MOTIVATIONS OF PRODUCERS AND CONSUMERS PARTICIPATING IN URBAN COMMUNITY SUPPORTED AGRICULTURE (CSA) GROUPS IN DENVER, COLORADO

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MOTIVATIONS OF PRODUCERS AND CONSUMERS PARTICIPATING IN URBAN COMMUNITY SUPPORTED AGRICULTURE (CSA) GROUPS IN DENVER, COLORADO

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I. INTRODUCTION

The spatial and social organization of increasingly urbanized areas tends to disconnect residents from the production of agricultural goods. This disconnect results from the large-scale commercialization of agricultural goods as well as disincentives for intra-urban agriculture engendered by modern urban planning, zoning, and land use regulations. Many communities are finding this distant relationship with food production, and food producers, to be unattractive, if not untenable in the face of emerging environmental sustainability, health maintenance, and community-building goals. Some communities seek both formal and informal initiatives meant to reconnect consumers with agricultural practices and producers. One such approach, Community Supported Agriculture (CSA), establishes food production networks in urban areas. These networks partner consumers with local, often peri-urban, agricultural producers in an effort to establish a food supply chain that bypasses the traditional monoculture-to-supermarket paradigm with a more transparent and community-based supply model (Sumner et al. 2010; Svenfelt and Carlsson-Kanyama 2010).

CSAs are local, small-scale networks of producers that grow seasonal food such as vegetables and fruit, and/or meat products, in which local consumers buy prepaid shares of inventory. The delivery of the boxes of produce to consumers occurs in a variety of ways: through home delivery, farm pick-ups, or at community drop-off points.

Growth in the number of CSAs in the U.S. has increased from 550 CSAs in 2000 to 1,144 in 2005 (USDA 2009). The highest density of CSA members occurs in urban environments (Schnell 2007). With this growth in CSAs, an increasing number of urban residents find themselves accessing agricultural goods through these organizations. The decision to participate in a CSA often requires all parties to make greater efforts and incur higher expenses to produce, distribute, and consume the products offered by the CSA. Previous studies have explored the impacts of local food systems on economic development, environmental quality, and health, (Lea et al. 2006; Martinez et al. 2010; McCormack et al. 2010; Racine et al. 2010; Svenfelt and Carlsson-Kanyama 2010). To date, none has examined the motivations for community members to participate in CSAs or the perceptions of participants on the value-added nature of the exchange. This research represents an effort to add to our understanding of involvement among CSA participants and to examine relative urban geographic relationships amid those motivations. The research, in Denver, Colorado employed a mixed-methods approach, including a structured survey instrument administered to a convenience sample of CSA producers and consumers, as well as unstructured interviews and participant-observations with CSA producers in the area. A spatial analysis of consumer survey responses, and the resulting motivations, were geo-coded the closest street intersection of members' home addresses to preserve anonymity. This portion of the analysis focused on the discovery of relative, urban geographic patterns among the motivational differences derived from the survey data.

II. PURPOSE STATEMENT

The purpose of this research is to examine the motivations of both producers and consumers of CSAs within Denver, Colorado. A variety of motivations for participation within alternative food systems exist. Such motivations include concern for the environment in the elimination of carbon-emitting long-range transportation and distribution. Pro-environment motivations tend to support the use of organic methods of production that promote healthy soil, water quality, and the protection of biological diversity through heirloom seeds. CSA consumers contribute to the food production through labor outlets that encourage knowledge sharing and learning. CSA models are immediate forms of trade, in which direct interaction replaces intermediary vendors between the producer and the consumer (Svenfelt and Carlsson-Kanyama 2010). The health benefits to the consumer are another motivation for CSA membership where consumers realize the higher quality and quantity of the produce itself. The reasons CSA members opt to participate vary from the pro-environmental to the health consciousness. To what degree these factors are important to the CSA member are the answers sought in this research.

III. RESEARCH QUESTIONS AND HYPOTHESES

What are the motivations for participation by producers and consumers of the CSA model in urban spaces in Denver, Colorado and what are the geographic patterns among the identified motivations?

- Are there distinct motivations for participation held by CSA producers?
- Are there distinct motivations for participation held by CSA consumers?
- Do motivations for participation among CSA producers and consumers fall into distinct, identifiable themes: social, economic, environment, health, or other?
- Are there any spatial or geographic patterns in the motivations or demographics of producers and consumers?

HYPOTHESES

The anticipation is that both CSA producers and consumers will be more highly educated, as the literature supports, with high incomes. The prediction is that the majority of CSA producers will be motivated to participate within this particular food production model for predominantly economic reasons, as CSA models have proven to be stable for small-scale agricultural operations. The research predicts that the remaining motivations for participation of CSA producers will be for environmental reasons, social/community support, and lastly for health concerns, ranked respectively. On the other hand, the researcher expects the motivation for CSA consumer participation to fall primarily

within the category of support of environmental concerns, followed by a focus on health concerns through the consumption of organic foods. The prediction is that CSA consumers' will rank community third with economic reasons for participation falling in fourth or last place as the main motive for CSA participation.

IV. BACKGROUND

The CSA model is a localized food production model that creates a direct and temporally seasonal relationship between small scale, independent farmers and consumers (Brown and Miller 2008; Sumner et al. 2010). In this model consumers buy a share of the food products at the start of the growing season as an investment where, in exchange, they receive a portion of the harvest each week (Cone and Myhre 2000). Typically, a member does not preselect their produce, but instead receives a selection of seasonally available products such as fruits and vegetables, meat products, eggs, honey, and nuts (Lea et al. 2006). Presumably, there is more than one reason a person might reject this model. The question explored in this research is whether CSA participants exhibit distinct patterns in their expressed motivations for rejecting the supermarket model.

Since the late 1980s, localized food production systems have increased in popularity (Brown and Miller 2008; Sumner et al. 2010). Present day activity of CSAs occurs in a geographically diverse pattern across the U.S. with the highest density in the Great Lakes and Northeast regions (LocalHarvest 2011). The 2007 Census of Agriculture reported an increase in CSAs from the late 1990s of 45 percent. This data found 12,549 farms that reported selling produce through the CSA arrangement. Out of these farms, the state of Colorado listed 204 CSAs alone. When compared to other states' CSA activity,

Colorado's number of listed CSAs is slightly below average, with some states such as California listing more than 800 CSAs (USDA 2009). Since this last Census of Agriculture, no complete and current records on the total number of current CSAs in the U.S exists. This study will focus on the CSAs located within the Denver, Colorado region.

V. LITERATURE REVIEW

Rapid urbanization coupled with heightened demands for seasonal, organic food grown "close to home" results in increased interconnectivity between food producers and consumers. The overall theme of alternative food networks (AFN) describes a general topical area that includes several subthemes within the academic and peer reviewed literature. The organization of these themes are social critique, urban policy, environmental management, as well as social justice, health, motivation, and AFN distribution methods. These themes apply to the research on CSAs in urban areas both directly and on a broad spectrum, with all research within the literature review relevant to the wide-ranging understanding of this phenomenon. The following review of the literature describes how these themes apply to AFN research.

ALTERATIVE FOOD NETWORKS

L. Jarosz in 2008 defines an AFN in terms of their spatial distance between producers and consumers as shorter than their corporate counterparts. They are frequently proponents of organic and sustainable methods of food production, the various venues for direct marketing, and are clear in their overall commitment to social, environmental, and economic resilience. AFNs interface in a variety of outlets. Farmer's markets, CSAs, and specialty food items sold to restaurants are just to name a few. The occurrence of AFNs are more common due to the rural to urban restructuring process on the outer hinterlands

of metropolitan areas, where large-scale, corporation operated agriculture is reduced to smaller family farm sized units. Additionally, urban environments with well-educated citizens that have higher incomes tend to support the existence of AFNs in greater density (Jarosz 2008). The success rate of AFNs is dependent, however, upon a multitude of variables and does not necessarily provide consistent, sustainable financial support to the producers participating in them. They are viewed as the reactionary response by producers and consumers of small-scale local food systems to resist corporate marketing structures though their emphasis on 'place', 'quality' and 'nature' or environmental ethics (Jarosz 2008). This opposition occurs through intentional practices of solidarity amongst community actors through the autonomous production of food outside of the large-scale industrial agricultural practices (Andree et al. 2010).

AFNs develop in situations where economic, historical, cultural, and political processes converge, typically in metropolitan environments, whereby producers and consumers forge a network (Jarosz 2008). Cultural norms associated with "quality of life", such as the degree of community volunteerism and resilience; thrive when interacting inside of AFNs. Those participating expose themselves to a greater connection with their communities and environments, with access to better nutrition. Socio-economically, AFNs support the ability to be ethical in purchasing power, allowing consumers to have a relationship with their local environments and to interact with their community, while fiscally backing the regional economy (Parkins and Craig 2009).

Such cultural norms are becoming more popular in the public's awareness of food distribution. Increasingly food products advertise on their labels where they originate. This reflects awareness generally held by consumers that local products are less impactful

on the environment and economically supportive of local businesses. Consumers define local as produced within a relatable distance and do not generally distinguish between products grown “nearby” versus “in-state”, demonstrating that the geographical extents of local are understood on a range of spatial scales. Distinct from the values of freshness and farm size or production capacity, consumers see purchasing local products as its own individual value (Darby et al. 2008). Consumer preferences in local food network engagement are matters of proximity to production and food quality and freshness, as well as a method of reconnection with producers as members of the community in a desire to be a part of place. In the Selfa and Quazi 2005, study of small-scale producers and consumers within local, alternative food networks of Washington State defined local as scaled down to the community level as compared to the definition of the general consumer on the state scale. In this case, actors already existing within the networks defined local as within their county or a day’s drive. As consumers elect to participate in alternative and local food networks, they participate in the market as empowered purchasers, not simply reacting to national and global scale market mechanisms in a predictable manner. The definition of local food is one of many market mechanisms acting against the consumer as they make their purchase selections. Local food labeling and trademarks that advertise the nature of the product are one example. The difference in an AFN is the presence of empowered consumers that decide to deliberately to connect with their producers as active and selective participants within a self-defined market (Dubuisson-Quellier and Lamine 2008).

The local food movement or AFNs is classifiable into two categories, corporate retail structure, and local, direct food distribution networks. Corporate retail structures,

such as grocery chains, purchase local products in a focus on positive environmental impacts, but are weak when compared to local, direct purchasing. Middle man local purchases, as seen through corporate retail structures, neglect to fully consider the rising costs of labor and supplies for small-scale farmers, animal welfare factors, and aggrandizement of rural community development. In contrast, local, direct food distribution networks are strong networks as they address the environmental impacts of food production as well as the aforementioned social, animal, and economic concerns. These methods of alternative food production are the stronger of the two categories of local food movements due to the strength of ties between producers and consumers. Knowledge and money is passed from producer to consumer through direct face to face communication and are not imbued with the extraneous costs of selling to a secondary market (Follett 2009; Watts, Ilbery, and Maye 2005).

Examples of strong and centrally organized AFNs exist on myriad of scales. There are established international movements that sponsor the advancement of AFNs, such as the *Slow Food* movement, cultivate the belief that although AFNs have their foundation in local networks, they must form partnerships and market to outside consumers in order to survive. The *Slow Food* movement began to help connect urban populations to food from rural or peri-urban family farms to provide access to food that was prepared outside of the rush and speed of urban life and rapid food consumption. As a method available for producers to overcome seasonal and market uncertainty, the *Slow Food* movement seeks to broaden the foundations of fiscal support through efforts to make AFNs diverse, such as farm tourism as an extension of a market outside of the heterogeneous markets they normally trade within such as farmer's markets in urban

areas (Parkins and Craig 2009). Another example of strong, centralized AFNs is in the Quazi and Selfa 2005 study of Washington State AFNs. When larger-scale organic producers of tree fruit dealt with crop overproduction, a focused campaign to encourage consumers to buy local became a tactic for financial survival. In a form of "defensive localism", farmers sought community financial backing by discouraging the purchase of imported produce. Although produce from this region travels around the U.S. through commodity chains, it is local purchasing power that becomes the liability coverage in times of market flux (Qazi and Selfa 2005). In attempts to contradict the forces of globalization, a reintroduction of a local food culture to persuade urban residents to reexamine their relationships with their local natural environment, occur in several regions of the world. A number of continental scale markets, including the European Union and Australia, have used re-localized food in efforts to support endogenous economic factors in underdeveloped regions. (Andree et al. 2010; Watts, Ilbery, and Maye 2005). The agro-tourism movement in Italy is an example of an idea designed to benefit local food production through urban to rural marketing and consumerism techniques focusing on bringing urban tourists to regional rural producers (Holloway et al. 2006). This successfully replicated model in the United States includes a statewide effort conducted in the state of Michigan, as a method of introducing economic stimulation to underrepresented areas through a focus on local agricultural production (Che, Veeck, and Veeck 2005).

For AFN producers, the ability to adopt adaptation strategies is crucial to inhabiting a consistent presence in their markets. An asset of alternative food networks is their ability to innovate rapidly within changeable and variable markets. Product

specialization and niche market development, as well as event enterprises related to agro-tourism, greatly enhance and diversify the financial base of small-scale producers within these networks. These economic strategies further the ultimate goal of social, environmental, and financial sustainability as a form of neoliberal resistance to global market powers (Holloway et al. 2006).

The demographic profile of AFN producers reveals a degree of homogeneity within those engaged in AFNs as a market strategy. A USDA study in the later 1990s found more AFN producers to be younger with higher levels of education than their conventional agriculture contemporaries. In fact, it is this particular demographic of producers who commonly utilize a multitude of agricultural practices and research the options available to them. They remain flexible to form partnerships with other AFN producers in order to be involved in such things as market share development, shared overhead costs, and create the time and space necessary to communicate and contribute to knowledge and strategies (Comer et al. 1999). In essence, AFNS seek to globalize local food through their holistic preferences of localized social/community, environmental, and economic preservation. These are just a few examples of the "culture" of AFNs and how they adapt and change shape within a network of actors in a variety of localized markets.

ALTERATIVE FOOD NETWORKS AND DISTRIBTUION: FARMERS MARKETS

The benefits and goals of embracing environmental, economic, and social sustainability of local food is publicly seen in the utilization of farmers markets (Connell et al. 2008; Jacques and Collins 2003; Smithers and Joseph 2010). In 2006, there were 3,700 farmer's markets listed in the United States (Darby et al. 2008). To the public there

are many reasons behind the ideology of farmers markets. They are avenues of local business support and with the common acceptance that local food equates to "good food" in terms of quality and freshness. Authenticity of food products at farmers markets is a realm explored by the literature. Traditionally, farmer's market food vendors sell food products, under the claim that they are local and organic. The customer has faith in the farmer-to-consumer relationship, trusting in the verbal proofs of food quality (Smithers and Joseph 2010). There is the pervading acceptance by farmer's markets consumers that farmers are trustworthy and provide goods that are of a high quality (Svenfelt and Carlsson-Kanyama 2010). The motivation of cost, quality, and taste lead the literature discussion as the most important considerations for farmer's market consumers, more than the methods of production (Svenfelt and Carlsson-Kanyama 2010; Smithers and Joseph 2010). Typically, the definition of "local" by consumers is unclear and ambiguous, while there is difficulty in ascertaining if consumers are considerate of production practices (Darby et al. 2008; Smithers and Joseph 2010).

Substantial ecological learning opportunities provide the avenue of communication that occurs at the farmer's market, whereby small-scale farmers meet the desire of consumers to have alternative shopping contexts. Consumers and farmers alike seek food education and communication through face-to-face relationships as both expand knowledge through discourse. Farmers share marketing ideas amongst themselves and sometimes even coordinate products so they are not in competition with one another (Alonso 2010; Svenfelt and Carlsson-Kanyama 2010). This sharing of information has helped farmers to understand how to price their products within the market, improve customer service skills, as well as boost confidence in their business skills (Brown and

Miller 2008). Additionally, the benefits of direct marketing manifest when vendors educate their consumers about the quality and variety of their products and provide an impetus for farmers to increase their customer bases (Andree et al. 2010; Alonso 2010). Accessibility to organic foods and to a greater quantity of fruits and vegetables encourages information about their preparation and farmers pass this to consumers who in turn enhance their nutritional foundations (McCormack et al. 2010; Racine et al. 2010). With all production and distribution methods within AFNs, farmers markets are the most publically visible, accessible, and popular, growing in both size and quantity throughout the United States.

ALTERNATIVE FOOD NETWORKS AND DISTRIBUTION: COMMUNITY GARDENS

One definition of community garden defines them as "anywhere two or more people garden together" (Blake and Cloutier-Fischer 2009). Community gardens are the transformative process where residents create green space in empty spaces of land through a democratic process of leadership and management for the intent and purpose of cultivating agricultural products (Baker 2004). They range in size from small wildlife gardens, to fruit and vegetable gardens in backyards, to community garden leases that are as small as a few hundred square feet to as large as several acres (Firth et al. 2011). Urban space has become a popular site for this land use conversion, with the focus on vacant lot cleanups through the process of localization. Localization is the refocus of residents on "narrowing the gap between production and consumption" where food insecurity is addressed for residents close to their homes and in their neighborhoods. By growing food, urban residents create community through community gardens (Corrigan

2011). Community gardens provide space for residents to share social-ecological knowledge, or the transfer of practices that sustain the long-term health of the ecosystem from one person to another (Barthel et al. 2010; Beilin and Hunter 2011; Ernstson et al. 2008). These spaces provide a wide range of benefits to participants from the physical benefits of outdoor activity, to the psychosocial benefits where participants gain confidence and independence through problem solving, and form social capital through community networks based on mutuality and reciprocity (Blake and Cloutier-Fischer 2009; Evers and Hodgson 2011; Irvine et al. 1999). Residents address community issues through a desire to reconnect with their natural surroundings, forming social capital through inputs of resources and the production of agricultural outputs. This is an additional perspective on community gardens, as "interest based" locations where participants support organizational structures designed to work over the long term in an equitable manner (Firth et al. 2011). Some studies even suggest that the community garden model of organizational structuring on a local level is an example of a good template for the design of sustainable local social, economic, and environmental policies (Holland 2004; Turner 2011).

ALTERNATIVE FOOD NETWORKS AND DISTRIBUTION: COMMUNITY SUPPORTED AGRICULTURE

Local food consumers and farmers together form a social network of connections. This "devotion" to community is "often the major selling point" that influences members in their decision to participate (Schnell 2007). Consumers of this form of local agriculture are similar to farmer's market consumer in that they participate for myriad goals that are social, political, and environmental in nature (Sean and Collins 2003; Seyfang 2008;

Sumner et al. 2010). CSAs are different, however, through a desire for greater community involvement (Sean and Collins 2003; Sumner et al. 2010). Consumers themselves in many cases play a role in the production of the shares they invest in, often as substantial aspects of the necessary production labor or as a "core group" of members whose degree of involvement include proper share cost analysis and increasing membership through marketing outlets. Marketing outlet examples include weekly newsletters distributed either in the food deliveries or through email. Such newsletters allow producers to provide updates about the status of certain crops, alert participants to events, and advertise or network with their members (Brown and Miller 2008; Cone and Myhre 2000; Sumner et al. 2010; Kolodinsky and Pelch 1997). Involvement occurs to various degrees and arises in innumerable roles. A significant difference between large-scale, corporation agriculture and the small-scale, family operated typical CSA farm is the dependence upon labor assistance. Assistance can come in many forms, including interns, apprentices, family members, and CSA members (Jarosz 2008). On the other hand, some forms of assistance are for the consumers themselves and can support lower income members. Through various means of assistance, consumers gain access to improved nutrition, enhanced food security, economic savings through an exchange of services, and increased knowledge of their food source (Forbes and Harmon 2007). A benefit of CSA participation consists of knowledge sharing whereby CSA farmers are in a position to educate their members. They may provide education on such topics as climatic variability, or urban development (as local food becomes a vehicle for arresting encroachment). Both groups meet in an ideal location for supporting other projects of a similar nature. Members encourage cross-generational communication and further

community resilience by exchanging ideas and their "sweat equity" to advance a common goal (Cox et al. 2008; King 2008; Sumner et al. 2010). Community events held at CSA farms are popular, and serve as an avenue for member recruitment. The Lass et al. 2001 national survey of CSAs found that 73.5 percent of farms participated in events such as harvesting parties, specific food festivals, or even hosted farm fresh dinners. It is the "emergency weed pulling parties" or the occasional celebratory potluck, that connect the growers with the consumers in community building activities (King 2008; Schnell 2007). The Cone and Myhre 2000 study found that the higher degree of participation by members, at least three visits to the farm itself, the more likely that particular CSA was successfully retaining present members and recruiting new ones.

ALTERNATIVE FOOD NETWORKS AND URBAN AGRICULTURAL POLICY

The urban landscape is a unique and fluctuating space where small scale agriculture takes a multitude of forms. Whether it is the backyard garden, the community garden or school garden, rooftop garden, or hanging container garden, urban agriculture adapts to whatever available space can accommodate it. A UK study found that as housing type, residential parcels and population density sizes change so too do the existence and type of urban agriculture carried out in those spaces (Smith et al. 2005). Among the various forms of urban density, such as the more recent reinstitution of highly dense designs or the traditional, less dense suburban designs, certain types of agriculture are more feasible. In peri-urban environments similar to those found in traditional more suburban spaces where residents and businesses exist distanced from one another with open space, community and backyard garden agriculture is more attainable than the CSA or farmer's market garden models (Ghosh and Head 2009).

In order for community gardens to remain on the landscape, there are certain political, physical, and social needs. These environments frequently require a supportive land use policy that allows for their existence in public spaces as well as in private backyards. Several authors describe the necessity for secured land tenure under long-term leases or via private ownership. In this way, land users ensure that relocation every few seasons does not waste the intensive and heavy resource investments put into the property. Other sustainability factors include sustained interest in the garden as a fixed piece within the community. These spaces are community development avenues that incorporate multiple generations and backgrounds into one location, the space where garden products are identified, marketed, and accessible publically (Beilin and Hunter 2011; Milburn and Vail 2010; Salvidar-Tanaka and Krasny 2004; Schmelzkopf 1995).

In some heavily urban areas such as New York City, there exist organizations to support the development and prolonged sustainability of these open garden spaces. Such organizations assist in land tenure advocacy for what is termed "participatory landscapes" in order to contribute public spaces for knowledge sharing. Knowledge forms include the sharing of ethnic, cultural food and agricultural traditions, events such as educational tours, concerts, and voter registration drives, as well as the provision of habitat/green spaces in highly dense urban areas (Salvidar-Tanaka and Krasny 2004). The presence of advocacy groups, such as the nonprofits in New York City, and their efficacy in securing land tenure initially began out of public land auctions. These organizations developed as grass roots political campaigners in order to maintain land for open spaces such as community gardens within the written public policy. Their successes came through organizational capacity that moved beyond single gardeners or families to larger groups

of determined citizens promoting their desires in the political arena. Over time and through protests, grants, and fundraisers these organizations became a presence securing open spaces for civic urban agriculture (Salvidar-Tanaka and Krasny 2004; Smith and Kurtz 2004; Tan and Neo 2009).

This is not to say that all efforts to adapt positively policy can follow democratic processes, sustained through a process of policy innovation within urban environments. In situations of constrained civic freedoms, gardening organizations are limited in the allowances given by their government. Despite the growing support of urban agriculture in developed countries, urban agricultural policies in developing countries, such as those found in Asia and Africa, do not promote the existence of these public spaces. Lower income populations, whose food dependency upon commoditized food increases, continue to utilize urban space for subsistence agricultural production to supplement their low access to retail food. Authorities generally see this as anti-Western, anti-modern progress and policies that seek to inhibit this function within the urban landscape pervade (Drakakis-Smith 1991). Such is the case of urban agricultural politics in the soft authoritarian government of Singapore. Here promotional organizations have to answer to governmental authorities for their community, event gathering purposes and organization leaders are subject a long laundry list of regulations (Tan and Neo 2009).

In addition to a lack of governmental backing, urban agriculture in developing countries can easily become a serious public and environmental health threat when mismanaged. Studies, that focus on highly dense urban spaces such as Lagos, Nigeria, relate the potential risks of mismanaged urban agricultural production inputs such as fertilizers and pesticides, citing a lack of regulation and education as the culprit. There

exist solutions to potential risks to human and environmental health and repressive governmental policies through an increase in community level participation in management design and implementation. It is through policies that endorse multifunctional land uses that serve to connect multiple users (Adedeji and Ademiluyi 2009). Policy then, is a large determining factor in the successful implementation or subsequent failure of urban agricultural practices. Therefore, although open space community gardens have their advocates that can generate positive political momentum they can likewise be subjected to strict management policies. In either case, urban agriculture represents a gathering place that requires the physical and legal space to exist and policy is the vehicle that places them inside the social, governmental structure.

ALTERNATIVE FOOD NETWORKS AND ENVIRONMENTAL MANAGEMENT

Urban agricultural space is the ideal location for knowledge passed through social relationships. Forms of knowledge include those regarding ecological practices that sustain and bolster environmental management and ecosystem services utilized by urban agricultural space. Open space protection and management are critical components of urban space sustainability, providing necessary ecosystem services to dense populations (Ernstson, Sörlin, and Elmqvist 2008). Such environmental knowledge sharing facilitates resiliency in times of ecosystem and/or social crisis. A general example of this process occurred in Europe during the first and second World Wars. During this time, the numbers of allotment gardens present doubled and tripled in Britain as the number of gardens surged to meet rapid, high food demand and successfully supplemented local food supplies.

Urban agricultural ecosystem services include water quality protection, pervious watershed space, pollination services, seed dispersal, habitat, and enhanced air quality. In these spaces, transmission and retention of experience and best management practices occur via direct face-to-face relationships in what has been termed as social-ecological memory. Participation in urban agriculture suggests that through shared actions, individuals derive meaning and purpose behind steps to enhance and maintain best management practices. For example, a study of social-ecological memory conducted in Sweden around garden allotments found that 57 percent of those surveyed felt they were learning about management tasks in their daily activities with other gardeners (Barthel, Folke, and Colding 2010). In addition to participatory learning, urban agricultural activities organize and gather intelligence and environmental resources alike while providing the physical space for such interactions to occur. AFN production sites become controlled and functioning ecological systems. The environmental benefits of their existence include small-scale protection of open space and ameliorates the loss of agricultural land (Cone and Myhre 2000; Lea et al. 2006; Schnell 2007). The cycle of goods and services exchanged within the ecological system of the AFN food production model are local, thus encouraging a degree of environmental protection.

It is in these spaces that improvements to environmental management concepts find the opportunity to advance. Environmental management concepts that are frequently mentioned in the literature include resilience, holism of ecosystems, plant and habitat biodiversity, as well as biodynamic or biointense gardening practices. These and the wide range of organic practices including heirloom seeds and seed saving are the foundations of social-ecological learning. The environment in these spaces then becomes a monitored

space, incorporating a level of science into their management (Beilin and Hunter 2011; King 2008). Lastly, beyond the physical garden spaces themselves, farmers markets are sites of ecological knowledge sharing between producers and consumers. These interactions provide opportunities for consumers, who are generally more concerned with freshness, quality, price, and taste to be educated on gardening practices and seasonal availability within their neighborhoods by the producers themselves (Svenfelt and Carlsson-Kanyama 2010). Whether communicated at the farmer's market, in community gardens, or when CSA consumers visit the farm to collect their shares, the sharing of ecological and environmental practices continues to revolutionize urban agricultural green space as a beneficial environmental service.

Lastly, small-scale agriculture is the backup system to large-scale agro-industrial system failure. Local agriculture has the benefit of less risk in that contamination issues are limited to only a few small-scale producers with fewer produce to market transactions. This creates the ability for rapid discovery of the source of contamination threats in food safety (Follett 2009; Forbes and Harmon 2007). Applying the same notion to supply demands, crop failures are local to each producer and a consumer can seek alternative suppliers physically nearby. Finally, local, small-scale agricultural investments by consumers participating in these AFNs are forms of rural development assistance. As urban areas continue to grow in population, local agriculture sustains rural economic markets (Follett 2009).

ALTERNATIVE FOOD NETWORKS AND NEOLIBERAL SOCIAL CRITIQUE

The focus on localism follows a long period of disinterest in local production and an attention on global interconnectivity. Agricultural industrialism followed the

productivism influences of a post-World War II global economy, established a food market culture that benefitted from increased outputs of mono-cropped, mass production technologies and distribution models. A social phenomenon is occurring in the development of urban agriculture where investments of time and capital that go into expanding smaller scale agricultural activities inside densely populated urban areas. These efforts to re-localize food are the reintroduction of nature into spaces traditionally seen as "anti-nature". Green spaces such as community gardens allow urban residents the opportunity to reconvene with nature and society simultaneously, providing the connection space for residents to define themselves by more meaning than the buildings and manmade structures surrounding them (Tan and Neo 2009).

This reconnection to nature can come at a cost of inequality amongst AFN actors. An example of this includes the financial challenges that a greater percentage of AFN producers incur upon acting within local food distribution models. Production costs coupled with distribution costs can mean that some producers are unable to participate in purchasing similar products from peer producers. Rather, these producers must rely upon their consumers who reside in higher income brackets to sustain their proportionately lower returns on investment in an AFN model (Jarosz 2008). This research does not address the social critique aspects of local and urban agriculture, but present research in this specific topical area discusses a range of social issues similar to the producer to consumer income disparity.

ALTERNATIVE FOOD NETWORKS AND SOCIETY: HEALTH

Studies show that of the many underlying benefits of AFNs, the exceptional food quality, and nutrition of fresh and typically organic produce, fortifies the health of those

participating (Cone and Myhre 2000). Although CSA membership does not guarantee the consumption of fruits and vegetables, the majority of each weekly delivery from CSAs is organic vegetables (Schnell 2007).There is the assumption then that individuals participating in these food-purchasing models intakes produce on a weekly basis. Such a diet rich in fruits and vegetables lowers risk of adverse health conditions such as cardiovascular disease, diabetes, and obesity. Health issues of this type are increasing within populations of developed countries around the world as the availability of processed and retail food popularize. There are no clear scientific statements however, that substantiate the connection to increased health benefits and AFN participation. One study published in the Journal of the American Dietetic Association in 2010 described the lack of reliable scientific studies conducted on the true nutritional impacts of farmers markets and community gardens. After analyzing research conducted from 1980 to 2009, they concluded that there is a need for sound, replicable studies in this area, especially research that utilizes control groups. They agreed on the other hand, with the general statements made by these historical studies that AFNs are outlets of education about healthy nutrition and do tend to positively affect their participating populations. This includes increased availability and encouragement towards higher intakes of fruits and vegetables. For the AFN model to assist in national efforts to reduce such health problems, additional public education regarding the benefits of healthy eating, and the accessibility of local and organic food products are necessary (Lea et al. 2006; McCormack et al. 2010; Racine et al. 2010).

Health education of the public is the motivation for many nonprofits and governmental programs participating in AFNs. These programs include statewide

programs, school district level gardens, and city level initiatives to promote health awareness directed by nongovernmental and governmental groups both separately and in conjunction with each other. The California Healthy Cities and Communities program is an example of a top-down governmental initiative to create local-level health education schemes that sponsor community-level health awareness. This program began in 1988 and has since supported the inception, development, and sustaining progress of at least 65 garden communities throughout the state. Health education occurs on the individual level as well (Corrigan 2011; Twiss et al. 2003). On the school district level, gardening programs are often the structure around which multiple school programs seek to influence positively younger generation's nutritional knowledge base and decision-making. These studies show a positive trend in the overall nutritional foundation of students as they become more likely to consumer more produce, appreciate the process of production overall, and cook for themselves (Cutter-Mackinzie; Henryks 2011; Lautenschlager and Smith 2007). Lastly, another method of health education takes place when farmers educate their customers about the products they are purchasing and how to prepare them. Often a consumer learns about new varieties of produce not commonly seen in grocery stores and this farmer-to-consumer education is a critical component of customer retention (Alonso 2010).

Within any health education program, it is crucial to each community's success that local leadership is with individuals personally invested in the area. This translates into a legion of volunteers and community partners who give of their time and money, and opportunities for sharing knowledge and learning which imparts a sense of accomplishment as goals are met (Corrigan 2011; Twiss et al. 2003). With the increase in

governmental and social awareness both in the media and in policy for locally produced agriculture, consumers are being educated from a greater multitude of external sources (Alonso 2010).

ALTERNATIVE FOOD NETWORKS AND SOCIETY: SOCIAL JUSTICE

AFN spaces tend to be unregulated areas where participants may act outside of large-scale government and market confines. It can be in these spaces that social hierarchies related to social differences flatten through shared visions and desired outcomes. Through collective decision-making and manual labor, greater civic stability emerges, especially in the more derelict parts of urban areas. As the revitalization of these rundown parts of the urban environment takes place, provisions to include open spaces for community gardens are more common than in the past. The result is increased food security, social equality, and cross-cultural pollination that contribute to community solidarity (Buckingham 2003).

Local food stabilizes issues of food security through addressing problems with access to healthy foods. Typically, low income and minority groups have the smallest degree of food security in urban environments, with the highest rates of diabetes and obesity. In conjunction, traditional attention given to these groups usually only happens during natural disasters and through holiday food drives (Corrigan 2011). This is a global phenomenon and is not limited to urban areas within the developed world. Urban subsistence agriculture is mandatory for the survival of this particular demographic in developing countries such as Asia and Africa as a supplement to highly commoditized retail food and other food distribution systems such as food aid (Drakakis-Smith 1991).

Food security is difficult to measure and policy makers lack sound predictors of this phenomenon. There exist global, agro-industrial corporations and federal government regulations that inhibit local food initiatives even on the micro level (Corrigan 2011; Evers and Hodgson 2011). Such regulations can heavily influence national to local scale programs that support access to food and fail to address myriad of socio-ecological factors that contribute to a lack of food security generally. Additional global scale factors that aggravate food security issues are climate change and the rising costs of energy, especially upon petroleum energy dependent markets such as food distribution (Evers and Hodgson 2011). Only in a few instances, have governmental regulations focused on and ameliorated local food production and distribution. Many of programs, such as food vouchers applicable to local food situations like CSAs or farmers markets, exist as shorted lived experiments (Rancine et al 2010). Amongst local opportunities available to underprivileged populations, the community garden model is the most functional. Rather than create a dependency on a program or network, such as voucher-to-food trade-ins, participants are required to learn self-reliant actions (Corrigan 2011). In addition to food independence, participants develop social networks that often connect them to other opportunities within their community. A series of marketable skills sets can result from the onsite training required for participation, giving lower income participants a point of dialogue to potential employers (Lawson 2007; Schmelzkopf 1995).

There is a need for greater development to make local food accessible to lower income populations by local governments through enhanced, intelligent policy design. Local agriculture has the capacity to adapt to a multitude of economic situations, including on the individual, case-by-case basis. Some strategies identified include both

governmental and nonprofit seasonal payment programs. In some cases food stamp vouchers, WIC coupons, and Farmers Market Nutrition vouchers are acceptable as a hard money value that farmers can trade in for cash. Local food models like CSAs require upfront money down payments at the start of every growing season and are not impossible for lower income populations through payment plans. These lower income consumers work with food provision focused nonprofits through loan programs or payment plans that break down the cost in increments and in some cases assist with the cost overall. For example, one method of payment plans gives CSA members the opportunity to pay for their shares as often as on a weekly basis. Discounts are common through working share programs where CSA members have the opportunity to reduce greatly the cost of their membership through a predetermined number of work hours at the farm. Share costs can be further reduced if a CSA participates in a subsidized, sliding scale payment system, where lower income consumers cost of membership is determined based on income. In situations where a CSAs consumer base may include a more wealthy population, collected donations generate scholarship memberships that fully or partially fund lower income members. These instances of support can include bartering as well, where members may trade their services in exchange for food goods (Forbes and Harmon 2007). In terms of access to food, these methods of food security assistance are crucial for lower income involvement in local agriculture as a means of increasing their accessibility to healthy food sources.

ALTERNATIVE FOOD NETWORKS AND SOCIETY: SENSE OF PLACE

One strength of local alternative food networks is their embeddedness in the social relations that are associated with a particular place. The long-term sustainability of

local food networks as an alternative to the corporate food structure relies upon how interrelated actors are within their market (Jarosz 2000). As food systems localize to a higher degree, the values of place become the forefront momentum driving their sustainability. These values can often be the reason a community chooses to live where they do and with whom they interact and invest their time and money. In order for this to happen, the process requires those participating to share, invest their time, and protect the unique resources that make each space different from one another. An involved, participating community member is more likely to feel a sense of connection to their neighbors, physical community space, and other initiatives within that place overall and not just to their community garden (Holland 2004). The Baker 2004 article defines this group of participating gardeners and individuals as having "food citizenship" with one another who positively influence the urban open spaces they occupy. The positive and negative external forces that determine how that space is used are influential factors to those participating. The various actors that participate such as community planners, land tenure managers, gardeners, local food activists, and youth groups express multiple meanings and definitions for a space (Baker 2004). Frequently these "food citizens" are social agents that promote a series of social, economic, and political values through their fiscal and voluntary support. In this perspective, consumers participating in alternative agriculture are conscious consumers, motivated to create a cultural identity of their place in space through activism towards social change (Lockie 2009). Another context describes this concept of "food citizenship" from the perspective of immigrants. It is common for this demographic to seek familiar agricultural artifacts and traditions to develop anew their sense of place in their new homes. Through reenacting their cultural

heritage, they establish the familiar in a new place and creating a hybridized sense of place (Saldivar-Tanaka and Kransy 2004).

Within the different types of AFNs, community gardens in particular are spaces filled with multiple meanings. These gardens are spaces where an overlap of cultural, political, and economic meanings pervade and out of this pluralism comes a sense of place. A community garden that generates a sense of place inspires not only by a sense of belonging to a communally shared idea, but is a space that provides opportunities to share a cultural heritage. Kitchen garden spaces, such as the Mexican kitchen gardens researched in the Christie 2004 article, are one primary example. Kitchen garden spaces are communal and aid in establishing a sense of place and establishment of culture as modernization and globalization changes how food identities communicate themselves across every day activities. It is through interactions in these spaces as well as religious rituals and traditions that self-definitions of space and place within culture are fostered (Christie 2004).

Finally, local agriculture creates a new kind of culture by itself. The meaning of space is determined through the multiple societal definitions of food through traditions, learning, collective space sharing, and production methods (Lawson 2007). Urban agriculture in particular, where residents inherently identify space as the blending of multiple meanings, AFNs provide food security linkages on personal levels. These networks foster civic engagement, encourage entrepreneurship, and bring groups of residents together to problem solve issues such as environmental sustainability around a common theme (Sumner et al. 2010). In the greater context of sustainability, the cultural development of these local agricultural spaces give design and form, tangible artifacts,

and space to further innovation of other sustainable ideas such as solar energy or rain water catchment systems (Turner 2011).

ALTERNATIVE FOOD NETWORKS AND SOCIETY: MOTIVATION FOR PARTICIPATION

Previous studies discuss how to predict an individual's relationship to or viewpoint on the environment in terms of agriculture, conservation, recycling, and environmental consumerism within their communities These studies determined that the motivations toward pro-environment behavior are related to a person's ability to behave compassionately (Cone and Myhre 2000; Hirsh and Dolderman 2007; Tilikidou and Delistavrou 2001). The underpinning of studies such as these is the inherent drive for individuals to feel more connected with nature in a rapidly urbanizing post-naturalist environment (Wolfe 1989). Generally, the modern technological and globalization movement decreases people's understanding of the roles they play within the human environment as it functions in nature. This creates a heightened sense of loss in self-narrative within the environment (Giddens 1991; Svenfelt and Carlsson-Kanyama 2010). As AFN producers and consumers identify with the land and the people working the land, they mutually benefit in a connection that assists in the expansion of a greater sense of self in nature (Cone and Myhre 2000). The synergies between both groups at production and distribution connection points provide contrast to the forces of modernity. Connection points become either central locations where similar ideologies or goals meet, and/or are the locations for knowledge sharing in the food production and distribution process.

Historically, environmental concerns ranked high among consumers surveyed about their initial reasons for AFN participation. A priority to participants is the environmentally sustainable or unsustainable practices supported by their fiscal decisions (Lang 2005; Svenfelt and Carlsson-Kanyama 2010). This forms a sort of ecological citizenship in which participation and fiscal investment towards environmental values becomes a large motivator to be involved in particular activities over others. Local and organic agriculture, with its intrinsic foundation of ecological service strengthening, gains momentum the larger the consumer population backing its existence in the market is in support of pro-environmental measures (Lockie 2009; Seyfang 2006). In a French study of CSA members compared to non-CSA members, CSA members more often considered the general wellbeing of the environmental to have a high degree of importance (Bougherara et al 2009). CSA members who initiate their relationship with farmers for environmental reasons augment their motivations and desires to be involved with other environmental and community causes as experience within the CSA accrues over time. AFN participants who are involved at production sites become increasingly aware of the sustainable ecological practices necessary to support their function (Kolodinsky and Pelch 1997). Participants introduced to the knowledge of sound environmental management practices learn what is required to maintain top farm performance and function (King 2008; Svenfelt and Carlsson-Kanyama 2010). A case study of Scottish CSA members over a number of seasons validated this process. In this study, the "graduation effect" is experienced by long time CSA members, whereby through CSA community activism, members begin to be more active in other aspects of their lives

(Cox et al. 2008). A few examples of this might include working for a local trails maintenance club or volunteering as a children's hour reader at the local library.

There is a consensus among the public that organic and local foods are often too expensive for the average consumer to afford and therefore is the most uncommon reason for participation by consumers. Despite this common generalization, local agricultural food products are not as expensive as their large retail store counterparts are. The mitigated costs of purchasing a locally grown food products occurs through the reduction in intermediary costs, such as transportation, when compared to a store-bought and continentally—if not globally—produced item of equal caliber (Cooley and Lass 1998; Forbes and Harmon 2007; Jarosz 2008; Lea et al. 2006). A CSA member's attainment cost can be affordable due to less intermediary costs even though they pay the price the CSA farmer must charge in order to remain a fixture within the local market. The Bougherara et al. French study concluded that rather than cost, it was the desire for greater variability of produce besides what was in season that prevented consumers from electing membership. The study revealed that consumers became CSA members not because of product cost, but due to a desire for the highest quality of produce freshness. The influence of the individual nature of local markets is considerable when examining the economic forces CSA members willingly overcome to attain food commodities. In the U.S., the CSA model provides a gross farm income at a higher percentage than the national average in data collected by the U.S. Agricultural Farm Census (Brown and Miller 2008). The economic stability of the CSA food production model is the seasonal distribution of guaranteed income. Upfront capital provided to the farmer through member investment shares at the start of the growing season tends to sustain the farmer

economically throughout the production season (Schnell 2007), while guaranteeing the member a season's-worth of fresh produce at a fixed cost (Lea et al. 2006). It was the perception of 12 traditional agricultural farmers surveyed in Victoria, Australia, that the number one benefit to the CSA food production model would be financial. This dialectic regarding the pros and cons of financial risk for CSA farmers is unique to each location, and more research is needed to make broad scale generalizations (Brown and Miller 2008; Lea et al. 2006).

Alongside the increase in visibility of farmers markets in public space and participation in CSA memberships in urban areas, much research has been conducted on the values-based decision making process of this specific group of consumers. In the Sumner et al. 2010 study of Ontario, Canada CSAs, the highest-ranking member motivation for participation was contact to healthy foods and defense of local farmer livelihoods. In the Connell et al. 2008 study of farmer's market shoppers in British Columbia, motivations for participation were more complex. Out of the 446 randomly surveyed shoppers, 236 respondents shopped on a weekly basis which rules out a lack of commitment to this method of food procurement. The majority of them ranked supporting food grown in season as the most important factor for participation, with high nutritional content and the purchase of locally grown produce as second and third in importance (Connell et al 2008). These results suggest that farmer's market consumers are similar to CSA participants in their motivation for participation. Both groups purchase their food products to fiscally support for a set of ideals and range of values. The most common type of local, food consumer are those who purchase organic food for

political, economic, and social value-based reasons (Kolodinsky and Pelch 1997; Seyfang 2008).

Food selection decisions can be a result of political activism. There is the opportunity in democratic systems to vote with consumer purchasing and related activities. Particular food choices can reflect an act of social agency or "food citizenship" as AFNs represents a host of ethical, values based variables (Hassanein 2008; Lockie 2009). The re-localization of the food movement is one method of this political consumer activism. It describes when the consumer elects to participate to support their local agricultural producers through participation, voting, and political activism.

In 2005, a survey of CSAs found in five Mid-Atlantic States founded a detailed study of CSA consumer motivation for participation. The conclusion of this study showed that consumer support of alternative agricultural practices correlates positively with membership. In the study, members who adhered to these ideals found greater satisfaction with their participation then those who did not. Additionally, if a member participated in events that occurred on their farm, the greater sense of satisfaction they felt due to a heighted connectedness to other CSA members and producers. It is important to note that this survey made several conclusions about the most common CSA member profile. Of the 198 respondents of the survey, 82 percent of them were female that were the average age of 40 years old. There is further description given by the income data that put most members of this study in the household income bracket of $95,000 and over. The study concluded that overall member satisfaction did not have a positive correlation with distance to farm or income, but was increased through farm activity participation and was more common if the member was female (Lang 2005).

SUMMARY

In conclusion, the academic literature has used food as a medium to discuss a multitude of societal, economic, political, and environmental topics. In particular, local agriculture and AFNs are increasingly a focus for research as their popularity in both the developed and developing world continues to advance. There is a limited research within the literature that focuses on motivations for participation by both consumers and producers in AFN production and distribution models. This is especially true for CSA producers and consumers who contradict the normal structures of urban and peri-urban spaces with local agricultural systems and whose motivations for participation are distinct from their rural counterparts.

VI. SITE AND SITUATION: DENVER, COLORADO

As a metropolitan area, Denver, Colorado has historically invested in community friendly infrastructure and development for several decades. For fifty years, the Denver Urban Renewal Authority has worked diligently to counsel intelligent growth in the city, preserving the "look and feel" of the community as it expands. Their efforts support a range of projects from historical buildings to housing for lower income families (DURA 2011). Due to the degree of involvement from groups such as this, the downtown and surrounding communities of the Denver metropolitan area have distinct appearances and local business incentives. Often this appears in the form of microbrewery restaurants or locally own coffee shops, with neighborhoods within the area consolidating themselves into active groups. These groups, such as Lo Do for lower Denver, are responsible for a variety of social engagements such as clean ups, dog park monitoring, crime watches, and garage sales. Frequently planners and landscape architects study Denver for its urban green space integration. Intermittent parks in the city exist alongside other natural features such as the South Platte River, which is complete with a whitewater kayak park and bike paths that extend for miles to city parks such as Red Rocks (Bonan 2000; Searns 2000). It is as a self-professed progressive urban community that Denver, Colorado makes an interesting location for this research, as its residents seek to self-individuate through the establishment of an augmented and developed sense of place.

The citizens of the city of Denver Colorado are classified as 68.9 percent white, 31 percent Hispanic, and 10.2 percent African American with 39.3 percent of the population 25+ years and older holding at least a bachelors' degree in education. The city limits extend to 153 square miles with a population density of approximately 3,922.6 individuals per square mile. The median household income is $45,438 and 53.8 percent are registered homeowners with the median home cost at $236,700. Around 17.8 percent of Denver's residents live beneath the poverty line (U.S. Census 2010). These demographic distributions are common among western U.S. cities. The 2010 U.S. Census data shows an 8.2 percent overall growth in total population from the 2000 census that registered the city of Denver at 600,158 individuals (U.S. Census Denver 2010).

The city of Aspen Colorado supplied a small convenience sample from one CSA and contributed to the collected survey data by 14 percent. The city of Aspen has a population of 6,658 individuals, which is up 12.6 percent from the 2000 census. In total 93.9 percent of the population is white, 7.5 percent are Hispanic, and 0.8 percent are African American. This is in combination with the median value of homes at $860,000 with the median household income at $56,963. Over 63 percent of the population 25+ years hold at least a bachelors' degree in education and 4.3 percent of the population lives below the poverty level. The city of Aspen is 3.87 square miles with a population density of 1,718.6 people per square mile (U.S. Census Aspen 2010).

Urban and peri-urban agriculture has been defined as "agriculture occurring within and surrounding the boundaries of cities throughout the world and includes crop and livestock production, fisheries and forestry, as well as the ecological services they provide" (Sumner et al. 2010). Increasingly, farmers are finding the need to adapt to a

rapidly urbanizing population and extreme development pressures, which result in the rapid loss of agricultural land. It is within urban environments where CSA members are more commonly found, where CSA farms are often smaller but more frequent then their rural equivalents (Schnell 2007). Denver is a large urban area in the state of Colorado with a population of approximately 600,158 (U.S. Census 2010). Within 100 square miles of downtown, there are 53 functioning CSAs with an estimated membership base of approximately 1600 consumers (Ecovian 2010; LocalHarvest 2011). The questions this research seeks to address focus on the motivations for both CSA producers and consumers within this urban environment and the geographic patterns of consumers relative to their expressions of motivation.

VII. METHODOLOGY

This research seeks to answer the research questions and hypotheses with a mixed methods approach. A mixed methods approach can increase the depth and breadth of the conclusions drawn from the study itself (Creswell and Clark 2011). Both consumers and producers completed a structured survey meant to assess their experiences with their CSA and their individual motivations for participating in one of Denver, Colorado's CSAs. Both consumers and producers completed surveys tailored for their particular group (Appendix A and B). The survey data reflect the uneven ratio of CSA producers to consumers with one producer survey response for every eleven consumer responses. Additionally, semi-structured interviews conducted from a convenience sample of CSA producers augment the survey data. Lastly, supplementing the survey and interview data is participatory field observation data collected while working on a CSA farm in the summer of 2011. As the data collected are from a specific region during one CSA production season, this research will add to our understanding of the CSA phenomena based on one geographical region's experiences (Stake 2005).

QUANTITATIVE METHODS

Quantitative data gathered via the structured surveys illuminate the degree to which CSA producer and consumers value, or motivate themselves by, four primary agency-oriented themes: social, economic, environmental, and health. The survey contains both

nominal and ordinal questions that utilize yes/no responses, ranking questions, and demographic questions. The surveys took place in the summer of 2011 in Denver and Aspen, Colorado. Six CSAs, serving approximately 679 members, in the study area participated in this research. Surveys were distributed in the member's food boxes with instructions to return completed surveys to their respective CSA producers; while producer's surveys were handed out to producers at the farm locations by the researcher.

The first step in the survey analysis examines the expressed motivations of both consumers and producers by exploring, through simple frequencies and descriptive statistics, the responses from each group separately. Secondly, the anonymous survey collected street intersection data of both producers and consumers to examine their locations for spatial patterns. Using a geographic information system (GIS), geocoded and address matched street intersections closest to each respondent created a point layer shapefile on the city maps of Denver and Aspen, Colorado to compare locations of survey respondents. Then, a comparison and contradiction of these locations to the U.S. Census 2010 census tract level population density data, explored the demographic and socioeconomic relationships found there. Lastly, all results from the quantitative analyses above describe the degree to which the motivations of producers and consumers participating in CSAs are distinct or blended inside the four identified themes of motivation.

QUALITATIVE METHODS

Semi-structured interviews took place with five CSA producers. These interviews used a brief questionnaire of predetermined prompts (Appendix C). Responses were collected using a digital recorder and were limited to the framework of the questionnaire.

A manual content analysis on these interviews extracted direct dialogue evidence that fixes producers within the four themes of motivation (Maxwell 2005).

Additionally, the researcher took part in participatory observation at a CSA farm in the summer of 2011. Events such as planting, weekly harvesting and box packaging, weeding and farm box deliveries provided access for the researcher to opportunities for conversation and observation. When consumers were accessible, the researcher utilized those moments to discuss material related to the research questions. The researcher wrote notes after events in a field notebook in a systematic and orderly manner. The evidence collected through this process augments the qualitative results.

VIII. RESULTS

QUANTITATIVE DATA

The survey response rate from consumers between the six CSA farms surveyed averages 16.5 percent (Table 1.). One farm, farm 5, had a high response rate of 35 percent and this could be due to the communication format followed by that particular CSA producer. This producer works full-time as a journalist and spends a great deal of time on the newsletter and pamphlets that go inside the consumers food boxes each week. The intent of these documents is to inform the consumers about the status of produce inside their boxes along with other farm details. This producer sends these newsletters both digitally and inside the food boxes themselves, accessing the consumers in two ways. Another producer, farm 6, requires their consumer members to participate in the production and distribution of their CSA products. Due to consumers frequent presence at the farm, this producer communicated about the research survey directly to their consumers, thus their response rate was 77 percent. The qualitative CSA producer interviews provide additional details.

The demographic characteristics of consumer survey respondents are relatively homogenous (Table 2.). Out of 143 total responses, 94.4 percent are White, 2 percent are Hispanic, and less than 1 percent is Asian, African American, and Native Hawaiian or Pacific Islander. The average educational attainment level is relatively high with most

consumers holding a 4-Year bachelor's degree and a graduate degree. Consumer respondents represent a range of income variability amongst mostly higher incomes with 42 percent in the highest household income bracket of $100,000+. This could be in part due to the proximity to large metropolitan urban areas where jobs and incomes tend to be high. The majority of the responses were from women who comprise 72 percent of the survey responses. This result matches previous research on CSA demographics (Lang 2005) where CSA participants were mostly women. Similarly, most of the women (and the overall consumer survey group) indicated they are married. The average age of respondents is 41 years old. The total age range extends from 21 to 66 years of age with more of these older and younger consumers contributing to their CSA production and distribution due to either not working at full-time employment or being of retirement age. These data are comparable to the state demographic profile. Out of the total Colorado population of 5,029,196 million individuals, 81.3 percent registered as White, and 20.7 percent registered as Hispanic. The most common age group for Colorado is 45 – 54 years old for females and 25 – 29 years old for males. The median household income is $54,046 and the most common educational attainment level is bachelor's degree (U.S. Census 2010).

Consumers generally either do participate in the distribution and/or production of their CSA goods or say they would like to if they had time (Table 3.). Many of the consumers are first year members who are experiencing the range of products and work opportunities their CSA provides for the first time. Often a CSA producer will incentivize volunteers who donate their time at the farm with excess produce or reduced rates on their CSA membership costs. More than half of the consumers expressed a desire to

participate even if they did not have the time at their CSA farms. A few of the reasons a consumer may not be able to work at the farm might include the inability to schedule their farm work hours within the small range of available time slots the farms provide. Producers might offer only a few hours per day or a few days per week that are open to farm assistance, thus limiting the options for consumers.

Although the sample size is smaller, 15 producer survey responses are relatively analogous in demographics to the consumer survey responses (Table 4.). All producers surveyed indicated White for race/ethnicity and most were male. All producers indicated a high level of education with 10 producers holding a 4-Year bachelor's and 4 producers holding graduate level degrees. They are dissimilar from the consumer group in that the majority of the household incomes are in the lower brackets. Out of the 15 producers, 10 or two-thirds of them earn household incomes of less than $50,000. This reflects the phenomenon previously described in the literature whereby producers make less income then their consumers (Jarosz 2008). The large percentage of labor inputs required of agricultural production could be one of the many impacts negatively affecting the lower amount of income generated by CSAs. This quantitative data, in conjunction with the producer interview data, give further insight into producer income. Interview data, discussed in detail in the qualitative section, provides evidence that the majority of the producers work full-time at alternative forms of employment to generate income from outside of the income produced by their CSA. This information then skews the producer quantitative household income data collected from the survey. There are multiple reasons why CSA producers require additional income. Among them are the large demands of labor and time of production. CSA producers are generally unable to translate the true

production and distribution costs to their consumers. It is this significant number of external forces working against successful such as these that explains why CSA producers are living within considerably lower income brackets or work outside jobs, than the majority of their consumer base (Jarosz 2008).

Additionally interesting are the number of facilities and agreements with other producers that CSA producers retain (Table 5.). A third to half of the surveyed producers have more than one production facility, either leased or owned, with the average number of facilities at 2.4. Seven producers work with other producers in agreements to exchange produce. These agreements assist in providing a greater variety of products to their consumers by allowing producers to focus on a smaller range of products. In addition, should a particular crop fail due to such issues as pest infestation or natural elements such as a hailstorm, they have a back-up source or sources of alternative produce. A greater, and more consistently available, variety of produce for consumers promotes positive marketing by attracting and retaining consumers who desire different types or a large range of produce.

Lastly, the producers numerically divide themselves evenly between the degree to which their consumers participate in the production and distribution of their CSA products. Nearly half of the producers have consumers that participate often and occasionally, while the other half have consumers that never participate and never, but would if they had time. Since most producers chose social as their main motivation, this means that at least half of the interactions shared between producers and consumers occur during short durations of time while deliveries are taking place. These delivery times are

the moments when consumers go to the farm to collect their food share boxes, at consumer's homes, or at drop-off points.

Consumers overall ranked environmental reasons as their primary motivation for participation within the CSA food production and distribution model (Table 6.). The secondary reason is health as a primary motivation with social reasons for participation ranked third. Economic reasons, not surprisingly given the relatively high incomes among consumers, were the least common at three total responses as the main motivation for participation. The following sections describe details that support these findings.

Several interesting results emerge when comparing the consumer respondent's main motivation for participation in their CSA to the other independent variables of the survey instrument. Due to the majority of female survey responses, they represent an impact once gender and main motivation compare to one another (Table 7.). Women ranked environmental as the most common motivation and health as the second most common reason for participation. Together environmental and health reasons account for 60 percent of the total survey responses from women. These two reasons are similar amongst male survey respondents, with health actually surpassing environmental by one response. When examining the results of main motivation with marital status (Table 8.) and main motivation and income (Table 9.), the majority of survey respondents who chose environmental are married and have household incomes within the $100,000+ household income bracket. In fact, the greater part of consumers has household incomes within the top three income brackets, ranging from $50,000 to $100,000+. A married couple can generate two income sources and this could affect a consumer's primary

reason for participation. Additionally, higher incomes mean that economic savings would be less of a concern for the household as well.

Consumer survey respondents fall into two dominant categories. The largest percentage of consumer survey respondents are White. Forty-five percent answered environmental as their main motivation for CSA participation (Table 10.). All three consumers who chose economic reasons are White and from the open-ended portion of the survey, the research shows that these consumers were investors of their CSAs rather than feeling they were saving on the cost of their groceries with their membership. All minority groups responded equally between the main motivations of environmental, health and social with no minority groups using economic as a main motivation choice. The degree of homogeneity within the consumer ethnicity data makes any statements about the motivational differences between different ethnic groups difficult to substantiate.

The previous independent variables, such as household income, reflect a degree of household income, reflect a degree of education, shown in the survey data as the average consumer highly educated (Table 11.). The main motivation of environmental ranks highest amongst highly educated consumers with 40 percent of the total surveyed earning a 4-Year bachelor to graduate or medical/law school degrees. Amongst the lower income consumer respondents there emerges a pattern. Those consumers that earn lower household incomes have similar motivations to those consumers that are not as highly educated. More consumers in these demographics find health reasons to be more important than environmental ones. This could be due to decreased accessibility to

consistent healthcare services and therefore, health reasons for participation are more important.

Another angle of CSA consumer participation involves the consumer's length of membership in years and their willingness to participate in the physical production and distribution of the CSA products themselves. The bulk of consumer respondents are first year members to their CSA at 62 total or 43 percent and responded primarily to environmental as their main motivation for participation (Table 12.). This group of first year members comprises 30 total or 21 percent of the total consumer survey responses. The next largest response group is the 3-year CSA members at 19 percent of the total, with every other length of membership, the 2-year, 4-year, and 5-year plus members, at equal proportions of responses. Those consumers that retain their membership beyond their first season might have more experience with how much time and effort it takes to assist their CSA and therefore have a more realistic perspective on how much of a commitment it is to participate. It follows then that their willingness to participate in the production or distribution of products at their CSA might drop-off after the first year of membership.

Consumers are mostly interested in giving assistance even if they do not have the time for it (Table 13.). More consumers who chose health as their main reason actually participate often in their CSA production and distribution. This may be because it is a requirement of their CSA membership or simply because they elect to verify, in person, the production methods they find most important, such as organic techniques. On the other hand, the desires to provide assistance aside, the numerical majority of consumers do not participate on any level with their CSA. This could be due in part to the fact that

most surveyed consumers work full-time schedules (Table 14.) The combination of these variables describes that the average CSA consumer as full-time employed outside of the home making a household income of $100,000 plus. The average CSA consumer has a relatively high educational attainment level and ranks environmental reasons as their main motivation for participation. This could be in part due to their degree of urban embeddedness and those results are in the following section.

NON-PROFIT CSA QUANTITATIVE DATA

Of all types of CSA models, the nonprofit CSA model in particular seeks out minority and lower income socioeconomic groups as their consumer base. A surprising result of the research, the Denver-based non-profit CSA group works with a consumer base that is demographically different based on income level and education attainment level. Generally, this CSA model addresses the issue of demographic homogeneity as a primary focus of their organization mission. Within the study area, multiple nonprofit CSAs support ethnic minorities as well as lower income and educational attainment groups. This researched attempted to collect survey responses from a variety of socioeconomic groups by working with a multitude of different CSA model types as the survey base. In particular, a large Denver CSA nonprofit participated in hopes to lend access to the aforementioned minority groups who use this CSA as a food resource. This particular nonprofit CSA sample group, however, had very few members that elected to participate in the research and therefore had a low response rate to the survey. Out of the 200 members of this nonprofit CSA, only 13 responded for a response rate of 6.5 percent. Future research should address this unrepresentative sample. This includes the need for the development of new methods of how to assess effectively minority and lower income

CSA members and their respective motivations for CSA membership. In terms of this research, the homogenous demographic results of the survey data are dissimilar from the participant observation of the researcher about CSA members in Denver and therefore, the data set is not a truly representative sample of the CSA consumer base found in this region.

SPATIAL PATTERNS OF MOTIVATION AND POPULATION DENSITY

The street intersections of both consumer and producer survey respondents were geocoded in a GIS and compared to U.S. 2010 Census survey census tract level population density data. The population density data is broken into four classes on the census tract level for each of the ten counties that survey respondents live inside. The counties observed from the survey data are Adams, Arapahoe, Boulder, Broomfield, Delta, Denver, Jefferson, Garfield, Pitkin, and Weld. Each of these four classes describes further details as high, medium-high, medium, and low population densities. This research uses population density as a surrogate for degree of urban embeddedness. This is with the understanding that higher population density areas are typically associated with more urban core areas and medium to lower population density areas associated with peri-urban, periphery areas.

The results of the geocoding process in GIS display where the consumer and producer survey respondents reside within the counties that comprise Denver and Aspen, Colorado (Figures 1.- 4.). The geocoding process accurately placed 140 out of the 143 total consumer survey responses and 14 out of the 15 total producer responses, with Boulder County containing the majority of the total geocoded points (Table 15.). Boulder County contains 37 percent of the total survey responses and Denver County holds the

second largest response with 21 percent of the total. Similarly, Boulder County hosts the largest number of producer survey responses, with 64 percent of the 14 geocoded responses. These two counties represent large, dense population centers around the Denver metropolitan area. There are 294,567 registered individuals in Boulder County and 600,158 registered individuals in Denver County (U.S. Census 2010). The geocoding process overlaid with the population density data allows the CSA consumer and producer data to be further described in terms population density. This research defines population density as the number of people per square mile within the census tract. Amongst the different regions of this research, some are more rural while others are densely urban. Therefore, each region in the study has different levels of population density amongst their census tracts (Table 16.). The four classes, or ranges of population density, are broken down by region using the Natural Breaks-Jenks classification system. This system separates the data set into classes at their natural divisions, or in other words, where there are larger gaps between the groups of data (Ormsby et al. 2010). Therefore, each region has their own range of population densities with the urban regions differing greatly from their rural counterparts. For example, the counties that comprise the Aspen survey area (Delta, Garfield, and Pitkin) are considerably more rural and less populated then those in the Denver area (Table 17.). Within the highest levels of population density, the rural Aspen counties exist in a range of 5 – 829 individuals, whereas the higher range of population density in the Denver area is 0 – 23,688 individuals.

Contrary to the previously stated hypotheses, the largest percentage of CSA consumers are located in low population density areas. Out of the 140 geocoded responses, 45 percent reside within the low population density areas on the outskirts of

higher population densities. Inside this majority of low population density responses, there is an even numerical split between the main CSA consumer motivations for participation in environmental and health. Environmental and health each have 45 percent of the responses with the remaining 7 social responses. The impacts of living on the outskirts of a city can include longer distances between jobs and services such as grocery stores. Perhaps consumers in this area elect to participate for environmental reasons to help offset these impacts of suburban lifestyle.

The second most common population density for the CSA consumer responses is the medium-high population density at 24 percent. Amid these responses 58 percent responded with environmental as their main motivation for participation with 11 total health and 3 total social responses. This is closer to the hypothesized result; that consumers who reside in more highly populated areas elect to participate in CSAs to reconnect and sustain the natural environments around them in response to their urban embeddedness. A close third is the medium population density range, with 23 percent of the CSA consumer survey responses. Health ranks as the most prominent response at 21 total responses along with 13 environmental, 8 social, and 3 economic, making the medium population density range the most diverse in motivation. It is the high population density areas then that have the fewest number of main motivation responses with only 9 total. Environmental is the most popular motivation for this population density with 5 total responses, followed by social with 3 responses and health with 1 response.

The low response rate inside high population dense areas is similar when compared to the population density of the census tracts of CSA producer farm locations, (Table 17.). There are three counties in the study area where producer farms are located:

Boulder, Denver, and Delta counties. Producers who responded to the survey live in low population density areas at 9 out of the 14 total geocoded responses (Table 18.). Sixty-four percent and the majority of the responses came from Boulder County. The remaining 4 producer responses are in the medium and medium-high population density range with no producer responses recorded from the highly dense areas. Social is the main motivation for CSA participation amongst producers, with economic a close second, followed by the motivation of environmental and health. Producers of this study live within the peri-urban environment on the outskirts of the more heavily urban areas. This gives them access to a large consumer market without having to compete with the higher property costs associated with urban-core areas. When compared to the majority of low density consumer responses, it appears that the CSAs of this study have consumer bases that come directly from within their areas rather than consumers who drive from the more interior parts of the metropolitan area.

GIS generated maps display the spatial patterns of both the population density and main motivation for CSA participation for consumers and producers (Figures 5.– 9.). These maps present the survey response points color-coded to each particular motivation with the census tracts color-coded to the four different population density classes, high, medium-high, medium, and low densities. Spatially, there are few noticeable patterns amongst the survey response points. The motivations of environment, health, social, and economic appear to be blend in their spatial proximities to one another. However, some observations reflect that survey respondents live in the peri-urban regions on the fringe of the more densely urban population centers. In summary, the environmental reasons are the most common motivation for CSA participation amongst consumers who live

primarily in both low and medium-high population density areas. Health reasons are frequently the second more common motivation for participation. CSA producer's farm locations reside within low, medium, and medium-high population density ranges and social and economic are their primary motivations for participation in the CSA model. Other than the tendency toward peri-urban locations, spatial patterns in the motivations for CSA participation and population density tend not to be distinct. This may be the result of the sample size and biases in the surveying procedure or it may be that CSA participation is less associated with urban situation and more associated with less location-based factors. In either case, future research, using larger samples among more urban areas, could examine the location question more closely.

CONSUMER SURVEY COMMENTARY AND ALTERNATIVE MOTIVATIONS

The open comment section of the consumer survey gave respondents the opportunity to offer additional evidence to clarify their reasons for participation with their CSA. After compiling and examining these comments for any commonalities in theme, three distinct additional themes emerged (Table 19.). Many consumers said they participated to educate himself/herself or family members; to enjoy fresh, higher quality, and greater variety produce than store bought; and to economically support local food and farmers. This economic focus is different from the previously used motivation of economic reasons in that rather than focus on household savings; its goal is to offer fiscal support to farmers within their community. These alternative motivations broaden the understanding of consumer motivation in CSAs. Since the majority of consumers in this study are first year members, the desire to learn and be exposed to new types of produce is not surprising. Often consumers receive varieties of produce in their food shares that

they have never seen or are unfamiliar with cooking. One consumer illustrated their view by saying,

> "My exposure to vegetables and fruits I would have never chosen to eat is so exciting to me. I love to eat and cook. I am proud of my choice. We are thrilled with the freshness, variety and the reduction of our carbon footprint and helping the planet at the same time. We love being CSA members."

Consumers commonly mention exposure to new varieties of produce as well as its enhanced quality and taste over store bought produce. It is understandable that learning new concepts such as food varieties and preparation are a large part of CSA participation.

Learning and sharing food production processes with younger generations is another frequently mentioned alternative motivation. In local agriculture, there is a two-way educational relationship established between the producer and the consumer. Producers educate their members during verbal interactions both at distribution points and through newsletters filled with status updates, articles, and recipes. Consumers are interested in educating themselves, their children, or community about new and different varieties of produce, where their food comes from, and how produced. One consumer commented on this situation exactly through explaining,

> "We chose to be part of a CSA mainly to teach our children about where food comes from, know exactly where our food comes from, and to support local business."

These additional motivation statements, along with the previous producer and consumer survey evidence, demonstrate the complexity that is participant motivation in local agriculture and CSAs. Environmental reasons appear to be the foremost popular reason for participation. The previous literature from which the main motivation categories for this research were derived, in addition to the research findings, indicate the need to update our understanding of consumer and producer motivation by adding the new

findings. The research data supports the conclusion that motivations for participation blend, with one particular motivation almost as important to the consumer as another.

Table 1. Consumer Survey Responses by CSA

CSA	1	2	3	4	5	6	Total
Total Members	275	70	65	43	200	26	679
Percent Response of Total Members (%)	4.7	14.3	29.2	27.9	34.5	76.9	
Number of Survey Responses	13	10	19	12	69	20	143
Percent of Total Survey Response (%)	9	7	13	8	48	14	100

Table 2. Consumer Demographic Information

Demographic Variable	Number of Respondents	%	Demographic Variable	Number of Respondents	%
Gender (*n* = 143)	**No.**	***%***	**Household Income Bracket (*n* = 141)**	**No.**	***%***
Male	30	21	$0 - 24,999	9	6
Female	103	72	$25,000 - $49,999	23	16
Married	102	71	$50,000 - $74,999	21	15
Single	30	21	$75,000 - $99,999	27	19
Average Age	41		$100,000 and over	61	43
Race/Ethnicity (*n* = 142)			**Employment (*n* = 143)**		
White	135	95	Full-time Outside Home	71	50
Hispanic or Latino	3	2	Part-time Outside Home	21	15
American Indian or Native Alaskan			Homemaker	16	11
African American	1	0.7	Full-time home-based business	12	8
Asian	2	1	Part-time home-based business	9	6
Native Hawaiian or Pacific Islander	1	0.7	Not Currently Employed	14	10
Educational Attainment (*n* = 140)					
High School	2	1			
Trade School	5	4			
2 -Year Assoc.	9	6			
4 - Year Bachelors	58	41			
Graduate School	57	41			
Medical/Law	9	6			

Table 3. Consumer Participation and Membership

Participate in Production/ Distribution (*n* = 143)	**Number of Respondents**	**%**
Often	12	8
Occasionally	33	23
Never	55	39
Never, but would if had more time	43	30
CSA Member (Years) (*n* = 143)		
Less than 1	62	43
1 Year	12	8
2 Years	17	12
3 Years	27	19
4 Years	8	6
5+ Years	17	12

Table 4. Producer Demographic Information

Demographic Variable	Number of Respondents	%	Demographic Variable Household Income Bracket (*n* = 15)	Number of Respondents	%
Gender (*n* = 15)	**No.**	***%***	**15)**	**No.**	***%***
Male	9	60	$0 - 24,999	6	40
Female	6	40	$25,000 - $49,999	4	27
Married	8	53	$50,000 - $74,999	2	13
Single	7	47	$75,000 - $99,999	2	13
Average Age	37 yrs		$100,000 and over	1	7
Race/Ethnicity (*n* = 15)			**Employment**		
White	15	100	Full-time Year Round CSA	2	
Hispanic or Latino			Part-time Year Round CSA	3	
American Indian or Native Alaskan			Full-time Seasonal	8	
African American			Part-time Seasonal	1	
Asian			Employed Elsewhere	7	
Native Hawaiian or Pacific Islander					
Educational Attainment (*n* = 14)			**Participate in Production/ Distribution (*n* = 15)**		
High School			Often	2	13
Trade School			Occasionally	6	40
2 -Year Assoc.			Never	4	27
4 - Year Bachelors	10	71	Never, but would if had more time	3	20
Graduate School	4	29			
Medical/Law					

Table 5. Producer Agreements and Facilities

	Responses
Agreements with Other Producers	
More than one	7
Avg. Number	2.7
Number of Facilities	
More than one	5
Avg. Number	2.4

Table 6. Motivational Rankings Amongst CSA Consumers

Motivation	**1st Ranked Motive**	**2nd Ranked Motive**	**3rd Ranked Motive**	**4th Ranked Motive**
Social	24	37	47	34
Economic	3	11	37	94
Environmental	66	50	21	5
Health	50	45	38	10
Total	143	143	143	143

Table 7. Consumer Motivation and Gender

	Gender			
Motivation	**No reply**	**Male**	**Female**	**Total**
Social	1	7	16	24
Economic			3	3
Environmental	5	11	49	65
Health	2	12	36	50
Total	8	30	104	143

Table 8. Consumer Motivation and Marital Status

	Marital Status			
Motivation	**No reply**	**Married**	**Single**	**Total**
Social	3	18	3	24
Economic		3		3
Environmental	5	47	13	65
Health	3	33	14	50
Total	11	102	30	143

Table 9. Consumer Motivation and Income

	Income						
Motivation	**No Reply**	**$0 - $24,999**	**$25,000 - $49,999**	**$50,000 - $74,999**	**$75,000 - $99,999**	**$100,000 and over**	**Total**
Social	1	2	2	6	4	9	24
Economic				2		1	3
Environmental	1	3	12	8	11	29	64
Health		4	10	5	11	20	50
Total	2	9	24	21	27	59	142

Table 10. Consumer Motivation and Race/Ethnicity

	Race/Ethnicity						
Motivation	**White**	**Hispanic or Latino**	**American Indian or Native Alaskan**	**African American**	**Asian**	**Native Hawaiian or Pacific Islander**	**Total**
Social	22	1		1	1		24
Economic	3						3
Environmental	60	1			1	1	63
Health	48	1		1			50
Total	134	3		2	2	1	142

Table 11. Consumer Motivation and Educational Attainment

	Educational Attainment							
Motivation	**No Reply**	**High School**	**Trade School**	**2-Year Assc.**	**4 - Year Bach.**	**Graduate**	**Medical/ Law**	**Total**
Social			1	1	13	7	2	24
Economic					2		1	3
Environmental	1	2	1	3	25	29	3	64
Health	1		3	5	19	21	1	50
Total	2	2	5	9	59	57	8	142

Table 12. Consumer Motivation and Years of CSA Membership

	Years Member						
Motivation	**Less than 1**	**1**	**2**	**3**	**4**	**5+**	**Total**
Social	8		3	8	1	4	24
Economic	2				1		3
Environmental	30	9	7	9	3	7	65
Health	23	3	5	9	4	6	50
Total	62	12	16	27	8	17	143

Table 13. Consumer Motivation and Participation

	Participation in Production/Distribution				
Motivation	**Often**	**Occasionally**	**Never**	**Never, but would if had time**	**Total**
Social	2	8	7	7	24
Economic			2	1	3
Environmental	4	15	21	25	65
Health	7	10	23	10	50
Total	12	33	54	43	143

Table 14. Consumer Motivation and Employment

	Primary Employment							
Motivation	**No Reply**	**Full-time Outside Home**	**Part-time Outside Home**	**Home maker**	**Full-time home-based business**	**Part-time home-based business**	**No Job**	**Total**
Social		11	5	1	2	3	2	24
Economic		1		1		1		3
Environmental	1	35	8	8	3	3	6	65
Health		22	8	7	7	4	2	50
Total	1	70	21	17	12	11	10	142

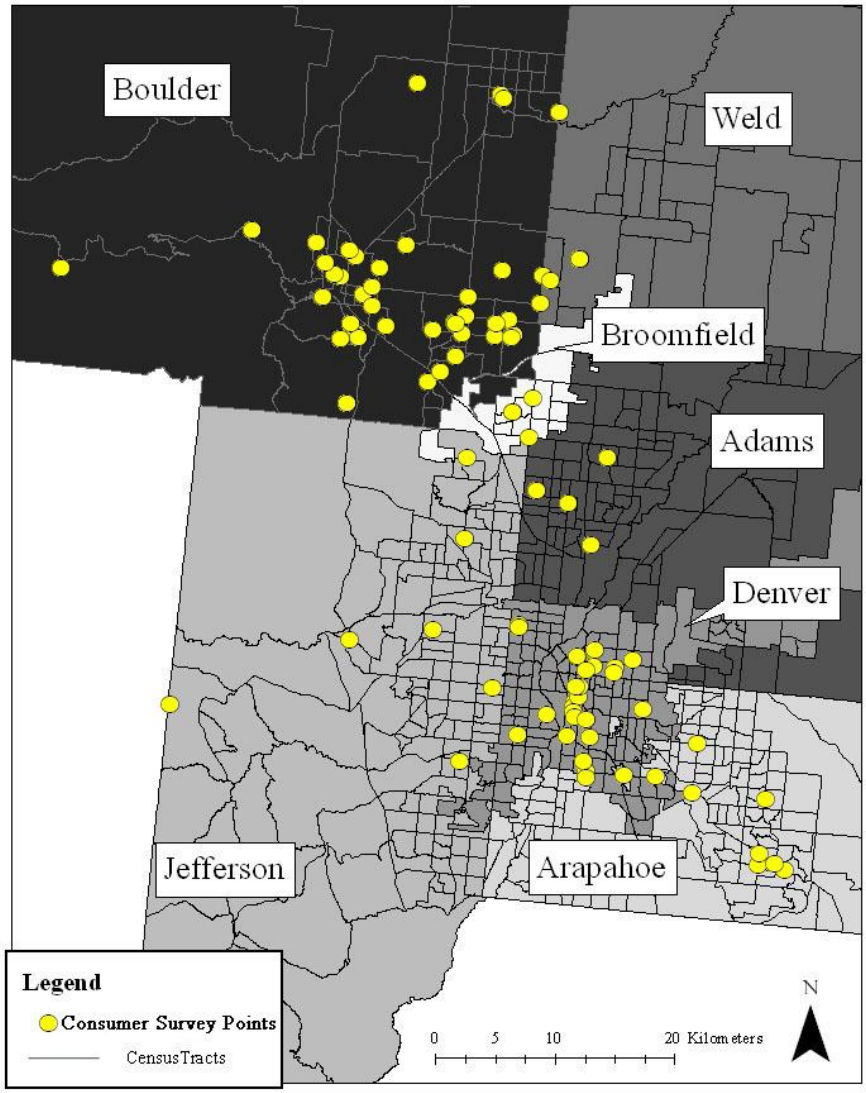

Figure 1. Denver, CO CSA Consumer Survey Response Points

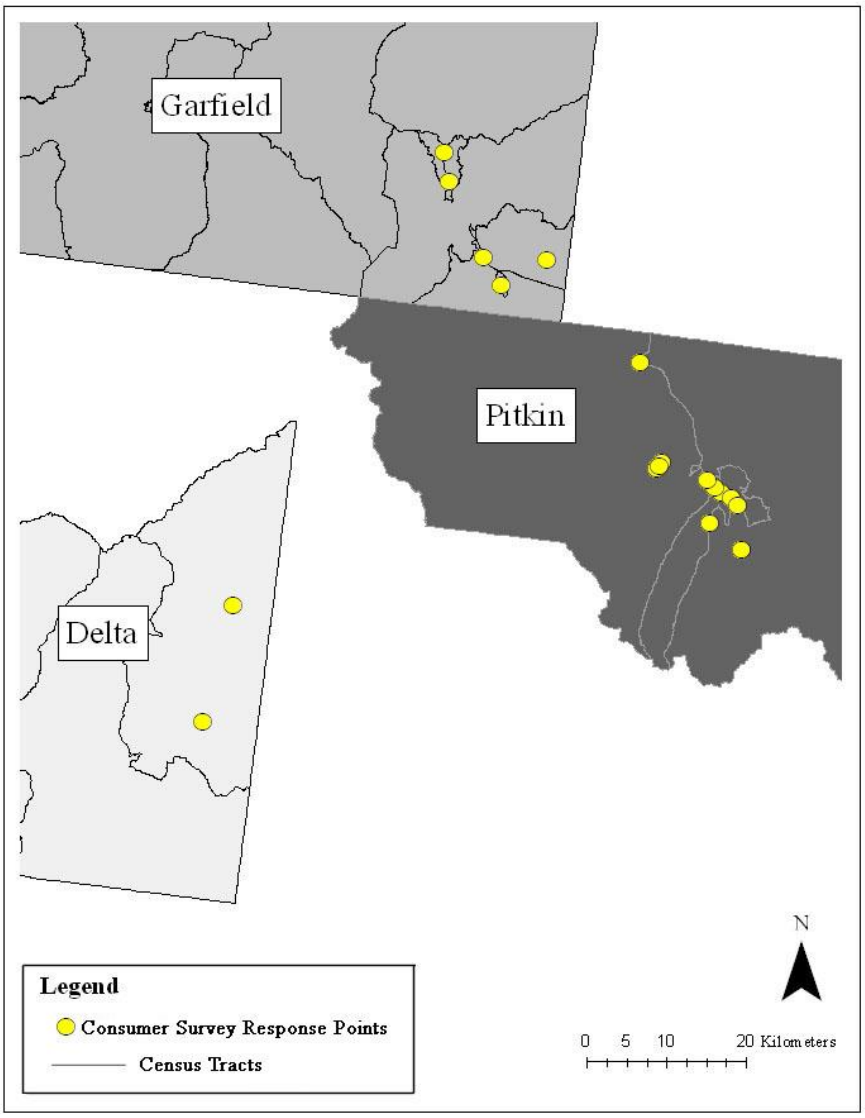

Figure 2. Aspen, CO CSA Consumer Survey Response Points

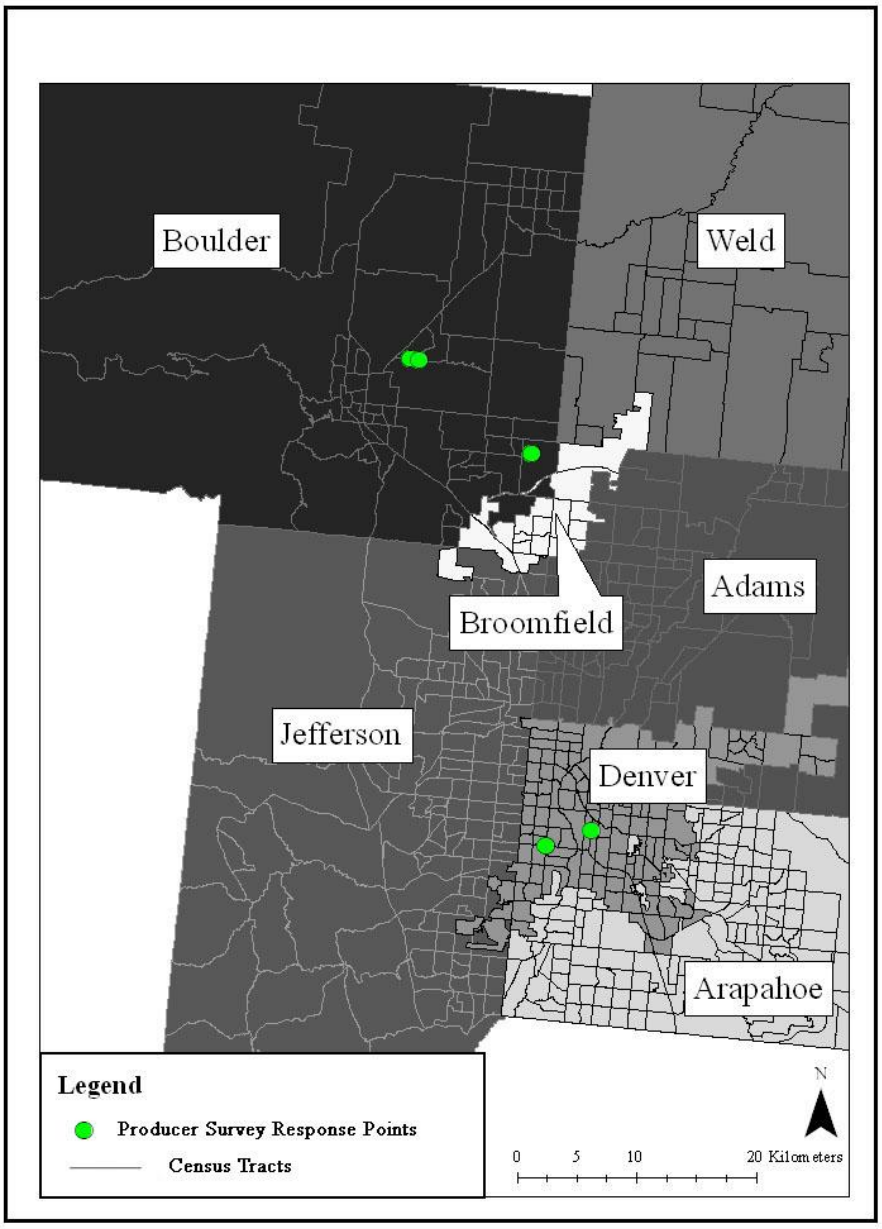

Figure 3. Denver, CO CSA Producer Survey Response Points

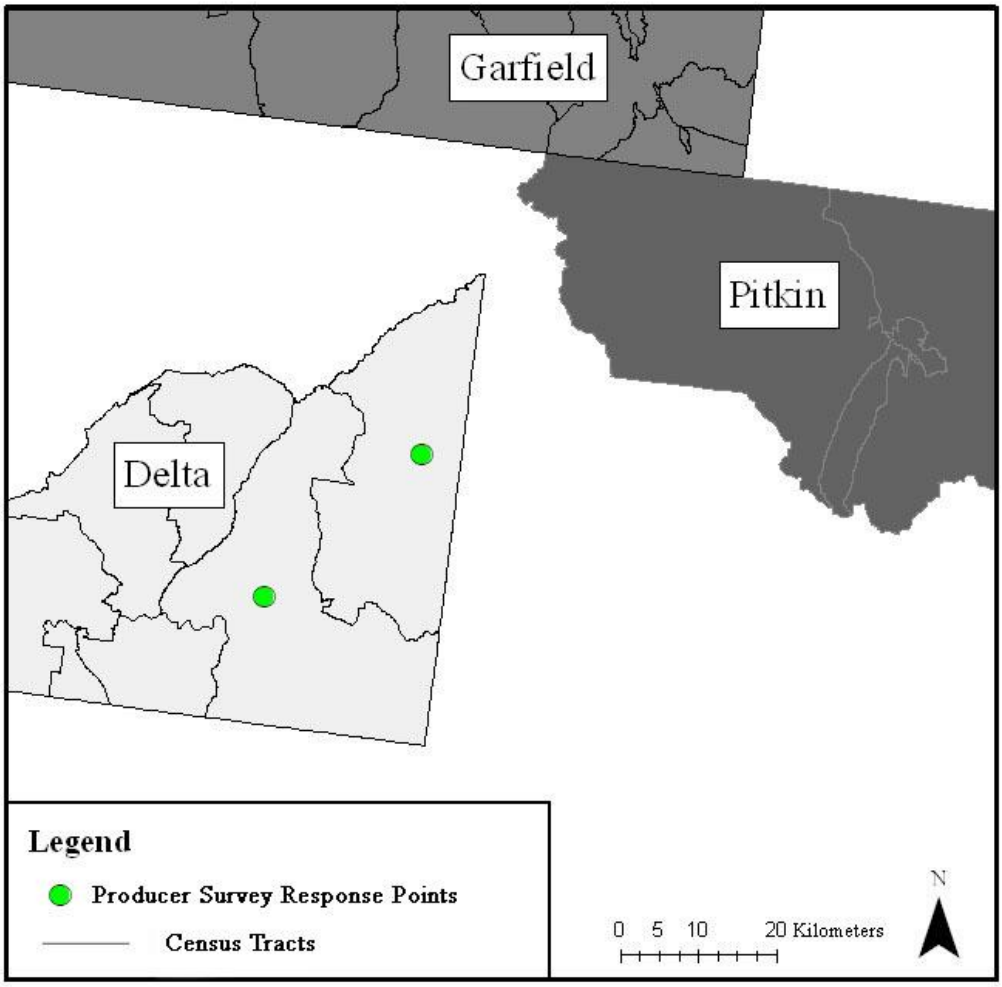

Figure 4. Aspen, CO CSA Producer Survey Response Points

Table 15. Survey Results by County

County	Number of Surveys	
	Consumer	**Producer**
Denver Counties		
Adams	5	
Arapahoe	7	
Boulder	52	9
Broomfield	7	
Denver	30	3
Jefferson	7	
Weld	13	
Aspen Counties		
Delta	2	2
Garfield	5	
Pitkin	12	
Total	140	14

Table 16. Consumer Motivation and Population Density

	Motivation				
Population Density per Sq. Mile	**ENVIRON**	**HEALTH**	**ECONOMIC**	**SOCIAL**	**Total**
Denver Counties					
Low: 0 - 4633	27	21		7	55
Med: 4634 - 8083	12	7	3	8	30
Med-High: 8084 – 13634	17	10		3	30
High: 13635 - 23688	6			3	9
Total Denver Counties	62	38	3	21	124
Aspen Counties					
Low: 5 - 17	2	8			
Med: 17 - 41	2	2			
Med-High: 42 - 165	2	2			
High: 166 - 829		1			
Total Aspen Counties	6	13			19
Total Counties Combined	68	51	3	21	143

Table 17. Total Population by County

County	Population
Adams	441,603
Arapahoe	572,003
Boulder	294,567
Broomfield	55,889
Delta	30,952
Denver	600,158
Garfield	56,389
Jefferson	534,543
Pitkin	17,148
Weld	252,825

Table 18. Producer Motivation and Population Density

	Motivation				
Population Density per Sq. Mile	**ENVIRON**	**HEALTH**	**ECONOMIC**	**SOCIAL**	**Total**
Denver Counties					
Low: 0 - 4633	2	1	1	4	8
Med: 4634 - 8083			3		3
Med-High: 8084 – 13634	1	1			2
High: 13635 - 23688					
Total Denver Counties	3	2	4	4	12
Aspen Counties					
Low: 5 - 17			1	1	2
Med: 17 - 41					
Med-High: 42 - 165					
High: 166 - 829					
Total Aspen Counties			1	1	2
Total Counties Combined	3	2	5	5	15

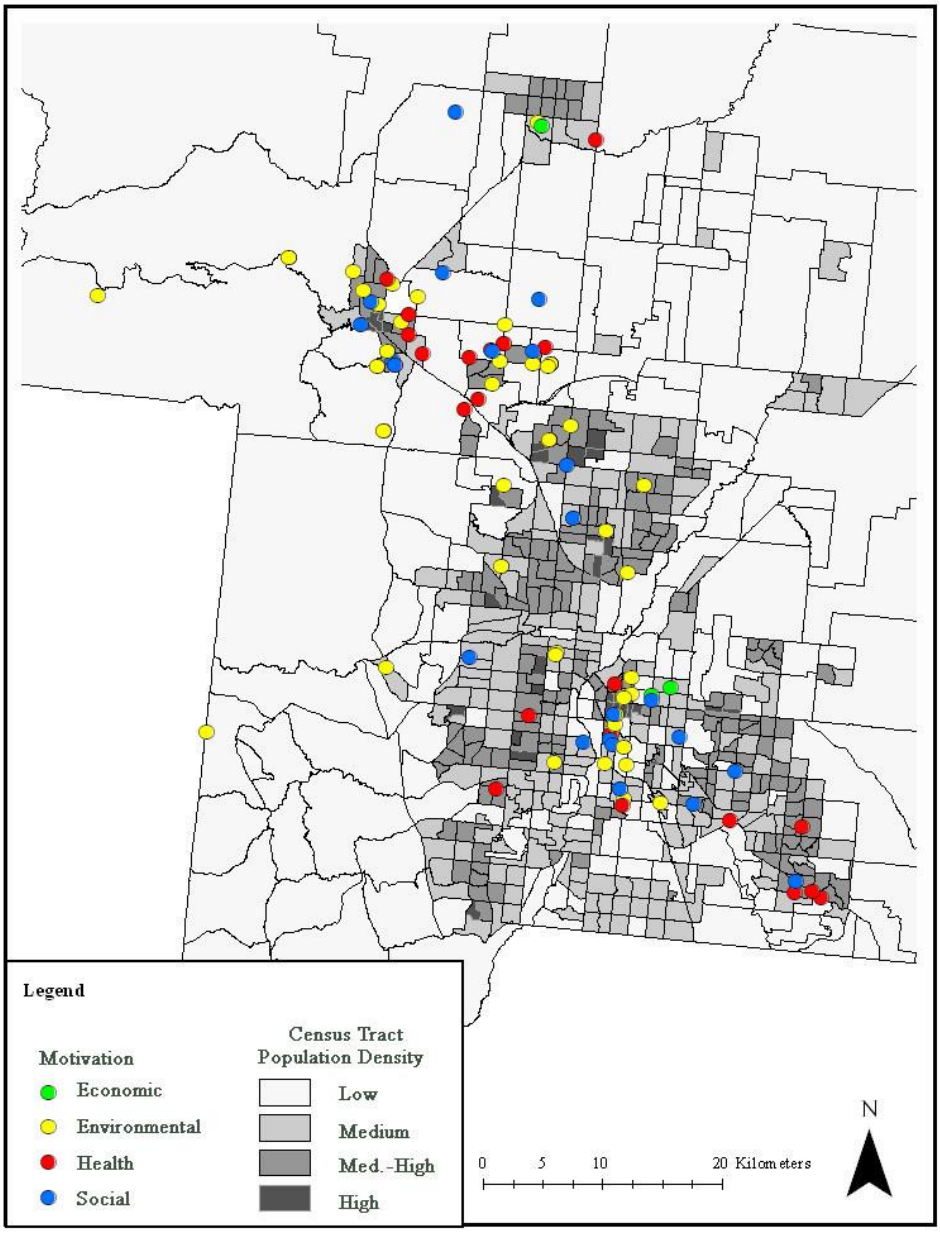

Figure 5. Denver, CO CSA Consumer Survey Response Points and Motivation by Population Density

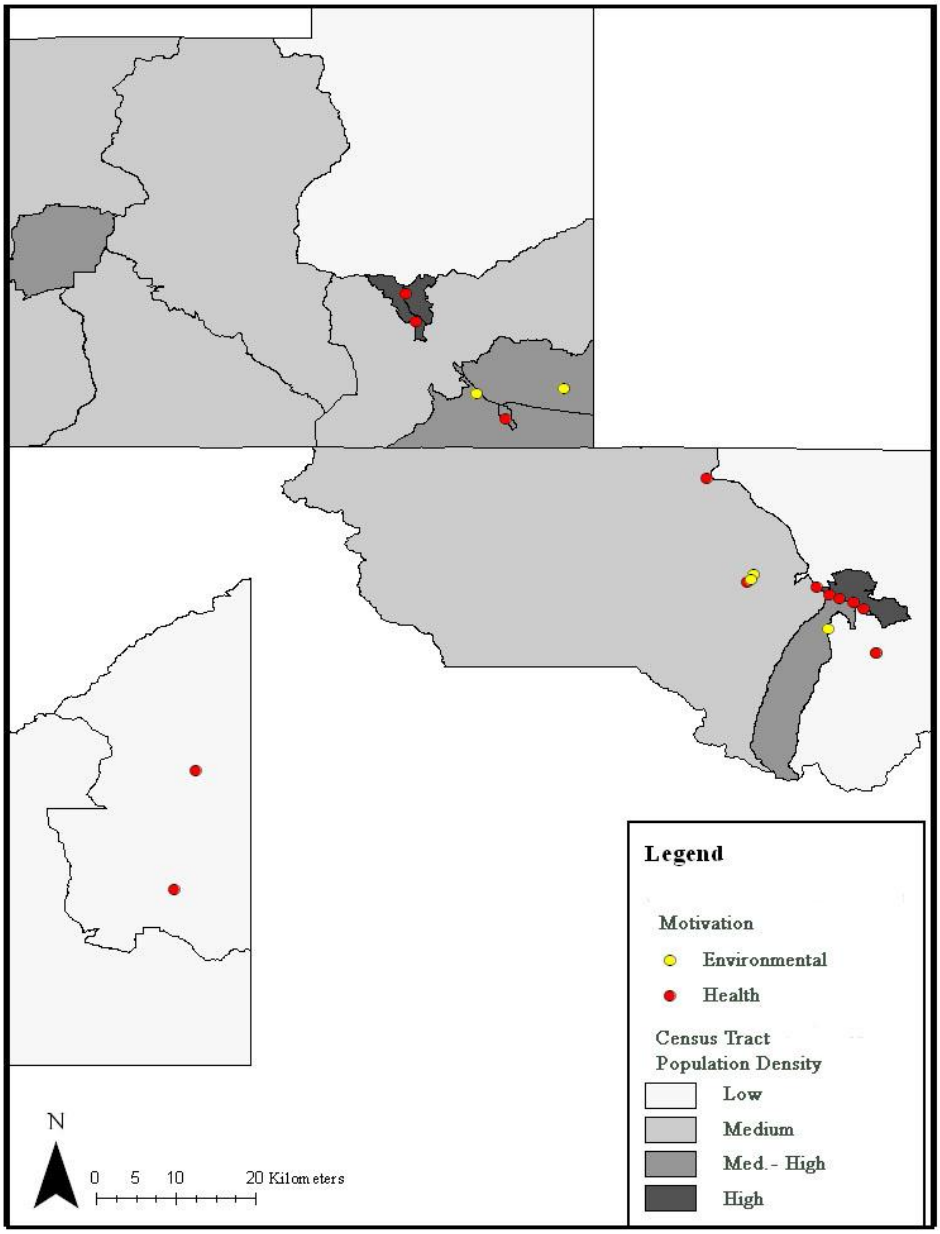

Figure 6. Aspen, CO CSA Consumer Survey Response Points and Motivation by Population Density

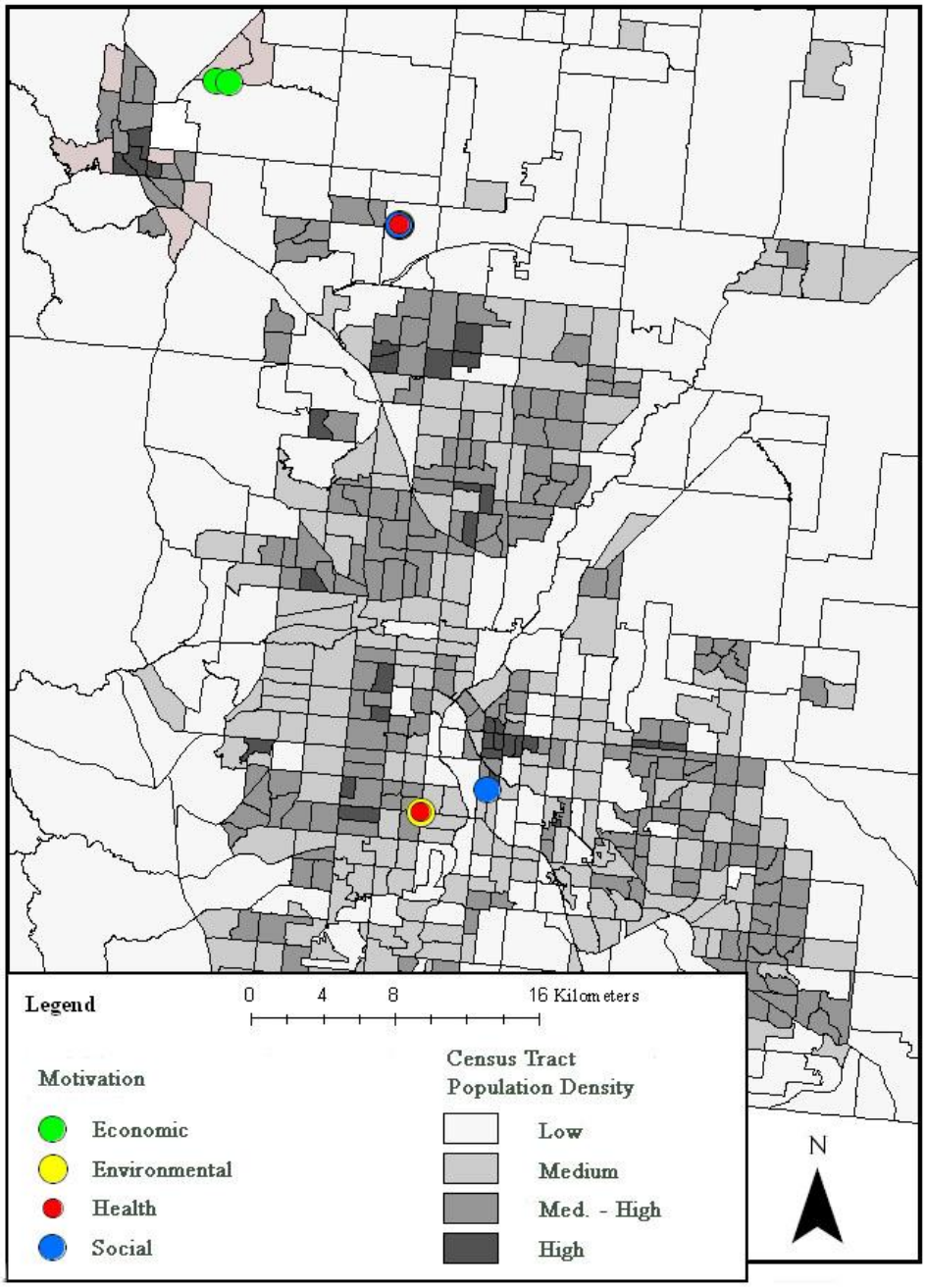

Figure 7. Denver, CO CSA Producer Survey Response Points and Motivation by Population Density

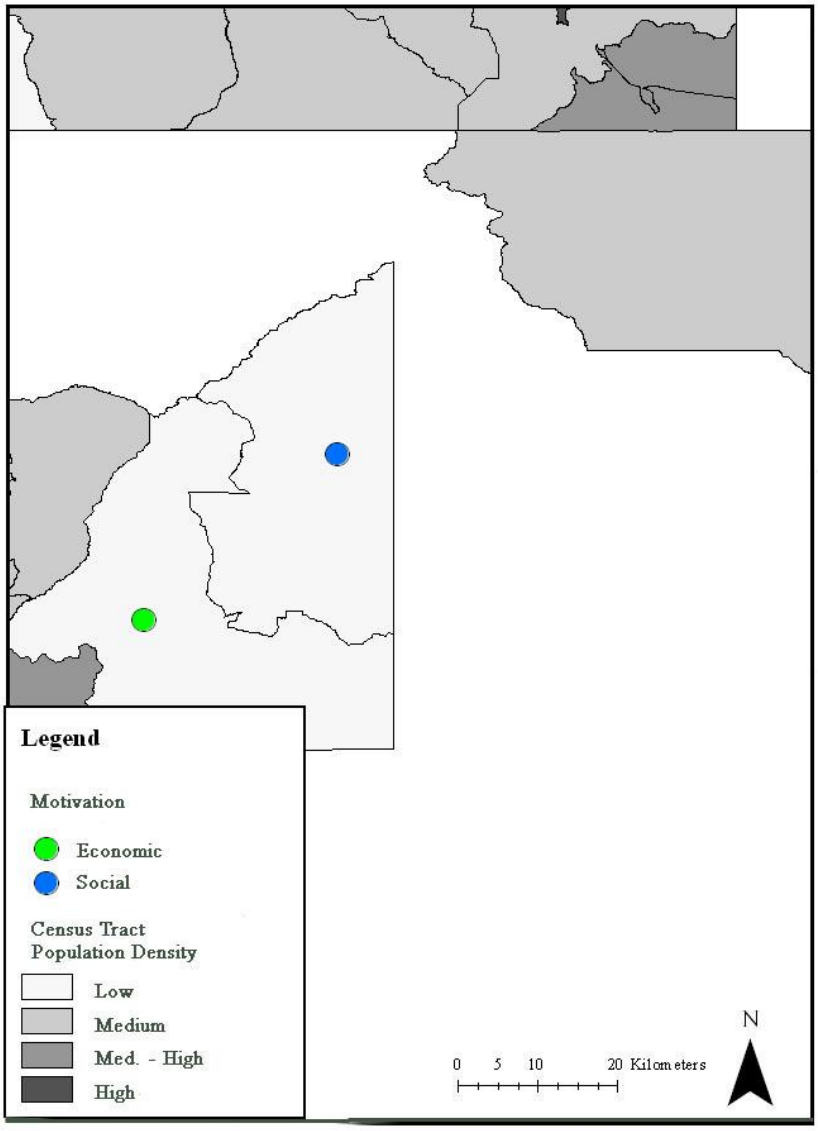

Figure 8. Aspen, CO CSA Producer Survey Response Points and Motivation by Population Density

Table 19. Alternate Consumer Motivations

Alternative Motivation	Education	Support of Local Farmer	Fresh quality and exposure to new varieties of produce
Frequency	9	34	30

QUALITATIVE DATA

CSA PRODUCER INTERVIEWS

The qualitative data consist of five producer interviews and the field notes from 36 hours of participatory research collected on one particular CSA farm. The producer interviews come from a convenience sample of CSA producers that opted to participate alongside the distribution of surveys to their consumer base. The interviewee base includes two men and three women who range from 32 to 66 years old. The majority of the interviewees work a full-time job outside of the CSA food production business they operate, with only one producer using their CSA solely for full-time employment. The producer solely employed by their CSA and other local-scale agricultural practices elected economic reasons for their participation. This producer uses the CSA membership base as one of many different venues to distribute their produce within the state of Colorado. Other factors that positively contribute to this producer's ability to sustain a living off their production is the historical nature of their production. This producer works from land historically owned by many previous family generations and grew up in the agricultural industry.

The additional jobs and businesses held by four of the five interviewed producers underwrite and in some cases fully financially support their CSA production. This particular group of producers holds employment as a certified public accountant, journalist, technology consultant, and nonprofit community outreach director. Three producers are completely self-employed and run their businesses out of their homes, allowing them to plan their CSA work and outside employment schedules around one another. All of the producers that work additional employment outside of the CSA

production chose social reasons as their primary motivation for participation. Two producers stated that they expected their CSA production to pay for itself in the following season and all claimed their alternative employment was their least preferred work, saying they would rather be full-time farmers. All interviewed producers used production and distribution models that were individualized and unique to the physical and societal landscapes they operate within, with the intention of accessing their consumer bases in the most efficient manner possible.

A unique CSA model followed by one of the interviewed CSA producers uses the front and back yards of Denver residents to grow produce. In an agreement with the homeowner, this CSA operates by converting grass lawns into full-scale gardens. The CSA incurs the costs associated with irrigation infrastructure, produce materials, and labor, while the homeowners pay the water bill and a reduced CSA membership fee. This particular CSA has no land use overhead costs and bypasses long distance distribution costs through production in the same location as its members. The producer clarified,

> "With the use of homeowner yards, I have access to more open space for production than I have the staff capacity to farm in the city itself. And when it comes time to deliver the shares, I can use a trailer on my bike to bring them to the distribution points."

According to the producer, this process of yard conversion is popular with homeowners as it saves them money. The replacement of the grass lawn with the garden the majority of the time saves the homeowner in water utility costs, as the gardens require less water inputs to maintain. An additional money and time saving benefit of on-site production and distribution is the word of mouth marketing that takes place as neighbors communicate to one another.

> "The use of this space as a location means that I have direct marketing opportunities beyond the farmer's market. A person working in a garden in a front yard means that people passing on the sidewalk stop and ask what is going on."

The producer of this CSA felt that homeowners involved with the conversion of their yards into community food production spaces were motivated to participate for primarily economic reasons as they saved money on utilities while receiving food in exchange and at reduced prices. This research shows through the consumer survey however, that most of these consumers elected environmental reasons as their overriding motivation for participation. As homes in this area place residents within the higher socioeconomic range, it is quite possible that CSA members in this area care more about reducing the effects of their impacts on the environment than on the savings to their monthly bills.

The one producer fully employed by their food production business uses the CSA distribution model as one element of multiple product distribution outlets. This particular individual specializes in varieties of fruit and contends that product specialization is essential to being financially stable as a producer. This specialization does not mean they lack in variety. This producer provides the CSA members a fruit specific produce share that contains up to ten different varieties of fruit from cherries, to apples, to apricots, to pears. Specialization provides this CSA with a marketing advantage. This producer described the situation,

> "We offer a type of food product that most small-scale farmers do not have either the knowledge or experience to produce in scales large enough to sustain a CSA membership. Our CSA members have first selection of what we have to offer when they come to the farmer's market to collect their shares. Non-CSA members will see what we have set aside and automatically they are interested in the pile of fresh peaches that are so special and tasty they have to be on a waiting list for. Its good marketing."

Word of mouth from CSA consumer to farmer's market consumers increases demand for this CSA's specialty products over the course of the season.

In the comments section of the consumer survey, consumers enumerated the multiple reasons they participated with this particular CSA. Several pointed out the rarity of attaining this type of locally grown produce, citing the enhanced taste, quality and freshness because of its origination from a local source. One customer said,

> "Part of my interest in joining a CSA was to eat what is in season locally. The quality and freshness of the fruit and produce fresh picked from the farm is far superior to industrial farm shipped produce. I like having a connection with the farmer - through his newsletter - He tells us about each crop and how it's been affected by frost or drought. I've come to really appreciate that perfect cherry or plum as I realize how at the mercy of nature each crop and the farmer - and all of us really are!"

This fruit CSA producer believes that his consumers participate due to the unique freshness and quality of the produce, while acknowledging that his consumers all seem to enjoy having a personal relationship with him, his family, and his farm staff. Another customer comment reinforces this belief,

> "Of course it's wonderful to see the farmer at the market each week when I pick up my share. He's a good guy with many great qualities and I love to see how much people want to talk to him and tell him how delicious his fruit is."

The producer of this CSA believes that the main motivations for participation held by its consumers are health and social as this CSA delivers a product uncommon among different CSAs generally and delivers its products at the farmer's market. The farmer's market delivery means the producer and consumers interact on a weekly basis and form interpersonal relationships among one another.

All of the producers interviewed claim to work within the CSA model of food production and distribution because of a passion for local food production and organic

farming methods. Every interviewee, with the exception of the nonprofit, expressed the opinion that the CSA model provided the greatest fiscal security for their production season due to the initial investment of money at the start of the season given by CSA members. One producer explained the financial power of their CSA like this,

> "We give everything to our CSA members, if all we have left is enough to supply their shares, then we give it to them. They supply us with the insurance every season to stay in production. We use farmers markets but CSAs mean we already have sold produce and that means money in our pockets."

Several agreed with this opinion and extended it with the statement that the CSA model alongside the farmer's market distribution model creates a diversity of income sources. This diversity ensures that there is still a source of income even if one outlet should fail to meet the producer's fiscal needs and is therefore a more financially stable, secure situation. Another similarity between these CSAs is the waiting list of consumers each season. A CSA decides the size of its consumer membership, or the number of food shares available each season, based on factors such as the amount of acres and variety planted. In other words, the number of food shares is based on the calculated and predicted crop output every season. These estimates are general guesses of produce quantity and often producers said they have excess during harvest season. One producer built in a second smaller CSA membership based on the most productive parts of the growing season. During the peak of the harvest season, they offer a short ten-week CSA membership that they use to sell whatever excess produce they have that season. This CSA benefits from strong communication ties to its constituency due to the educational background of its producer. This producer is fully self-employed as a journalist and utilizes an online website, social media outlets, as well as an email newsletter to market and advertise their CSA shares. This producer claims,

> "Our business has surpassed word-to-mouth marketing and moved on to direct online marketing. Our CSA members pass on our newsletter advertising an excess of zucchini or some such crop for example, through email to their friends. We then receive a flood of email requests for whatever it is that we have an excess of."

This producer's background in public communication and passion for local agriculture has assisted the rapid growth of this CSA. Each season this particular CSA leases additional average for production and adds another several dozen members to their consumer base.

NON-PROFIT CSA QUALITATIVE DATA

The individual involved in the nonprofit CSA is salaried on behalf of grant money, generated to support the nonprofit CSA food production model and mission. This particular interviewee works both on the manual labor and production decision making side of the CSA model as well as the community outreach and coordination of events. The mission of the nonprofit influences the consumer demographics targeted for CSA membership. Typically, nonprofits focus on lower socioeconomic groups who receive economic incentives for membership, which can heavily influence their main motivation for participation. To encourage membership from this demographic, this particular nonprofit visits federally supported food stamp program clinics once a week. At these locations, this nonprofit educates potential members about the many avenues of acquiring food assistance through the CSA. No individuals in need of food assistance are turned down and members are given multiple different avenues for acquiring food. One of these avenues includes the once a week farm stand that is open at the entrance of the farm itself. This farm stand is open at hours that accommodate normal weekday work hours and is open on Friday evenings, which is a different timeframe than the area's farmers

markets. At the farm stand, members may pay the asking price or donate whatever amount they can afford in exchange for produce goods. This includes the acceptance of electronic food stamps, which trade directly for food the same as if at a large-scale, corporate grocery store.

To enforce the educational aspect of their mission, the CSA requires its members to collect their food shares from the farm itself and does not provide any pick up points or home delivery. The nonprofit requires each of its members, at all socioeconomic levels, to meet the minimum volunteer contribution as a part of the cost of their membership. This means consumers witness the processes involved in the production of the food they receive and alleviates the nonprofit from consumer misgivings about produce supply, quantity, and availability. This nonprofit producer explained that:

> "Having the requirement for our members to come to the farm to collect their food means that we don't get asked, "Where are my tomatoes in June?" because they know what the situation is on the farm itself. We don't want people to have that disconnect. "

This educational focus is unique as other for-profit CSA models spend comparatively less time educating their consumer bases about their food production and benefits. The nonprofit status for this CSA means that extra funding and time spent on activities other than direct food production labor. This producer said,

> "We are very lucky because we are a nonprofit organization so we have the capacity to have staff and time to devote to finding funding to do other activities."

The nonprofit takes advantages of educational opportunities other than food pick-up and volunteer work at the farm. During the growing season, members can elect to participate in a large number of food related events held at the farm itself. These events include fairs, potlucks, and summer movie nights where members may bring a dish to share with others

in the member community. Several times during the growing season, the nonprofit will focus on a specific type of produce, such as herbs, and have a fair around the uses of this product including culinary, medicinal, and home cleaning with demonstrations and vendors. These fairs are opportunities for members to bring a potluck dish and interact with one another, thus encouraging community. Overall, the nonprofit CSA felt like its members participated for the economic incentives as well as the popular trendiness of local food among Denver's residents.

PRODUCER SATISFACTION

Lastly, all five CSA producers interviewed derive a degree of satisfaction from their own personal involvement with the CSA model. Each interviewee expressed being happy with their work even when it meant working full-time hours in addition to working full-time at their main employment. Although the producer survey showed the social theme to be the most common main motivation, the producer interviews reveal a blending of motivations. One producer expressed this by explaining their financial position,

> "We do not make an income from our CSA business, but we bring our community together. The farm-to-table dinners, ladybug delivery day, the pumpkin patch-everything, even the weeding, and the daily fight to keep the cows out of the garden, make us happy. We fill our freezer for the winter and make new friends."

Another described their passion for sharing gardening,

> "Living in the Rocky Mountains means high altitude gardening and all that comes with it. I like sharing and experimenting with the folks who eat food from this farm. It gives me a great level of satisfaction."

Rather than point to one particular motivation, the research showed that producers claim a multiplicity of motivations. Lastly, each producer expressed that economic diversification is critical to financial success as their CSA supported community or social cohesiveness while engendering a passion for protecting the environment in organic

farming methods even as they provide their community and families with food that is healthy.

PARTICIPATORY FIELD RESEARCH

The 36 hours of participatory field observation conducted by the researcher was on a farm whose distribution models included farmer's markets, wholesale to restaurants, and CSA memberships. The two acre vegetable garden provides 63 full sized CSA shares weekly, with 7 – 15 different varieties of produce weighing at least 10 to 15 pounds. Each share, collected at the farm by the CSA members themselves on a regular pick up date every week, allowed both producers and consumers to interact with one another on a regular basis. The food production takes the time and labor of four part-time staff and a large number of volunteers whose participation is coordinated by one of the farm producers. The farm producers are a husband and wife team that run their business on leased land and have been in this particular location for six growing seasons. The researcher worked weekly for 10 weeks for at least 3.5 hours a day on a variety of activities. These activities include weeding, thinning, replanting, harvesting, washing, and prepping produce for distribution, and direct handing out of CSA food share boxes to consumers. This direct and consistent contact with CSA producers and consumers allowed opportunities to investigate and observe their motivations for CSA participation directly.

Several employees maintain they work in CSA food production because of distaste for large-scale industrial agricultural farming methods. Employees view these methods are as unhealthy for both the ecosystem and for human consumption. They work

at the farm to support alternative and organic means of food production. One employee said,

> "I hate going to the grocery store and will not go unless I absolutely have to. The produce there is bland, filled with pesticides, and tastes terrible. Large-scale, corporate agriculture is killing our knowledge of how food should taste and sustain our bodies. Working here [farm] helps me get to know my community, support organics, and puts good food into my life."

One volunteer who regularly came with her daughter spoke about her excitement in showing her daughter where food comes from and how to produce it. Their commitment to volunteering meant a reduction of their CSA membership cost and first claims on any extra produce from the weekly harvest, which their often was. Other volunteers were food conscious, retirement aged individuals who enjoyed the opportunity to get outside. One man said,

> "This is my excuse to get out of the house and work towards the food that directly benefits my life. I want to know where my food comes from. I like seeing the kids play with the chickens and pick green beans. It reminds me of when I was a kid when this [farming] was a more common practice for folks to do."

Of the number of labor hours put into food production, the majority of the work on this farm came from within the large group of volunteers, who commitment paid off in a multitude of ways. A bumper crop of zucchini or excessive flowers left over from the farmer's market, meant that volunteer who typically rode a bike to and from the farm would take the plenty home with them.

Finally, the participant observation led to opportunities to question the motives of the producers themselves. As both individuals held jobs in the off-season months, the CSA and other distribution methods of selling their produce are how they provide food for their family year round. Both producers maintain that the ability to assist in

connecting their community to a local food source is their priority reason for participating in the CSA model. Every Friday afternoon and Saturday morning, both producers make a point to be present at the farm stand as members come to collect their shares. This brings many individuals together on a first name basis and the researcher witnessed how the opportunity to network into other community projects occurred frequently. What is more, direct contact with their market base led the producers to adjust shares on a weekly basis as their consumers requested changes. This ability to adapt rapidly is a major benefit to the producers of this CSA farm. It is the social and economic aspects that reside on the forefront of these producers reasons for CSA participation, but it is the underlying process of organic farming methods, or commitment to environmental integrity, that connects everyone involved to healthy foods.

IX. CONCLUSION

The purpose of this research was to determine the motivations for CSA participation among consumers and producers and to assess the degree to which these motivations varied spatially. This research established that the four themes of environmental, health, social, and economic motivation each influence the CSA participant's reasons for participation. The research questions sought to examine any differences in these agency-oriented motivations of CSA producers and consumers in relation to low, medium, medium-high, and high population density areas. Specifically, the research looked for any spatial patterns in CSA participant's primary motivation for participation and found that with the given data sample size; no clear patterns appeared other than their presence at the fringe of the most densely populated areas. Rejecting the hypothesis that most participants live in high population density, survey respondents reside primarily in the peri-urban environment in less densely population areas and closer to the CSA farm locations themselves.

The hypothesis that consumers will participate in their CSA for primarily environmental motivations with health as the secondary motivation is accepted by evidence in this research. The evidence provided by the consumer survey ranking question, the open commentary questions, and participant observations clarifies however, that motivation for CSA participation derives from a range of themes. CSA producers ranked social reasons as the most common motivation for participation with economic

reasons a close second. This rejects the original hypothesis that economic reasons would be the primary motivation. Similar to CSA consumers, producer's motivations for CSA participation when considering the breadth of the data intermingle across the four identified themes of motivation. This research also illuminates agency-oriented motivations beyond the four previously discussed in the literature. Especially the desire to participate in the economic support of local farmers, the desire for exposure to new varieties of fresh, high quality produce and the education of self and family members are other common motivations. The mixed methods approach to this research presents a more holistic perspective on CSA participant's motivations for participation and supports these conclusions through survey data, interviews, and participatory observation.

Several connections between the quantitative and qualitative data are possible. The producers of the CSA farm observed by the researcher said social rather than economic reasons were their primary motivation for participation. This statement supports the survey data collected from other CSA producers in the study who ranked social reasons as slightly more important than economic reasons. Repeatedly these producers stated their interest is to expose their members to local agricultural practices and produce while connecting those members to one another. One producer said,

> "By working with our CSA members we get to know more people where we live and feel good knowing that they are eating well while supporting their environment. It feels good to know that our members get to know each other too and help each other out at different activities other than here on the farm."

Consumers connect to one another through distribution points and in the various phases of production through volunteer work, activities, and events. The literature discusses how consumer participation can positively affect CSA consumer retention and satisfaction

(Lang 2005). The majority of consumers either participates, or would like to if they have time, in the production and/or distribution of food at their CSA. Most of the consumer survey respondents are in their first season as a member. The presumption is that the greater part of those first year members that elect to participate will remain involved with their CSA in the growing seasons to come because of community connections forged through local agriculture activity.

In conclusion, the purpose of the research is to discover the degree to which both consumers and producers participating in Denver, Colorado's CSAs exhibit distinct motivations, the degree to which those motivations coincide between the two groups, and any geographical spatial patterns of these motivations related to population density. The study areas of Denver and Aspen, Colorado describe phenomenon that corresponds to the literature as well as reveals new areas of motivation for why participants involve themselves with CSAs. Generally, the CSA producers in this study earn less income than their consumers earn and are higher educated alongside their mostly higher educated, wealthy and white, female consumer counterparts. The majority of producers and consumers participate for a variety of motivational reasons, but tend to support primarily environmental motivations as consumers and social or community-based motivations as producers. The qualitative interviews suggest that consumers tend to participate to contradict those global forces that create environmental degradation and to fiscally sponsor a local-scale economic service. Producer interviews evoke the conclusion that CSA participation is a part of a foundational value system for them: a means by which to bring their community members together for a similar purpose.

FUTURE RESEARCH

Ideally, an increase in the number of observations from both consumers and producers would further enable the use of a predictive statistical analysis. The availability of an online survey in addition to a hardcopy delivered inside the CSA food share boxes could potentially attract a higher survey response rate. Conclusions within this research point to the need for future research to focus more intently on local, small-scale agriculture that access and provide services to lower socioeconomic and minority groups. Lastly, the survey given to both consumers and producers included a series of 5-option Likert-scale questions along with a singular ranking question. The Likert questions sought to compliment the ranking question as another method of verifying the data. After examination, these Likert questions turned out to be redundant and not utilized in the motivation analysis.

The largest amount of evidence for producer motivation came from the qualitative interviews, which proved to be more fruitful than attempts to quantify their motivations in the survey. The qualitative interviews illuminated a variety of issues unique to the producers themselves. The producer interviews gave evidence that most spend a great deal of time working at alternate forms of employment in addition to their CSA employment. Since four out of the five producers interviewed work full-time at jobs other than the CSA, there is evidence that this is potentially not exclusive to this region. In the long-term, this presents a fiscally unsustainable situation. When the CSA producer must underwrite partially or fully their CSA production with outside employment, the additional and consistent long hours of work spent on agricultural production could prove too burdensome to maintain. This suggests the temporal probability that this situation will

not continue into the future should this type of local-scale agriculture remain unprofitable as an independent enterprise. Future research studies might explore this economic juxtaposition in detail.

CSAs use a variety of different contractual relationships in order to exchange food for labor, money, and other goods and services. The adaptability and flexibility inherent within the CSA model allows producers and consumers to design specific production and distribution flows that work for them. Producers and consumers create, sometimes even at the individual consumer level, the type of financial, labor, and trade relationships that best meet their needs. This generates an assortment of production and distribution models unique to the space and place that each CSA farm resides in. The urban and peri-urban environments can be challenging spaces to engage in local, small-scale agricultural activities due to regulatory constraints, both politically and socially. This research reveals how producers and consumers in one region take advantage of the inherent flexibility of the ever- changing urban space. Future research could concentrate on these variations of business design in both urban and peri-urban spaces.

X. APPENDIX A: CSA CONSUMER SURVEY

Community Supported Agriculture (CSA) Survey

All information provided in this survey is anonymous and confidential.

Please mark the choice that best reflects your experiences or opinions.

---

1. How many years have you been a CSA member?

☐Less than 1 ☐1 ☐2 ☐3 ☐ 4 ☐5 +

2. I participate in the production and/or distribution of my CSA's products.

☐Often ☐Occasionally ☐Never ☐Never, but I would if I had more time.

3. Social concerns are an important part of why I participate in my CSA.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

4. Participation in my CSA plays an important role in improving my community.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

5. Cost-savings are an important part of why I participate in my CSA.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

6. Participation in my CSA has helped me to reduce my food costs.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

7. Environmental concerns are an important part of why I participate in my CSA.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

8. Participation in my CSA plays an important role in improving and/or protecting the environment.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

9. Health concerns are an important part of why I participate in my CSA.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

10. My health has improved as a result of participation in my CSA.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

11. People participate in CSAs for many reasons. Please rank the following reasons (1-4) for participating in your CSA, with 1 being the *most* important to you and 4 being the *least* important among these choices.

Social Reasons_____ Economic Reasons_____
Environmental Reasons_____ Health Reasons_____

12. Are there other reasons you chose to participate in a CSA? _____
_____
_____

13. Please provide a street intersection nearest to your residence (do not give your exact street address):
_____
_____and _____

14. Home zip code:_____

Your information: 15. ☐Male ☐Female

16. ☐Married/Domestic Partner ☐Not Married 17. Age:_____

18. Employment:

☐Full time outside the home ☐Part time outside the home ☐Homemaker

☐Full-time home-based business ☐Part-time home-based business ☐Not Currently Employed

19. Your highest level of education?

☐High School ☐Trade School ☐2-Year Assoc. ☐4-Year Bachelors

☐Graduate ☐Law/Medical School

20. Which income bracket best reflects your household?

☐Under $15,000 ☐$15,000 to $24,999 ☐$35,000 to $49,999

☐$50,000 to $74,999 ☐$75,000 to $99,999 ☐$100,000 and over

21. Which of the following best reflects your race/ethnicity?

☐White ☐Hispanic or Latino ☐American Indian or Alaska Native

☐African American ☐Asian ☐Native Hawaiian or Pacific Islander ☐Other:__

_____

If you have time, please provide additional comments on the back regarding your decision to participate in your CSA.

Thank you for taking the time to complete this survey.

Additional Comments

If you have questions or concerns, please contact us at: urbanagresearch@gmail.com

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APPENDIX B: CSA PRODUCER SURVEY

Community Supported Agriculture (CSA) Survey

All information provided in this survey is anonymous and confidential.

Please mark the choice that best reflects your experiences or opinions.

---

1. How many years have you been a producer for CSAs?

☐Less than 1 ☐1 ☐2 ☐3 ☐ 4 ☐5 +

2. My customers participate in the production and/or distribution of my CSA products.

☐Often ☐Occasionally ☐Never ☐Never, but I would if I had more time.

3. Social concerns are an important part of why I participate in my CSA.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

4. Participation in my CSA plays an important role in improving my community.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

5. Increased profitability is an important part of why I participate in my CSA.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

6. Participation in my CSA has helped me to increase my profitability.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

7. Environmental concerns are an important part of why I participate in my CSA.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

8. Participation in my CSA plays an important role in improving and/or protecting the environment.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

9. Improving my customers' health is an important part of why I participate in my CSA.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

10. To my knowledge, my customers' health has improved as a result of purchasing my CSA products.

☐Strongly Agree ☐Agree ☐Neutral ☐Disagree ☐Strongly Disagree

11. Farm product producers participate in CSAs for many reasons. Please rank the following reasons (1-4) for participating in your CSA, with 1 being the *most* important to you and 4 being the *least* important among these choices.

Social Reasons_____ Economic Reasons_____
Environmental Reasons_____ Health Reasons _____

12. Are there other reasons you chose to participate in a CSA? _____

_____

_____

13. Please provide a street intersection nearest to your farm or production facility (do not give your exact street address):_____ and _____

14. Farm zip code:_____

15. Do you have more than one farm or production facility? ☐No ☐Yes: I have _____

16. Do you have agreements with other producers in order to fulfill CSA orders?

☐No ☐Yes > How many? _____

Your Information: **17. ☐Male ☐Female**

18. ☐Married/Domestic Partner ☐Not Married 19. Age:_____

20. I am employed as a CSA producer:

☐Full-time year around ☐Part-time year around* ☐Full-time seasonally ☐Part-time seasonally*

* My other employment is:_____

21. Your highest level of education?

☐High School ☐Trade School ☐2-Year Assoc. ☐4-Year Bachelors

☐Graduate ☐Law/Medical School

22. Which income bracket best reflects your household?

☐Under $15,000 ☐$15,000 to $24,999 ☐$35,000 to $49,999

☐$50,000 to $74,999 ☐$75,000 to $99,999 ☐$100,000 and over

23. Which of the following best reflects your race/ethnicity?

☐White ☐Hispanic or Latino ☐American Indian or Alaska Native

☐African American ☐Asian ☐Native Hawaiian or Pacific Islander

☐Other:_____

If you have time, please provide additional comments on the back regarding your decision to participate in your CSA.

Thank you for taking the time to complete this survey.

Additional Comments

If you have questions or concerns, please contact us at: urbanagresearch@gmail.com

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APPENDIX C: CSA PRODUCER SEMI-STRUCTURED INTERVIEW PROMPTS

1. Why do you participate in a CSA?

2. Why do you think producers / consumers people participate in CSAs?

3. Are you going to continue to use the CSA model to sell your produce, why or why not?

4. In what ways do you retain current members and recruit new members?

5. What would you tell another producer / consumer who is considering participating in a CSA?

APPENDIX D: INSTITUTIONAL REVIEW BOARD EXEMPTION NUMBER

Based on the information in IRB Exemption Request **EXP2011P6528,** which was submitted on 04/23/ at 16:37:27, this project is exempt from full or expedited review by the Texas State Institutional Review Board.

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