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Community Supported Agriculture (CSA) in and around California's Central Valley:

Farm and Farmer Characteristics, Farm-Member Relationships, Economic Viability, Information Sources, and Emerging Issues

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Executive Summary

Community Supported Agriculture (CSA) is a growing form of direct marketing connecting farmers to consumers. The number of CSAs within California has steadily and rapidly increased since the early 1990s. The purpose of this report is to explore and document the characteristics of, and innovations in, CSA production and marketing in California's agriculturally focused Central Valley and surrounding foothills. The information contained within this document is intended to provide farmers, customers, researchers, UC Cooperative Extension agents, and farm advocates with a description of important characteristics of CSA — social, economic, and environmental — within California's Central Valley and surrounding foothills, and to briefly share farmers' reflections on their experiences.

The report includes our findings from 54 in-depth interviews and 48 survey responses from CSA farmers and two in-depth interviews with CSA organizers (non-farmers organizing CSAs for two or more farms) in the study site. Data collection and analysis was conducted over 16 months. This report provides a summary of much of the data gathered.

The report has seven parts. The first explores the recent expansion of CSAs in the country, the state, and the study area. The second explains the study, including the study site, our sample, methodology, and approach to data analysis. The third part contains our findings about CSA farms and farmers. The fourth section looks at farm-member relationships, including the composition of the CSA box, membership numbers and retention, and ways that CSA farmers and organizers seek to build relationships with their members. The fifth part looks at the economic viability of CSA farms. The sixth section presents farmers' views of various information sources and the advice they would give to farmers wanting to start CSAs. The final section is our conclusions.

All the CSAs in our sample differ in practice from the original CSA model popularized in the United States by Robyn Van En in the 1980s. Farmers have adapted CSA to suit farm-level characteristics and ambitions, food products that are less common in CSA (such as meat, dairy, and grain), and regional conditions. Here we define CSA as farm-based operations that have regular-and-direct sales of local farm goods to households. They fall into two overarching categories:

1. Box Model, which has three subtypes
 - a. Single-Farm Box CSAs
 - b. Collaborative Box CSAs
 - c. Farm-Linked Aggregator CSAs
2. Farm Membership/Share Model

Farmers chose the CSA model for a number of reasons: love of farming and the land; commitment to provide fresh, healthy food; desire to strengthen the connection between people, food and the land; and an intense desire to positively change societal and environmental relationships. Most of the farmers work with one or more farm partners. In addition to farm partners, most of the farms rely on additional hired labor and/or apprentices/interns. The farmers and their partners are younger, more educated, and less reliant on off-farm income than the average California and U.S. farmer. As a population, there is more participation by women in CSA than in the larger population of California farmers. As a whole, CSA farmers are concerned with agroecological farming methods, including cultivation of agrobiodiversity, use of green and/or animal manures for fertilization, integration of livestock, and reducing off-farm resource use generally. The majority of the farms use organic methods; most are either certified organic or the farmers report that their practices meet organic standards or are "beyond organic" even if not certified.

The majority of the farms offer a weekly box, available year-round, most commonly filled with vegetables. Boxes are sometimes filled with add-on foods produced on or off the farm, including fruit, eggs, flowers, grains, processed products (like preserves), and meat. There are a few CSAs that specialize in meat, dairy, or grains, with boxes reflecting these production foci. Minimum payment periods range widely; some farms require no minimum payment, while others require the customer to pay for the entire season up front. Membership size also varies by farm; the smallest CSAs have fewer than 20 members, and the largest CSAs have over 1,000 members. From 2005 to 2008 all the farms in existence experienced a growth in, or unchanged, membership numbers. From 2008 to 2009, some CSAs experienced a loss in membership numbers, attributed by many to the economic recession. Even with these losses, the total number of members of CSAs in the region grew during this period. Farmers identify membership turnover and retention as a major concern, and give different explanations for why they lost members and approaches to maintain members.

CSA is a crucial direct marketing channel for small- and medium-scale farmers who participate. The majority of farmers use the CSA arrangement as only one market channel; farmers' markets, you-picks, wholesale, and restaurants are other popular sales outlets. Larger farms, in terms of gross sales, are less reliant on the CSA component of their sales. There is also a positive relationship between size of farm and farmers paying themselves a formal salary, and between farm size and reported profitability of the farming operation. Yet for many farmers, a good salary and profitability is not the only way they value their work. Many farmers express that the tangible and intangible benefits they receive from farming are as important, if not more important, than monetary returns. Even if the farms are not able to accumulate large amounts of capital, CSAs demonstrate strong economic vitality in terms of gross farm sales. CSAs in our study had, on average, \$9,084 in gross sales per acre. This is much higher than California agriculture as a whole, at \$1,336 in gross sales per acre, and California organic vegetable production, at \$2,087.

Farmers running CSAs utilize many information sources for their operations. Farmers rely most on those with direct farming experience (other farmer and farmworkers) and secondarily on specialists (such as UC Cooperative Extension agents, agricultural consultants, conservation agents, and input dealers). Farmers also note the importance of written material, and especially resources on the Internet. CSA farmers' most valuable lessons fall into three major categories: member and community relations, production and the CSA box, and CSA management. CSA farmers' advice for new and beginning farmers falls into five categories: starting out, attitude towards farming, relationship to the community, learning how to farm and run a CSA, and resources needed to get started. The most common piece of advice from farmers to new CSA farmers was to start small.

CSA is a very bright spot in the current economy. It meets rapidly increasing demand for a localized food system and the need for environmentally conscious food production. While highly diverse in many of their specific characteristics, CSAs are simultaneously powerful economic engines in terms of gross sales per acre and employment, arrangements that support strong environmental stewardship, and ways of building meaningful connections between farmers and eaters.

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The recent expansion of Community Supported Agriculture

Community Supported Agriculture (CSA) refers to a direct relationship between farmers and eaters that is growing in popularity. Traditionally in CSA, “consumers buy products directly from the farm, and pay for them in advance. Farmers do their best to produce sufficient quantities, quality of food and variety to meet consumers’ needs” (Junge et al. 1995: 1—2). In return for paying up front, CSA members “receive shares in the farm’s bounty throughout the growing season, as well as satisfaction gained from reconnecting to the land. Members also share in risks, including poor harvest due to unfavorable weather or pests” (USDA definition, cited in Adam 2006: 2). Robyn Van En, the founder of CSA in the U.S. in 1985, reflected in 1996 on her original goals: “local food for local people at a fair price to them and a fair wage to the growers. The members’ annual commitment to pay their share of the production costs and to share the risk as well as the bounty set this apart from any other agricultural initiative” (Henderson and Van En 2009: xiv). After careful consideration, Van En and others involved in the first U.S. CSA settled on calling it “CSA to ASC” — Community Supported Agriculture to Agriculturally Supported Communities — since this was the whole message (Henderson and Van En 2009). Although “CSA to ASC” symbolized the mutual, back-and-forth nature of the relationship, CSA¹ has become the common name for these programs since the founding of the concept.

Since its origins in Japan and Switzerland in the 1970s, CSA has been modified as it has been practiced in different regions of the world, taking on variations in different locales. In these various forms, CSA is an important social invention created in industrialized countries to address numerous problems at the nexus of agriculture, environment, and society, including a decreasing proportion of the “food dollar” going to farmers, loss of small- and medium-scale farms, financial barriers to entry for potential new farmers, large-scale food scares from foodborne illness, resource depletion, and environmental degradation. CSAs, together with farmers’ markets, farm stands, you-pick farms, agri-tourism, etc., are strategies that help small- and medium-scale farms to persist within the context of a highly concentrated food system in which it difficult for small- and medium-scale farms to compete at the wholesale level. These strategies constitute a “civic agriculture” that seeks to re-embed agricultural production in more positive and sustainable social and ecological relationships and fulfills the non-farm-based populations’ increasing desire to reconnect with food (Hinrichs 2000; Kloppenburg et al. 1996; Lyson 2004). Those fashioning a community food systems movement through these and other efforts often stand in opposition to what many call the corporate food regime (McMichael 2009). As such, “a key concept of early CSA organizers was to assert local control over a food system that was growing increasingly consolidated and remote” (Adam 2006: 3).

The first two CSAs in the U.S. formed in the mid-1980s on the East Coast (Adam 2006). The first CSAs in California started in the early 1990s. By 1996, the number of CSAs nationally had grown to 635 (Bio-Dynamic Farming and Gardening Association, 1997, cited in Wells et al. 1999). By 2004, the number had nearly tripled to 1,700 CSA farms (McFadden 2004). The local food movement of the first decade of the 2000s saw CSA numbers grow rapidly, especially between 2007 to 2009 (Figure 1).² Although figures vary, an estimated 3,637 CSAs existed in the U.S. by 2009 (Galt in

¹ While grammatically incorrect, most people familiar with CSA refer to individual CSA operations as “a CSA” and multiple operations as “CSAs.” We adopt this phrasing here.

² LocalHarvest is an organization that connects consumers and farmers. It has a website on which farmers can list their CSA and its characteristics. Of the national data sets that allow us to count CSAs, its national CSA count is likely the closest to the actual number (Galt in press).

press). This near doubling of CSA numbers from 2004 to 2009 shows that CSA is an increasingly popular model for farmers and those they feed.

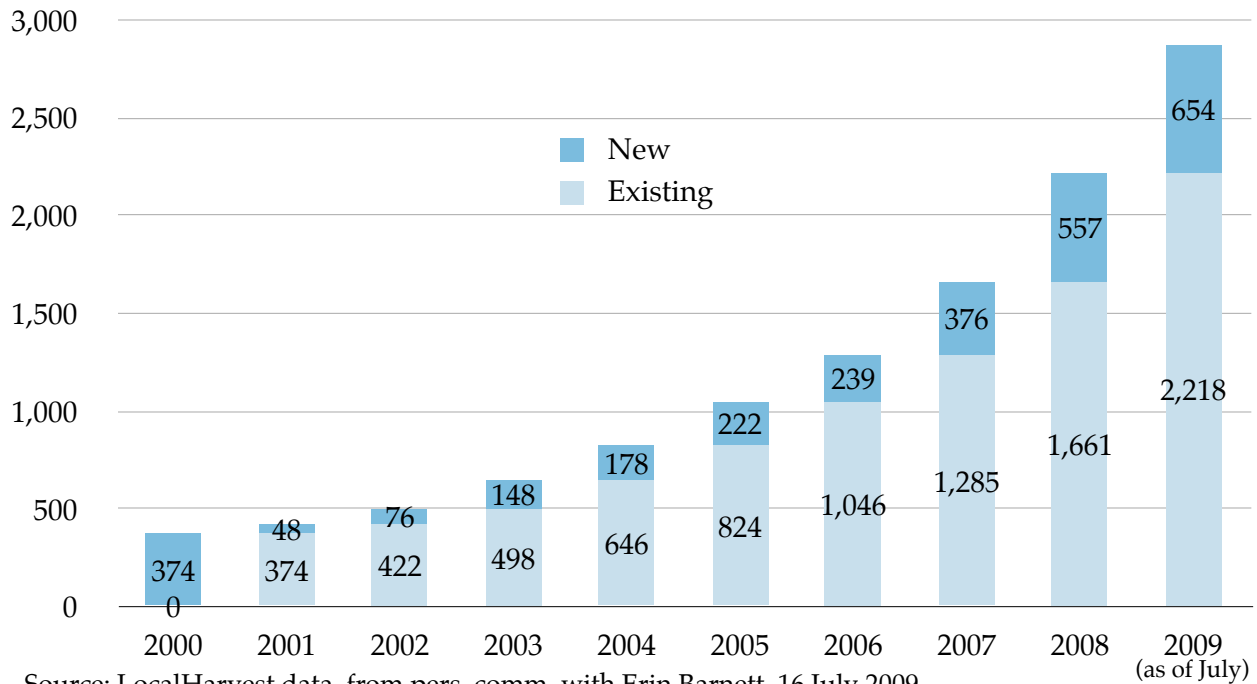


Figure 1: CSA operations listed on the LocalHarvest website, by year, 2000-2009

We know little about the farmers and farms involved and the CSA movement’s evolution in recent years. Our research focused on California’s Central Valley and surrounding foothills because coastal CSAs have been researched (Perez 2004; Perez et al. 2003) and because we wanted to learn about adaptations to different local contexts, particularly in the various areas of the Central Valley, since many of its characteristics — relatively low incomes, higher unemployment rates, more conservative politics — are different from the coast and most other regions where CSA is popular (Schnell 2007). The goals of our research include: providing a description of important characteristics of CSA — social, economic, and environmental — within California’s Central Valley and surrounding foothills; sharing farmers’ reflections on their experiences, including their philosophies, successes, challenges, and learning experiences; gathering farmers’ ideas and advice for those wanting to start CSAs and to inform future research related to CSAs; and informing policymakers, non-governmental organizations, researchers, and others interested in CSA.

Though much popular literature has discussed CSAs, detailed analysis of CSA from a research approach that integrates qualitative and quantitative social science methods has been rare. This report is the first in a series of publications that aim to provide a comprehensive quantitative and qualitative analysis of CSAs in California’s Central Valley and surrounding foothills. It focuses on four aspects of CSA: (1) the characteristics of the farms and farmers involved, (2) the relationships between farms and their members, (3) economic viability, and (4) information sources and farmers’ advice for starting CSA farmers. Our treatment of most issues is necessarily brief. Future publications will delve into greater analysis of our study’s data and its context, including more detailed analyses of the relationships between multiple characteristics, such as geographic region and cooperation, farm size and profitability, and more. For updates on these future publications, please continue to check [Ryan Galt’s website](#).

Study details: study site, sample, methodology, and data analysis

This report comes from a study of CSAs within California’s Central Valley — from Redding to Bakersfield — and its surrounding foothills (Figure 2). The Central Valley is a large, flat alluvial valley in the central part of the state, running about 450 miles from north to south, with widths ranging from 40 to 60 miles. It is surrounded by mountain ranges on all sides, with the only outlet being the Sacramento/San Joaquin Delta that connects to the San Francisco Bay. Its Mediterranean climate of hot, dry summers and mild, wet winters creates a year-round growing season. This combined with its extensive irrigation infrastructure, fertile soil, and early agrarian capitalism make the Central Valley world-renowned for agricultural production (Jelinek 1979; Walker 2004).

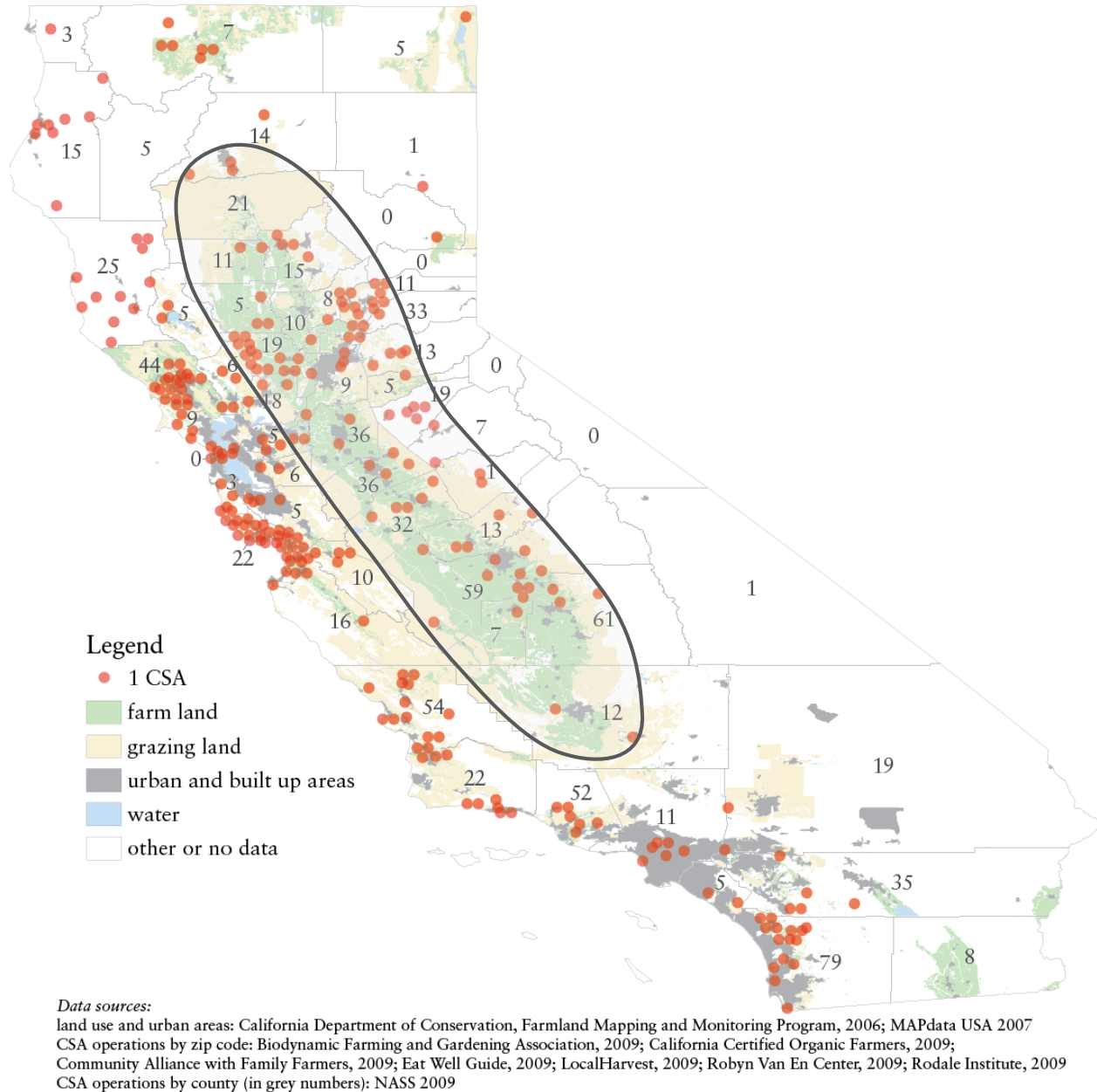


Figure 2: CSAs in California and within the Central Valley and surrounding foothills region, as listed on websites, 2009

An initial list of CSA operations in California was compiled from all websites featuring CSAs that could be found.³ This compiled list showed that 276 CSAs existed in California in 2009 (Galt in press). CSAs thus make up approximately 0.3 percent of California's 81,033 farms (National Agricultural Statistics Service 2009a), yet California has the largest number of CSAs out of any U.S. state (Galt in press).

Once the list of California CSAs was compiled, a Geographic Information System (GIS) was used to determine whether they were located within the study region. We contacted all 101 CSAs we thought to exist within the study site, and we augmented this list with snowball sampling by asking interviewees about other CSA operations. This added 21 CSAs to the potential participants.

Of these 122 farms, we discovered that 28 no longer appeared to be operating as CSAs, as their email, website, and/or phone numbers no longer worked. We call these "ghost CSAs" — they are present on online lists of CSAs, but no longer operate.⁴ Seven other CSAs turned out to be CSA contributors (without primary responsibility for shares), and 13 were never really CSAs with membership or shares, or they were not directly tied to agricultural production. Removing the ghost CSAs, CSA contributors, and non-CSAs from the CSA population, we consider our survey population to be 74 CSAs. Of the population of 74 CSAs, 54 CSA farmers and 2 CSA organizers participated in the study, making for a response rate of 76 percent. In most cases we interviewed the farmers directly responsible for the CSA operation, although in two cases we interviewed CSA organizers for CSAs where there was not one farm operation in charge of the CSA. In both of these cases, the CSA organizers were non-farmers who coordinated with two or more farms in the running of the CSA. Although common in many areas, CSAs organized by non-farmer organizers are relatively rare in California.

Primary data collection occurred from January 2010 to April 2011 and involved two components: an interview composed mostly of open-ended questions and a survey done through an online questionnaire. With our questions we cast the net broad, and deep in some areas, because of the general lack of comprehensive studies of CSAs. The open-ended nature of many of the questions allowed us to identify specific issues of concern to study participants that we could not have predicted, although these are not a specific focus of this report.

Each study participant was interviewed, with most interviews occurring on their farms. All were sent the link to the questionnaire via email. Due to slight differences in completion rates, we have interview data from 54 CSA farmers and two CSA organizers and questionnaire data from 48 of the 54 interviewed CSA farmers. We use the qualitative data from farmers who did not complete the questionnaire, but are unable to include these farms in most of the quantitative data that we rely on heavily in this report. In discussing this data, we often compare it to CSAs nationwide and organic and conventional agriculture in California. The Appendix sets the data in greater comparative context by presenting data on a number of CSA and farm characteristics for four other types of

³ These were the Biodynamic Farming and Gardening Association (2009), California Certified Organic Farmers (2009), Community Alliance with Family Farmers (2009), Eat Well Guide (2009), LocalHarvest (2009), the Robyn Van En Center (2009), and Rodale Institute (2009). See Galt (in press) for details.

⁴ For slightly more than half (15) of the ghost CSAs we do not know what happened, as no definite statement of CSA closure could be found and our contact attempts failed. For the other 13 ghost CSAs, we found that some left farming altogether, some are still farming without CSAs, and one moved out of state and continues to farm.

farming: CSAs nationwide, organic agriculture in California, California agriculture as a whole, and U.S. agriculture.

Qualitative data were analyzed through coding responses to specific questions. We present this below through illustrative quotes, percentages, and detailed tables of responses. Quantitative data analysis proceeded through creating summary statistics of various characteristics, with some bivariate statistical analysis.

Before presenting results, we want to clarify our word use. When using phrases like “Half of CSA farms grew 30 or more vegetables,” we are referring to *CSAs that participated in the study*. We want to emphasize that we do not believe that CSAs in and around California’s Central Valley are somehow representative of all California CSAs, CSAs in the U.S., or CSAs worldwide, as we see considerable variation at all of these scales.

CSA farms and CSA farmers

What is a CSA? Survey-based studies (e.g., Lass et al. 2003) implicitly assume that CSAs listing themselves on the Robyn Van En Center’s (2011) CSA list or that of LocalHarvest (2011) share a common understanding of CSAs with each other and with the researchers, thus making CSA a coherent analytical category. Through our experiences on many farms and during in-depth discussions allowed by the interviews, we learned that this is a problematic assumption. Some operations that list themselves on these sites are not linked to farms, but are retailers instead (what we call Non-Farm Aggregators below).⁵ As another example, one had just a handful of customers who do not regularly purchase the farm’s goods. This highlights one of our key findings: because of this diversity, drawing the line around *what is* a CSA and *what it is not* a CSA is difficult. The lack of a commonly understood definition of CSA was also a problem in the 2007 Census of Agriculture, which led to considerable overcounting of CSAs (Galt in press). Although expedient, a survey method by itself will likely not detect the diversity of relationships that the term CSA is now used to describe.

We found that CSAs take a variety of forms in the study site. CSA types across different regions appear to have a relatively distinct character developed within specific contexts, so typologies developed elsewhere do not necessarily fit the study site. For example, Adam (2006) distinguishes between *subscription CSAs* (farmer-driven), in which the farmer makes most of the management decisions and farm work is not required of subscribers, and *shareholder CSAs* (customer-driven), which have a core group of members that organize and coordinate membership and “hires” the farmer (see also Lyson 2004). Dyczewski and Kantor (1999) note that the former is more common on the West Coast, and the latter on the East Coast. Consistent with that portrayal, all the CSAs in our sample are farmer-driven CSAs and most with “hands off” style subscriptions (Hudson 2005: 12), although these operations vary considerably.

That these very different arrangements are all called “CSA” by their operators demonstrates a central finding of our study: a great deal of innovation is occurring in how farmers and members are connecting in the Central Valley and surrounding foothills. Farmers have adapted CSA considerably for various reasons: farm-level characteristics and ambitions, food products that are less common in CSA, and regional conditions. Sue Temple, one of the first CSA farmers in California, spoke to the importance of farmers’ preferences and contexts in the 1993 CSA conference held at UC Davis, “Some of us want to keep things small with lots of personal contact, while others like going out to

⁵ A Facebook page run by a CSA farmer in Ohio seeks to point out these “Fake CSAs” (Owsley-Goodman 2010).

large institutions with these ideas. ‘There is room for all of us to find our niche and to use the CSA concept at different levels in different ways’ (Cohn 1993: 22). Some of the innovation comes from farmers fitting new products, especially meat and dairy, into CSA; their special characteristics, especially that processing is often needed, do not fit easily into CSA practices that evolved around vegetables and fruit commonly sold without processing. Other innovations are related to efforts of bringing CSA to a population that is not familiar with the concept or to those that cannot afford the large upfront cost often associated with being a member of a CSA. We also see some of these CSA innovations as conventionalization, whereby alternative forms of production-consumption relations come to mimic conventional forms due to the pressures of agrarian capitalism (Guthman 2004). In other words, because CSA farms have to conform somewhat to the political economic situation of California agriculture, especially high land values, and, to a lesser extent, the ideology of growth, some CSAs are taking on characteristics of “industrial organic” agriculture.

What kinds of CSAs exist? A typology for the region

All self-identifying CSAs in our sample differ in practice from the original conception of CSA in the U.S. (cf. Henderson and Van En 2009). That is, none have formal core groups of members that directly decide what to produce, none have mandatory community work days, most do not require members to visit the farm (although most have member events at their farms), many do not require a long minimum payment period, and many do not actually share much of the production risk with their members (they might supplement their box to make up for times of lower yields, for example). However, all the CSAs we include in our analysis have something in common with the original conception of CSA: *they are farm-based and have regular-and-direct sales of local farm goods to households*. This is the definition we use for CSA in our study.

The vast majority of CSAs maintain a regular relationship with members by requiring formal commitment through upfront payment or paying for farm membership (see below). However, 20 percent of the CSAs in our sample do not have a minimum payment period, and are instead “pay as you go.” This is a reflection of some farmers’ desire to extend membership to a broader population, including those that may be hesitant or unable to commit to an extended payment period. It also reflects the reality for many meat CSAs that they are often unable to know what will be available at any given time because of the variability of production, including both individual cuts of meats and type of meats available (chicken, goat, beef, lamb, or pork).⁶ As a result, meat CSAs rely on committed customers who agree to buy some amount of some variety of meat, typically on a monthly basis. This regularity of sales, even without a formal, lengthy commitment, differs from farmers’ market sales but is a hallmark of CSA in the region.

Although we use a fairly open definition that reflects the substantial variation of CSA in the study site, we draw a line between Farm-Linked Aggregator CSAs, which we include in our analysis of CSA, and Non-Farm Aggregators, which we do not consider to be CSAs. Non-Farm Aggregators are retailers that purchase all of their produce from farms that are not directly connected with their business, or from the wholesale market; they do not produce any of their food themselves.

⁶ This insecurity around product availability is a function of the three minimum steps required in meat production, from maturation to slaughter to butcher. In California, very few slaughter and butcher facilities serve small-scale producers. Consequently, small-scale meat producers doing CSA have to compete with large-scale ones for the very limited number of processing facilities, and have greater variability in their animals’ maturation because they raise their animals mostly on pasture. These two compounding factors can come together to create scheduling difficulties. For example, during the summer, ranchers may need to plan months in advance to schedule a slaughtering but their animals might not be ready when the scheduled date arrives.

Although we draw this distinction to exclude Non-Farm Aggregators from our analysis, many Non-Farm Aggregators call themselves CSA and are listed on online CSA listing websites.

Though we found that each CSA has its own nuances, we include two types in our analysis. The first type, the Box Model, has three subtypes that are relatively common.

1. Box Model
 - a. Single-Farm Box CSAs
 - b. Collaborative Box CSAs
 - c. Farm-Linked Aggregator CSAs
2. Farm Membership/Share Model

The **Box Model** is the most common type of CSA and is basically a farm subscription, although as a type it exhibits great internal diversity. Members pay up front for a set amount of time. The minimum payment period varies, from week to week, to monthly, to quarterly, to a full season (six months); in our sample, the average minimum payment time is eight weeks, while the median⁷ is a month. CSAs using the Box Model use different distribution systems, including on-farm pick up, neighborhood or institutional drop-off sites, and door-to-door delivery. Some CSAs have standard boxes in which every member gets the same items (Figure 3), while other CSAs allow members to customize their boxes by size and/or item. There are three subtypes of the Box Model: Single-Farm Box CSAs, Multi-Farm Box CSAs, and Farm-Linked Aggregator CSAs.



Figure 3: A CSA box of fresh vegetables, late spring

Single-Farm Box CSAs produce the majority of the foods used in their box, although a large portion of these farmers reported “buying in” some produce from other farms to supplement their shares (see also Stochlic and Shelley 2004). Many of these CSAs have developed relationships with other farms in their area, and offer some of the local farms’ produce either as occasional or regular

⁷ The median refers to the number in the middle of the distribution. When averages are affected by very large or very small numbers in the data, the median helps illustrate what is typical.

additions, or as optional “add-ons” for purchasing, such as additional shares of fruit, meat, eggs, flour, honey, cheese, etc., that come at an additional cost to the original box.

Collaborative Box CSAs, also called “bundled CSA” (Cantor and Stochlic 2009), consist of several farms coming together to cooperatively market their products and manage the CSA between the farms (Flora and Bregendahl 2007). This collaborative decision-making sets these CSAs apart from a Single-Farm Box CSA run by one farm that buys from other farmers and a Farm-Linked Aggregator CSA (see below).

A **Farm-Linked Aggregator CSA** is a business tightly linked to a single farm that groups its own produce with a large volume of consistently purchased produce from other farms and/or the wholesale market. These combined boxes are sold in the same fashion as the two other kinds of box CSA with similar types of distribution systems. Non-Farm Aggregators, which we exclude from our analysis of CSA, grow nothing and act only as a distributor. Aggregators typically allow greater flexibility for their members; most require no upfront payment period and allow for customization of the produce in their boxes.

The **Farm Membership/Share Model** also takes a variety of forms, although they are rarer than Box Models. The most common type consists of customers paying a minimum upfront payment to become a member of the farm. That membership payment then becomes credit for use at the farm’s you-picks, farm stands, and/or at its stall at farmers’ markets. In return for the upfront payment, the customer gets a discount off of all purchases from the farm, usually between 10 to 15 percent. In a share model, members sign a contract to own a share of a farm animal. For animal products, the member owns a share of a cow, for example, and the share fee pays for the feed of the animal that they co-own. The member then has the right and obligation to purchase the product(s) from that animal.

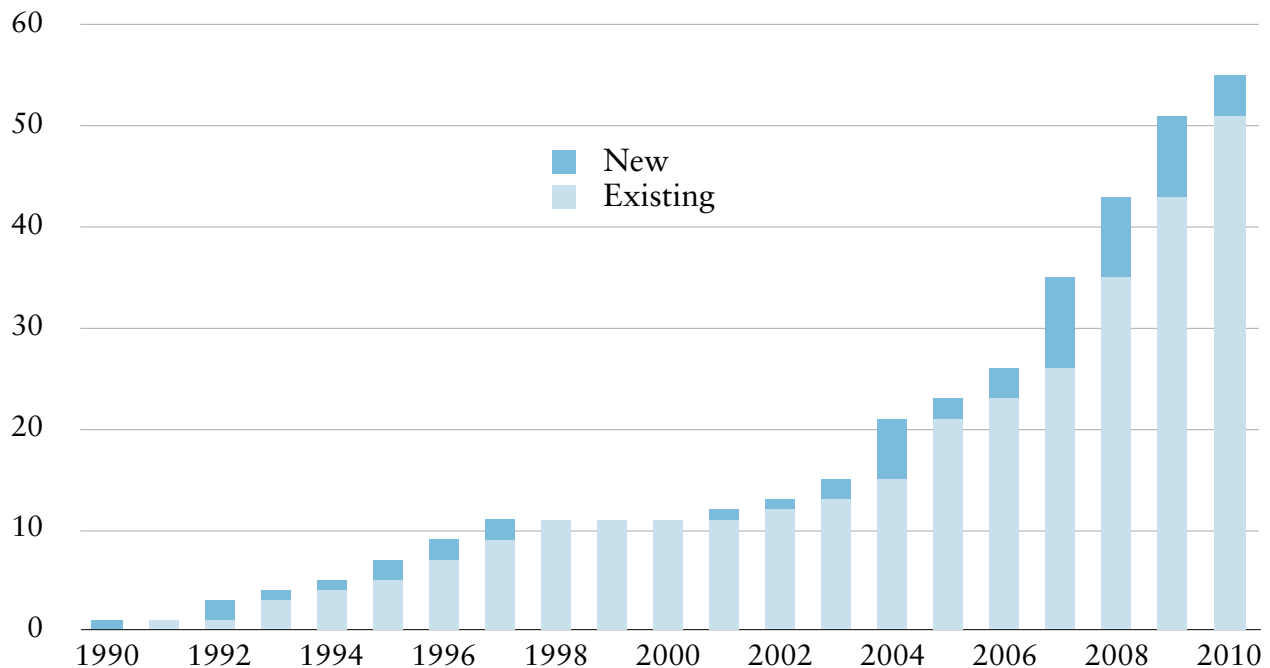


Figure 4: Cumulative number of CSAs in study sample highlighting start year, Central Valley and Surrounding Foothills, 1990-2010

When did CSAs start and where are they located?

In the study area, start years of CSAs (Figure 4) follow a pattern similar to the national trend, with relatively rapid growth after 2000. CSAs have been operating for 5.7 years on average, putting the average start year at 2004. The median number of years operating is three, showing that very many CSAs started in the last few years. Recent national media attention, especially a *Time* magazine issue with “Forget organic, eat local” on the cover and ensuing articles (Roosevelt 2003), and books by popular authors (Nabhan 2002; Pollan 2006) have helped popularize CSA. This was also echoed by many CSA farmers noting that their membership expanded rapidly when local newspapers featured their farms.

The oldest CSAs in California were founded about two decades ago in the late 1980s and early 1990s. Pioneering farmers Gloria and Stephen Decater in Colevo, Mendocino County, started their CSA in 1988, followed by a handful of others in the Capay Valley, Yolo County (Cohn 1993). Since then, new CSAs have come into existence in many areas of the state, expanding the geographic range of CSA greatly.

There is still a great deal of spatial heterogeneity in the distribution of CSA in California (Figure 2). Previous geographic analyses have noted that CSAs in the U.S. tend to be located around areas with liberal politics (Galt in press; Qazi and Selfa 2005; Schnell 2007). In California, CSAs abound in the coastal area of Northern California, especially near Santa Cruz and Sebastopol. Some specific clusters of CSA also exist in the Central Valley. The oldest cluster, and now one of the largest, is in the Capay Valley and nearby areas of Yolo County. CSAs in this region have flourished in large part because of considerable demand for fresh, local, organic produce in the San Francisco Bay Area. The Grass Valley/Nevada City area has more recently become another cluster, whereas in the 1990s there was only one CSA in the area. In contrast to these clusters, many CSAs, both established and new and in both urban and rural areas, are relatively far from other CSAs. CSAs in the San Joaquin Valley serve the area’s population, and some increasingly provision the greater Los Angeles area, much like CSAs in the Capay Valley found a large market in the Bay Area.

Who are CSA farmers and how did they become CSA farmers?

CSA farmers are extremely innovative — many have been on the forefront of civic agriculture for many years. Although CSA as a marketing strategy is a way to diversify income channels for most farms, this is not nearly the whole picture of what motivates farmers’ participation. In the interviews, when asked about the philosophy of their farm, CSA farmers expressed a love of farming and the land; feeling a great deal of satisfaction in providing fresh, healthy food to people in their communities and regions; having an educational mission in helping people better connect to their food and the land; and an intense desire to positively change societal and environmental relationships. As one farmer noted:

I’m changing the world. The world’s messed up and we’re fixing it — one family at a time, one farm at a time (Farmer 44).

CSA farmers’ philosophical foundations for changing the world are extremely diverse, much more than is usually assumed for CSAs. While most identify with the broader sustainable agriculture and food movements, the political basis for engagement with localized food systems ranges from libertarianism to socialism to evangelical Christianity to feminism and everything in between. Additionally, there is a considerable range of farmers’ priorities in relation to the CSA as a business.

Many see their CSA as helping to promote values they hold that are relatively independent of maximizing profit. For example, one newer CSA is explicitly about empowering women:

I really want to empower other women to do work in sustainable ag. Because there are so many women interns. Almost all our applications we've gotten for interns are women, probably 75 percent, but there aren't that many women farmers. I think there is a lot of interest from women but it takes a lot of confidence to start your own business to take it on. And I've noticed for myself, it's hard, there are still a lot of farm wives. It's old fashioned but there are a lot of women who are supporting their husbands and not taking any credit. So that's the philosophy behind the women's collective [CSA] we are starting. But besides that, I just totally believe in local food (Farmer 56A).

Others run their CSA to make money, although they all do so within the context of broader social and environmental commitments. A quick, back-and-forth exchange between a husband and wife when asked about their farm philosophy illustrates this well:

Farmer 39A: Make money. Send children to college.

Farmer 39B: Capitalism. You have to be greedy, grubbing capitalists. Growing the best possible quality of produce.

Farmer 39A: We always try to be the top of the market in terms of quality and price.

Farmer 39B: Most productive soil, most nutrient dense food. Find a supportive community to reward us for doing it.

Farmer 39A: We are also committed to offering our employees year-round employment in a toxic-free environment.

To complement the qualitative data from the interviews, the survey asked about demographic information for up to six farm “partners,” defined as people who are “essential players in farm management and/or operations.” We refer to all of these individuals as CSA farmers here, although their on-farm involvement differs substantially, and not all were part of the interviews. The majority (69 percent) of CSAs have more than one farm partner; the average number of partners is 2.7 (the median is 2), with the range being from one to thirteen. For our analysis here, we discuss “Farmer A” — the partner who was identified first in the survey (following Lass et al. 2003) — and when we refer to CSA farmers as a general category we pool all data on the 115 CSA partners of the farms that completed the survey. We look at CSA farmers in these two ways because, unlike the agricultural census, we did not require CSA farmers to identify a primary operator because, in our experience, it takes many hands to run a CSA farm, with responsibilities for decisions and work being truly shared in most cases.

CSA farmers tend to be comparatively young. Farmer A is 43 years old on average, and CSA farmers as a whole are 42 years old on average. This is considerably younger than the 57.1 years for the average farmer in the country (National Agricultural Statistics Service 2009b: 269), the 58.4 years that is the average in California (National Agricultural Statistics Service 2009a: 7), and the 56.3 years amongst California organic farmers (National Agricultural Statistics Service 2009a: 50). The trend of CSA farmers being younger than average has similarly been shown across the nation (Lass et al. 2003).

Women make up 35 percent of Farmer A as a group, and women make up 40 percent of the partner team on average. Of the 19 CSAs run by one person, seven are run by women. Although not directly comparable since we did not ask for a principle operator, the proportion of primary operators on California organic farms who are women is 19.2 percent (National Agricultural Statistics Service 2009a: 50). These figures suggest that a greater proportion of women are in decision-making positions in CSA than in organic agriculture in California. This is also true in comparison to U.S. agriculture (see also DeLind and Ferguson 1999; Lass et al. 2003).

CSA farmers tend to be slightly less ethnically diverse than the rest of the California farming population. The vast majority (87 percent) of CSA farmers identify as white/Caucasian, while 6 percent did not specify an ethnicity, 5 percent are Latino, 1 percent are Filipino, and 1 percent are North African/Middle Eastern. This is more diverse than CSAs nationwide, where 97 percent are white/non-Hispanic (Lass et al. 2003: 15). But it is less diverse than in California agriculture as a whole, where all farm operators (the census counts up to three per farm) are 80 percent white, 11.8 percent Latino, 4.5 percent Asian, 2.4 percent Native America, 0.5 percent African American, and 0.4 percent Native Hawaiian/Other Pacific Islander (National Agricultural Statistics Service 2009a: 60).

CSA farmers are academically well-educated. Seventy-nine percent of Farmer A as a group hold bachelor's degrees, and 13 percent have graduate degrees. For CSA farmers as a group, 82 percent have bachelor's degrees, and 27 percent hold graduate degrees. This is slightly higher than the national average for CSAs, at 74 percent and 23 percent, respectively (Lass et al. 2003: 16), and considerably higher than for California and U.S. agriculture, where 39 percent and 24 percent of farmers have completed 4 years or more of college (Agricultural Resource Management Survey 2011). Disciplines and fields for CSA farmers' degrees are extremely broad. Of the degrees of all farm partners, 22 percent have agriculturally focused degrees, followed by social sciences (20 percent), sciences and engineering (20 percent), humanities (13 percent), vocational degrees (13 percent), and business and accounting (12 percent). Seventeen farmers (31 percent) mentioned university as the main location where they learned how to farm, either in classes, internships, through peers, or at a student farm. From those experiences, Cal Poly San Luis Obispo and UC Davis were the institutions most frequently mentioned by name.

CSA farmers supplemented these formal educational experiences substantially and necessarily by on-farm experience. CSAs require a great deal of skill in a wide range of domains, from field production to personnel management to marketing to building personal relationships. A large majority of CSA farmers described themselves as self-taught in terms of learning how to run a CSA. Although there appears to be growth in apprenticeships and internships offered on CSA farms and an emphasis in CSA in some university curricula (e.g., Falk et al. 2005), only 26 percent of farmers completed on-farm apprenticeships or internships themselves. Instead, many farmers referred to their time at the "school of hard knocks," i.e., the time they put in learning-while-doing through "trial and error" as farmers. Roughly half (55 percent) noted that they had learned much of what they know from experiences in farming or gardening with family members.

What are CSA farms like?

Farms with CSA programs share a number of core features, especially agroecological methods, very high agrobiodiversity, and numerous other practices related to environmental conservation. They are also diverse across a range of other characteristics, including organic certification, farm size, land ownership, and labor arrangements.

CSA production, as a whole, is based on agroecological methods (Altieri 1995; Gliessman 1998). Two-thirds of CSAs use green manures for fertilization, a practice that has almost entirely been abandoned by conventional agriculture because of reliance on synthetic nitrogen. Eighty-two percent of CSAs use animal manures and/or green manures, compared to 49 percent of California organic growers (National Agricultural Statistics Service 2010: 2, 93), showing a higher level of commitment to maintaining on-farm or near-farm nutrient cycles than California organic farmers generally. Concerning this integration and the long-term rotation of vegetable fields into pasture, one farmer noted:

The less we disturb the soil the better . . . The years that we put fields into permanent pasture, while we have animals on them, is probably when we cause the least damage to those fields. Row cropping vegetables is an inherently damaging activity. People don't like to admit that, people don't like to think about it that way, but driving all over the place, having feet all over the place, yeah, it's tough. Irrigating. It's all damaging (Farmer 47).

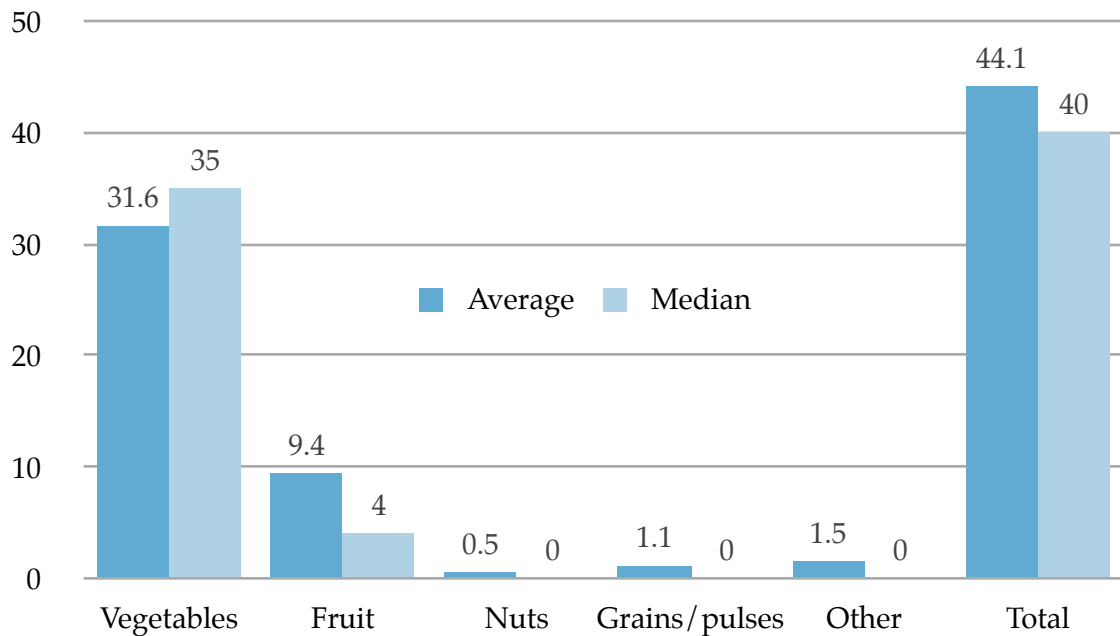


Figure 5: Number of crops (not varieties) grown per CSA operation, by crop type

CSAs cultivate a tremendous amount of agrobiodiversity, growing 44 different crops (Figure 5) and raising three different types of livestock on average. Most CSAs focus on vegetables, although some are exclusively focused on fruit, one on grain, and a handful of others on meat or other animal products. Since one of the core nutrient cycling strategies of agroecologically-oriented farmers is integrating livestock and crop production, about half of CSAs (49 percent) had livestock on hand in 2009, although the extent to which animal products are a strong production focus is highly variable. The most common animals are layer chickens (43 percent of CSAs have them, although not all have them in their CSA box). These are followed by hogs and pigs (23 percent of CSAs have them), goats and kids (21 percent), and then broilers, sheep and lamb, and beef cattle (all at 13 percent). Many CSA farms also have some land devoted to conservation plantings and other such areas where other species can live. As one farmer noted,

I have a very strong view that agriculture doesn't need to, and shouldn't, decrease the vitality, the biodiversity of the environment . . . [agriculture] can actually enhance it (Farmer 2).

In the Central Valley, the commitment to agrobiodiversity contrasts with the monocultures that dominate the landscape (Figure 6). This cultivated agrobiodiversity is supported and enhanced through the unique market relation that is CSA, since the members have a direct interest in a more diverse share and are able to communicate this desire directly to those producing their food. Many farmers noted that providing diversity in the box was a key strategy for maintaining CSA members, and that this translated directly into diversity in crops and varieties on the farm.⁸ As one farmer noted about her CSA's first survey of their members, the response was,

“More fruit, more diversity.” We immediately planted fruit trees, and told our members, “We are planting these fruit trees for you, wait for four years for some peaches” . . . the diversity of the farm has increased as a result of member responses (Farmer 1).

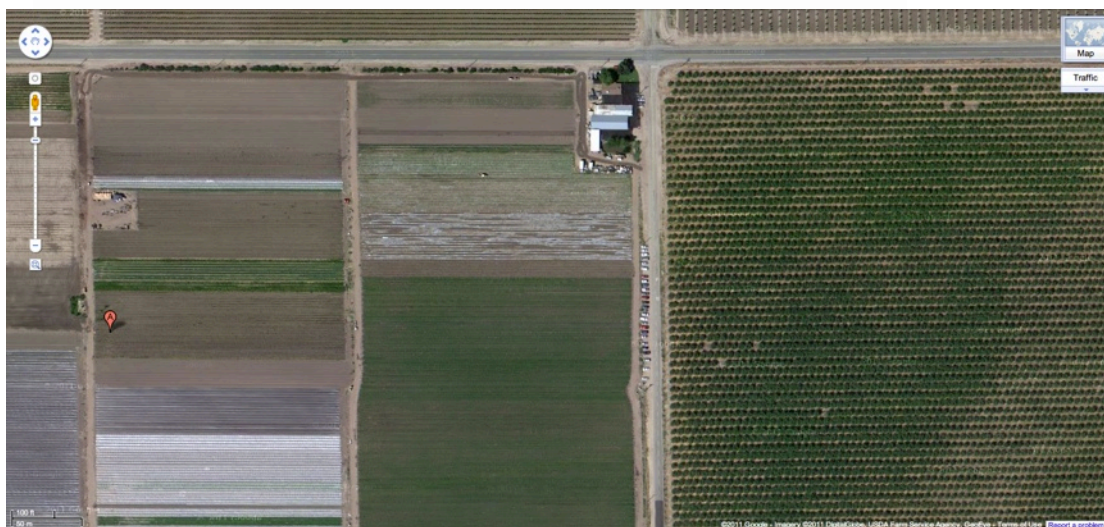


Figure 6: Numerous vegetable row crops of a CSA farm (left) next to an almond orchard (right) in the Central Valley. Source: Google Maps.

CSA farmers are very conscious of resource use, including fossil fuel use, farm input materials, packing materials, and electricity. Twenty-two percent of CSAs have on-farm renewable energy production, mostly solar, and a few are completely powered off the grid; this is considerably higher than the 1.1 percent average for all U.S. farms. As one CSA website states,

We want to minimize our ecological footprint. Food systems and industrial agriculture as they exist today are extremely wasteful, generating 20% of the carbon emissions for the whole country. By using organic practices & ensuring that the food we produce stays local we can minimize fossil fuel usage.

Similar environment ethics continue to be shared by CSAs in other parts of the country (Anderson-Wilk 2007; Flora and Bregendahl 2007; Lass et al. 2003).

While the characteristics discussed above are widely shared, CSA farms exhibit differences in other traits, including organic certification. Forty-five percent of CSAs are certified organic, although 87 percent report meeting or exceeding National Organic Program (NOP) standards (Table 1).

⁸ How this commitment to cultivated agrobiodiversity affects other forms of agrobiodiversity, such as native plants and animals, pests and predators, and soil fauna could be explored through in-depth ecological research on these farms.

Table 1: CSA farms’ organic certification compared with farmers’ views of their practices in relation to National Organic Program (NOP) standards

	Certified	Not certified	Total
Beyond NOP standards	8	10	18
Meet NOP standards	13	10	23
Do not meet a small part of NOP standards	—	4	4
Don’t know/not enough information	—	2	2
Total	21	26	47

Across certified and non-certified CSAs, 39 percent described their practices as “beyond organic” or exceeding NOP standards. For example, one farmer with organic certification noted, “We meet Federal organic standards and incorporate many practices which go beyond those standards with respect to conservation and community responsibility.” Another, without certification, noted, “Production methods are far more sustainable and based on locally available resources than USDA Organic.” The theme of CSA farmers’ practices being “beyond organic” came up consistently.

The median CSA farm size is 20 acres, which is the same as the median size of all California farms (National Agricultural Statistics Service 2009a: 259). The average size of CSA farms 151 acres, while the average California farm is 313 acres (National Agricultural Statistics Service 2009a: 259). With both the CSA and census data sets, large farms make the average much higher than the median. For acreage devoted to cropland, the median for CSAs is 6.3 acres, the average is 41 acres; area in cropland ranges from hundreds of acres to under one acre.

Land tenure arrangements are also diverse. Forty percent of CSAs own all the land they farm, while 25 percent own some land and rent some land, and the remaining 35 percent depend entirely on rented land. Of the 60 percent of CSAs that lease land, there are three main types of rental arrangements. The most common involves agreements in which market-value rents are not charged because of a service provided by the farmer or because of family or other close relationships (55 percent). For example, one arrangement had the farmers “trade a CSA share for the use of the land. Owners are also welcome to pick up extra produce at farmers markets” (Farmer 7). There are, however, many leases at market-value rental prices (45 percent) and there are some sharecropping arrangements (10 percent). One arrangement involves accessing land in homeowners’ front yards and/or backyards for a CSA-landscaping business.

How is work organized in CSAs operations?

This section focuses on CSA labor arrangements, but does so from the perspective of CSA farmers, as we have not yet gathered primary data from CSA farmworkers or apprentices/interns. For this reason, we do not draw strong comparative conclusions about treatment of workers on CSAs and non-CSA farms, as doing so would require prioritizing the perspectives and voices of workers.

The type of labor arrangements found on CSA farms depends greatly on the size and philosophy of the farm. In addition to farm partners, the three categories of workers most common on CSA farms are temporary (seasonal) farmworkers, permanent (year-round) workers (including farmworkers and office staff), and apprentices/interns. The majority of CSAs (75 percent) had one or more of these labor categories working on their farm.

The most common type of labor is seasonal. Fifty-three percent of farms hired some farmworkers seasonally, especially during the summer and fall peaks in production. A small minority discussed using farm labor contractors for this seasonal hiring. A fairly large proportion (42 percent) of CSAs employ at least one permanent (year-round) worker. For those with at least one permanent worker, the median number of permanent workers is 3.5. Seven CSAs have permanent workforces of over 10 farmworkers. The least common category of worker were apprentices/interns. Only 29 percent of farms reported having apprentices/interns.

When looking at how individual farms organize labor by these three categories, there is a large range. Table 2 sorts farms into mutually exclusive categories, while Figure 7 visualizes the number of farms in each category by using overlays to show farms with interns (yellow), seasonal workers (blue), and permanent workers (red). The two most common work arrangements are farms with no additional labor and farms employing permanent and seasonal workers. As noted above, 31 percent of CSAs are run by one operator. These farms and their CSAs tended to be smaller, with no permanent employees and relatively little use of off-farm labor; they make up most of the farms in the no additional workers category.

Table 2: Permanent workers, seasonal workers, and interns on CSA farms

	Number of farms
No additional workers	13
Permanent and seasonal workers only	13
Seasonal workers only	8
Interns only	6
All three	4
Permanent workers only	3
Permanent workers and interns only	2
Seasonal workers and interns only	1

Note: colors correspond to Figure 7 below.

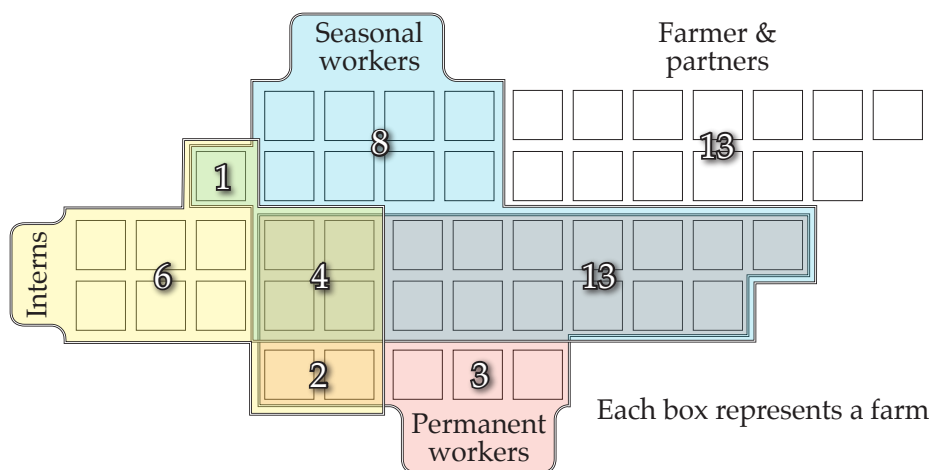


Figure 7: Overlap between types of workers on CSA farms

Interns and employees are far from mutually exclusive ways of organizing work on CSA farms (Table 2). Although six farms rely on only interns to supplement the work of the CSA farmers and their partners, seven farms mix their internships with other labor arrangements. Farmers typically offer some sort of compensation to their apprentices/interns, ranging from room and board to regularly paid hourly wages. Although in some instances it can be difficult to distinguish between seasonal workers and interns and apprentices, one of the major differences is the educational component of the work.

The distinction between apprentices/interns and seasonal labor on diversified farming operations has recently come under increased scrutiny from within the sustainable agriculture community and from external regulatory agencies (e.g., Schuessler 2010). Nearly all the farmers we spoke with expressed some concern about regulatory issues associated with having apprentices/interns on their farm.⁹ One of the tensions with apprentices/interns is between an expanding educational opportunities for aspiring farmers, needing to operate a productive farm, and abiding by labor laws. As one farmer from a prominent CSA explained the issue:

There's no legal definition for an apprentice. If we were going through a university we could get away with a paid internship. But we don't because there's accreditation and enrollment issues that you really just cannot fit well with [our] model . . . The way I justify it is we pay them, for 10 hours of their time, we pay on the worker's comp[ensation] . . . and we give them food, things like that, so the valuation is not bad. But, there's 30 hours of their work week that we're calling educational. Because it is; we spend a lot of time on them but they're working — the IRS would consider it to be a wage earner, wage laborer that we're not taking wages on. But I wouldn't hire an apprentice for 40 hours a week, I would just go and hire a seasonal worker because they're much more efficient (Farmer 36).

Other CSA farms have explicitly addressed the regulatory issues involved, sharing their findings and their intern program details recently at the EcoFarm Conference (Hamilton et al. 2011) and at the North American Biodynamic Apprenticeship Program Third Annual Farmer-Mentor Conference (Howe et al. 2011).

Farmworker wages range from \$8 per hour (minimum wage) for fieldwork to \$18 per hour for tractor work, maintenance, and management. Some CSA farmers talked in detail about the importance of their workforce. One farmer, with over 50 permanent employees, emphasized:

Farmworkers are incredibly skilled. And this whole rhetoric around farmworkers being unskilled labor drives me nuts. They are incredibly skilled. They have incredible spotting image abilities and incredible endurance. And an understanding of plants . . . a good farmworker is an incredibly skilled person. People don't get that (Farmer 47).

Some larger CSAs, as Guthman (2004) points out, also offer health insurance and other benefits for their employees; this continues to be the case and continues to be a remarkable feature of these farms in relation to other organic farms in California, and California agriculture generally. In addition to health insurance, one program by a larger CSA offers small, no-interest loans paid back through payroll deduction. But these types of benefits only exist amongst some of the larger, and more well-established CSAs that are committed to providing good employment conditions for their workers. They are much less likely among newer CSAs.

⁹ Other concerns about regulations created for a large-scale, industrialized food system abounded in the interviews, yet we do not have space here to elaborate on these.

When looking at CSA-related tasks in relation to farm partner gender, we must consider it in relation to specific arrangements. Single operators and woman and man co-operators were the most common arrangements, with 19 of each type. Of the 19 farmers that considered themselves single operators, 7 were women and 12 were men. Of the other 19 farms jointly operated by a woman and a man, all the men and only four of the women expressed that their work was primarily production focused. Fifteen of women in these jointly operated farming enterprises expressed that their work was primarily focused on marketing and administration, and two women explained that they were responsible for marketing and administration in addition to their production responsibilities. We suspect that, as Vail (1981: 19) pointed out in his study of Maine's small organic farms, women co-operators of CSAs in the Central Valley might "face a 'double' and some a 'triple burden' of farm, household, and off-farm labor," but more detailed work on the distribution of CSA labor *in relation to* household and off-farm work is needed.

The farm-member relationship

The CSA box and the accompanying newsletter are often at the center of the farm-membership relationship. Since there are no member-organized CSAs in the study site, the level of work and on-farm engagement by members is low compared to other regions where CSA members are more heavily involved in farm-level decision making. There remain, however, a large number of ways that CSA members do connect directly with the farm.

What do CSA boxes include?

Fifty-eight percent of CSAs have shares available year round. The remainder grow during one or two shorter growing seasons; the average number of weeks of production per year is 43. Not surprisingly given California's climate and water infrastructure, this is considerably higher than the 24 weeks on average for the country (Lass et al. 2003: 17). Not having shares year round is more typical in the higher elevations of the foothills, where frosts complicate year-round production.

Vegetables continue to be the main focus of CSA production. Table 3 uses two discrete categories, "each share" and "some shares," to show the percentage of CSAs offering these types of products. For example, 82 percent of CSAs offer vegetables from their farm in each share, whereas another two percent offer vegetables from their farm in some shares. Fruit is the next most common focus, followed by meat, then grain. The other categories of products — flowers, eggs, processed goods (such as jams and other preserves), and other — are all supplemental to the main focus of CSAs since no CSAs exclusively focus on these products.

Most CSAs supplement their shares with products from other nearby farms, although most do not do this for each share (Table 3, lower section). Rather, it is either customized by purchased add-ons, or happens occasionally, like in times of lean production. Fifty-eight percent of CSAs supplement their shares either regularly or occasionally in this way within some product category — fruit (51 percent), vegetables (31 percent), eggs (13 percent), grain (11 percent), meat (2 percent), flowers (2 percent). Additional fruit is the most common part of the share that comes from another farm (Figure 8); Adam (2006) notes that this is also the case nationwide. Thirteen percent of CSAs supplement every box with products purchased from off the farm — these include some meat-focused CSAs that buy vegetables for those portions of the share and most of the Farm-Linked Aggregator Model CSAs described above. Our data collection did not distinguish between additional items purchased from nearby farms, other farms, or the wholesale market, but in discussions of cooperation with other CSAs, most farmers noted that most purchases they make to supplement their shares are from farms located near them.

Table 3: Percentage of CSA farms that include types of goods in their shares

	<u>Foods produced on the farm for CSA share</u>							
	Vegetables	Fruit	Grain	Flowers	Meat	Eggs	Processed goods	Other
Each share	82%	29%	4%	7%	9%	4%	4%	7%
Some shares	2%	33%	2%	38%	7%	29%	9%	13%

	<u>Foods purchased for CSA share</u>							
	Vegetables	Fruit	Grain	Flowers	Meat	Eggs	Processed goods	Other
Each share	13%	11%	0%	0%	0%	0%	0%	0%
Some shares	18%	40%	11%	2%	2%	13%	0%	4%



Figure 8: A CSA vegetable share with a fruit add-on share, which is produced by another farm but available through the vegetable-focused CSA

Determining the average weekly cost of CSA boxes requires some standardization since share sizes vary. We took the price charged for boxes meant to feed two to four people, and used the minimum payment period. Standardizing this way, the average cost is \$25.74 per week, with the median at \$25 per week. Since there are often discounts offered when members pay for longer periods, this is a slightly higher price than most members pay.

How this compares to non-CSA consumption is an important question. Other studies have shown that locally purchased food is slightly less expensive in Iowa (Pirog and McCann 2009), and a direct comparison of three CSAs in Wisconsin and Minnesota showed a wide spread: one CSA was typically cheaper than comparable produce from retail outlets, one was about the same, and another was typically more expensive (Center for Integrated Agricultural Systems 2001). Here we want to compare our case of a \$25 box to some other ways of eating. The “thrifty” USDA market basket food price — a “healthy, minimal-cost meal plan that shows how a nutritious diet can be achieved with limited resources” — for a family of four is \$135 weekly (Lino 2011: 3). Of that, fresh fruits

and vegetables come out to \$49.13 per week.¹⁰ Doing the same for the “liberal” USDA market basket, which involves spending about twice as much, shows fresh fruits and vegetables at \$98.16 per week (\$268.50 times 36.56 percent). Thus, if CSA boxes are providing even half of the fresh fruits and vegetables consumed by a family whose eating approximates the “thrifty” plan, they are a good deal from a monetary perspective, even if we ignore the other attributes of CSA production that might argue for higher valuation (organic, minimizing environmental harm, direct connection to a farm, etc.).

From another perspective, though, CSA boxes may seem expensive. Americans consume far less than the USDA-recommended amount of fresh fruits and vegetables. For all of 2009, the average U.S. family spent \$429 on fresh fruit and fresh vegetable purchases for at-home consumption, a weekly expenditure of \$8.25 (U.S. Bureau of Labor Statistics 2010).¹¹ This is almost six times less than in the fresh fruits and vegetable portion of the “thrifty” USDA-defined diet, even though U.S. families are on average spending almost four times on food overall than this diet. As one CSA farmer pointed out, the average family expenditures on fresh fruits and vegetables is also less than the average family’s expenditure on alcohol, which is \$435 per year (U.S. Bureau of Labor Statistics 2010). From the perspective of the average U.S. family used to spending \$8.25 per week on fresh vegetables and fruits, spending \$25 per week would be a large, even if likely healthy, increase.

What has happened to CSA membership numbers?

The median membership size of CSAs in 2009 was 60, while the average is 585. A few very large CSAs skew the membership averages to be much higher than the median (Table 4), so the median should be taken as a much more “normal” size. That CSA membership numbers range by several orders of magnitude in the study site, from greater than 1,000 to fewer than 10, shows the incredible diversity of CSA operations.

Table 4: CSA membership size, 2009

Number of CSAs	
below 20	7
20-49	12
50-99	8
100-499	10
500-999	3
1,000 or more	3

CSA membership has grown steadily since the start of CSA in the area (Figures 9 and 10). Farmers pointed to an especially large and steady boom in membership numbers between 2006 to 2008. In looking at member numbers between 2005 and 2008, 16 CSAs increased in member numbers, three stayed the same size, and none experienced a loss in membership (that only 19 CSAs reported data

¹⁰ We take the percentages of cost from previous market basket studies; e.g., a female between 19-50 years old on the “thrifty” USDA-defined diet spends 36.38 percent on fresh fruits and vegetables (Carlson et al. 2007: A4-3).

¹¹ If we add processed fruits and vegetables, the annual expenditure is \$657, for a weekly produce expenditure of \$12.60 per household. The data also includes expenditures on meals away from home, but the data cannot be disaggregated into fresh produce.

for this period shows the rapid numbers that have been started since 2005). Between 2008 and 2009, 22 farms reported gaining members, six maintained, and eight lost members. The Great Recession started in 2008, and many farmers who experienced a decline in membership noted that the difficult economic situation was the likely reason behind declines or stagnation. We should note, however, that losses in membership are not universally negative from the farmers' perspective; some losses of membership are intentional when farmers decide to reduce CSA as a marketing emphasis. Even with more farms experiencing membership declines during the Great Recession, the median annual growth rate from 2008 to 2009 for those that experienced membership growth was 50 percent, while for those CSAs that lost members the median loss rate was 24 percent.¹²

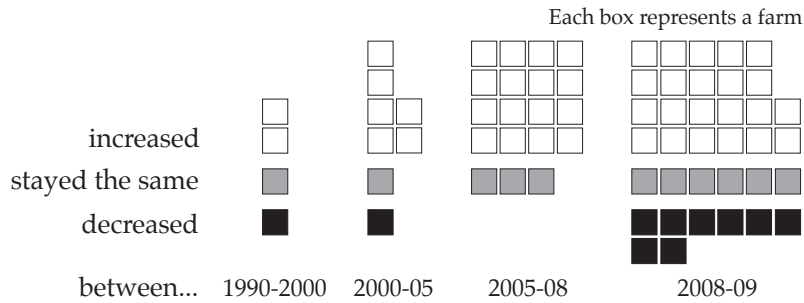


Figure 9: Change in CSA membership over time, by farm

Even with 22 percent of CSAs experiencing member losses between 2008 and 2009, the total number of CSA members across all farms continued to increase during this time. Indeed, it has increased dramatically between each time period for which we asked about member numbers. Figure 10 shows that between 1990, when there were 672 CSA members for the farms in our sample, and 2010, CSA membership has increased by 49 times, or 4,900 percent (based on expected member number in 2010). Dividing it into decades, membership grew 3.4 times between 1990 and 2000, whereas from 2000 to 2010, membership grew 14.2 times. The annual growth rate from 2008 to 2009 was 38.4 percent. Thus, the rapid increase in CSA operations since 2000 has been accompanied by an even larger growth of CSA membership numbers.

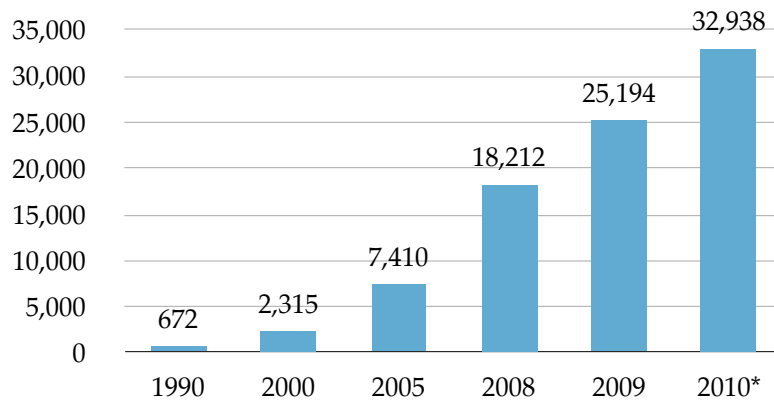


Figure 10: CSA membership over time, all farms in sample (* = expected)

¹² The extent to which losses occurred in the context of nearby CSAs that experienced membership gains, which might show the effects of competition within the CSA marketing channel, will be explored in future analyses.

How do CSAs relate to their members and community?

In the realm of member participation on farm, 81 percent of CSAs host on-farm events for the community associated with the farm, from festivals to potlucks to educational field days. Although there is less member participation than in the original CSA model in which members had to participate in farm labor days, some farms host “farm parties,” wherein members help with labor-intensive farm tasks periodically or as necessary. While CSAs do not require interaction, there are usually options for members who want to be more involved.

Membership retention and reduction in membership turnover have also been large topics of interest for CSA farmers. If members quit too soon it can be difficult for the farm because planning is based on a certain membership size, and it takes effort to enroll new members. Farmers noted that many members are deeply committed and stay with the CSA for a long time; many have a loyal group of members that had been with them from the beginning.¹³ On the other end of the spectrum are members that try out the CSA for a few weeks or months. One of the most frequent explanations for the large amount of turnover was attributed to the spectrum of CSA members:

You just have to sort of trust that process [growth in appreciation for eating seasonally] and that’s not something that I think comes naturally to everyone, and so there is just a certain portion of people who sign up because they think its cool, that are just not going to stay. You just have to be kind of willing to accept that that is how it is. There [are] going to be some people who it doesn’t work for (Farmer 1).

Farmers noted that these short term, rapid turnover members were often overwhelmed by the amount of product in the CSA and/or did not have the skill set, desire, or commitment to prepare and cook the products. Two representative quotes are:

[Members] feel bad about themselves if they can’t use [all the products from the box] (Farmer 12).

It is very easy to overload people with produce. You will lose more customers by giving them too much produce than too little. We don’t try to skimp on the boxes, but we also don’t try to drown them in the box . . . You will guilt people by overwhelming them and you will be giving away money essentially (Farmer 7).

Demographically, most farmers described membership bases that had some similar characteristics but also a range of difference. Families with children and people with a college education topped the list of characteristics farmers used to describe their members. Many farmers described a diverse age range (e.g., from 20 to 80) and occupations, from students to retirees to full-time workers and stay-at-home moms. What members share, according to farmers, is a concern about what they put in their, and their families’, bodies. They also enjoy cooking and want to know where their food comes from.

Those CSAs that gave members greater flexibility in choosing the items they received, and delivered to the door of their customers, described serving a wider demographic. For example,

¹³ All of the characteristics describing members are from farmers’ perspectives. We have not yet collected data directly from members.

[In delivery] you'll be in a million dollar neighborhood and then you'll go to a trailer park. But generally they are pretty normal people, mainstream maybe (Farmer 18).

Economic viability

Consistent with other studies (Cantor and Strohlic 2009), we found CSA to be a crucial direct-to-consumer marketing channel for those small- and medium-scale farmers involved. Farms with CSAs on average obtain 58 percent of their gross sales from the CSA market channel, and 48 percent of CSAs obtain 70 percent or more of their gross sales from CSA. Percentage of gross sales made up by CSA sales is negatively correlated with acres in cropland ($r = -0.2$) and gross sales ($r = -0.17$), showing that smaller-scale farmers tend to be more dependent on CSA as a market channel. This pattern also exists at the national level (Lass et al. 2003).

Most farms with CSA operations also sell to a number of other market channels, including other direct marketing venues such as farmers' markets, farm stands, you-picks, and restaurants, and many also have important wholesale market relationships. In the Central Valley we found a phenomena that has not been reported in other locations: some of the Farm-Linked Aggregator CSAs act as wholesale market outlets for some small farms that also have their own CSAs. As one newer CSA farmer noted,

[We] wholesale to a very, very large CSA that we help with. They primarily buy from other farmers. That really, really helped us considerably ... growing for another CSA was very good for us (Farmer 55).

Assessing economic viability of CSA operations is difficult because economic viability needs to take into account current profitability, and the generation of sufficient income for savings for retirement, sending children to college, buying land, paying health insurance premiums, etc., which vary from farm to farm. Considering just profitability, we note that different farmers conceptualize profit differently. There is rarely a shared conception of profit for a number of reasons: some farmer consider their salaries (or what remains for them after expenses are covered) as profit while others set aside a salary for farm partners and consider profit to exclude this salary, not all farmers amortize their accounting, and many reinvest all operating surplus into the farm to make it more productive or to prevent reporting a profit so as to avoid taxes. Because of these differences, we asked a few related questions to get at profitability without doing a detailed accounting ourselves of each operation.

Are CSAs profitable?

One simple proxy is to ask farmers their level of profitability. Because of the differences in whether farmers consider their salaries to be profit or to be an expense, the question gets more at whether farmers feel that they are making ends meet or accumulating enough capital. In the survey, 54 percent of CSAs reported being profitable, 32 percent reported breaking even, and 15 percent reported operating at a loss or large loss. In the interviews, we found that most farmers use the commonly understood definition of profit (Levins 1996), rather than a strict economic definition. "For most everyone, except economists, the word 'profit' means something like 'what's left after the bills are paid' or 'what's left for the family.' Some might even go so far as to include 'and something has been set aside to replace equipment and breeding stock,' but that is about as far as it goes" (Levins 1996: 23). Most view "whatever is left" as equivalent to profit, which is the same as their non-formal wage for the work they do, with the recognition that there will sometimes be

nothing left for them depending on the year’s circumstances. Profits above the money used to support the farmers are rare:

Almost no farms make enough excess profits, you know, beyond what it would take to pay for the farmers – like if you had to pay somebody for what the farmers are doing, is there any money left over? And, typically, no (Farmer 47).

One-third of CSA farmers reported paying themselves a formal salary in 2009. Farmer salaries range from \$3,600 to \$100,000 per year, with the median at \$60,000 for those farms paying a formal salary. There is a positive correlation ($r = 0.31$) between gross farm sales and farmers paying themselves a formal salary. Indeed, the only farms by category of gross sales in which a majority pay farmer salaries are those with more than \$500,000 in gross sales (Table 5). There are, however, both smaller and newer farms (those less than five years old) who do pay themselves some kind of salary.

Table 5: Gross sales in relation to formal farmer salary

Gross farm sales category	Number paying farmer salary	Number not paying farmer salary	Percentage paying farmer salary
Less than \$4,999	0	2	0.0%
\$5,000 to \$9,999	1	1	50.0%
\$10,000 to \$24,999	2	5	28.6%
\$25,000 to \$49,999	1	2	33.3%
\$50,000 to \$99,999	3	7	30.0%
\$100,000 to \$499,999	1	4	20.0%
\$500,000 or more	4	3	57.1%

In contrast to a formal salary, the majority of farmers reported living off of operating surpluses. Many farmers noted that they would just “take what’s left at the end of the year.” It is not always clear that what remains after expenses will be enough to live on. One solution is off-farm income, although we should note that not all CSA farm families want all of their work to go into the CSA. Many partners of CSA farmers are professionals pursuing their careers off farm. Forty-two percent of CSAs have farm partners who hold off-farm jobs. Although not strictly comparable, CSAs appear to be less dependent on off-farm employment than for California organic principle operators generally, where 67.7 percent work off farm, and of U.S. farming generally, where 66 percent of all operators work at least some days off farm. This is true of CSAs nationally: “CSA farmers are less likely to rely on non-farm income” (Lass et al. 2003: 21). The type of work that CSA farm partners do off of the farm is diverse, including bank teller, certified public accountant, chaplain, equipment rental manager, farm supply employee, garment worker, landscape architect, graphic artist, lab manager, law enforcement, military contractor, pet groomer, teacher, veterinarian, Wal-Mart greeter, and warehouse manager.

In these ways — lack of profitability of some operations, infrequency of formal salaries in return for hard work, some reliance on off-farm jobs for income — CSA farms are like other U.S. farms. “We know that farming in general represents a challenging profession for monetary reward and financial security” (Lass et al. 2003: 23). However, most CSA farmers are not interested in maximizing their salaries or profit in the formal sense, since most do not see their balance sheets as adequately capturing what they value. Instead, other values, especially balancing environmental

conservation, an active and outdoor lifestyle, paying workers well, and personally connecting with members, are also important. As Levins (1996: 23) notes,

in sustainable agriculture, there is always a balancing act among family, community, and environment that includes, but is not confined to, profits from farming. In this balancing act, the concepts of “enough” and “acceptable to me, if not everyone else,” are simply more useful than maximization of profits or any other single goal.

This sentiment came up repeatedly — while profits above the amount of money that allows the farmers to live modestly are rare, CSA farmers mentioned receiving other forms of compensation in CSA work, both tangible and intangible (see also Pratt 2009). For some, tangible benefits include living on a farm, raising their children on a farm, benefiting from improvements to the property, eating well, living healthfully, etc. More intangibly, many farmers noted that their payment was their lifestyle: their work is hard but deeply personally rewarding, they have autonomy in decision making, and, ultimately, it does not feel like “work.” Farmer 47 continued in his discussion of profit:

I don't really look at it that way [in terms of strict economic profitability]. I also look at being able to live here. I look at having great food all the time. I love what I get to do most of the time.

Other farmers, when asked how they value their own labor on the farm, noted similar perspectives:

I think we value it as a way to live a life. It's been great, it's been a good trade: put in labor, get *life*. If we kept track of hours spent, the numbers wouldn't look so pretty, but we got life (Farmer 20).

We don't keep track of hours 'cause that would be depressing from a pay standpoint. But, on the other hand, we just love it. And it's great and we're out here and, so, we don't do any time tracking. You know we probably should, but on the other hand, it's part of the lifestyle. It's just enjoying the farm and being real free. And it isn't jobby at all. And, so ... we have what we need to get by, but we don't pay ourselves an official wage (Farmer 50).

How do gross farm sales compare to other kinds of agriculture?

Yet, even if many CSA farmers are not accumulating a great deal of capital, CSAs do demonstrate strong economic vitality in terms of gross farm sales. For Central Valley CSAs, gross farm sales in 2009 from all market channels (including CSA) range from a few thousand dollars to multiple millions of dollars, with the median at \$57,000. Seven CSA farms have gross sales above \$1,000,000 — all of these farms have 70 acres or more in cropland. On the opposite end, four small and new operations with one to two acres in horticulture have gross farm sales under \$10,000. There is a strong correlation between years a CSA has been operating and gross sales ($r = 0.4$).

Although these gross farm sales figures tell us nothing of expenses, we can look at them in relation to reported profitability from the survey.¹⁴ There is a positive, but relatively weak, relationship between reported profitability and gross sales ($r = 0.18$). By gross sales categories, the majority of CSAs in the categories above \$50,000 per year are profitable, whereas 50 percent or fewer of CSAs in the smaller categories are profitable (Table 6).

¹⁴ For simplicity, here we group survey responses of “break even,” “operating at a loss,” and “operating at a large loss” into the single category of “not profitable.”

Table 6: Gross sales in relation to profitability

Gross farm sales category	Number profitable	Number not profitable	Percentage profitable
Less than \$4,999	0	1	0.0%
\$5,000 to \$9,999	1	1	50.0%
\$10,000 to \$24,999	3	4	42.9%
\$25,000 to \$49,999	2	2	50.0%
\$50,000 to \$99,999	7	3	70.0%
\$100,000 to \$499,999	3	2	60.0%
\$500,000 or more	4	2	66.7%

Since CSAs vary greatly in size, standardizing gross sales by farm size is important. The median gross sales *per acre* for all CSAs is \$4,341/acre (average is \$9,084/acre), although this hides considerable diversity, especially between horticulture-, grain-, and animal-focused CSAs. Taken as a whole, however, these figures show that gross sales per acre for CSA is considerably higher than the average for all of California agriculture — \$1,336 — and for California organics — \$2,439 (National Agricultural Statistics Service 2010: 2). However, because many CSAs are mixed operations with pastured livestock, not all the land in CSA farms is devoted to high-value production. When we restrict the data to crop-focused CSAs and look in terms of gross sales *per acre in cropland*, the average for CSA is \$13,354/acre, the median is \$10,000/acre, and more than two-thirds of CSAs are over \$5,000/acre (Table 7). Three farms have sales over \$40,000 per acre and five more have sales over \$20,000/acre.¹⁵ The lowest gross sales per cropland acre is under \$999, which is a grain-focused CSA. Since grains are worth considerably less per acre, this is not surprising. Years operated and gross sales per cropland acre are also highly correlated ($r = 0.43$), showing that CSAs typically become more powerful economic engines as their operations mature.

Figures for gross sales per acre in California organic agriculture show that CSA is considerably higher than other kinds of organic agriculture (Figure 11). This includes vegetables (\$2,087), fruits and nuts (\$2,004), field crops (\$217), and livestock, poultry, and products (\$3,622). The only exception where CSA gross sales per acre is not higher on average is organic nursery and flowers (\$21,394) (Klonsky 2004: 251-2, with Table 8 figures divided by Table 7 figures).

Table 7: Gross sales per cropland acre for crop-focused CSAs

Gross sales/acre category	Number of CSAs
less than \$999/cropland acre	1
\$1,000 to \$4,999/cropland acre	9
\$5,000 to \$9,999/cropland acre	7
\$10,000 to 19,999/cropland acre	10
\$20,000 or more/cropland acre	8

¹⁵ In a few cases, these figures might include the sales of some of the off-farm purchased foods, since we asked for gross farm sales but did not ask for them to be sure to remove the sales figures for off-farm foods included in boxes.

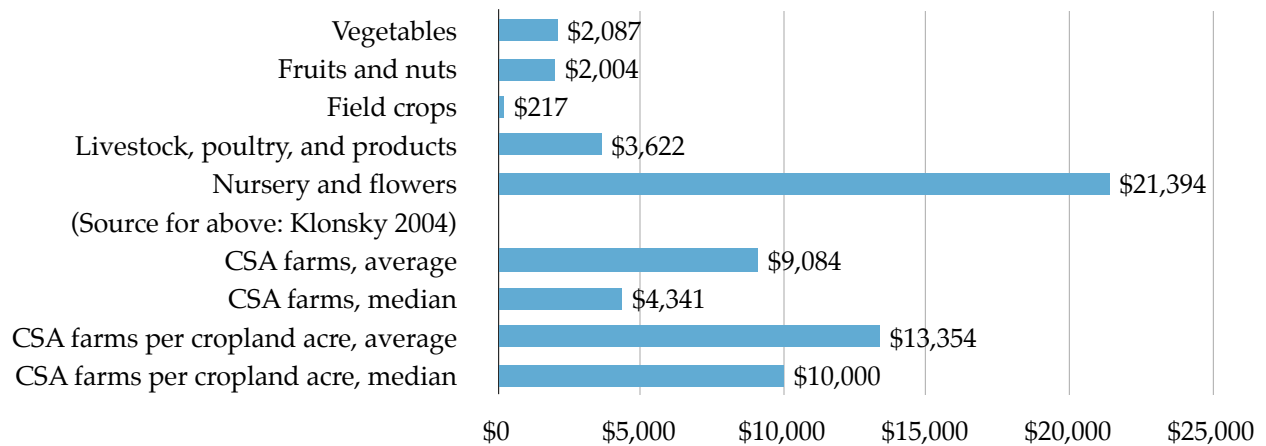


Figure 11: Gross sales per acre for organic agriculture in California

CSAs also demonstrate economic vitality because they are sources of employment, which is especially high per acre of land because of the labor intensive nature of the operations. For those farms with permanent workers, every 8 cropland acres cultivated by CSA operations support one year-round worker position, not including the farm partners. This contrasts strongly with large-scale monocultures of high-value crops — fruits, vegetables, and nuts — that dominate the landscape in the study site. These monocultures generally need a brief but very large pulse of seasonal labor, generating very little year-round employment (Mitchell 1996). These monocultures' gross sales per acre are also considerably lower than CSA.

Thus, another of our key findings is that in very important categories — gross sales per acre (especially gross sales per cropland acre) and number of permanent jobs supported — CSAs are much higher than the dominant monocultures of the Central Valley. CSA farms are also considerably more complex, difficult to operate, and have faced a disadvantage due to the way that knowledge about, and services supporting, agriculture has been produced over the last century. This knowledge production, and the availability of information generally, is a key component for the continued existence and expansion of CSA.

Information and advice

CSA is an information-intensive enterprise for a large range of knowledge domains. This is especially true for those new to it. Fortunately, there has been an increase in formal written advice for CSA farmers, and there continues to be important information sharing between CSA farmers.

Where do CSA farmers get their information?

We asked farmers about information sources — people and texts — for managing their CSA operation, and their preferred medium of communication. When considering people as sources of information for CSA farmers, the highest rated are those with direct farming experience: other CSA farmers, farmworkers and interns, and other farmers who do not have CSAs (Table 8). UC Cooperative Extension is the next highest rated source, followed by formal farmer organizations, independent agricultural consultants, and conservation agents, with input dealers last.

Table 8: CSA farmers' ratings of people as information sources

People as information sources	Average Rating (1=none, 2=low, 3=moderate, 4=high, 5=very high)
Other CSA farmers (not your farm partners)	3.2
Farmworkers or interns on your farm	2.7
Other farmers who do not have CSAs	2.5
Cooperative Extension specialists	2.1
Formal farmer organizations	1.8
Independent agricultural consultants	1.6
Conservation agents (such as NRCS)	1.6
Fertilizer/input dealers or sales representatives	1.4

Given the location- and context-specific nature of farming and its heavy reliance on know-how, or *techné* (instead of just know-what, or *epistémé*), the fact that CSA farmers rely most heavily on people with farming experience is not particularly surprising. Off-farm information providers typically do not provide expert knowledge in the embodied sense of someone who has worked long and hard and grappled intimately with similar circumstances. Instead, the information they provide is at a more basic level that must then be tailored to specific contexts of farming (cf. Murdoch and Clark 1994) and specific CSA types. Nevertheless, off-farm information providers play a role supporting CSAs, and most CSA farmers do access them, even if less frequently than people who farm.

Some University of California Cooperative Extension (UCCE) advisors are fulfilling an important role that is widely recognized by CSA farmers in their area. As an information source, UCCE advisors ranked just below other farmers and farmworkers. Cindy Fake and Roger Ingram, Farm Advisors in the Nevada-Placer Counties UCCE office (University of California Division of Agriculture and Natural Resources 2011), were mentioned often and with great appreciation by many CSA farmers in the northern part of the study site. As for other off-farm sources of information, most farmers do not use independent agricultural consultants, but for a few they are quite important. That input dealers are the lowest ranked speaks to the strength of the norm of resource self-sufficiency among CSA farmers and the dearth of input dealers who specialize in farming systems like those on CSA farms.

In considering medium of communication, in-person conversations (rating = 3.9) led slightly in importance over email (3.8), followed by phone (3.6). A number of farmers also noted the importance of social media, including Facebook and, to a lesser extent, Twitter.

Table 9: CSA farmers' ratings of written information sources

Written information sources	Average Rating (1=none, 2=low, 3=moderate, 4=high, 5=very high)
Internet	3.2
Trade magazines	2.3
Cooperative Extension bulletins	1.8
Libraries	1.7

Of all written information sources, CSA farmers rated information from Internet sources as most important (3.2), followed distantly by trade magazines (2.3), Cooperative Extension bulletins (1.8), and libraries (1.7) (Table 9). Internet sources are rated at the same level of importance as other CSA farmers. Many farmers noted the importance of being able to look up information online at any time, especially in the evenings once the work in the field was over.

Table 10 shows the most popular websites mentioned by CSA farmers. LocalHarvest, devoted to reconnecting farmers and consumers, was the most mentioned. Next was the National Center for Appropriate Technology (NCAT) and its National Sustainable Agriculture Information Service (ATTRA), which has numerous resources on CSA, horticulture, beginning farmers' needs, local food systems, marketing, organic agriculture, including a very helpful report on CSA nationwide with links to a variety of resources (Adam 2006). The third most mentioned was UC Davis, especially its Integrated Pest Management and Small Farm Program sites. A couple of farmers also mentioned *Growing for Market*, a trade magazine aimed at local food producers, and Johnny's Selected Seeds as a source of seeds, tools, information and service (including a Growers' Library and interactive tools).

Table 10: Websites most mentioned by CSA farmers

Website	URL	Times mentioned
LocalHarvest	www.localharvest.org	9
National Center for Appropriate Technology (NCAT) and its National Sustainable Agriculture Information Service (ATTRA)	http://www.ncat.org & https://attra.ncat.org	8
UC Davis, including its Integrated Pest Management and Small Farms Programs	http://www.ipm.ucdavis.edu & http://sfp.ucdavis.edu	5
<i>Growing for Market</i>	http://www.growingformarket.com	2
Johnny's Selected Seeds	http://www.johnnyseeds.com	2

What are CSA farmers' most valuable lessons and advice for starting farmers?

When asked through open-ended questions about the most valuable lessons they had learned while running a CSA, we found that farmers' most valuable lessons fell into three major categories: member and community relationships, production and the CSA box, and CSA management (Table 11). The majority of farmers highlighted how customer service is foundational for the success of a CSA. Yet, in CSA, they also noted that this cannot be separated from member education, as new members must understand why their CSA box faces limitations that the grocery stores does not (e.g., that they are not getting tomatoes in early summer because of cold weather), and why members might want to continue because of the other benefits. As one farmer noted about the educational component,

I like the idea of being an ambassador for agriculture. I like the idea of talking to people and letting them understand about things that I . . . take for granted (Farmer 21).

Another CSA farming couple noted how one's mentality must be retail oriented:

Farmer 39B: Your CSA has to be twice as profitable as your farm. There is much more hand holding, much more detail work. It's retail. It has to be more profitable than your farm.

Farmer 39A: You can't get caught up in wholesale economics. It has to be in tune with retail economics: massive amounts of service, information and inefficiencies versus growing food for a wholesale market. Those are all really important.

Table 11: Most valuable lessons learned as mentioned by CSA farmers and organizers

Lesson	Number mentioning	
	Farmers (n=54)	Organizers (n=2)
<u>Member and community relationships</u>		
Customer/member service is foundational: this includes all types of outreach to current members, supporting customers so they can be successful CSA members, educating members about potential benefits of CSA and seasonal eating, dealing with special requests	30	2
CSA is about linking farmers to consumers and members: building community this way is important, valuable, and rewarding	19	1
Build personal relationships with members based on trust and commitment: trust goes both ways, from prepayment of the farmer to trusting that members will pay	13	1
Make the CSA accessible (financially and conceptually) to a spectrum of members: potential CSA members come from different parts of society, including foodies and those wanting a good deal on local produce	8	1
<u>Production and the CSA box</u>		
Plan ahead: plan for harvest, plant at intervals, use space wisely, be prepared for unforeseen circumstances	20	0
Maintain variety in the box: a diversity of offerings is very important	14	1
Knowing what quantity to put in the box: there is a good amount to put in the box, and there are consequences for giving too much produce	7	0
<u>CSA management</u>		
Organizational and management skills are vital or very important to a successful CSA operation	17	1
Seek labor and help when needed: to expand, one must relinquish control and seek help, which is a financial and psychological leap	6	0
One has to learn how to wear many different hats: farmer, CSA manager, community educator, etc.	3	0

This was a common sentiment, of both the need *and opportunity* to bring knowledge about agriculture and growing food to a population that is largely disconnected from the land and from their food, but is yearning for a connection. CSA farmers also noted that this way of creating community was valuable and rewarding to them (see above section on profitability).

The most important lesson regarding production was the vast importance of planning. Detailed planning is required to have enough quantity and variety of produce for the weekly shares. One farmer noted a number of examples:

Some of the other key lessons are just basic farming things, like you need to plant squash every month. You can't plant all your tomatoes at one time, people are less enamored with heirloom tomatoes than you think they are, people have a high tolerance for ugly produce as long as it taste good, don't give them too many weird things at one time but you should include some weird things or they will get bored, almost every week (Farmer 7).

The other group of lessons involved CSA management. Much of this was being record oriented and keeping track of details about all the operation's aspects. One farmer summed it up well:

The CSA also takes the special skills of managing a database. Keeping track of drivers, and who's paid and if you want to be flexible and offer half shares and when people go on vacation — that takes a whole different level of challenges. Not everyone likes to do that. Some farms will just hire someone to do that. But if you have a smaller CSA you are going to end up doing that yourself, and you have to like that type of stuff, being on a computer (Farmer 15).

Table 12: Current CSA farmers' advice for beginning CSA farmers

Advice	Times mentioned
<u>Starting</u>	
Start small, ease into it, then scale up to meet your goals	15
Just go for it — there is no way to learn like doing (“Come on in, the water's great” in CSA; “There is room for everyone”)	10
Do not do a CSA in your first year of farming, start with a farmers' market first	5
<u>Attitude</u>	
Do not expect it to be easy, farming is tough	7
<u>Community</u>	
Have a support community and personal relationships to see you through hard times	6
Do it in a community you know very well, especially your own; you'll have an easier time building trust and membership	5
Work with other people, team up, take on partners	4
<u>Learning</u>	
Do an internship or apprenticeship to learn to farm in someone else's farming system	8
Learn economics and business; take a business class, understand basic economics	6
Know your target market first; do not grow anything without knowing where you will sell it	5
Work on a profitable, production oriented farm, then apply those skills to your CSA	5
Read a lot before you start	3
Get a college education, it will make your life easier	2
<u>Resources</u>	
Don't quit your day job since it can be really helpful to have part-time work when you're starting, and as you grow	4
Find good land, good soil, good water, and a good location	3
Use leased land that is free and/or cheap; contact relatives, friends, and land trusts to see about possibilities	3
Have a great deal of capital saved to start	2

In our interviews we also asked farmers for their advice for those wanting to start a new CSA. Out of the responses (Table 12), it is evident that there are multiple pathways to successfully creating a CSA, including different primary routes of learning, e.g., from books to apprenticeships to university courses to starting one. The differences in advice also stem from different farmers' dispositions toward risk. The amount of preparation mentioned by farmers suggests that many are fairly risk averse, which might be a reflection that more risk averse people gravitate toward CSA since it is seen as one of the least risky ways of farming for market, especially when one is good at choreographing the complex dance that is CSA. A more detailed analysis of how CSA farmers got to where they are today, and their identification of decisive moments with make-or-break consequences, would be useful.

The most common piece of advice, mentioned by 15 farmers, was to start small. It is too easy to be overly ambitious and to have a very difficult first year because of taking on too many members or too complex of a cropping system. The next most common piece of advice was to jump in — “just go for it” was a common sentiment. This came from farmers' experiences where they had learned most of what they needed to know by doing it, and should also be seen as encouraging new farmers to start CSAs. As one farmer noted, “Come on in, the water's great . . . there's incredible opportunity” (Farmer 44). A large number also recommended internship and/or apprenticeship experiences, from which these farmers had learned a great deal.

Next most common was the sentiment, “don't expect it to be easy.” Many farmers spoke to the difficulty of having so many responsibilities all at once. Although the following quote is in response to a question about the challenges faced, it fits well with the advice of not expecting CSA to be easy:

It's kind of hard to wear all these different hats. To be the farmer, and then the coordinator of the CSA and then at the same time being the educator — like going out there and trying to convince people and teach people what a CSA means for their community and for them, so we are constantly giving this spiel, which is exciting but also exhausting. And then we are trying to just farm, to be in our fields and work all day (Farmer 56B).

This speaks to the need for beginning farmers to start to cultivate their dispositions and attitudes. As Wendell Berry (1973: 112) notes, farming “requires not merely a competent knowledge of its facts and processes, but also a complex set of attitudes, a certain culturally evolved stance, in the face of the unexpected and unknown.” Other advice had to do with establishing a supportive community, learning (especially what to learn and how to learn), and resources (Table 12).

Conclusion

CSA farm and member numbers have demonstrated incredible growth around the world (Henderson 2010), the U.S. (Galt in press), and in the study site in recent decades. There were only a few CSAs in the Central Valley and surrounding foothills in the early 1990s. In 2010 there were 74, even after removing from the count those that no longer exist and those that do not fit the definition of CSA we use here. That 28 CSAs in the study site are no longer operating merits further research into the reasons that farmers get out of CSA.

Membership growth has similarly been explosive; the figures from our sample show that CSA membership increased from less than 700 in 1990 to almost 33,000 expected members in 2010. Even with the Great Recession in 2008-2009, membership numbers increased for the majority of CSAs, and new CSAs continue coming into existence rapidly. In the study site, and very likely in many other regions, CSA as a concept, practice, and relationship between farmers and eaters offers a

number of features that are appealing to an increasing number of people, both members and farmers, as the local food movement expands.

By definition, CSAs are farm-based operations that have regular and direct sales of local farm goods to households, but the CSA expansion has been accompanied by a great deal of innovation in CSA. In spanning continents and existing in very different regions, the concept appears to be both robust and flexible, and different CSA operations are using it to address different challenges. Farmers' motivations for creating CSAs are also extremely broad; ideological positions vary greatly, as do farmers' attitudes and practices around paying themselves well in monetary terms. Yet, CSA does retain a number of core characteristics in the Central Valley and surrounding foothills. The vast majority of CSAs cultivate high levels of agrobiodiversity, are deeply committed to agroecological principles and practices, and work from an ethic of reducing off-farm resource use. Even with the innovations that have occurred, there continues to be a very strong ecological orientation within CSA.

CSA remains an important form of direct marketing, and is especially important for smaller farms who are more likely to be more heavily dependent on CSA as a market channel. Although most CSAs are profitable, CSA is like other forms of farming in the U.S., which often require farm partners to work off farm to maintain. However, CSAs are less dependent on off-farm work than U.S. agriculture generally. CSA also appears to be supporting a new generation of farmers that aspires to start farming who do not have a great deal of capital.

CSAs are very powerful economic engines. CSAs' gross sales per acre are considerably higher than almost all other agricultural endeavors, including all other forms of organic agriculture in California except nurseries and floriculture. CSA is also one of the few kinds of agriculture in the area that creates year-round jobs for many farmworkers, and the more established CSAs provides real benefits to their workers such as health insurance and no-interest loans. Additionally, it is likely that because of CSA farmers' commitment to reducing off-farm inputs and input purchases from distant sources, much of the input costs — including the labor costs as wages paid — remain within the local or regional economy. In addition to CSAs being economic engines in their areas by supporting the local economy and providing employment for workers and livelihoods for farmers, they tend to make farmers' work very satisfying and rewarding, even if extremely demanding.

Making CSA work well is difficult. CSA farmers have a great many responsibilities because of the complexities of their production, marketing, and distribution systems. Thus, much learning is necessary for continued success, as in all complex occupations. Most CSA farmers remain very open to sharing the expertise they have developed through their years of experience. The vast majority are happy with their work and continue to promote CSA as a viable option for small- and medium-scale farmers.

Appendix: CSAs in study compared with other types of agriculture

How to read this table: the data presented in each row is comparable, often directly, but the wording or focus of questions asked by different studies were different in some cases. These differences are highlighted by varying font colors; the colors in the description of the characteristic correspond to the colors in the data for each row.

Characteristic	CSA farms in study sample (2009-2010)		CSA farms nationwide (2001) ^a		California organic farms (2007-08) ^b		California farms (2007) ^c		U.S. farms (2007) ^d	
	Average	Median	Average	Median	Average	Median	Average	Median	Average	Median
Years ... in operation / on present farm	5.7	3	5.7	5	17.1 ^c	—	18.6	—	21.6	—
Number of farm partners	2.7	2	—	—	—	—	—	—	—	—
Age of ... farm partners / principle operator / all operators	41.6	41	43.6	44	56.3 ^c	—	56.1	—	54.9	—
Women as percentage of ... partner team / primary operators	40%	-	36%	-	19.2% ^c	-	23%	-	14%	-
Percentage white (all partners, all operators)	87%	-	97%	-	—	—	93%	-	92%	-
Percentage Latino (all partners, all operator)	5%	-	—	—	—	—	11%	-	3%	-
Percentage ... with Bachelor's degrees (all partners) / completed 4+ years college (principle operator)	81%	-	74%	-	—	—	39% ^c	—	24% ^c	—
Percentage with graduate degrees (all partners)	27%	-	23%	-	—	—	—	—	—	—
Percentage ... with holding off-farm jobs (all partners) / worked any days off farm (principle operator, all operators)	42%	-	—	—	67.7% ^c	-	68%	-	66%	-
Percentage using green or animal manures	82%	-	—	—	49%	-	—	—	—	—
Percentage with livestock (including poultry)	49%	-	—	—	7%	-	29%	-	44%	-
Percentage with on-farm electricity production	22%	-	—	—	—	—	4%	-	1.1%	-
Percentage certified organic (non-exempt)	45%	-	42.7%	-	84%	-	2.7%	-	0.8%	-
Percentage describing practices as "beyond organic"	39%	-	—	—	—	—	—	—	—	—
Percentage meeting or exceeding organic standards	87%	-	93.5%	-	100%	-	—	—	—	—
Farm size	151	20	58.9	15	174	—	313	20	418	80
Acreage in cropland (harvested, all farms)	41	6.3	25	7	81	—	94	—	140	—
Acres owned by operator(s)	113	8.5	57.9	18	—	—	178	—	259	—
Percentage ... that own all land / full owners	40%	-	29%	-	—	—	78.7%	-	69%	-
Percentage ... that rent all land / tenants	35%	-	23%	-	—	—	9.1%	-	6%	-
Percentage ... that own & rent land / part owners	25%	-	48%	-	—	—	12.1%	-	25%	-
Number of weeks shares available	43	52	24	—	N/A	N/A	N/A	N/A	N/A	N/A
Percentage employing ... 1+ permanent worker(s) / workers working 150 days or more	42%	-	—	—	—	—	20.8%	-	9.1%	-
Percentage of ... gross farm income from CSA / cropland dedicated to CSA	58%	60%	28.8%	42.8%	N/A	N/A	N/A	N/A	N/A	N/A
Gross farm sales / Total organic product sales / Market value of agricultural products sold	\$983,503	\$57,000	—	—	\$203,036	—	\$418,164	—	\$134,807	—
Gross CSA sales	\$491,752	\$34,200	\$33,541	\$15,000	N/A	N/A	N/A	N/A	N/A	N/A
Gross farm sales per acre	\$9,084	\$4,341	—	—	\$2,439	—	\$1,336	—	\$323	—
Gross farm sales per acre in harvested cropland (excluding meat-focused CSAs) / Gross CSA sales per CSA acre	\$13,354	\$10,000	\$9,660	\$6,420	\$3,834	—	\$4,439	—	\$960	—
Membership count / shares sold per week	585	60	79.5	41	N/A	N/A	N/A	N/A	N/A	N/A

Legend: — = data not collected; - = medians are not applicable to percentages; N/A = data applicable only to CSAs

Sources: ^a Lass et al. (2003); ^b NASS (2010); ^c NASS (2009a); ^d NASS (2009b); ^e ARMS (2011).

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