faggian, R., & Docking, A. (2020). Principles of multifunctional agriculture for supporting agriculture in metropolitan peri-urban areas: The case of Greater Melbourne, Australia. *Journal of Rural Studies*, *74*, 34–44. https://doi.org/10.1016/j.jrurstud.2019.11.009

Statistics Canada. (1998a, October 29). *Aberdeen No. 373 RM - 1996 Census of Population—Catalogue no. 95F0181XDB96001*. Statistics Canada. https://www12.statcan.gc.ca/english/census96/data/profiles/Rp-eng.cfm?TABID=2&LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=203840&GK=0&GRP=1&PID=35782&PRID=0&PTYPE=3&S=0&SHOWALL=0&SUB=0&Temporal=1996&THEME=34&VID=0&VNAMEE=&VNAMEF=&D1=0&D2=0&D3=0&D4=0&D5=0&D6=0

Statistics Canada. (1998b, October 29). *Dundurn No. 314 RM - 1996 Census of Population—Catalogue no. 95F0181XDB96001*. Statistics Canada. https://www12.statcan.gc.ca/english/census96/data/profiles/Rp-eng.cfm?TABID=2&LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=203653&GK=0&GRP=1&PID=35782&PRID=0&PTYPE=3&S=0&SHOWALL=0&SUB=0&Temporal=1996&THEME=34&VID=0&VNAMEE=&VNAMEF=&D1=0&D2=0&D3=0&D4=0&D5=0&D6=0

Statistics Canada. (1998c, October 29). *Touchwood No. 248 RM -1996 Census of Population—Catalogue no. 95F0181XDB96001*. Statistics Canada. https://www12.statcan.gc.ca/english/census96/data/profiles/Rp-eng.cfm?TABID=2&LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=203576&GK=0&GRP=1&PID=35782&PRID=0&PTYPE=3&S=0&SHOWALL=0&SUB=0&Temporal=1996&THEME=34&VID=0&VNAMEE=&VNAMEF=&D1=0&D2=0&D3=0&D4=0&D5=0&D6=0

Statistics Canada. (2001). *Community Hightlights for Aberdeen No. 373*. Statistics Canada. https://www12.statcan.gc.ca/english/Profil01/CP01/Details/Page.cfm?Lang=E&Geo1=CSD&Code1=4715018&Geo2=PR&Code2=47&Data=Count&SearchText=&SearchType=Begins&SearchPR=01&B1=All&Custom=

Statistics Canada. (2002a). *2001 Community Profiles- Dundurn No. 314*. Statistics Canada. https://www12.statcan.gc.ca/english/Profil01/CP01/Details/Page.cfm?Lang=E&Geo1=CSD&Code1=4711061&Geo2=PR&Code2=47&Data=Count&SearchText=&SearchType=Begins&SearchPR=01&B1=All&Custom=

Statistics Canada. (2002b). *2001 Community Profiles—Touchwood No. 248*. Statistics Canada. https://www12.statcan.gc.ca/english/Profil01/CP01/Details/Page.cfm?Lang=E&Geo1=CSD&Code1=4710014&Geo2=PR&Code2=47&Data=Count&SearchText=&SearchType=Begins&SearchPR=01&B1=All&Custom=

Statistics Canada. (2006). *Farm Data and Farm Operator Data, Catalogue no. 95-629-XWE-Census of Agriculture*. Statistics Canada.

Statistics Canada. (2007a, March 13). *Aberdeen No. 373, Saskatchewan (Code4715018) (table). 2006 Community Profiles. 2006 Census. Catalogue no. 92-591-XWE*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/details/page.cfm?Lang=E&Geo1=CSD&Code1=4715018&Geo2=PR&Code2=47&Data=Count&SearchText=Aberdeen%20No.%20373&SearchType=Begins&SearchPR=01&B1=All&Custom=

Statistics Canada. (2007b, March 13). *Dundurn No. 314, Saskatchewan (Code4711061) (table). 2006 Community Profiles. 2006 Census. Catalogue no. 92-591-XWE*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/details/page.cfm?Lang=E&Geo1=CSD&Code1=4711061&Geo2=PR&Code2=47&Data=Count&SearchText=Dundurn%20No.%20314&SearchType=Begins&SearchPR=01&B1=All&Custom=

Statistics Canada. (2007c, March 13). *Touchwood No. 248, Saskatchewan (Code4710014) (table). 2006 Community Profiles—Catalogue no. 92-591-XWE*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/details/page.cfm?Lang=E&Geo1=CSD&Code1=4710014&Geo2=PR&Code2=47&Data=Count&SearchText=Touchwood%20No.%20248&SearchType=Begins&SearchPR=01&B1=All&Custom=

Statistics Canada. (2012a, February 8). *Touchwood No. 248, Saskatchewan (Code 4710014) and Canada (Code 01) (table)- Census Profile. 2011 Census. Catalogue no. 98-316-XWE*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=4710014&Geo2=PR&Code2=01&Data=Count&SearchText=Touchwood%20No.%20248&SearchType=Begins&SearchPR=01&B1=All&Custom=&TABID=1

Statistics Canada. (2012b, October 24). *Aberdeen No. 373, Saskatchewan (Code 4715018) and Canada (Code 01) (table). Census Profile. 2011 Census. Catalogue no. 98-316-XWE*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=4715018&Geo2=PR&Code2=01&Data=Count&SearchText=Aberdeen%20%20No.%20373&SearchType=Begins&SearchPR=01&B1=All&Custom=&TABID=1

Statistics Canada. (2012c, October 24). *Dundurn No. 314, Saskatchewan (Code 4711061) and Canada (Code 01) (table). Census Profile. 2011 Census-Catalogue no. 98-316-XWE*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=4711061&Geo2=PR&Code2=01&Data=Count&SearchText=Dundurn%20No.%20314&SearchType=Begins&SearchPR=01&B1=All&Custom=&TABID=1

Statistics Canada. (2012d, December 10). *Table: 32-10-0153-01-Land use, Census of Agriculture historical data*. Statistics Canada. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210015301

Statistics Canada. (2012e, December 10). *Table: 32-10-0156-01-Farms classified by total farm area, Census of Agriculture historical data*. Statistics Canada. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210015601

Statistics Canada. (2012f, December 10). *Table: 32-10-0157-01-Farms classified by total gross farm receipts, 2015 constant dollars, Census of Agriculture historical data, 1981 to 2016*. Statistics Canada. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210015701

Statistics Canada. (2014, November 24). *Table: 32-10-0403-01- Farms classified by farm type, Census of Agriculture, 2011 and 2016, inactive*. Statistics Canada. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210040301

Statistics Canada. (2017a, February 8). *Aberdeen No. 373, Rural municipality [Census subdivision], Saskatchewan and Division No. 15, Census division [Census division], Saskatchewan, Catalogue no. 98-316-X2016001*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=4715018&Geo2=CD&Code2=4715&SearchText=Aberdeen%20%20No.%20373&SearchType=Begins&SearchPR=01&B1=All&TABID=1&type=0

Statistics Canada. (2017b, February 8). *Touchwood No. 248, Rural municipality [Census subdivision], Saskatchewan and Division No. 10, Census division [Census division], Saskatchewan,Statistics Canada Catalogue no. 98-316-X2016001*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=4710014&Geo2=CD&Code2=4710&SearchText=Touchwood%20No.%20248&SearchType=Begins&SearchPR=01&B1=All&TABID=1&type=0

Statistics Canada. (2017c, November 29). *Dundurn No. 314, RM [Census subdivision], Saskatchewan and Division No. 11, CDR [Census division], Saskatchewan (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=4711061&Geo2=CD&Code2=4711&SearchText=Dundurn%20No.%20314&SearchType=Begins&SearchPR=01&B1=All&TABID=1&type=0

Statistics Canada. (2022a, January 24). *NAICS 2022 Version 1.0—1129—Other animal production*. Statistics Canada.

https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1369825&CVD=1369949&CPV=1129&CST=27012022&CLV=3&MLV=5

Statistics Canada. (2022b, May 11). *Table: 32-10-0230-01- Characteristics of farm operators, Census of Agriculture historical data*. Statistics Canada. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210023001

Statistics Canada. (2022c, May 11). *Table: 32-10-0231-01-Farms classified by farm type*. Statistics Canada. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210023101

Statistics Canada. (2022d, November 28). *Table: 32-10-0052-01- Net farm income*. Statistics Canada. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210005201

Statistics Canada. (2023a, March 29). *Aberdeen No. 373, Rural municipality (RM) Saskatchewan [Census subdivision] Census Profile. 2021 Census of Population. Catalogue no. 98-316-X2021001*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Aberdeen%20%20No%2E%20373&DGUIDlist=2021A00054715018&GENDERlist=1,2,3&STATISTIClist=1,4&HEADERlist=0

Statistics Canada. (2023b, March 29). *Dundurn No. 314, Rural municipality (RM) Saskatchewan [Census subdivision] Census Profile 2021 Census of Population. Catalogue no. 98-316-X2021001*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Dundurn%20No%2E%20314&DGUIDlist=2021A00054711061&GENDERlist=1,2,3&STATISTIClist=1,4&HEADERlist=0

Statistics Canada. (2023c, March 29). *Touchwood No. 248, Rural municipality (RM) [Census subdivision], Saskatchewan , Census Profile , 2021 Census of Population. - Catalogue no. 98-316-X2021001*. Statistics Canada. https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Touchwood%20No%2E%20248&DGUIDlist=2021A00054710014&GENDERlist=1,2,3&STATISTIClist=1,4&HEADERlist=0

Statistics Canada & Agriculture and Agri-Food Canada. (2000). *Understanding Measurements of Farm Income* (No.21-525-XIE; p. 16). https://www150.statcan.gc.ca/n1/en/pub/21-525-x/21-525-x2000001-eng.pdf?st=3sIR2Pqi

Stockdale, A. (2010). The diverse geographies of rural gentrification in Scotland. *Journal of Rural Studies*, *26*(1), 31–40. Scopus. https://doi.org/10.1016/j.jrurstud.2009.04.001

Sutherland, L.-A. (2012). Return of the gentleman farmer?: Conceptualising gentrification in UK agriculture. *Journal of Rural Studies*, *28*(4), 568–576. Scopus. https://doi.org/10.1016/j.jrurstud.2012.05.001

Sutherland, L.-A. (2019). Agriculture and inequalities: Gentrification in a Scottish parish. *Journal of Rural Studies*, *68*, 240–250. Scopus. https://doi.org/10.1016/j.jrurstud.2018.09.009

Uzun, C. N. (2003). The impact of urban renewal and gentrification on urban fabric: Three cases in Turkey. *Tijdschrift Voor Economische En Sociale Geografie*, *94*(3), 363–375. https://doi.org/10.1111/1467-9663.00263

Veeman, M. M., Dong, X. Y., & Veeman, T. S. (1993). Price Behavior of Canadian Farmland. *Canadian Journal of Agricultural Economics/Revue Canadienne d'agroeconomie*, *41*(2), 197–208. https://doi.org/10.1111/j.1744-7976.1993.tb03743.x

Wall Street Oasis. (n.d.). *Compound Growth Rate—Overview, How to Calculate, Example*. Wall Street Oasis. Retrieved April 6, 2023, from https://www.wallstreetoasis.com/resources/skills/finance/compound-growth-rate

Wilson, G. A., & Burton, R. J. F. (2015). "Neo-productivist" agriculture: Spatio-temporal versus structuralist perspectives. *Journal of Rural Studies*, *38*, 52–64. https://doi.org/10.1016/j.jrurstud.2015.02.003

WOWA. (2023). *Bank of Canada Interest Rate 1935-2022 & 2022 Forecast*. WOWA. https://wowa.ca/bank-of-canada-interest-rate

Zhang, Z., & He, S. (2018). Gentrification-induced displacement. *Handbook of Gentrification Studies*, 134–152. https://www.elgaronline.com/display/edcoll/9781785361739/9781785361739.00018.xml

Appendix

A. **Appendix A -** Rural Gentrification Indicators

Åberg (2021) comprised a list of the current indicators for rural gentrification that can be utilized for landscape assessment.

Rural Gentrification Indicators

Type of Change	**Indicator**	**Metric**	**Source**
Population	Growing population (recovering)	Number of inhabitants overtime	Mamonova et al. (2015), Solana-Solana (2010)
Population	Increasing ex-urban in-migrants	% of inhabitants that have moved from an urban address in the last (x) years	Stockdale (2010), Smith et al. (2019), Sutherland (2019)
Population	Increasing number of second homes	Address without electoral register divided by residential addresses = number of second homes in percent	Smith et al. (2019)
Demographic	Younger couples with children move to area	Average age over time	Pistre (2010), Solana-Solana (2010), Mamonova and Sutherland (2015)
Demographic	Increasing age	Average age over time	Stockdale (2010), Sutherland (2019)
Demographic	Higher education among gentrifiers	Degree level among new inhabitants	Stockdale (2010), Pistre (2010)
Economic	Higher income among gentrifiers	Average income over time in area	Stockdale (2010)
Economic	Higher pension among gentrifiers	Average pension over time in area	Pistre (2010)
Residential	Increasing housing prices	Comparison of housing prices over time	Carrosio et al. (2019), Stockdale (2010)
Residential	Affordable housing becomes rare	Housing prices in comparison to local average income	Solana-Solana (2010), Carrosio et al. (2019)
Residential	Local population can no longer afford to stay in the area	% of out-migrants of local population	Solana-Solana (2010), Carrosio et al. (2019)
Residential	Increasing amount of residential properties	Number of approved building permits in comparison to total number of properties	Stockdale (2010), Gonzáleza (2016)

Residential	Refurbishment of existing houses	% of newly refurbished houses	Stockdale (2010), Solana-Solana (2010), Richard et al. (2014)
Residential	Conversion of agricultural property to residential property	Number of refurbished agricultural property	Stockdale (2010)
Residential	Refurbishment of houses in a "traditional" style	Number of refurbished properties in traditional style	Solana-Solana (2010), Richard et al. (2014)
Residential	Increasing number of properties that do not match local building traditions	Number of newly built property	Smith et al. (2019), Gonzáleza (2016)
Residential	Conversion of agricultural property for leisure for tourism purposes	Number of properties that has been converted from agricultural property to leisure	Stockdale (2010), Sutherland (2019)
Residential	Change around residential properties e.g., gardens	Number of refurbished gardens	Solana-Solana (2010), Richard et al (2014)
Residential	Increasing consumption of water and energy	% of consumption over time	Carrosio et al. (2019)