The Goat Next Door:
An examination of the underlying community dynamics in agrihoods and the policy strategies that can assist in the expansion of this model

Antonia Stinnett

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Reading Committee:

Christopher Campbell, Chair

Yona Sipos

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Abstract

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Antonia Stinnett

Chair of the Supervisory Committee:
Professor Christopher Campbell
Department of Urban Design and Planning

Agrihoods are single-family, multifamily, or mixed-use communities that integrate agriculture and food consumption or distribution into their development. The popularity of this model has continued to grow since the phrase was first popularized in 2014. Despite the topic's novelty, diversity of developments, potential health benefits, and growing popularity, academic research on agrihoods is limited.

This thesis expands knowledge of this development model by examining the underlying community dynamics in agrihoods. For this research, *community dynamics* describe how residents feel about their neighborhood and the concomitant impact of these feelings on the development and residents. Understanding agrihoods' community dynamics can provide another

dimension to how planners conceive of this model and may help planners or developers determine what features of agrihoods they should replicate elsewhere.

Twenty-two agrihoods in the United States were surveyed to answer the research questions posed by this thesis. The ranking of values and survey responses demonstrated that *sense of community* is the strongest perceived value in agrihoods. Agrihoods bolster residents' sense of community through reinforcing feedback loops created through social capital and the presence of amenities. This relationship is illustrated through visual diagrams. This thesis also provides direction on the tools planners and developers can use to create agrihoods and warns of challenges that planners may face in the promotion of this model.

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APA	American Planning Association
CSA	Community supported agriculture
HOA	Homeowners' association
PUDs	Planned unit developments
SDOH	Social determinants of health
ULI	Urban Land Institute

GLOSSARY OF TERMS

There are several terms used throughout this research that were created for this thesis and many that are related to different fields. All the terms and phrases below are also explained within the body of the text.

- *Agricultural urbanism*: an approach to city design and planning that "[invites] food and agriculture back into our communities, and into our lives" (De La Salle and Holland 2010, 12).
- *Agrihood:* single-family, multifamily, or mixed-use communities that integrate agriculture and food consumption or distribution into their development.
- *Bootstrap:* "an initial success in bringing about an increase in a sense of mutual obligation sets up a base on which to build toward a shared sense of community" (Rubin and Rubin 2001, 98).
- *Cluster developments:* a development strategy "clusters" houses to reduce infrastructure costs and provide for high density housing (McMahon 2010).
- *Collective efficacy*: residents' collective action.
- *Community dynamics*: how residents feel about their neighborhood and the concomitant impact of these feelings on the development and residents.
- *Community functioning:* the occurrence of collective action that results in behavior in line with the shared interests and values of the community (Moustafa 2009).
- *Conservation developments:* a development strategy that prioritizes the quality and quantity of preserved land to preserve biodiversity and land (Feinberg and Hostetler 2019; McMahon 2010).
- *Emergent solidarity*: "turning personal concerns into a collective responsibility" (Rubin and Rubin 2001, 99).
- *Food insecurity:* occurs when households cannot consistently afford or otherwise access sufficient food (Coleman-Jensen et al. 2022).
- *Food security*: households have access to sufficient nutritional food that meet their dietary needs and support them in a healthy life (Coleman-Jensen et al. 2021).
- *Intentional communities*: housing developments that center on communal living and follow a shared set of values (Tina 2021).
- *Land entitlement*: the multi-step process required to develop and get permissible use of land (Somers 2020).
- *Nature contact:* accessing green space (Frumkin and Fox 2011).

- *Neighborhood planning:* is a planning approach and policy to alter the built environment of neighborhoods to achieve a social objective (Rohe 2009).
- *Organic farming:* Farming practices that follow regulations and focus on food production, including restricting inputs, such as fertilizers and pesticides, and techniques like crop rotation (Clouser 2019; USDA National Organic Program 2015).
- *Physical determinism*: theory that assumes the physical characteristics and designs of a neighborhood play a predominant role in shaping the behaviors of the residents (Jabareen and Zilberman 2017).
- *Planned unit developments:* "[provide] a legal framework for the review and approval of [developments]" (Cullingworth and Caves 2014c, 154).
- *Social capital:* "refers to connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam 2011, 19).
- *Sustainable agriculture:* "seeks to provide more profitable farm income, promote environmental stewardship, and enhance [the] quality of life for farm families and communities" (National Institute of Food and Agriculture n.d.).
- *Tax abatement:* a tax incentive.
- *Third places:* locations in neighborhoods outside of homes (first places) and offices (second places) where residents can gather to meet and build relationships (Butler and Diaz 2016; Oldenburg 1989).
- *Variances and conditional use permits:* legal means that developers can apply for the allowance of otherwise non-permitted uses on their property, such as a farm in an area zoned as residential (FindLaw 2018).

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Chapter 1. Introduction

Agrihoods are single-family, multifamily, or mixed-use communities that integrate agriculture and food consumption or distribution into their development. The phrase *agrihood* was trademarked and entered popular discourse in 2014. The California-based development firm, Rancho Mission Viejo, created and trademarked the term as a tool to entice potential millennial homeowners passionate about the farm-to-table movement (Adams 2019; Justia Trademarks 2017; Loudenback 2017; Travers 2017). Since then, the popularity of this model has continued to grow in the United States and Canada. This thesis focuses on agrihoods in the United States.

Most agrihoods are in rural or suburban areas, but urban agrihoods also exist. Typically, agrihood farmers sell their produce directly to consumers through community-supported agriculture (CSA) and farmers' markets or wholesale to restaurants or grocers (Norris 2018). Homes in agrihoods are usually privately owned and often more expensive than surrounding market rate houses (Albright 2014; Giacobbe 2017; Goonan 2016; Loudenback 2017; Strassmann 2015). The exclusivity of agrihoods causes observers to describe them as the new golf courses and country clubs. Relatedly, some developers have converted their golf courses *into* agrihoods (Adams 2019; Loudenback 2017).

However, not all agrihoods include luxurious single-family homes. For instance, Village Farm in Austin, Texas is a tiny house village (DeSimone 2020; Village Farm Austin 2021). Arbor House in the Bronx is an affordable rental community in a LEED-Platinum building with a rooftop hydroponic farm (DeSimone 2020; Serlin 2013). Aria in Denver, Colorado includes market-rate housing and affordable options, including below-market-rate apartments, assisted living cohousing, and a Habitat for Humanity pocket neighborhood (Aria Denver 2022; DeSimone 2020). Finally, Cobb Hill Cohousing in Hartland, Vermont is a cohousing

development with more cows than residents and produces 17,000 pounds of cheese annually (Cobb Hill CoHousing 2015; DeSimone 2020). This diversity of housing types and examples of affordability underscores that, in certain situations, the agrihood development model has the potential to fill a need for affordable housing while increasing food availability.

Agrihoods also provide an opportunity to embrace an environmentally friendly and health-minded development model. Many agrihood homes feature environmental upgrades, such as solar panels and compost centers, so the homes are more sustainable (Loudenback 2017). The on-site farms can shorten food supply chains by providing food to customers nearby and even hyper-locally to residents living in the development (Watson 2020). Food production is frequently organic, thus minimizing toxins and synthetic chemicals in the soil and waterways. Furthermore, planted trees and vegetation can absorb carbon in the atmosphere. The prevalence of green space also helps residents. Experiencing green space can reduce stress, improve retention and attention, help childhood development, and instill a sense of community (Frumkin and Fox 2011). Likewise, gardening and cultivating food together can improve social capital and enrich the community (Firth, Maye, and Pearson 2011). Finally, the consumption of delicious and healthy produce can improve human health.

Despite the topic's novelty, diversity of developments, and potential health benefits, academic research on agrihoods is limited. Nevertheless, there is growing interest in this topic, as shown by the American and Canadian masters' theses[1] on agrihoods completed in 2020 and the increasing number of agrihood developments (Birkby 2016; Breger 2020; Watson 2020).

This thesis expands knowledge of this development model by examining the underlying community dynamics in agrihoods. For this research, *community dynamics* describe how

[1] The Canadian thesis came from York University in Toronto (Watson 2020). The American thesis was published at University of Massachusetts Amherst (Breger 2020).

residents feel about their neighborhood and the concomitant impact of these feelings on the development and residents. Understanding agrihoods' community dynamics can provide another dimension to how planners conceive of this model and may help planners or developers determine what features of agrihoods they should replicate elsewhere. This thesis will also provide direction on the tools planners and developers can use to create agrihoods in their municipalities.

Thus, this research aims to prepare planners for future agrihoods by deepening their knowledge of this development model and summarizing policies used to develop agrihoods. The research questions guiding this thesis are:

1. What is the underlying community dynamic operative in agrihoods?
2. What tools are best suited to help the establishment of agrihoods?

The researcher surveyed seventy agrihoods to answer the research questions. The survey gauged how well specific values align with the developments to determine the underlying dynamic in agrihoods. The intersection of these values, coupled with opportunities for social capital and the agrihoods' amenities, shaped the visual diagram used to illustrate the findings of this research. Additionally, the survey provided insight into the planning policies that supported the creation of these developments and any barriers the developments faced. The policies were summarized to answer the second question.

With the popularity of the farm-to-table movement and immense health benefits related to access to nature and green space, the expansion of the agrihood model is likely to continue both in the United States and abroad. The proliferation of this development form is advantageous for multiple reasons. The agrihood model has the potential to protect farmland and employ farmers, improve access to locally grown food, increase the housing supply, and promote sustainability.

Therefore, planners and developers should support and advocate for this model. The research and findings described in this thesis can assist planners and developers in their preparation for the expansion of agrihoods by deepening knowledge about agrihoods and describing policies that have already proven successful in supporting the developments.

Chapter 2. Literature Review

This literature review describes the connection between food systems and planning, introduces the agrihood development model, and predicts the community dynamic most evident in agrihoods. Given that this research intends to grow knowledge on agrihoods, this chapter also elucidates the history of agrihoods and compares three agrihoods. See Figure 1 for a visual composition of the timeline of events in urban planning, health, and real estate to contextualize the history of agrihoods and illustrate the durability of this model.

2.1 Urban Planning and Food Systems

Despite the agrarian roots of the creation of settlements, early city planners removed agriculture from urban spaces through the tool of single-use zoning (Yellin 2013). At the time this separation was deemed necessary because of nuisance claims and concerns for public health. It is only within the past twenty years that food systems have fallen under the purview of urban planning again (Morgan 2013). In 2000, Pothukuchi and Kaufman published their seminal piece, "The Food System: A Stranger to the Planning Field." Their article argued that, although planners wanted to improve human settlements, they failed to recognize the importance of food on human well-being (Pothukuchi and Kaufman 2000). The authors urged planners and policymakers to incorporate food systems into urban planning. Simultaneously, obesity and health-related chronic diseases were rising in America, farmland was being lost, food insecurity was becoming a more significant equity concern, and there was increased attention to the ecological impact of food systems (Raja et al. 2018; American Planning Association 2007). Thus, it became increasingly apparent that policymakers could no longer deprioritize the importance of food production, distribution, consumption, and disposal.

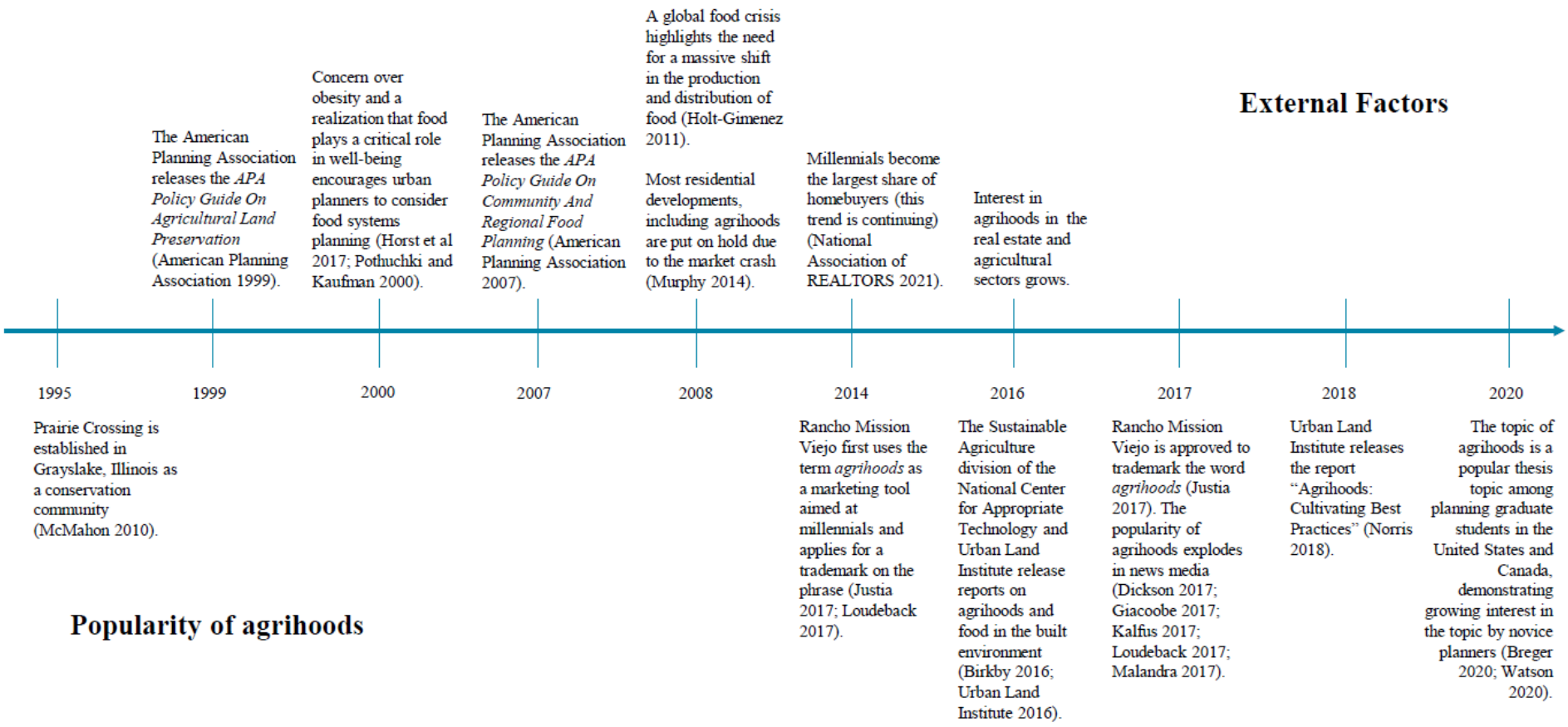


Figure 1: Timeline of the Growth and Expansion of Agrihoods

Following Pothukuchi and Kaufman's call to action and the health conditions in the United States, the American Planning Association (APA) released a policy guide in 2007 on food planning. In it, the APA acknowledged that food is critical to human life yet absent from planning (American Planning Association 2007). The APA hoped the guide could support community food systems by providing policy recommendations and a vision for how planners can be engaged in local and regional food planning. This cultural and professional shift also sprouted a new framework of urbanism, agricultural urbanism. Agricultural urbanism is an approach to city design and planning that "[invites] food and agriculture back into our communities, and into our lives" (De La Salle and Holland 2010, 12). Agricultural urbanism has various forms, from community gardens to farmers' markets to food hubs. Agrihoods are a recent iteration of agricultural urbanism.

Supporters of agricultural urbanism argue that planning "[plays] an important role in trying to fashion a new and more sustainable food system, one that is better aligned with societal goals of public health, ecological integrity and social justice" (Morgan 2013, 1). Planners can use a range of tools to achieve this objective. For example, some cities and municipalities include food access goals or statements on urban agriculture within their comprehensive plans or climate action plans (Horst, McClintock, and Hoey 2017; McClintock and Simpson 2016). Additionally, cities may update their city code to encourage community gardens and farmers' markets, build local food reserves, or provide incentives for developers to add rooftop gardens or grocery stores (American Planning Association 2007; Horst, McClintock, and Hoey 2017; McClintock and Simpson 2016; Raja et al. 2018). Governments can also rely on food policy councils. Food policy councils are groups tasked with addressing concerns about food policies by working across different sectors and agencies related to food systems (Farnsworth 2016).

Food system policies can be central in improving food security in neighborhoods and at larger, regional scales. When a household is food secure, it has access to sufficient nutritious food that meets its dietary needs to support all household members to live a healthy life (Coleman-Jensen et al. 2021; 2022). The inverse, food insecurity, occurs when households cannot consistently afford or otherwise access sufficient food (Coleman-Jensen et al. 2021; 2022). Unfortunately, policies alone may not guarantee improvements in food security. Cities and food policy councils can suffer from a lack of funding (Horst 2017). This challenge decreases their ability to expand programming and support local farmers.

Additionally, some policies may be ineffective. For instance, zoning related to food systems has mixed results. On the one hand, permitting farms and gardens in cities has expanded urban agriculture (Cohen 2018). On the other hand, incentives for additional grocery stores have not resulted in significantly more stores, and when developers do build grocery stores, they are not guaranteed to reflect residents' needs. Furthermore, some policies may prove successful but only target wealthy, food-secure areas, thereby having a minimal impact on food insecurity (Horst 2017; Raja et al. 2018). Finally, a lack of awareness of local food system issues may minimize the sense of urgency surrounding this topic (Raja et al. 2018). Thus, although planning is more integrated into food systems, limitations still exist. In addition to the urban-targeted policies discussed, planning tools are useful in rural settings.

Planners can support food systems through farmland preservation. Although the APA officially recognized the importance of planners' engagement with food systems in 2007, they released a policy guideline on agricultural land preservation in 1999 (American Planning Association 1999). Agricultural land preservation intends to "protect commercially viable farms and agricultural land which incidentally provide open space" (American Planning Association

1999). A recent report by the American Farmland Trust found that all states have enacted policies to protect farmland, but more aggressive action is required to save states' farmland (Freedgood et al. 2020).

Farmland preservation is critical because agricultural land is being rapidly paved and converted to urban areas or for residential uses. From 2001 to 2016, eleven million acres of agricultural land were converted (Freedgood et al. 2020). Loss of farmland has massive consequences. Well-managed agricultural land provides economic opportunities, improves food security, sequesters carbon, protects wildlife habitats, and prevents floods and fires. Agrihoods represent an opportunity to preserve farmland and support a growing population.

2.2 About Agrihoods

2.2.1 *The Definition of Agrihoods*

In line with a growing interest in food systems planning and the protection of farmlands, the real estate think-tank, Urban Land Institute (ULI), published a report in 2016 extolling the benefits of incorporating food production and distribution into real estate development. This report includes a definition for agrihoods: "Single-family, multifamily, or mixed-use communities built with a working farm as a focus" (Urban Land Institute 2016, 3). Although frequently cited, ULI's definition is not the only description for agrihoods. For instance, additional definitions have included combinations of the following characteristics: real estate or residential development, luxury living, community, mixed-use development, millennial homeowners, working farms or food production, proximity to nature, and sustainability (Albright 2014; Birkby 2016; Giacobbe 2017; Loudenback 2017; Norris 2018; Travers 2017).

This thesis builds on ULI's definition and defines agrihoods as *single-family, multifamily, or mixed-use communities that integrate agriculture and food consumption or distribution into*

their development. This definition intends to broaden the understanding of agrihoods to include developments that produce food through orchards, ranches, community gardens, or professionally managed farms and prioritize food through amenities like communal kitchens, restaurants, agricultural education centers, or farmers' markets. An expanded definition is appropriate because it permits developments with smaller footprints or size restrictions, such as apartments in urban centers, to market themselves as an agrihood and encourages developers to integrate food and agricultural amenities into their development regardless of its location. However, restricting the definition to include the integration of food production *and* food more broadly implies that community gardens alone are insufficient for a development to qualify as an agrihood. Specificity in this definition is critical as the model is likely to expand. The presumed expansion of this model underscores the importance of clarity in the definition of agrihoods. Without a clear definition, this development model is at risk to be commodified and cheapened with the food-based components becoming an after-thought or a gimmick. The history of agrihoods underscores the durability of this development model and the likelihood of its longevity.

2.2.2 *History of Agrihoods in Context*

Prairie Crossing is considered the first agrihood. It opened outside of Chicago, Illinois in 1995 (Birkby 2016). The creation of Prairie Crossing predated the growing national interest in food production and healthy eating. The connection between location, food, and health likely inspired the expansion of agriculturally focused residential developments, such as Prairie Crossing. Since the term did not exist until 2014, these early developments did not market themselves as agrihoods. Instead, phrases such as agricultural developments, planned agricultural communities, conservation communities, or agriburbia were used to describe these

developments. At least seven developments now designated as agrihoods opened between 1995 and 2008[2] (DeSimone 2020; Murphy 2014). The expansion of early agrihoods slowed as housing developments paused construction due to the 2008 housing market crash (Murphy 2014). However, the agrihood development pattern bounced back and boomed within nine years (Birkby 2016).

Likely, millennial homebuyers and strategic marketing techniques are partially responsible for the growth in agrihood developments. In 2014, the millennial generation became the largest share of homebuyers, a trend that continues (National Association of REALTORS Research Group 2021). Some real estate preferences of this generation differ from earlier generations. As with other generations, a great location is still a priority, but millennials also desire multifunctional outdoor community spaces and sustainable features (QuickenLoans 2020). Additionally, homebuyers and renters desire locations that provide access to healthy fresh local food (White 2017).

The development firm, Rancho Mission Viejo, clearly recognized the potential of the millennial market and their different priorities. In 2014, Rancho Mission Viejo first used the phrase *agrihood* to target millennial homebuyers passionate about the farm-to-table movement and later applied for a trademark on the term (Adams 2019; Justia Trademarks 2017; Loudenback 2017; Travers 2017). Agrihoods' connection to real estate marketing strategies underscores the risk for further commodification of this development model. Rancho Mission Viejo was not the only developer to recognize the potential of agrihoods.

[2] The agrihoods include Agritopia in Arizona, Broomgrass in West Virginia, Edwards Addition in Oregon, Hidden Springs in Idaho, Prairie Crossing in Illinois, Serenbe in Georgia, and South Village in Vermont (DeSimone 2020; Murphy 2014).

ULI is a substantial supporter of agrihoods. In 2015, ULI released a report on building healthy places, including a chapter on healthy food in the built environment (Urban Land Institute et al. 2015). The following year, ULI released a report on the intersection of food and real estate and their definition of agrihoods. (Urban Land Institute 2016). ULI also hosted food and real estate forums on the economic and health potential of agrihoods and the importance of blending food production with real estate. Since 2016, the government approved Rancho Mission Viejo's trademark, ULI published a final report on agrihoods, and the popularity and diversity of the development model exploded (Birkby 2016; Justia Trademarks 2017; Norris 2018). Additionally, the increase in remote work due to Covid-19 has provided employees more flexibility for where they can live and resulted in an exodus from urban environments into the suburbs (Cassidy 2021; Rutten 2021). The growth of agrihoods is likely to continue as employers allow remote work and millennials and younger generations prioritize sustainability, nature, community, and healthy eating.

2.2.3 *Characteristics and Amenities of Agrihoods*

Under the right circumstances, agrihoods provide an environmentally friendly development model. Many homes feature environmental upgrades, such as solar panels and compost bins, so the homes are frequently more sustainable (DeSimone 2020; Loudenback 2017). The farms can decrease greenhouse gas emissions by providing food to customers nearby and shortening food supply chains or 'food miles' (Urban Land Institute 2016; Watson 2020; Weber and Matthews 2008). Food production is frequently organic, thus minimizing toxins and chemicals in the soil. However, not all farms are certified organic.

There is a common misconception that sustainable agriculture and organic farming are synonymous (Rigby and Cáceres 2001). In truth, organic farming may or may not be sustainable

and sustainable agriculture may or may not include organic farming. Organic farming focuses on food production, including restricting inputs, such as fertilizers and pesticides, and techniques like crop rotation (Clouser 2019; USDA National Organic Program 2015). Farmers need to follow regulations and guidelines to be certified organic by the United States Department of Agriculture (Clouser 2019; Rigby and Cáceres 2001). Organic farming does not consider land use or food miles (Clouser 2019). Additionally, depending on the techniques used, organic farming may have adverse environmental effects on soils due to the leaching of nitrates and ammonia from livestock waste and accumulation of heavy metals in the soil (Rigby and Cáceres 2001).

On the other hand, "sustainable agriculture seeks to provide more profitable farm income, promote environmental stewardship, and enhance [the] quality of life for farm families and communities" (National Institute of Food and Agriculture n.d.). There is no certification or regulatory requirement for sustainable agriculture. Therefore, sustainable agriculture is a set of practices intending to improve the health of the planet and people. Agrihood farms could be certified organic, rely on sustainable agricultural practices, or do neither.

Even if agrihoods do not practice sustainable farming, the prevalence of green space from farms and gardens can benefit residents and the planet. Planted trees and vegetation can absorb carbon in the atmosphere. Nature contact, or accessing green space, can reduce stress, improve retention and attention, help childhood development, and instill a sense of community (Frumkin and Fox 2011). Likewise, gardening and cultivating food together can also improve social capital and enrich the community (Firth, Maye, and Pearson 2011). Furthermore, the consumption of delicious and healthy produce can improve human health.

As alluded to, farms are rarely the only amenity on agrihoods. Most agrihoods are master-planned communities with a range of attractive and desirable services. In Anne DeSimone's book *Welcome to the Agrihood* (2020), DeSimone includes a directory of agrihoods and descriptions of the versatility one can expect in this development form. DeSimone describes agrihoods with community gardens, fitness centers or pools, K-12 schools, community centers, trails and parks, and recreational spaces for sports, archery, boating, or horseback riding (DeSimone 2020).

There is also diversity in the type of housing in agrihoods. Housing options could include single-family homes, townhouses, condos, or apartments. Additionally, although most homes in agrihoods are privately owned, some housing can be rented at or below market rate. Some developments have areas reserved for residents 55 years of age and older, while others include multi-generational homes. Agrihoods could also follow the tenets of intentional communities. Intentional communities are housing developments that center on communal living and follow a shared set of values (Tina 2021). Developments that rely on cohousing or are tiny house villages would likely fall under the umbrella of intentional communities. Finally, an agrihood could be a mixed-use community and blend residential, retail, and commercial uses.

A common similarity across many suburban or rural agrihoods tends to be the development pattern. Many agrihoods are cluster developments or conservation developments (DeSimone 2020). Both development patterns preserve open space often by clustering homes (Cullingworth and Caves 2014a; McMahon 2010). The phrases cluster development and conservation development are frequently used interchangeably, but there is a distinct difference between the two. Although cluster developments result in conserved green space, that is not their

primary function. Instead, the goal is to reduce infrastructure costs and provide high-density housing; thus, developers may build homes on valuable natural land (McMahon 2010).

Conversely, conservation developments prioritize the quality and quantity of undeveloped land to preserve biodiversity and natural space (Feinberg and Hostetler 2019; McMahon 2010). The critical first step for conservation districts is to analyze what land should be protected and not used for development. Additionally, developers may choose not to cluster homesites in conservation developments. In some instances, developers may strategically scatter homes on selected parcels so the homes "sit lightly on the land" (McMahon 2010, 7).

There are numerous benefits to using a cluster or conservation development model. In conservation developments, even when developers do not cluster homes, natural land is still preserved and provides ecological benefits, such as reduced stormwater runoff and improved air quality. Access to open space also provides residents with recreation opportunities. Clustering homes often results in the same amount of density on a site but with a smaller footprint for each house and more shared space amongst the homes. Another benefit of this model is that less infrastructure is required, saving cities money and increasing the timeline for the completion of the development. Critiques of this development model are that it may cause sprawl in rural areas, tends to appeal to higher-income people, and increases land values (McMahon 2010). As the following case studies describe, these concerns are salient for urban and suburban agrihoods as well.

2.2.4 *Examples of Agrihoods*

Miralon is a master-planned community in a suburban area of Palm Springs, California. The developer, Freehold Communities, imagined the property as a golf country club but pivoted to an agrihood to meet the preferences of different homeowners (Giacobbe 2017). When

complete, the development will include 1,150 single-family homes powered by solar panels. Miralon is targeting high earning households; the homes are anticipated to start at $820,000 and may cost more than $1,100,000 (The Jelmberg Team 2022). Comparatively, as of April 2022, the median home sales price in Palm Springs was $624,500 (Redfin 2022b).

Miralon will also include a 70-acre olive tree grove. Olives were selected as the main crop because they are suitable for the arid climate and desert topography of Palm Springs and do not attract insects, bunnies, or rodents (Kalfus 2017). Additionally, olives provide an opportunity for Miralon to partner with a local olive oil company to harvest the olives and create olive oil. For amenities, Miralon will include 6.5 miles of hiking paths, community gardens, a demonstration kitchen, and a community center that includes pools, a spa, a health club, a coffee shop and a bar, and a lounge (DeSimone 2020; Giacobbe 2017; Kalfus 2017; Loudenback 2017). The cost of housing and emphasis on a single crop implies that improving food security is not a primary objective for Miralon.

While Miralon predominantly grows one crop, the Michigan Urban Farming Initiative (MUFI) grows a variety of produce in Detroit, Michigan. MUFI is a Detroit-based non-profit established in 2012 (Adams 2019; Dickson 2017). Initially a community garden, in 2016, it rebranded as the country's first "sustainable urban agrihood." MUFI differs from other agrihoods because they are not directly involved in housing development. Instead, the President of MUFI, Tyson Gersh, hopes that MUFI's farm will increase property values in the surrounding area and attract buyers interested in local food (Adams 2019; Perkins 2017; Travers 2017). Unfortunately, Gersh's aspiration is problematic.

Using the farm as a tool to increase property values is a form of green gentrification. Green gentrification occurs when a developer creates a green amenity, like a park or trail, and it

increases property values and leads to gentrification and possibly displacement (Gould and Lewis 2017). Gentrification and displacement tend to have a stronger negative impact on communities of color. In the case of MUFI, green gentrification is particularly problematic because Gersh is a white man who located MUFI in a predominantly Black neighborhood without consulting the residents. Notably, Gersh has acknowledged the risks of gentrification and has promised to build relationships with the current residents and support affordable housing initiatives (Travers 2017). However, there are reports that he publicly objected to a 130-unit affordable and market rate housing complex near MUFI (Perkins 2017). For these reasons, some residents compare his actions to colonialism. However, many residents are large supporters of MUFI's mission (Perkins 2017).

MUFI's stated objective is to fight food insecurity by providing free food to nearby residents (Adams 2019; Perkins 2017). They grow 300 vegetable varieties and have 200 fruit trees on three acres (Dickson 2017; Runyan 2016). Since their founding, they have distributed 70,000 pounds of produce to over 2,500 households (Perkins 2017). Additionally, as a popular non-profit, they receive significant funding from corporations and are primarily volunteer-operated (Dickson 2017). This circumstance allows MUFI to provide their food free of charge. The outside funding also provides financial support for creating affordable housing for their interns, a water harvesting cistern, and the Community Resource Center (CRC) that provides education, a café, and an industrial kitchen for community members (Dickson 2017; Runyan 2016; Travers 2017). Critics of MUFI observe that by being volunteer-run, MUFI does not employ nearby residents (Perkins 2017). Additionally, by providing food at no cost, MUFI can harm Black-owned farms by taking away business and creating a system of dependency (Adams 2019; Perkins 2017).

Like MUFI, the agrihood, Sustainability Park or S*Park (pronounced “spark”), in Denver, Colorado is also in an urban setting. S*Park is a mixed-use multifamily development near transit (Singer 2019; Tres Birds Workshop 2018). It includes 91 condo units. A condo at S*Park was recently listed for $555,000, which is $150,000 higher than the median sales price for condos in Denver (Redfin 2022a; Usaj Realty n.d.). Concernedly, in addition to being more expensive than most condos, S*Park is in a rapidly gentrifying area of Denver (Calhoun 2020). The higher cost for housing may be due to the expansive amenities in the development.

The development features a Japanese restaurant, a juice bar-yoga studio, an outdoor kitchen, stormwater runnel and detention pond, a community garden, and a 7,000 square-foot aeroponic farm above the Japanese restaurant. There is also a rotating artist-in-residence and two yet-to-be-filled retail spaces (Singer 2019). The buildings utilize reclaimed material and sustainable technologies, such as LED lights, solar rooftops, advanced insulation, and passive heating and cooling (Tres Birds Workshop 2018). Finally, single-occupancy vehicles are discouraged through limited access to resident parking coupled with a prominent bicycle share on-site (Singer 2019; Tres Birds Workshop 2018). Thus, unlike MUFI, food production is a bonus for S*Park, and the focal point of the development is sustainable living.

These descriptions exemplify the diversity and desirability of the agrihood model, potential equity concerns related to the model, and that agrihoods may not hold the same core values. As a master-planned community, Miralon strengthens the sense of community and provides residents access to natural land and luxurious amenities. However, living at the development is expensive and not a realistic option for most people. Unlike Miralon, which predominantly produces one crop, MUFI prioritizes access to local food and the production of a variety of food for neighbors and nearby residents but may displace current residents. MUFI is

not directly associated with the surrounding homes, which differs from Miralon and S*Park. Of the three examples, S*Park is the only mixed-use community and agrihood that relies on condos and aeroponic farming. Additionally, while organic farming and harvesting water are components of MUFI and Miralon uses solar panels, sustainability is not the primary focus for the other two developments as it is for S*Park. The yoga studio, sushi restaurant, and prominence of bicycle culture also demonstrate that S*Park is driven by a value of health and wellness.

2.2.5 *Values found in Agrihoods*

In researching agrihood developments, this research discovered numerous values at play in the various communities. Based on research, the most common seven values visible in agrihoods are the sense of community, luxury and exclusivity, access to natural land, the opportunity to grow food, proximity to local food, sustainability, and health and wellness. How the values appear, and which values are most prominent within agrihoods differs based on the developments. The values and amenities present on agrihoods impact the community dynamics experienced in the neighborhood.

2.3 Predicted Underlying Community Dynamic

2.3.1 *Sense of Community and Social Capital*

This thesis defines an agrihood's community dynamic as how residents feel about their neighborhood and the concomitant impact of these feelings on the development and residents. A survey of the literature implies that the most substantial value in agrihoods will be the sense of community and that other values will support and strengthen this value. Therefore, it is likely that the community dynamic in agrihoods will be how the development supports residents' sense of community.

Since its inception over 100 years, urban planners have touted neighborhood planning as a tool to strengthen residents' sense of community and sense of place (Rohe 2009). Neighborhood planning is a planning approach and policy to alter the built environment of neighborhoods to achieve a social objective. A strong sense of community is beneficial for neighborhoods and residents because it can strengthen the health of residents and society (Eicher and Kawachi 2011; Moustafa 2009; Rohe 2009). As master-planned communities, the design of agrihoods was likely influenced by neighborhood planning strategies, predictably causing residents to experience a strong sense of community.

A key component in establishing a strong sense of community is social capital (Rubin and Rubin 2001). According to political scientist Robert Putnam (2011), "social capital refers to connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them" (19). Communal collective action and social solidarity are inspired by trust, reciprocity, and obligations to others, resulting in feelings of belonging and a sense of community (Putnam 2000; Rubin and Rubin 2001; Teig et al. 2009). A firm sense of belonging and strong social capital result in an enhanced sense of safety, empowered residents, social solidarity, and a sense of responsibility to improve and protect the community (Eicher and Kawachi 2011; Rubin and Rubin 2001). The built environment can promote or undermine the building of social capital (Eicher and Kawachi 2011; Moustafa 2009; Rubin and Rubin 2001).

2.3.2 *Sense of Community and the Built Environment*

The built environment can impact the sense of community through instrumental and symbolic means (Moustafa 2009). According to research by Moustafa (2009), the built environment plays an instrumental role by enabling the occurrence of certain behaviors and a symbolic role by affecting residents' perceptions. The built environment can affect perceptions

about the characteristics of residents in the area through the personalization and upkeep of houses and yards or gardens. A built or natural boundary can also affect perceptions about who is "in or out" of the neighborhood. Walkable design, the presence of maintained parks and "third places," and mixed land uses are examples of the built environment playing an instrumental role in building social capital and enhancing a sense of community by encouraging contact between neighbors (Eicher and Kawachi 2011).

Third places are locations in neighborhoods outside of homes (first places) and offices (second places) where residents can gather to meet and build relationships (Butler and Diaz 2016; Oldenburg 1989). These locations often result in a sense of community and togetherness as neighbors see one another more frequently. Conversely, urban sprawl and reliance on vehicles for travel can reduce the opportunity for chance encounters and interactions, thereby impeding the creation of social capital (Eicher and Kawachi 2011). Fortunately, agrihoods have significant third spaces, like parks and restaurants, and often include walkable designs and mixed land uses. However, it is critical to recognize that the built environment alone cannot result in an enhanced sense of community or preferred social behaviors.

Physical determinism assumes that the physical characteristics and designs of a neighborhood play a predominant role in shaping the behaviors of the residents (Jabareen and Zilberman 2017). Critics of physical determinism say "that social behavior is determined by a social group's cultural and social codes" (Jabareen and Zilberman 2017, 2). Likely, it is a combination of factors – such as the physical characteristics of the development, the level of community satisfaction, demographic characteristics of residents, attitudes toward behaviors, and socio-cultural perceptions – that shape the perceived values and behaviors experienced in agrihoods (Dill, Mohr, and Ma 2014; Jabareen and Zilberman 2017; Moustafa 2009). The mixed

reaction to community gardens, a frequent amenity in agrihoods, exemplifies that social behavior does not always respond as anticipated to features in the physical environment.

Community gardens are often purported as a robust mechanism for establishing social capital (Firth, Maye, and Pearson 2011; Glover 2004; Teig et al. 2009). The gardens allow community members to work towards a collective goal, have face-to-face interactions, and protect and grow something together. Unfortunately, not all community gardens have a positive result. In their study of a community garden in Brookyln, Thrasher (2016) found that disagreements on governing the garden can exacerbate current community stressors. Likewise, Glover (2004) found that the social capital generated from participation in a community garden "can be both beneficial and costly, depending upon the social actor's position within a functioning social network" (159). Thus, even when a community garden is created with the best intentions to enhance social capital and improve the community's diet, the community outcome is not guaranteed. Theoretically, the cultural and social norms in agrihoods may negate these concerns and reinforce the positive aspects found in the built environment. The benefits of community gardens, coupled with likely social norms in agrihoods, suggest that the ability to grow food or access to local food could play a more substantial role than the sense of community in agrihoods' community dynamics. However, a recent thesis suggests that is unlikely to be the case.

Breger's (2020) master thesis studies agrihood residents' engagement with the agricultural amenities in their neighborhood. They find that the community's character was a more potent driver for residents to move to the agrihood than the access to fresh produce (Breger 2020). In many cases, the reason to move to a neighborhood may not reflect the core value in the development. However, if residents are moving to a development and not heavily prioritizing

access to food, it is unlikely to be the operative value in the community's dynamic; instead, the ability to grow food could have a supportive role.

This thesis will examine the underlying community dynamics present in agrihoods. A diagram of the relationship between the seven listed values, including the ability to grow food, will illustrate the various connections. A diagram on agrihoods' dynamics is timely because the popularity of agrihoods is likely to expand as homebuyers continue to prioritize sustainability, healthy and local food, and a strong sense of community. It is planners' responsibility to prepare for the growth of agrihoods in their cities and towns. A comprehensive understanding of this model can assist such planning efforts. However, previous research on agrihoods has been limited to real estate reports conducted by ULI, news media articles on new developments, and masters' theses that analyze a component or effect of agrihoods. Comparatively, this thesis fills a gap in the literature by examining and visualizing the underlying community dynamic in agrihoods. The research then compiles a list of relevant policies for planners to implement to support this model.

Chapter 3. Methods

3.1 Research Questions

The answers found from this thesis's research questions will increase knowledge of agrihoods and prepare planners and developers for this model's continued popularity and expansion. The answer to the first question will be illustrated through a visual diagram to expand planners' knowledge of agrihoods as a development model and ongoing trend. The second question highlights policies planners can implement to support this model. The questions are:

1. What is the underlying community dynamic operative in agrihoods?
2. What tools are best suited to help the establishment of agrihoods?

3.2 Creation of an Agrihood Diagram

As mentioned, the survey asked about multiple values aligned with agrihoods. The variety of values includes community priorities, such as access to local food, and ethics, like sustainability. The visual diagram will be constructed based on how the various values and amenities present in agrihoods interact to reinforce the underlying community dynamic in the development. A diagram is ideal for this research because it can visually demonstrate the connections and relationships discovered during the research.

The presence of physical characteristics, such as trails and walkable designs, likely reinforce the observed values, so they are also examined in the survey. However, this analysis recognizes that agrihoods are not a panacea, nor is the intent of this research to describe how to design a "perfect agrihood." Thus, the physical characteristics of agrihoods are not the primary focus of this research. Additionally, such stringent limitations on the development form of agrihoods could dissuade municipalities and developers from creating an agrihood if they cannot meet the prescribed design requirements. Finally, the researcher is cognizant of the criticism

against physical determinism and does not want to overemphasize the role of design in driving values in agrihoods.

The socio-cultural context in agrihoods, including residents' socioeconomic status, demographics, and pre-dispositions, would also play a substantial role in the values present in the developments. Unfortunately, it is challenging to review all sociological factors that may impact agrihood values within this research because survey respondents are unlikely to possess information regarding residents' demographics and attitudes. Notably, research evaluating psychological and health benefits of nature contact finds that community satisfaction and health are higher among residents with access to views of natural elements and scenery, such as natural land or agriculture (Frumkin and Fox 2011; Kaplan 2001). Therefore, the research could assume that residents in agrihoods have a high level of community satisfaction since the developments often include ample green space. However, utilizing assumptions and one response to reflect a neighborhood's level of satisfaction is not great practice. For these reasons, this thesis does not examine the socio-cultural context of agrihoods. Instead, the research aggregates the survey responses to reveal patterns and values found in agrihoods. A deeper analysis of residents' feelings and demographics in a smaller sample size of agrihoods is an opportunity for future research.

3.3 AGRIHOODS AS THE UNIT OF ANALYSIS

There is disagreement about how many agrihoods exist because of the definitional inconsistencies of what constitutes an agrihood. To overcome this concern, this research predominantly relies on the agrihoods listed in the directory of *Welcome to the Agrihood* (DeSimone 2020). As the self-described first urban agrihood, MUFI[3] is also included in the list

[3] DeSimone (2020) classifies MUFI as urban agriculture and not an agrihood.

of agrihoods, as is Rooted Northwest in Washington State and Lakehouse17 in Colorado. The research retrieved contact information for the agrihoods from their websites. As popular residential developments, many agrihoods have active and engaging websites with contact information for various stakeholders such as the developers, the agrihoods' social coordinators, and managers or realtors of the development. A shortcoming of relying on websites for contact information is that the surveys were more likely to be completed by developers or realtors, with fewer responses likely from residents.

Research of agrihood websites resulted in the removal of 21 of the initial 91 agrihoods. Of the 21 removed developments, 14 are proposed developments that have not yet broken ground. These developments were removed because the community dynamic is unlikely to be apparent until residents move into the development. The remaining agrihoods were removed for various reasons, including the cancellation of planned development, the developments' websites lacking connections with farms or community gardens, or the development not appearing in any internet searches. Thus, the sample size for this study is 70, with 50 agrihoods including professionally managed farms and 20 including community gardens coupled with other food-based amenities.

Table 1: Sample Size of Agrihoods

Initial Number of Developments	**Resulting Sample Size**	**Agrihoods with Farms**	**Agrihoods with Community Gardens**
91	70	50	20

An initial introduction email was sent to 70 agrihoods with information on the researcher, the objective of this report, and details on the forthcoming survey. The survey was sent one week later and completed using an online platform. A survey platform is preferable to an open form questionnaire because it is user-friendly and can collate and analyze data. The survey was open for three weeks. The general schedule for the survey and messages sent to the agrihoods takes

inspiration from the Tailored Design Method (TDM). The messaging and communications of the TDM follow the social exchange theory with an intent to prioritize trust, reciprocity, and altruism (Dillman, Smyth, and Christian 2014). However, with the large sample size and constrained timeline, the researcher could not rely on the mixed messaging technique and the longer timeline recommended in the TDM.

Appendix A includes the survey questions. A blend of questions allowed respondents to provide descriptions of the agrihood and their perceptions of the development. Many questions on the survey have a numeric value or a limited set of answers. Thus, some questions result in nominal or numeric data, while other questions are qualitative and based on respondents' experiences. Utilizing quantitative and qualitative approaches for this research provides a comprehensive examination of the development form. Moreover, it can validate how people feel about the agrihood development model, which can underscore the likelihood of its continuation and provide context for the community dynamics.

3.4 Reasoning for Survey Questions

The survey questions are low barrier and easy to answer for individuals with various connections and knowledge about the development. As mentioned, demographic and level of satisfaction information about residents is not the survey's primary focus. Instead, the priority is to gather general details on the agrihood and perceptions of the values present in the developments. Thus, the survey includes subjective and objective questions about the agrihoods' characteristics and values.

The first section of questions provides general information on the respondent and agrihood. The following section brings a personal perspective and background to the respondents' connection to the development. Open-ended answers from this section provide

additional support in evaluating the interaction of values when creating a visual diagram. The third section asks respondents to rank pre-determined values from most to least aligned with the development. Another open-ended question allows respondents to provide additional values not included in the initial list. The final ranking of the pre-determined values, coupled with the additional values, will shape the backbone of the diagram. Respondents' ranking of values may result in the exclusion of specific values from the diagram.

The *Characteristics of Developments* section asks about the amenities of the agrihood, the geographic setting, the scale of the development and food production, the type of housing, and if the development has any sustainability certificates. These answers will provide context for the responses. Information about current agrihood developments will also give planners a deeper understanding of how agrihoods have developed. Additionally, the list of amenities can provide a glimpse into the dynamics of agrihoods and demonstrate if the presence of certain amenities results in a value being ranked higher in developments.

3.5 Planning Tools and Policies

The final questions are related to the second research question for this project, what tools are best suited to help the establishment of agrihoods? This research question will be answered by synthesizing survey responses. Policy recommendations provided in ULI's guidebook will also be included. This research prioritizes policies that have already been operationalized and have a track record of success by highlighting policies that have supported the establishment of existing agrihoods. Finally, barriers experienced by the agrihoods are also examined. By describing challenges, this research hopes to prepare developers and planners for how to strategize against such obstacles when developing future agrihoods.

Chapter 4. Survey Results

This chapter includes characteristics of the participating agrihoods, common themes describing why the agrihoods are unique, and an overview of the values experienced in agrihoods. This chapter intends to provide context on the respondents, underscore the diversity of the development model, and highlight where the survey revealed similarities between the developments.

4.1 Characteristics of Agrihoods

Twenty-two survey responses were received (Appendix B). As predicted, most of the responses come from developers (14), six of whom are also residents. A developer responsible for two agrihoods completed one survey, and two residents of the same agrihood completed separate surveys. Thus, these findings represent 22 agrihoods. The agrihoods are located throughout 15 states, with multiple responses received from North Carolina, California, Oregon, Virginia, and Washington. Most agrihoods are in suburban areas, while urban areas are the least common location for this model (see Figure 2). Figure 4 is a map and displays the various locations of the agrihoods, the names of the developments, and if the development is in a rural, suburban, or urban area. Based on these findings, the development model is most prevalent in suburban areas and is not limited to specific regions in the United States.

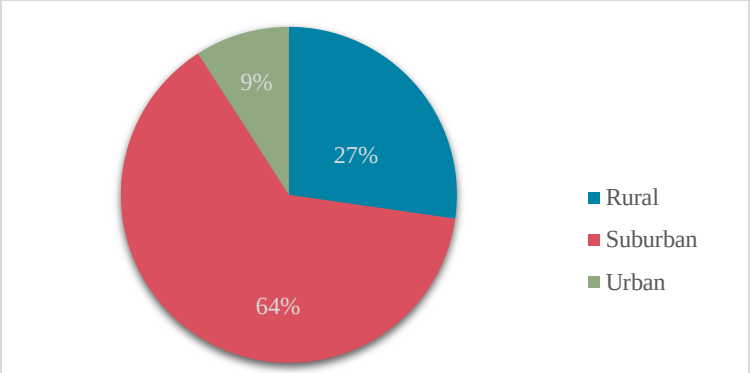


Figure 2: Land Category for Developments

While the suburbs are the most common location for respondents, the scale of agrihoods varies. The developments' size ranges from 2.5 acres (S*Park condos) to 6,000 acres (Rancho Mission Viejo), and they have between seven (Serosun Farms) and 7,500 (Whisper Valley) households on site. However, these extreme sizes are rare; most developments are between 200 to 410 acres (Figure 3). Within this development size, most developments have fewer than 80 homes onsite.[4]

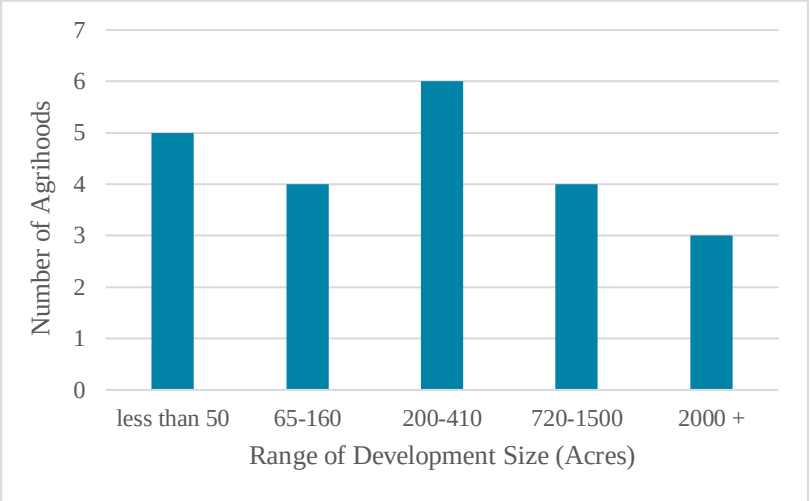
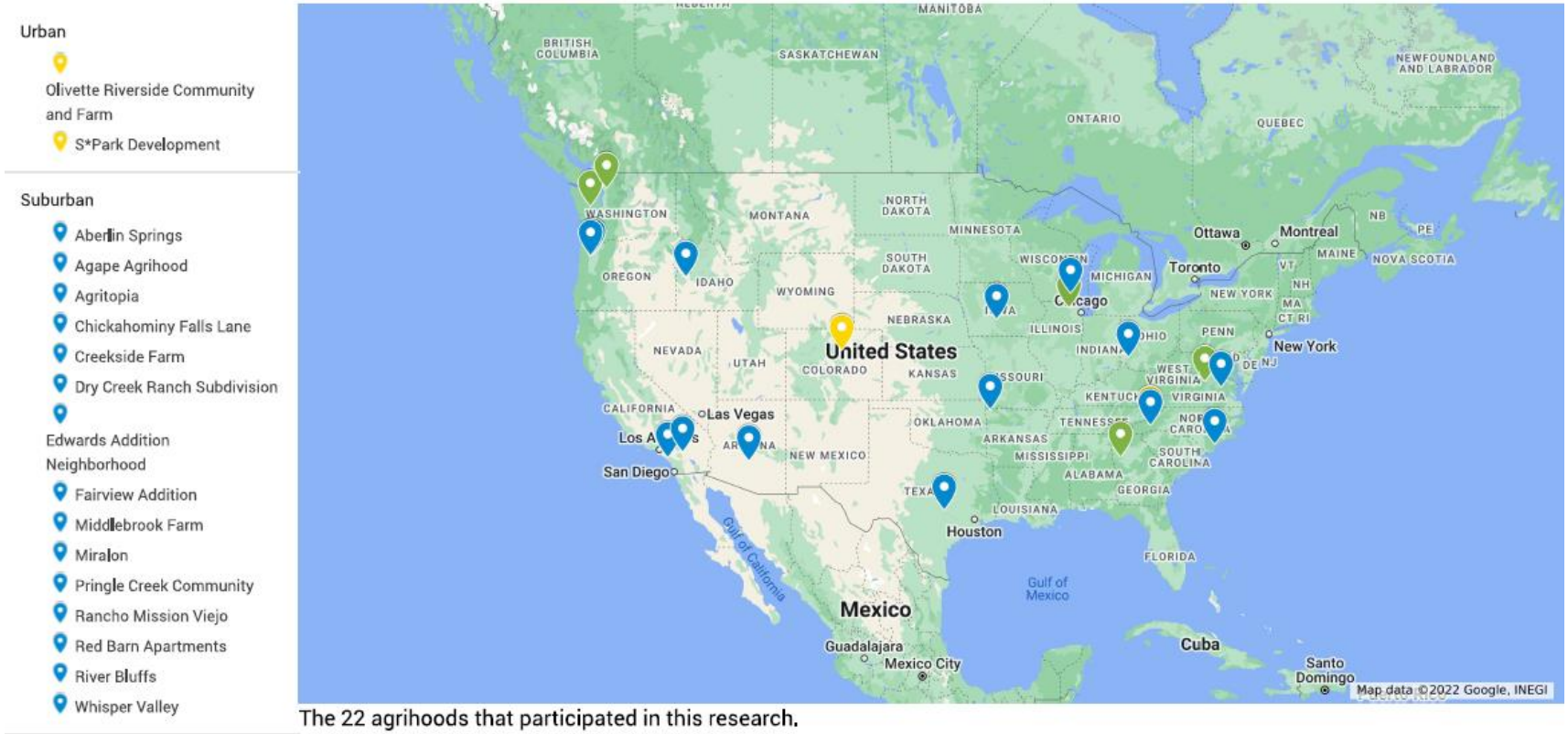


Figure 3: Range of Agrihood Development Sizes

[4] Some of the developments are completed but most are still under construction. Respondents may have answered the housing-related questions based on current capacity or on future projections.



The 22 agrihoods that participated in this research.

Figure 4: Surveyed Agrihood

With such a large spread regarding the size of the developments and number of households, it is unsurprising that the gross density of housing and type of housing also varies. Gross density is calculated as the number of units per acre based on the *total* development. Thus, the density calculation includes land on agrihoods that is undevelopable for housing because it is farmland, conservation land, or occupied by amenities. The average gross density of housing is 3.7 housing units per acre. Most agrihoods include a blend of housing types. As expected, the densest developments, S*Park and Red Barn Bentonville, rely on multifamily housing, condos, and apartments; they are the only two developments that do not include unattached single-family housing. Table 2 shows the housing types found in the agrihoods.

Table 2: Housing Types in Agrihoods

Housing Type	**Count**
Unattached single-family homes	20
Multifamily homes (duplexes, townhouses, etc)	15
Condos	6
Apartments	5
Senior living	2
Tiny houses	2
Live/Work[5]	1

The research also examined the amenities found in agrihoods. Every surveyed agrihood includes at least seven amenities from the survey list. Appendix C includes the complete list of amenities and the percentage of respondents with each amenity. Rancho Mission Viejo includes all 32 amenities. Trails are the most common amenity; 86.4% or 19 agrihoods have trails. The next most common amenities relate to agriculture; all agrihoods have community gardens or farms, and twelve agrihoods have community gardens *and* farms. Conservation and sustainable building practices are also common elements in agrihoods, with over 70% of respondents

[5] This is a housing type in Serenbe where the owner of a business lives in a townhouse or apartment above their storefront location (Serenbe 2019).

claiming to have these amenities. Finally, spas are the least common amenity (three agrihoods have spas).

The survey also asked about the green certifications awarded to the developments. Seven agrihoods have received certifications, and nine have not (Table 3). Of the three agrihoods awarded agricultural certificates, two farms are certified organic, and one is certified naturally grown. Additionally, two agrihoods claim to practice sustainable agriculture through regenerative farming practices or the selective use of inputs and farming techniques. Finally, four agrihoods have received various certifications due to their building or land conservation practices. The certifications the agrihoods received include Audubon International Certified Gold Signature Sanctuary, LEED, Conservation at Home, and Whisper Valley received the Austin Energy Green Building 2 star and Certified Wildlife Habitat certificate. Overall, the number of certifications is not significant. However, it demonstrates the potential that agrihoods can have on various aspects of sustainable development, including food production, land conservation, and building design.

Table 3: Does your development have a green certification?

Categories of certifications	Count
Yes, certification is about agricultural practices	3
Yes, certification is about the design of the development	4
No, but the farm practices sustainable agriculture	2
No, it does not have a certification	9
No response	4

4.2 Survey Themes Detailing What Makes Agrihoods Special

The research also asked respondents their opinion on what makes the development special. The wording of the question respondents answered was specific to their role on the development (Appendix A). The research amalgamated the responses to determine what themes are apparent across respondents' backgrounds. As demonstrated by Figure 5, of the 28 open-

ended responses,[6] the two most common themes are access to farmland (16% of respondents) and community (17%). The composition of themes can be organized into three categories (see Table 4); with most respondents providing answers that fall into the category of health or food.

Figure 5: What makes your development special?

[6] There are more open-ended responses than survey respondents because respondents may have two roles on the development (i.e. farmer and resident).

Table 4: Categories of Survey Themes

Category	Theme	Count	Percentage
Built and Natural Environment	Design	4	5%
	Location of Development	4	5%
	Rural Aesthetic	2	2%
	Amenities	5	6%
	Presence of Natural Land	4	5%
Built and Natural Environment Total		19	22%
Community and Individual Health	Sustainable Development	8	9%
	Economic Value	4	5%
	Multigenerational Living	3	3%
	Healthy and Active Lifestyle	4	5%
	Community	15	17%
Community and Individual Health Total		34	39%
Food and Agriculture	Preserving Farmland	8	9%
	Access to Local Food	8	9%
	Ability to Grow Food	4	5%
	Access to Farmland	14	16%
Food and Agriculture Total		34	39%

The least common category relates to the built and natural environment of the agrihoods. The themes of design, location of the development, the rural and small-town aesthetic, conservation of natural land, and amenities all fall under this category. These visible features play a role in the urban fabric of the development and can attract residents to the agrihood. For instance, when answering what was special about the development, a resident answered, "Overall appearance (has trees vs. clear-cut). Developer's commitment to maintaining an eco-friendly environment. Location is an ideal distance to needed businesses, but far enough away to not be 'crowded' and developed."

Sustainable development, community, economic value, multigenerational living, and healthy and active lifestyles relate to another category. This collection of themes centers on the community and individual health benefits of living in an agrihood. A developer's answer

underscores their emphasis on health and wellness in developing an agrihood. “As a builder/developer of active adult communities only, we were looking to offer something different by way of amenities. With so much focus on health and wellness, long before covid, and the need to eat healthy for longer more engaging lives, farm to fork living seemed natural.” Many of the themes under this category benefit different components of health.

The social determinants of health (SDOH) are features of the environment that affect health and quality of life (Office of Disease Prevention and Health Promotion n.d.). Five key categories[7] represent how the environment can impact health. Many of the SDOH categories have subsets to emphasize specific components. Table 5 demonstrates which SDOH categories are associated with the health-related survey themes. The responses’ health-related themes align with three of the five SDOH categories underscoring the vast health potential of agrihoods.

Table 5: SDOH and Health-Related Themes

Survey Theme	**Relevant Social Determinant(s) of Health**
Sustainable development	Neighborhood and the Built Environment – Environmental Health
Community	Social and Community Context
Economic value	Economic Stability
Family and multigenerational living	Social and Community Context
Healthy and active lifestyles	Neighborhood and the Built Environment – Physical Activity and Social and Community Context – Nutrition and Healthy Eating

The final category relates to food and agriculture and includes the survey themes of access to farmland, local food, preservation of farmland, and the ability to grow food. Of this category, access to farmland is the most common theme. Since farmland is rapidly being developed and is often expensive to purchase, it is unsurprising that agrihood farmers more

[7] The categories are economic stability, education access and quality, healthcare access and quality, neighborhood and built environment, and social and community context.

frequently cited this theme when answering why agrihoods are special. For example, in describing why they wanted to live and farm at an agrihood, a farmer answered, "I wanted to live here to have the support of neighbors who want to help farmers succeed and who are willing to help out financially by supporting agriculture infrastructure costs and land access." As implied in that response, many respondents support the farm and value the accessibility of fresh food "without having to do the required work."[8]

The three overarching categories – built and natural environment, community and individual health, and food and agriculture – while separate, are not mutually exclusive. Figure 6 displays the various relationships between the categories. Farms support the visual composition of agrihoods, while open land in the natural environment provides room to farm or ranch. Farms also improve the community's health by providing fresh produce to residents. If there is excess food, the roads and streets in the built environment provide a way for farmers to move their goods. Community gardens and growing food together result in feelings of community. The walkable design, green spaces, and engaging amenities of agrihoods support health by providing residents with opportunities for physical exercise and improving residents' mental and emotional well-being. The design of homes, such as single-floor, street-level houses, makes multigenerational living possible. An emphasis on sustainable development results in decisions and designs that create an environmentally friendly development. Likewise, an interest in nutrition encourages the consumption of healthy food and (possibly) a passion for the farm-to-table movement. The connections illustrated below highlight how the categories reinforce one another to improve the lives of current agrihood residents and attract new residents.

[8] Quote is from an employee answering what residents have expressed as their reason for living in the agrihood.

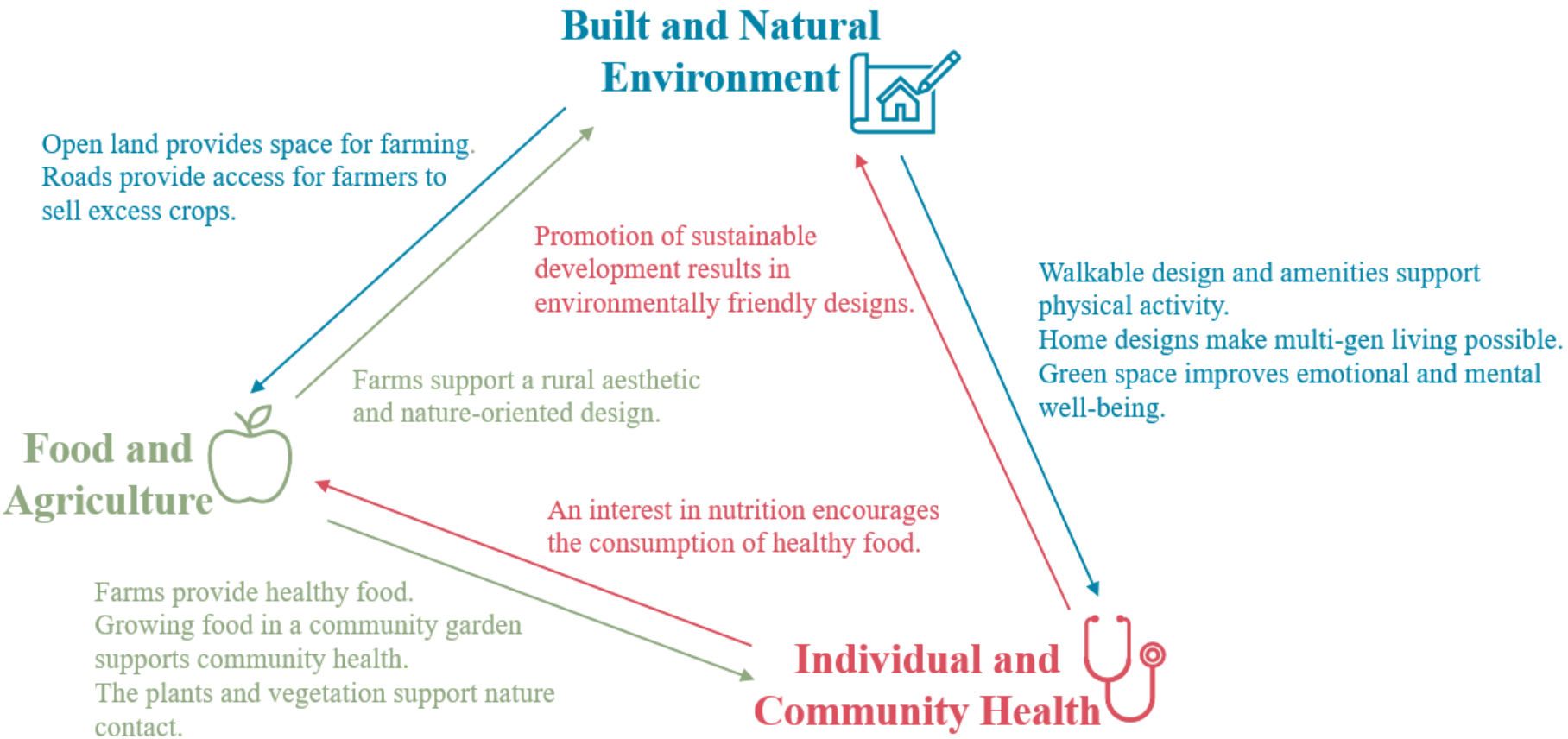


Figure 6: Relationship between Survey Categories

4.3 AGRIHOOD VALUES

The values of agrihoods reflect many of the themes and categories discussed above. Figure 7 coalesces respondents' ranking of values. As predicted, sense of community is the most aligned value; 59.1% of respondents (13 responses) ranked this value most aligned with their agrihood. This ranking contrasts with exclusivity and luxury which 68.2% of respondents ranked as least aligned with their agrihood. Ranking sense of community first and exclusivity seventh coincides with the survey themes above; many of the themes reinforce feelings of community (Figure 6) and none of the themes relate to exclusivity (Table 4). However, there is an unexpected pattern when comparing the values with the survey themes.

While topics on food and agriculture are common in the survey responses (incorporated in 39% of responses), neither access to local food nor the ability to grow food are ranked as the most aligned value. Surprisingly, some respondents did rank the food-oriented values as *least* aligned. There are a few possibilities as to why the survey themes and aligned values are at odds.

As demonstrated in the case studies, many of the houses in these developments are expensive. The cost of housing implies that most residents are middle- or upper-income and may not rely on the food grown in agrihoods for their subsistence. Therefore, agriculture as a value may not seem as important to their life nor the development. Another possibility is that, as developers, realtors, or employees, the respondents may have wanted to highlight the sense of community and other values because they determine the other values to be more meaningful or marketable. Additionally, Breger's (2020) thesis finds that residents may not participate in their agrihood's CSA or engage with the agricultural amenity. It is likely that food-oriented values would rank as less aligned if residents are not participating in them. Finally, it is possible that the food-based nature of agrihoods is taken for granted. For instance, respondents may remember

community events and gatherings, but forget that the event was to celebrate a harvest or that the gathering was at a farmers' market. Thus, the feeling of community could be remembered more deeply than the presence of food.

Another observation is that no one ranked health and wellness, a common topic in the open-ended questions, as most aligned. Notably, health and wellness is likely still an influential value in agrihoods since no one ranked it as least aligned. Likewise, no one ranked sense of community or sustainability last. Thus, it can be assumed that sense of community, health and wellness, and sustainability are prominent values in all the participating agrihoods. In addition to ranking the values, respondents provided values they determined to be present in their development but absent from the pre-selected list of values.

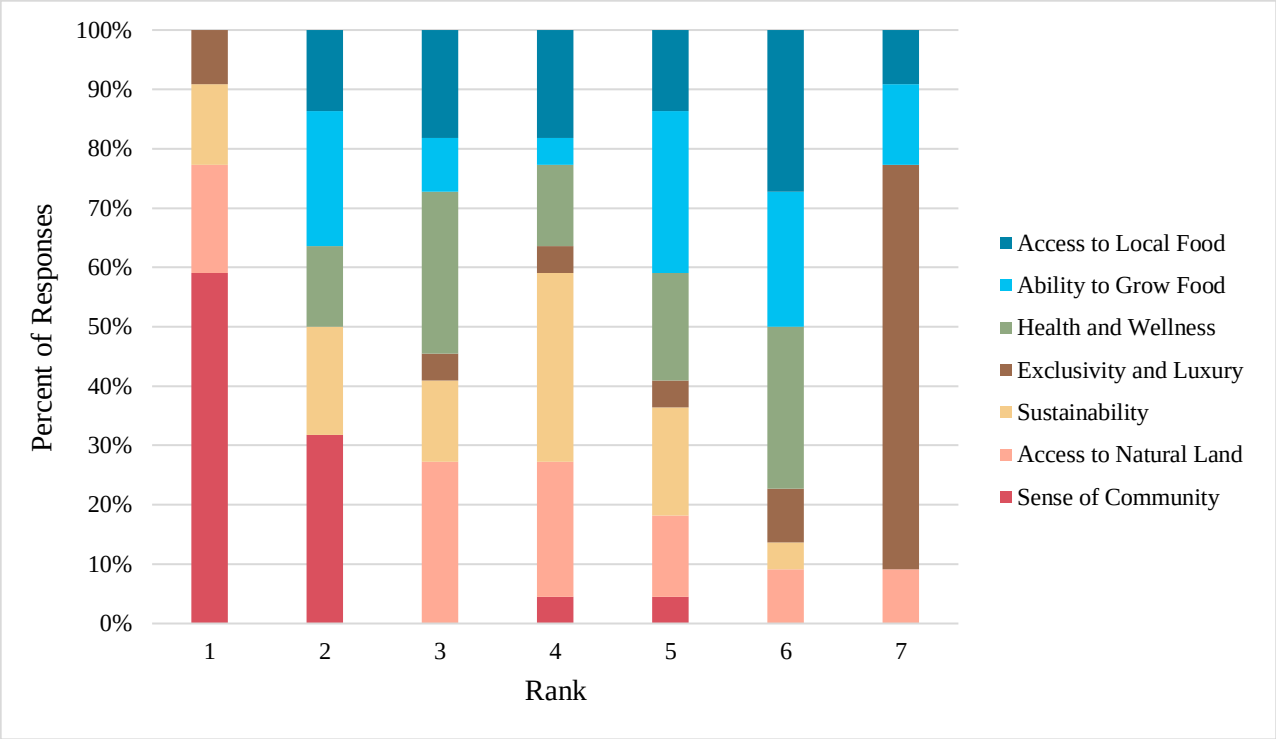


Figure 7: Ranked Values

Respondents provided a list of 14 additional values (Table 6). Of the 14 values, four (italicized) could fall under the umbrella of pre-selected values. Additionally, six of the respondent-provided values align with themes from the open-ended survey question. The duplication of certain agrihood elements, including walkability, sustainable development, and community, emphasizes how much agrihood residents and developers appreciate these features. It also implies that by incorporating built environment components and design elements, planners and developers can strengthen specific values in agrihoods. The following section examines how the values, social capital, and amenities in agrihoods interact to strengthen the underlying community dynamic.

Table 6: Additional Values

Respondent-Provided Values	**Corresponding Survey Themes**
Community Events	Community
Walkability	Design
Conservation of Natural Land	Presence of Natural Land
Rural / Small Town Atmosphere	Rural/ Small Town Aesthetic
Sense of Place	
CSA/ Access to Fresh Seasonal Food	Access to Local Food
Economic Value	Economic Value
Affordability	
Sharing Lessons Learned	
Pet Friendly	
Participatory Governance	
Sustainable Development	Sustainable Development
Recreational Opportunities	Amenities
Multigenerational Living	Multigenerational Living

Chapter 5. Underlying Community Dynamic in Agrihoods

As shown by the ranking of values and survey responses, *sense of community* is the strongest perceived value in agrihoods. Therefore, as predicted, the answer to the first research question is that residents feel a strong sense of community by living in agrihoods. The comprehensive visual diagram created through this research and presented in Figure 10 displays how this dynamic is operationalized by demonstrating how agrihoods bolster residents' sense of community through reinforcing feedback loops. Figures 8 and 9 zoom in on the instrumental and symbolic roles, respectively, of how the developments' design and amenities function in this dynamic.

The visual diagrams for this research takes inspiration from Moustafa's (2009) "integrative and cross-culturally valid theoretical diagram" on design and neighborhood sense of community (77). In both this research's diagrams and Moustafa's diagram, the built environment plays two roles impacting the sense of community – an instrumental role that promotes behavior and a symbolic role that affects perception. However, there are some differences between the comprehensive agrihood diagram and Moustafa's diagram.

First, Moustafa (2009) assumes a more limited impact of the instrumental role of the built environment. In their diagram, the instrumental role only impacts how a community functions. In this diagram, the built environment also impacts the community's characteristics. Second, Moustafa's interpretation of the symbolic role of the built environment has equity concerns. Moustafa claims that the symbolic role of the built environment can impact residents' perceptions of group affiliations and the level of safety perceived in a neighborhood. While this may be true, the perceived "intrusion" of outgroup visitors has resulted in the death or arrest of non-white visitors, so this research does not want to extol this aspect of the symbolic role of the

built environment. Instead, this research highlights how the built environment defines a socio-spatial designation and symbolically demonstrates like-mindedness and value-based similarities. Third, Moustafa's diagram includes additional elements, while this diagram is more condensed to highlight critical aspects of the survey responses. Finally, this diagram highlights the role of social capital and amenities and values from the participating agrihoods. In comparison, Moustafa's research primarily operates in the conceptual and does not directly discuss social capital.

The built environment is not the only component of neighborhoods that affects the sense of community. Culture, demographics, level of satisfaction, and other psychological and socio-cultural conditions also affect residents' daily lives and perceptions. Therefore, the diagrams include s*ocio-cultural context* as a critical driver impacting local community characteristics and residents' perceived similarities. However, as this research focuses on the development model of agrihoods, conditions of that model are the primary focus of the diagrams.

Figure 10, the comprehensive visual diagram developed in this thesis, is a combination of two initial diagrams detailing the instrumental (Figure 8) and symbolic (Figure 9) roles the built environment has in creating a sense of community for residents. The amenities and values included in Figures 8 and 9 represent most pre-selected values, amenities found in over 55% of participating agrihoods[9], and many of the respondents' written-in values. Notably, the value of luxury and exclusivity is absent since most respondents agree that exclusivity is least aligned with their development. While Figures 8 and 9 are siloed and concentrated on separate roles, Figure 10 provides a 30,000-foot perspective of Figures 8 and 9 and demonstrates where social

[9] Sustainable development is used as an umbrella term in the diagram to include two popular amenities - sustainable building practices (72.7%) and stormwater management (68.2%). Additionally sustainable development is a respondent-provided value.

capital is critical in strengthening residents' sense of community. The following sections describe the elements of Figures 8 and 9 before explaining how they are incorporated into Figure 10.

5.1 Instrumental Role of Built Environment

5.1.1 *Community-Wide Reactions*

As shown in Figure 8, the instrumental role of the built environment affects the sense of community through two means. The first way is a direct influence on *local community characteristics*. Amenities, such as farms, communal BBQs, and trails, and design choices, such as improved walkability and dense development, have two significant effects. These components impact the visual aesthetic of the development and create paths of contact that encourage face-to-face interactions and build social capital, thereby enhancing a sense of community (Eicher and Kawachi 2011; Rubin and Rubin 2001). Likewise, when an agrihood resembles a small town, is pet-friendly or multigenerational, or practices sustainable development, it impacts local community characteristics by prioritizing values in its design and operation. These design decisions appeal to distinct potential residents with similar interests and preferences. Thus, the built environment influences local community characteristics through its design and amenities, attracting particular residents, and providing opportunities for accidental interaction.

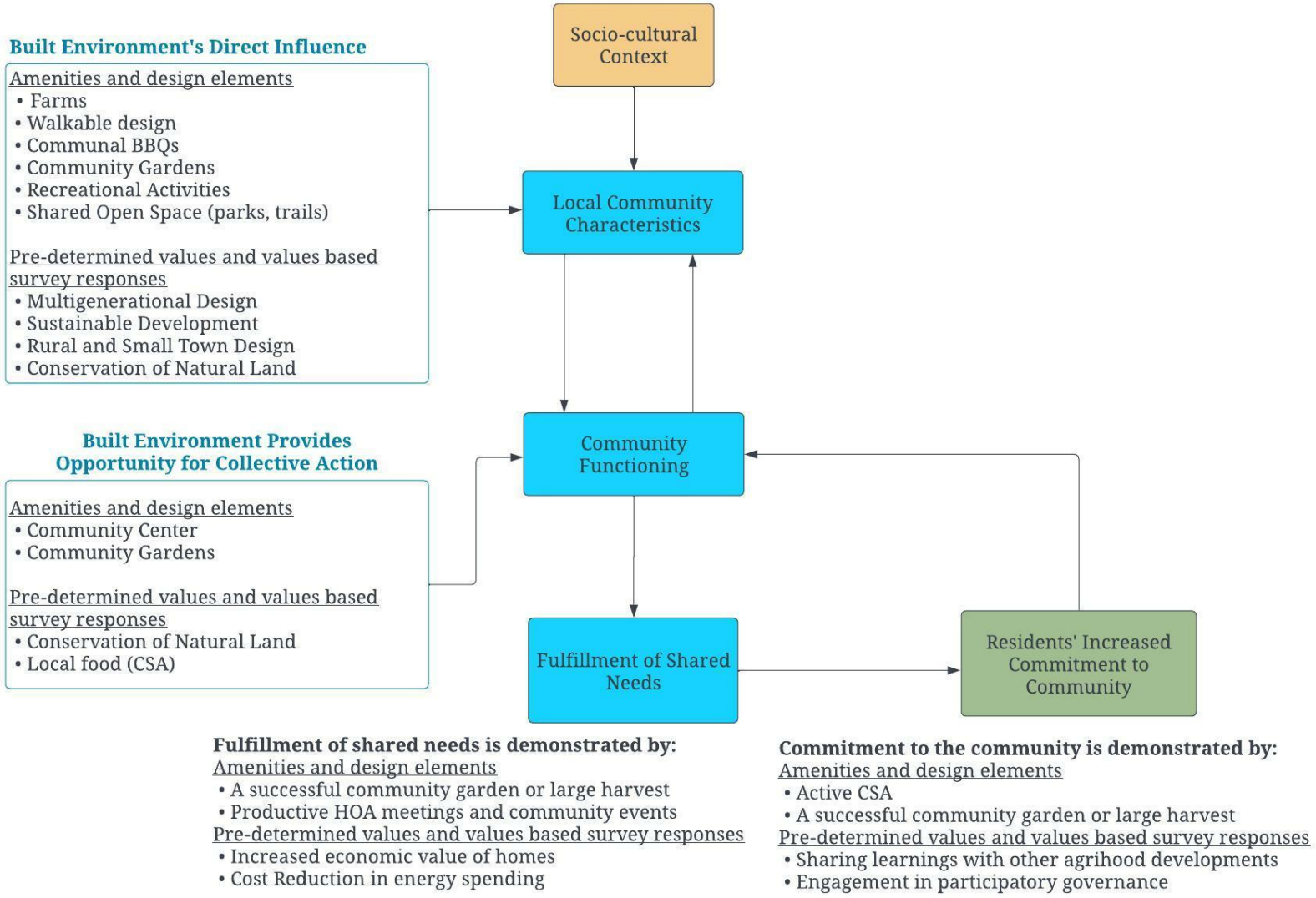


Figure 8: Instrumental Role of the Built Environment on Sense of Community

The design of agrihoods also indirectly influences the sense of community. The second way that agrihoods have an instrumental influence on the sense of community is through *community functioning.* Community functioning is the occurrence of collective action that results in behavior in line with the shared interests and values of the community (Moustafa 2009). Elements of agrihoods have an instrumental role in community functioning because they provide opportunities for community members to work together toward a shared goal. Examples of agrihood amenities and values that inspire community functioning are growing food together in community gardens, protecting natural land, and participating in CSAs. Community functioning is a critical component of the sense of community because collective success builds trust and reciprocity between residents. Community functioning is also related to local community characteristics.

As seen in Figure 8, the relationship between local community characteristics and community functioning is a feedback loop. The developments' characteristics mean that many residents have similar interests and may casually run into one another while participating in the developments' amenities. This interaction can strengthen community functioning because it implies an increased likelihood that residents have shared preferences and want similar outcomes from the neighborhood. Likewise, successful community functioning benefits local community characteristics because the residents' collective action, called collective efficacy, can beautify and maintain aspects of the built environment, such as gardens or trails. Thus, the built environment has an instrumental role in two community-wide categories pertinent to the sense of community and strengthened by aspects of social capital.

Effective community functioning also results in the final community-wide element of the diagram, the *fulfillment of shared needs*. Examples of the fulfillment of shared needs are the

success of community events or homeowners' association (HOA) meetings, the increased economic value of houses, improved affordability of renewable energy through shared sustainable practices, and a flourishing harvest. The fulfillment of shared needs also influences individual-level attitudes.

5.1.2 *Residents' Reactions*

Presumably, the fulfillment of shared needs can result in residents' improved feelings of solidarity and empowerment. In addition to a more productive and better-functioning community, these attitudes can increase residents' *commitment to the community*, as they are feelings and achievements that residents would like to continue. Therefore, commitment to the community impacts how well the community functions since it can cause a predilection for volunteerism and community engagement which are indicators of social capital (Putnam 2000). Rubin and Rubin (2001) refer to this effect as a bootstrap - "an initial success in bringing about an increase in a sense of mutual obligation sets up a base on which to build toward a shared sense of community" (98). Agrihood residents exemplify bootstrapping through an active community garden or CSA, a robust participatory governance structure, and the sharing of community learnings. Sharing lessons learned underscores a commitment to the agrihood model more broadly. Support for agrihoods outside of one's neighborhood highlights loyalty, commitment, and pride for this development model.

5.2 Symbolic Role of Built Environment

5.2.1 *Residents' Perceptions*

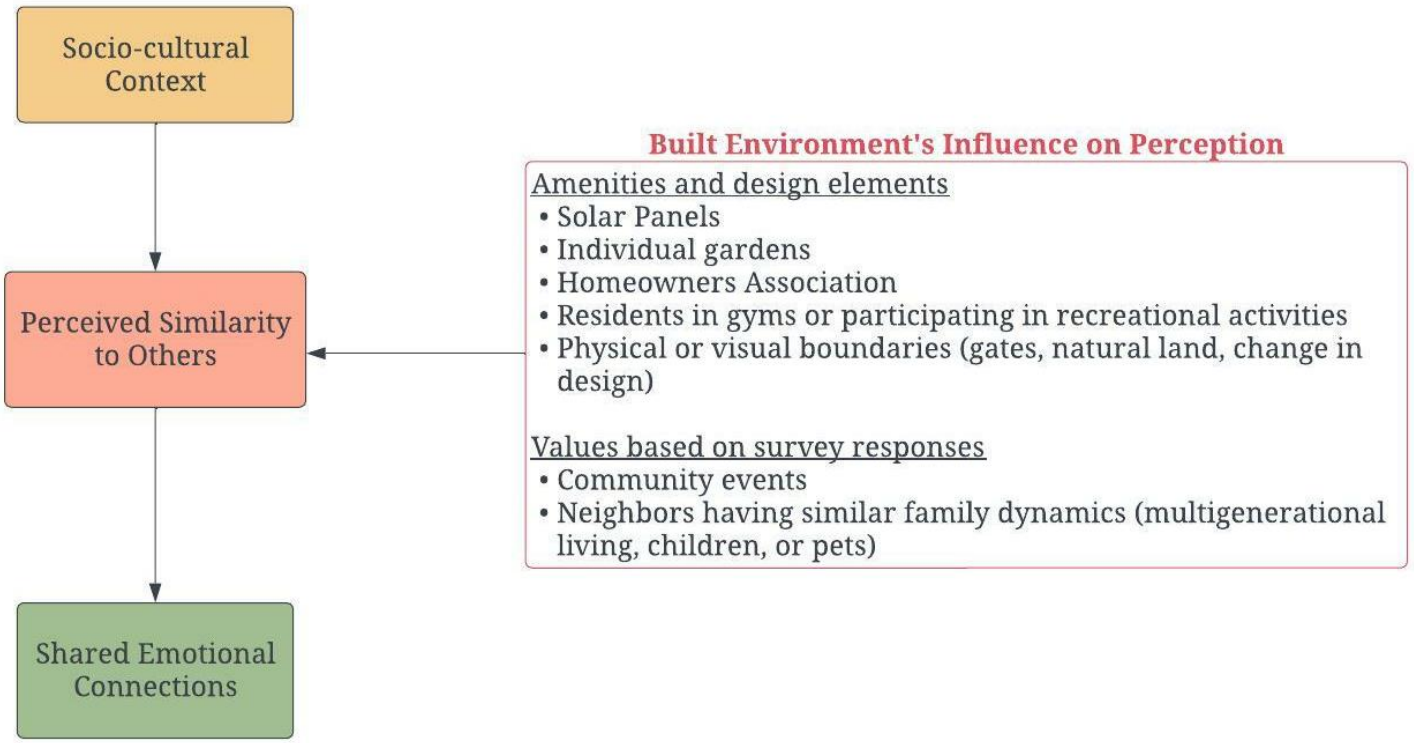
In addition to promoting behavior, increasing the opportunity for chance encounters, and fulfilling residents' needs, the built environment affects residents' perceptions. Figure 9 demonstrates the impact of the symbolic role of the built environment. Numerous elements in

agrihood developments can influence *perceived similarities to one another*. For example, physical boundaries, such as gates or surrounding conserved land, can create a spatial designation that causes residents to perceive each other as physically part of the same community (Moustafa 2009).

The built environment can also impact how residents perceive their neighbors' interests. For instance, the personalization of homes with solar panels or gardens can present a message about the hobbies and priorities of the homeowners or renters. Additionally, where residents see one another through paths of connection, such as at fitness centers, the community garden, or HOA meetings, can imply that individuals are health-focused or active in the community. These perceptions can imply similarities. Perceiving similarities, like interests, values, and preferences, can enhance the sense of community because it creates a sense of belonging and an obligation to one another and the community (Rubin and Rubin 2001).

5.2.2 *Residents' Reactions*

The sense of belonging and perceived similarities can result in *shared emotional connections* amongst residents. These connections are reflected through a strong sense of solidarity among residents, referred to as social cohesion. Feelings of emotional connection also improve emotional well-being and individual satisfaction (Eicher and Kawachi 2011; Moustafa 2009). As a subjective reaction, shared emotional connections are challenging to recognize. Likely, the values of environmental stewardship and sustainability, a desire for multigenerational living and connection, and purchasing of food from their agrihood's farm illustrate reactions to a shared emotional connection. These values all prioritize results associated with an ethics-based viewpoint. Shared emotional connections are also associated with other segments of the overall diagram.



Shared emotional connections is demonstrated by an emphasis on similar values and objectives:

Amenities and design elements
- Consumption of local and seasonal food from the onsite farm
- Multigenerational living

Pre-determined values and values based survey responses
- Health and wellness
- Environmental stewardship and sustainability

Figure 9: Symoblic Role of the Built Environment on Sense of Community

5.3 Overview of the Comprehensive Diagram

5.3.1 *The reinforcing nature of the diagram*

Figure 10 illustrates the entirety of the diagram, showing the relationships between the various components. There are two occasions where reactions to the instrumental or symbolic roles of the built environment interact. First, local community characteristics likely appeal to residents of similar ages who care about agriculture or the farm-to-table movement and can afford to live in a desirable development. The gathering of like-minded people impacts residents' perceived similarities to others by implying that residents living in an agrihood already share similar preferences and interests.

Second, residents' shared emotional connections can lead to an increased commitment to the community as residents are emotionally moved to collective action to protect their neighbors and neighborhood. Rubin and Rubin (2001) define emergent solidarity as "turning personal concerns into a collective responsibility" (99) when explaining how disenfranchised communities create solidarity after struggling together. It is unlikely that agrihood residents represent the "poor, dispossessed or disempowered" (99), but the concept is still relevant. Rather than the phrase "emergent solidarity," this research uses "communal solidarity." Communal solidarity has the same reaction as emergent solidarity but without an underlying economic or power-based struggle.

In this diagram, communal solidarity occurs in response to emotional connections and leads to an increased commitment to the community. The connection between shared emotional connections and increased commitment to the community creates a comprehensive feedback loop that incorporates community functioning, local community characteristics, and perceived

similarity to others. Therefore, instrumental and symbolic roles of the built environment continually enhance and perpetuate the sense of community experienced in agrihoods.

5.3.2 *The Role of Social Capital*

Similarly, social capital reinforces the sense of community throughout almost every diagram element. The below list summarizes how the diagram incorporates various indicators for social capital.

On the instrumental side of the diagram:

1. Agrihood designs increase the opportunity for informal connections through paths of contact.
2. The amenities provide opportunities for collective action and formal social interactions.
3. Successful community functioning strengthens social ties by building trust and reciprocity.
4. Community-wide accomplishments increase residents' commitment to the community because of a stronger feeling of mutual obligation. Thus, there is an increase in continual action, volunteerism, and engagement.

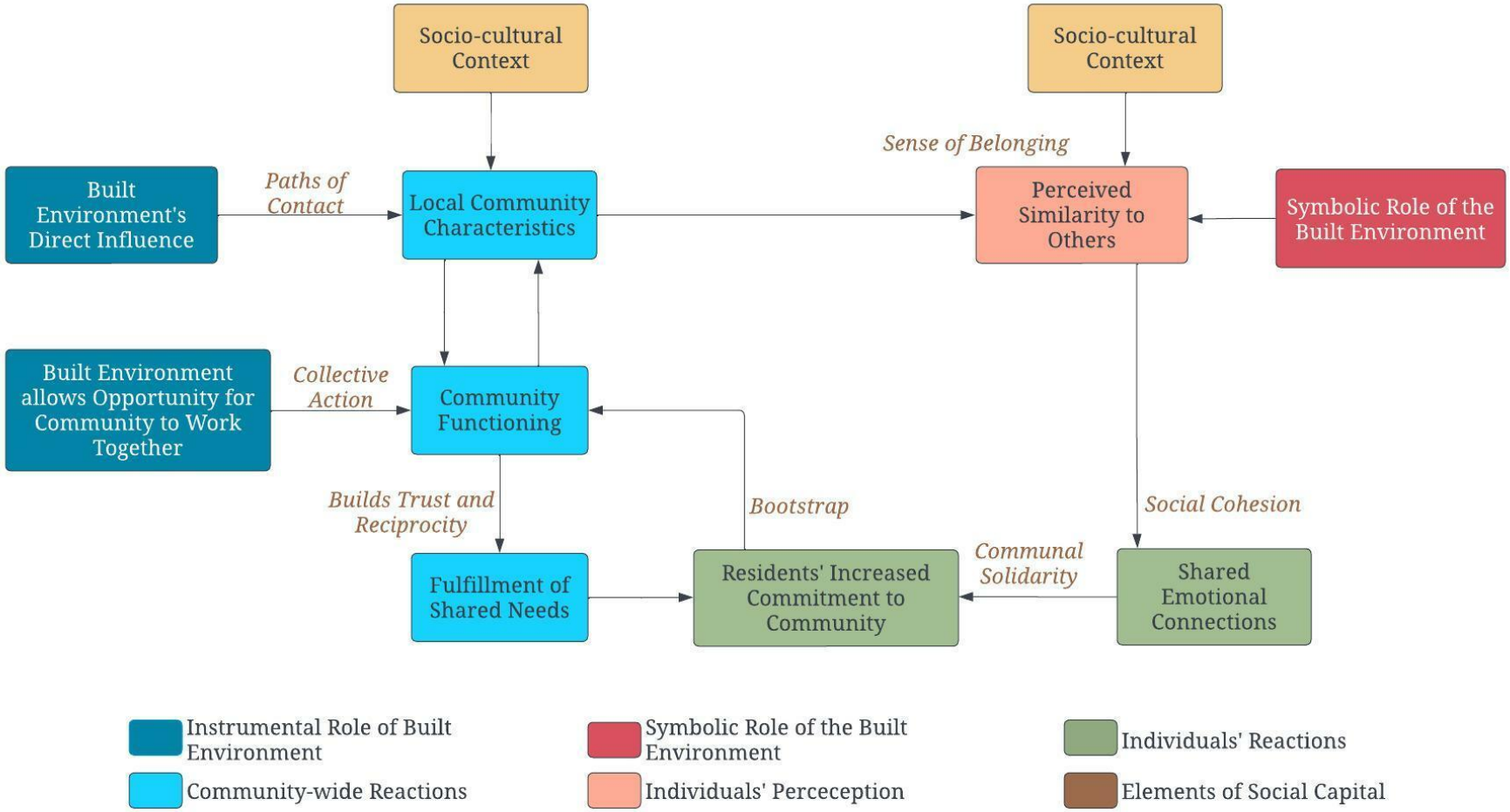


Figure 10: Comprehensive Diagram Demonstrating Agrihoods' Community Dynamic, the Strengthening of Sense of Community

On the symbolic side of the diagram:

5. Perceived similarities deepen residents' sense of belonging. Sense of belonging "makes people feel they are not alone, that others care and are available to help" (Rubin and Rubin 2001, 116).
6. The feeling of like-mindedness and a sense of belonging can improve social cohesion, which benefits residents' level of satisfaction and emotional well-being.
7. Finally, shared emotional connections cause a feeling of communal solidarity as residents' concerns become a collective responsibility.

The ubiquitous presence of social capital highlights that the sense of community in agrihoods is dynamic and results from a combination of factors, including amenities, values, design elements, and the residents' emotional connections to the community and one another.

5.3.3 *The Role of Agriculture*

The role of agriculture also influences the sense of community. Agriculture affects the sense of community in three ways. First, agricultural amenities provide opportunities for collective action and paths of contact. Second, the food-based priorities in agrihoods attract residents with similar values and interests. Therefore, agriculture is apparent in the instrumental *and* symbolic role of the built environment. Additionally, eating together and sharing food can often create a feeling of sharing and community. Consequently, it is possible that food represents an invisible connection to the sense of community.

Arguably, other well-designed intentional communities with an unusual or specific amenity could have a similar effect on the sense of community. However, unlike other intentional communities, agrihoods bolster the sense of community *and* provide health benefits for residents. By connecting food with the community, under the right circumstances, agrihoods

can promote social interactions and improve health, minimize food miles, provide consistent employment for farmers, preserve farmland, educate residents on food systems, and increase access to local and healthy food (Breger 2020; Norris 2018; Watson 2020). Thus, it appears that agrihoods are an innovative development model worth expanding. The following section discusses strategies to implement this development model.

Chapter 6. Implementation Strategies

In addition to evaluating the values and amenities concentrated in agrihoods, the survey also assessed policies and conditions that supported or hindered the establishment of the participating developments. The purpose of these survey questions was to answer the second research question, what tools are best suited to help the establishment of agrihoods? The following policies and experiences offer planners an initial guide on expanding this development model. However, the ideal strategy for building an agrihood is likely placed-based and situational.

6.1 Applicable Planning Policies

The survey asked respondents what policies, if any, assisted with developing their agrihood. Some policies were pre-selected[10] and respondents could write in answers. Table 7 demonstrates the participants' responses. There are more policy strategies than survey respondents because six developments utilized more than one strategy. When applying more than one planning policy, developers used entitlements or planned unit developments (PUDs).

Table 7: Supportive Regional Policies

Did regional policies assist in the creation of your agrihood? If yes, please select the policies.	**Total respondents**
Entitlements	7
Planned Unit Development	6
Conservation Community or Conservation District	2
Cluster Development	1
Agricultural Land Use Tax Abatement	1
Zoning for agricultural land or food production	1
I don't know	4
No	5

[10] Appendix A includes the pre-selected policies.

Three agrihoods coupled PUDs with other strategies, and three used PUDs alone. PUDs "[provide] a legal framework for the review and approval of [developments]" (Cullingworth and Caves 2014c, 154). PUDs rely on negotiations between municipalities and developers to determine criteria that provide flexibility in the development's design and offer different amenities to meet market demands. Another feature of PUDs is the inclusion of HOAs. HOAs typically maintain the amenities and landscaping and ensure a consistent development aesthetic (Cullingworth and Caves 2014c; Inman n.d.). HOA fees are beneficial for agrihoods since they can cover costs to maintain the landscaping and farms. Thus, agrihoods are great candidates for PUDs because of the design flexibility and maintenance they provide.

Surprisingly, few respondents claimed that conservation or cluster developments assisted in the establishment of their agrihood. Notably, developers or municipalities can incorporate conserved land and clustered design norms within the negotiation of the PUDs. Additionally, some zoning, like the *Agricultural Preservation with Limited Development* zoning in Kane County, can result in the conservation of land and clustering of houses (Norris 2018). Thus, although participants did not broadly cite conservation or cluster developments as supportive policies, the corresponding urban fabric is still visible in many agrihoods.

Entitlements were the most popular strategy. Land entitlement is the multi-step process required to develop and get permissible use of land (Somers 2020). Variances and conditional use permits are examples of entitlements used by one agrihood. Variances and conditional use permits are legal means that developers can apply for the allowance of otherwise non-permitted uses on their property, such as a farm in an area zoned as residential (FindLaw 2018).

The most popular entitlement tactic was to apply to modify the zoning code and rezone the development. Developments had different phrasing for the zoning needed, such as

Agricultural Preservation with Limited Development for Serosun Farms mentioned above, but the explanations were often similar. For example, a developer from Red Barn explained that the "code was not conducive to establishing farm infrastructure in the urban zoning environment." Developers also used different strategies to implement the required changes to the code. For instance, Serenbe was developed alongside the city of Chattahoochee Hills to authorize new codes and conservation practices alongside the town's establishment. Meanwhile, the development of Pringle Creek was possible through special zoning designations and code changes made in coordination and collaboration with the city and county. Notably, one agrihood was able to rely on the existing agricultural zoning to establish its development.

Finally, one agrihood used an *Agricultural Land Use Tax Abatement*. A tax abatement is a tax incentive. Tax incentives have historically been used for farmland preservation and provide an opportunity to convince developers that agrihoods are a wise investment (Cullingworth and Caves 2014b; Norris 2018). ULI included this strategy in its report on agrihoods. In addition to tax incentives and adopting agricultural zoning, Norris (2018) recommends that municipalities allow mixed-uses on developments that coincide with agrihoods, such as farm stands and wineries, protect farmland through easements, and deed the property to a third party for the administration of the land. Thus, there are numerous opportunities for planning to support the expansion of this development model. Unfortunately, there are also several challenges.

6.2 Challenges and Barriers

Considering 22% of respondents reported needing to change the zoning code to accommodate the agricultural nature of agrihoods, it is unsurprising that the most common barrier was zoning and code restrictions. Table 7 includes a summary of the challenges that plagued the developments. Many challenges are site-specific, such as determining climate-

appropriate foods in Palm Springs or groundwater conditions for Rooted Northwest. However, some challenges are pervasive.

Table 8: Challenges and Barriers

What barriers or challenges, if any, were there to the development of the agrihood?	**Total respondents**
Zoning and Regulation Restrictions	7
High cost of sustainable development	2
Local town does not want growth or increased density	2
Needed to educate town on the agrihood concept	2
Groundwater Conditions	2
Needed to find a food that would grow in the specific climate	1
Conditional Use Permits	1
Downturn in Economy	1

Restrictive zoning and regulations, a lack of knowledge about agrihoods, costs, and pushback against new growth are challenges likely to be faced throughout the country. The exact blend of policies and strategies to overcome these obstacles is situational. However, it is still worth knowing what other developments have experienced to prepare a strategy and build partnerships and coalitions of support as early as possible. Education and outreach present an opportunity to describe the agrihood model, answer questions and concerns about the new development, present successful agrihood case studies, and explain how an agrihood could benefit the region by increasing access to local and healthful food. As the popularity of this model grows and research on agrihoods expands, the tools for education will grow as well. Thus, future research is critical to the continued growth of this development model.

Chapter 7. Limitations and Future Research

There are limitations to this research that future research can overcome. The most significant issue with a survey on a development model is that it does not allow site visits to observe daily life in the development. Likewise, in this survey each agrihood was represented by only one or two respondents. Additionally, only 22 of the possible 70 agrihoods responded to this survey. While this is almost a 31% response rate, this is a small sample size and may not represent agrihoods throughout the country. The concern about thorough representation is particularly relevant because only one source was used to determine the initial list of agrihoods.

Finally, most survey respondents were developers. Developers' perspectives are valuable and can provide insight into the impetus for establishing agrihoods. However, their perspectives are also limited and may not reflect residents' opinions. Thus, the listed policies are not exhaustive; they represent a limited collection of possible solutions and challenges based on a small sampling of agrihoods. Future research could determine innovative planning policies or development strategies to expand agrihoods. Additional avenues for future research are below.

1. As mentioned, there are numerous definitions for agrihoods, and a precise definition is critical to avoid manipulation of this model. Future research could create a stricter definition and a list of criteria required to be designated as an agrihood. Alternatively, a tiered based system could be created to grade agrihoods on various levels, like LEED's point-based rating system.
2. Agrihoods clearly represent a diverse development model. Future research could create a typology of agrihoods based on current and future developments.
3. Future research could compare the agrihood model to other agricultural developments, such as communes or co-housing.

4. Other intentional communities may also generate a similar sense of community. Future research could ask what the impact of agricultural amenities on the sense of community is compared to the effect of unique amenities in other intentional communities.
5. Future research could examine if the comprehensive diagram created for this research is applicable to other intentional communities, or if it is specific to agrihoods.
6. One of the developers responded that they were "surprised to find that those moving here didn't necessarily hold the same values or have the same expectations for the development as [we did]." This developer's observation is worth examining further. So, instead of surveying multiple agrihoods as done in this research, a survey could be completed of all residents in one agrihood to determine how the perception of values changes depending on the respondents' role within the development. A benefit to focusing on one agrihood is that the survey could also ask for respondents' demographic information to estimate demographic trends of residents in agrihoods.
7. As mentioned, developers conceptualized agrihoods to entice millennial homeowners (Adams 2019; Loudenback 2017; Travers 2017). Therefore, residents are likely middle- to upper-income residents and may consider the food produced in their neighborhood a benefit rather than meeting a need. Future research could ask residents experiencing food insecurity and living near urban agriculture or community gardens to rank the values aligned with their neighborhood. This research will establish if agricultural values are a priority when locally grown agriculture plays more of a subsistence role.

8. Future research could examine the equity implications of agrihoods through the lens of health equity and food security. In this case, a researcher could ask what the equity implications are of agrihoods and what policies could mitigate equity concerns.
9. Likewise, research could examine if there is a relationship between green gentrification and agrihoods. Although agrihoods are new, many developments have existed for over a decade. Research could compare property values and demographic information surrounding the development before and after its completion to see if there is a correlation between the establishment of agrihoods, gentrification, and displacement.
10. This research does not evaluate agriculture's physical or economic role in the developments. Future research could create a spectrum of agriculture and assess if the amount of food grown in an agrihood impacts the values perceived by residents.
11. Similarly, research could compare agrihood farms to more traditional farms. Research could examine which farms are more productive in terms of the food grown, assess if earnings are comparable across different types of farms, and evaluate how farmers' roles differ when the land they are cultivating is their job *and* an amenity.

The agrihood model is still new, so the opportunity for exploration and research is extensive. It is critical to understand this model because it intersects the growing popularity of the farm-to-table movement and sustainable development and provides a strong sense of community and health benefits for residents. Hopefully, the planning tools described above, and the challenges listed can assist in expanding agrihoods in various geographic settings.

Chapter 8. Conclusion

In expanding agrihoods, planners should utilize sustainable development practices and prioritize agrihoods reliant on affordable housing in urban and suburban spaces. It is sensible to target development where growth is most likely. The World Bank predicts that urban populations will grow through 2050 (The World Bank 2020). Furthermore, the loss of farmland in the United States is primarily due to the growing development of cities and suburbs (Nosowitz 2018). Therefore, developing agrihoods in urban and suburban areas can help feed rapidly growing populations and quickly protect and expand depleting farmlands. Additionally, the suburbs and other areas surrounding cities are most at risk for sprawl. Thus, by promoting a denser development pattern in suburbs and urban areas, agrihoods can minimize the impact of sprawl, preserve agricultural land, meet the needs of a growing population, and deepen the sense of community.

Another consideration when planning for future agrihoods should be the cost of housing. Based on the survey responses, luxury and exclusivity are the least aligned values in agrihoods and, thus, not critical for the success of the development. The presence of agrihoods established using cohousing, tiny houses, or apartment buildings also underscores that extravagance is not required for agrihoods to succeed. Consequently, agrihoods have the potential to improve access to food *and* affordable housing under certain conditions. This opportunity is particularly salient because there is a high correlation between people most at risk of food insecurity and those experiencing housing instability (Lee et al. 2021). Therefore, planners and developers can help the most vulnerable populations thrive by establishing affordable agrihoods that create a sense of community and provide healthful food and nourishment.

Finally, in addition to equity, planners should expand this model with sustainability as another driving guide. In agrihoods, this has a multi-pronged approach. First, certified organic farming practices should be encouraged to protect soil biodiversity and minimize the contaminants found in the food. Second, developers should utilize sustainable building practices wherever possible. These practices can include solar-powered homes, compost centers, and water reuse. Third, developments should have a "light touch" on the natural land through strategies like land conservation, pollinator gardens, or (where appropriate) drought-tolerant landscaping. Most importantly, planners should adhere to Julian Agyeman's just sustainabilities framework and prioritize equity and justice when considering sustainability. "A truly sustainable society is one where wider questions of social needs and welfare, and economic opportunity are integrally related to environmental limits imposed by supporting ecosystems" (Agyeman, Bullard, and Evans 2002, 78). By following Agyeman's framework, the agrihood development model can be a boon for residents and the planet.

The strong sense of community, benefits on residents' health and well-being, and potential for environmentally friendly design illustrate why planners should advocate for agrihoods in their municipalities. Ideally, this thesis has deepened the understanding of the benefits, features, and underlying dynamic in agrihoods and prepared developers and planners for how and where to build agrihoods to maximize the benefits of this development model.

REFERENCES

Adams, Biba. 2019. “In Detroit, A New Type of Agricultural Neighborhood Has Emerged.” *YES! Magazine*, November 5, 2019. https://www.yesmagazine.org/social-justice/2019/11/05/food-community-detroit-garden-agriculture.

Agyeman, Julian, Robert D Bullard, and Bob Evans. 2002. “Exploring the Nexus: Bringing Together Sustainability, Environmental Justice and Equity.” *Space and Polity* 6 (1): 70–90.

Albright, Mary Beth. 2014. “It’s a Beautiful Day in the Agrihood.” *National Geographic*, June 23, 2014. https://www.nationalgeographic.com/culture/article/its-a-beautiful-day-in-the-agrihood.

American Planning Association. 1999. “Policy Guide on Agricultural Land Preservation.” American Planning Association. 1999. https://www.planning.org/policy/guides/adopted/agricultural.htm.

———. 2007. “Policy Guide on Community and Regional Food Planning.” American Planning Association. 2007. https://www.planning.org/policy/guides/adopted/food.htm.

Aria Denver. 2022. “Community.” Aria Denver. 2022. https://www.ariadenver.com/community.

Birkby, Jeff. 2016. “Agrihoods: Development-Supported Agriculture.” Publication. ATTRA Sustainable Agriculture. National Center for Appropriate Technologies. https://www.extension.iastate.edu/ffed/wp-content/uploads/2018/01/Agrihood-Handout.pdf.

Breger, Benjamin. 2020. “Understanding Agrihoods: An Exploration into the Growing Trend of Farm-to-Table Communities Across the United States.” University of Massachusetts Amherst. https://scholarworks.umass.edu/masters_theses_2/934/.

Butler, Stuart M., and Carmen Diaz. 2016. “‘Third Places’ as Community Builders.” *Brookings* (blog). September 14, 2016. https://www.brookings.edu/blog/up-front/2016/09/14/third-places-as-community-builders/.

Calhoun, Patricia. 2020. “Is This Five Points, RiNo...or Gentrification Station?” *Westword*, July 8, 2020. https://www.westword.com/news/gentrification-denver-five-points-rino-black-neighborhood-11739444.

Cassidy, Benjamin. 2021. “Seattle Real Estate Experts Predict Which Covid-Era Trends Will Last.” *Seattle Met*, August 31, 2021. https://www.seattlemet.com/home-and-real-estate/2021/08/seattle-real-estate-experts-housing-market-predictions-covid-2021.

Clouser, Steph. 2019. “Organic Vs. Sustainable Agriculture | Her Campus.” *Her Campus* (blog). November 2, 2019. https://www.hercampus.com/school/susqu/organic-vs-sustainable-agriculture/.

Cobb Hill CoHousing. 2015. “Community, Land, Farm, Sustainability.” Cobb Hill CoHousing. 2015. http://www.cobbhill.org.

Cohen, Nevin. 2018. “Unintentional Food Zoning: A Case Study of East Harlem, New York.” In *Integrating Food in Urban Planning*, edited by Yves Cabannes and Cecilia Marocchino, 312–33. London UK: UCL Press.

Coleman-Jensen, Alisha, Matthew P. Rabbitt, Christian A. Gregory, and Anita Singh. 2021. “Household Food Security in the United States in 2020.” Report summary from ERS. USDA Economic Research Service. https://www.ers.usda.gov/webdocs/publications/102076/err-298_summary.pdf?v=8123.1.

Coleman-Jensen, Alisha, Matthew P. Rabbitt, Reem N. Hashad, Laura Hales, and Christian A. Gregory. 2022. “Food Security in the US - Key Statistics & Graphics.” USDA ERS. April 22, 2022. https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/key-statistics-graphics/#insecure.

Cullingworth, Barry, and Roger W. Caves. 2014a. “Environmental Policy and Planning.” In *Planning in the USA: Policies, Issues and Processes*, 4th ed., 245–81. New York, NY: Routledge.

———. 2014b. “Growth Management and Local Government.” In *Planning in the USA: Policies, Issues and Processes*, 4th ed., 196–212. New York, NY: Routledge.

———. 2014c. “The Techniques of Zoning and Subdivision Regulations.” In *Planning in the USA: Policies, Issues and Processes*, 4th ed., 142–75. New York, NY: Routledge.

De La Salle, Janine, and Mark Holland. 2010. *Agricultural Urbanism: A Handbook for Building Sustainable Food and Agriculture Systems in the 21st Century Cities*. First. Green Frigate Books.

DeSimone, Anna. 2020. *Welcome to the Agrihood: Housing, Shopping, and Gardening to a Farm-to-Table Lifestyle*. First. New York, NY: Housing 2020 Property, LLC.

Dickson, James David. 2017. “Farming Nonprofit Aims to Grow North End Co-Op.” *The Detroit News*, February 20, 2017. https://www.detroitnews.com/story/news/local/detroit-city/2017/02/26/agrihood-detroit-crowdfunding/98453428/.

Dill, Jennifer, Cynthia Mohr, and Liang Ma. 2014. “How Can Psychological Theory Help Cities Increase Walking and Bicycling?” *Journal of the American Planning Association* 80 (1): 36–51. https://doi.org/10.1080/01944363.2014.934651.

Dillman, Don A., Jolene D. Smyth, and Leah Melani Christian. 2014. “Reducing People’s Reluctance to Respond to Surveys.” In *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method*, 4th ed., 19–55. New York: John Wiley & Sons, Incorporated. http://ebookcentral.proquest.com/lib/washington/detail.action?docID=1762797.

Eicher, Caitlin, and Ichiro Kawachi. 2011. “Chapter 8: Social Capital and Community Design.” In *Making Healthy Places: Designing and Building for Health, Well-Being, and Sustainability*, First, 117–28. Washington, DC: Island Press.

Farnsworth, Lindsey Day. 2016. “More Than the Sum of Their Parts: An Exploration of Connecrtive and Facilitative Functions of Food Policy Councils.” In *Cities of Farmers: Urban Agricultural Practices and Processes*, edited by Julie C. Dawson and Alfonso Morales, 245–64. Iowa City: University of Iowa Press.

Feinberg, Daniel, and Mark Hostetler. 2019. “Conservation Subdivision: Post-Construction Phase—Engaging Residents.” UF IFAS Extension. April 28, 2019. https://edis.ifas.ufl.edu/publication/UW379.

FindLaw. 2018. “Zoning Changes, Variances, and More.” Findlaw. September 6, 2018. https://www.findlaw.com/realestate/land-use-laws/zoning-changes-variances-and-more.html.

Firth, Chris, Damian Maye, and David Pearson. 2011. “Developing ‘Community’ in Community Gardens.” *Local Environment* 16 (6): 555–68. https://doi.org/10.1080/13549839.2011.586025.

Freedgood, Julia, Mitch Hunter, Jennifer Dempsey, and Ann Sorenson. 2020. “Farms Under Thread: The State of States.” https://s30428.pcdn.co/wp-content/uploads/sites/2/2020/09/AFT_FUT_StateoftheStates_rev.pdf.

Frumkin, Howard, and Jared Fox. 2011. “Chapter 15: Contact with Nature.” In *Making Healthy Places: Designing and Building for Health, Well-Being, and Sustainability*, First, 229–43. Washington, DC: Island Press.

Giacobbe, Alyssa. 2017. “Inside the ‘Agrihood’ Residential Real-Estate Boom.” *Architectural Digest*, September 27, 2017. https://www.architecturaldigest.com/story/agrihood-residential-real-estate.

Glover, Troy D. 2004. “Social Capital in the Lived Experiences of Community Gardeners.” *Leisure Sciences* 26 (2): 143–62. https://doi.org/10.1080/01490400490432064.

Goonan, Deborah A. 2016. “Agrihood: HOA with a Working Farm.” *Independent American Communities* (blog). June 20, 2016. https://independentamericancommunities.com/2016/06/20/agrihood-hoa-with-a-working-farm/.

Gould, Kenneth A., and Tammy L. Lewis. 2017. *Green Gentrification: Urban Sustainability and the Struggle for Environmental Justice*. New York, NY: Routledge.

Horst, Megan. 2017. “Food Justice and Municipal Government in the USA.” *Planning Theory & Practice* 18 (1): 51–70. https://doi.org/10.1080/14649357.2016.1270351.

Horst, Megan, Nathan McClintock, and Lesli Hoey. 2017. “The Intersection of Planning, Urban Agriculture, and Food Justice: A Review of the Literature.” *Journal of the American Planning Association* 83 (3): 277–95. https://doi.org/10.1080/01944363.2017.1322914.

Inman. n.d. “What Is A PUD (Planned Unit Development) In Real Estate?” Inman. Accessed March 13, 2022. https://www.inman.com/real-estate-glossary/planned-unit-development-pud/.

Jabareen, Yosef, and Omri Zilberman. 2017. “Sidestepping Physical Determinism in Planning: The Role of Compactness, Design, and Social Perceptions in Shaping Sense of Community.” *Journal of Planning Education and Research* 37 (1): 18–28. https://doi.org/10.1177/0739456X16636940.

Justia Trademarks. 2017. “AGRIHOOD Trademark of Rancho Mission Viejo LLC.” 2017. http://trademarks.justia.com/871/02/agrihood-87102725.html.

Kalfus, Marilyn. 2017. “Goodbye Golf Course, Hello Olive Groves! New Palm Springs Enclave to Become an ‘Agri-Hood.’” *Orange County Register*, October 22, 2017. https://www.ocregister.com/2017/10/22/good-bye-golf-course-hello-olive-groves-new-palm-springs-enclave-to-become-an-agri-hood/.

Kaplan, Rachel. 2001. “The Nature of the View from Home: Psychological Benefits.” *Environment and Behavior* 33 (4): 507–42. https://doi.org/10.1177/00139160121973115.

Lee, Che Young, Xue Zhao, Layton Reesor-Oyer, Aliye B. Cepni, and Daphne C. Hernandez. 2021. “Bidirectional Relationship Between Food Insecurity and Housing Instability.” *Journal of the Academy of Nutrition and Dietetics* 121 (1): 84–91. https://doi.org/10.1016/j.jand.2020.08.081.

Loudenback, Tanza. 2017. “Agrihoods Replace Golf Communities for Millennial Homebuyers.” *Business Insider* (blog). October 30, 2017. https://www.businessinsider.com/agrihoods-golf-communities-millennial-homebuyers-2017-10.

McClintock, Nathan, and Michael Simpson. 2016. “Cultivating in Cascadia: Urban-Agriculture POlicy and Practice in Portland, Seattle, and Vancouver.” In *Cities of Farmers: Urban Agricultural Practices and Processes*, edited by Julie C. Dawson and Alfonso Morales, 59–82. Iowa City: University of Iowa Press.

McMahon, Edward T. 2010. *Conservation Communities: Creating Value with Nature, Open Space, and Agriculture*. Washington, DC: Urban Land Institute.
Morgan, Kevin. 2013. "The Rise of Urban Food Planning." *International Planning Studies* 18 (1): 1–4. https://doi.org/10.1080/13563475.2012.752189.
Moustafa, Yasser M. 2009. "Design and Neighborhood Sense of Community: An Integrative and Cross-Culturally Valid Theoretical Framework." *International Journal of Architectural Research* 3 (1): 22.
Murphy, Kate. 2014. "Farm-to-Table Living Takes Root." *The New York Times*, March 11, 2014, sec. Food. https://www.nytimes.com/2014/03/12/dining/farm-to-table-living-takes-root.html.
National Association of REALTORS Research Group. 2021. "2021 Home Buyers and Sellers Generational Trends Report." Chicago, IL: National Association of REALTORS. https://www.nar.realtor/sites/default/files/documents/2021-home-buyers-and-sellers-generational-trends-03-16-2021.pdf.
National Institute of Food and Agriculture. n.d. "Sustainable Agriculture Programs." USDA National Institute of Food and Agriculture. Accessed May 2, 2022. https://www.nifa.usda.gov/grants/programs/sustainable-agriculture-programs.
Norris, Matthew. 2018. *Agrihoods: Cultivating Best Practices*. Washington, DC: Urban Land Institute. https://2os2f877tnl1dvtmc3wy0aq1-wpengine.netdna-ssl.com/wp-content/uploads/ULI-Documents/Agrihoods-Final.pdf.
Nosowitz, Dan. 2018. "10 Numbers That Show How Much Farmland We're Losing to Development." *Modern Farmer* (blog). May 22, 2018. https://modernfarmer.com/2018/05/10-numbers-that-show-how-much-farmland-were-losing-to-development/.
Office of Disease Prevention and Health Promotion. n.d. "Social Determinants of Health - Healthy People 2030." Health.Gov. Accessed May 16, 2021. https://health.gov/healthypeople/objectives-and-data/social-determinants-health.
Oldenburg, Ray. 1989. *The Great Good Place: Cafés, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts, and How They Get You Through the Day*. New York: Paragon House.
Perkins, Tom. 2017. "On Urban Farming and 'colonialism' in Detroit's North End Neighborhood." *Detroit Metro Times*, December 20, 2017. https://www.metrotimes.com/detroit/on-urban-farming-and-colonialism-in-detroits-north-end-neighborhood/Content?oid=7950059.
Pothukuchi, Kameshwari, and Jerome L. Kaufman. 2000. "The Food System: A Stranger to the Planning Field." *Journal of the American Planning Association* 66 (2): 113–24. https://doi.org/10.1080/01944360008976093.
Putnam, Robert D. 2000. "Thinking about Social Change in America." In *Bowling Alone: The Collapse and Revival of American Community*, 15–28. New York, NY: Simon and Schuster Paperbacks.
QuickenLoans. 2020. "What Do Millennials Want In A Home?" December 15, 2020. https://www.quickenloans.com/learn/what-do-millennials-look-for-in-a-home-a-sellers-guide.
Raja, Samina, Jennifer Whittaker, Enjoli Hall, Kimberley Hodgson, and Jeanne Leccese. 2018. "Growing Food Connections through Planning: Lessons from the United States." In

Integrating Food in Urban Planning, edited by Yves Cabannes and Cecilia Marocchino, 134–53. London UK: UCL Press.
Redfin. 2022a. "Denver Housing Market: House Prices & Trends | Redfin." Redfin. 2022. https://www.redfin.com/city/5155/CO/Denver/housing-market.
———. 2022b. "Palm Springs Housing Market: House Prices & Trends | Redfin." 2022. https://www.redfin.com/city/14315/CA/Palm-Springs/housing-market.
Rigby, D., and D. Cáceres. 2001. "Organic Farming and the Sustainability of Agricultural Systems." *Agricultural Systems* 68 (1): 21–40. https://doi.org/10.1016/S0308-521X(00)00060-3.
Rohe, William M. 2009. "From Local to Global: One Hundred Years of Neighborhood Planning." *Journal of the American Planning Association* 75 (2): 209–30. https://doi.org/10.1080/01944360902751077.
Rubin, Herbert J, and Irene Rubin. 2001. "Understanding Community." In *Community Organizing and Development*, 3rd ed., 97–118. Boston: Allyn and Bacon.
Runyan, Robin. 2016. "America's First Sustainable Urban Agrihood Is Growing in Detroit." *Curbed Detroit*, December 14, 2016. https://detroit.curbed.com/2016/12/1/13807672/urban-agrihood-detroit-mufi.
Rutten, Caitlin. 2021. "Moving to the Suburbs: A COVID Response or Long-Term Trend?" *LemonBrew* (blog). October 13, 2021. https://www.lemonbrew.com/move-to-suburbs-covid-response-or-long-term-trend/.
Serenbe. 2019. "Spaces." *Life at Serenbe* (blog). June 12, 2019. https://www.lifeatserenbe.com/blog/2019/6/12/spaces.
Serlin, Christine. 2013. "Developer Raises the Bar in the Bronx." *Architect* (blog). March 12, 2013. https://www.architectmagazine.com/technology/developer-raises-the-bar-in-the-bronx_o.
Singer, Daliah. 2019. "Denver's Newest Multi-Use Community Is All About Sustainable Living." *5280, Denver's Mile High Magazine*, August 27, 2019. https://www.5280.com/2019/08/denvers-newest-multi-use-community-is-all-about-sustainable-living/.
Somers, Jason. 2020. "The Land Entitlement Process & What You Need to Know." *Crest Real Estate* (blog). February 10, 2020. https://www.crestrealestate.com/land-entitlement-process/.
Strassmann, Mark. 2015. "Home Grown: Moving next to the Farm." *Sunday Morning*. CBS News. https://www.cbsnews.com/news/home-grown-moving-next-to-the-farm/.
Teig, Ellen, Joy Amulya, Lisa Bardwell, Michael Buchenau, Julie A. Marshall, and Jill S. Litt. 2009. "Collective Efficacy in Denver, Colorado: Strengthening Neighborhoods and Health through Community Gardens." *Health & Place* 15 (4): 1115–22. https://doi.org/10.1016/j.healthplace.2009.06.003.
The Jelmberg Team. 2022. "Miralon, Palm Springs – New Home Development." Coachella Valley Area Real Estate. 2022. https://www.jelmbergteam.com/miralon-palm-springs/.
The World Bank. 2020. "Urban Development Overview." Text/HTML. World Bank. April 20, 2020. https://www.worldbank.org/en/topic/urbandevelopment/overview.
Thrasher, Dory. 2016. "Fumbling for Community in a Brookyln Community Garden." In *Cities of Farmers: Urban Agricultural Practices and Processes*, edited by Julie C. Dawson and Alfonso Morales, 159–76. Iowa City: University of Iowa Press. https://doi.org/10.2307/j.ctt20q23dv.

Tina, Cynthia. 2021. “Starter Guide to Intentional Communities.” Instructional Guide. Foundation for Intentional Community.
Travers. 2017. “Growing Agrihoods: The Next Frontier in Urban Revitalization.” *Civil Eats*, January 30, 2017. https://civileats.com/2017/01/30/growing-agrihoods-the-next-frontier-in-urban-revitalization/.
Tres Birds Workshop. 2018. “S*PARK.” 2018. https://tresbirds.com/S-PARK.
Urban Land Institute. 2016. *Cultivating Development: Trends and Opportunities at the Intersection of Food and Real Estate.* Washington, DC: Urban Land Institute.
Urban Land Institute, Joanna Frank, Rachel MacCleery, Suzanne Nienaber, Sara Hammerschmidt, Abigail Claflin, and Building Healthy Places Initiative, eds. 2015. *Building Healthy Places Toolkit: Strategies for Enhancing Health in the Built Environment*. Washington, D.C: Urban Land Institute. https://uli.org/wp-content/uploads/ULI-Documents/Building-Healthy-Places-Toolkit.pdf.
Usaj Realty. n.d. “For Sale: 2550 Lawrence Street, #RB103, Denver, CO 80205, RiNo | 1 Bed / 1 3/4 Bath | $555,000.” Usaj Realty. Accessed June 9, 2022. https://www.usajrealty.com/real-estate/2550-lawrence-street-rb103-denver-co-80205/9367273/122580254.
USDA National Organic Program. 2015. “Introduction to Organic Practices.” https://www.ams.usda.gov/sites/default/files/media/Organic%20Practices%20Factsheet.pdf.
Village Farm Austin. 2021. “Home.” Village Farm Austin. 2021. https://villagefarmaustin.com/.
Watson, Kaelan. 2020. “Agrihoods: A Contemporary Planning Strategy to Shorten a Community’s Food Supply Chain.” Master in Environmental Studies, Toronto, Ontario, Canada: York University. https://yorkspace.library.yorku.ca/xmlui/bitstream/handle/10315/38351/MESMP03411_Watson_K.pdf?sequence=1&isAllowed=y.
Weber, Christopher L., and H. Scott Matthews. 2008. “Food-Miles and the Relative Climate Impacts of Food Choices in the United States.” *Environmental Science & Technology* 42 (10): 3508–13. https://doi.org/10.1021/es702969f.
White, Meg. 2017. “Inside the Agrihood Trend.” *REALTOR Magazine*, May 2, 2017. https://magazine.realtor/home-and-design/feature/article/2017/05/inside-the-agrihood-trend.
Yellin, Joshua. 2013. “The Intersection Between Urban Agriculture and Form-Based Zoning: A Return to Traditional Planning Techniques” 19 (1): 45.

APPENDIX A: SURVEY QUESTIONS

General Information

- Please include your email address if you would like to participate in the drawing.
- Name of your agrihood development:
- If your agrihood is still under development, when is the anticipated year of completion?
- What is your role in your affiliated agrihood development? If you are an employee *and* resident, please select resident. If you are a developer, realtor, or farmer *and* resident, please select developer, realtor, or farmer.
    - Resident
    - Non-resident employee
    - Developer
    - Realtor
    - Farmer
    - Other: _____

Personal interest in the development

- The following question is dependent on respondents' answers to the previous question.
    - *Resident*: What attracted you to this development and made you want to live here?
    - *Employee*: What have residents expressed as their reason for living in your affiliated agrihood?
    - *Developer*: What was your reason for developing an agrihood instead of a traditional development?
    - *Realtor*: What have clients expressed as their reason for buying or renting in this affiliated agrihood? If this answer is unknown, why do you choose to show this development to clients?
    - *Farmer*: Why did you choose to work at this agrihood instead of a more traditional farm?
    - *Other*: What have you observed about this agrihood that differs from other similar settings (neighborhoods or residential areas) in your area?
- Most respondents are then asked if they are also a resident.
    - If the answer is yes, respondents are asked "What made you want to live here?" If the answer is no, the survey moves to the next question.

Values

- Reflecting on the development, please rank the following values based on how closely they align with this development. 1 = most closely aligned, 7 = least aligned.
    - Sense of Community
    - Access to Natural Land
    - Sustainability
    - Exclusivity and Luxury
    - Health and Wellness
    - Ability to Grow Food
    - Access to Local Food
- Are there additional values not mentioned in the previous question that align with your development?

Characteristics of the development

- Select amenities found on your affiliated agrihood. You can select more than one answer.

55+ community	Drought tolerant landscaping	Natural water bodies	Spa
Agricultural education	Edible landscaping	Playgrounds	Sports Courts
Communal BBQs	Farmers markets	Pollinator gardens	Stormwater Management
Communal kitchens	Farmstand	Pool	Sustainable Building Practices
Community center	Fitness center	Professionally Managed Farm	Trails
Community garden	Food shops	Restaurants	Undeveloped Natural Land
Compost center	Gated community	School	Use of Renewable Energy
CSA	Library	Small Businesses	Water Conservation and Reuse

- Please select the setting that best describes this agrihood.
    - Urban
    - Suburban
    - Rural
- How large is your development in acres?
- How many households are on the development?
- What types of homes are on your agrihood?
    - Unattached single-family homes
    - Multi-family homes (duplexes, townhouses, etc)
    - Condos
    - Apartments
    - Tiny houses
    - Other: _____

- How large is your working farm or community garden? Please specify the unit of measurement (acres or square feet).
- Does your development have a green certification?
    - It does not have a certification
    - WELL
    - LEED
    - Certified Organic
    - Other: _____

Planning Policies

- Did regional or local land-use policies assist in creating this development?
    - No
    - Conservation Community or Conservation District
    - Zoning for agricultural land or food production
    - Cluster Development
    - Planned Unit Development
    - I don't know
    - Other: _____
- What barriers or challenges, if any, were there to establish this development?

APPENDIX B: LIST OF PARTICIPATING AGRIHOODS

Name	State	Respondents' Role
Aberlin Springs	Ohio	Developer-Farmer-Resident
Agape Agrihood	Wisconsin	Developer-Resident
Agritopia	Arizona	Developer-Resident
Bundoran Farm Community Association	Virginia	Employee
Chickahominy Falls	Virginia	Developer
Creekside Farm	North Carolina	Realtor
Dry Creek Ranch	Idaho	Developer
Edwards Addition**	Oregon	Developer-Resident
Fairview Addition**	Oregon	Developer
Middlebrook	Iowa	Developer
Miralon Palm Springs	California	Marketing Manager
Olivette Riverside Community and Farm	North Carolina	Lifestyle Director
Pringle Creek Community	Oregon	Developer-Resident
Rancho Mission Viejo	California	Developer
Red Barn Bentonville	Arkansas	Developer
River Bluffs	North Carolina	Resident
Rooted Northwest	Washington	Farmer-Resident and Volunteer*
Serenbe	Georgia	Real Estate Office Manager
Serosun Farms	Illinois	Developer
Skokomish Farms	Washington	Farmer-Resident
S*Park	Colorado	Developer-Resident
Whisper Valley	Texas	Developer

*Received two responses from this agrihood.

**Received one response from the developer of both agrihoods.

APPENDIX C: LIST OF AMENITIES

Amenities	Count	Proportion*
55+ community	4	18.2%
Agricultural Education Center	9	40.9%
Communal BBQs	13	59.1%
Communal Kitchens	7	31.8%
Community Center	13	59.1%
Community Garden	17	77.3%
Compost Center	8	36.4%
CSA	14	63.6%
Drought Tolerant Landscaping	12	54.5%
Edible landscaping	11	50.0%
Farmers Markets	11	50.0%
Farmstand	12	54.5%
Fitness Center	8	36.4%
Food Shops	7	31.8%
Gated Community	5	22.7%
Library	3	13.6%
Natural Water bodies (river or lakes)	12	54.5%
Playgrounds	12	54.5%
Pollinator Gardens	8	36.4%
Pool	10	45.5%
Professionally Managed Farm	17	77.3%
Restaurants	6	27.3%
School	3	13.6%
Small Businesses	8	36.4%
Spa	3	13.6%
Sports Courts	5	22.7%
Stormwater Management	15	68.2%
Sustainable Building Practices	16	72.7%
Trails	19	86.4%
Undeveloped Natural Land	17	77.3%
Use of Renewable Energy	10	45.5%
Water Conservation and Reuse	10	45.5%
TOTAL	325	

*Proportion is based on 22 agrihoods.