Exploring the Impacts of Canadian Agrihoods as a Form of Development-Supported Agriculture

by

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Abstract

Exploring the Impacts of Canadian Agrihoods as a Form of Development-Supported Agriculture

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Agrihoods, an innovative blend of agriculture and neighbourhood development, are gaining traction in real estate markets. They are presented by developers as a solution to the escalating loss of farmland and interest in local, sustainable living. This research investigates the multifaceted impacts of agrihoods on agriculture and community development within Canada. Utilizing a mixed methods approach, including case studies and surveys, the research examines agrihoods through the lens of development-supported agriculture as a potential tool for supporting agriculture, fostering community engagement, and facilitating sustainable living practices. Findings reveal varied degrees to farmland preservation, enhancing local food systems, and sustainable development. The study highlights the need for adaptive planning frameworks and policy considerations to guide the development of agrihoods. It underscores the importance of critical analysis of agrihood proposals, while acknowledging the potential for redefining residential development, emphasizing a harmonious integration of agricultural and residential land use.

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List Abbreviations

ALR	Agricultural Land Reserve
CAHRC	Canadian Agriculture Human Resource Council
CEA	Conservation Easement Agreement
CSA	Community Supported Agriculture
OCP	Official Community Plan
YES	Yarrow Ecovillage Society

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1 Introduction

There is a growing trend in the real estate development market that looks to address consumers' rising interest in local food and sustainable living (Hauser, 2019; Norris, 2018). The characteristics of these particular development projects include integrating residential neighbourhoods with food producing landscapes, particularly by having an agricultural operation designed into the planned community (Norris, 2018). While this concept is not new to community design and development, recent agrarian-based master-planned communities are being designed and marketed using a newly coined term: *agrihoods* (Breger, 2020; Hauser, 2019; Norris, 2018; Watson, 2020).

It is believed that over 200 agrihoods are either developed or in the planning stages in the United States and their development is anticipated to continue to rise in the years to come (Birkby, 2016; Norris, 2018). The trend has not grown as rapidly in Canada when compared to the United States. The first community to use the term *agrihood* in Ontario was Drayton Ridge, which only began development in 2019, but three additional agrihood developments, Rangeview, Thornbury Acres and Kinsland, have since been proposed (Castlepoint Numa, 2024; Rangeview, 2024; Oskar Group, 2023).

Society's concern for sustainability and attention to the overall protection of our environment has rapidly taken the masses (Hauser, 2019). This societal shift has included a growing interest and awareness in fresh, locally produced foods (Norris, 2018). Despite this, Canada is experiencing an escalating loss of farmland, having lost over 13 million acres between 2001 and 2021 (Statistics Canada, 2022b). This is exacerbated by urban expansion and fueled by a housing affordability crisis, which poses a significant threat to food security and access to local produce (Caldwell et al., 2022; Fawcett-Atkinson, 2022; Harris, 2023; National Farmers Union, n.d.; Perrin et al., 2020; Syed, 2023). Perrin et al. (2020) point to these challenges leading to anomalous alliances among environmentalists and agriculturalists. Agrihoods may demonstrate the emergence of developers as a new atypical partner to these alliances.

Rising farmland prices, pose another concern for the future viability of Canadian agriculture. In 2021, Canadian farmland prices rose on average by 8.3% and another 12.8% in 2022 with the most notable increases occurring in Ontario, where prices rose 22.2% in 2021 and 19.4% in 2022 (FCC, 2023). Increasingly, farmers are having to bid against investors to purchase farmland and with prices increasingly untethered from the productive capacity of the land. As a result, new and young farmers are most excluded from ownership (Qualman et al., 2018). Investor purchases are both a cause and an effect of rising land prices. This has implications for the future sustainability of farms, since much of a farmer's capital is consumed by the cost of land, leaving little room for investment in new business enterprises, such as food processing. While renting land is a cheaper alternative, a survey conducted by the Ontario Federation of Agriculture suggests that farmers are more likely to make investments to improve farmland when they own it (Ontario Federation of Agriculture, 2015).

Agrihoods have been presented as a model for communities attempting to adapt to the myriad of mounting challenges facing the agricultural sector and community development (Norris, 2018). They are believed to hold solutions to issues such as preserving farmland, environmental protection, housing, sustainable lifestyles, talent retention, improve the mental health of farmers, increasing interest in agricultural careers and generally, higher rates of social health and wellbeing (Albright, 2014; Donnally, 2015; Dunn, 2017; Norris, 2018). From a marketing perspective, they are an appealing community for the growing interest in the local food movement, providing access to farmland, backyard gardens, and green spaces, while also offering a sense of community (Albright, 2014; Donnally, 2015; Hoak, 2016; Lidz, 2015; Loudenback, 2017; Murphy, 2014; Trapasso, 2017).

With so much promise, there needs to be a greater understanding about how these unique and trending communities are able to achieve the multitude of benefits identified above. Given the variety of land uses involved in an agrihood, a closer analysis of these communities is needed to understand the opportunities for innovation

in land-use planning and community development projects that can address those challenges facing our society today and for future generations. There is, however, a limited amount of academic literature or empirical evidence that confirms these claims or even a consensus on what defines an agrihood.

1.1 Research Goals, Question, and Objectives

The main goal of this research is to answer the following question: What are the various impacts an agrihood can have on agriculture and communities? By answering this question, the research seeks to understand whether agrihoods can be a tool to support agriculture and if so, how provinces and municipalities across Canada can better prepare for these intentional communities within contemporary planning paradigms.

In addressing the research question, this research will also address the following research objectives:

- Objective 1 – Discover the beneficial and adverse impacts of agrihood developments
- Objective 2 – Understand how planning frameworks impact the development of agrihoods
- Objective 3 – Determine which planning provisions should be utilized to achieve desired impacts
- Objective 4 – Discover mitigation strategies to minimize the potential conflicts associated with these diverse land uses

Overall, this research is designed with the intention to provide considerations for policy makers, municipalities, planners and the agricultural sector to address agrihood development proposals. This may prove useful with the growing pressure to develop farmland throughout Canada and challenge widely accepted knowledge regarding the incompatibility of residential and agriculture land uses.

1.2 Organization of Thesis

This thesis is organized into six chapters. Chapter one introduces the growing trend of agrihoods and explores the rationale for their growing popularity, both from the perspective of developers and homebuyers. Chapter two provides an in-depth literature review providing background information, defining characteristics, opportunities and challenges related to agrihoods, while exploring historical community developments and social movements of similar nature. The literature review also identifies research gaps, which help position and validate the importance of this study.

Chapter three describes the methodology utilized within this study. A description of mixed methods and case study research design is provided, as well as the quantitative survey and qualitative research methods employed. Chapter four presents the findings of the study and is organized first presenting the case studies, second presenting a case study synthesis, and finally looking at the results of the residential survey.

Chapter five presents a discussion of the research findings providing an interpretation of the data. The findings are discussed in the context of trends that emerged for development-supported agriculture, and considers the existing literature and land use planning policies and processes used to permit the development of the agrihoods. Chapter six concludes the thesis, providing a summary of the findings, identifies areas for future research, and offers recommendations for municipalities, developers and residents when considering the pursuit of agrihood communities.

2 Literature Review

2.1 Introduction

The real estate development market is increasingly focusing on agrihoods, a concept blending residential neighbourhoods with agricultural operations. The literature review will explore the various impacts that agrihoods are stated to have. It will first consider the term *agrihood* and how it is applied. As the report by Birkby (2016) illustrates, the term *agrihood* has been used synonymously with the term *development-supported agriculture*. Meanwhile, as is explored further in the literature review, both terms are inconsistently defined.

This is a critical consideration since there are over 200 agrihoods either developed or in the planning stages in the United States (Birkby, 2016; Norris, 2018). In the context of the United States, the rapid expansion of agrihoods may intersect with constitutional protections. Specifically, the United States differs from Canada with the strong emphasis on private property rights playing a pivotal role in shaping land use and management (Bender, 1989). Understanding these constitutional underpinnings is essential, as they define the landscape for development for agrihoods in the U.S., providing a stark contrast to Canadian regulatory environments where such explicit property rights are absent.

Contemporary Canadian land use planning frameworks intend to separate agriculture and residential land uses in order to foster a sustainable agriculture industry and mitigate conflicts (AFRI, n.d.; Daniels, 1997; MAFF, 2020; MMAH, 2020). Given an agrihood's integration of these two land uses, the literature review will explore the opportunities and challenges expressed with developing and maintaining agrihoods. Primary consideration is given to the integration of the two land uses and will explore whether conflict mitigation strategies are recommended.

The concept of food production integrated into community design is not a new approach to development (Arnold, 1971; Breger, 2020; Hauser, 2019). Nor is the

concept of people desiring to move closer to a location that enables more daily interaction with the land (Boyce, 2013; Pawlick, 2009; Walker-Bolton, 2012). The literature review will consider historical instances of similar development projects and movements associated with local food and reconnecting with land. Agrihoods are also considered with an economic lens and as such, literature is reviewed for their economic impact.

The literature review begins with an exploration of common characteristics associated with agrihoods, followed by a review of the opportunities and challenges extrapolated from the literature. Agrihoods are then compared to similar community development trends throughout time and are juxtaposed with movements that appear to intersect with the characteristics of agrihoods. This approach provides opportunities to explore similarly characterized communities in the research but self-identify using different nomenclature. Finally, a section is dedicated to the potential use of agrihoods as an economic development tool for communities.

2.2 Defining Development-supported Agriculture

Development-supported agriculture is an emerging term primarily used within the real estate development industry and as such has, not been widely explored nor has it been clearly defined within academic literature. The earliest use of the term was by Jensen (2009), who sought to differentiated between *community supported agriculture*, which he says focuses on connecting local farms to nearby residents in a business partnership, and *development supported agriculture,* which establishes the relationship between development and agriculture.

Birkby (2019), Siegner, Sowerwine, and Acey (2018), and Wallace (2014) each refer to development-supported agriculture and present these communities as being synonymous with agrihoods. Neither attempt to provide a definition but Wallace (2014) does stipulate that development-supported agriculture communities differ from traditional suburban development because of their commitment to preserve some rural land for agriculture.

The use of *development-supported agriculture* by Weiler (2023), a development company, describes it as a model they used to develop Harvest, a master-planned community located in Chatham County, North Carolina, with farming as the primary amenity. Weiler (2023) provides the greatest details explaining what they mean by development-supported agriculture, which is “establishing a sustainable model of land use for the urban-rural interface that preserves farming culture, agricultural land, and community-based food security.” Weiler (2023) states that to achieve this they will use revenues from the real estate development project to create an incubator program that establishes a new generation of small-scale organic farmers. This interpretation provides the most significant framework for considering the intended relationship between development and agriculture when referring to development-supported agriculture. The efficacy of preserving farming culture, agricultural land and community-based food security at Harvest is currently unknown; nonetheless, this provides a framework for considering agrihoods as a form of development-supported agriculture. This is an important consideration when reviewing agrihoods because as Birkby (2016) states, agrihoods are a model for development-supported agriculture and yet Birkby is elusive in depicting how precisely agrihood development projects are assuring any support for agriculture nor does he define development-supported agriculture in his literature.

The existing grey and academic literature lack clear guidance on establishing commitments for farmland preservation to affirm development-supported agriculture communities. This includes both quantifying protected farmland and the nature of such commitments that would guarantee long-term protection. Furthermore, the literature does not specify what actors are responsible for driving the details of such commitments, whether it be developers, municipalities, or community stakeholders. Given these gaps, there is a pressing need for more research on development-supported agriculture to address the use of the term and comparison with agrihoods.

2.3 Defining an Agrihood

The term *agrihood* is a relatively new term in the real estate and development markets (Birkby, 2016) and began to appear in national media in 2014 (Breger, 2020). An abandoned trademark submission from that time states the agrihood as,

> real estate development services, namely, the development of master planned communities, planning and development of residential communities, including houses and apartments, commercial properties, industrial buildings, office and retail space; real estate development services for residential communities and commercial properties; construction planning (Justia Trademark, 2020, para. 1).

Notably missing from this definition is any reference to food production or agriculture. Birkby (2016) more succinctly summarizes an agrihood as a style of development-supported agriculture. The more widely referred to definition by the Urban Land Institute notes that agrihoods are “single-family, multi-family, or mixed-use communities with a working farm or community garden as a focus” (Norris, 2018, p. 3). The working farm or community garden is seen as an amenity provided to its residents creating a mutually beneficial relationship. There is, however, little research or literature suggesting the variety and extent to which farm activities, features, and other characteristics are intentionally planned and accessible to residents in order to achieve the perceived benefits of an agrihood that have been expressed in the literature.

The literature also varies when considering agrihoods as either urban-, rural-, or mixed-development projects. Birkby (2016) addresses agrihoods as when homes are built around a working farm in a rural or urban setting. Meanwhile Hauser (2019) describes agrihoods as an emerging trend in urban settings, typically considered urban agriculture. The broader context of this style of planned community could be categorized into a rural or urban stream of planning but the literature suggests that for these communities to be attractive for residents and support sustainable development, agrihoods in rural settings must adopt urban planning practices, such as higher density and stronger integrated community planning (Birkby, 2016). This type of planned

community requires the adoption and integration of both urban and rural planning policies, theories and design.

Agrihoods tend to promote their use of conservation development to preserve farmland and protect the environment (Breger, 2020). For instance, Dunn (2017) discusses how developers can use agrihood models to persuade farmers who are torn between preserving their land and selling it for development. The literature did not offer any prescribed methods of development that would suggest how agrihoods accomplish farmland and environmental preservations. There are various examples, a few explored later in the literature review, of how different agrihoods are attempting to achieve this. The literature lacks comparison of the different methods for efficacy and does not confirms the long-term success of these preservation efforts.

The scale and scope of agrihoods are unique and do not have a universally accepted set of characteristics. However, Birkby (2016) attempts to categorize the various scales of agrihoods as presented in Table 2-1.

Table 2-1 - Categories of agrihood sizes as described by Birkby (2016)

Name	Number of Homes	Agricultural Component
Microhoods	<12	Homes surround a large community garden or small farm
Medium sized	100-1,000	built around farms that have been in the same family for generations, preserving land for production and easement
Largest end	>1,000	hundreds of acres for farm production and land conservation

Name	Number of Homes	Agricultural Component
Infill development	Unspecified	agrihoods in urban spaces

Agricultural and food amenities are a common characteristic for agrihoods. They can vary greatly and can include livestock, orchards, greenhouses, vegetable gardens, vineyards, and row crops (Birkby, 2016; Breger, 2020). The food is then sourced by residents and other neighbouring communities through various outlets including community-supported agriculture (CSA), farm stands, farmer markets, and restaurants, which improve food accessibility for the respective region (Birkby, 2016; Brass, 2019; Hauser, 2019; Norris, 2018). Farms are also described as front facing in the community, which strengthens the connection of the farm, farmer, and community (Brass, 2019). This suggests agrihoods are a means to provide more direct food purchases from farmers, which often represents the sole means for many small farms to earn sufficient profits to sustain their operations (Cekander, 2016).

2.4 Opportunities and Challenges

The following offers a wide range of opportunities and challenges associated with agrihoods that were identified throughout the literature. Many of the opportunities are associated with social, economic, and environmental benefits and are primarily attributed to food production being integrated into the community design.

2.4.1 Opportunities to Connect People with Food

Rowat et al. (2019) describe food as an integral part of our lives, culture and society. According to Norris (2018) and Vidgen and Gallegos (2012), peoples' relationship with food and their food literacy is a determinant of health that is largely shaped by home environments and exposure to the food system.. Additionally, people's engagement within their community can be a determinant for improving various other socioeconomic indicators (Rowat et al., 2019; Vidgen & Gallegos, 2012). The literature supports the notion that if agrihoods are thoughtfully planned to encourage resident

participation in food production, that agrihoods can be a promising intervention that increases people's food literacy and community engagement and therefor, can provide a multitude of socioeconomic and health benefits for its residents (Hauser, 2019.; Norris, 2018).

Several examples in the literature suggest that successful engagement by residents requires ongoing social planning surrounding the food system of the agrihood. Activities mentioned include cooking classes, farm workshops, and farm-to-table community dinners (Donnally, 2015; Dunn, 2017). The literature refers to other farm-based activities and unique experiences, but does not provide further details, examples or suggestions regarding the scope of engagement by residents to achieve these benefits (Breger, 2020; Donnally, 2015; Dunn, 2017; and Hauser, 2019). Brass (2019) reinforces the notion that agrihoods are not just about agriculture, but that they are also about healthy living and suggests that agriculture is simply part of a package of amenities, which also includes trails, parks, and personal gardens.

Direct-to-consumer outlets are seen as having higher quality food; however, these markets are not always the most convenient to access. For agrihoods, the localization of housing around the working farm creates opportunities for both farmers and consumers to engage in the local food supply chain. The high level of convenience to access local food in an agrihood conceivably removes one of the main barriers preventing consumers from accessing CSAs and farmers' markets (Bond et al., 2009; Morgan et al., 2018; Wolf et al., 2005).

The literature also suggests that planned characteristics of an agrihood influences people's awareness and actions related to sustainable and healthy lifestyles. Birkby (2016) explains that agrihoods are designed with planned social engagement that will strengthen residents' environmental awareness and consumer choices. Additionally, residents are more exposed to conversations regarding conserving farmland and environmental issues impacting the preserved natural environment around them (Norris, 2018).

2.4.2 Innovation in Sustainable Living

Hauser (2019) suggests that agrihoods may possess innovations that can help broader society with these issues related to sustainability. For instance, agrihoods allow for sustainable innovations from carbon sequestration, increase shaded areas, improve water efficiency, lower maintenance costs, reduce need for pesticides, and increased opportunities for composting, all while supporting local economies. Some agrihoods also create programs that promote a reduction in food waste and resource conservation, which can play a role in fostering environmental health (Norris, 2018).

Despite there being no articulation of sustainable principles found in the definitions, Hauser (2019) and Norris (2018) suggest these considerations are commonly incorporated in the early planning of agrihoods and have been applied in existing agrihoods through use of renewable energy, reduction of impervious surfaces, front yard landscaping restrictions, dark sky compliance, and the use of efficient building materials.

2.4.3 Housing

Given the nature of agrihoods being a housing development project, they also have an opportunity to address housing-related issues. In an urban context, agrihoods are said to be especially beneficial to communities if they are developed on brownfields or other abandoned lands. This can help communities that are suffering from insufficient housing and could offer affordable housing solutions (Birkby, 2016). There is divisive literature as to whether agrihoods address housing affordability issues given that housing costs in agrihoods are reportedly expensive and above its respective region's median income (Albright, 2014; Breger, 2020; Donnally, 2015; Feldman, 2015; Trapasso, 2017). Feldman (2015) describes how home prices at Bucking Horse, Colorado, sell for above one million United States dollars (USD) and at Willowsford, Virginia, home prices start at around $600,000 USD.

2.4.4 Addressing Challenges Facing Agriculture

Canada's 2021 Census of Agricultural indicates several changes facing the agricultural industry. Over time, farms have been evolving to be larger in size while smaller and mid-sized farms are declining. Farm viability is also a concern as farm inputs and land prices continue to rise (FCC, 2023). Yet, despite the well documented rising cost of food by consumers paid in recent years, prices being paid to farmers remain largely stagnant (Charlebois et al., 2022, 2023; National Farmers Union, 2023).

Barriers to agriculture also exist for new and young farmers, particularly Black, Indigenous, People of Colour, Queer, and women (Fenton, Oke, MacInnes, 2021; Hoffelmeyer, Wypler, Leslie, 2022). Researchers have cited that colonial institutions have maintained inequitable access for racialized people within the agricultural sector and has led to predominantly white, heterosexual family farms, effectively excluding under-represented groups (Cameron, Chilton, & Ghaith, 2021; Linton, 2020a, 2020b; Perry, 2012; Rotz, 2017; Rotz et al., 2019). While these barriers exist, there is an aging population of farmers without succession plans in. Key findings in the *Farmers Wanted* report noted that by 2033, 40% of Canadian farm operators will retire and 66% do not have a succession plan in place, leaving the future of farmland in doubt (Yaghi et al., 2023).

The top five barriers for new farmers to enter agriculture and succeed, included (i) affordability of land ownership, (ii) lack of access to capital/credit/other sources of financing, (iii) low profitability of the agricultural sector (iv) lack of agricultural infrastructure (abattoirs, storage/processing facilities, etc.), and (v) lack of security of demand, markets or distribution channels (Fenton, Oke, MacInnes, 2021; Government of Canada, 2023a). Although the Government of Canada (2023a) is calling for innovations in policy instruments, institutions, and programs to address the key challenges facing Canada's agri-food sector, agrihoods were not found as a possible intervention being explored by federal or provincial governments.

2.4.5 Employment and Skill Development Opportunities

Job opportunities and markets are thought to be created in agrihoods through these highly localized food systems and services (Norris, 2018). Additionally, agrihoods often require paid positions to coordinate engagement opportunities for the residents of the agrihood (Brass, 2019). Norris (2018) identifies ways of doing this through food hubs, kitchen incubators, and culinary education programs. He suggests that this can also reduce inequalities in food literacy by providing shared access to kitchen equipment and distribution networks. Other incubators could also be established through use of shared farm space and equipment that could fuel entrepreneurialism (Dunn, 2017; Norris, 2018).

However, Norris (2018) also indicates the need for upward mobility in the workplace to retain talent. The literature does not indicate any degree to which agrihoods are able to provide that. Hauser (2019) also identified the challenge of ensuring the right expertise is available. This can be particularly challenging given the labour market challenges facing Canadian agriculture where two out of every five agricultural employers could not hire the minimum number of workers they needed in 2022 (CAHRC, 2023). The Canadian Agricultural Human Resource Council (CAHRC) recognized that there is a general labour shortage rate of 5.9% and yet the agricultural sector reported a much higher peak vacancy rate of 7.4% (CAHRC, 2023). Their recommendations suggest Canadians do not perceive agriculture as a career choice, that agriculture needs to improve its human resource practices, and that additional training opportunities are needed for being a technologically-driven sector.

Agrihoods are complex communities that require a high degree of technical skills to plan and a different set of skills needed to operate and carry out activities such as farm management, community engagement and marketing. For example, in a case study of Freehold Communities, they needed to hire various local experts to determine the best crops to grow in the difficult desert environment (Hauser, 2019). A part of an agrihood’s success is dependent on successful crop production, meaning choosing the

right crops to grow that will respond well with the local environment. Without local knowledge and experience, it is left to the residents to operate and may need to deal with poor soil, staff shortages, and homeowners indiscriminately picking crops (Brass, 2019). Brass (2019) also suggests that agricultural projects are management-intensive activities that often require risk and experimentation. The literature suggests that if there is a high degree of challenges with the farm or gardens, that people may find it to be too much work and not worth preserving. In such instances, the farmland could be at a high level of risk of development at a later time (Brass, 2019; Breger, 2020; Watson, 2020).

2.4.6 Rural and Agriculture Community Development

There are additional issues for the adoption and development of an agrihood model. Daniels (1997) explains that agricultural and residential land uses may not be very compatible due to the use of pesticides, noise, and smells that are not always desirable by people choosing to move to the countryside. Rural agrihoods are often a great distance from off-farm employment, with limited access to quality internet (Kozolanka, 2020) and to other amenities residents may require (Breger, 20202). Interestingly, a potential outcome of the recent COVID-19 pandemic was an increase in the number of people able and willing to work from home. This, coupled with a growing desire for larger homes near greener spaces, may result in a surge in population in some rural communities (René, 2024; Russek, Thornton, & Elias, 2021).

The real estate market has seen a shift in trends with people are moving out of the Greater Toronto Area and into less dense regions and counties for housing options (Miller, 2020). Furthermore, the Canadian federal government recently promised high-speed rural internet to 100% of Canadians by 2030 (Government of Canada, 2022; Government of Canada, 2024). Coupled with comparatively cheaper rural properties and an increase of people working from home, it stands to reason that more people will migrate to more rural settings (Bingly, 2020). This does mean that existing residents with low- and moderate-incomes may not be able to compete with the purchasing power

of urbanites who are moving out to these regions. Therefore, Norris (2018) recommends using innovative design and policy solutions to promote housing affordability.

2.4.7 Farm Business Stability

There is growing concern over farm business viability and the impact on farmers' livelihoods. In regions like Central Ontario, some of the greatest pressures to develop in Canada is evident, yet these areas are home to the most significant concentration of prime farmland in the country (Neptis Foundation, 2021). Farmland remains an attractive investment opportunity for sites of future development by land speculators. Speculative land purchases, shrinking availability of farmland, and the economy of scale driving farms to get larger in size are contributing to an increase in farmland prices (Duffy, 2009; Qualman et al., 2018). Rising farmland prices are turning agriculture into an inaccessible career for the next generation and restricts the capital of current farmers from being available to invest in other aspects of the farm business (Government of Canada, 2023b).

If shown to be a form of development-supported agriculture, which results in sustainable investments in agricultural operations, agrihoods can be a tool to balance the need to protect farmland, offer solutions to other challenges facing the future of agriculture, while also providing necessary housing (Birkby 2016). Farmers will, however, often reduce investment in their operation, as they see clusters of homes beginning to develop around them because they foresee the eventual conversion of their land for housing (Coughlin & Keene, 1981). This may result in the agrihood farm being preserved but surrounding farms becoming antiquated. Agrihoods would need to be seen by neighbouring farmers as contributing to the agricultural system instead of hindering it, while also managing the other land-use conflicts experienced by the agricultural sector when development occurs close to farms.

Ranney, Kirley and Sand (2010) identify benefits for farmers, including creating affordable access to farmland, providing favourable farm leases, creating a high-value customer base at the farm gate, being integrated into the broader community, providing

access to urban or suburban amenities, and having the farm infrastructure subsidized by the developer. At the same time, they also point to the challenges that involve close proximity of non-farm neighbours, increasing the potential complaints for farm nuisances, possibly increasing the distance to other agricultural colleagues, and reducing the farmer's privacy.

2.4.8 Addressing Climate Change

Climate change is another challenge that is threatening farm viability and is placing increased attention on sustainable farming practices (Laforge et al., 2021; Qualman, 2019). Meanwhile, cities will also face new challenges due to climate change, such as risk of extreme flooding, precipitation and heat events (Jopek, 2018). Agricultural lands have opportunities for nature-based solutions to mitigate the effects of climate change through water absorption, water filtration, carbon sequestration, and by providing habitats for many species. Municipalities are also increasingly adopting climate change adaptation and mitigation strategies (Herbert et al., 2022; Guyadeen & Henstra, 2023). Irvine et al. (2023) recognize the growing use of nature-based solution designs in increasing community resilience to various environmental disturbances. Given agrihood's integration of farmland into residential communities, the literature suggests the possibility that agrihoods may constitute a climate change mitigation strategy. However, there is a lack of evaluation tools to measure the benefits of nature-based solutions and there are a number of factors that would impact an agrihoods contributions that would need to be determined on a case-by-case basis, such as local climate and precipitation patters, topography and natural drainage, soil type and permeability, storm water management systems, and other surrounding infrastructure (Irvine et al., 2023).

2.4.9 Possible Misrepresentations

Birkby (2016) and Guion (2017) highlight concerns that some agrihoods may engage in "greenwashing," a practice where more effort is spent on promoting perceived sustainable practices than on actually reducing environmental impact, as

discussed by Watson, B. (2016). This approach could allow agrihood developments to disguise their upscale features, like scenic views and estate property plots, as secondary benefits and allow consumers to assume the agrihood will support their environmental values (Watson, 2020). The ease of this misrepresentation is further enhanced by the sustainable depiction of agrihoods, which has been bolstered by coverage in major media outlets such as the New York Times (Murphy, 2014), Business Insider (Towey, 2022), and Forbes (Steele, 2023; Yale, 2019). A greater understanding of what characteristics contribute to the expressed benefits of agrihoods may lend municipalities to adopt zoning ordinances that ensure the greatest chance for success in achieving the desired outcomes. Furthermore, this knowledge will support developers who are authentically trying to use agrihoods as a means for social good, instead of those simply capitalizing on a real estate trend and contributing to further farmland loss and social inequalities.

2.5 Indications of Agrihoods Throughout the Ages

The literature discusses agrihoods as a recent trend popularized in today's real estate market; however, many of the characteristics of these communities are seen in various iterations throughout space and time. At the turn of the 20th century, Ebenezer Howard's Garden City concept emerged with many socialist ideals rooted in design and centred on the notion of the "social city" (Tizot, 2018). Howard's concept involved protecting both agricultural lands, nature preserves and managing local waste (Friedman, 2012; Livesey, 2016). This was done through a series of greenbelts that were meant to buffer towns from surrounding development, create land reserves, and provide a rural environment for the townspeople (Arnold, 1971). This popularized the idea of greenbelt towns, although the idea of greenbelts existed well before the Garden City concept emerged (Amati, 2008). The development of greenbelt towns was supported by the United States public administration in the 1930s as an effort to provide housing for farming families who were driven out of agriculture. These families and migrating to urban slums after losing profits due to unproductive land and technological efficiencies of farming that led to an increase in farm outputs but depressed the market

(Arnold, 1971). Although there were plans for dozens of greenbelt towns only three were ever constructed in the US due to financial constraints.

Following WWII, the resurgence of development projects of the 1950s saw the expansion of many suburban neighbourhoods. Hauser (2019) writes that the early concepts of agrihoods emerged in 1950s with the introduction of community gardens into neighbourhoods to help counter inflation, environmental troubles, and urban lifestyle decline. There are no indications in the literature that these suburbs were a form of development-supported agriculture. Meanwhile, Lewyn (2000) considers the development of these suburbs to have brought a new set of wicked problems, such as farmland loss, environmental degradation, poor air and water quality, increased traffic congestions, decreases in health and wellbeing, urban sprawl, and lack of community culture. This suggests the integration of community gardens in development projects does not constitute development-supported agriculture.

The 1960s and 70s saw a growing desire for more open space and sustainable communities. This was a response to the lack of environmental considerations and open space issues in post-war suburbs (Breger, 2020). The concept of *cluster design* was introduced by William Whyte (1966) and began to grow in influence in the 1980's when it was combined with the philosophes of designing with nature to create conservation development, which seeks to protect a variety of ecological services and productive farmland (Arendt, 1996). There was also the emergence of regional planning theory by Patrick Geddes, who championed the idea of planning using the natural region. Geddes argued that planning must include all features of a region, such as the watershed, topography, soil, botany, zoology and even the spirit of the location, while rejecting the nature/society divide and the economic exploitation of the environment (Young, 2017). An example of a conservation town is Village Homes, California, that was constructed in 1975 and includes food producing landscapes. Jackson (1999) argues it is one of the world's best examples of sustainable development. Founder Michael Corbett saw the practice of land use neglecting to utilize productive landscaping and considered it wasteful. He noted it not only wastes land, but also wastes energy

and resources used in transporting and marketing agricultural products (Corbett & Corbett, 2000).

Prairie Crossing, a community in Chicago, is another example of a master-planned community designed for environmental conservation and began construction in 1992. The community states that it was built in an effort to preserve open land (Prairie Crossing, n.d.). This planned community integrated 395 units and a 100-acre organic farm on a 677-acre site, while conserving 60% of the area. It has many characteristics similar to today's agrihoods yet was conceived 22 years prior to the popularization of the term agrihood.

Communities designed around a central amenity have also been previously experimented within development projects. Real estate companies believed golf courses offered great amenities and room for development. Norris (2018) believes the inclusion of a golf course amenity into a master-planned community is an important predecessor for the agrihood movement. Research of golf course communities found that around 40% of their residents do not play golf but instead moved to the community for the aesthetics, the open space, and the access to nature (Arendt, 2010). Furthermore, the Wall Street Journal reported golf course communities are facing challenges with the associated golf courses closing due to declining interest in golf, which is affecting the value of homes by an average of 25% and as high as 50% in some places (Taylor, 2019). Meanwhile, an agrihood case study on Agritopia, Arizona, by Breger (2020) shows a participation rate in the CSA program by the residents as low as 16%. Another case study by Breger (2020) found the CSA program at Harvest Green was suspended due to a lack of community interest. Therefore, the literature suggests some parallels between golf course communities that offer a cautionary tale for agrihood developers, farmers, and residents.

Ecovillages are another, more recent phenomena as a master-planned community using nomenclature to express the type of community it intends to offer. The first report on ecovillage communities was created in 1991 and supported an ecovillage movement

across the world (Mare, 2000). Unlike agrihoods, ecovillages have established a fairly prescriptive definition that guide their development and intended benefits. According to the Global Ecovillage Network (2023), an ecovillage is defined as, “an intentional, traditional or urban community that is consciously designed through locally owned participatory processes in all four dimensions of sustainability (social, culture, ecology and economy) to regenerate social and natural environments.” While food production may not be included in the definition, the Global Ecovillage Network includes food production as a design component of an ecovillage (2023).

It is evident in the literature that the various characteristics and perceived objectives of agrihoods are not new to community design and development projects. Since there is not consistent evidence that dictates what an agrihood is, developers can draw inspiration from other model communities throughout history. This suggests that the concept of an agrihoods is simply to differentiate these communities that draw on various characteristics of other community development initiatives.

2.6 An Intersection of Various Movements

Birkby (2016) considers the growing presence of agrihoods a movement for all ages; however, there is not sufficient academic literature to address what the movement is in response to or what it is motivated by. After reviewing various literature on related social movements, agrihoods could be seen as a planned community where various social movements intersect.

2.6.1 Back to the Land Movement

By considering the agrihood trend as a current day evolution of the Back to the Land (BTTL) movement, parallels can be drawn and apply knowledge gained from research on this movement. For instance, there were lessons learned from the BTTL movement that can help newcomers to the rural area adapt to, and change, their community (Walker-Bolton, 2012).

Many BTTL members wanted to support the family farm, rural business, culture of small towns, and provide refuge from city stresses (Pawlick, 2009). A significant part of the BTTL movement can be characterized as radically in opposition to conventional agriculture (Halfacree, 2007). Although the literature on agrihoods is not overt to the opposition to conventional agriculture, the literature does not describe it as belonging to that system of agriculture either (Breger, 2016; Hauser, 2019; Norris, 2018).

Agrihoods appear to have some distinct differences. Scholars, such as Miraftab (2009), view the BTTL movement as a form of insurgent planning and defines it as an outcome of disenfranchised groups excluded by those in power from legitimized spaces of change-making, inventing new spaces within which to make change. The case studies by Breger (2020) identifies that the majority of people living in the studied agrihoods are above the median income level for their region, suggesting that agrihoods deviate from the BTTL movement because disenfranchised groups are unlikely to be able to afford a home in an agrihood. Additionally, Norris (2018) believes the popularization of the agrihood trend began with development companies looking to market real estate to the millennial generation. Thereby, making agrihoods about supplying a demand, or consumerism, instead of supporting disenfranchised groups of people. Nonetheless, a significant motivator for people moving to agrihoods is to increase their access to land, trails and remove themselves from city stresses and therefore has some resemblance of the motivations expressed in the BTTL movement (Breger, 2020, Hauser, 2019; Norris, 2018, Pawlick, 2009).

2.6.2 Local Food Movement

The appeal of agrihoods is also fueled by the local food movement. Research indicates a growing trend in consumers' preference for local foods and, by association, sustainable growing practices (Boyce, 2013). The movement has grown over the distrust with industrialized agricultural system and consumers’ desire for a transparent supply chain from farm to table.

The growth in the local food market can be seen by tracking the increase in outlets, such as farmers' markets, CSAs, and roadside farm stands (Breger, 2020; Low & Vogel, 2011). In 2013 the Conference Board of Canada noted a growing trend towards local food consumption throughout retail, restaurant and public sector institutions (Edge, 2013). They observed that the number of farmers' markets has doubled since the 1990s, attributing this surge in local food's popularity to various factors including social, economic, quality, and environmental considerations. (Breger, 2020; Edge, 2013).

Advocates for local food systems argue that they offer substantial benefits to Canada's economy, pointing out that when consumers buy food produced within their province, this spending has a greater multiplier effect on the provincial GDP compared to buying food imported from outside the province or food that is processed elsewhere and then returned for sale within the province (Edge, 2013; Gibson, 2005).

Schnell (2013) discovered that the idea of local food extends beyond its basic definition to encompass the more intricate concept of place, including how to relate to, responsibly be a part of, and identify oneself with a particular place. This is later supported by Stewart and Dong (2018) who indicate that broader complexities of the local food movement also include opportunities for education through direct interaction between consumers and producers. As previously explored in the characteristics of agrihoods, this is an integral part of the community. Stewart and Dong (2018), however, suggest that convenience and access to local food remain the most important factors for engaging with local food systems. There are indications that this is true for agrihoods through the research by Breger (2020).

Experts in fields spanning academic sociology to business say different definitions for local and sustainability exist in the minds of consumers (Boyce, 2013). DeLind (2011) argues that individualizing the responsibility of fostering a new food regime to consumers distracts from more active reform. She advocates "the integration and reintegration of local food into place-based practice" (DeLind, 2011, p. 280). This points

toward a particular form of the local food movement with more place-based integration, suggesting how the local food movement can intersect and be advanced by agrihoods.

2.6.3 Community- and place-based movements

The literature on agrihoods implies that a movement centred on the search for community might be emerging, though it does not explicitly categorize the migration of people seeking community as a distinct movement, especially when compared to other migration factors like employment and affordability. Nonetheless, Birkby (2016) highlights a clear trend of individuals turning away from standard, uniform housing developments. This shift is attributed to feelings of isolation from neighbours, which stem from the design of these subdivisions, including the absence of central gathering spaces, community amenities, and pedestrian-friendly streets.

Agrihoods are increasingly being recognized for fostering a community-centric lifestyle, particularly through events that emphasize the connection between residents and their shared local food system. Such activities, as documented in the literature, include cooking classes, farm workshops, and farm-to-table dinners (Donnally, 2015; Dunn, 2017). The rising popularity of agrihoods has been broadly linked to their unique combination of offering a strong community feel, along with the convenience of urban amenities, including proximity to farms and access to fresh food (Breger, 2020). The growing appeal of agrihoods, especially for their strong sense of community, suggests an emerging trend towards a preference for community-based living.

A case study of Willowsford, Virginia, demonstrates how agrihoods can function as community-owned farms, emphasizing the integration of the farm into its overall fabric and fostering a sense of unity among residents. The farm not only acts as a social and educational hub but also encourages inhabitants to adopt healthier lifestyles. This encompasses choices about food consumption, relationships with their living environment, and participation in community activities. The evident attention that this community pays to the well-being of its residents appeals to a diverse range of interests and further strengthens the community bond (Birkby, 2016; Willowsford, n.d.).

2.7 Agrihoods and Economic Development

Agrihoods are often viewed as an economically viable development option. They have even demonstrated resilience during economic downturns, such as the 2008 real estate market collapse, with many developments remaining stable and property values increasing (Brass, 2019; Murphy, 2014). This perspective is not universally agreed upon in academic literature. Hauser (2019) notes that certain agrihood models can incur significant costs. Generally, agrihoods tend to use less land and require lower maintenance compared to traditional golf course communities, resulting in lower initial costs. This not only benefits the developer's financial outcomes but also contributes to a thriving food business economy. Particularly effective is when developers integrate various aspects like production, processing, distribution, consumption, and waste management within the agrihood, thereby adding significant value to the communities (Norris, 2018; Hauser, 2019).

The initial establishment of an agrihood can have a positive impact on the local economy, especially when it utilizes local skills and materials from the region, as Norris (2018) points out. Unlike typical infrastructure projects which often offer only a one-time economic boost, agrihoods have the potential to create a self-sustaining economy that benefits not only the residents but also the surrounding communities. An example is the case study of the agrihood, Serenbe, in Georgia. It functions as an agrarian economy, featuring its own branded food products, pickled vegetables, and weekend markets that draw tourists from nearby cities. Additionally, Serenbe offers Community Supported Agriculture (CSA) memberships and supplies food to restaurants in neighbouring towns, thus extending its support to the broader local food economy beyond its immediate community (Breger, 2020; Lidz, 2015).

Norris (2018) highlights the importance of partnerships with local businesses as a key factor in the success of agrihood farm businesses, noting that these collaborations are mutually beneficial. He attributes agrihoods to facilitating increased cooperation among various stakeholders including developers, owners, property managers,

designers, investors, and public officials. This collaboration is seen as a response to the growing consumer interest in being directly involved in food production. The emphasis on local partnerships and the focus on local food indicate the potential of agrihoods as tools for economic development. However, noticeably missing from his list of stakeholders are farmers and agriculture organizations, which will play a critical role in ensuring a successful farm operation and food production practices that the consumer is keen to be a part of.

Dunn (2017) and Hoak (2016) present how agrihoods offer economic opportunities for farmers. They suggest they can sell some of their land at a profit but retain some of the land as farmland and gain access to a new market in the form of the agrihood's residents. However, Brass (2019) notes this can come with additional problem where residents might hand-pick food from gardens without compensating the farmer. Brass (2019) suggests the need for a clear division of farm business space that the community cannot access and community farm space where residents can grow their own food.

Birkby (2016) notes that some agrihoods offer homeowners living near the farm the opportunity to purchase shares, allowing them to actively participate in the planting and harvesting processes. This not only creates an additional market but also fosters a vested interest in the business's success. Despite the level of resident involvement, agrihoods typically require numerous skilled agricultural workers, leading to significant labour and operational expenses. For example, a farm manager is often needed to reside on-site and oversee daily farm operations, while additional labour is required for managing other farm-based community initiatives (Breger, 2020).

According to the *Farmer 4.0* report, the CAHRC is projecting an agricultural labour shortage of 123,000 workers by 2029 (RBC, 2019). This suggests a potential challenge for agrihoods in securing necessary farm labour. Over the long-term, agrihoods could offer alternative pathways of land access and unique job opportunities for those exploring a career in agriculture, potentially attracting non-traditional sources

of farm labour. This could not only benefit the agrihoods but also contribute to addressing the broader agricultural labour shortage.

According to Statistics Canada (2022a), nearly half of Canadian farmers (47.7%) hold a second job outside of their farming activities. Agrihoods, by offering farm business opportunities in a collective or cooperative environment, reduce the need for individuals to make significant investments typically associated with traditional farming, such as purchasing land, equipment, or quotas. Norris (2018) and Hauser (2019) suggest that the development of a strong local economy within agrihoods could also potentially lead to better wages for farmers and reduce the need for off-farm employment. This not only saves commuting time and costs but also implies that farmers might have more time to spend with their families and engage in their local communities. Such a shift could have significant impacts on the quality of life for those involved in the agricultural sector of agrihoods. It is important to note that this claim lacks empirical evidence in the existing literature.

Some scholars, like Gibson (2005), propose that community economic development should be viewed as a process where community members gain empowerment, emphasizing the promotion of cooperative business models. Edge (2013) and Gibson (2005) highlight the benefits of such models, noting a multiplier effect where every dollar spent in a cooperative significantly supports the local economy. While the current body of literature on agrihoods is limited in its scope, it hints at the potential of cooperative models in the context of agrihood development, especially as a means of economic development. However, the exact number of cooperative agrihoods currently in existence remains unclear, and the literature suggests that this model warrants consideration in future agrihood projects. To fully understand and validate the effectiveness of cooperative agrihoods as a tool for economic development, further research is needed.

2.8 Conclusion

Despite all the possible benefits that agrihoods can have for society, Hauser (2019) recognizes that assessing their feasibility and overall effectiveness necessitates further time and study. This evaluation process will also require the development of more agrihoods to provide a broader base of data and experiences for analysis.

Understanding why residents are drawn to agrihoods and choose to move there has significant implications for various aspects of these developments. It influences how the food system and agricultural amenities within agrihoods are designed, marketed, and managed, and it may also affect the degree to which residents engage with these amenities. This situation is comparable to that of golf course communities, where many residents do not actually play golf. In agrihoods, it is possible that the primary attractions for residents are the open spaces, the aesthetic appeal, and the sense of community, rather than direct access to fresh food and participation in farm-based activities.

As observed in various studies, many elements of agroecology are evident in agrihoods, positioning them as practical microcosms of agroecology. Despite these observations, there remain several unanswered questions about the certainty of agrihoods in adopting agroecology practices, preserving farmland and the natural environment, as well as in promoting healthier lifestyles for their residents.

The popularity of agrihoods is expected to keep growing, particularly in the wake of the pandemic, as people seek more affordable, resilient, and food-accessible communities (Pickett et al., 2004; Sheller 2020). This trend may exert pressure on rural areas to expand suburban development to accommodate the increasing population. For these communities, where farmland preservation and food systems are critical issues, development-supported agriculture could offer viable solutions. While the literature suggests agrihoods' ability to offer a model of development-supported agriculture, it will be important to investigate their impacts further. To validate and ensure the benefits of agrihoods, factors contributing to these benefits must be identified.

3 Methodology

Mixed methods research is defined by Creswell and Creswell (2018) as "combining or integration of qualitative and quantitative research and data in a research study" (p. 14). A mixed-methods approach was used for this study; this method is used to merge quantitative and qualitative data that is collected roughly at the same time (Creswell & Creswell, 2018). Using surveys, interviews, document review and participatory observational research, quantitative and qualitative data was collected on Canadian agrihoods. The methods were used to gain information related to the residents, general spatial design, history, business structure, local food and agricultural profile, and amenities of these agrihoods. This approach allowed for the agrihoods to be presented as a case study and analyzed for the various impacts the agrihood had on agriculture, food, and community members. A comparative case study analysis will gain an understanding of the variations between the impacts of each agrihood and their design considerations that may have led to differences (Breger, 2020).

In the section below, a discussion on the reliability and validity of the research methods will be discussed as well as the limitations on the methods used within the study.

3.1 Sample Process

First, the research project needed to subscribe to a definition and criteria that would identify possible case studies, whether the communities applied the term agrihood to describe themselves or not. The Urban Land Institute definition of an agrihood was used to create the following criteria for the communities: i) some level of agricultural production is occurring within the community, and ii) agricultural production was spatially integrated into the neighbourhood and was part of the initial development plan (Breger, 2020; Norris, 2018).

Agrihoods were identified through a series of internet and social media searches for the terms *agrihood*, *agri-hood*, *agriculture neighbourhood community*, *development-*

supported agriculture, *farm-to-table community*, and *agrarian community development* accompanied with *Canada* and repeated again with each provinces' name. Through this process, a list of potential Canadian agrihoods was created.

In refining the sample of agrihoods to include in this study, the initial list was pared down based on specific selection criteria to ensure a focused and manageable scope of research. After identifying potential agrihoods through extensive online searches and preliminary document reviews, each community was considered for its adherence to the defined criteria of integrated agricultural production and spatial integration within the neighbourhood as part of its development plan. Communities that did not have clear documentation or evidence supporting these criteria were excluded. Additionally, the responsiveness of community representatives and the availability of sufficient data played crucial roles in the final selection. This strategic narrowing down was essential to ensure that the selected case studies were representative of the definition of agrihoods used for the research and that relevant data would be available for a suitable analysis.

The agrihoods selected for this study include O.U.R. Ecovillage (Shawnigan Lake, BC), Southlands (Tsawwassen, BC), Yarrow Ecovillage (Chilliwack, BC), Creekside Mills (Lindell Beach, BC), Drayton Ridge (Drayton, ON), and Hendrick Farm (Chelsea, QC). Hendrick Farm was later removed from the research project due to several challenges with data collection.

3.2 Participant Recruitment

Key contacts were identified for each potential case study community representing developers, farmers, municipal planners, and resident associations. Where a representative could not be identified, a message was sent to a general email address to request a contact be identified. Outreach to the community contacts included a request for a representative to participate in the data collection methods, including support to distribute the survey to the residents.

The response and participation between the different case study communities varied, as seen in Table 3-1. This is further discussed in the Limitations section of this chapter where missing information from the case study communities is outlined.

Table 3-1 Participant Responses

	O.U.R. Ecovillage	Southlands	Yarrow Ecovillage	Creekside Mills	Drayton Ridge	Hendrick Farm
Developer	Yes	No	Yes	Yes, but then withdrew	Yes	Yes, but then withdrew
Farmer	Yes	No	Yes	No	No	No
Planner	Yes	No	Yes	Yes	Yes	Yes
Resident Contact	Yes	No	Yes	No	No	No

3.3 Mixed Methods Research Design

3.3.1 Document Review

Document review methodology was used to gather information on the development of the agrihood, including corresponding land use policies and the history of the land. Documents included respective Official Plans, Zoning Bylaws, Official Plan Amendments, and any other relevant and accessible document related to the subject lands for the corresponding agrihood, such as a neighbourhood master plan. Following Breger (2020), mapping the relative locations of structures, roads, trails, water,

farmland, recreation land, and conservation land, was completed to help inform the spatial design of the agrihoods. This was accomplished through comparisons of various maps, including master site plans and aerial images. Maps and site plans were overlaid in Google Earth to create polygons that would allow an approximate measurement of the various features of the case studies, such as residential areas, agricultural areas, and forested or other natural areas.

3.3.2 Survey

An online survey (see Appendix A) was developed to gather information from residents regarding the following: their living situation and lifestyle prior to moving to the agrihood; what motivated them to move there; their participation in food production on the farm; their use of the agrihood amenities; their sense of belonging; perceived changes in their food literacy; perceived changes in their food waste habits; perceived changes to their health and happiness; their description of the culture within the agrihood; perceptions of the resilience of the community; and, any negative aspects they have experienced living in their agrihood.

The survey was administered online using Qualtrics software. For each case study, a contact person was identified and asked whether they can assist in administering the survey to residents within the community (see Appendix B for outreach message to contact person). Only one of the case study communities provided adequate survey results with an estimated household response rate of 36.3%, as shown in Table 3-2.

Table 3-2 Survey Response Rates

	Responded to Request	# of Responses	Est. # of Households Received Survey	Est. Response Rate by Household
O.U.R. Ecovillage	No	1	Unknown	NA
Southlands	No	0	0	NA
Yarrow Ecovillage	Yes	12	33	36.3%
Creekside Mills	No	0	0	NA
Drayton Ridge	Yes, but requested not to distribute	0	0	NA
Hendrick Farm	No	0	0	NA

3.3.3 Semi-structured interviews

Interview questions (see Appendix C) were developed for farmers, developers and municipal planning staff. The interview method allowed for the framework of the study to be followed and address the research questions. The semi-structured format of the interviews provided flexibility to offer additional questions and paths of inquiry based on participant responses (Breger, 2020).

The farmer interviews were constructed to explore:

i. motivations to farm within an agrihood
ii. how and where the food is sold

iii. other sources of farm revenue
iv. changes to the farming operation if they had farmed the land prior or happen to know the history
v. perceptions of alternative land-uses if an agrihood had not been developed
vi. changes to their mental health since farming in an agrihood
vii. perceptions of the resiliency of the community
viii. their description of their agrihood's culture (customs, arts, social institutions, and achievements of the agrihood)
ix. how residents were intended to interact with the food production
x. the business model of the agrihood's farm and, if applicable, other businesses, and
xi. their career mapping and succession planning.

Interviews with developers and municipal planners were constructed to explore:

i. challenges faced initiating the development
ii. address sustainable living designs and initiatives
iii. conflict mitigation design considerations
iv. how the development was funded
v. considerations on municipal services and taxation
vi. perceptions of alternative land-uses if an agrihood had not been developed
vii. impacts experienced by the broader community since the agrihood development, and
viii. accessibility considerations for marginalized groups (low-income/affordable housing, Indigenous Peoples, Black, People of Colour, LGBT2Q+, differently abled, seniors, immigrants and migrant workers)

Table 3-3 Interview Participation

	Planner	Developer	Farmer
O.U.R. Ecovillage	1 Microsoft Teams Video Interview	1 In-person Interview	1 In-person Interview
Southlands	0 No Response	0 No Response	0 No Response
Yarrow Ecovillage	1 Microsoft Teams Video Interview	1 In-person Interview	4 In-person Interview
Creekside Mills	1 Microsoft Teams Video Interview	Initially responded yes but then withdrew due to time constrains prior to interview	Contact could not be identified without developer participation
Drayton Ridge	1 Microsoft Teams Video Interview	1 In-person Interview	No Farmer (agriculture activity has not commenced)
Hendrick Farm	1 Microsoft Teams Video Interview	Initially responded yes but did not follow through	Contact could not be identified without developer participation
TOTAL:	5	3	5

3.3.4 Participatory Observation

Participatory observational research was also employed while visiting the agrihoods. This method allows a researcher to immerse themselves in a social setting to observe and gain better appreciation for the culture and experiences of residents (Bryman & Bell, 2019). While Bryman and Bell (2019) state that researchers stay for an extended period of time, in this research study participant observation lasted from several hours to two days. Observations focused on the spatial design, residential use of the amenities, and signs of perceived benefits and conflicts.

	Open Setting	Key Informant	Access to Closed Setting	Length of Stay
O.U.R. Ecovillage	Partial	Yes	Yes	Two Days
Southlands	Yes	No	NA	Three Hours
Yarrow Ecovillage	No	Yes	Yes	Two Days
Creekside Mills	No (gated community)	No	No	NA
Drayton Ridge	Partial	Yes	Yes	Two Hours
Hendrick Farm	Partial	No	No	Two Hours

3.4 Developing the Case Study

Case studies were used to reveal the characteristics of the agrihoods. Yin (2014) explains that this approach provides an opportunity to observe and analyze a phenomenon, in this case the development of agrihoods, that has not been observed by

scientific research. This was also the approach used to study agrihoods by Breger (2020) and provides a basis for a broader comparison to the results found in that study.

For the case studies, the data gathered included the date the development project was initiated, the developer, its total size, number and types of units, population, the amount of land in agricultural production, the amount of land used for other purposes (i.e. residential density, commercial, recreational, environmental land uses), cost of homes, and the frequency of use of the amenities, including residents' involvement in food production.

3.5 Data Analysis

The mixed-methods research design provides the ability to conduct a comprehensive analysis of the research problem by integrating the information collected and interpreting the results (Creswell & Creswell, 2018). For this study, the qualitative data was coded and themed by characteristics of the agrihood, farmland preservation, investments into the agricultural operation, agricultural career pathways, rural diversification, food systems, housing costs, amenities, sustainability considerations, indicators of economic considerations, and land use planning frameworks. The data was further coded as either having been expressed as a benefit or a concern. A constructivist worldview has been applied to this research. Constructivism supports generating meaning behind of a situation (Creswell & Creswell, 2018). The use of constructivist world view supports generating significant statements made within the qualitative data pertaining to the impact the agrihood has had on agriculture, food availability, and the lives of the residents.

In the analysis of qualitative data collected for this study, a thematic coding approach was employed to categorize and interpret the impacts of agrihood developments. Initially, themes were established based on a comprehensive review of the literature, identifying common impacts associated with agrihoods. These pre-defined themes guided the initial coding process, providing a framework for organizing the data systematically.

As the analysis progressed, it became apparent that the data also contained unique impacts not previously identified in the literature. To accommodate these novel insights, an inductive coding process was incorporated, allowing for the creation of new codes that emerged directly from the data. This flexible approach ensured that the coding scheme could adapt to the richness of the data, providing a more nuanced understanding of the agrihood impacts.

Further, to deepen the analysis, codes were grouped into broader categories, facilitating the identification of overarching themes that capture the complex interactions within agrihoods. This methodological approach not only grounded the analysis in existing scholarly work but also allowed for the emergence of new perspectives, enhancing the comprehensiveness and depth of the research findings.

The data analysis also explored changes in land use as it related to the overall land in agricultural production, how much land was removed in order to develop the agrihood, and the likely alternative land use expressed by the planners. Descriptive statistics will provide an interpretation of the accessibility of agrihoods for various socioeconomic and underrepresented groups.

Finally, the findings consider the land use planning policies and zoning by-laws that were employed to support the development of the agrihood and consider their role in leading to the impacts of the agrihoods. These impacts will be compared to the information provided in the literature review to determine whether agrihoods are a form of development-supported agriculture and are achieving the benefits expressed in the literature.

3.6 Limitations

The timeline of data collection was impacted significantly by the COVID-19 pandemic. While face-to-face interviews were preferable, they were not always possible due to distance and COVID-19 restrictions. This complication may have impacted participant comfort levels. Remote interviews were only conducted with professional

planners and the quality of data did not appear to be impacted. All other interviews were conducted in-person.

This research did not receive full participation from all case study communities, so gaps in the data exist. As a result, it is difficult to fully compare case study sites and identify commonalities or generalizations. Participation in surveys and interviews at Hendrick Farm and Southlands was constrained. Southlands lacked survey and interview data, yet ample information from document reviews supported the development of a case study. In contrast, Hendrick Farm's sparse document review data resulted in considerable case study gaps, leading to its exclusion from the research.

Furthermore, some data sets did not provide enough depth or breadth of information for all themes, so it was difficult to validate all of the benefits touted in academic literature. Additional documents were sought but could not be obtained, including any Request for Proposals or reports on the impacts of the agricultural system (e.g., in Ontario this would be an Agricultural Impact Assessment).

Although case studies have some generalizability, there are limitations to apply to other communities (Yin, 2009). In Canada, land use planning frameworks are governed by provincial legislation and responsibility for their application are shared with municipalities, therefore, the context of the respective provincial land use planning system can have implications on the design and considerations given to each development project. The results and perspectives from the participants involved in each case study are specific to that community and the transferability to future agrihood development should include context of the municipality it is being developed in and the intent, or objectives, of the agrihood development project. Most of the case study communities were discovered in British Columbia and there were no agrihoods identified from the Prairies nor the east coast.

In reflecting upon the limitations of this research, it is pertinent to acknowledge my personal background and its influence on my approach to this study. Growing up on a dairy farm in Eastern Ontario, I was deeply embedded in the dynamics of rural and agricultural life from a young age. My subsequent academic pursuit at the University of Guelph, focusing on International Development, with a specialization in Rural and Agricultural Development, and my professional experience at the Ontario Agricultural College, exposed me to innovative agricultural research and the critical issues facing our farming communities, particularly the loss of farmland to urban development.

These experiences have profoundly shaped my understanding of the agricultural sector's needs and the urgency to protect our farmland. This personal connection to agriculture and farmland preservation has driven my research focus and may have influenced my perspectives on the potential of agrihoods as sustainable development models. Currently, as the Executive Director of the Ontario Farmland Trust, my commitment to preserving farmland for future generations continues to inform my research interests and objectives.

This positionality has both informed my investigative focus and shaped my interpretation of the data, possibly biasing my research towards models that prioritize farmland preservation. Recognizing this, I have endeavoured to maintain objectivity in analyzing the impacts of agrihoods, though my personal and professional experiences inevitably influence my perspectives on sustainable land use and community development.

4 Results

4.1 Case Study Communities

Six agrihoods were investigated – O.U.R. Ecovillage, Southlands, Yarrow Ecovillage, Creekside Mills, Drayton Ridge, and Hendrick Farm (Figure 1). However, since Hendrick Farm lacked significant participation and data, they have been removed from the case studies, leaving five communities for the analysis.

The following section presents each community as a case study. Each case study begins with a summary of facts on the agrihood and a diagrammatic base map of the agrihood showing the main land-use features of each community. This is followed by a description of the agrihood and relevant land use planning information. This information emerged through interviews with agrihood developers, farmers, and planners, as well as the agrihoods' websites and document reviews. Soil classification data is based off the Canada Land Inventory, which is a system used to rate agricultural land capability through seven classes (Government of Canada, 2013). Descriptions for each soil class can be found in Table 4-1. Local demographic data was gathered using Local Logic, a software program that uses Statistics Canada data to provide demographic information for real estate professionals, developers, investors, and governments. When possible, current real estate listings were used to identify the price range of units. When no listings were available, the most recent sale prices were used.

Table 4-1 Land Capability Class Descriptions for Agriculture (Government of Canada, 2013)

Classes	Description
Class 1	Soils in this class have no significant limitations in use for crops.
Class 2	Soils in this class have moderate limitations that restrict the range of crops or require moderate conservation practices.

Classes	Description
Class 3	Soils in this class have moderately severe limitations that restrict the range of crops or require special conservation practices.
Class 4	Soils in this class have severe limitations that restrict the range of crops or require special conservation practices.
Class 5	Soils in this class gave very severe limitations that restrict their capability in producing perennial forage crops, and improvement practices are feasible.
Class 6	Soils in this class are capable only of producing perennial forage crops, and improvement practices are not feasible.
Class 7	Soils in this class have no capacity for arable culture or permanent pasture.

In conducting this research, the intent was to have residents from each agrihood complete the survey. As expressed in section 3.3.2, only Yarrow Ecovillage provided adequate participation in the survey. Given this lack of comparative data, the survey results are not included in the Yarrow Ecovillage case study or in the case study comparison (section 4.2). Nevertheless, the data from Yarrow Ecovillage provides interesting and useful information for exploring various impacts of this single agrihood and therefore is presented separately in section 4.3.

Figure 4-1 - Locations of Identified Case Studies

4.1.1 O.U.R. Ecovillage, Shawnigan Lake, BC

Table 4-2 - O.U.R. Ecovillage Quick Facts

Information Category	Data	Additional Context
Year Initiated	1999	Concept began early 1990s
Developer	Collective of Individuals	Primarily led by Brandy Gallagher, there was a co-operative approach to the development project with other members and community engagement with Indigenous consultation.

Information Category	Data	Additional Context
Total Size	25 acres	*No additional context.*
Number of Residential Units	Nine	While nine are planned, several are still under construction.
Types of Units	Detached single-family dwelling	Described as off-grid, eco-home cluster
Price Range of Units	*No data available*	*No additional context.*
Residential Use Land Size	0.56 acres	Ground truthing was completed during observational data collection.
Agricultural Use Land Size	14.5 acres	Ground truthing was completed during observational data collection. Observations included food production has been integrated throughout the different areas of the property. For instance, food is produced along the shared kitchen amenities, within the children's play area, and grazing animals are permitted to roam between the houses.
Soil Class	Class 5	Confirmed using the Government of British Columbia's Soil Information Finder Tool's soil mapping data.
Food Sale Mechanism	CSA, farmgate sales	*No additional context.*
Farm Management	Multi-stakeholder co-operative	As described by the developer, co-owner, and farmer (one in the same).

Information Category	Data	Additional Context
Management Type	Non-profit	*No additional context.*
Other Use Land Size	9.94 acres	Other uses include natural features such as a forested area and ponds.

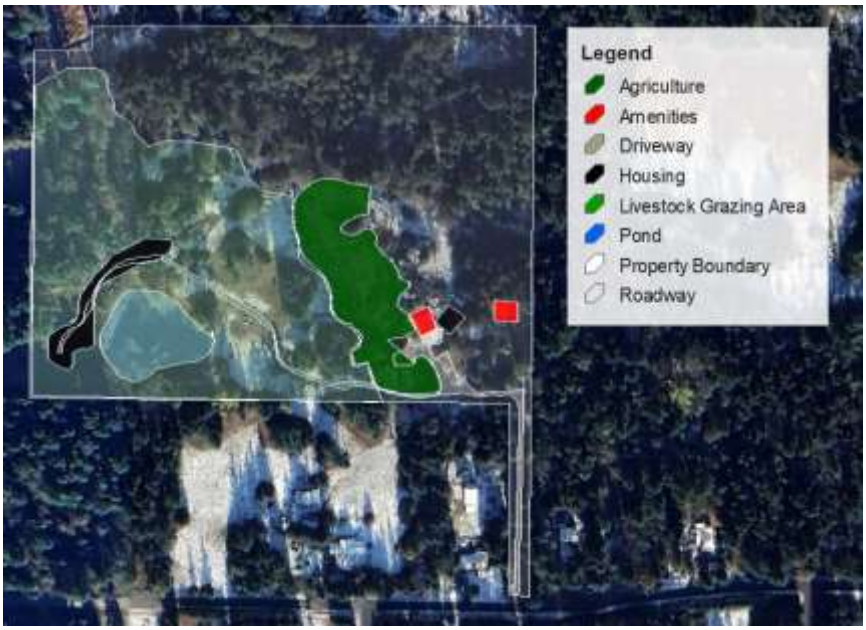

Figure 4-2 - O.U.R. Ecovillage Spatial Design Map

4.1.1.1 O.U.R Ecovillage Description

O.U.R. Ecovillage is located near Shawnigan Lake on Vancouver Island, British Columbia. The 25-acre site operates as a "Regenerative Living Demonstration Site and Education Centre," developed with the intent to serve as a model for sustainable living and community education in social, ecological, and economic well-being. “O.U.R.” stands for One United Resource. The intent was to build a community that addressed the climate crisis, provided affordable housing, and improved food insecurity through

community design. The developer shared an underlying philosophy of being stewards of the lands, meaning they need to respect what the land wants and needs.

The land was purchased in 1999 from the previous owner, who had approval to sever the property into four lots. The owner was eventually convinced to sell the property to the collective of individuals who were looking to develop an environmentally friendly community. After buying the property, the new owners engaged in a one-year, nature-based design process that involved “listening” to the land and understanding its requirements. They lived on the property, watched, and looked for signs of the land’s needs. In 2000, the collective established the O.U.R. Community Association, a registered not-for-profit.

The former owner, who used to keep several beef cows, stayed living on the property as the development began and would share knowledge about the land, such as where he had buried waterlines. The developer stated, “we never did anything without him” and shared the story of how he died 20 years later and, as part of the green burial project he helped create, they had his remains placed on a hill on the property.

The spatial design is laid out to support sustainable living practices and community interaction. The community design process was described as “messy” and “lengthy,” but necessary for creating a collective and satisfying living environment. The wooded and wetland portion of the agrihood is designated for conservation and protected by a conservation covenant with the Cowichan Community Land Trust, which is intended to maintain the area’s ecological integrity.

Central to the agrihood is the farm, which consists entirely of Class 5 soil, meaning there are severe limitations that restrict their capability in producing perennial forage crops, and improvement practices are feasible. This soil class is often best used for grazing livestock. Despite this limitation, the farm on this agrihood produces not only poultry and livestock but also vegetables, fruit, herbs, and flowers while adhering to

organic and permaculture practices. There are agricultural improvements including a barn, greenhouse, and nursery operation.

A variety of food products are sold through a community-supported agriculture (CSA) program, which includes a diverse selection of vegetables, fruits, eggs, and baked goods. Value-added products, including seeds, dried flowers and herbs, and processed foods, are integral to the Ecovillage's operations, providing them with increased sources of revenue. All products sold are intended to emphasize the importance of sustainable agriculture and food security. Additionally, the site features a farm stand and facilities for CSA distribution. They work with a variety of community stakeholders including farmers, cooperatives, and those involved in environmental and social pursuits to ensure long-term sustainability of the food system.

The organization is structured as a non-profit. Its primary purpose is focused on providing education related to sustainable living, permaculture, holistic wellness, green burial, peacemaking, eco-tourism, and natural building. Educational facilities were also developed that provide learning opportunities for residents and visitors for different workshops and training opportunities. The educational facilities are also used for accommodation, such as Eco-Bed and Breakfasts, dorm space, and camping.

The homes are built as part of their education program, clustering the homes together, and ensuring a low building footprint in order to achieve low cost housing. The developer shared how many of their resources come from donated infrastructure and estimated that 90% of everything they used was salvaged. She expressed concern and criticism of mainstream developers who pay lip service to the issue of affordable housing without any substantial commitment. Using the developer's skilled resourcefulness, the agrihood has been gifted a solar hot water system with an estimated value of $150,000, dump trucks of topsoil to amend the vegetable beds, and a tiny home. The intent is to ensure resources are reused before they are discarded, including materials from not just within the agrihood but the surrounding community as well, which help address the housing affordability crisis.

O.U.R. Ecovillage lists 20 local community partners ranging from educational institutions, conservation organizations, farm groups, and financial institutions. Another 25 organizations from a wider-community context are also listed which add additional partners such as real estate and building groups. They note that this list is not exhaustive and many more have contributed to the development of this agrihood.

The agrihood hosts a variety of programs and activities aligned with its mission, ranging from natural building workshops to wellness retreats. These activities are part of a broader commitment to provide educational experiences in sustainable living and to promote community engagement in ecological stewardship.

4.1.1.2 O.U.R. Ecovillage - Land Use Planning Framework and Processes

O.U.R. Ecovillage aimed to offer an alternative to traditional living. The municipal planner recognized that they were emphasizing environmental impact minimization, sustainability, and collective ownership within a land-use planning system that saw this as unconventional. Despite this, the planner noted there was an openness within the planning department to work on such a project that aligned with the municipality's sustainability goals.

While the developer, who does not have a background in development or land use planning, suggests the process was challenging at first, she said they needed to take an approach where she needed to think of any requests which received a "no" from the municipality as just an uneducated yes, meaning she had to explain why what they were doing was in the best interest of the community. While the developer expressed some painful moments of the land use approval process, the planner recalls everything being relatively straight forward. The planner also commended the developer on the level of community engagement they utilized, to explain what they were proposing since many community members had negative perspectives at the outset. The ecovillage has seemingly gained community acceptance over time, with indirect suggestions of resident satisfaction and well-being.

O.U.R. Ecovillage now operates on land designated as 'Rural Community Residential' with ‘R-4’ zoning, which allows for a multiple housing structures on a single parcel; however, the dwellings are not to exceed overall density of one dwelling per hectare, or per 2.47 acres. While maintaining low-density housing, they are permitted to be clustered together, which contributed to preserving significant land areas within the agrihood.

This zoning permits agriculture and horticulture, sale of products grown or reared on-site, including value-added agricultural products grown or reared on the property, and educational facilities. Accessory residential uses, such as kitchen facilities, are also permitted. R-4 zoning allows for a maximum of six camping spaces per parcel, as long as they are accessory to the educational uses.

Their use of conservation covenants is also permitted in British Columbia on privately held lands through the province’s Land Title Act.

The planner expressed the need to rethink planning paradigms and integrate values and lifestyle choices that support sustainability into planning practices. He expressed great admiration for O.U.R. Ecovillage and believes the region’s Official Community Plan (OCP) could adopt better land use planning policies that are reflective of what they have achieved at this site.

4.1.2 Southlands, Tsawwassen, BC

Table 4-3 - Southlands Quick Facts

Information Category	Data	Additional Context
Year Initiated	1989	Land purchased in 1989. 2008 is when a design charrette was held. 2013 is when the first proposal was submitted to council. Civil construction began in 2016 and residential building construction began in 2016. 2020 is when the first residents began to move in.

Information Category	Data	Additional Context
Developer	Company – Century Group	*No additional context.*
Total Size	537 acres	*No additional context.*
Number of Residential Units	950	*No additional context.*
Types of Units	Cottages, townhomes, cottages framing common courtyards, country flats, and row homes.	Described as Scandinavian-inspired.
Price Range of Units	From $679,900 to over $1,709,900	2024 real estate listings range from $679,900 for a 616 sq. ft. unit (1,103/sq. ft) to $1.7 million for 2,139 sq. ft. unit ($799/sq. ft)
Residential Use Land Size	107 acres	Ground truthing was completed during observational data collection. This includes mixed commercial uses.
Agricultural Use Land Size	325 acres: 275 acres of publicly-owned farm; 50-acre community farm	While ground truthing was attempted during observational data collection, significant development was still occurring. Data was confirmed using multiple sources including the municipality and agrihood websites.
Soil Class	Mix of Classes 3, 4 and 5	Confirmed using the Government of British Columbia's Soil Information Finder Tool's soil mapping data.
Food Sale Mechanism	Farmers markets, CSAs, direct to food retailers within the community,	*No additional context.*

Information Category	Data	Additional Context
	and available through the private farm business sales outlets	
Farm Management	Publicly owned	*No additional context.*
Management Type	Multi-stakeholder management including non-profit organizations and for-profit farm businesses	*No additional context.*
Other Use Land Size	96 acres – Forested 9 acres – Commercial and other uses	The 105 acres of Other Use Land Size pertains to forested and natural areas. Mapping suggests 96 acres is forested, meaning the remaining 9 acres is for commercial and other uses.

Figure 4-3 – Southlands Spatial Design Map

4.1.2.1 Southlands Description

Southlands is situated in Tsawwassen, British Columbia, adjacent to Boundary Bay Regional Park and Centennial Beach. The beginning of Southlands traces back to the acquisition of the lands in 1990 by Century Group, with development commencing in 2016. When the community is fully built, it will contain approximately 950 residential units on 107 acres of land. The homes are intended to cater to diverse demographics and life stages.

Encompassing an area of 537 acres, over 425 acres has been donated back to the City of Delta to be preserved for dedicated public space, agricultural use, wildlife habitats, and recreational pursuits such as trails and parks. The 325-acre farm is considered North America's largest publicly owned farm and resides within British Columbia's Agricultural Land Reserve (ALR). The Southlands Grange Centre for Farming and Food is the nucleus of agricultural activity, offering educational workshops, farming incubators, and serving as a venue for communal events like long-table dinners and farm tours.

The subject lands include a mix of Class 3, 4, and 5 soils. A soil classification map overlay on the agrihood shows that the majority of the residential and commercial uses have been developed on the lower-class soil. Even though a small portion of class 3 soil, considered to be prime agricultural land, has been developed on, the majority has been avoided. This has helped ensure that the best farmland is being used for food production while balancing spatial considerations for the build environment.

The farm management at Southlands is a collaborative venture with partners including Earthwise, Boundary Bay Bees, Brent Kelly Farms, Snow Farms, Delta Community Farmers, and Farm Roots. The farm partnerships are a mix of not-for-profit and for-profit organizations intended to collectively contribute to sustainable and community-centred agriculture.

Retail food outlets like Prado Café and the biweekly Farmers' Market in the Market Square contribute to the agrihood's food culture, providing residents with access to fresh, locally-sourced produce and artisanal products.

4.1.2.2 Southlands - Land Use Planning Framework and Processes

As a large-scale master-planned community, Southlands has a number of land-use designations and zoning by-laws pertinent to the various lots found within the community. They include:

- Southlands Gateway (SG) which is intended for low to medium density housing including single-family dwellings on small lots and townhouses.
- Southlands Village (SV) which permits a mix of residential housing types and densities, including community-oriented commercial and public uses like a public market, community farms, and gardens.
- Agricultural (A) allows for general and intensive agricultural uses, including ancillary uses in compliance with Municipal and Agricultural Land Commission policies.

- Parks and Recreation Areas (P) is used for regional, municipal, and public open space, recreation, and conservation areas, with specialized commercial uses serving these areas.
- Environmentally Sensitive Area (ESA) applies to areas that are environmentally sensitive, with permitted uses varying based on sensitivity and including agricultural uses on lands within the ALR.
- Environmentally Sensitive Area 3 (ESA3) applies to properties owned by government agencies or non-profits that are environmentally sensitive or subject to hazardous conditions, supporting passive recreation and wildlife habitat preservation.

The range of zoning clearly directs housing to particular areas, while ensuring agricultural areas and environmentally sensitive areas are used for their respective purposes, restricting further development from encroaching on those particular lands.

Unfortunately, neither the developer or the municipal planner responded to a request for an interview so no further data could be gathered.

4.1.3 Yarrow Ecovillage, Chilliwack, BC

Table 4-4 - Yarrow Ecovillage Quick Facts

Information Category	Data	Additional Context
Year Initiated	2002	2002 land was purchased. 2003 farm operation began. 2008 is when housing construction began. 2014 the housing was completed.
Developer	Yarrow Ecovillage Society (YES) Cooperative	Members contributed to the design of the community.

Information Category	Data	Additional Context
Total Size	25 acres	*No additional context.*
Number of Residential Units	33 units	range from 1000 square feet to over 2000 square feet
Types of Units	Duplexes, flats, townhouses	Multi-generational cohousing communities. Includes a 3,900 sq. ft. common house equipped with large kitchen and dinning hall for community events, guests' quarters, shared laundry, play room, and common seating area.
Price Range of Units	$578,000 - $660,000	No current listings. A home sold in February, 2024 for $578,000 for a 1012 sq. ft. unit ($571/sq. ft.) and another in 2022 for $660,000 for 1,417 sq. ft. unit ($466/sq. ft.)
Residential Use Land Size	2.5 acres	Ground truthing was completed during observational data collection.
Agricultural Use Land Size	16.8 acres	Ground truthing was completed during observational data collection. The agrihood website states 20 acres are identified as agricultural land, however within these 20 acres approximately 1.2 acres is used for their engineered wetland marsh as their wastewater treatment system and 2 acres include a waterway and forested area.
Soil Class	Class 2	Confirmed using the Government of British Columbia's Soil Information Finder Tool's soil mapping data.

Information Category	Data	Additional Context
Food Sale Mechanism	CSA, Farmers' Markets at adjacent park, direct-to-consumer sales	*No additional context.*
Farm Management	Affiliated Co-operative	*No additional context.*
Management Type	For-profit	Membership-led
Other Use Land Size	3.2 acres	Approximately 1.2 acres is used for their engineered wetland marsh as their wastewater treatment system and 2 acres include a waterway and forested area.

Figure 4-4 - Yarrow Ecovillage Spatial Design Map

4.1.3.1 Yarrow Ecovillage Description

Yarrow Ecovillage is described as a purpose-built community located in the village of Yarrow within the municipal boundaries of Chilliwack, British Columbia. Yarrow Ecovillage Society (YES) Cooperative was formed and purchased the property, formerly a dairy operation, in August 2002. The YES Cooperative began agricultural operations in 2003, five years prior to any housing development, and has progressed to encompass a 20-acre certified organic farm and a 33-unit intergenerational cohousing community on approximately 2.5 acres of land. The spatial configuration of Yarrow Ecovillage is characterized by its integration of residential structures with agricultural and communal spaces, adopting a co-housing design, and functioning with collective community responsibilities.

The development of the Yarrow Ecovillage was influenced by early visions of eco-communities. The developer shared that the founders aimed for a community with a

better quality of life, closer ties to the environment, and a strong communal fabric. Visioning workshops were conducted to establish a framework of values. The idea was that with a shared vision and values, the nuances of policies and plans would naturally align. The ecovillage was influenced by the three pillars of sustainability: financial, ecological, and social-cultural. This holistic approach shaped the design and operational principles of the community. Sociocracy, a consensus-based decision-making style, was described as being integral to the process, promoting a cooperative approach to community governance. The founders wanted to aim for greater diversity, including economic diversity. This meant that the community had to be open to people with different financial means and a passion for working the land. These insights offered by the developer indicated that the Yarrow Ecovillage was founded with a strong emphasis on sustainability, community values, and diversity, with the intention to create a model that goes beyond typical cohousing in terms of environmental and social-cultural integration.

Central to the development is the organic farm, which operates as the ecological and social nucleus of the community. Early on in establishing the farm there were discussions about the viability of agriculture as a standalone operation, reflecting a broader concern about whether farming is economically sustainable without additional uses. Today, the farm is managed by the Yarrow Ecovillage Community Farm Cooperative. Multiple producers lease plots of varying sizes, allowing for individual agricultural operations that benefit from and contribute to the community's collective resources and knowledge. Food production was designed throughout the community, as seen by the herb gardens and fruit trees incorporated throughout the residential area and intended to be available for any resident to harvest.

Farmers that were interviewed expressed they could pursue their interests in food production, specifically mentioning permaculture, in a supportive environment. They also believed that the cooperative model with farmers sharing values, such as organic farming techniques, is critical to their collaboration and success. Concerns were expressed around different approaches, such as tilling practices, to maintaining soil

health and weed management in a cooperative model. Overall, the farmers were making little more than the cost of their lease due to the challenges of selling produce at local markets and the complex relationship with the local food economy. For example, many of the homes in the Yarrow village were large enough for people to have their own gardens, so the community bought less from the local, small-scale farmer. However, it was not all about profit, as they also expressed the community aspect and the importance of giving back, as exemplified by the farmers donating food and resources to those who lost crops during the recent flooding and heat wave.

There were plans for affordable housing and spaces where farmers could market their produce, indicating an intention to integrate economic opportunities for residents within the design of the ecovillage. However, two farmer-community members interviewed noted that housing affordability is an issue for anyone who wants to be a farmer in the agrihood, as income from farming is not enough to allow someone to purchase a home in the agrihood. They shared an example of two farmers who were renting a home and leasing farmland but their landlord listed the home for sale and they could not afford to purchase it. As a result, they had to move out of the community when the unit was sold. In the interview, the farmers expressed this being a loss for the agrihood since they were good farmers that contributed a lot to the cooperative.

Another young farmer who was interviewed shared her story of purchasing a residential unit in the agrihood so she could become an entrepreneur and start her own hazelnut orchard. When she moved to the agrihood, a previous farmer was moving and sold her his orchard. She also expressed the benefit of being able to learn to farm from other farmers in the cooperative who share plots next to hers. Her goal is to grow her operation so she can hire a staff member, indicating opportunities for economic development and job creation in agriculture. She also led the creation of a sign-up sheet for residents to see what extra food farmers have available for sale, helping to reduce food waste and encourage additional purchasing at the farmgate.

The farm activities are multifaceted and dependent on who is leasing plots of land. There was turnover in farmers leasing the land, which has created challenges for consistency but also created opportunities, as new ideas and resources are brought to the agrihood with new farmers. Generally, the farm features organic crop cultivation, a permaculture food forest, walking trails for residents, and a Community Supported Agriculture (CSA) program. The CSA is instrumental in establishing a direct consumer-producer relationship within the community, and the produce is also distributed through local farmers' markets, thereby extending the agrihood's reach to the broader regional community. As farmers have rotated through, the CSA program has not always been consistently offered. Other methods of connecting food sales are being tested by the farmers, both in a collective arrangement and individually. Farmers from within the agrihood, as well as the broader community, lease land from the co-operative. A plot is also leased by the local food bank which has hired a farmer to use the land to produce fresh produce for their program. The entire property is made up of Class 2 soil, considered to be prime agricultural land with little limitations for food production.

4.1.3.2 Yarrow Ecovillage - Land Use Planning Framework and Processes

The planning and development of the Yarrow Ecovillage have been deeply influenced by a commitment to sustainability and community values. This commitment is evident in the intentional integration of mission and values into the development process, guided by the ecovillage founders and supported by visuals that helped to communicate these ideals to city planners.

The developers also engaged in a three-part consultation process, which included internal workshops, discussions with city authorities, and public input. This inclusive approach helped to align the community's vision with municipal planning frameworks, resulting in innovative zoning solutions that support sustainable living.

Initially, the Yarrow Ecovillage faced skepticism from traditional planning entities. However, pivotal moments arose when personal experiences and the visible commitment of the developers turned city planners into advocates for the project. This

shift was crucial in overcoming initial doubts and integrating the ecovillage into the broader planning landscape.

Challenges, such as internal conflicts and budget overtures, were part of the journey, reflecting the complexities inherent in pioneering sustainable community models. There were also encounters with counter-narratives that questioned the viability of combining agriculture with development, which the ecovillage addressed by demonstrating the value of preserving farming within a community context.

During an interview, the municipal planner highlighted Yarrow Ecovillage's suitability to its location in a region with a long-standing agricultural tradition. The planner noted it is positioned on transitionary land as you leave the Yarrow village towards the countryside and that the farm area of the agrihood is within the ALR. The planner stated that the agrihood aligns with the municipality's OCP goals of supporting and encouraging agriculture and agricultural productivity, including innovation and education in agriculture.

At the time of the ecovillage's approval and development, the city did not have a climate change plan, but one is currently in development. The planner acknowledged the ecovillage's potential alignment with the climate change plan due to its emphasis on sustainable housing, sustainable food systems and resource efficiency.

The planning staff of Chilliwack was noted to be open-minded and supportive in exploring rezoning bylaws to accommodate the ecovillage, reflecting a forward-thinking approach to community planning. This has led to the policies and zoning bylaws that were specially created to support this development project. The zoning is split between Agricultural Lowland Zone (AL) at 88% and Ecovillage Zone (EV) at 12%. The AL lands are also entirely within the province's ALR. Key aspects of the zoning bylaws relevant to the ecovillage's agrihood characteristics include:

- Agricultural Lowland Zone (AL) permits a range of agricultural and residential activities. This includes conditional and general agriculture. Ancillary Uses:

These include accessory dwelling units, home occupations, boarding, cottage industry, farm retail sales, and rural ancillary uses. These provisions support small-scale, agriculture-related commercial activities that are typical of an agrihood.

- Ecovillage Zone (EV) principal uses include a mix of residential and community-oriented uses like child care facilities, cultural facilities, schools, and religious assemblies. It also includes restricted agriculture, which the municipality's zoning bylaws defines this as the growing of crops and raising of livestock and other agricultural activities, limited to the raising of livestock or poultry to a maximum density of 1 animal unit per hectare, growing of all field, orchard, and nursery crops, greenhouse operations, mushroom farming but not the curing of manure, storage and maintenance of farm machinery used on that farm, and apiaries and aviaries. Notable ancillary uses in the EV zone include boarding, cottage industry, parking, and farm retail sales. A maximum of 33 dwelling units (DUs) are permitted on the main parcel and an additional four are permitted on the severed lot, ensuring controlled residential growth within the ecovillage.

The land use planning policies and bylaws specially designed for the Yarrow Ecovillage provide a framework that supports its development as an agrihood, protecting the agricultural features and allowing farm-related business activities to be pursued. They allow for a blend of agricultural and residential uses, along with ancillary activities that foster a community-oriented, sustainable lifestyle centred around agriculture. The emphasis on controlled residential growth, along with provisions for small-scale commercial and community activities, further reinforces the ecovillage's agrihood characteristics.

4.1.4 Creekside Mills, Lindell Beach, BC

Table 4-5 Creekside Mills Quick Facts

Information Category	Data	Additional Context
Year Initiated	2012	*No additional context.*
Developer	Frosst Creek Development Ltd.	*No additional context.*
Total Size	79 acres	*No additional context.*
Number of Residential Units	129	*No additional context.*
Types of Units	Single-family residences	*No additional context.*
Price Range of Units	$839,000 - $1,075,000	2024 real estate listings range from $839,000 for a 1,158 sq. ft. unit ($724/sq. ft) to $1,075,000 for a 1,789 sq. ft. unit ($600/sq. ft)
Residential Use Land Size	26 acres	Ground truthing was not possible as this is a gated community and the developer pulled out of the research. 2023 aerial imaging was used to determine residential area.
Agricultural Use Land Size	2 acres	Ground truthing was not possible as this is a gated community and the developer pulled out of the research. 2023 aerial imaging was used to determine land in agricultural use. While Creekside Mills website says there is 10 acres of protected farmland, aerial images suggest 8 of those acres are forested. The remaining 2 acres appear to be in food production.
Soil Class	Mix of Classes 3 and 5	Confirmed using the Government of British Columbia's Soil Information Finder Tool's soil mapping data.

Information Category	Data	Additional Context
Food Sale Mechanism	*No data available*	*No additional context.*
Farm Management	Developer	Creekside Mills has an on-site farm manager.
Management Type	*No data available*	*No additional context.*
Other Use Land Size	51 acres	Forest and water ways

Figure 4-5 - Creekside Mills Spatial Design Map

4.1.4.1 Creekside Mills Description

Creekside Mills is situated within the neighbourhood of Cultus Lake, British Columbia, in the township of Lindell Beach. The development of Creekside Mills is

spearheaded by the Frosst Creek Development Company, a family company with roots in the Fraser Valley's residential land development scene.

Encompassing a total of 79 acres, the community integrates 129 single-family residences with on-site food production. The community is integrated with the land's natural features and agricultural land within British Columbia's ALR. Approximately ten of its 79 acres is dedicated to food production, including protected farmland, community gardens, and diverse horticultural areas managed by an on-site farmer, albeit aerial images suggest less is in food production, however ground truthing could not occur. The development, less than 90 minutes from Vancouver, positions itself within a rural context, promoting a farm-to-table lifestyle in a secure, gated neighbourhood.

Soil classification mapping shows that the subject lands have a mix of Class 3 and 5 soils. Class 3 soil is considered to be prime agricultural land, while Class 5 has greater limitations that restrict their capability in producing perennial forage crops. The previous owners raised approximately six to eight angus cows, which is suitable and common for Class 5 soils.

A soil classification map overlay on the agrihood shows the entirety of the residential and commercial uses have been developed on the prime agricultural soil, leaving approximately 2 acres left for food production. The remaining Class 5 soil has no development and little to no agricultural activity.

The development supports a full-time farmer to manage the community features, which indicates the development of job opportunities in agriculture.

The developer was not available for participation in the research project, so no further data was collected.

4.1.4.2 Creekside Mills - Land Use Planning Framework and Processes

The municipal planner interviewed for Creekside Mills shared the intention of the agrihood to be a self-sufficient, resort-like community. The design was influenced by the

intention to maintain rural character while providing modern amenities, which led to the creation of community gardens and common spaces that would not have been present in a traditional housing development.

The development included a "6 to 1 land swap" and entered into a covenant that protected “fingers of garden or agricultural land” so they remained undeveloped in perpetuity.

The subject lands are designated under the Resort Residential category in the OCP and present a blend of land use policies that intends to balance environmental sustainability with the development of a resort community. The intent of this policy is to maintain public access to natural assets while mitigating environmental impacts. Conversely, to the notion of public access to the natural assets, the property is zoned as Private Resort Residential Development 1 (PRD-1) and is a gated community.

Permitted uses in this zone are diverse, reflecting the area’s resort character. They include resort residential use, multi-family resort residential use, holiday parks, commercial campgrounds, conservation areas, recreational facilities, parks, golf courses, local commercial mixed use, associated resort use, and assembly use. These uses are encouraged to ensure a wide range of activities associated with resort living are available.

In terms of housing, the policy encourages a range of options, focusing on compact, site-built structures like cabins, cottages, and attached ground-oriented resort dwellings within comprehensive strata developments. Multi-family resort residential use is permitted but generally limited to developments on lands of 2 hectares or more, although unique re-development proposals for smaller sites may be considered.

A significant aspect of these policies is the attention to environmental performance and sustainability. Developments must not only be low-impact but also contribute to greenhouse gas reductions, conserve water and energy, and support long-

term sustainable development. This approach is vital given the environmental sensitivity of the area, especially concerning the health of Cultus Lake.

Amenities play a crucial role in the resort area, categorized into public, semi-private, and private access. Public amenities include spaces like Cultus Lake and community trails, whereas semi-private amenities are more focused on strata owners, including clubhouses, pools, and internal trails. Private amenities are exclusive to individual or single strata owners, like balconies or backyards. Importantly, resort developments should be self-sufficient in recreational amenities, with semi-private and private amenities contributing to the diversity of recreation and leisure pursuits in the area.

The portions of the lands within the ALR must be consistent with the Agricultural Land Commission Act and lands developed adjacent to the ALR should be designed to be compatible with farm use.

4.1.5 Drayton Ridge, Drayton, ON

Table 4-6 Drayton Ridge Quick Facts

Information Category	Data	Additional Context
Year Initiated	Late 90's	Land purchased in late 90s to begin housing development. Concept of a golf course community grew from there. Shortly before 2019 the concept changed to an agrihood.
Developer	Glenaviland Development Corporation (Operating as Drayton Ridge Homes)	*No additional context.*
Total Size	118 acres	*No additional context.*

Information Category	Data	Additional Context
Number of Residential Units	189	*No additional context.*
Types of Units	88-single-family homes; 101 townhomes and condos	*No additional context.*
Price Range of Units	$949,000 - $1,345,000	2024 real estate listings range from $949,000 for a 2,004 sq. ft. unit ($473/sq. ft) to $1,345,000 for a 3001 sq. ft. unit ($448/sq. ft)
Residential Use Land Size	30 acres	Ground truthing was completed during observational data collection. However, the development is not complete. Additional data from the agrihood's website and site maps were used to ensure accuracy.
Agricultural Use Land Size	10 acres	While ground truthing was attempted during observational data collection, significant development was still occurring. Data was confirmed using multiple sources including the municipality, conservation authority, and agrihood websites.
Soil Class	Class 1	Confirmed using the Ontario Ministry of Agriculture, Food and Rural Affairs AgMaps tool.
Food Sale Mechanism	TBD	Food sales have not begun since the agrihood is still being developed. The developer is still deciding these details.
Farm Management	TBD (likely developer)	Farm management and structure is not determined since the agrihood is still being developed. The developer is still deciding these details.

Information Category	Data	Additional Context
Management Type	TBD – likely for-profit	The developer is still deciding these details.
Other Use Land Size	17 acres – golf 5 - commercial 55 acres – forest and walking trails	Of the 55 acres of forested area, approximately 37 acres is controlled and protected by the Grand River Conservation Authority, which includes 13 acres of protected habitat for Bobolink, a provincially designated as a species at risk.

Figure 4-6 - Drayton Ridge Spatial Design Map

4.1.5.1 Drayton Ridge Description

Drayton Ridge is an agrihood currently in the development stages and situated in Drayton, Ontario. Officially announced in 2019 as Ontario's first agrihood, Drayton Ridge is designed over 118 acres, next to the Conestoga River. The development represents the agrihood concept by integrating residential units with agricultural

amenities. The developer was influenced by models seen from the United States, which is reflective in the design.

The initial intention behind Drayton Ridge was to create a golf course community before the agrihood concept was realized. The developer mentioned changing the plan from a golf course to an agrihood because of advice received from a consultant that noted the declining popularity of golf course communities. An agrihood would also better align with county policies. The initial phase, developed prior to the agrihood concept, was not designed with future phasing in mind. As a result, this limitation had implications for the design and location of the farm and residential areas, such as an insufficient sewer system for the increase in density.

The residential aspect of Drayton Ridge is planned to encompass 88 single-family homes alongside 101 townhouses and condominiums, blending private residential units within a communal agricultural framework. The residential units will cover 30 acres. The architectural vision for the community's hub, “the Porch”, is planned to be a multifunctional space hosting community markets, farm-to-table eateries, and social venues.

The developer expressed a desire to create community gathering spaces like gardens to contribute to sustainable livelihoods and the creation of jobs through the development of a restaurant, a microbrewery, and a driving range. There are also potential plans for the agricultural spaces to provide food for the on-site restaurant and local markets. The developer expressed his motivations to pursue an agrihood model with these on-site amenities due to the growing market for local food, agritourism, and community engagement.

Management of the agricultural components of Drayton Ridge appear to still be in the development stage, with an unconfirmed size of parcel that will be dedicated to agriculture. Current plans suggest it will be approximately 10 acres in size.

The planner described the agrihood as attractive to those who grew up farming and want to continue in a smaller capacity. While the development continues to progress, farming activities are maintained by a neighbour farmer to help keep agricultural aspects and tax benefits.

The non-residential land use, totaling 88 acres, is described as being maintained as environmentally friendly land that will also include a golf academy. Although explicit details of the management entity have not yet been determined, the integration of a golf academy suggests a for-profit model, striving to balance economic viability with ecological stewardship.

4.1.5.2 Drayton Ridge – Land Use Planning Framework and Processes

For the development of Drayton Ridge, the land use planning framework incorporates multiple designations to balance residential growth, recreational activities, and environmental conservation. This framework includes Residential (Urban Centre), Recreational, and Core Greenlands areas, including a special protected area for Bobolink habitat, a bird that has been provincially designated as a species at risk.

While the developer noted there was initial opposition to increased density from local residents, the municipal planner noted that the community was mostly positive about the agrihood, showing interest and curiosity without much pushback. The developer faced the challenge of justifying the use of prime agricultural land for this project, particularly in light of provincial regulations that were prohibitive of non-agricultural land uses on prime agricultural land.

The development, situated on the edge of the urban boundary, is designed to reflect the unique urban-rural interface. It is not planned for intensive agriculture but rather to promote a community farming culture, allowing residents to actively engage in farming activities. The land designated for residential, commercial, golf activities, and farming all reside on Class 1 soil, which is considered to be the best land for crops with no significant limitations for food production.

In the Residential (Urban Centre) area, the focus is on a diverse mix of housing types, including single-detached, semi-detached, townhouses, and apartments. This mix aims to provide diversity and affordability while preserving the small-town feel. The area also accommodates non-residential uses such as schools, clinics, and local stores, all subject to specific criteria to ensure compatibility with the residential environment, however, these were not expressed as planned uses by the developer.

The Recreational designation supports various public and private recreational facilities, like parks, playgrounds, and trails, with a mandate to respect the natural environment and meet community needs.

Core Greenlands, designated as protected areas, include floodplains, vital wetlands and habitats for endangered species. Development is highly restricted to safeguard ecological functions.

The zoning for Drayton Ridge includes Low Density Residential (R1C), Medium Density Residential (R2), and High Density (R3), Open Space (OS), and Future Development (FD). In addition to the permitted uses set out in the municipality's zoning bylaws for the identified zones, the designation of a Special Policy Area (PA4-8) applies to the subject lands which permit an agrihood community. The zoning by-law further explains that this including, but not limited to, a community market, farm-to-table eater, a local brewery, a golf academy and meeting rooms, an event barn, vegetable gardens, tree nursery, fruit trees and in-ground crops such as hops, pumpkin patches, and sunflower fields, a lookout peak and recreational trails, practice golf greens and a golf driving range.

4.2 Case Study Communities Synthesis

The synthesis of the five case studies will offer a detailed examination of their history, physical characteristics, methods of farmland preservation, engagement in food production and sales, and the land use planning policies and zoning bylaws facilitating

their development. Four communities are located within British Columbia, providing limited geographic variation within Canada.

This exploration aims to uncover both the differences and nuanced impacts of development-supported agriculture within their respective communities, albeit limited with the varying degrees of data that was possible to collect. It will also delve into the types of land use policies implemented, their influence on agrihood development, and examine any application of conflict mitigation strategies amidst varying land uses.

4.2.1 Development History

Comparing and contrasting the five agrihoods' historical backgrounds, can provide insight into the variations and commonalities amongst Canadian agrihoods. Looking at the five agrihoods, each one was developed on land that had previously been used for agriculture. Despite all being developed on farmland, the impetus for incorporating agriculture in the development differed amongst the communities. The lands used for these agrihoods were purchased between the late 1980s to the early 2000's. It took between six and 19 years for construction to begin. The developer with the longest timeframe began with a concept of a golf course community before pivoting to an agrihood in the later part of the 2010's. The two agrihoods with the shortest timeframes had a vision for developing a sustainable community that incorporated food production in order to rationalize the purchase of the lands. The other agrihoods were purchased with the intent to develop and the concept of an agrihood came later.

Two were developed as ecovillages, which aim to incorporate sustainability principles into daily community life. This inherently means food production is a major component of the design consideration for these communities. Three communities were being created by development companies (developer-created), while two of the communities were a collective of individuals (collective-created) that shared similar values. Two of the developer-created agrihoods includes land in the ALR, while only one of the collective-created agrihoods has land in the ALR.

The Ontario agrihood was originally intended to be a golf-course community but shifted to an agrihood that incorporates golf as a recreational amenity within the community design. This community is still in the development stage and is not fully complete. While agricultural activities are occurring on the property, this is being done by a nearby farmer renting the land for his own operation and not for the integration of agriculture into the agrihood.

All three of the developer-created agrihoods are for-profit companies, while one of those companies has partnered with not-for-profit organizations to support ongoing agricultural activities. The other two developer-driven agrihoods maintain ownership and management of the agricultural activities. Uniquely, one of these agrihoods is a gated, private, residential resort community. One developer-created agrihood operates as a strata corporation, while one is a mix of strata and non-strata homes. The third is non-strata but development continues with this agrihood and the developer has indicated that a condominium corporation will likely be formed for the low- and mid-rise housing units.

One of the collective-created agrihoods established a charitable non-profit, which owns the land and operates the agricultural activities. The other collective-created agrihood created a co-operative model for the farm operation and a strata corporation, allowing for shared spaces and private ownership of the housing.

This information showcases various types of actors that can be involved in developing agrihood communities. These case studies have demonstrated that a collective of individuals can be as successful at developing these communities as developers. There appears to be correlation between shorter timeframes for the development projects and the type of developer that initiates them. This information on ownership models, whether by a not-for-profit organization, a for-profit business, condominium models, or individual owned units, will allow comparison to the literature on agrihoods.

4.2.2 Agrihood Spatial Characteristics

The five agrihood case study communities vary in total size, number of units, types of units, density, and amount of acreage dedicated for the working farm and other land uses, such as open space. Southlands is the largest community with a total of 537 acres and the smallest are O.U.R. Ecovillage and Yarrow Ecovillage with 25 acres each. Yarrow, Southlands, and O.U.R. Ecovillage contain the greatest percentage of farmland with 67.2%, 60%, and 58% respectively (Table 4-6). Creekside Mills and Drayton Ridge have significantly less proportion of their agrihoods dedicated to food production with 2.5% and 8.5% respectively.

The net residential density is a measurement of the number of residential units per acre of land identified for residential developed. The net residential density ranges from five units per acre at Creekside Mills and up to 14 units per acre in O.U.R. Ecovillage. However, O.U.R. Ecovillage is only permitted one dwelling per hectare, and they plan to have a maximum of nine units on the property clustered onto approximately 0.56 acres. The second greatest housing density is Yarrow Ecovillage with 13.2 units per acre followed by Southlands with a density of eight units per acre and Drayton Ridge with 6.3 units per acre.

The gross developed land is the amount of land that is (or will be) developed for residential and commercial uses. In the case of Drayton Ridge, this includes land used for golfing activities. Drayton Ridge has the greatest percentage dedicated for development with 43%. The lowest developed land is seen in O.U.R. Ecovillage with 3.2%. This is significantly lower than the next agrihood, which is Yarrow Ecovillage at 20%.

The amount of farmland per unit also gives a sense of how much land would be available per household if divided equally. Although this is not how farmland is managed within the agrihoods, it gives a general characteristic of land in food production per household. O.U.R. Ecovillage has the greatest farm acres per unit at 1.6. The second

greatest farm acres per unit is seen in Yarrow Ecovillage at 0.34. The lowest is seen at Creekside Mills at 0.02.

Natural lands, such as forests and waterways, are another feature of agrihoods that are often promoted as an amenity. Natural landscapes are also a contributing factor in sustainable food production. Creekside Mills has the greatest percentage of natural lands included in their agrihood at 64.5%. These data sets are summarized below in Table 4-6.

The comparison reveals a diverse approach to integrating agriculture, residential, and natural heritage land use. These agrihoods demonstrate varying balances in terms of land allocation for farming, residential and commercial density, and preservation of natural landscapes. The data underlines the potential for agrihoods to offer a range of lifestyles, from densely populated communities with limited farmland to more expansive agricultural settings, highlighting the versatility and adaptability of the agrihood model.

Table 4-7 Spatial Characteristics

	Total Size (Acres)	Farm Size (Acres)	Farm Size (%)	Net Res. Den. (units per acre)	Gross Dev'd Land (Acres)	Gross Dev'd Land (%)	Farm Acres per Unit	Natural Lands (%)
O.U.R. Ecovillage	25	14.5	58%	14	0.8	3.2%	1.6	38.8%
Southlands	537	325	60%	8	116	21.6%	0.34	18.4%

	Total Size (Acres)	Farm Size (Acres)	Farm Size (%)	Net Res. Den. (units per acre)	Gross Dev'd Land (Acres)	Gross Dev'd Land (%)	Farm Acres per Unit	Natural Lands (%)
Yarrow Ecovillage	25	16.8	67.2%	13.2	5	20%	0.5	12.8%
Creekside Mills	79	2	2.5%	5	26	32%	0.02	64.5%
Drayton Ridge	118	10	8.5%	6.3	51	43%	0.05	48.5%

4.2.3 Farmland Preservation

The protection level and approach for farmland differ across the five case studies. Forms of protection include public ownership, the ALR (specific to British Columbia), and conservation easement agreements (CEA). The ALR is a provincial land use zone applied to lands where agriculture is recognized as the priority use. However, there is some debate as to whether the ALR provides significant protection, since land is often swapped in and out of the ALR suggesting there is no guarantee for the long-term preservation of farmland. Furthermore, as in the case of Yarrow Ecovillage, oil and gas pipelines are permitted to run under the agricultural land in the ALR. Although the pipelines are covered and agriculture can resume, the quality of the land may not be returned to its original quality and there runs the risk of oil spills and contamination. Comparatively, CEAs are legal agreements that are registered on property title and

include covenants that restrict certain activities. Typically, a conservation organization or a municipality are the holders of a CEA and are responsible for ensuring the conservation interests are upheld.

Three agrihoods in British Columbia, Southlands, Yarrow Ecovillage, and Creekside Mills, have their farmland included in the ALR. The developer for Southlands also donated 425 acres to the municipality as their method of preserving the agricultural and ecological features. However, while conservation covenants were recommended, there is no indication that these have been applied, meaning that in the future, a different council could choose to sell the lands and permit development.

Furthermore, during the approval process for Southlands, one city councillor opposed the development proposal as he did not believe that the developer should be rewarded after they allowed the land and drainage system to deteriorate, degrading its agricultural potential. Concerns were also raised that this will signal to speculators that more farmland can be used for development. However, in addition to the donated land, Century Group also pledged $9 million to fund irrigation and drainage work, showing a significant investment into agriculture as a result of the development project. This research was unable to confirm if the investment in irrigation and drainage work actually occurred.

While O.U.R. Ecovillage does not have protection over their farmland, they worked with conservation organizations to place a CEA on the title to protect the ecological features. The protection of farmland in their case came in the spatial design of the agrihood where they clustered the homes in order to save the greatest amount of land for food production. This does not necessarily provide long-term guarantee, should the property ever sell and planning policies change to permit more development.

Drayton Ridge does not have any form of agricultural protection. They do have natural lands that are controlled and protected by the local conservation authority that restricts development near the riparian area and on an area of the property that has

been identified as conservation habitat for Bobolinks. Additionally, new laws in Ontario have stripped conservation authorities of various capabilities and monetary resources they previously employed to manage and safeguard essential watershed areas, calling into question their ability to provide long-term protection (Pothen, 2022). Table 4-7 summarizes the farmland protection characteristics per site discussed above.

Table 4-8 Farmland Protection

	Description of Protection	Permanent Protection of Farmland	Developer Driven?
O.U.R. Ecovillage	Conservation easement agreement	No – only ecological features	Yes
Southlands	Land publicly owned, placed in the ALR	Presumably	Partial
Yarrow Ecovillage	Farmland in the ALR	Presumably	No
Creekside Mills	Farmland in the ALR, possible conservation easement agreement (could not verify)	Presumably	No
Drayton Ridge	Conservation authority-controlled land	No	No

4.2.4 Food System and Management Structure

As stated in the Breger (2020) study, the number of various farm management structures that exist is as numerous as the number of agrihoods. Each agrihood had a different variation to the ownership and management of the farm, which are summarized below in Table 4-8. In no instance did the home-owners association own the farmland. Furthermore, no private outside entity owned the farmland. However, unique to

Southlands, the majority of farmland was donated to the municipality and therefore a public, outside entity owned the land. The remaining agrihoods' farms were owned by either the developer or an affiliated organization (co-operatives).

The developer for Creekside Mills hired their own farm manager, who also lives within the community. Since data collection is missing form Creekside Mills, it was not possible to confirm whether the food is sold only to residents of the agrihood. Since Drayton Ridge does not have their agrihood farm operation established yet, they are still determining what structure they will employ, but the developer did suggest a similar model to Creekside Mills. Southlands, while publicly owned, has a variety of private farm businesses and not-for-profit organizations managing parts of the land. The food sales for these are sold within the community at farmers markets, CSAs, direct to food retailers within the community, and through the private farm business sales outlets. O.U.R. Ecovillage and Yarrow Ecovillage have their farms managed by members of their co-operative. Yarrow Ecovillage co-operative members includes community members from outside the agrihood. Food sales for both communities are done through CSAs, farmgate sales, and famers markets. The non-agrihood co-operative members from the Yarrow Ecovillage also sell their products through their own business sales outlets including directly to restaurants. Unique to Yarrow is a co-operative member who has been hired by the food bank to lease land from the agrihood to grow fresh produce for their program.

Table 4-9 Food System and Management Structure

	Farmland Owner	Management Type	Residential Fee to Support Farm?
O.U.R. Ecovillage	Affiliated Co-operative	Affiliated Co-operative – Non-profit	No
Southlands	Publicly owned	Multi-stakeholder management including non-profit	No

	Farmland Owner	Management Type	Residential Fee to Support Farm?
		organizations and for-profit farm businesses	
Yarrow Ecovillage	Affiliated Co-operative	Affiliated Co-operative – For-profit	No
Creekside Mills	Developer	Developer – for-profit	Yes
Drayton Ridge	TBD (likely developer)	TBD (likely developer, for-profit)	TBD (likely yes)

4.2.5 Land Use Planning and Process Comparison

Each case study offers unique insights into how agrihoods navigate municipal planning frameworks in order to develop these alternative communities. Each community faced some level of opposition, albeit for different reasons. While O.U.R. Ecovillage and Yarrow Ecovillage both faced initial challenges due to its unconventional approach to sustainable community development and collective ownership, both municipal planning departments' openness to explore innovative community designs led to the adoption of planning policies that would support its development. Both Southlands and Creekside Mills received initial opposition due to the development on their respective subject lands. Southlands appeared to receive opposition related to environmental concerns and lack of maintenance of the agricultural infrastructure, such as the existing irrigation and drainage system. Creekside Mills' opposition, was concerned with the development on ALR lands. Finally, despite Drayton Ridge development being on Class 1 farmland, the opposition was predominantly regarding higher density that was mandated by provincial policy. Interestingly, Drayton Ridge has the second lowest density of all the case studies.

O.U.R. Ecovillage represent the only agrihood that is predominantly within the rural countryside. Whereas Yarrow Ecovillage, Southlands and Drayton Ridge are agrihoods along the peri-urban boundaries and represent rural-urban interface development projects. Creekside Mills is more rural but still close to other developments, such as housing or resorts.

Southlands stands out for its diverse land-use designations, catering to a range of needs from residential housing to agricultural and environmentally sensitive areas. This master-planned community strategically directs housing to specific zones, avoiding prime agricultural land, while protecting environmentally sensitive areas. The absence of detailed developer or planner perspectives limits deeper insights into the planning process, yet the zoning framework speaks to a comprehensive approach to community planning, balancing residential, agricultural, and environmental needs.

Yarrow Ecovillage's journey was marked by its commitment to sustainability and community values. Despite initial skepticism from traditional planning entities, the ecovillage's engagement in a three-part consultation process, involving internal workshops, discussions with city authorities, and public input, facilitated innovative zoning solutions. The openness by the municipal planners reflects a similar experience to the O.U.R. Ecovillage and led to the creation of an Ecovillage Zone (EV) designation, fostering a blend of agricultural and residential uses that align with the municipality's sustainability goals.

Creekside Mills' designation of Private Resort Residential Development 1 (PRD-1) zoning, despite its gated community nature, allows for a wide range of recreational and residential activities. This case reflects a nuanced approach to land use, where luxury living coexists with food production and environmental sustainability.

Drayton Ridge experienced challenges associated with its eventual shift to the agrihood concept. This late and drastic change in inception had implications for the

design and location of the farm and residential areas, resulting in insufficient sewer system for the increased density.

4.3 Resident Survey

The results from the residential survey are reflective of only the Yarrow Ecovillage. As previously stated, the other case study communities were unresponsive to requests to distribute the survey or had requested the survey not be administered.

Yarrow had an estimated response rate of 36% (Table 4-9). The survey was circulated to residents on October 9, 2021. A reminder was sent again on October 25, 2021. The survey was closed on October 31, 2021.

Table 4-10 Resident Survey

	# of Responses	Est. # of Households Received Survey	Est. Response Rate by Household	Date Survey Sent	Date Survey Closed
Yarrow Ecovillage	12	33	36.3%	October 9, 2021	October 31, 2021

Each respondent identified the agrihood as their primary residence. Age distribution was diverse, with notable representation across different age groups, predominantly in the age ranges of 35-44, 55-64, and 65-74. The majority were women (82%), and while no respondents identified as Black, Indigenous, Person of Colour, or recent immigrants, there was representation from the LGBT2Q+ community (25%), differently-abled individuals (25%), and non-neurotypical persons (17%).

Income levels varied, with 40% reporting household incomes between $100,000 and $149,000. Most respondents previously lived in suburban (50%) or urban (41%) areas, with only one respondent moving to the agrihood from the rural countryside. The

average relocation distance to the agrihood was 53.3 km, excluding two outliers whose distance was 1,200 km and 2,400km.

Top motivations for moving to the agrihood included the community's character and feel (11), the opportunity to live on a farm (9), and for the community events (8). These were followed by opportunity to work on a farm (7), access to locally grown food (7), and opportunity to garden (5). While the latter tended to rank lower in their motivation, five of the seven respondents ranked the opportunity to work on a farm within their top three motivations for moving. Organic and sustainable practices were important to most respondents. The opportunity to raise livestock was also selected by four respondents, each with a specific interest in chickens.

One-third of the respondents were members of the CSA program. The most cited motivations for being a member included supporting local farmers and environmental benefits. Non-members cited the CSA being not available, limited options and inconvenience as reasons why they did not participate. Half of the respondents (50%) frequently purchased food from agrihood farmers, spending an average of $19.38 per purchase.

There was a notable increase in appreciation and understanding of agriculture post-move with 91% identifying as either having more or significantly greater appreciation and 58% having a better understanding of how food is produced. Over half maintained a community garden plot, yet there was a perceived low collective effort in supporting the farm. Dietary changes occurred with 75% of the respondents, including purchasing more locally sourced, seasonal, and fresh foods, with an uptick in home cooking.

A strong sense of attachment to the agrihood was evident, with 91% feeling attached and appreciating its ambiance. However, desired amenities that respondents felt were missing included a workshop (2), pottery or art studio (2), hot tub (2), sauna (2), swimming hole (1), hiking or cycle group (1), and a covered outdoor space (1).

Volunteering on the farm would occur a few times per season for 55% of the respondents. The remaining respondents were split between either volunteer more frequently or not at all. Main motivations for volunteering included outdoor enjoyment and community engagement.

A significant proportion, 73%, reported increased happiness, fulfillment, and reduced stress since moving to the agrihood, though a small proportion experienced heightened stress. The COVID-19 pandemic, family emergencies, and strata corporation responsibilities were cited as contributing factors for some of the respondents. Overall, the majority experienced a positive trend in health and wellbeing.

The survey results from Yarrow Ecovillage offer valuable insights into the lifestyle, motivations, and experiences of agrihood residents. While the absence of responses from other agrihoods constrains broader conclusions, the findings from Yarrow provide a meaningful glimpse into the impact of such communities on resident wellbeing and engagement with sustainable living practices.

5 Discussion

5.1 Agrihoods as a Form of Development-Supported Agriculture

Development-supported agriculture establishes a sustainable model of land use for the urban-rural interface that preserves farming culture, agricultural land, and community-based food security (Weiler, 2023). The case studies exemplify varying degrees to which the agrihoods could be considered a form of development-supported agriculture. For instance, Drayton Ridge and Creekside Mills both develop on a significant portion of the best farmland on the respective subject lands. Furthermore, the total area reserved for agricultural activity is limited to 8.5% and 2.5% respectively. This calls into question whether their model preserves agricultural land and whether enough food could be produced to contribute to community-based food security.

O.U.R. Ecovillage, Southlands, and Yarrow Ecovillage each have a significant portion of farmland reserved for food production. Yarrow Ecovillage and Southlands

also have the farmland protected through the ALR. While O.U.R. Ecovillage does not have protection on the farmland, the cluster design of housing was intentional to ensure the greatest amount of farmland was available for food production, signaling a long-term commitment on their part to protect the agricultural land. Meanwhile, Southlands approach to farmland preservation involved donating the farmland to the municipality. It is yet to be determined whether this would result in its long-term protection.

Although farming culture is not defined, the affordability of housing calls into question whether farmers can afford to live within these communities. As noted in the Yarrow Ecovillage, the residents do not make enough from farming to purchase homes within their community. This case study also has the lowest housing prices compared to the others, with the exception of O.U.R. Ecovillage data on housing prices were not available. It is presumed that O.U.R. Ecovillage model would provide affordable housing options for farmers given their focus on the matter and the significant amount of activities that keep the construction costs to a minimum. However, if farmers cannot afford a place to live within these communities, agriculture becomes a less viable career and undermines the ability to preserve farming culture in a significant way.

The survey from Yarrow Ecovillage suggests that their agrihood model contributed to a notable increase in appreciation and understanding of agriculture and how food is produced. This led to dietary changes including purchasing more locally sourced, seasonal, and fresh foods. This suggests that while the community may not provide enough revenue for a farmer to afford a home within the agrihood, there would be economic benefits with an increase in local food purchases from farmers within the greater agricultural community.

Southlands was also the only case study that had any indication of a commitment, whether followed through or not, to use development funds being used to directly improve the agricultural lands. Using revenue from the development was a part of Weiler's (2023) framework for development-supported agriculture, however, it bears

to question whether Southlands investment would be considered an investment after having allowed the agricultural land and infrastructure to deteriorate in the first place.

Considering whether agrihoods are a form of development-supported agriculture is critical if they are being promoted as such. Without any standard framework for testing whether an agrihood proposal is a form of development-supported agriculture, municipalities are left to make this decision based solely on the developer's proposal. Table 5-1 provides a summary of whether elements of development-supported agriculture, as described in the literature, were identified for each of the case studies.

Table 5-1 Indications of Development-Supported Agriculture

Elements of Development-Supported Agriculture:	O.U.R. Ecovillage	Southlands	Yarrow Ecovillage	Creekside Mills	Drayton Ridge
Sustainable Model of Land Use	Strong Indication	Strong Indication	Strong Indication	Difficult to Determine	No Indication
Urban-Rural Interface	No	Yes	Yes	Yes	Yes
Preserving Farmland	Yes (14.5 acres)	Yes (325 acres)	Yes (16.8 acres)	Yes (2 acres)	No (10 acres)
Preserves Farming Culture	Strong Indication	Difficult to Determine	Strong Indication	Difficult to Determine	Cannot Determine
Preserves Community-based Food Security	Strong Indication	Strong Indication	Strong Indication	Difficult to Determine	Difficult to Determine

Elements of Development-Supported Agriculture:	O.U.R. Ecovillage	Southlands	Yarrow Ecovillage	Creekside Mills	Drayton Ridge
Revenues from Development Invested into Agriculture	Difficult to Determine (no major revenues as not-for-profit but other investments made)	Difficult to Determine (expressed commitment, not confirmed)	Difficult to Determine (Investments noted were from grants)	Difficult to Determine (appears to support on-site farmer)	Difficult to Determine (agriculture operation not yet active)

5.2 Characterizing Agrihoods

The literature explored a variety of characteristics believed to be associated with agrihoods. The paradox of development-supported agriculture highlights the inherent conflict between the goals of real estate development and sustaining agricultural operations. This conflict arises as developers aim to create appealing, modern living spaces that integrate agricultural elements, often marketed as agrihoods, which promise to offer a blend of community living with sustainable, locally-sourced food production. While this model suggests a harmonious blend of development and agriculture, it often poses a significant challenge where the economic pressures of real estate development can threaten the very farmland they develop and the agricultural system they declare they would support.

On one hand, development-supported agriculture promotes the preservation of farmland, the support of local food systems, and the fostering of community around sustainable living principles. On the other, the profitability of real estate development frequently leads to higher land values, which can make it unaffordable for actual farming operations, thus contradicting the goal of supporting sustainable agriculture. Moreover,

while these developments can offer new markets for farmers and a more visible connection between consumers and their food sources, they also risk reducing agriculture to a mere aesthetic or amenity, potentially overshadowing the critical economic and environmental roles that genuine agricultural practices play.

This paradox requires careful planning and genuine commitment to agricultural values to ensure that development-supported agriculture does not devolve into simple real estate ventures with superficial agricultural elements but rather evolve into true agrihoods, where sustainable living and genuine farming coexist in a mutually beneficial manner.

While agrihoods are presented in the literature as synonymous to development-supported agriculture, the previous section described the challenges of making such an assumption by exploring some of the characteristics that contribute to such a paradox of development-supported agriculture. This section will explore whether the various other characteristics identified in the literature, which contribute to the paradox of development-supported agriculture, and whether they are exemplified within Canadian agrihoods.

While food security is cited as a benefit (Breger, 2020; Norris, 2018; Weiler, 2023), measuring impacts to food security in this research projected was limited given the short period of time this research was conducted. Given that O.U.R. Ecovillage and Yarrow Ecovillage properties went from producing a few beef cows and a small dairy operation, respectively, they now produce a wide range of food products while keeping relatively the same amount of land in agriculture. Meanwhile, O.U.R. Ecovillage also still raises several livestock. Yarrow Ecovillage also contributed to food shortages after crops were lost to flooding and heat waves. This provides an indication that the models of food production adopted by these two agrihoods could contribute to greater food security for a community. It is difficult to confirm whether the other three models contribute to food security given that land quality was noted as being depleted once the Southlands developer purchased the property, that Creekside Mills developed on the

best farmland on the property, and Drayton Ridge is developing on a significant portion of prime farmland and does not yet have a food production plan for the community.

Reconnection people with food was another theme found within the literature. The Yarrow Ecovillage residential survey certainly showed signed of people feeling more connected with their food that helped improve their food literacy and make healthier food choices. Despite the proximity to food being produced, convenience was still noted by some residents as a factor preventing them from buying directly from the Yarrow Ecovillage farmers. Although the literature says the high level of convenience to access local food in an agrihood conceivably removes this main barrier to local food purchases (Bond et al., 2009; Morgan et al., 2018; Wolf et al., 2005), it appears this is not completely overcome. This is also consistent with the research conducted by Breger (2020) that found approximately 30% of agrihood residents source food directly from the agrihood on a regular basis. With the turnover of farmers in Yarrow Ecovillage and the relatively new structure of these communities, more research could go into establishing best practices for improving engagement of local food purchases by the residents. The young farmer from Yarrow Ecovillage is already working on innovative approaches that may offer future models for improved methods for direct-to-consumer sales within agrihoods.

These agrihoods reflect the findings in the literature that suggests agrihood models vary in size, intentions, and locations. While all would be seen as contributing various amounts of housing supply, only O.U.R. Ecovillage was intentional in providing affordable housing. Although the Yarrow Ecovillage developer mentioned wanting to ensure that people with different financial means would be considered during the initial development stage, current tenant-farmers noted that the free market had priced out lower-income people from living in the community. While the example they gave was valid, it is also interesting to note that the housing prices within Yarrow are still substantially more affordable than the other agrihoods. Therefore, if developers or municipalities are going to look to agrihoods as an opportunity for affordable housing, additional programs or policies will likely be needed to ensure they remain affordable.

While OUR Ecovillage was dedicated to affordable housing, Southlands attempted to cater to diverse demographics. Meanwhile, Yarrow Ecovillage was interested in providing intergenerational, sustainable housing development by adopting co-housing designs. Creekside Mills focused on resort lifestyle housing, catering to a more affluent demographic. Drayton Ridge's housing intentions were difficult to determine. While the case study comparison exemplified the versatility and adaptability of the agrihood model, the goals and intentions of individual communities can result in different outcomes. Getting a clear concept of a proposed agrihood's objectives, such as housing options or farmland preservation, is essential and will determine what model of agrihood may be best suited for particular settings.

A common characteristic of all the agrihoods was environmental sustainability, conservation and preservation of the environment, whether this intention was driven by the developer or not. Hauser (2019) and Norris (2018) suggest sustainable principles are commonly considered. While it appears to be a commonly promoted component of all the Canadian agrihoods, the sustainable practices used or having goals associated with sustainability are inconsistent and therefore, sustainable outcomes of agrihoods should not be so easily assumed.

It is difficult to determine whether the benefits of these communities included positive impacts on climate change, reduced fossil fuel dependency, or led to more people adopting sustainable lifestyle. Yarrow Ecovillage and Southlands both had public transit accessible directly to the communities, indicating the possibility of integrating transit into these communities and within the rural-urban interface. Although sustainable lifestyles were either discussed or promoted as a benefit, it was not possible to capture the impact these communities had on the adoption of sustainable practices. Provincial land use planning authorities have an opportunity to see the most commonly adopted practices and could prescribe through policies and bylaws certain measures or requirements for agrihoods proposals to adopt in order to prevent assumptions by the public or greenwashing.

Furthermore, O.U.R. Ecovillage and Yarrow Ecovillage appeared to be developer-driven in their sustainability efforts not only through land preservation but design and construction. These also happen to be the collective-created agrihoods and not the developer-created agrihoods. Interestingly, despite these two collectives of individuals not coming with a developer's background, these two agrihoods had the shortest timeframe from the land being purchased to the construction beginning. Meanwhile, the three developer-created agrihoods had land farmland protected but this was mainly driven by existing policy, conservation authorities, or to appeal to the community interests. They also experienced significantly longer time between acquiring the land, receiving approvals, and starting construction. Given the current housing access and affordability crisis in Canada, there may be lessons to learn from these collective-driven projects.

Improved health and wellbeing are also considered a benefit of living in an agrihood. Generally speaking, residents from Yarrow Ecovillage did indicate improvements to their health and wellbeing. Only further research with the residents from the other agrihoods would determine whether this is consistent with residents living in the different models.

The agrihoods that appeared to have the most consistent characteristics of an agrihood as described in the literature, are the agrihoods that were collective-driven, ecovillage, development projects. These communities had a collective of individuals with shared values and purpose to create a community that aligned with their intentions, which also happened to align with the characteristics of an agrihood. It is important to recognize that the various literature previously reviewed emphasized the benefits of these communities to different degrees, which is understandable, given the breadth of agrihood models that exist.

There are indications that agrihoods could provide the benefits listed throughout the literature. More research is recommended in order to verify these benefits and the characteristics required to achieve them. A longitudinal study could provide greater

understanding of the impacts on the residents and the broader community as well. The current research findings would suggest that if developing the housing more quickly is a goal, which may be, given the current housing crisis, then governments could invest in support systems for collectives of individuals to design and build their own agrihood communities. If farmland preservation and maintaining food production is a goal, then it is critical to include sustainable agriculture stakeholders on the projects. Regardless of whether these projects are developer- or municipally-driven, the best farmland on the site should be identified and permanently protected to ensure the agrihood and its community members have intrinsic value for the farm. This means that the farm planning, design, and conservation methods should be considered at the onset of the project, along with the other spatial considerations of the agrihood.

5.3 Agricultural Career Opportunities

The research findings can infer that agrihoods can, at the very least, provide opportunities for agricultural careers. Creekside Mills demonstrated the value of agriculture by maintaining one resident farmer within the development. O.U.R. Ecovillage's model included a significant number of education and community engagement opportunities designed to teach sustainable agricultural skills and ideally, teaching new entrants and increasing agricultural opportunities. While determining the impact on the number of agricultural career opportunities is difficult for this agrihood, they do provide alternative methods of acquiring agricultural skills and training that will support the next generation of farmers.

Yarrow Ecovillage also provided a clear example of how a young farmer was seeking farmland and this agrihood provided them with a means to access land in a way they otherwise could not afford. Moreover, this agrihood model t included multiple farmers leasing plots of land next to one another, creating a supportive environment for this new farmer to learn skills and grow their operation. This land was previously owned by one farming family and now several individuals who otherwise would not have purchased a farm have found an alternative pathway into agriculture.

There is evidence to suggest that agrihoods can be used as a tool for economic development, however, there are additional, complex factors that would require consideration in the planning and development of agrihoods. For instance, Giguère (2008) suggests that workforce development requires a long-term approach that considers career pathways as a means of supporting local development and sustainability of the labour force. In other words, there also needs to be a sense of upward mobility and growth for people entering into the agricultural operation of an agrihood, whether they are employed by the agrihood farm itself or see opportunities to expand their own operation. Given the trend of these agricultural operations to be small-scale, this may prove challenging to rely on the agrihood alone. Therefore, if municipalities are considering agrihood developments, they may want to consider the surrounding agricultural landscape as providing opportunities for growth.

As the average age of farmers continue to rise, there is an important need to attract new and young people to the food production sector. As interest in the local food movement continues, DeLind (2011) advocates for the reintegration of local food into place-based practices. Canadian agrihoods have proven to integrate place-based and local food interests and can, therefore, be a way to attract people with such interests into food production careers. Some models of agrihoods have clearly demonstrated their ability to provide pathways for new entrants that do not come from a traditional farming background. Through the development of more agrihoods, more opportunities exist for community members, including youth, to engage in the agrihood's agri-food system. This can include employment opportunities to produce food or support the sales through CSAs, farmers' markets, or food delivery services. A characteristic of the agrihoods' farms that supported this is when multiple plots are available to be leased to multiple farmers. This creates a supportive learning environment and allows some farmers to scale their operation, albeit with limitations within the agrihood itself. With more agrihoods built with the intention of creating these incubator-type spaces for food production, individuals from non-farming families are given the opportunity to explore a career in food production and the broader agri-food sector.

Hauser (2019) and Norris (2018) suggested that to be effective in creating a thriving food business economy, the developers need to integrate various aspects, like production, processing, distribution, consumption, and waste management within the agrihood. Southlands provides the most significant activities related to a food business economy with multiple food producers, farmers markets, CSAs, restaurants, and sales directly to food retailers. Given their size, it is likely that this contributes significantly to the success of these ongoing operations. The proximity of the other agrihoods to urban centres have also provided significant opportunities. Where agrihoods were not close to significant markets, they provided service-related products like food production courses and cooking classes. These communities have shown that they spark innovation to maintain economic activity and support careers in the agri-food sector.

5.4 Agrihoods and Planning Frameworks

In the instance of these case studies, Canadian agrihoods have key elements that contribute to planning for the rural-urban interface. As noted by the Chilliwack municipal planner, the agrihood was well positioned on transitionary land. This may provide municipalities with frameworks to consider peri-urban, edge planning policies that support the transition from the urban centre to the countryside. This allowed residents to take advantage of a bus route and bike lanes, services that are often missing from the rural countryside. They also included a unique permitted use of agriculture, called *restricted agriculture*. This recognized that while in an agricultural area, there needs to be conflict mitigation strategies in effect to mitigate issues related to noise and smells (Daniels, 1997). Despite the concern for conflict between agriculture and residential areas, the largest hurdle that these communities seemed to face was the perception of what these communities are. While Brass (2019) believed residents might hand-pick food from gardens without compensating the farmer, causing additional problem, each farmer interviewed stated that this was never a problem.

A different problem was shared in one agrihood, which was when one particular resident would let their dog off-leash in the fields, potentially damaging crops. Aside

from this example, very little conflict between these land uses were discovered in these agrihoods. This apparent harmoney was likely due to the implementation of regulatory measures and policies that have been developed over many years of evolving land use planning practices. While the development trend has been a separation of agriculture and residential land uses, agrihoods showcase a form of development that reintegrates the two. The success of this deliberate reintegration is related to conflict mitigation strategies, such as restricting agriculture in size and scale for the community and welcoming residents that value local food production and are not concerned with the potential nuisances associated with proximity agricultural activites. With the intention of integrating the two, as opposed to sprawling development that erases agriculture from the land, these communities have found a way to balance the integration of both land uses. This may suggest a new iteration of mixed land use development to not only include residential and commercial but also agriculture.

Overall, the Yarrow Ecovillage represented a significant effort to rethink how communities are planned, with a strong emphasis on environmental stewardship, community involvement, and sustainable living practices. The developers' experiences underscored the potential for agrihoods to challenge and transform existing planning frameworks, making them more adaptive to the needs of both people and the planet.

As to be expected, the larger the agrihood, the more complex the zoning provisions became. While Southlands provided a comprehensive look at how different zones of this large-scale agrihood can be developed, it is unclear whether the delineation of permitted uses will result in the integration of food production throughout the community like in O.U.R. Ecovillage, Yarrow Ecovillage or Creekside Mills. Meanwhile, what is yet to be determined at Drayton Ridge is whether the large lot sizes will deter people from participating in community agriculture or leasing community plots, given the ability for landowners to have their own garden space in their yards.

The literature and media provide the assumption that agrihoods are inherently contributing to the preservation of farmland. When examining the case studies there

was only one developer who voluntarily pursued a conservation easement agreement, albeit on the natural landscape and not the farmland. They did, however, employ a housing cluster design in an effort to preserve farmland, which was not required by the municipality. A similar cluster approach to Yarrow Ecovillage allowed for 33 units to be constructed on what the municipal planner suggested would otherwise have held one oro two homes. Without municipal water servicing, this challenges the common practice of only permitting one or more homes per acre. This could lead to rural densification, where if planned carefully, could help preserve a significant amount of farmland in regions across Canada.

Conservation and agricultural land protection methods were predominantly municipally or provincially driven. In the Ontario context, where the equivalent to British Columbia's Agricultural Land Commission is lacking, municipalities may need to find alternative approaches to ensure the preservation of farmland by establishing minimum agricultural area ratios for future agrihoods and require those areas be protected by other means, such as CEAs. This tool can be used to help direct housing onto the marginal lands while providing restricted covenants on lands used for food producti. This means that the lands cannot be later converted to other non-agricultural uses and that they remain as a food producing resource for future generations of community members. In Ontario, a conservation organization is required to register the CEA on title and are responsible for ensuring adherence to the covenants. This creates unique opportunities for additional partnerships and collaborators to support the development of agrihoods. With for-profit developers, this could provide a unique collaborative opportunity that brings a unique perspective to the planning and design of the community. As noted earlier, collective-created agrihoods have strong indicators of achieving the perceived benefits of agrihoods and so in developer-created agrihoods, this could be an opportunity to ensure these benefits are also realized.

While each of the agrihoods required special zoning provisions, Chilliwack is an example of how the municipality can integrate the special zoning provisions and adopt it as a zoning ordinance that could be used for other future development. Although this

has not yet occurred, this unique zoning is not established as an exception to the zoning bylaws but one that can be designated on future sites.

Throughout the interviews with the municipal planners, all but one saw these communities as a trend that is likely to increase. They all agreed that the broader land use planning frameworks, or paradigms, need to shift and that these communities offer insight into new approaches to community design that could prove beneficial. Although often described as “alternative lifestyles”, several planners recognized that there were not a lot of alternative options for people seeking a different lifestyle. Agrihoods also create opportunities for multi-family households or non-traditional families, such as queer community members, to live communally. Further, they offer concepts for more sustainable community design by integrating conservation into community development, as opposed to conservation in opposition to development. The planners also saw the benefit of agrihoods adding to the fabric of their community. As one planner described that the community spirit of the agrihood spilled over into the broader community.

If rural municipalities or urban centres that need to expand are recognizing the challenges of protecting farmland and addressing housing needs, agrihoods could provide solutions to both problems. It would be important to identify exactly what benefits the municipality wishes the agrihood would contribute to in order to identify exemplary models or particular characteristics that are needed to achieve certain results. Given the mixed land uses and interdisciplinary nature of agrihoods, their success will be dependent on having clear objectives and values that integrate agriculture, natural features, rural economies, and social inclusion. This is reminiscent of Patrick Geddes theory of planning described by Young (2017). While contemporary planning has attempted to address complex social issues by delineating and restricting the integration of different land uses, there are examples in a Canadian context that shows this is not always desirable by community members who want to live in dynamic, intentional communities. Planning departments need to be willing to explore the proposals and consider how these communities could be built with intention and integrity.

6 Conclusion

The goal of this research question was to explore the various impacts that developing an agrihood can have on agriculture and communities. By looking at the various characteristics of the Canadian agrihoods, the research sought to understand whether the benefits of agrihoods explicit in the literature and media are inherent in an agrihood, particularly as agrihoods have been considered a model for development-supported agriculture. Through this exploration, the research sought to learn how provinces and municipalities across Canada can better prepare themselves for the likely influx of agrihood development proposals. The research had four main objectives, (1) Discover the beneficial and adverse impacts of agrihood developments; (2) Understand how planning frameworks impact the development of agrihoods; (3) Determine which planning provisions should be utilized to achieve desired impacts; and (4) Discover conflict mitigation strategies for the mix of land uses.

This research has demonstrated that each developer had varying intentions for the agrihood project, which led to various impacts on residents, farmers and the design of the actual site. The existing planning frameworks that include sustainable land use practices and that require conservation of either farmland or natural features are critical to ensure the long-term preservation of farmland. This is not always developer driven and therefore not inherent in an agrihood proposal. Municipalities may be required to think creatively on how to utilize other land conservation tools that may be available to ensure the long-term preservation of the agricultural land so that these communities are, in fact, development-supported agriculture communities instead of agriculture-supported development.

The exploration of Canadian agrihoods in this thesis has not only illuminated the diverse impacts these communities have on agriculture and local food systems but has also unraveled the inherent paradox of development-supported agriculture. While agrihoods ostensibly support sustainable living and community agriculture, they simultaneously pose the risk of prioritizing residential development at the expense of

genuine agricultural productivity. This paradox reveals a critical tension between the potential for agrihoods to either genuinely support agriculture or, conversely, to serve as mere aesthetic enhancements that increase real estate value without real commitment to agricultural sustainability.

This research has shown that while some agrihoods have successfully integrated agriculture into their development, ensuring long-term farmland preservation and community involvement, others have not fully realized this potential, treating agricultural spaces more as landscaping than as functional agricultural land. This dichotomy poses significant questions about the future of development-supported agriculture: Will it lean towards genuine sustainability or drift towards commodification of rural aesthetics?

In pondering the future of agrihoods, it is crucial for municipalities, developers, and residents to critically assess the intentions behind agrihood development and their execution. The development of agrihoods offers a canvas for innovative community planning that could either embrace its full potential to sustain agriculture and enhance local food systems or succumb to the superficial allure of marketing strategies that only nominally address these goals.

As we move forward, further research is essential to continue unpacking the complex interactions within agrihoods and to ensure that these communities can truly fulfill their promise without compromising their agricultural integrity. This will require not only rigorous policy frameworks but also an ongoing dialogue among all stakeholders to align development with genuine agricultural support, ensuring that agrihoods evolve as true bastions of sustainable development rather than mere enclaves of idealized rural living.

Municipal planners have an opportunity to think creatively to develop innovative policies that are both permissive of agriculture while addressing the unique challenges that are present when housing is in close proximity to residential areas. While some agrihoods provide policies and zoning ordinances that would be adopted, at least as a

starting framework, any large-scale agrihood will likely require special considerations. By looking at existing policies as models, municipalities can likely adopt zoning provisions for small and medium scale agrihood projects, in preparation of receiving proposals or to encourage their development, should a municipality desire that.

It is clear that agrihoods are a type of development that significantly impacts the future use of farmland, local and regional food networks, and housing. Tracing their historical roots, agrihoods can be seen as an evolution of greenbelt towns, post-war suburbs, and conservation planning, blended with back to the land and, more recently, local food movements. This trend illustrates a growing desire among people to live in environments connected to food production, open spaces, and community. The increasing number of agrihoods being constructed or initiated in recent years suggests a potential for expansion. Moving forward, agrihoods could play a substantial role in preserving farmlands and bolstering local food systems, or they might serve as a cosmetic marketing strategy for developers to distinguish their communities. The future role of agrihoods, whether as meaningful contributors or superficial elements in development, will become clearer as more are established. The responsibility falls on regulators, developers, and citizens alike to steer this development model towards outcomes beneficial for all involved.

While this research addresses some of the gaps in understanding how agrihoods impact agriculture and communities, the limited scope of this research in terms of design precludes longitudinal insights. Furthermore, as noted in the introduction, more agrihoods are being proposed, likely meaning new models or varying combinations of characteristics of agrihoods are being designed. Researching the new emerging communities can offer additional insight into the impacts of further agrihood development projects. New research could revisit the case studies found in this research, as well as the new communities and compare their impacts over time. Additionally, given the lack of participation in the residential survey, further research could attempt to gather more data on the impact these communities have on the residents of these agrihoods. Furthermore, interviews with the residents may provide

additional context that the survey may not have uncovered. Finally, broadening the geographic scope, not only to other parts of Canada but exploring similar communities found in Europe or other parts of the world, may lead to the discovery of other elements that may help enhance the planning and design of agrihoods in Canada.

This research has still provided some useful insight into the impacts of Canadian agrihoods. Stakeholders at all levels have a responsibility to ensure proper policies, designs, and intentions are driving the development of these communities. Without them, the purported benefits of agrihoods are likely unfounded and permit the emergence of a new type of suburbia plagued with its unique set of challenges and complex problems that will require future resolution. To further support the development of agrihoods, this thesis will conclude with recommendations for municipalities, and residents.

1. The first recommendation is for provincial governments to support ongoing research into agrihood impacts on local food systems and community dynamics through case studies or follow-up research on the case studies presented in this research. This would help build a more robust dataset over time, supporting larger-scale future recommendations with more detailed empirical backing.
2. The second recommendation is to develop policy and planning frameworks specifically for agrihood development projects. Provincial planning authorities should use existing data to inform the best practices to inform their existing land use planning policy framework and develop implementation guidelines to support municipalities' implementation of these policies. Municipalities considering agrihoods would then have resources to develop quality planning policies and bylaws that would ensure the desired outcomes of such development projects. It is further recommended that permitting policies should start with small-scale agrihood initiatives along the peri-urban boundary, acting as a community that supports a rural-urban interface.
3. The third recommendation is for an arms-length, credible, and relevant third party to establish a certification for agrihoods as a form of development-supported

agriculture. A third party certification would be beneficial given the definitions and promotional materials in the literature review were primarily developer-driven. A monitoring and evaluation framework should accompany any certification that can track the impact of agrihoods on local agriculture and community cohesion over time. Developers can apply for initial certification based on their agrihood proposal and therefore can assist municipalities with limited knowledge or capacity to assess agrihood proposals to assist in the consideration.

4. The fourth recommendation is for developers. Developers interested in pursuing agrihood projects should participate in educational workshops to provide them with a foundational understanding of agri-food systems, sustainable agricultural practices, and engage with the local agricultural community to understand challenges and opportunities in the communities they are proposing agrihoods for. This will foster developer awareness and skill development, which is essential for the successful integration of agriculture into residential developments, as well as the development integrating well into the community.
5. The final recommendation is to provide educational information for potential residents and ensure ongoing resident engagement and education programs. These programs should aim to cultivate a thorough understanding among residents of the agrihood's goals and challenges of integrating residential development with agricultural operations. Prospective and current residents should be informed about any communal aspects of living in an agrihood, including the potential for land use conflicts and any communal responsibilities tied to agricultural production. The program should include orientation sessions, regular workshops, and community meetings to encourage active participation in agricultural activities and foster a respect for the balance between private and communal land use. By actively contributing to these initiatives, residents can ensure the long-term success and sustainability of their community, reinforcing the agrihood's objectives of fostering a robust, integrated community centered around sustainable living practices.

Reflecting on the breadth of possible impacts this research has uncovered, it becomes clear that agrihoods represent a complex intersection of development, agriculture, and community dynamics. As communities venture into the future and are faced with the pressures of housing development with the need to protect farmland, the evolving landscape of agrihoods offers a unique opportunity to reimagine the interplay between urban development and agricultural preservation. The findings from this research underscore the necessity for a balanced approach, one that genuinely supports agriculture while fostering vibrant, cohesive communities.

To encapsulate the findings, agrihoods cannot be recognized for just physical spaces but as vibrant ecosystems that have the potential to redefine the paradigms of community development and food production. As this research concludes, it invites stakeholders to not only envision but actively participate in crafting agrihoods that are true to the ethos of sustainability and community harmony. Embracing this model requires thoughtful consideration, innovative policy-making, and a commitment to continuous engagement, research, education, and adaptation. By doing so, we can ensure that agrihoods do not merely exist as idyllic enclaves but thrive as dynamic, sustainable communities that offer a model for future development. This path forward is not just possible but is necessary for the sustainability of our communities and the preservation of our agricultural heritage.

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Appendices

APPENDIX A: Resident Survey

Theme 1 – Connecting the Resident with an Agrihood

1. Which agrihood do you live in?
   List of choices, select one

2. What year did you move to the agrihood?
   List of years, select one

3. Is the agrihood your primary residence?
   Yes/No

4. How many people live in your household?
   List of numbers, up to 10, select one

5. What best describes the community you lived in prior to moving to the agrihood?
   Urban, suburban, rural town, rural countryside

5.1. Please approximate the distance that you moved from your previous home?
   [Write in option] KM

6. What best describes the type of housing you live in?
   Tiny home
   Single Family Detached Home
   Multifamily Home
   Townhouse
   Apartment

6.1. Is it co-op housing?
   Yes/No

7. What was your motivation to seek out a home in the agrihood? Select all the apply:
   Opportunity to live on a farm
   Access to locally grown food
   Opportunity for garden
   Opportunity to work on a farm
   Community events and gathering
   Character and feel of the community
   Appropriate housing availability
   Seeking certain lifestyle amenities: [write in option]
   Other: [Write in options]

7.1. *[If "Opportunity to live on a farm" was selected]* If the type of farm was a factor in your decision, please describe what type of farm was important to you in your decision to move to an agrihood? Select and rank all that apply:
Organic
Conventional
Regenerative Agriculture Practices (or other sustainable farming practices)
CSA opportunities
Livestock [write-in option]
Crops [write-in option]
Other [write in option]

Theme 2 – Farm Involvement and Food Consumption

8. In the past year, have you been a member of agrihood's CSA?
yes/no/not available

8.1 If yes: What are your motivations for being a member of CSA? Rank the following:
Convenience
Affordability
Health
Taste
Support local farmers
Better for environment
Other [write-in option]

8.2 If no: Why have you not been a member of CSA? Check all that apply:
Too expensive
Inconvenient
Lack of options
Poor quality
Portion size
Other [write-in option]

9. During a typical month when the local farm stand or farmer's market is open, how often do you purchase food from within agrihood?
Not available
Never
A few times per season
Once a month
2-3 times a month
Once a week
2-3 times a week

9.1. If once/mo, 2-3 times/mo, once/wk, 2-3 times/wk: What are your motivations for purchasing food from your neighborhood farm stand or farmer's market? Rank the

following:
Convenience
Affordability
Health
Taste
Support local farmers
Better for environment
Other [write-in option]

9.2. If never, a few times/season: Why do you not purchase food from your neighborhood farm stand or farmer's market very often? Check all that apply:
Too expensive
Inconvenient
Lack of options
Poor quality
Portion size
Other [write in option]

9.3. Approximately how much do you spend on an average purchase?
$[write in option]

10. In the past year, have you maintained a plot in the community garden?
yes/no/not available

10.1. If not available, is a community garden plot something you'd be interested in accessing?
Yes/no

11. Describe any involvement you have with farm-related activities?
[Text box]

12. How has your appreciation towards or understanding of agriculture changed since moving to the agrihood?
Likert scale [less appreciation – unchanged – greater appreciation]

12.1. Please elaborate on the answer you've selected
[Text Box]

13. Please describe any changes to your understanding of how your food is produced and the system(s) to get food to your home since moving to the agrihood?
[Text box]

14. Please describe any changes to your eating habit, diet, and/or food preparation?
[Text box]

Theme 3 –Community

15. How much do you agree or disagree with the following statements?
    I feel an attachment to my neighbourhood
    Strongly disagree – neutral – strongly agree

    My neighborhood is the best place for how I want to live my life
    Strongly disagree – neutral – strongly agree

    My neighborhood has a pleasing ambiance
    Strongly disagree – neutral – strongly agree

    I have many friends in my neighborhood
    Strongly disagree – neutral – strongly agree

16. What are the components of your agrihood that create the sense of community?
    [Text Box]

17. Would you describe there being a collective effort to support the farm?
    High collective effort – Moderate collective effort – Low collective effort – None

17.1. Please elaborate on the answer you've selected
    [Text Box]

18. Please describe any personal values you see reflected in the agrihood community?
    [*Text box*]

19. Have you experienced any challenges to feel a sense of belonging or community?
    [*Text box*]

Theme 4 –Amenities and Other Benefits

20. Please list recreational activities you engage pertaining to agrihood features or amenities?
    [Text box]

20.1. On average, how often would you engage in the total use of these features or amenities per month?
    0, 1-3, 4-6, 7-9, 10+

21. Are there any additional benefits you experience by living in the agrihood?
    [Text Box]

22. Are there other amenities you feel could be a good fit for the agrihood?

[Text Box]

23. Do you have access to active transportation system (e.g., walking trails, bike lanes)?
    Yes/No

23.1. If yes, how frequently do you use this system?
    Daily
    Weekly
    Monthly
    A few times per year

24. How would you describe your access to a local public transportation system?
    Excellent – Somewhat good – Somewhat poor – Very poor – None at all

24.1. How important is access to public transportation
    Extremely - Neutral - Not at all

24.2. Please describe why you chose your answer
    [*Text Box]*

Theme 5 – Economy and Employment

25. Which statement best describes your employment status? (check all that apply)
    Working outside community
    Working from home (occupation unrelated to the agrihood)
    Working for the agrihood (including any enterprise on the agrihood that services the community)
    Retired
    Not working (seeking employment)
    Not working (other)

25.1. If [*Working for the agrihood*] is selected:
    How many hours in a typical week do you work for the agrihood?
    1-9, 10-19, 20-29, 30-40, 41+

25.2. What is your position/title:
    [*Write in option*]

26. In the past growing season, how often have you volunteered to work on the farm?
    Not available
    Never
    A few times per season
    Once a month

2-3 times a month
Once a week
2-3 times a week

26.1. *If a few times/season, once/mo, 2-3 times/mo, once/wk, 2-3 times/wk,*
What are your motivations for volunteering to work on the farm? Check all that apply:
Volunteering is required
I enjoy being outside
I like to know how my food is grown
Engaging with neighbours
I want my children to learn about growing food
Other [Write-in option]_____

26.2. *[If never]*
What are your main barriers to volunteering on the farm?
Check all that apply:
Time constraints
Physical ability
Uncomfortable working outside
I don't know anyone else who volunteers
Location is not convenient
Other_____

Theme 6 – Health and Wellbeing

27. As a result of moving to an agrihood, whether directly or indirectly, have you noticed a change in your overall:

Happiness
Significantly less happy–slightly less-unchanged–slightly more-significantly happier

Sense of Fulfillment
Significantly less fulfilled-slightly less-unchanged-slightly more-significantly more fulfilled

Stress
Significantly less stressed-slightly less-unchanged-slightly more-significantly more stressed

Overall health and wellbeing
Significantly worse-slightly worse-unchanged-slightly improved-significantly improved

27.1. If desired, please provide any additional comments to further explain your response:

[Text box]

Theme 7 - Demographics

28. What is your age?
    18-24
    25-34
    35-44
    45-54
    55-64
    65-74
    75+

29. What is your gender?
    Male
    Female
    Non-binary
    My gender identity is not listed above [Write-in Option]
    Choose not to respond

30. What is the highest level of school you have completed or the highest degree you have received?
    No high school degree
    High school graduate
    Some college/university but no degree
    Associate degree/diploma
    Bachelor degree
    Master degree
    Doctoral degree

31. What is your annual household income?
    Less than 25k
    25-49k
    50-99k
    100-149k
    150-199k
    200k+

32. We are looking to see if agrihoods are also helping support and reach traditionally underserved groups. You may opt-in to self-identifying the following groups and select all that apply:
    Indigenous
    Black
    Person of Colour
    Recent immigrant

LGBT2Q+
Differently abled
Non-neurotypical
Low-income household
Other: [write-in option]

Further Research

33. We may explore conducting interviews with residents to gain a deeper understanding of the experiences of people living in an agrihood. Would you be willing to participate in an interview if this becomes an option?
Yes
No

33.1. *[If yes]* Thank you for agreeing to participate further! Please provide your name and email address so that we may contact you. Your identity will not be associated with the survey results and responses will remain anonymous.
[Text box for Name]
[Text box of email]

APPENDIX B: Recruitment Email for Survey

Dear [Agrihood HOA/Contact Name],

My name is Martin Straathof and I am a graduate student at the University of Guelph, studying Rural Planning and Development. I am completing my thesis research by exploring the impacts of agrihood-style communities across Canada and am interested in studying [INSERT AGRIHOOD NAME]. The research project is titled *Exploring the impacts of Canadian agrihoods as a form of development-supported agriculture*.

As part of my research, I have prepared a 10–15-minute anonymous online survey for agrihood residents to understand their motivations for moving to an agrihood, their level of involvement with the agricultural components of the neighborhood and other impacts living in an agrihood has resulted. I would like to ask for your help in circulating this survey to the residents in your community. By doing so, you can receive insight into the appeal and functioning of your community as well as contribute to a broader understanding of the agrihood movement.

If you're capable and willing to distribute the survey I have prepared a sample email below that could be sent to the contact list for your community, inviting them to participate in the survey.

I invite you to review the survey at the link below prior to sending it out to residents. If there is someone else I should talk to about administering this survey at [INSERT AGRIHOOD NAME], please let me know.

Please feel free to contact me, Martin Straathof at tstraath@uoguelph.ca or my thesis advisor, Dr. Wayne Caldwell at wcaldwel@uoguelph.ca, if you have questions about this project.

You may review the survey at this link: [inset link here]. Please note this research project has been reviewed from the University of Guelph Research Ethics Board (REB# XX-XX-XX).

Sincerely,

Martin

Martin Straathof | MSc (Planning) Student
Rural Planning and Development

University of Guelph

Sample script:

Dear Residents,

Do you have 15 minutes to spare? You are invited to participate in an exciting research project about the growing trend of agrihood communities across Canada. A graduate student researcher from the University of Guelph is seeking to explore the impacts of agrihoods and the residents living in them. Participation in this survey is voluntary and anonymous and will contribute important insights to the planning and design of agrihood communities. Please take 15 minutes to fill out the online survey at the link below and contribute to the pool of knowledge on agrihoods!

Please find the survey at this link: [inset link here]
Research Title: Exploring the impacts of Canadian agrihoods as a form of development-supported agriculture (REB# XX-XX-XX)

Sincerely,

[Agrihood HOA]

APPENDIX C: Semi-structured Interview Guides

Developer Questions:

Theme 1: History and Planning

1. What made this property a prospective location for an agrihood?
2. Was an agrihood always the goal?
3. What was the previous use of this property?
4. How was it acquired from the owner? Or how did the partnership with the owner begin?
5. How was the agrihood concept introduced to you?
6. Why did you/your firm choose to pursue an agrihood development project? (What was your motivation?)
7. Were there community issues that the agrihood was to help address? (Were there particular values driving this?)
8. Who was the agrihood designed for? Please describe the residents that this community was meant to attract.
9. How was planning for the success of the farm integrated into the community planning phase?
10. Did you initially establish indicators of success?
11. Are they still being measured now?
12. By these measures, would you say there has been success?

Theme 2: Financials and Business Structure

13. What initial investment was needed to start the agrihood?
14. How long, if at all, did it take for the farm to break even?
15. How important was the agrihood concept in meeting real estate demand?
16. How did it drive the value of the homes? (Comparable to other homes in the municipality?)
17. What is the current business structure of the agrihood and how was it initially established?
18. Can you describe the differences between the cost of agrihood amenities and maintenance compared to traditional landscaping/amenities?
19. Were there public incentive programs available and did you take advantage of them?

Theme 3: Planning, Design and Development

20. Can you describe the approach you took to planning the agrihood? (Plan and design for complete communities, resiliency, sustainability, innovation, etc.)
21. Who was a part of the “public” during the engagement process? (If prospective residents were involved, how did you find them?)
22. Was there consultation with Indigenous Peoples?

23. Can you describe what was involved in the planning process? (i.e., needing to advocate for the agrihood concept or was it welcomed by community and council; Official Plan and rezoning amendments, site-plan control challenges, etc.?)
24. Did you find any by-laws/policies that hindered/roadblocked the development? What other challenges were faced?
25. Was there an overarching concept behind the design of the neighborhood? (Do you consider it a particular “style”?)
26. What design considerations did you use/incorporate into the agrihood? (What were the most important factors driving the design of this site?)
27. How was it decided how much land would be saved for agricultural uses, built environment and natural environment?
28. What design considerations were to help mitigate conflict between various land uses? (i.e., residential, agriculture, commercial, environmental)

AGRICULTURE (including amenities)

29. How was the location of the farm and other agricultural features determined?
30. How did you determine the type of agricultural features?
31. Was it important to have agriculture focused or dispersed?
32. How did you include the anticipation of community members participating in agriculture impact the design considerations?

HOUSING

33. How was home density, size, and type determined?

ENVIRONMENT

34. What types of environmental management, protection and climate change mitigation considerations were included in the design of the agrihood?

OTHERS

35. Were there considerations for public transportation, active transportation, and car-share programs?
36. What sort of planning/future development conditions does the agrihood face? (Any foreseen challenges to future development, if planned?)
37. What was the consideration given to public utilities? (Was there any discussion of the agrihood being “off-grid”?)
38. Can you describe how the agrihood contributes to innovation? (Testing new food/crops, processing, technology, design, infrastructure, etc.)

Theme 4: Partnerships and Programming

39. Who were your key partners and for what arrangements? (Main goals?)

40. How is agricultural related programming designed, maintained (including amenities), and funded?

Theme 5: Agrihood Trend

41. What are the biggest challenges and opportunities in developing an agrihood?
42. What do you wish you knew going into this process?
43. Do you envision this trend continuing to grow?

Farmer Questions:

Theme 1: History

1. Did you farm the property before it was an agrihood? [How long, what was your history with the land]
   If yes:
   1.1. What motivated them to pursue an agrihood
   1.2. If it hadn't become an agrihood, what do you perceive would have happened with the property?
   1.3. What was the initial investment to start the agrihood?
2. How did you find this job?
3. Can you describe the condition of the farm when you started? (facilities/buildings, laneways, soil quality, farm house, etc.)

Theme 2: Farm Business and Operations

4. How would you describe the type of farm/farm practice?
   (i.e. conventional, organic, regenerative, livestock, cash crop, community oriented, etc.)
5. What values would you say guide the farm business?
   5.1. How do they present themselves in food production and distribution?
   5.2. Does the agrihood help to serve underprivileged groups in society? (i.e. people who identify as Indigenous, Black, Person of Colour, Recent immigrant, LGBT2Q+, Person with a disability, Non-neurotypical, Low-income household, Other
6. What is the business structure of the farm in relation to the agrihood? (Governance, decision making, allocation of resources, etc.)
7. What decision making processes? (i.e. what crops will be grown)
   7.1. Who do you consult or solicit ideas from? (i.e. ideas for landscaping, use of excess food, waste reduction, water preservation, new crops to try, etc.)
   (i.e. idea from residents, broader community, Indigenous Peoples, other?)
8. What sort of planning/future development conditions does the agrihood face? (Any foreseen challenges to planning and future development?)
   8.1. Have there been talks about farm succession planning? What has that process been like?

9. How many employees work for the farm?
    9.1. Are there employee management plans, whether formal or informal? (Career progression plans, retention, filling any skill deficits, etc.)
    9.2. What challenges have you faced with this?
10. Who is responsible for purchasing and maintaining equipment?
    10.1. What type of current technology has been adopted by the agrihoods (including farm tech and high-speed internet)?
    10.2. What is available for community members' usage?
    10.3. What type of challenges have you faced? (i.e. sourcing, maintenance, community members mis-use of equipment, etc.)
11. How much of your time is spent on sales/marketing vs. production?
12. What is the waste management system? (i.e. self-contained, private, municipal services, etc.)
    12.1. Is there integrated with the residential waste management system? (i.e. composting)
    12.2. What is done with extra food/produce?
13. What types of environmental management and protection takes place on the agrihood?

Theme 3: The Agrihood Economy

14. How much food is produced?
    14.1. Which outlets are products sold? (Ratio of internal vs external to agrihood)
    14.2. Who would you describe as the main customers base?
    14.3. Which are the most successful/profitable?
15. Would you say an economy of the agrihood exists? If so, how would you describe it? (i.e. circular economy, people-centered economy or democratic economy, social economy, sustainable economy)
    15.1. How does it compare and fit into the larger economic structures surrounding it (municipal, provincial, federal, international)?
16. COVID-19 acted as a critical event and spurred conversation around resilient communities. Can you reflect on the resiliency of the agrihood in this regard?
17. Can you describe how the agrihood contributes to innovation? (i.e. testing new food/crops, processing, technology, design, infrastructure, etc.)

Theme 4: Programming

18. What role do you play, if any, in education programs on the farm?
19. Do you think engaging residents with the farm enhances the success of the operation? Please share in what ways.
20. Do community members from outside the neighborhood have opportunities to engage with the farm?
21. Do you rely on residents to provide volunteer labor on the farm and how are the incentivized to do that?

21.1. What role do you play in managing or interacting with the volunteers?

Theme 5: Personal

22. Do you live in the community?

    22.1. How would you describe the culture?

23. How would you describe your involvement in the community beyond food production?

24. What are the opportunities and challenges of working as an agrihood farmer vs. a typical operation of a similar size?

25. In your role as the farmer for the agrihood, whether directly or indirectly, have you noticed a change in your overall:
    Happiness? [Please describe]
    Sense of fulfillment? [Please describe]
    Stress and general mental health? [Please describe]
    Overall health and wellbeing? [Please describe]

Final comments

26. Do you have any additional comments to further explain any answers or want to provide any additional insight into agrihood developments?

Planner Questions:

Theme 1: History and Planning

1. What made this property a good location for [agrihood name]?
2. How was this development going to meet the goals of your community?
   2.1. Can you reflect on the initial response to the development proposal? (councilors, committee members, planners/staff, nearby residents)
   2.2. Could you speculate, if the [agrihood name] project wasn't brought forward, what do you think would be the most likely land-use today?
   2.3. Were there community issues that the agrihood was to help address?
   2.4. Who would you say [agrihood name] was designed for? Please describe the residents or visitors that this community was meant to attract.
   2.5. How important for the municipality was it that agriculture was integrated into this development? What steps were taken to ensure its integration?
3. Can you describe what was involved in the planning process? (i.e., staff learning about agrihoods, rezoning, site-plan control, etc.?)
   3.1. Did the approval of [agrihood name] impact broader community planning?
   3.2. What were the various "publics" that were engagement in the process?
   3.3. Was there consultation with Indigenous Peoples?

3.4. Were there particular conditions [agrihood name] had to meet to receive municipal approval? (What were the most important factors driving the design of this site?)
3.5. How was it decided how much land would be saved for agricultural uses, built environment and natural environment?
3.6. Were there design considerations required by the municipality to help mitigate conflict between various land uses? (i.e., residential, agriculture, commercial, environmental)

4. How did you find the agrihood fit within the Regional and Provincial land-use planning framework? (i.e., policies, provincial interests, etc.)

AGRICULTURE

5. How important was it that the municipality be involved in the design and to what extent? Such as, location and type of agriculture, amenities, features, and focused or dispersed agricultural design.

HOUSING

6. How important was the home density, size, and type determined?

ENVIRONMENT

7. What types of environmental management, protection and climate change mitigation considerations were required by the municipality?

OTHERS

8. Were there considerations for public transportation, active transportation, and car-share programs?
9. Public utilities that required consideration? (Are you aware of any discussion of [agrihood name] being “off-grid”?)

Theme 3: Community Impact

10. Are you evaluating impacts of [agrihood name]?
    10.1. Would you say the development has been a success? Why or why not?
    10.2. Has [agrihood name] contributed to any impacts of nearby property values?
11. COVID-19 acted as a critical event and spurred conversation around resilient communities. Can you reflect on the resiliency of [agrihood name] or its contribution, if any, to the resiliency of the broader community?
12. Can you describe any other impacts the agrihood has had on the broader community?

Theme 4: Agrihood Trend

13. What are the biggest challenges and opportunities in developing an agrihood?
14. What do you wish you knew about agrihoods before starting the process?
15. Do you envision this trend continuing to grow? (Are you aware of any other discussions of agrihood/ecovillage developments in the area?)