

Growing CSA Farms:
A Geographic Analysis of Community Supported Agriculture
in Madison, WI

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Introduction

Since the concept of Community Supported Agriculture (CSA) was introduced to the United States in 1984, Wisconsin has provided fertile ground for CSA expansion (Adam 2006). Within Wisconsin, the city of Madison has a particularly well-established network of CSA farms. Thirty-six states in the U.S. have fewer CSA farms serving the entire state than Madison has serving the city alone (Adam 2006: table 1). However, the CSA movement is young and relatively small throughout most of the country. Through our research, we identify the characteristics of both the CSA network and the population of Madison that enable the city to sustain such a large CSA system. The identification and analysis of these attributes may offer implications for efforts to expand CSA in Madison or elsewhere.

CSA is an integral component of the local food movement as it involves direct exchanges between consumers and producers through membership agreements. The consumer shares the risk of the farming operation with producers by paying an upfront fee to receive weekly shares of the harvest while providing the farmer means to cover production costs. Consumers also benefit by receiving fresh, nutritious, and organic food at a lower cost than a comparable product at retail prices. Thus, the CSA system addresses issues of food quality and environmental sustainability, which are becoming increasingly important in today's world (Larsen and Gilliland 2009: 1158).

Beyond its economic implications, Community Supported Agriculture is also a social arrangement which connects consumers to producers as well as the food system in general. Thus, CSA has many benefits that are hard to measure, including its ability to build connections between people, their food, and the environment and strengthen the community uniting these entities (Adam 2006: 2; Sharp et al. 2002).

Literature Review

Producer Characteristics

The studied trends of CSA farms present some identifying characteristics of CSA growers. Studies show that generally, CSA farmers are highly educated. A national study of 354 farms found that 75 percent of CSA operators hold a college or graduate degree (Lass et al. 2001: 16). Tegtmeier and Duffy (2005: 4) also find that most CSA farmers are college graduates, however, very few of these degrees are in agricultural-related fields (Worden 2004: 325).

Studies show that in addition to being highly educated, CSA farmers are predominantly white and are younger, with fewer years of experience in agriculture than the average U.S. farmer. Almost all CSA farmers identified themselves as white/non-Hispanic in several large-scale surveys (Lass et al. 2001: 15; CIAS 2004: 1). Two studies surveying fifty-five and 354 CSA farms indicated that the average CSA farmer is about ten years younger than the average farmer recognized by the U.S. census (Lass et al. 2001: 13; Tegtmeier and Duffy 2005: 4). The average CSA farmer has around five years of experience within the CSA system (Lass et al. 2001: 13). However, studies also show that CSA farmers have between thirteen and fourteen years of farming experience on average, indicating that although they may have fewer years of experience than the average farmer, they often have a background in agriculture preceding their involvement in CSA (Lass et al. 2001: 13; Tegtmeier and Duffy 2005: 13).

Producer Motivations

Growers identify with various social, economic, and environmental benefits of Community Supported Agriculture as motivations to adopt the CSA model. CSA is an economic

arrangement, which is often a significant source of livelihood for the grower. A considerable number of growers become involved in CSA in addition to their previous marketing techniques because it provides an opportunity to reach a larger market and thus produce more revenue (Sharp et al. 2002). Sharp et al. (2002) also note that CSA provides an opportunity to intensify on-farm production because of the potential for a larger market. However, agricultural intensification is only compatible with CSA to a point, as it could compromise fundamental CSA values relating to environmental sustainability and social connections.

The potential of CSA as a marketing tool is demonstrated by the growth in markets and CSA membership found in a national study by Tegtmeier and Duffy (2005). Although there were differences in time between farm establishment and study, farms averaged a 350 percent increase in CSA membership since their first year (2005: 2). In addition, one-third of the studied farms reported to be at membership capacity (Tegtmeier and Duffy 2005: 10).

Apart from the potential to reach a larger market, CSA provides a guaranteed market that attracts some growers to this model (Worden 2004: 323). Because producers sell shares at the beginning of the season, they have a market secured before harvest. The consumers' agreement to pay upfront acts as a form of insurance against uncontrollable disturbances such as weather-related issues that may result in crop failure. Adam (2006: 2) describes this arrangement as a primary advantage for farmers.

Producers see the CSA marketing option as more than an economic goal; it is used as a means to achieve a greater purpose (Worden 2004: 323-333). These growers aspire to create an alternative food economy that involves direct, educated interactions between the producer and the consumer (Worden 2004: 323). This objective reflects producers' frequently reported goals of building community and fostering connections between consumers and their food, as well as

educating the public on the importance of understanding where their food comes from and how it is grown (Gibson 1993; Sharp et al. 2002; Worden 2004: 323).

CSA producers also cite concerns about the environment as a motivation for CSA involvement (Worden 2004: 323). Agricultural practices within this system are consistent with environmentally sustainable practices on a number of different levels. CSA farms tend to use significantly less land than the average farm in the U.S., with 72 percent of CSA farms operating within the categories of *less than ten acres* and *ten to twenty-nine acres* compared to only 30 percent of all U.S. farms that fit these categories (Lass et al. 2001: 6). The survey of CSA farms conducted by Lass et al. (2001: 10) as well as the study by Tegtmeier and Duffy (2005: 10) found that between 96 and 98 percent of CSA farmers practice some form of organic or biodynamic farming, indicating that environmental values are nearly ubiquitous in CSA.

However, the conclusion reached by Worden (2004: 323) that environmental concerns are a motivation for producers to adopt the CSA model may be somewhat misleading. While sustainable production is embedded in the concept, CSA is primarily a social and economic model. Worden (2004: 324) notes that many of these growers operated diversified organic vegetable farms before adopting the CSA model, verifying that environmental concerns are likely to motivate people to become involved in alternative farming methods in general rather than CSA in particular.

Producer Concerns

Existing literature reveals several common concerns shared by CSA growers throughout the nation. One of the predominant concerns among producers is their initial unfamiliarity with the CSA model (Sharp et al. 2002). Many of the farmers surveyed were uneasy about selling

their produce before the harvest with the concern of disappointing their members (Cohn 1993: 20; Sharp et al. 2002). Sharp et al. (2002) found that some farms assuage this concern by employing the cooperative CSA model, where a sole producer is not responsible for providing the entire share.

Growers also related concerns regarding their workload and economic viability of CSA farms. In a Midwest study characterizing CSA farmers and consumers, grower concerns included feeling overworked with farm production and CSA management and their need to rely heavily on volunteers and underpaid interns (Tegtmeier and Duffy 2005: 6). Lass et al. (2001: 11) confirm this tendency, reporting that less than 50 percent of CSA workers receive a set monetary wage.

Some farmers are concerned that their personal wage through the CSA economic outlet is not sufficient (Tegtmeier and Duffy 2005: 6). Less than 50 percent of respondents of a national survey indicated that they are satisfied with their ability to cover operating costs or provide themselves with adequate compensation (Lass et al. 2001: 22). However, this finding likely pertains to the profession of farming in general, as independent farmers are usually compensated through their net income rather than set wages. Lass et al. (2001: 22) found that implementing CSA operations on farms significantly improves both farmers' ability to meet operating costs and increase compensation (according to farmers' testimony). This finding indicates that financial concerns likely reflect concerns shared by agriculturalists in general rather than CSA producers specifically. Additionally, these studies focus specifically on CSA operations and do not consider income from other economic outlets, which studies show CSA farmers use in conjunction with CSA to market their products. Tegtmeier and Duffy (2005: 12) found that only 18 percent of 55 Midwest farms surveyed maintain CSA as their only economic outlet. Cone

and Myhre (2000: 4) and Lass et al. (2001: 9) found that all eight and 314 of their surveyed farms, respectively, used other economic outlets such as farmer's markets, grocery and natural food store sales, cooperatives, restaurants, and wholesale markets, to provide additional income.

Producer Resources

Farmers build their agricultural knowledge base using various resources. Worden (2004) reports that almost all CSA farmers involved in her study rated "other farmers" as their primary source of information. In addition, all respondents of an eight-farm survey indicated that friends or farm associates aided the start-up of their CSA operation (Cone 2000: 4). This reinforces the importance of building community and networks between farmers, as their cooperation seems to be a necessary condition for individual CSA growth.

Many CSA farmers lack the formal means of information exchange available through formal agricultural education and involvement with cooperative extension systems (Lass et al. 2001: 16; Worden 2004: 324-325). Worden identifies these components of information exchange as the "mainstays of traditional agriculture" (2004: 324).

Worden (2004: 324) also finds that cooperative extension systems through the USDA are an insignificant source of information for CSA farmers. These extensions, which aim to provide university research and resources to the community, are often the foundation of information transfer into mainstream agriculture (Worden 2004: 324). Although many farmers attempted to obtain information from the extension systems, they often found that their services were not useful because they focused on industrial-scale farms (2004: 324). This is particularly significant because Worden's study specifically targets large CSA farms (2004: 321). Thus, it can be

assumed that small or average sized CSA farms are not likely to receive a significant amount of information from the extensions either.

Consumer Characteristics

Characterizations of the typical CSA member provide insight to the structure of CSA systems and possible motivations for particular groups within the consumer base. Several studies find that income does not have a significant effect on CSA membership (Kolodinsky and Pelch 1997: 138; Zepeda and Li 2006: 9; Brehm and Eisenhauer 2008: 108). However, Lang cites Kolodinsky and Pelch (1997) to verify that the majority of CSA members are affluent. When examining the Kolodinsky and Pelch article, it becomes clear that Lang used their findings to support his hypothesis that wealthy members will be more satisfied with CSA memberships. Kolodinsky and Pelch (1997) found that income was positively correlated with CSA membership, but the effect was insignificant. Lang (2005) fails to mention the negligible effect and instead reports a positive correlation without explanation.

Like CSA producers, CSA members are often highly educated (Kolodinsky and Pelch 1997: 136; Sharp et al. 2002). This may be reflective of the association between higher levels of education and awareness of social and environmental issues (Kolodinsky and Pelch 1997: 138). As environmental ideals and farmer-consumer relationships frame the concept of CSA, educated members more aware or responsive to the CSA model.

The study by Kolodinsky and Pelch (1997: 139) also indicates that CSA members are less likely to have children. This finding is supported by Groh's point that CSA membership involves a significant time commitment, including on-farm involvement and food preparation and preservation (1997: 77). People with children may have less time to devote to these aspects of

membership, and thus may be less likely to join CSAs. In contrast, a study by Sharp et al. (2002) found that the majority of CSA members are families. However, this generalization is based on an intensive case study of only one CSA and thus may not be representative of the population.

Consumer Motivations

Although it is frequently hypothesized that consumers holding particular social and political values congruent with CSA values have an increased likelihood of becoming CSA members, Kolodinsky and Pelch (1997: 139) find that the presence of these values alone does not affect CSA membership. Zepeda and Li (2006: 3) expand on this idea with the construction of the Lancaster-Weinstein model of local food-buying behavior. This model, a hybrid of the Lancaster attribute model and the Weinstein stages model, suggests that the purchase of local food reflects stages of behavior: first, the consumer must perceive a need followed by a connection between this need and a specific action, after which they must develop an intention to act, and finally actually act upon the developed connection or preference. The emergent stages of consumption recognized in this model offer an explanation as to why attitudes or preferences do not necessarily result in immediate action. Thus, we observe that the motivations for becoming interested in the CSA system may not necessarily be the same set of motivations required for actually making the purchase of a CSA share.

Despite the discrepancy between motivations for attitudes and behaviors, many studies have assessed the motivation for consumer interest and involvement in CSA systems. The most frequent and least disputed motivation cited is a desire for fresh, quality produce, reflecting consumer concern with the quality of food and how it is produced (Cone 2000: 5; Sharp et al. 2002; Lang 2005: 65; Zepeda and Li 2006: 9; Brehm and Eisenhauer 2008: 102).

Correspondingly, enjoyment of cooking and gardening, which also reflect these values of quality and production, are also significant motivations to join a CSA (Zepeda and Li 2006: 5; Brehm and Eisenhauer 2008: 108).

Many members report that their desire to either find or build a sense of community motivates them to join or renew membership at a CSA farm (Lang 2005: 65; Russell and Zepeda 2007: 136). Russell and Zepeda (2007) examined the attitudinal and behavioral changes of CSA members at a specific farm in Madison, WI with regard to influence on membership renewal. This study finds that changes in attitude and behavior are a result of the structure of the CSA system, not the “social norms” of the community of members (Russell and Zepeda 2007: 136). Although members view community as an important motivation in membership renewal, in reality they have little to no interaction with other members, showing feelings of belonging to a “community of interest” rather than a community of relationships (Russell and Zepeda 2007: 137, 142). However, as this study examines membership *renewal* specifically, it is not clear if these findings on perceptions of community are applicable to the motivation for initial involvement. Additionally, due to the unique urban location of the farm used in the case study, it is doubtful that this study accurately represents the rest of the CSA farms in the area or, therefore, that the findings are applicable to the other farms.

Contrary to the findings of Lang (2005) and Russell and Zepeda (2007), Brehm and Eisenhauer (2008: 102) suggest that community involvement and the building of social networks are not very significant motivations for CSA involvement among consumers. The inconsistencies between different studies indicate potential geographic or social differences among the farms in review. For example, Lang studied five CSAs in the mid-Atlantic states, Russell and Zepeda studied one farm within the city limits of Madison, WI, and Brehm and

Eisenhauer studied six CSAs in Illinois and New Hampshire. The unique physical and cultural environments of these regions cannot be properly assessed or accounted for in these primarily quantitative studies. In this sense, geographical analysis is limited by quantitative spatial science (Rhoads 2005: 140). Geographic investigations relying primarily on quantifiable measures often constrain analysis by marginalizing cultural and regional factors, which may be particularly influential in local systems such as CSA.

In an eight-farm qualitative study, one of the top consumer motivations to join a CSA was “concern for a healthy environment” (Cone and Myhre 2000: 5). This study suggests that as industrial farming continues to dominate food systems, and environmental issues continue to be topics of societal concern, people will turn to food alternatives such as CSAs in consideration of the health of their bodies and the land. However, Zepeda and Li (2006: 5) report that attitudes regarding energy conservation, a proxy for environmental awareness, are not a significant motivation for buying local food. This contradiction could be a result of the difference in the parameters of the study: Cone and Myhre study CSA farms specifically, whereas Zepeda and Li study the concept of local food as a whole. This inconsistency is significant in that CSA is an economic market of local food movements, and therefore may merit more specific motivations than environmental concerns. On the other hand, one may expect to see these concerns interlinked with motivations to participate in the broader scale of the local food movement.

The economic benefit of purchasing local and organic food at lower prices than offered in grocery stores or farmer’s markets is an important motivation for consumer involvement in the CSA system. Tegtmeier and Duffy (2005: 4) find that most farmers consider what consumers are willing to pay when pricing their shares, as opposed to using regular market value. This is beneficial to members, as they often end up paying less for these products than at a grocery store,

yet growers still receive a higher wage without excessive external costs. Keeping the cost of shares low could be an important aspect of increasing membership in the CSA system because, as reported by Zepeda and Li (2006: 9), consumers who are concerned about the cost of food are significantly less likely to buy local foods.

Consumer Concerns

As the success of the CSA system is dependent on member satisfaction, it is important to consider member concerns and find sufficient solutions or justifications. Many consumers find that involvement in the CSA system requires lifestyle changes that can be difficult or unwanted (Tegtmeier and Duffy 2005: 6; Andreatta 2008: 124). Membership in the CSA system generally requires time spent storing and preparing food, and in some cases helping with farm operations. Although these are enjoyable aspects for some, they can be overwhelming to others. Member attrition is not uncommon when the consumer feels that he or she cannot fulfill the commitments entailed by their CSA membership (Tegtmeier and Duffy 2005: 6).

Another prevalent consumer concern is the quantity and type of produce that CSA members receive in their share (Groh et al. 1997: 74; Sharp et al. 2002). Some members feel that they receive more produce than they can use and feel guilty wasting the surplus. This concern is reflected in Lang's finding that half-share members are generally more satisfied with their CSA membership than full members, possibly because they feel they receive a more manageable amount of food (Lang 2005: 77). However, current literature does not examine whether the source of this problem is the amount of produce provided, or the lack of experience the consumer has with eating recommended amounts of produce.

A related concern of consumers is that they have little choice in the type of food that they receive and are thus forced to take food items that they would not normally choose to buy. One way to alleviate this concern is addressed in Lang's study (2005: 68), which included a farm that offers substitutions so that members can have some choice in what foods they receive. Gibson (1993) also notes that some CSA farms bring all of their produce to distribution sheds where members can select the items they want. While this method may elicit concerns of greed among members, these CSAs report that members are generally very considerate of others and actually take less than the amount of food they are allotted.

Consumers also report that CSA membership requires a significant time commitment for the preparation and preservation of food (Groh et al. 1997: 74). Some members feel bombarded with too much produce; they tire of processing and storing what they cannot eat and feel bad about it going to waste (Tegtmeier and Duffy 2005: 6). However, other members believe that CSA membership saves time because it effectively does shopping and meal planning for them (Cohn 1993: 21).

While these concerns have implications for the importance of consumer education and resources, mitigation strategies for other consumer concerns are more difficult to identify due to inherent conflicts with the CSA model. The CSA structure can be problematic for some consumers because of the requirement to pick up food at specific locations and specific times, which is difficult or impossible for people with limited access to transportation or people working several jobs or jobs with incompatible hours (Groh et al. 1997; Kolodinsky and Pelch 1997: 131; Andreatta 2008: 120). Further, Guthman (2008: 432) notes that distribution sites are typically situated in areas with a high population of white people with middle to high ranges of

income. This concern reflects the embedded issues of accessibility that may inhibit some members of society from becoming CSA members.

In this regard, the CSA system is often critiqued for being inherently elitist (Andreatta 2008: 126). The aforementioned accessibility conflicts inhibit equal access to this food system. The structure of the CSA system often excludes low-income and food-insecure people, arguably those who could benefit most from a weekly box of fresh produce (Andreatta 2008: 116).

However, the issue of transportation alone is likely to be variable between regions. While CSA involvement does often require members to pick up their shares at specific locations and during specific time periods, this may be less of an issue in areas where grocery stores are far away. Lang (2005: 74) alludes to this explanation in his examination of the relationship between consumer satisfaction and the distance that a consumer lives from the farm. He found that rural dwellers are less likely to live close to supermarkets and are thus less likely to be concerned with the proximity of their CSA farm. However, this could also be applicable to urban areas as the availability of fresh produce is becoming increasingly limited with the movement of supermarkets to the suburbs (Larsen and Gilliland 2009: 1158). Still, other issues that contribute to unequal CSA access are present across geographic regions. The risks of paying upfront, not knowing what food is going to be provided, and taking harvest risks with the farmer can often be overwhelming for people with a low income or those already facing food insecurity (Andreatta 2008: 126).

Other risk-associated consumer concerns are generated from farm operations, such as the possibility of low production seasons resulting in small shares or, contrarily, overwhelming production seasons in which members feel inundated with too much produce (Tegtmeier and Duffy 2005: 6). These concerns would be difficult to remove from the CSA system because

consumers are aware of the shared responsibility that they agree to in the beginning of the season with their upfront payment. This type of commitment requires consumers to value the quality of produce as well as other, less conventional aspects of their food such as the livelihood of farmers, appreciation of sustainable production techniques, and a sense of community. In order for consumers to accept the inherent risks in this operation, these factors must take precedence over price and quantity of produce.

Consumer Resources

The resources available to consumers are important as support systems for member involvement. Many CSA farms set up consumer-friendly websites, using email and discussion boards to maintain communication with the consumer base (Tegtmeier and Duffy 2005: 8). This keeps consumers connected to their farm as well as other members. In the CSA production system, it is important for farmers to provide an open atmosphere, and fully expose their farm operations to the consumer.

Some CSAs, specifically those operated by non-profit organizations, offer free or reduced-price shares, as well as work and training for the unemployed and transportation for disadvantaged inner-city residents (Adam 2006: 2). Outreach to lower income communities is an important resource for potential CSA members as healthy produce is often inaccessible to poor urban areas (Guthman 2008: 432; Larsen and Gilliland 2009: 1158).

Community

According to Adam (2006: 2), the original concept of Community Supported Agriculture was to maintain a sense of connection to the land for urban dwellers and to “foster community

and cooperation.” Sense of community is an important aspect of CSA to both farmers and members. Specifically, many consumers are drawn to CSA because of its perceived capacity to facilitate relationship building (Lang 2005: 65). Thus, the ability of CSA farms to foster community has implications for consumer satisfaction.

Lang’s study found that members are more likely to be satisfied with their membership if they participate in farm work (2005: 76). A probable explanation for this correlation is that members feel a greater sense of community and ownership in the farm when they are directly involved in its production process. The Cone and Myhre (2000: 12) assessment of member attitudes through interviews confirms this, as they found that members who participate more in their CSA farms’ operations experience feelings of connectedness to the land. Thus, encouraging farm participation may be an effective way to achieve goals outlined by both producers and consumers as well as to keep members satisfied and the farm economically viable.

Growers employ various strategies to encourage member involvement. CSA farms often designate farm visit or work days, or encourage members to volunteer whenever they can (Gibson 1993: 3; SARE 1997: 1-2; Lang 2005: 76). Farmers also use newsletters to communicate with members and enhance their experience of CSA. Newsletters serve multiple functions including sharing recipes, announcing which crops to expect in shares, and giving updates about the farms’ activities (Gibson 1993: 3; Groh 1997: 78; Adam 2006: 8-10).

The use of a core group of members to aid in decision making and planning can provide an insight into the concerns and preferences of members, as well as bring out a sense of shared responsibility and commitment to the farm. A national survey conducted by the Center for Integrated Agricultural Systems (2004) reported that farms with core groups have significantly

higher incomes and are more likely to offer programs for low-income families and organize social and educational events and than CSA farms without core groups.

Lass et al. (2001: 22) found that the majority of farmers feel that CSA operations significantly increase community involvement on their farm. However, some studies indicate that direct involvement with CSA farms is usually low among members (Cone and Myhre 2000: 7; Lang 2005: 74). There may be embedded structural issues barring some consumers from direct involvement. Findings regarding consumer concerns indicate that transportation or lack of time may be issues preventing some consumers from visiting farms (Groh 1997: 74; Kolodinsky and Pelch 1997: 131; Andreatta 2008: 120). It may also be that the specific CSAs involved in the studies where participation is low do not offer sufficient incentives for members to become involved with the farm. These findings are significant because farm visitation can facilitate community building between members and producers.

The Madison Area CSA Coalition (MACSAC) is a resource that helps build connections between producers and consumers. MACSAC hosts an annual open house, which offers children's activities, educational presentations, and opportunities to meet farmers (Ostrom 1997: 88-91). They also maintain a directory of farms that makes it easier for consumers to find and get in touch with growers (Ostrom 1997: 90). The concern among members over familiarity and quantity of food, discussed in a subsequent section, is addressed by MACSAC through the publication of a food book, which provides recipes and information on vegetables commonly grown by CSAs in the area. Because MACSAC addresses many of the challenges faced by producers and consumers, it may have significant implications for community building and CSA popularity. However, Ostrom's research was purely descriptive and more research needs to be performed to assess MACSAC's significance.

Study Methods

As there is much ambiguity regarding the terms associated with alternative agriculture systems, vocabulary is arguably one of the most important aspects of the study methods.

Russell and Zepeda (2007) note that the lack of a clear, universal definition of *local food* is an obstacle in the study of local-food demand. This obstacle is applicable to the definition of CSAs and aspects of their production (such as *organic* and *sustainable*). It is important to distinguish between concepts such as these in our own study to ensure that the CSA model is accurately represented.

Much of the existing research on Community Supported Agriculture is based on case studies of a small number of CSA farms (Kolodinsky and Pelch 1997; Sharp et al. 2002; Lang 2005; Russell and Zepeda 2007). Case studies allow in-depth examinations of groups with small populations (Yin 1984: 18). Because CSA growers as a group represent a small population, case studies seem appropriate for their study. However, case studies also tend to be descriptive and particular due to their inherent small sample sizes and intensive nature. Thus, it can be difficult to make general statements or characterize the larger population based on such a narrow investigation.

Kolodinsky and Pelch (1997) developed a conceptual model based on their literature review describing hypothesized relationships between household characteristics and the decision to join a CSA. They tested this model by surveying members to assess the validity of their hypotheses. This deductive approach allowed them to produce general statements because their theory was tested against their primary data (Burt 2005: 123).

Russell and Zepeda (2007) designed a study of four focus groups composed of current, returning, 'engaged' (worker-share), and former CSA members. A facilitated discussion was recorded, transcribed, and evaluated for frequency of themes in discussion. The turnout for the discussion sessions was notably low, with a total of only 23 people (Russell and Zepeda 2007: 138). The low turnout indicates that the sample was most likely unrepresentative of the population and therefore any generalization is questionable. The investigators also recognize that the results of their study are subject to a sample bias, noting that the type of people who chose to participate in the voluntary study likely have different views than the share-holders who were not active in the study.

The Brehm and Eisenhauer study (2008) surveyed three farms in Illinois and three farms in New Hampshire, with a variety of both unique and overlapping membership and product bases. Surveys were distributed at CSA pick-up sites; members were approached, asked to participate, and if they agreed were given a study overview, survey, and an addressed and postage-paid envelope. The surveys returned a 67% response rate, compared with 42% in the Tegtmeier and Duffy study, in which questionnaires were mailed to participants. These higher rates may reflect that personal contact increases the likelihood of response.

The survey used by Brehm and Eisenhauer consisted of a series of statements in which the respondent rated their level of agreement with each motivation listed, adhering to a five-point scale. Respondents were also asked to rate their community attachment and social capital. Environmental attitudes and values were measured with the New Ecological Paradigm scale, which is a common method of assessing environmental awareness. Qualitative questions were also used to ask respondents how long they had been a member in the CSA and where they first heard about the system (Brehm and Eisenhauer 2008: 99). The survey used by Tegtmeier and

Duffy was designed to collect descriptive information on the operations and farmers, as well as data on finances and labor of the systems.

As described above, many studies rely on ‘self-reporting’ for data acquisition, which is a potentially skewed form of reporting. Much of the existing literature is based on the perceptions people have of themselves, their behaviors, and their attitudes. Although these perceptions are undoubtedly not completely representative of reality, such methods can provide valuable insight when used in conjunction with empirical data.

Methods

We conducted a geographic analysis of the Madison area to determine the characteristics that enable this area to sustain one of the largest CSA systems in the country. This case study aims to interpret both quantitative and qualitative factors descriptive of Community Supported Agriculture in the Madison area through a comparison to the national trends found in the literature review. Drawing on Hannah’s (2005: 152) affirmation in *Questioning Geography*, every representation we utilize is contestable and responds to a moment in time. Thus, our representation of the CSA system in Madison is inescapably subjective and shaped by the current conditions.

A literature review indicates critical factors that support and define CSA systems throughout the country. We grouped these factors into the following themes: CSA farm structure, community characteristics, and producer and consumer characteristics, motivations, concerns, and resources. We used the information extracted from these themes to indicate qualities that characterize a typical CSA system and then compared these qualities to those present in the CSA system in Madison.

In order to characterize Madison's CSA system, we studied CSA farms that serve the area, as well as their members and the surrounding community. Our initial intention was to administer a questionnaire through the post service to 41 CSA farms serving the Madison area, which we complied through the Madison Area CSA Coalition (MACSAC) website and the Local Harvest network. We also planned on administering a member questionnaire by asking farmers to include it in their weekly box, but were unable to do so because most farms' season ended before our questionnaires were ready for distribution. Facing limitations in accessing member contact information as well as cost-efficiencies, we decided to administer the member survey online, although we recognized that online surveys often have significantly lower response rates (Kaplowitz et al. 2004: 94).

We decided to administer the farmer questionnaire online as well in order to be consistent. We emailed farmers with an explanation of our project and a link to the online survey. The farm list was reduced to 35, as six CSA farms did not have accessible email addresses. In this questionnaire, farmers were asked if they would be willing to forward a link to the member survey. We received four positive responses but were only able to send the link to three farms because of lack of contact information provided by the fourth farm. Of the members that received the email, only six responses were received. This small sample size prevented us from performing statistical analysis as it cannot be considered a representative sample of Madison's CSA member population. As we did not have information on how many members each farm contacted, we were also unable to calculate a member response rate.

We also received a relatively low response rate from our farmer questionnaire (33%, n=35), making generalizations in this area problematic as well. Nevertheless, we include information obtained through the surveys in our results in order to illustrate particular

experiences and support conclusions derived from other sources. We used the results from both questionnaires in conjunction with more thorough interviews to evaluate themes in the responses. We conducted interviews with four CSA farmers and four CSA members within the Madison area CSA system. The qualitative approach taken through our interview portion allowed us to assess the differences in perceptions and experiences among farmers and consumers involved in CSA that we would not be able to capture through quantitative data.

Our questionnaire and interview questions (see Appendix A, Appendix B, Appendix C) asked about the farmers' initial motivations for starting a CSA farm, the resources available to farmers, their educational background, and resources these farms offer to their consumers (i.e. newsletters, farm updates, farm websites, etc.). To assess the sense of community existing between producer and consumers, we asked farmers to describe their relationship with their members as well as the involvement that members have in their farm. Through interviews and questionnaires with CSA members, we collected information concerning member demographics (annual household income, education level), motivations for joining CSAs, perceived benefits, obstacles and concerns with CSA membership, and resources that members utilize from their CSA farm.

The farmer interviewees were first contacted by phone through random selection from the MACSAC farm list and asked to participate in an interview. Three of the interviews were conducted in person and one was conducted over the phone per the participants' request. All member interviewees were colleagues, family members, or acquaintances of the authors. This non-random selection process undoubtedly introduces biases into our results, but limitations on time and member contact information were major constraints in the selection process. Interviews were also conducted with the Director and the Partner Shares Coordinator of MACSAC to gain

an understanding of their roles as facilitators of farmer-consumer relationships and CSA growth in Madison. Additionally, we interviewed the Outreach Specialist for the Center for Integrated Agricultural Systems (CIAS), a research center at the University of Wisconsin-Madison, about the role of CIAS as well as for personal insights on the Madison CSA system from the point of view of a local agricultural support system.

All three authors conducted the farmer interviews, while scheduling prevented more than one author from being available for the member, MACSAC, and CIAS interviews. All of the authors who were present at the interviews took notes individually, later comparing them for accuracy. Because most interviews were not recorded, some quotes included in our results are paraphrased. We distinguish an exact quote from paraphrased quote by using double apostrophes.

In addition to conducting interviews and administering questionnaires, we also created maps to explore geographic relationships within the CSA system. In one map, the correlation between affluence and CSA membership is shown by the location and density of CSA drop-off sites with respect to Madison household income. CSA drop-off points are used as a proxy for member households, based on the assumption that drop-off locations are generally located in areas of higher member concentration. We obtained the data on drop-off sites from MACSAC, and the block group data of mean household income through the Census Bureau. This map also features an inset map showing the distribution of persons per household in the Madison area, reinforcing the distribution of wealth in the city in relation to number of dependents per income level. This datum was also provided by the Census Bureau.

We created another map to illustrate the relationship between soil productivity, population, income, education, and the location of CSA farms throughout the state of Wisconsin.

Soil productivity is indicated by percent soil organic matter, which functions in many ways to promote crop growth (SARE 2009). A shapefile of percent organic matter was obtained through Soil Data Mart. Population, education (percent of the population aged 25 and over holding a bachelor's degree), and per-capita income data were obtained through the Census Bureau.

A comparison of our primary data to the trends identified by the literature review distinguishes characteristics of the Madison CSA system that are shared with CSA systems in general, as well as characteristics that are unique. Our data analysis then determined which of these aspects make Madison uniquely capable of sustaining a large CSA network.

Results

CSA Structure and Farmer Characteristics

Eighty-three percent of farmers surveyed indicate that CSA provides the majority of their total farm income. However, no farms reported 100 percent total farm income from CSA, revealing that all surveyed farms use more than one economic farm outlet. Previous studies also show that most CSA farms use more than one economic outlet for their farm income (Cohn and Myhre 1993: 4-5; Lass et al. 2001: 9; Tegmeier and Duffy 2005: 12). All of the interviews conducted with farmers support this as well. Most farms participate in local farmers' markets including the popular Dane County Farmers' Market. Other outlets used include local restaurants, wholesale, grocery stores and distribution centers. All farmers reported that they either offered different products through different venues or received different prices for the produce depending on the outlet.

Our online survey results show that 10 of 12 surveyed farmers hold a four-year college or graduate degree. This is consistent with a national study of 354 farms, which found that 75

percent of CSA producers hold a college or graduate degree (Lass et al. 2001: 16). In regard to direct education through farm experience, interviewed farmers held a range of two to sixteen years, with a median of nine years experience. According to literature, CSA farmers nation-wide have a median of 10 years experience (Lass et al. 2001: 13), suggesting that CSA farmers in the Madison area hold a similar level of experience to other CSA farmers elsewhere in the country.

None of the interviewed farmers indicated that they have a background of formal agricultural education. Farmers often cited attendance of informal, non-university classes on CSA operations as an important source in building their knowledge base. This is congruent with previous studies stating that many CSA farmers do not have a background of conventional agricultural education (Lass et al. 2001: 16; Worden 2004: 324-325). Respondents also indicate that internet publications, print resources, and information from local organizations play an important role as educational sources. Farmers also listed other farmers as a resource for information and advice for their operations, which is congruent with Worden's findings on CSA growers' informational sources (2004).

One grower noted that because the demand exceeds supply in the area, they do not feel a sense of competition between CSA farms. Through the course of the interviews, some farmers expressed their belief that competition between farms could grow in the future with changes in demand, suggesting that increased competition could feasibly reduce cooperation between growers. However, as one interviewee noted, the CSA farmers are generally 'all about supporting one another' (Farmer 1, personal interview, 17 Nov 2009). She notes, as did other farmers, that they had become friends with other CSA farmers, particularly through grower gatherings and workshops offered by MACSAC. The participating CSA farmers also shared sentiments of the importance of quality food, local support, and a connection with the land,

indicating that farmers see CSA as much more than an economic model. Thus, even with a possible increase in competition, these convictions and existing relationships are likely to continue to facilitate the exchange of information between farmers.

Motivations and Benefits

Under the wake of industrial agriculture, farmers and members alike feel an urgency to enhance the community-based agricultural movement. ‘People are aware of the unsustainable nature of industrial inputs and cheap fuel associated with large-scale agriculture’ (Farmer 3, personal interview, 23 Nov 2009). CSA is a form of action and education that offers an alternative to energy- and chemical-intensive industrial agriculture, providing a system that reconnects people to food and, in turn, to the “natural world” (Farmer 3, personal interview, 23 Nov 2009). The connection established between farming and eating food is one of a “mutually nourishing relationship” that must retain value in society if the CSA movement is to persist and progress (Farmer 3, personal interview, 23 Nov 2009).

While CSA provides one response to extensive agriculture, producers are drawn to this specific model for various reasons. Both the questionnaire and interview responses indicate that financial motivations are the most common initial incentives to become involved in CSA (see Appendix D, Figure 1). Because CSA involves an established consumer base, CSA is seen by growers to have significant financial advantages over other economic outlets. For example, one grower related that unlike selling produce through a farmers’ market, sales through CSA are guaranteed through subscriptions. She noted that while she could bring 100 flats of strawberries to a farmers’ market, if another farmer brings 200 flats and can sell them at a lower price she

may not sell any strawberries. Thus, greater competition at farmers' markets can lead to less financial security because of uncertainty in sales.

Many growers were attracted to the upfront payments that reduce the financial risk associated with agriculture while also helping to provide for upfront costs. Farms that were established under the CSA model found great benefit in the upfront payments, as the money was needed for equipment and other start-up costs. Likewise, the upfront payments provide a continuous benefit after the farm is established, as much of the cost of growing for the CSA is incurred at the beginning of the season.

Growers noted that they were motivated to become involved in CSA as they watched the model develop in the area and heard inspirational stories of its potential. The growing market in the Madison area has lead demand to exceed supply and facilitated the growth of farm membership. Although they were not asked directly, two producers reported an experience of 1017% and 3471% increases in membership over the five and seven years of their operations, respectively. Although this small sample may not be representative, it illustrates the substantial growth of CSA member involvement over a short period of time. This rapid growth in the market for CSA was a significant factor in the decision of some growers to adopt the model.

Although many of the growers' initial motivations were largely financial, they also cited non-monetary motivations. Environmental concerns were often cited in the questionnaire as a reason producers became involved in CSA. However, environmental concerns likely lead to involvement in sustainable agriculture rather than the CSA model specifically. Although environmentally sustainable production is embedded in the CSA concept, produce can be grown using the same sustainable techniques but be sold through different outlets. Environmental concerns do not explain why one would choose to grow organic vegetables and market them

through CSA rather than other systems that support these agricultural practices. Thus, it is likely that environmental sustainability is a ubiquitous priority for CSA producers but other factors also contribute to the decision to market through CSA.

Support for the local food movement and the promotion of an alternative food economy were commonly shared motivations for the surveyed growers in the Madison area, as it was for growers in Worden's study of CSA farms in the northeastern United States (2004: 323). For some respondents, this relates to the ability of CSA to help actualize their desire for meaningful work and sustainable lifestyles, while others view the local food movement as a way to build trust and direct relationships between consumers and producers. Our interviews with CSA growers indicated that while an increased connectedness with consumers was not always an initial motivation to become involved with CSA, it became an increasingly important personal benefit as their CSA developed. One farmer who cited mostly financial initial motivations recalled that she was hesitant about having so much interaction with consumers when the CSA was first started, but now "it's the best part" (Farmer 4, personal interview, 24 Nov 2009).

Collectively, growers feel that the stronger connection with consumers facilitated by their CSA is one of greatest personal benefits of their operations. While these relationships are decidedly variable between members, as member involvement is "across the board" (Farmer 4, personal interview, 24 Nov 2009), the sense that CSA is personally fulfilling through social relationships beyond their economic arrangements is nearly universal among the growers. In fact, more growers cited connections with consumers as a personal benefit of CSA than any other survey option, including multiple financial benefit options (see Appendix D, Figure 2).

The ability of CSA to serve as an educational model is another benefit for many farmers. Educating the public about food is an important issue for all of the CSA farmers in our study,

from educating members how cook and preserve unfamiliar produce to raising awareness of how food and farming affect personal health and the environment. Education and health concerns are also reasons that some consumers are drawn to CSA. One member voiced that health issues and food quality play an integral part in his CSA involvement, responding that his role as “the guardian of [his] kids’ health and of [his] health” motivates him to continue to renew his membership (Member 2, personal interview, 20 Nov 2009).

This particular confidence in the safety and healthiness of the produce provided through CSAs resonates with all the CSA members surveyed, as obtaining high-quality, fresh, and/or organic produce was cited as one of the greatest motivations for CSA involvement by all participants (see Appendix D, Figure 3). Concerns with food quality were found to be a primary consumer motivation in studies on CSA involvement in other regions as well (Cone 2000: 5; Sharp et al. 2002; Lang 2005: 65; Zepeda and Li 2006: 9; Brehm and Eisenhauer 2008: 102).

While share price was a concern voiced by some members in our study, they often feel that CSA provides produce at a lower cost than other outlets with comparable produce. Members also feel that CSA memberships are convenient as they save time by reducing the time spent food shopping, which was the most commonly mentioned benefit of their membership (83.3%, n=6). Likewise, only one member (n=6) said that their drop-off site was located further from their home than other food outlets where they purchase food.

Although ‘*concerns for the environment*’ was among the lowest rated motivation for CSA involvement in the online survey (see Appendix D, Figure 2), some interview participants noted that environmental sustainability was a major reason they supported CSAs. The respondents who cited support for sustainable agriculture as a motivation also noted concerns relating to the safety and environmental impacts of industrial farming, concerns which Cone and Myhre

identified as a major reason some people are turning to CSA (2000: 5). As one member put it, CSA provides “food safety in an out-of-control world food system” (Member 2, personal interview, 20 Nov 2009). The members who did not consider environmental issues to be influential in their decision were more likely to be chiefly motivated by personal preferences, such as fresh produce, convenience, and variety. The variance in responses shows that different people are drawn to different aspects of CSA.

The desire to build community or establish relationships also ranked low as a motivation for CSA involvement among surveyed members. While consistent with the findings of Brehm and Eisenhauer (2008: 102) that building social networks is not a significant motivation, the sense of community or relationships built through the CSA network may be motivations for the renewal of memberships, as suggested by Russell and Zepeda (2007: 136). The members that we interviewed that did not consistently renew their memberships were also those that did not participate in farm activities or describe a personal connection with the farm. It is feasible that members who are involved in the farm and form relationships with their farmer are more likely to renew their membership than those who feel little direct connection to their CSA. Without doubt, memberships are renewed for various other purposes reflecting the personal reasons that members are involved with the CSA system. While consumers and farmers may be drawn to different aspects of the CSA concept, their sustained involvement indicates that they derive personal benefits from participating in CSA, whether anticipated or not.

Farmer-Consumer Relationships

The relationships between CSA growers and their members are a fundamental part of the CSA system. Our study indicates that farmer-consumer relationships are more recognized by

farmers than members. One farmer points out that his relationship with members is “as close as they want it to be,” reflecting that opportunities for involvement in the farm are available and it is the member’s choice whether or not to participate (Farmer 4, personal interview, 24 Nov 2009). Another grower recognizes that although some members would like to help out and be involved in the farm, others just want their vegetables. Across the surveys and interviews that we conducted, we found varied efforts and successes at relationships between CSA growers and members.

All farmers that participated in our study employ various methods to encourage member involvement in their farm. Generally, farmers view communication with their members as an important part of their job, and a way to connect with the people and values that drive their operation. Most farmers surveyed (86.4%, n=13) involve members through both newsletters and opportunities to attend on-farm events (see Appendix D, Figure 4).

However, notably few members report involvement in farm-related activities. Although awareness of farm events is high, only three out of eight members contacted have actually participated in at least one on-farm event. Some members cite poor timing or lack of transportation to the farm as reasons for not attending farm events, a finding supported in the literature review (Cone and Myhre 2000: 7; Lang 2005: 74). Other responses in our study suggest that the proximity of a farm to the urban area it serves is a significant determinate in the level of member involvement the farm experiences. One farm about seven miles outside the city limits reports generally enthusiastic member involvement, whereas another farm located 30 miles from the city finds that their distance from Madison makes farm involvement and worker shares difficult.

Two-thirds of members surveyed say they make use of the newsletters sent out by farmers. Many members expressed appreciation for the weekly newsletters, as the communication allows them to feel like they are aware of what is happening on the farm, even if they have no physical connection with it. However, the connections built through newsletters are generally not reciprocal, as the farmers are not able to get to know their members through this resource. Members also appreciate recipes included in the newsletters, which help them to prepare the new/unfamiliar foods they find in their boxes.

Member responses on their involvement are consistent with the 54.5% of farmers surveyed who listed 'difficulty encouraging member involvement on farm' as a concern of their CSA operation. As discussed by Lang (2005: 76), members are likely to be more satisfied with their membership if they participate in farm work. However, none of the interviewed members indicated this type of participation.

One member who does attend farm events with his family says that he is motivated to bring his children to the farm to help them understand where their food comes from. This response challenges Kolodinsky and Pelch's (1997: 139) finding that CSA members are less likely to have children, along with our interpretation that time commitments may be an issue for people with children, and thus inhibiting CSA membership. For this member, lack of available time is not an issue; rather, he integrates his CSA membership with the education of his children. This member's connection between his farm and family is shared by a crew leader on a farm we visited, who commented on the importance of introducing food choices and values to children at an early age.

Survey and interview responses in our study indicate that interactions between CSA members are substantially less common than the interactions of members with their farmer.

Most members did not have notable relationships with other CSA members. This is supported by the findings of Russell and Zepeda (2007: 137, 142) that members of a specific farm in Madison have little to no interaction with other members.

Some farmers note that the “community” is occasionally missing from *Community Supported Agriculture*. In reality, some growers know their farmers’ market customers better than they know their CSA members. For example, members that pick up their shares at a location other than the farm may not ever meet their farmer. In this case, CSA is less effective than the farmers’ market model in the community-oriented, or as one grower puts it “get-to-know-your-farmer deal,” that it is intended to provide (Farmer 1, personal interview, 17 Nov 2009). Additionally, several farmers expressed concerns that large farms lose aspects of community as they are not able to serve each member with the intimacy that is fundamental to the CSA model. Although a consistent definition of ‘large’ was hard to come by, it is clear that farmers in our study are aware of the changes associated with growth of their farm, and are taking steps to keep community central in their operations.

Most farmers we questioned offer an end-of-season survey to their members, which has generally proved to be an effective strategy in getting feedback on their farming operations. Farmers value consumer input in their production, as it helps them to meet the needs and expectations of their members. “You can’t please everybody” was a common adage among farmers in our study, reflecting producer concerns with trying to satisfy a diversity of consumer desires. One member adamantly stated that if members choose to participate, they can have more say in what they’d like from the farm experience; she believes that there is room for change if a member would like it, and it is possible to take an active role. Because she, personally, does not choose to participate, she does not feel that she has a right to complain about farm practices

or her CSA share. It is important to note that even someone who is not active seems to have an understanding of the level of involvement that is possible in this system.

In our survey of Madison-area CSA members, the most commonly cited change that could improve the member's experience with CSA was a lower cost of share. Changes such as more produce, more choice in produce, more flexible pick-up schedule (including "flexibility, with advance notice, to have a couple of weeks during the season when the member does not receive or pay for a delivery"), closer pick-up site, more resources on how to prepare and preserve produce, and more on-farm activities, were suggested by consumers in the online survey (Anonymous, online survey). None of these changes were suggested by more than 40% (n=6) of the surveyed members. No members selected 'less produce' or 'fewer time obligations' as changes that would improve their CSA experience. Inconsistent with these responses are reports by multiple farmers that more members complain about too much produce than too little. Interestingly, members questioned in the interview format were sure to justify the inescapable nature of their concerns, citing the structure of CSA and inherent risk of the system. This understanding is also inconsistent with several farmer comments that many consumers do not understand the principles of farming that drive certain issues, such as members who do not understand "that it is not possible to have radishes when it is 90 degrees" (Farmer 4, personal interview, 24 Nov 2009). These inconsistencies could be a result of our small sample size, specifically in members.

The grievances conveyed by consumers in our study align with those found in existing literature. Too much or too little produce are found as common concerns, and a small percentage of members in our study stated concerns about type of produce received, which was also cited in the literature (Groh et al. 1997: 74; Sharp et al. 2002). However, type of produce was not a

common concern in our study, and several members actually stated produce variety as a motivation to join CSA. Furthermore, most study participants said that they made use of newsletters and recipes provided by their farm. These resources help to educate consumers about the variety of produce and cooking methods, which in turn can alleviate concerns about produce type. Another mitigation strategy for this concern arose when one member commented that his farm used a “swap bucket,” in which members can exchange food items with other members. The concern with lack of time to prepare and cook food stated in previous studies was not found to be a concern with the consumers we interviewed, although we did not specifically direct a question on the subject.

One member who voiced a moderate concern about the price of his CSA share describes the CSA system as catering to “rich, white, yuppy families” (Member 3, personal interview, 21 Nov 2009), a demonstration of Kolodinsky and Pelch’s findings (1997) of a positive (although insignificant) correlation between wealth and CSA membership. This finding is interesting in that the majority of survey respondents feel that their CSA membership is cheaper than comparable produce at other outlets, yet still believe that their experience would benefit from a lower cost of share.

MACSAC and Grower Networks

Madison Area Community Supported Agriculture Coalition, a local organization working to “strengthen the local food system through supporting and promoting CSA for farmers and consumers,” has an undeniably significant role in the CSA system in the Madison area (MACSAC, personal interview, 18 Nov 2009). MACSAC, a network of thirty-five CSA farms that serve the Madison area, is a 501(c)4 organization, which is slightly different from a non-

profit in that it is not tax-exempt. The organization is in the process of re-applying for tax-exemption, which they believe they were denied 10 years ago for their appearance of promoting individual businesses. MACSAC is governed by a board of directors (half farmers, half community members), as well as two paid staff, and is helped along by a slew of community volunteers. In our study, the role of MACSAC as a network of CSA growers was not frequently acknowledged by consumers, but was highly discussed among farmers.

The majority of farmers interviewed and surveyed in our study acknowledged that MACSAC has, at least at one time, been an important and useful resource for their CSA operations. One farmer explains that, 'MACSAC requires little for what farmers get out of it' (Farmer 1, personal interview, 17 Nov 2009). Benefits of MACSAC membership include advertising, grower gatherings and facilitation of relationships with other farmers, an Open House event to link farmers with potential customers, and a website to increase awareness and serve as a valuable resource for consumers.

One of the most influential aspects of MACSAC's involvement in this system is an insurance rebate program, in which area health plans offer subscribers a \$100-\$300 rebate for CSA membership in a MACSAC-endorsed farm. Across the board, farmers have recognized this program as a catalyst for growth in their membership base. The insurance rebates clearly involve more people in CSA, especially those who might not have tried it without this financial incentive.

However, farmers have mixed feelings about the explosive growth induced by this program. Many farmers are finding that it is challenging to connect with people involved in their farm for a financial incentive, as they are often unfamiliar with the CSA model and do not necessarily share the ideology of the system. One farmer notes that he never had a member quit

mid-season before the rebates started. However, many farmers also recognize that people buy shares in the farm for different reasons, and “anytime we help someone eat fresh, local food it is a positive thing” (Farmer 3, personal interview, 23 Nov 2009).

Another important effect of the insurance rebates is that, as described by one farmer, the program acts as a subsidy to Madison’s CSA system. Many farmers have expressed concerns that the rebate program is creating uncertainties about the size of the market in this area. They wonder how many members they might lose if the insurance rebates stopped (which they could, without warning), and if the constantly growing number of CSA farms in this area would suddenly outweigh the demand.

As explained by the outreach specialist of the Center for Integrated Agricultural Systems (CIAS), it was easy for insurance companies to get involved with the application of existing insurance benefits to CSA because of the network of farms available for contact. It would have been much more difficult, and perhaps unfeasible, to establish this incentive with each of the 35 member farms of MACSAC individually. This program is a demonstration of the outreach opportunities that develop with a centralized coalition of farms.

Recognition of MACSAC as a figure in the Madison area CSA scene was not common among members we interviewed. Most members either had never heard of MACSAC or did not immediately recognize the name. One member stated that although she had seen their acronym, she did not feel directly affected by them. We did not explicitly question survey participants on their awareness of MACSAC or related programs. In a future study, it would be interesting to compare the number of members who feel directly affected by MACSAC with the number of members using MACSAC-created resources, such as the health care rebates or the A-Z food book. It appears that consumers may not know who is providing them with these resources.

Staff time, directly tied to funding, has been a traditional limitation of MACSAC; the current staff note, “there are a million things we could be doing if we had people doing them” (MACSAC, personal interview, 18 Nov 2009). It was also suggested that the recent growth of certain programs within MACSAC, like Partner Shares, which assists low-income households in purchasing CSA boxes, could be attributed to the recent increase in staff hours (the Partner Shares Coordinator position just doubled). One farmer comments,

“For MACSAC to operate it needs funding . . . Most of MACSAC's work has been funded through the sale of A to Z cookbooks. MACSAC also needs a board of directors to manage it and it has been fortunate to have a lot concerned community members who volunteer their time there”
(Farmer 5, email communication, 11 Nov 2009).

Undoubtedly, increases in qualified staff time, possible through increases in funding, could also contribute to the expansion of programs offered by the organization.

Despite the overwhelmingly positive responses of farmers to MACSAC programs and operations, there appears to be a controversy regarding MACSAC's recent decision to require organic certification in all vegetable growers they endorse. While some farmers see this step as ensuring that MACSAC farms are “following the ideals of CSA,” other farmers disagree that organic certification has a place in CSA, which they view as a system built on trust between farmers and members (Farmer 1, personal interview, 17 Nov 2009). One farm polled their members, asking if they preferred certification, and discovered that “nobody cared” (Farmer 4, personal interview, 24 Nov 2009). Disputation has arisen regarding the costliness of organic certification, which is often seen as a misdirection of money that could be used to enhance other areas of the CSA production. CSA farmers formed the FRESH Food Connection largely as a

response to MACSAC's organic certification policy. This alliance provides an alternative cooperative network to CSA farmers, which supports independent decision-making regarding the issue of organic certification. While acknowledging that this policy is clearly controversial, one farmer explains that it is ultimately a good thing because consumers are very attracted to certified organic produce, and want to make sure that growers who say they use organic practices are really working up to those standards. One member in our study commented that when choosing a CSA farm, she went through MACSAC because of their farmer guidelines for representation and the fact that she was "pretty much assured an organic farm" (Member 4, personal interview, 27 Nov 2009).

Interviews with both MACSAC and CIAS attested the uniqueness of Madison's coalition of CSA growers, compared to the national CSA scene. MACSAC staff listed several 'similar' organizations in Wisconsin and Minnesota, however, these were primarily larger consortiums with a CSA component. When questioned on whether the existence of an organization similar to MACSAC would increase the success of CSA in another area, the answer was emphatically positive. MACSAC staff also mentioned that their organization cannot grow too much because their strength is in the on-ground presence and farmer communication that is not possible on a large scale. Instead, "ideal growth would be a replication of locally based organizations in the model of MACSAC," but without the orchestration of MACSAC staff (MACSAC, personal interview, 18 Nov 2009).

While MACSAC is a local organization, and thus unique to Madison, the majority of the findings discussed in the previous sections are consistent with the characterization of CSA systems by the existing literature. These findings provide insight on the functioning of the CSA system, as well as some indications of how the Madison area CSA system conforms to systems

elsewhere in the country. However, several common themes emerged from our interviews that are not discussed in the literature but have significant implications for CSA locally.

While not all of the following aspects are necessarily unique to Madison in the sense that they do not exist anywhere else, their interaction with one another creates a unique support system for the CSA movement.

Unique Aspects of the Madison System

The Dane County Farmers' Market has an established role in the Madison area's local food system. Beyond its role as an additional economic outlet, the extent to which the farmers' market interacts with the CSA system is undecided among farmers. Multiple farmers expressed the feeling that the farmers' market and CSA model do not impact one another. One farmer noted that members may still shop at the farmers' market to supplement their CSA share, depending on their produce needs. However, during our preliminary research, informal interactions with non-members strongly suggested that the farmers' market does affect the decision *not* to join a CSA farm. For example, one non-member noted that although he "love[s] knowing how many of the farmers [he] buy[s] from are supported by CSAs," he "still like[s] to talk to them every week (and not get a box full of parsnips in November)" (Anonymous, e-mail communication, 13 Nov 2009). Similarly, two other non-member acquaintances related that they had been 'discussing joining a CSA farm for some time, but that's as far as it ever went because we enjoy shopping at the farmers' market' (Anonymous, personal communication, 12 Nov 2009).

Apart from the effect of the Dane County Farmers' Market on CSA membership, many farmers and members view it as an important precursor to CSA expansion. The Dane County

Farmers' Market was established in 1972, before the wide-spread growth of CSA in Madison, and remains one of the largest grower markets in the country (Dane County Farmers' Market 2009). Many involved in Madison's CSA system note that the market helped establish an initial interest in direct interactions with farmers by the public, thus providing CSA with an interested market. Members have confirmed that involvement in CSA is a "natural progression" for those that shop at the farmers' market (Member 1, personal interview, 17 Nov 2009). One consumer views membership in a CSA as "an extension of involvement in the farmers' market for many people" who are interested in local food (Member 4, personal interview, 27 Nov 2009).

As many CSA farmers also market their harvest at local farmers' markets, this venue provides an opportunity for farmers to form relationships with members and potentially influence their decision to join a CSA. One member indicated that he found his CSA after frequently buying from the farm at the farmers' market. One farmer described the confidence that consumers have in farmers' market vendors, as people feel assured that 'you're a real farmer if you sell at the market' (Farmer 4, personal interview, 24 Nov 2009). Thus, the farmers' market is a "huge status thing" for farmers, as well as consumers (Farmer 4, personal interview, 24 Nov 2009). Some members also related the farmers' market with a social status and "prestige" that is associated with the opportunity of some people to shop there (Member 1, personal interview, 18 Nov 2009). The parallel between the perceived prestige or elitist nature of both farmers' markets and CSAs verifies findings from the literature review citing accessibility issues for some demographics.

Members and farmers alike recognized the connection between CSA prevalence and the demographics of the area, particularly with regard to education and affluence. The majority of interviewees believe that the highly-educated population of the Madison area positively affects

CSA involvement. Fifty-one percent of Madison residents over age 25 hold a bachelor's degree, which is over 23 percent higher than both state and national averages (see Appendix E, Table 1). The correlation between education and the CSA system is supported by the literature, as well our survey in which 66 percent of members and 83 percent of farmers indicated that they hold a bachelor's or graduate degree.

Above average income levels and environmental awareness were often cited as corollaries of education that contribute to CSA involvement in the Madison area. The interrelationship between these characteristics and the CSA model was described by a CIAS staff member, who noted that education provides people with access to information regarding organic foods and pesticide use (CIAS, personal interview, 25 Nov 2009). He also noted the discretionary income available to wealthier households may be influential in the decision to join a CSA. However, our study does not draw a clear correlation between affluence and CSA membership. The concentration of CSA farms around cities of above-average income and education levels in Wisconsin shows correlation on a statewide scale (see Appendix F, Map 1). Yet, although Madison's median household income is slightly higher than Wisconsin and national medians (see Appendix E, Table 2), an examination of income and membership distribution within the City of Madison does not show a conclusive relationship (see Appendix F, Map 2).

Although our study did not fully explore the environmental values of the general population, the majority of members and farmers represented feel that the population is particularly 'environmentally conscious and tuned-in to the local food movement' (Member 1, personal interview, 18 Nov 2009). This belief was echoed by another member who attributed the prospering CSA system to a demographic of "cultural creatives" whose values strongly parallel

fundamental CSA ideals of ecological sustainability, equity, and relationship building (Member 2, personal interview, 20 Nov 2009).

Madison is viewed by many as a “green town,” which is characteristic of other cities with large CSA systems, such as Portland, Austin, Seattle, or Chapel Hill (Farmer 1, personal interview, 17 Nov 2009). Almost all farmers mentioned these cities as sharing similar characteristics with Madison, such as the presence of a large university, a highly educated and relatively large population, and general environmental awareness. Several farmers also noted that these characteristics work together to support the CSA system. As one farmer who grew up in Cincinnati observed, the population is much larger than in Madison, but CSA is almost non-existent because the “[environmental] mentality is not present there like it is in Madison” (Farmer 1, personal interview, 17 Nov 2009).

The interaction between this urban environment and its rural surroundings plays an indisputably significant role in the eminence of CSA in the area. While a sufficient population is a necessary component of CSA from a marketing perspective, the proximity of highly productive agricultural land to the urban center ‘makes it feasible to have so many farms in a small area’ (MACSAC, personal interview, 18 Nov 2009). Although the distribution of CSA farms is less correlated with soil productivity than social factors, the majority of interviewed farmers emphasized the importance of the rich agricultural soils of southern Wisconsin in the expansion of the CSA system (see Appendix F, Map 1).

The long history of agriculture in this region, particularly with small farms, has also contributed to the present success of CSA in the Madison area. Many of those involved on the production-end of CSA noted that the ‘historical roots of the family farm in Wisconsin have established a farm culture which persists into the present’ (MACSAC, personal communication,

18 November 2009). Most farmers share the sentiment that the areas' agricultural history has fostered a positive attitude toward farmers, and consequently the "ideal of the small farm still exists in Wisconsin" (Farmer 1, personal interview, 17 Nov 2009). As one farmer suggested, the history of organic farms in the area is also influential, as 'southwest Wisconsin has the highest concentration of organic farms in the country' (Farmer 3, personal interview, 23 Nov 2009). The Center for Land Use Education verifies not only verifies this observation, but also notes that that state of Wisconsin has the second-most organic farms in the country (Markham 2007: 4). Thus, CSA was able to build on an already established and valued tradition of small and/or organic farms, which are fundamental components of CSA production.

The strong ties to agriculture in the area are also evident in the extensive agricultural research within the University of Wisconsin- Madison. While not all farmers and members acknowledged a linkage between the university and the CSA movement, many felt that it does play an important role either directly or indirectly. Apart from the university's link to an educated demographic, the agricultural research being conducted is seen by some farmers to encourage the CSA movement and enhance awareness. One farmer attributed this influence to the university's status as a land-grant institution, with research that is "strongly anti-conventional" (Farmer 1, personal interview, 17 Nov 2009). She cited her personal experiences with the university, illustrating a unique focus on sustainable food systems within university research. She related that a friend with whom she attended graduate school at UW-Madison is now a professor at an Ivy League school and the only faculty member researching 'environmental-food issues,' whereas food issues are a major component of research across departmental lines at the University of Wisconsin (Farmer 1, personal interview, 17 Nov 2009).

Many farmers cited the Center for Integrated Agriculture Systems (CIAS) as a catalyst for bringing university research into practical application through its involvement with local farmers. CIAS is a research center in the UW- Madison's College of Agricultural and Life Sciences which was specifically created to "build UW sustainable agriculture research programs that respond to farmer and citizen needs" (CIAS 2009: para. 1). The publications, outreach, and educational programs provided by CIAS are utilized by many farmers in our study and were also influential in some farmers' decision to begin their CSA farm. As one farmer recounted, both he and his wife participated in the Wisconsin School for Beginning Market Growers through CIAS and were motivated by "the inspirational stories that were told about [how] CSA...is both profitable and [personally] rewarding" (Farmer 4, personal interview, 24 Nov 2009).

While the outreach specialist for CIAS explained that, due to its focus on production, the organization 'doesn't contribute to CSA growth in terms of membership,' it does play an important role as a support mechanism for CSA growers (CIAS, personal interview, 25 Nov 2009). As one farmer expressed, 'in order for a CSA system to be successful, growers need to feel like they have support and know what they're doing' (Farmer 2, personal interview, 19 Nov 2009).

CIAS is only one of the many organizations cited by farmers as having a significant role in the support of both their operations and the CSA movement in general. REAP (Research, Education, and Policy on) Food Group, Family Farm Defenders, and Slow Food UW are all organizations based in Madison which farmers identified as important support systems for alternative agriculture in the Madison area. The existence of these advocacy groups is often cited as evidence of the broader local food movement that is proliferating in Madison. As most of these organizations promote the larger local and sustainable food systems of which CSA is a part

of, many farmers viewed these organizations as giving credence to the CSA model. One farmer acknowledged that the local organizations are “drawing in young people” and facilitating an open dialogue on alternative agriculture (Farmer 3, personal interview, 23 Nov 2009).

The activism associated with these organizations undoubtedly contributes to influencing a population which members and farmers observe “is very aware of the need to buy local and support sustainable agriculture” (Member 4, personal interview, 27 Nov 2009). As noted by a CIAS staff member who has been involved in both the local food movement and Madison’s CSA network, “you can’t ignore the role that MACSAC has played” in the growth of the CSA system (CIAS, personal interview, 25 Nov 2009). As MACSAC functions as a network for CSA farmers specifically, many farmers spoke about how it directly impacts their operations.

All interviewed farmers recognized that MACSAC has had a “huge impact on the growth and spread of the popularity [of CSA]” through their role as “pioneers of the rebate program” (Farmer 1, personal interview, 17 Nov 2009). Farmers also discussed how, “over time, MACSAC increases membership” largely by “constantly advertising on [the farm’s] behalf” (Farmer 1, personal interview, 17 Nov 2009). One farmer related how these functions serve to support CSA farmers through his personal experiences serving both the Madison area as well as a region lacking a similar organization:

My personal feeling is that MACSAC has been very critical to CSA in the Madison area because of its promotion and marketing. Our farm serves CSA members in the Madison area and also in the Dubuque IA area. MACSAC is a huge boon to us in Madison because it does all of our marketing there, runs the annual open house, arranges workplace drop sites for CSA farms, etc. Also the HMO rebate program has been very key [to our growth], and the rebate program might not be there without MACSAC. (Farmer 5, email communication, 11 Nov 2009)

The existence of a local support network for CSA farms, such as MACSAC, appears to be a vital component in the growth of Madison's CSA system. The formation of the FRESH Food Connection suggests that while farmers may differ in their opinions on how such a network should be structured, the basic framework of a CSA coalition provides a unique support system that enhances the ability of both individual farms and the broader system to reach their goals.

Limitations

Although the CSA system in Madison is thriving, it also holds certain limitations for farmers and consumers. The Von Thünen model of agricultural land-use and spatial economics provides insight to one observed geographic limitation to member involvement (see Appendix D, Figure 5). Although many of the limiting assumptions of the Von Thünen hypothesis render the exact model inapplicable in a post-industrialized world, many of the assumptions are relevant given the nature of local food. For example, the model hypothesizes that the closest ring around the market produces perishable items in order to reach the market more quickly. As local, fresh produce is a key component of CSA, this assumption of proximity is pertinent to the location of CSA farms. However, within this ring, many CSA farms have to locate relatively far away from the city in order to purchase affordable land (CIAS, personal interview, 25 Nov 2009).

While CSA farms are likely in closer proximity to the city than other farms supplying food to the area, they may still be located further than members are willing to travel. Thus, their geographic separation from Madison's CSA consumer base may negatively impact the likelihood of member visits to CSA farms. This geographic constraint is often a limitation to CSA farmers' cited goals of building relationships with their consumers. The issue of farm-city separation is

reinforced by one member who attributes her lack of attendance of farm events to the distance of the farm to her house (Member 1, personal interview, 18 Nov 2009).

Farmers also experience difficulties serving their members due to the sheer area that they must cover. As one farmer stated, “It’s easy to advertise to the whole area, but hard to serve” (Farmer 4, personal interview, 24 Nov 2009). As CSA demand increases, this obstacle becomes more relevant. One farmer explains that having a good dispersal of drop-off sites, and adding more where necessary, helps to increase convenience for consumers. However, this dispersal must be convenient for the farmer as well. In the opinion of one farmer, “[the] Madison area doesn’t sound big, but depending on what you define it to be, it’s a big area to serve” (Farmer 4, personal interview, 24 Nov 2009). As CSA continues to expand in the Madison area, an influx of CSA farmers may assuage the physical challenge of serving widely distributed drop-off sites.

The accessibility of the CSA system, as well as other local food markets to low-income families is an issue shared in urban areas throughout the U.S. (Andreatta 2008: 116; Guthman 2008:432). Based on the assumption that CSA drop-off points are located in areas of relatively high member density, as suggested by Guthman (2008: 432), accessibility issues are present in the Madison population as well (see map, Appendix C). While CSA drop-off points are not necessarily clustered in the wealthiest areas of the city, there is a noticeable lack of distribution sites in areas of lowest income.

Many farmers recognized the need to provide outreach for low-income consumers. Most CSA farms in our study reported that they utilize some form of alternative payment methods to mitigate accessibility issues. One farm offers a sliding scale payment plan in which members can choose what they pay within a given a price range. This farmer noted that while some members choose to pay less, others choose payments in the upper range, as “members know

what they can pay” (Farmer 2, personal interview, 19 Nov 2009). The farm also accepts partial payments in Madison Hours, a local currency system in which people can earn hours by providing their particular skills or services to other individuals or participating businesses. Two of the farms interviewed also offer worker shares in which members can receive a CSA box for free or at a reduced rate in exchange for a specified time commitment dedicated to working on the farm. Beyond facilitating CSA involvement by low-income earners, worker shares also provide farmers with much-needed labor as well as an “opportunity for people living in the city to get connected with their food, or the natural environment in general” (Farmer 3, personal interview, 23 Nov 2009).

Consumers may face certain personal constraints that inhibit participation in CSA, such as a lack of knowledge of food preparation and preservation techniques useful for handling large quantities of produce. Farmers related that some of their consumers voice that they find themselves with too much or “weird” food that they cannot necessarily deal with, especially because “people don’t know to pickle, or they don’t have enough freezer space [to store excess produce]” (Farmer 3, personal interview, 23 Nov 2009). Time restraints can be another obstacle to CSA members, particularly for those accustomed to shopping at grocery stores that provide an abundance of packaged and prepared foods. With a general societal shift from traditional agricultural practices to an industrial system, and the convenience of ready-made food that is available in urban areas, “people don’t cook any more” (Farmer 3, personal interview, 23 Nov 2009).

It is suggested that the presence of MACSAC, often cited as a positive force in the local CSA movement, affects farm structure and the way that farms achieve their potential. While a core group of members was identified by a CIAS study as an integral part of the original CSA

structure, only one (8%) of farmers in our study reported that they incorporate core groups in their farm (see Appendix D, Figure 4). The outreach specialist for CIAS notes his impression that ‘not many farms in MACSAC have core groups, especially not strong ones because they often rely on MACSAC for the outreach and support’ that the core group of members is intended to provide (CIAS, personal interview, 25 Nov 2009). He suggests that the success of MACSAC as an organizing and marketing resource acts to both cause and mitigate the lack of core groups that play an integral role in CSA systems elsewhere.

There is no single factor supporting the CSA system in the Madison area, rather the confluence of multiple factors that act to develop the system. An interested urban population, and above-average levels of education and income provides a sizable market for producers, who are then able to meet this demand because of the highly productive agricultural land surrounding the city. In addition to the archetypal arrangement that the Madison area provides for the CSA market, in terms of social and geographic features, the widespread local food movement provides a background for the growing CSA system, supporting it with already established values and resources. In addition, the support of a grower network (MACSAC) is a powerful feature of CSA in Madison, working to promote CSA in a unique way.

There is a striking difference between farmer and consumer involvement in this system, one that suggests that more support for local farmers (through grower networks and organizations) may lead to more farmer involvement, resulting in stronger views and more articulated attitudes regarding CSA. This is in contrast to consumers, who have lower levels of personal involvement in the system and whose attitudes we found more difficult to measure. Consumers often cited contradictory values, attitudes, and behaviors, possibly reflecting a weak understanding of their role in the CSA system.

The inconsistency of beliefs and action among members may detract from the practicality of the CSA model. We suggest that although many consumers are receptive to the concept of CSA, putting it into practice is difficult. Consumers express a desire for the continued existence of the CSA market, but only one consumer clearly noted the effort that must be made by the consumer in this model. As there are strong examples of farmer support networks in the Madison area, we suggest that it would be beneficial to establish a network for consumer support. Such a network could increase consumer understanding of the model, and lead to more effective functioning within the system, offering resources for involvement and activism, and in turn, helping CSA to live up to its ideals.

Further Research

The trends recognized in this study could be strengthened with further research on the topic of Community Supported Agriculture in the Madison area. Most notably, increasing the sample size of our study would allow statistical analysis to determine the significance of our principally descriptive findings. As we experienced farmer participation in the study to be enthusiastic, the largest constraint is time for involvement. However, the largest constraint with member participation is accessibility, in part due to privacy restrictions. Thus, timing of the study is crucial, as we believe that face-to-face contact with members at drop-off sites could increase response rates.

An expansion of the *Unique Characteristics of the Madison System* discussion would be useful, as more detail on the area's local food movement in general could expose implications for the CSA system in the area. Comparisons between different cities with established CSA systems could yield important conclusions on possible applications of the CSA model. Likewise, a

comparison of cities with and without established CSA systems might uncover emblematic differences and similarities regarding community characteristics that support the CSA model.

Many references were made to the agricultural quality of land in our study area. A more detailed exploration of area soils and crop productivity would be beneficial in supporting these claims. Other geographic relationships, such as the proximity of other food outlets to the CSA member base or other segments of the urban population, could benefit our understanding of motivations to join CSA. It could also be useful to evaluate accessibility issues that some segments of the population may face in obtaining healthy foods through CSA as well as other outlets.

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Appendix A
Online Farmer Survey

<i>Survey Instructions</i>	<i>Question</i>
<p>Please check one or more responses for the following questions.</p>	<p>1. Which, if any, of the following do you consider personal benefits of your CSA operation?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Increased price per product (versus other outlets) <input type="checkbox"/> Increased farm revenue <input type="checkbox"/> Increased financial security <input type="checkbox"/> Stronger connection with consumers <input type="checkbox"/> Increased sense of community with other farmers <input type="checkbox"/> Environmental ties to the land <input type="checkbox"/> Other
	<p>2. What resources do you use to build your agricultural knowledge base or strengthen your operation?</p> <ul style="list-style-type: none"> <input type="checkbox"/> MACSAC <input type="checkbox"/> Conferences <input type="checkbox"/> Other farmers <input type="checkbox"/> Printed materials <input type="checkbox"/> Formal education <input type="checkbox"/> Government/university outreach (i.e. USDA, CIAS, UW-Extension) <input type="checkbox"/> Other <input type="checkbox"/> Not applicable
	<p>3. What best characterizes your farming experience prior to starting your CSA operation?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Industrial farm (e.g. significant chemical inputs, capital intensive) <input type="checkbox"/> Non-industrial farm (e.g. labor intensive) <input type="checkbox"/> Organic farm (not certified) <input type="checkbox"/> Certified organic farm <input type="checkbox"/> Subsistence/hobby gardener <input type="checkbox"/> Other <input type="checkbox"/> None
	<p>4. What concerns do you have regarding your CSA operation?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inaccessible to low-income households <input type="checkbox"/> Difficulty covering operating costs <input type="checkbox"/> Difficult to encourage member involvement in farm <input type="checkbox"/> Distribution issues

	<p> <input type="checkbox"/> Lack of resources to expand operation <input type="checkbox"/> Other <input type="checkbox"/> Not applicable </p> <p>5. What outlets do you use to market your products?</p> <p> <input type="checkbox"/> Farmers' market <input type="checkbox"/> Restaurants <input type="checkbox"/> Grocery store <input type="checkbox"/> Co-op/natural foods store <input type="checkbox"/> Roadside stands <input type="checkbox"/> U-pick <input type="checkbox"/> Regional multi-farm CSA network <input type="checkbox"/> Online sales <input type="checkbox"/> Other <input type="checkbox"/> Not applicable </p>
	<p>6. How do you involve members in your CSA operation?</p> <p> <input type="checkbox"/> Farm visits <input type="checkbox"/> Farm work days <input type="checkbox"/> Festivals <input type="checkbox"/> Encouraging volunteerism <input type="checkbox"/> Core group of members (involved in decision-making and planning) <input type="checkbox"/> Newsletters <input type="checkbox"/> Other </p>
<p>Please rank your response, with the number "1" as the most important factor.</p>	<p>7. What were your motivations in establishing your CSA operation?</p> <p> <input type="checkbox"/> Marketing/financial <input type="checkbox"/> Support for local food movement/alternative food economy <input type="checkbox"/> Build sense of community between people <input type="checkbox"/> Build relationship with consumers of your product <input type="checkbox"/> Increase public awareness of food production <input type="checkbox"/> Environmental concerns <input type="checkbox"/> Other, please specify </p>
<p>Please select only one response for each of the following questions.</p>	<p>8. Approximately what percentage of your total farm income is generated from your CSA operation?</p> <p> <input type="checkbox"/> Under 5% <input type="checkbox"/> 5-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-99% <input type="checkbox"/> 100% </p>

	<p>9. What is your highest level of education?</p> <p><input type="checkbox"/> Less than high school diploma</p> <p><input type="checkbox"/> High school diploma</p> <p><input type="checkbox"/> Technical or associate degree</p> <p><input type="checkbox"/> Some college</p> <p><input type="checkbox"/> 4-year college degree</p> <p><input type="checkbox"/> Graduate degree</p>
	<p>10. Thank you for your valuable input! It is equally important in our study to consider CSA member feedback. If you are interested in passing on this opportunity to your members, please check "Yes" below. We will then send you an email containing a link to the member survey to be forwarded. We appreciate your support for this project!</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No, thanks</p> <p>Preferred email address:</p>

Appendix B
Online Member Survey

<i>Survey Instructions</i>	<i>Question</i>
<p>Please check one or more responses for each of the questions below.</p>	<p>1. How would you describe your CSA share?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Full-share <input type="checkbox"/> Half-share <input type="checkbox"/> Splitting share with another household <input type="checkbox"/> Working member share <input type="checkbox"/> Specialty share (i.e. flower share, meat share, dairy share, etc.) <input type="checkbox"/> Partner Share Program <input type="checkbox"/> Other <hr/> <p>2. Which of the following are personal benefits of your CSA membership?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Less expensive than buying comparable produce elsewhere <input type="checkbox"/> Better understanding of where food comes from and how it is produced <input type="checkbox"/> Sense of community <input type="checkbox"/> Saves time/less grocery shopping <input type="checkbox"/> Direct relationship/connection with grower(s) <input type="checkbox"/> Other <input type="checkbox"/> Not applicable <p>3. What resources or activities provided by your CSA farm do you take advantage of?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Newsletters <input type="checkbox"/> Recipe books/food books <input type="checkbox"/> Contact lists <input type="checkbox"/> Food festivals <input type="checkbox"/> Potlucks <input type="checkbox"/> Educational events <input type="checkbox"/> Work days <input type="checkbox"/> Other volunteering <input type="checkbox"/> Other <input type="checkbox"/> Not applicable

	<p>4. What, if any, changes would improve your experience with your CSA?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lower cost of share <input type="checkbox"/> More choice in produce <input type="checkbox"/> More produce <input type="checkbox"/> Less produce <input type="checkbox"/> More flexible pick-up schedule <input type="checkbox"/> Closer pick-up site <input type="checkbox"/> Fewer time obligations <input type="checkbox"/> More resources on how to prepare and preserve produce <input type="checkbox"/> More on-farm activities/opportunities for involvement <input type="checkbox"/> Other <input type="checkbox"/> Not applicable
<p>Please rank your response, with the number “1” as the most important factor.</p>	<p>5. Why did you purchase your CSA share?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fresh, high quality produce <input type="checkbox"/> Ease of obtaining produce <input type="checkbox"/> Variety of produce <input type="checkbox"/> Lower cost than comparable produce at other outlets <input type="checkbox"/> Build community/meet others sharing similar interests <input type="checkbox"/> Concern for the environment <input type="checkbox"/> Support local farmers/economy <input type="checkbox"/> Other <p>6. Why did you choose your particular CSA farm?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Variety of produce <input type="checkbox"/> Cost of share <input type="checkbox"/> Convenience of pick-up locations <input type="checkbox"/> Recommended by a friend <input type="checkbox"/> Farm activities and resources (i.e. farm visits, recipe books, potlucks, etc.) <input type="checkbox"/> Other
<p>Please select only one option for each of the questions below.</p>	<p>7. Where do you most frequently shop for food to supplement your CSA share?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Supermarket <input type="checkbox"/> Co-op

	<p><input type="checkbox"/> Natural foods store <input type="checkbox"/> Farmers' market <input type="checkbox"/> Neighborhood market/corner market <input type="checkbox"/> Other <input type="checkbox"/> Not applicable</p> <p>8. Is this outlet closer to, or farther from, your home than your CSA pick-up point?</p> <p><input type="checkbox"/> Closer <input type="checkbox"/> Farther <input type="checkbox"/> About the same <input type="checkbox"/> Don't know <input type="checkbox"/> Not applicable</p>
	<p>9. What is your highest level of education?</p> <p><input type="checkbox"/> Less than high school diploma <input type="checkbox"/> High school diploma <input type="checkbox"/> Technical or associate degree <input type="checkbox"/> Some college <input type="checkbox"/> 4-year college degree <input type="checkbox"/> Graduate degree</p>
	<p>10. What is your approximate annual household income?</p> <p><input type="checkbox"/> Under \$25,000 <input type="checkbox"/> \$25,000- 49,999 <input type="checkbox"/> \$50,000- 74,999 <input type="checkbox"/> \$75,000- 100,000 <input type="checkbox"/> Over \$100,000</p>

Appendix C
Interview Questions

<i>Interviewee</i>	<i>Question</i>
Farmer	<ol style="list-style-type: none"> 1. How long have you been farming on your current land? Do you have any farming experience elsewhere? 2. What motivated you to adopt the CSA model? 3. Do you sell your products through any outlets other than CSA? If so, how does your experience in these outlets compare? 4. What are some of the concerns or challenges you have faced with your CSA operation? 5. Is there anything you think could be changed about the CSA system in Madison or your CSA in particular that would make it more successful? 6. Can you describe your relationship with your members? 7. Can you describe your relationship with MACSAC? 8. How do you think the [insurance rebate program, farmers' market] has affected either your personal experience as a CSA grower, or the Madison area CSA system as a whole? 9. Is there anything else that you feel has played an important role in the success of your CSA operation or the CSA system in the Madison area in general? 10. What do you view as the limitations of CSA, either physically or conceptually?
Member	<ol style="list-style-type: none"> 1. How long have you been a CSA member? 2. Why are you a CSA member? 3. Can you describe your relationship and interaction with the farm

	<p>that you belong to?</p> <p>4. What could be changed to improve your CSA experience?</p> <p>5. Will you sign up again next year? Why?</p> <p>6. Has MACSAC been a part of your CSA experience? How?</p> <p>7. About 6,000 CSA boxes are delivered to the Madison area each week during the growing season. Why do you think this system has reached such a large scale and can continue to sustain itself on such a large scale?</p> <p>8. Have you been a part of a CSA in any community other than Madison? If so, do you notice any differences in the CSA system in Madison?</p>
<p>Madison Area CSA Coalition (MACSAC)</p>	<p>1. What are the goals of your organization?</p> <p>2. When and how was MACSAC formed?</p> <p>3. How do you feel that MACSAC is contributing to the CSA system in this area?</p> <p>4. Can you describe the relationship MACSAC has with CSA farmers and members in this area?</p> <p>5. What are the limitations of your organization or its programs?</p> <p>6. What do you see as the limitations of CSA in general?</p> <p>7. Do you know of any similar programs in other areas of the state?</p> <p>8. Can you describe the role of MACSAC in the insurance rebate program?</p> <p>9. Do you see any other influential factors in sustaining the CSA system in this area?</p>

<p>Center for Integrated Agricultural Systems (CIAS)</p>	<ol style="list-style-type: none">1. What is the mission/goal of CIAS and the work that you do there?2. What role does CIAS play in the CSA system in this area?3. What do you see as the limitations of CSA?4. Why is the CSA system so successful in this area?5. How does this area compare to the national scene?6. What are some challenges you've had in your programs/operations?7. I understand that you were involved in the formation of MACSAC. Can you speak about the motivations for its establishment and how it actually came together?
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Appendix D
Figures

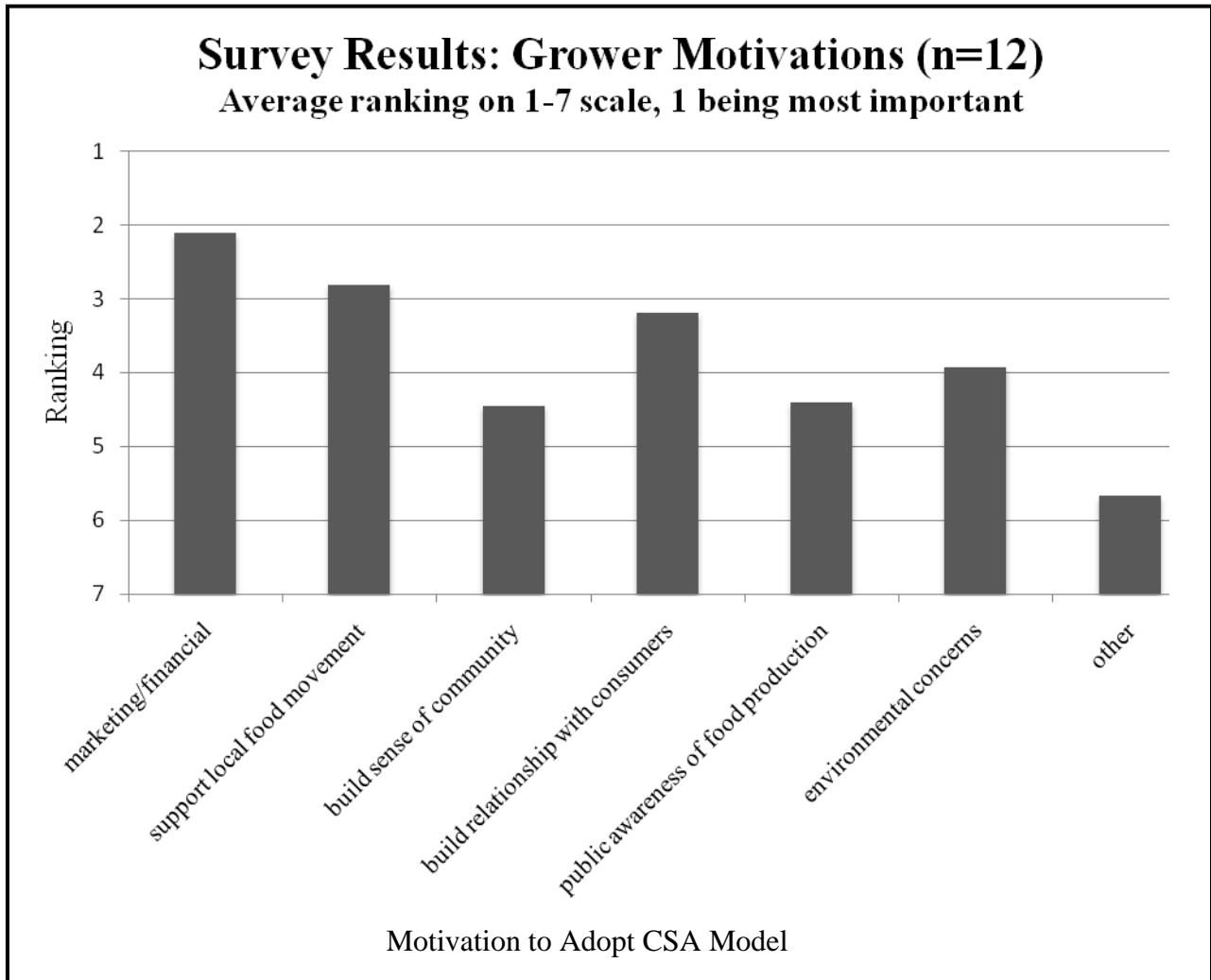


Figure 1

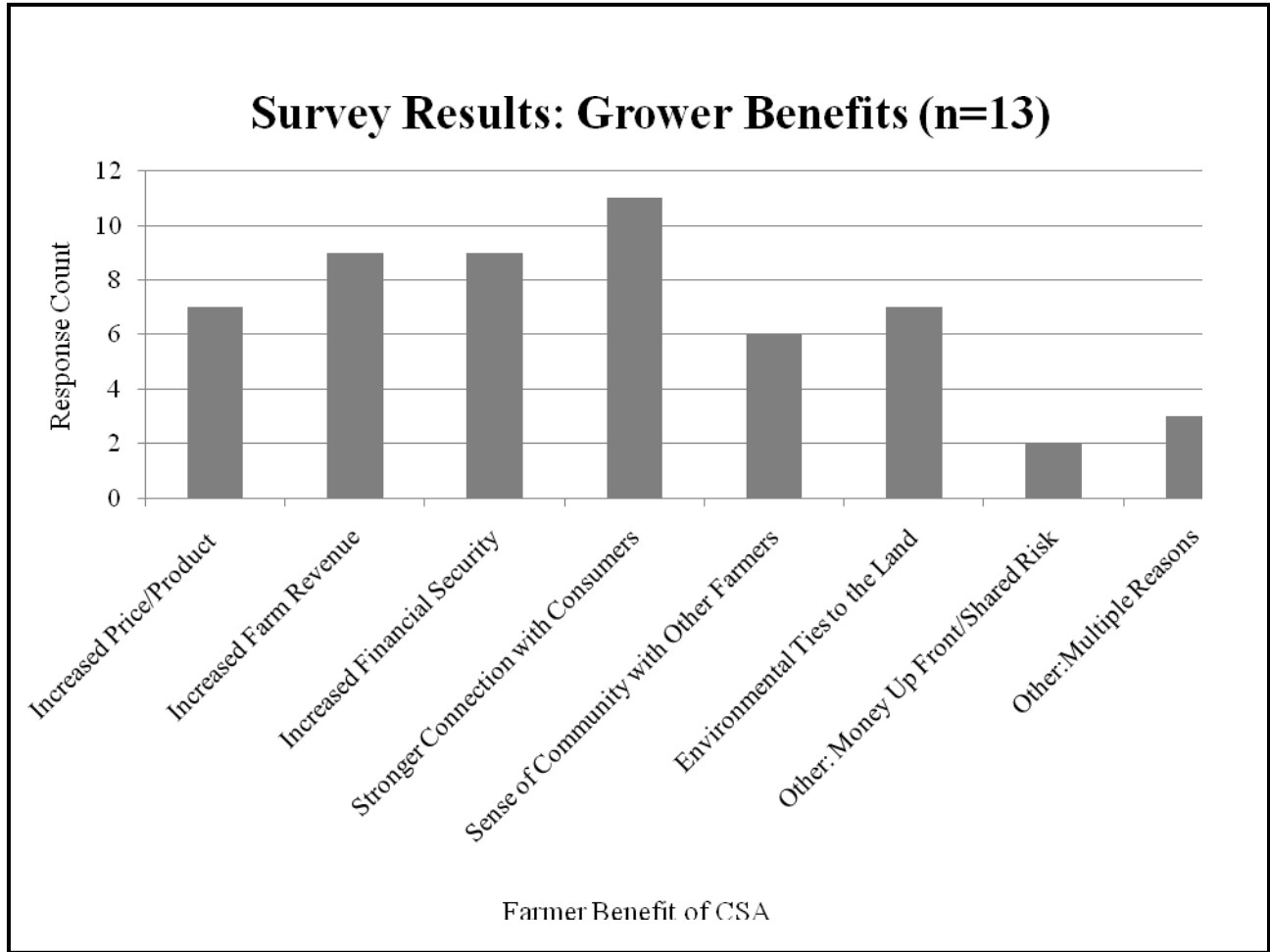


Figure 2

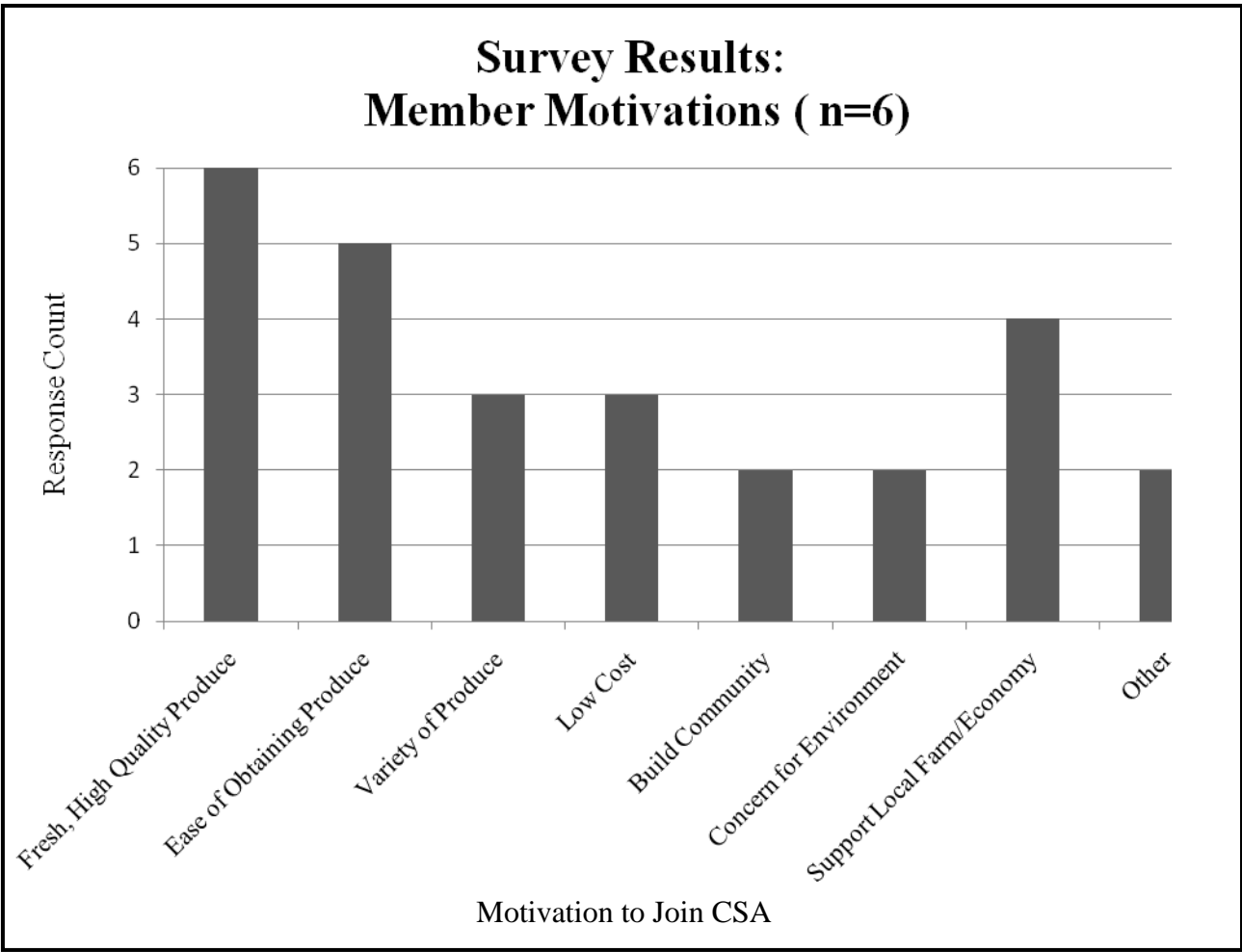


Figure 3

Survey Results: Grower Involvement Offerings to CSA Members (n=13)

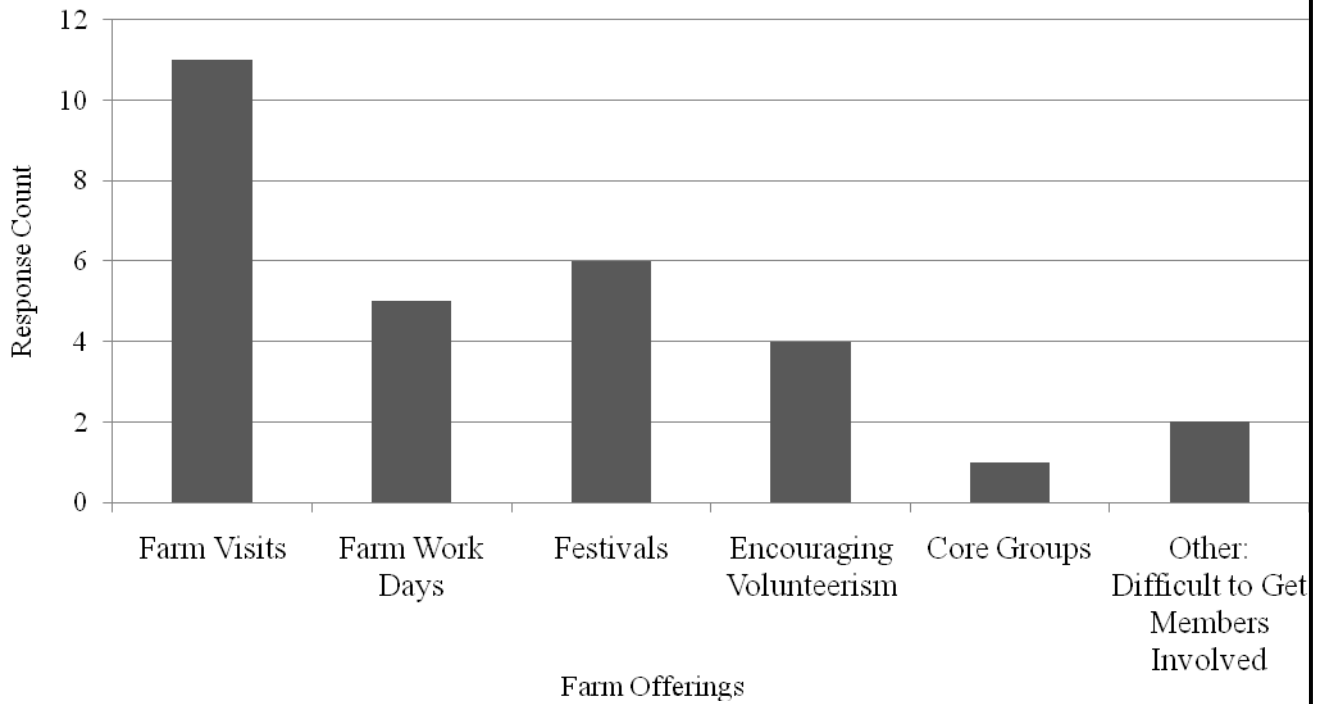


Figure 4

Von Thünen Model

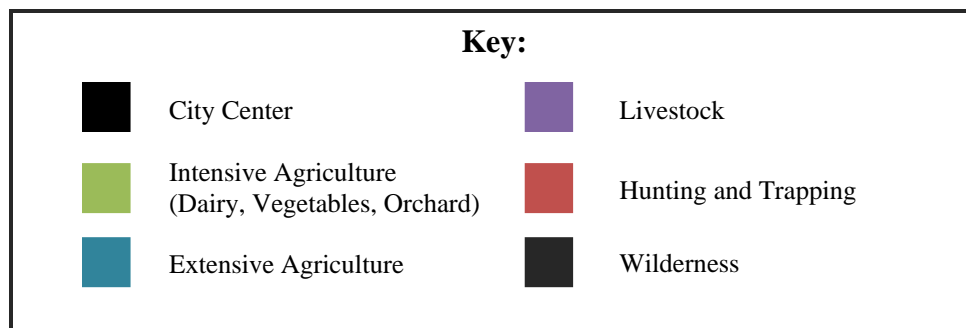
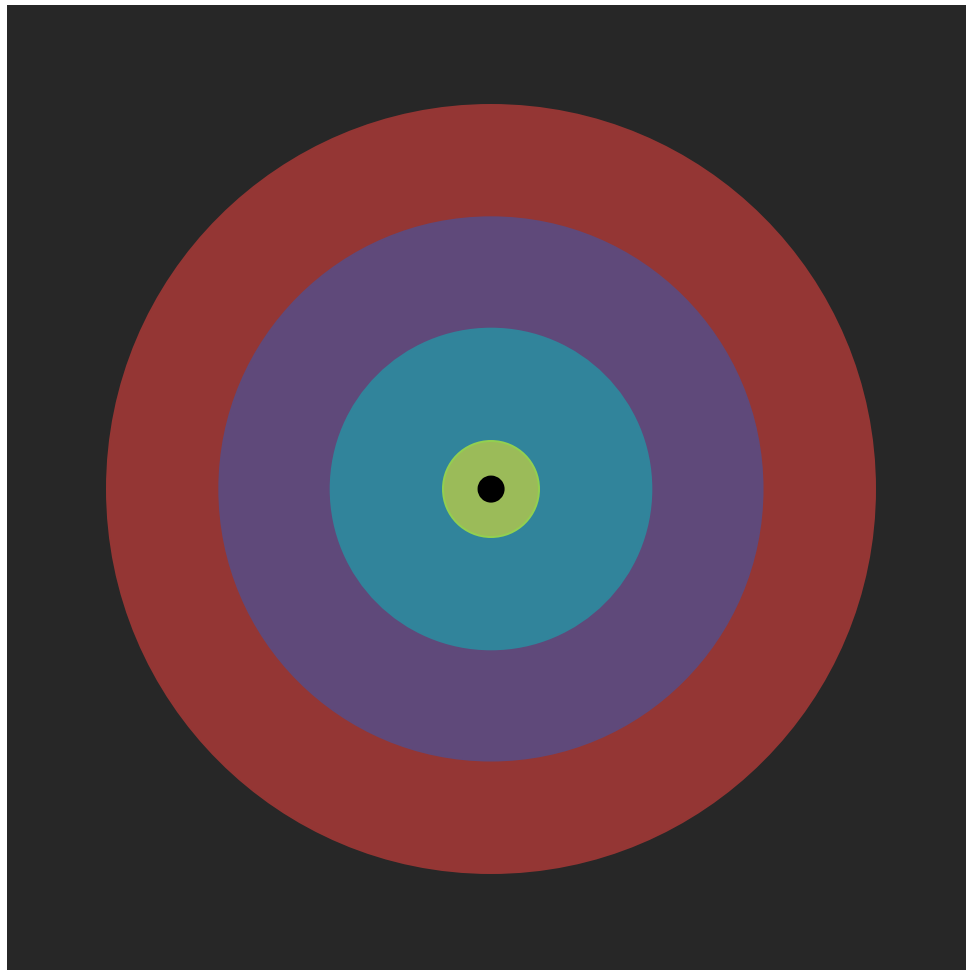


Figure 5
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Appendix E
Tables

	Percent Population 25+ with Bachelor's Degree or Higher (2007)
Madison	51%
Wisconsin	25.5%
U.S.	27.4%

Table 1

	Median Household Income (2007)
Madison	\$60,794
Wisconsin	\$50,567
U.S.	\$50,740

Table 2

Appendix F
Maps

Map 1:
Factors Influencing CSA Farm Distribution in Wisconsin

Map 2:
Community Supported Agriculture (CSA) in
Madison, WI

Factors Influencing Community Supported Agriculture Farm Distribution in Wisconsin 2009

This map demonstrates that social factors such as population, income, and education are more influential in Wisconsin CSA farm distribution than physical factors such as soil productivity.

Map Features

Soil productivity is indicated by percent soil **organic matter** (decomposing plant and animal material), which functions in many ways to promote crop growth. The average soil contains about 5% organic matter.¹

Education, associated with knowledge of alternative agricultural systems, is expressed as percent of the population aged 25+ holding a bachelor's degree.

Per-capita income is used to demonstrate populations with relatively high discretionary income.

Population indicates the available consumer base.

Sources

Farms: Local Harvest, MACSAC (2009)
Income, Education, Population: Census Bureau (ACS demographic estimates 2005-08)
Soil: Soil Data Mart (1994)
Text: Environmental Protection Agency, SARE (Sustainable Agriculture Research and Education) (2009)

