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Article

# Gaining and Maintaining a Competitive Edge: Evidence from CSA Members and Farmers on Local Food Marketing Strategies

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**Abstract:** Community-supported agriculture (CSA) is a widely-used approach for farmers to sell directly to consumers. We used the product, place, price, and promotion (4P) marketing mix framework to examine characteristics that help farms offering CSA maintain member satisfaction and thus competitiveness. We conducted semi-structured interviews with 20 CSA members and 24 CSA farmers in four states. CSA members additionally completed a modified choice experiment. Qualitative data were coded iteratively, and choice experiment data were summarized and compared across scenarios. CSA members and farmers were motivated by a range of personal, social, environmental, and economic objectives. Members favored high-quality staple vegetables (e.g., lettuce, green beans), ideally produced organically. Trust and a sense of personal connection with the farmer comprised part of the “value added” of CSA participation. Time and location of share pick-up were very important; thus, farmers tried to offer convenient sites or an enriched pick-up experience. Small changes in price appeared unlikely to impact participation among current members. Social networks and word-of-mouth were powerful for marketing, but may limit the ability to reach diverse populations. Future research should examine the ability of CSAs to meet the needs of those who do not currently participate.

**Keywords:** community-supported agriculture (CSA); direct-to-consumer (DTC) marketing; local foods; competition; alternative food network (AFN)

## 1. Introduction

Concerns about the environmental, economic, societal, and health risks inherent in global food systems have drawn public and scientific attention to sustainability and food security [1–5]. How

best to achieve sustainable development of food systems remains contested [2], but in recent decades, a growing number of people in high income countries have turned to “alternative food networks” (AFNs). AFNs are characterized by the proximity between farmers and consumers made possible through short food supply chains and direct-to-consumer (DTC) sales [5–8]. Proponents argue that AFNs “re-establish spatial, social and value connections lost in conventional food markets” [7] (p. 159), offer environmentally- and socially-conscious alternatives to global food systems, and provide a more reliable income stream for farmers [6–8]. However, the evidence of sustainability impacts remains unclear [6,8].

In the United States, the number of farms selling directly to consumers increased by nearly 70% between 1992 and 2012 as interest in locally-produced, seasonal foods has grown [9,10]. In addition to farmers’ markets, farm stands and farm stores (which together make up 75% of DTC sales), community-supported agriculture (CSA) is a widely-used AFN strategy [11]. In a CSA arrangement, consumers become “members” by paying a fee, usually up-front prior to the growing season. In return, the farm provides periodic shares of farm products, predominantly vegetables [12]. By 2015, 7398 farms in the United States were generating \$226 million in sales from CSA [11]. Prior research reveals that farmers’ motivations for CSA participation are diverse and frequently connected with a desire to contribute to the expansion of a form of agriculture that they perceive to be more sustainable; while earning an income is essential to CSA viability, it often is a lower priority relative to other motivating factors [13–15].

As local food sales have grown, competition between CSAs and other types of retailers marketing local or farm-sourced foods has increased. For example, a national consumer panel study found that the availability of a local farmers’ market was a leading reason for not joining a CSA [16]. CSA farmers also face competition from subscription-based produce delivery programs that source from multiple farms and adopt a broader definition of “local” [17]. Low et al. [18] hypothesize that the plateau in DTC food sales that has been observed in recent years could be in part due to displacement by local foods sold through intermediated marketing channels like grocery stores or institutions. These trends threaten the economic viability of CSAs [14,15,19–21] with many farmers leaving CSAs [15,22]. As a result, CSAs are coming under increased pressure to find more effective ways of competing [15,20,23,24].

To survive, CSA farmers must find innovative approaches to harness and highlight the unique qualities that members value. Previous research has explored the reasons why consumers choose to participate in CSA. Studies from the U.S. consistently have found that in addition to freshness and taste, those who participate in CSA are motivated by a desire for produce free of synthetic chemicals, health priorities, concerns for the environment, interest in supporting farmers and the local economy and economic considerations [16,25–34]. However, members’ motivations are not homogeneous. In a statewide study of 565 CSA members in New York, Pole and Kumar [27] found four distinct consumer segments within the CSA marketplace: “no-frills” members who join for seasonal and fresh produce, “foodie” members who also are concerned about the provenance of the food, “quintessential” members who care about these attributes, as well as the community dimensions and support for farmers, and “nonchalant” members with unclear motivations. Beyond recruitment, member retention is equally important [15,20,24]. There is some evidence that the psycho-social benefits of CSA participation influence members’ attitudes and behaviors related to farming and food, making them more likely to renew their membership [35,36].

In addition to a strategic focus on what consumers need and want, sustainable (long term) competitive advantage requires a value chain process that is coordinated and responsive to their dynamic demands [37]. An advantage is sustainable only if consumers view the producer’s product or service as superior and competitors cannot (or will not) imitate it [38]. For CSA, actions that contribute to sustainable competitive advantage will be those that differentiate the business from competitors in ways that add value for consumers, earn the loyalty of a large enough set of members, and create well-being for the farmers.

The abovementioned changes to local food and CSA markets highlight the need for inquiry into how CSAs function for the communities that they serve [28] and how CSA farmers cope with competitive pressures and evolving member demands [20]. Indeed, we know little about these two aspects despite the mounting evidence of competitive pressures that will likely have important implications for farmers. Recent studies indicate that farmers participating in local food systems face an “entrepreneurial treadmill”, requiring the continuous development of new strategies to entice customers [21] and use “bricolage” (improvisation with scarce and often eclectic resources at hand) to maintain self-sufficiency [39], which raises important questions about the social and economic sustainability of these enterprises.

In this paper, we draw on data from four U.S. states with varying levels of demand for local foods [40] to examine characteristics that help CSAs maintain member satisfaction and thus competitiveness in dynamic local food markets using the core 4P marketing mix framework: product, place, price, and promotion [41]. These data include perspectives of both CSA members and farmers. The well-known 4P framework has been used extensively by practitioners and researchers for product design and marketing campaigns, including to assess the marketing of local foods to institutions [42].

## 2. Materials and Methods

### 2.1. Study Participants and Data Collection

This mixed-methods study used data from semi-structured interviews with CSA members ( $n = 20$ ) and CSA farmers ( $n = 24$ ). Data were collected evenly across four states (New York, North Carolina, Vermont, and Washington) as part of the research project, Farm Fresh Foods for Healthy Kids (F3HK; [ClinicalTrials.gov](https://clinicaltrials.gov/ct2/show/study/NCT02770196) NCT02770196), which subsequently examined the impact of subsidized or ‘cost-offset’ CSA participation for low-income families with children. The study protocol, detailing the trial design and methods has been described previously [43].

We identified CSA farmers through referrals from cooperative extension agents, internet searches, and our own networks, and screened farmers to ascertain whether they operated a cost-offset program or did not have a cost-offset program in place. In each state, we interviewed the first three farmers from each category who provided consent. We conducted interviews in-person or by phone. Topic guides included questions about farm and CSA operations, marketing strategies, characteristics of CSA members, and most popular produce, as well as views on adapting CSA for lower income households (not reported in this paper). We also asked farmers to complete a checklist of seasonal vegetables and fruit that they grow on their farms and to suggest full-paying CSA members who may be willing to take part in an interview. We compensated each farmer \$50.

We conducted in-person or telephone interviews with five full-paying CSA members from at least two different farms in each state, including individuals without children ( $n = 11$ ) and those with children aged 2–12 years ( $n = 9$ ). Our topic guide included questions exploring members’ views on features of their CSA, CSA preferences, factors that influence their participation, their child’s involvement in the CSA (if relevant), and food shopping preferences. We also asked CSA members about their perceptions of lower income consumers and strategies for making CSA more affordable for low-income households, but these topics are not the focus of the present analysis or reported in this paper.

As part of the interview, participants also were asked to complete a stated preference exercise to determine their willingness to pay for CSA shares under hypothetical market situations. We used a modified choice experiment technique, based on McGuirt et al. [44] that provided choice alternatives in which CSA shares are defined by combinations of price, quantity, variety, frequency, and distance attributes. Specifically, we considered three willingness-to-participate scenarios: (1) CSA share size and variety (summer starter share, summer half share, summer full share with low variety and summer full share with standard variety) with varying frequency (1 time per week, every 2 weeks, and 1 time per month); (2) CSA price discount relative to supermarket prices (−5%, −10%, −20%, −30%, and −40%)

with varying travel time (same distance and 5, 10, 15 min further); and (3) CSA price premium relative to supermarket prices (+5%, +10%, +20%, +30%, and +40%) with varying travel time (same distance and 5, 10, and 15 min closer). We also asked participants to select preferred produce items from a list of 32 vegetables and fruits typically produced in the study regions, and to report the quantities they desired. Further detail on the scenarios (as used with a different population) is available elsewhere [45].

At time of the interview, we asked members to complete a brief demographic survey. Each member provided consent prior to the start of the interview and was compensated \$20. The study protocol was approved by the Institutional Review Boards at the University of Vermont and Cornell University (protocol ID #1501005266). Interview guides used with CSA farmers and members are provided as Supplementary materials (S1 and S2, respectively).

## 2.2. Analysis

Interviews were audio-recorded, transcribed verbatim, imported into the NVivo qualitative data analysis software (QSR International Pty Ltd. Version 11, Melbourne, Australia), and coded by question. For each type of interview, we selected a subset of transcripts (3 member interviews and 4 farmer interviews) for open coding by at least two authors. We met to discuss the process, application of the 4P marketing mix framework to the data [41], and salient emergent ideas. These discussions informed the development of preliminary descriptive codebooks reflecting participants' motivations for CSA participation, and attitudes and perceptions about CSA features. We then iteratively and collaboratively revised and refined the codebooks based on application to additional transcripts (6 member interviews and 5 farmer interviews). Once we reached consensus about code definitions and achieved high inter-rater reliability (observed agreement >95% and prevalence- and bias-adjusted kappa >0.90), the second author coded all interviews.

Qualitative data were analyzed by reviewing and summarizing codes, and using matrix coding queries to compare the perspectives of different participant groupings. We compared data only within dichotomous categories; specifically, we examined the perspectives of CSA members based on household composition (with and without children) and CSA farmers based on membership (<200 and  $\geq$ 200 people) and CSA demand (with and without a waitlist). We present member and farmer findings related to motivations for CSA participation and the four dimensions of the 4P marketing mix framework [41]. Within this framework, we consider CSA share contents under "product", pick-up location and time under "place", absolute and relative willingness-to-pay under "price", and marketing and the social dimensions of CSA participation under "promotion".

We qualify how we report the data based on the number of participants who shared a response [46]: "almost all" indicates >90% (18+ members or 22+ farmers); "most" means more than two-thirds (14–17 members or 17–21 farmers); "many" indicates between half and two-thirds (10–13 members or 12–16 farmers); "some" indicates at least one-third yet less than half (7–9 members or 8–11 farmers); and "few" means less than one third (<7 members or <8 farmers) of respondents.

Quantitative data from the choice experiment were entered into Excel for tabulation and SPSS for statistical analysis. Share preferences were calculated as the sum of participants who were willing to purchase: (1) each share size across all frequency options; (2) each share frequency across all share sizes; (3) preferred produce items. We also generated mean  $\pm$  standard deviation for responses to the question, "What price would you be willing to pay for the share you have selected". For the scenarios considering CSA price and travel time relative to the supermarket, we used McNemar's tests to examine differences in willingness across pairs of scenarios; travel times were compared within price levels, and prices were contrasted within travel times. We considered *p*-values less than 0.05 to be significant.

### 3. Results

#### 3.1. CSA Members

##### 3.1.1. Member Profiles and Motivations

Members in our sample were primarily female, white, had completed four or more years of college education, and had a household income greater than \$35,000 (Table 1). Participant ages ranged from 24–71 years. Over one-third had participated in CSA for more than five years.

**Table 1.** CSA member characteristics ( $n = 20$ ).

Characteristic	Mean	SD
Age <sup>a</sup>	46.3	14.5
Characteristic	Number	Percent
Female	19	95
White	20	100
Household composition		
Two adults without children	11	55
Two adults with children	9	45
Household income <sup>a</sup>		
Less than \$35,000	2	11.1
Between \$35,000 and \$49,999	3	16.7
Between \$50,000 and \$74,999	4	22.2
Between \$75,000 and \$99,000	2	11.1
\$100,000 or more	7	38.9
Education <sup>a</sup>		
Grade 12 or GED	1	5.6
College 1 year to 3 years	2	11.1
College 4 years or more	15	83.3
Duration of CSA participation		
1–2 years	7	35
2–5 years	5	25
>5 years	8	40

<sup>a</sup> Results based on 18 participants due to missing data.

A combination of altruistic and personal goals motivated members' participation in CSA. Some offered critiques of the conventional food system, often expressing distrust in and disdain for the production practices used in large-scale agriculture. Most said that the origins of their food (particularly fresh food) were very important and many appreciated the opportunity to support their local economy and directly contribute to the income of a specific farmer.

"We know the farmer, and we largely do the CSA to support her. Wanting to put our money where our mouth is. And so I think if we were really doing it based on what we eat, we would go with a smaller share, but we wanted to do the full share for the financial bit, just for the farm."—NC Member 3.

Obtaining fresh, "higher quality" produce was paramount for members. While supporting a larger social cause appeared motivating for many, this was usually secondary to or intertwined with an interest in personal benefits of CSA participation. Members wanted flavorful food that they believed to be healthier and "safer" than alternatives. Buying food from a trusted source was an important motivator.

"By developing like a relationship with a farmer where you kind of like know what their growing practices are, I feel like there's just like a little more security in the fact that what you're eating is actually having an overall beneficial effect on your body."—NC Member 5.



Parenthood appeared to be a turning point in food-related behaviors among those with children. Many discussed a strong desire to use CSA to expose their children to a wide range of vegetables and fruit, provide agrarian experiences, impart environmental values, and lay the groundwork for more sustainable lifestyles.

“I have really tried to eat organic and that’s because you know, I feel like my kids need to eat organic and expense-wise I think it’s more affordable to do the CSA. And then also just exposing them to new varieties of vegetable and just what’s in season and how we eat seasonally versus going to the grocery store where there’s always strawberries in the middle of winter. When you taste something that comes from the grocery store and it’s been sitting there for a month, it’s not going to taste as good as if it’s fresh. So I wanted them to try things that were local and fresh and give them the best opportunity of trying something they’ve never had before.”—WA Member 4.

“I can’t stress how cool it is as a parent to have your three year-old look at you and say, ‘These are [farmer]’s potatoes’, ‘These are [farmer]’s carrots’ . . . And whether they are or not, she thinks they are and to have her see at the farm where they’ve grown and be able to be a part of the shopping experience and talk to them, and she knows them personally . . . To me, that’s a huge piece of why [I] started the CSA. And I think one of the other big pieces we started was because we knew the farmers from growing up. I think it’s cool to know that our money is going to support people that we know personally versus the supermarket.”—VT Member 1.

### 3.1.2. The CSA Attributes Valued by Members

Members valued their connection to the farms and appreciated the tangible and intangible benefits of participation. Below, we use the 4P marketing mix framework to present attributes that were valued by CSA members. Key themes and quotations are presented in Table 2.

#### Product

Every member interviewed talked about the superior taste and experience attributes of produce from their CSA, with fresh vegetables providing, in one participant’s words, “that whole sensory experience”. Many members discussed organic or low-input production practices, particularly with respect to associations with food safety and healthfulness. Members reflected positively on how CSA participation influenced how they cooked and ate, complementing current dietary patterns or leading to increased vegetable consumption.

Members said that they appreciated the ability to choose the share size that met their needs and preferences. In the choice experiment, the most popular shares were the two with the greatest variety: the half share (five different items) and full share-standard variety (nine different items). The degree to which members could choose items week-to-week varied by CSA. Most were happy with the way that their CSA functioned; not all wanted to select vegetables on their own. There also was limited interest in purchasing supplemental products (e.g., eggs, cheese, wine) from partner farms sold as “add-ons” to the CSA. In line with how CSAs typically operate, members indicated a preference for weekly distribution rather than fortnightly or monthly distribution.

The most popular produce items were common staples like lettuce, green beans, and summer squash. Items typical in CSA, but less commonly found in supermarkets, such as kohlrabi and fennel, were the least popular. However, members discussed valuing introductions to new vegetables in moderation and learning new recipes. Some said that they regularly received undesired products or more than they could eat, but they appeared to be resourceful in finding ways to avoid wasting these items, either through preservation, trading, or sharing. A few specifically mentioned that tips and ideas shared in CSA newsletters had been helpful.



**Table 2.** CSA member and farmer perspectives related to the product, place, price, and promotion (4P) marketing mix and implications for practice.

Marketing Mix Dimension and Topic	CSA Member Wants and Needs	Related Farmer Marketing Strategies	Implications for CSA Practice
Product			
Items	<p><b>Universal demand for fresh, tasty vegetables</b>  <i>It's a huge difference what vegetables taste like when I know she picked 'em yesterday.—WA Member 2</i></p>	<p><b>Focus on providing high quality, fresh vegetables</b>  <i>When you have carrots, lettuce or tomatoes fresh, those are the vegetables that convert people to fresh, local and organic. You can just see people's reactions to them when they taste them. So they wait for them and love them. Those are like the treasured vegetables.—NY Farmer 4</i></p>	Provision of fresh produce needs to be prioritized.
Share size	<p><b>Smaller shares may suit the needs of small households, those new to CSA, and those who desire greater produce choice</b>  <i>I felt like [the half share] would probably be a more realistic amount of food that we could consume each week. I don't like to waste food, so being the first time, I didn't wanna go overboard.—NY Member 2</i></p> <p><i>Knowing that we would not eat all of anything much larger [than the 'single' share], and knowing also that there were things I wanted and I could go to the farmers' market and get or just buy straight from [the CSA farmer] if they had [it is why I chose the 'single' size].—VT Member 2</i></p> <p><b>Larger shares may be more appropriate for larger households, those with high vegetable demand, and those who seek to minimize purchases through mainstream retailers</b>  <i>There's not a huge cost difference between the individual [share] and the full [share]. So it really is incentivized for you to pay a couple more dollars because you do receive a lot more for that. And I personally eat a lot of produce and I knew that I was gonna be sharing this.—NC Member 5</i></p> <p><i>When we looked at the volume of the half share, it didn't seem like a family volume. It seemed like that—a couple—like if we didn't have kids, we would probably be satisfied with that. But cooking for a family and trying to use vegetables in your diet more is a big part of it, and I guess we just felt like there was financial incentive enough where you know, it wasn't twice as much, the full share, and it just sort of seemed worth it.—WA Member 5</i></p>	<p><b>Offering various share sizes caters to different demands, but can create some additional work</b>  <i>We have four different options. One is the economy. One is what we call basic, and that's a larger share without eggs. We have a basic, we have a basic with eggs, and then we have the plus. And what we're finding is that we get about 30% of people in each of the categories except for basic, which is the one without eggs, and we get about 10% in that category.—NC Farmer 1</i></p> <p><i>We offer full and partial shares. Not that we're thrilled about offering partial shares but people want them. So we do [laugh].—NY Farmer 3</i></p>	Offering multiple share sizes may help attract members with various needs and preferences.
Production practices	<p><b>Expectation of organic (or low-input) production among some members</b>  <i>I like them (vegetables) to be seasonal and local and organic for health concerns.—NC Member 3</i></p> <p><i>I thought it (CSA participation) would be a lot healthier. [Our CSA] doesn't do organic, but they say they use the least amount of pesticides. They said it's really impossible to have fruit without having some type of pesticides on it.—NY Member 5</i></p>	<p><b>Production is often low-input, but organic certification is less common</b>  <i>We're not certified organic, but people know that we don't use pesticides or synthetic anything. It's customers that want that. And I have to tell 'em, "no [we're not certified organic]."—NY Farmer 4</i></p>	Information on production practices should be communicated clearly. Where possible, identify how the practices differ from those of large-scale conventional agriculture.

Table 2. Cont.

Marketing Mix Dimension and Topic	CSA Member Wants and Needs	Related Farmer Marketing Strategies	Implications for CSA Practice
Variety	<p><b>Appreciation for staple vegetables, as well as limited exposures to new products</b>  <i>Zucchini is a big thing for us. Radishes, big thing. Broccoli, green beans. The weirdo things like fennel [laugh], not really our thing. And the squash, not so much. I look for the fix-ins for salad. So tomato, radishes, red onion, you know that kind of thing. Carrots. Always carrots.—VT Member 3</i></p> <p><i>There's not been one thing that I haven't liked. We've gotten to try Romanesco, which we didn't ever have before, so it was like being able to try something. Because we're getting [a] good variety of things, we're actually trying to cook new and different recipes.—NY Member 3</i></p> <p><i>There was one week that they had garlic scapes, and I'm like, "What the heck is a garlic scape?" I knew what garlic was, but I didn't know what do with garlic scapes, and they gave like four or five different recipes [in the newsletter] that they have, that they use it in. Which is great because it gives us ideas.—VT Member 1</i></p>	<p><b>Offering a balance of staples and less common products to satisfy different tastes</b>  <i>You know, I have to make sure that my share isn't all weird stuff, like kohlrabi and bok choy and things people aren't familiar with. So I try and make sure that things they are familiar with and already definitely love, there's enough of them.—NY Farmer 1</i></p> <p><i>Half of the people really enjoy being in a CSA that like forces them—well not force but we like invite them—to try new kinds of vegetables and produce. And they really like being adventurous in the kitchen. And then the other half just want to feed their family organic produce, and they, you know, don't have the time on weekdays to like do the research and like figure out how to make fennel taste good for their kids. So it's finding that balance.—WA Farmer 4</i></p>	<p>Focusing on staples with occasional introductions of less common items accompanied by preparation tips and recipes is likely to satisfy diverse member expectations for CSA variety.</p>
Choice	<p><b>Some appreciate receiving a pre-boxed and pre-selected share</b>  <i>It's not really important to me to pick the exact food that we get. I don't really want to put a lot of effort into thinking about what I'm selecting. I like that the CSA just like gives me a bag, and then I work with it.—NC Member 1</i></p> <p><b>Others prefer to choose their own produce</b>  <i>I enjoy going [to the farm to get my share] because I pick what I want.—VT Member 3</i></p>	<p><b>Divergent opinions regarding letting members choose what they get</b>  <i>If I were joining a CSA, I would wanna choose what I could take home. I also felt like it would be more accessible to people because a lot of folks don't like the more unusual veggies, and they don't wanna have to feel like they have to take it home. [Laugh] I guess I just felt like it would be better marketing to be like, "You get whatever you want. Like you don't have to take anything you don't like. And you're not gonna get too much food; you won't get overwhelmed with like all cabbage or something." 'Cause that's one of those mythologies about CSA's, that's like, "Oh no. [Laugh] I'm gonna get overwhelmed with a certain thing that I don't want." [Laugh].—VT Farmer 5</i></p> <p><i>I guess it's easy to manage [the CSA when members don't choose their own items]. Like if you let people select what they want off a list, it exponentially increases like the time to harvest and prepare the boxes. So it's probably not gonna be as profitable, or like, worth it, to pre-sell all that stuff if you have to spend too much time like organizing and then delivering it.—NC Farmer 2</i></p>	<p>Different levels of product choice are likely to be successful with different customers. No single approach appears to be more effective.</p>
Add-ons	<p><b>Interest in CSA is primarily focused on purchasing produce, with limited interest in buying "add on" products from partner farms</b>  <i>They do have like a meat share and a flower share . . . sometimes I think they've had eggs or cheese or milk. Those are things that I would rather have the option of what I wanna buy when, so I don't do that.—VT Member 5</i></p>	<p><b>Collaborating with local businesses is a way to provide an expanded range of products and support others</b>  <i>We're kind of a collaborative farm. Like we want to work with our neighbors. We don't really feel like it's competition as much as it's like helping everybody else out.—WA Farmer 5</i></p>	<p>Partnerships with local farms and businesses should be strategic, as indeterminate collaborations may not add value, but require resources to manage.</p>

Table 2. Cont.

Marketing Mix Dimension and Topic	CSA Member Wants and Needs	Related Farmer Marketing Strategies	Implications for CSA Practice
Place		<p><b>Some favor on-farm pick-up because it increases member interaction with the farm and minimizes distribution logistics</b>  <i>I'd like to have them to the farm 'cause I'd really like them to feel more connected to us... And we feel like the folks who come out to the farm at some point in time and actually lay their eyes on the farm or maybe even help out, we have great retention with that. So we like that. So I would love to have more on-farm pick-up.—NC Farmer 5</i></p>	
Pick-up location	<p><b>Demand for convenient ways to get produce</b>  <i>I like having my produce brought to me or available close by.—WA Member 2</i></p> <p><i>[The] location is good for us because it's on our way home.—NY Member 1</i></p>	<p><b>Others prefer offering a limited number of drop-off or pick-up sites, especially if they do not have to be managed by the farmer</b>  <i>In this area, there's a ton of farms offering CSA's . . . We sort of think that being flexible in where we offer our pick-ups enables us to sort of find niches that aren't being served yet.—VT Farmer 5</i></p> <p><i>In terms of efficiency, [the ideal distribution approach is] probably just having spots where we could drop it off and go.—VT Farmer 4</i></p>	<p>Most members expect share collection to be convenient. Options that minimize travel often are preferred.</p>
On-farm experience	<p><b>Some demand for recreational farm experiences, especially for children</b>  <i>[On the farm] there's chickens and people to talk to and kids to play with. She can play outside. 'Cause we're here for a while, you know. We don't come and leave. We stay and chat. So that's pretty cool too. She likes to come.—NY Member 1</i></p> <p><b>Minimal interest in participating in farm work</b>  <i>We haven't done any [on-farm volunteering]. I know that there are really good cooperative places that are happening, [but] I don't feel capable . . . I guess, you know, maybe it's complacency, but I feel like investing in CSA farming by being a client is already pretty good [laugh] . . . —WA Member 5</i></p>	<p><b>Finding ways to enrich or enhance the farm-based CSA experience can be a useful marketing strategy</b>  <i>So our CSA model is a little bit more unique than some others because we don't package boxes for people. We actually put all our food out on the table . . . we might put carrots and beets together, and say, "you get two pounds," or a pound, or whatever it is. They can take all of one, all of the other, or a mixture . . . So we give a lot more choice to our members that way . . . It's even important, I think, with individual items that they can pick the thing they want in that pile, much like the grocery store. So I typically pitch our CSA in part that members have a lot more choice in what they get.—VT Farmer 2</i></p> <p><i>Members have access to [our pick-your-own section] any day of the week... We don't do any delivery shares, like, in boxes or anything, 'cause the pick-your-own section is really sort of what sets us apart. So that's why we have people pick up on the farm... I like my members to have like a community feel. So like they know their farm personally and know their farmers personally and get to know each other because they're all picking up around the same time . . . —NY Farmer 1</i></p> <p><b>Having members work on the farm is labor-intensive and only desirable under certain circumstances due to lack of skill and commitment</b>  <i>We host the work parties on Thursday and Sunday mornings and that's about what we can handle [laugh] for volunteers, ya know, for people that don't know what they're doing . . . They have to be very careful, be supervised, 'cause you can get some pretty radical looking stuff [laugh] that's not uniform. And I think part of what keeps the people joining or rejoining [our CSA is] the quality of our produce. So it's important, you know, when you're working with a lot of people to stay on top of it and make sure they're picking things and making bunches that look like bunches. And, and then when we wash, ya know, making sure they're washing.—NY Farmer 3</i></p>	<p>For some people, farm experiences are more important than convenience. To draw members to this model, there must be compelling reasons to visit the farm. Opportunities for on-farm volunteering are unlikely to be compelling.</p>

Table 2. Cont.

Marketing Mix Dimension and Topic	CSA Member Wants and Needs	Related Farmer Marketing Strategies	Implications for CSA Practice
Price			
Payment plans	<p><b>Payment plans can make participation more feasible</b>  <i>I think it was \$600 something this year for the 20 weeks. It's crept up over the years, so I can't quite remember. I do a monthly where I pay . . . and I think partly this is because I'm their neighbor and they know me . . . So if it was \$580 or \$600 [total], I might pay like \$180 or \$200 by May and then \$100 a month for 4 months throughout the summer.—WA Member 1</i></p>	<p><b>Offering payment plans helps fulfill community food security goals and is not unduly burdensome if most members pay upfront</b>  <i>There are a few people who need to pay by installment and usually they just contact me and I work something out with them personally. I don't have anything [formal] in place, mostly because I really do need a majority of people to pay upfront because that's the way it works, ya know.—NY Farmer 1</i></p>	<p>Offering payment plans is a strategy for increasing CSA accessibility, but should be considered with respect to other cash flow needs.</p>
Promotion			
Marketing strategies	<p><b>People learn about CSA through multiple channels; social networks are particularly important</b>  <i>Somebody had just mentioned a CSA. [I] didn't know what that was at the time. We stopped at a farm market . . . and they had information and I was like 'okay, this is the second time I've seen information about a CSA. This might be something that would be really good for us.'—NY Member 3</i></p> <p><i>My sister actually has been part of a CSA for a number of years now up in Burlington area and she could not say enough about it for so many reasons. And one of the biggest things [about joining this CSA] was that we know the farmers personally.—VT Member 1</i></p> <p><i>. . . This farm I chose because my friends had recommended it, and then also because it dropped at a little community store that I shop at frequently that's convenient to where I live.—WA Member 4</i></p>	<p><b>Social networks and personal connections are the most valuable marketing channels</b>  <i>It's pretty much like a word-of-mouth thing. Having lots of like loyal, supporting customers that I send out each season. And I pretty much fill up based on that list. And I always have people just like randomly come up to me and ask if I have room in the CSA. So I haven't actually ever like advertised it in like a public way. It's always like a direct email or like a face-to-face conversation.—NC Farmer 2</i></p> <p><i>Referrals are the most successful [marketing strategy], but you know, your referrals only have so many friends, right.—WA Farmer 5</i></p> <p><b>Willing to try any marketing strategies</b>  <i>I don't think I've seen many, many referrals come from, you know, posters being hung up in local businesses. But I still do it just 'cause [laugh], ya know, why not. There are also a couple online things that I signed up for that I had never received any input on.—NY Farmer 1</i></p> <p><b>Existing strategies for targeting low-resource households have had limited success</b>  <i>I guess the mission was to be able to allow people in the community to participate and to kinda share also . . . I didn't want to exclude anyone for income and I was actually specifically trying to target . . . low-income and elderly. We're not that successful in that, even though that's what I'm trying to target. We have over half of the people are able to pay their CSAs right up front and hardly anybody participates at all in helping with the farm. [Laugh].—NY Farmer 2</i></p>	<p>Broad-based marketing increases may increase awareness of CSA concept in the wider community, but may not be an efficient use of resources. Carefully targeted marketing leveraging social networks may attract new members, but could limit who learns about CSA to higher resource households and those with interests in local foods. Evidence is needed on effective strategies for reaching low-resource households.</p>

Table 2. Cont.

Marketing Mix Dimension and Topic	CSA Member Wants and Needs	Related Farmer Marketing Strategies	Implications for CSA Practice
Personal connection	<p><b>Desire for personal connection with the farmer and farm</b>  <i>It's cool to be able to see them [the farmers] every week, when you go to get your stuff and talk to them about how do I prepare this, how do I-what is this, what do you recommend.—VT Member 1</i></p> <p><i>I do, you know, really love sorta everything about the farm, and, you know, they have a Facebook page where they put the pictures of the chickens walkin' around . . . it has that kind of like feel like it's coming from the earth, it's not coming from, you know, a truck that's coming from Wisconsin or wherever.—WA Member 1</i></p>	<p><b>Dedicating effort to personal interactions with members helps cultivate relationships, but can take time away from farming</b>  <i>[At CSA pick-up], I'm really kinda the main person who's kinda greeting them, and that's just like, my personality. I think [when] doing an on-farm pick-up, it's important to have someone in a role who can be very, kind of, nurturing and like, making people feel comfortable and welcoming and really explaining things.—VT Farmer 1</i></p> <p><i>I'm realizing now there is a drawback to [having on-farm pick-ups].—you want a window of time when people come because you can't be in the field and be running in to deal with these persons. And people like to talk. [Laugh] . . . But an important component of it too is them seeing the farm and seeing how it works.—NY Farmer 2</i></p>	Establishing a connection with potential and current members is imperative to attract and retain customers.
CSA communication	<p><b>Appreciation of regular farm communications</b>  <i>One thing that my CSA does do, which is fantastic, is they send out weekly emails to tell us what's part of the share, but then also at the bottom, gives us a couple of ideas or recipes for some of the items in the share.—VT Member 1</i></p>	<p><b>Newsletters and social media are a good way to communicate with members and build loyalty</b>  <i>[Newsletters] are a nice way of keeping in touch and, I mean, in marketing language, like building brand loyalty and affection and connection and commitment... to just foster the sense of, [this farm] is your farm, and I'm your farmer . . . I think that's a big reason, aside from just getting food, people join a CSA because they want a sense of connection to the farmer and their farm. So, that's all. That's just another thing that's kind of intangible but quite valuable.—WA Farmer 3</i></p>	Newsletters and social media can be used to promote a CSA's unique attributes.

## Place

Share pick-up logistics, defined in terms of location and time, were very important. Many participants noted that they had selected their CSA based on its location, or had switched CSAs to increase convenience. While a few members had their share delivered directly to their home or workplace, most utilized pick-up sites located along regular travel routes or collected their produce on the farm. Few people travelled more than three miles to get their share, except in Vermont where distances to distribution locations were slightly farther (maximum 15 miles).

CSA members expressed some demand for recreational farm experiences. Some parents said that they preferred on-farm CSA pick-up because it provided an enjoyable outing for their children. There was minimal interest among interviewed members in sharing the burden of farm labor, with members often citing time as a barrier to greater involvement in the community aspect of CSA.

## Price

CSA members had varied opinions about price. A few indicated that they participated in part because it was a more affordable way to access organic vegetables while others noted that they found the CSA to be expensive. Some said that they used payment plans to space out their payments. Less than half could recall precisely what they had paid for their share, but expressed a willingness to pay  $\$28.35 \pm \$7.80$  on average per week which corresponded well with the actual prices paid by those who could remember. No one said that they felt that their CSA was unfairly priced.

When considering price and travel times relative to the supermarket, CSA members indicated interest in participating in a CSA for which there was a price saving (Table 3, Panel a). All members were willing to purchase the CSA share when there was a discount of at least 10% and the added distance to pick up the CSA share was no more than 5 min. Within CSA discount level, however, members responded differently depending upon the additional travel time involved. For a discount of 30 percent, 95–100% of members wanted to participate irrespective of travel time; whereas, when the discount was only five or 10 percent, members were significantly less interested if it involved 15 more minutes of travel time.

**Table 3.** CSA relative to supermarket choice experiment.

(a) Scenarios Involving CSA Price Discounts and the Same or Greater Travel Time			
CSA Price Relative to Supermarket Price (CSA Discount)	CSA Travel Time Relative to Supermarket (Minutes Further)	% Willing to Purchase CSA ( <i>n</i> = 20)	Difference within Relative Discount Level
−5%	same	95	**
	+5	95	**
	+10	80	
	+15	55	ref.
−10%	same	100	**
	+5	100	**
	+10	85	*
	+15	55	ref.
−20%	same	100	
	+5	100	
	+10	95	
	+15	85	ref.
−30%	same	100	
	+5	100	
	+10	100	
	+15	95	ref.

Table 3. Cont.

(b) Scenarios Involving the Same or Less Travel Time and a CSA Price Premium			
CSA Travel Time Relative to Supermarket (Minutes Closer)	CSA Price Relative to Supermarket Price (CSA Premium)	% Willing to Purchase CSA ( $n = 20$ ) <sup>a</sup>	Difference within Relative Travel Time
Same	+5%	90	*
	+10	90	*
	+20	84	*
	+30	53	ref.
−5 min	+5%	90	*
	+10	90	*
	+20	84	*
	+30	53	ref.
−10 min	+5%	100	
	+10	90	
	+20	84	
	+30	74	ref.
−15 min	+5%	100	
	+10	95	
	+20	84	
	+30	74	ref.

Statistical significance indicated: \*\*  $p < 0.01$ , and \*  $p < 0.05$ . <sup>a</sup> Sample size varies from 19 to 20 due to missing data.

When CSA was priced higher than the supermarket, the largest price premium that most members were willing to accept was 20% (Table 3, Panel b), and there were no significant differences across travel times within CSA premium level. However, within relative travel time levels, premium prices were associated with willingness to participate; for example, if CSA travel time were the same or five minutes closer than the supermarket, significantly more members were willing to pay a 5%, 10%, or 20% premium than were willing to pay a 30% premium. For scenarios that involved CSAs 10 or 15 min closer, all premium levels were equally attractive to members. In fact, seven members indicated a willingness to purchase the CSA share under every price and travel time scenario.

### Promotion

A few members said that they initially signed up for their CSA in part because they knew their farmer personally. Others discussed learning about CSA from various sources, including discussions with members, brochures, signage, workplace CSA schemes, and referrals from social service providers.

Personal connections were important to members, who often referred to CSA farmers by their first names and shared anecdotes that characterized them as trustworthy and relatable. One member said she appreciated that the farmers appeared to be “thoughtful and conscientious in their processes and methods” and seemed “very transparent and communicative about what they were doing and what their goals were and why they were doing what they were doing” (NC Member 4). Members discussed connecting with the CSA and farmer through farm visits, chats during pick-up, newsletters, and social media.

### 3.2. CSA Farmers

#### 3.2.1. Farm Profiles and Farmer Motivations

Each farmer who participated in this study organized CSA in a different way (Table 4). CSA often was one of multiple farm-based income streams, with almost all farms also selling at farmers’ markets and/or through wholesale channels. CSA membership ranged from six to over 1200 households. Only seven farmers said that their CSA had a waitlist of prospective members. Most CSA operations distributed shares on the farm as well as through at least one other distribution channel.



**Table 4.** Selected characteristics of CSA study farms ( $n = 24$ ).

Characteristic	Number	Percent
Farm size		
Less than 200 members	14	58.3
More than 200 members	8	33.3
Unassigned	2	8.3
Portion of farm dedicated to CSA		
<25%	4	16.6
25–49%	7	29.2
50–75%	4	16.6
>75%	8	33.3
Unassigned	1	4.2
Farm has member waitlist		
No	17	70.8
Yes	7	29.2
Years CSA has been in operation		
<5	8	33.3
5–10	6	25
>10	10	41.7
Distribution methods		
On farm	18	75
Pick-up/drop off sites	16	66.7
Home delivery	6	25
Supplemental on farm ‘u-pick’ option	7	29.2

Farmers had socially-minded motivations for offering CSA, particularly the desire to improve access to nutritious foods and help people “make a connection” between growing and eating. Those interviewed indicated values relating to community engagement, social justice, public health, and getting in touch with nature and the landscape. Few said that they were raised on farms; most described acquiring farming skills through apprenticeships or informal training. Many claimed to use organic farming methods; few said that they were certified organic. They were nearly united in their ambition for their CSA activities to support positive social change rooted in sustainable community development. For example, one stated that she hoped that her CSA would contribute to “lives improving and becoming healthier in ways beyond just vegetables.” Almost all farmers interviewed operated a for-profit enterprise, but no one identified explicit economic interests as a main motivator for CSA.

### 3.2.2. Strategies to Enhance Marketing

Farmers were acutely aware of competition, but there appeared to be minimal strategic planning that guided farm operations and informed marketing strategies. Farmers’ decisions often were based on trial and error and colored by local context, particularly the extent of CSA awareness and competition locally. For example, farmers who perceived considerable competition in the CSA market tended to focus more on differentiating their product and service offerings from other CSAs, while those in areas with few CSAs sought to highlight their enterprise as an alternative to the dominant food system. We did not observe any clear patterns of marketing or CSA practice based on years of experience in farming.

Below, we use the 4P framework to consider the strategies used by farmers to market their CSA. Illustrative quotations are presented in Table 2.

## Product

Farmers recognize heterogeneity among their members' preferences and described using multiple strategies to appeal to a wider range of people. Offering multiple share sizes was a common practice among farmers in this study. Acknowledging members' differing appetites for trying new things, farmers described working to strike a balance between offering new or novel produce and more familiar items. Farmers discussed deliberately trying to offer members a diversity of items including, in one farmer's words, local, seasonal products that are "new and exciting". Another way that a few farmers sought to cater to diverse member tastes was to let members choose their own produce. A few also expanded their product offerings by partnering with producers of foods that could complement items in the CSA, such as flowers, eggs, meat, mushrooms, and bread, and that were not direct competitors.

## Place

While farmers described their members as people "clued in" to local food systems who sought fresh and organic produce, they also recognized that many valued convenience, which conflicts with the traditional CSA model in which farm visits, active engagement in the CSA member community, and shared risk with the farmer supersede convenience. For example, one farmer expressed discontent about the presence of non-profit CSAs in his area because they skew perceptions about what to expect from a CSA:

"They deliver boxes all over the place at a distribution cost that a normal CSA couldn't afford . . . All those multiple drop sites make that more convenient than what any individual farm can do. And in today's day and age, sadly, as we race to the bottom, convenience becomes more important than community."—VT Farmer 2.

Farmers rarely engaged the CSA community in substantive on-farm labor, due to the high management needs of low-skill volunteers, and perceptions (sometimes based on experience) of spotty reliability and lack of interest.

Some farmers described their ideal method of operation as a model where members come to the farm to pick up their shares. Beyond being easiest and most cost-effective for farmers, this provides opportunities for members to experience, enjoy, and connect with the farm and CSA community, thereby aligning with farmers' social values. However, few thought that this was a viable business model and few farms offered only on-farm pick-up. Those who offered only on-farm pick-up presented a vibrant, place-based farm experience or greater choice in product selection to enrich or enhance what they offered to members.

Other farmers said that they would prefer a method of operation in which all shares could be distributed through a limited number of drop-off sites. The dominant perception was that only a subset of members would be interested in on-farm pick-up and farmers have "gotta deliver the boxes to the people where they're gonna be" physically, but perhaps also psychologically and financially. Home delivery was used by a few farmers to maximize convenience for members, but this was identified as "by far the most complex and most expensive" distribution method. As a less complicated approach, most sought to distribute at drop-off and pick-up locations that cater to busy parents and professionals, such as community centers, offices, or complementary businesses. Where drop-off sites were used, farmers indicated a preference for locations with cooler space to keep vegetables fresh.

In spite of strong idealistic motivations, the economic realities of operating a farm and catering to member preferences could leave CSA farmers feeling drained. The strong sense of obligation often felt towards members made it difficult for them to establish firm boundaries around their work. This was most evident among farmers who did not have a waitlist for their CSA and felt greater angst over retaining members. A few farmers discussed making special efforts to reach or deliver shares to members who miss pick-ups because, as one farmer put it, there is:

"this guilt of like, 'oh my God, they paid for vegetables and they didn't get them'"—NC Farmer 2.

## Price

We found little evidence of farmers leveraging price as a marketing tool. While this study was not designed to explore farm expenses in depth, estimates based on membership numbers, share prices, and expenses seem to indicate very low profitability ratios. A few farmers noted that they considered the prices of other local CSAs when setting their share prices or that they had developed other rubrics for determining share cost (e.g., 20% less than their farmers' markets prices), but no one explicitly mentioned using price to their competitive advantage. Most farmers reported offering payment plans to members, either as standard practice or on request.

## Promotion

Farmers described using diverse mechanisms to recruit new members, but largely agreed that social networks, word-of-mouth, and face-to-face interactions were the most valuable. Broad-based 'spray and pray' promotional strategies were used commonly, including some strategies that farmers acknowledged were likely to be ineffective (e.g., paid advertisements in event brochures).

Most farmers were committed to addressing food security, but reaching low-resource households was more challenging than anticipated. A few discussed taking specific steps to recruit and retain more vulnerable households to their CSA with limited success. These strategies had included promoting the CSA through newsletter notices at low-income housing units and through brochures at low-income health clinics.

Farmers hoped that CSA would create a context for developing close social ties both between themselves and members and among members. However, impersonal distribution methods and time constraints proved to be major barriers. Farmers recognized that creating a sense of belonging to the CSA was important to get their members invested and secure future membership. However, spending more time with members could limit what other work could be done or could mean working more hours to compensate.

Therefore, newsletters often were used to communicate with members. These provided a platform to anticipate upcoming produce, share recipes and storage tips, and promote events on the farm. They also offered a vehicle for farmers to establish a connection with members, albeit impersonal, and provide snapshots of life on the farm.

## 4. Discussion

CSA comprises an important AFN strategy with the potential to contribute to greater food system sustainability. This study explored why producers and consumers participate in CSA and how they perceive different CSA features using the 4P marketing mix framework. Given the rapid expansion of the market for local foods in recent years, insight on what matters to members and how farmers market these attributes is important for CSA viability. To our knowledge, this study is the first to apply the 4P marketing mix framework to examine CSA.

Corresponding with prior research, we found members and farmers to be motivated by a range of personal, social, environmental, and economic objectives [13–16,20,25–34]. As noted by Ostrom [15] (p. 109), for many, the decision to participate in CSA is based on a "complex interplay between self-interest and social values". In line with Kolodinsky and Pelch [25], we found household composition may influence interest in CSA. Parents with young children wanted the CSA to provide their family with new experiences and exposures that they could not easily get elsewhere. They also expected CSA to offer a vehicle for demonstrating and passing on values such as protecting the environment, supporting your neighbors, and eating well.

*Product:* Farmers interviewed for this study generally had a robust understanding of which attributes members desire in CSA produce, particularly with respect to freshness, experiential characteristics, variety, and volume, and strived to meet that demand. Providing more than one share size option was a relatively simple strategy for expanding consumer choice and was appreciated

by members. Although lack of choice and unwanted vegetables have been found to be leading reasons for leaving CSA [15,16,35], we found there to be strong and divergent opinions among current members with respect to choosing their own produce, indicating a benefit to CSA models that offer both self-selection and pre-boxed shares. Clear preferences for staple vegetables suggest that farmers may benefit from a stronger focus on these products, with less attention on uncommon regional items. Further, we found little interest among members in “adding on” supplemental local products offered through multi-farm collaborations. This aligns with recent research indicating mixed interest in a greater diversity of products [47] and diminishing returns for expanding product range [23]. Selectivity in entering into partnerships with other local producers and businesses may result in more efficient use of farmers’ limited resources. Based on many members’ interest in organic produce, there appears to be opportunity for CSAs to more prominently highlight their production practices.

*Place:* Our findings underscore the importance of place to CSA marketing. Members generally fit into two categories: those who highly valued on-farm experiences and those who prioritized convenient access to local produce. It is clear that farmers understand that distinct distribution strategies are warranted to reach different market segments; in fact, they often articulated that their approach to distribution is what sets them apart from other CSAs. For CSA pick-up 10 or 15 min closer than the supermarket, members were willing to pay any level of premium for their share, suggesting that convenience may be a lucrative pathway. However, what is less clear is whether endeavoring to reach these two categories of consumers simultaneously is spreading farmers too thin as found by McKee [21] and Galt [14,20]. Of note, even among members who valued farm experiences, there was little interest in helping with manual labor and farmers were reluctant to have unsupervised volunteers. Thus, opportunities for structured on-farm recreation (e.g., you-pick gardens, harvest meals) may be more acceptable to both members and farmers.

*Price:* In this sample of committed CSA members, price did not appear to stimulate CSA participation, but could be a deterrent to continued participation. Results from the interviews and choice experiment suggest that small changes in price are unlikely to dissuade participation among most current members. However, we found the balance of travel time and price to be of consequence. It is important to note that the relatively high income level of our interviewees might explain why small price variations appear unlikely to impact CSA participation. Our study was not designed to ascertain how these factors might influence participation among prospective and former CSA members, but this is an important area of inquiry. Prior studies have found that CSA price is a key factor for participation [16,25,33,47], particularly for lower income households [28,45]. However, competing on price may not be practical, considering the low profit margins in CSA [14,15,20].

*Promotion:* As has been observed in prior research [16,28], members and farmers in our study discussed the power of marketing through social networks. This reinforces the importance of building a community of recurring members that serve as ambassadors for the CSA and engage in indirect promotion by sharing their positive experiences with their networks. However, a focus on social networks may limit the ability of CSA farms to reach groups that are not already “clued in” to local food systems, including lower-resource households. A critique of some AFNs has been that inward-facing orientations result in the exclusion of disadvantaged groups [8,48], thereby undermining social sustainability.

In line with Zepeda et al. [36], we found that committed CSA members highly valued familiarity and trust in the person growing their food. We also found that once a relationship was established, members often were willing to make personal sacrifices to support their farmer. In the narrative where small-scale farming is a casualty of global food systems, CSA farmers emerge as identifiable victims. Research from economics and psychology shows humans have a tendency to offer greater support to a specific beneficiary with a personal story than to a larger, unnamed group of victims [49,50]. Providing ways to bring members face-to-face with the major characters and the work of the farm (in-person or using visual media) and letting members know how their participation creates impact in the areas that matter to them may result in greater member satisfaction leading to long-term commitment. This

differs from how ‘community’ was initially conceived in CSA [20,51,52], but may help cultivate the connections necessary to compete in an evolving local foods marketplace [21,23]. Investing in this storytelling effort will require finding ways to save time and labor on other activities or hiring someone with this expertise.

Our paper makes several contributions. First, we not only address an important research gap around market competition within the local food system, we also touch on the issues of social and economic sustainability which have been overshadowed by a focus on environmental sustainability [53]. However, issues in the social and economic realm are directly connected to environmental sustainability; farmers not able to make a profit or not able to draw on outside resources might not have the capacity to continue to farm or engage in growing practices that support the health of ecosystems [6,54]. Second, our paper has important implications for policy makers and outreach professionals interested in strengthening CSA practice. Significant resources for farmers participating in AFNs have expanded in the past decade, an investment that seems wise given recent evidence that participation in the local food system benefits farmers economically [19,55,56] and may be able to address some sustainability issues [6]. Diversity strengthens the overall sustainability of our food supply by providing options which support resiliency and flexibility, and CSAs add much-needed diversity to food systems. Increased competition in these market channels brings up important questions about farm persistence and our research provides important practical information to support these farmers.

### *Limitations*

This mixed-methods study used convenience sampling, which limits the generalizability of the findings; farms were purposively sampled for inclusion of farms offering (and not) cost-offset CSA for low-income households, which may bias reported farmer values towards concerns about social and economic equity. The CSA sample included only current members, who tended to be educated, affluent, and white, and included many satisfied, long-term participants which may positively bias perspectives on product, place, price, and promotion. Validity may have been strengthened, however, by the inclusion of perspectives of both major stakeholder groups, the geographic diversity of the sample, and the demographic similarities between our participants and those in prior studies of CSA members [16,26,27,32,51]. Further, many of our findings (especially those related to motivations and values) correspond with previous research [13–16,20,25–34] suggesting any potential sampling bias may be small.

## **5. Conclusions**

There was little evidence of strategic planning among CSA farmers, whose success appeared to be the result of hard work, people skills, and a bit of comparative advantage. However, sustainable competitive advantage is unlikely to occur by chance [28]. With low profit margins and an increasingly crowded local food marketplace, in order for CSAs to become or remain viable, farmers need to focus scarce resources on activities that will add value for existing consumers and reach untapped market segments. Because high quality, fresh, seasonal produce is now readily available from competitors, it will be necessary to promote the unique qualities of an individual farm’s CSA to enhance its competitiveness. Given the small scale of many CSAs, competing on convenience and price may be unsustainable long-term strategies. Trust in and emotional attachment to the farm and farmer are important parts of the “value added” in CSAs and should be prioritized in operations. More research with prospective members is needed to understand how to entice them initially to join a CSA. Finally, finding ways to communicate a compelling and authentic farming story in which members are indispensable supporters of a broader cause may contribute to loyalty among CSA members.

**Supplementary Materials:** The following are available online at <http://www.mdpi.com/2071-1050/10/7/2177/s1>. S1. Interview guides for CSA farmers; S2. Interview guides for CSA members.

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## References

- Clark, M.; Tilman, D. Comparative analysis of environmental impacts of agricultural production systems, agricultural input efficiency, and food choice. *Environ. Res. Lett.* **2017**, *12*, 064016. [[CrossRef](#)]
- Garnett, T. Food sustainability: Problems, perspectives and solutions. *Proc. Nutr. Soc.* **2013**, *72*, 29–39. [[CrossRef](#)] [[PubMed](#)]
- International Food Policy Research Institute. *2016 Global Food Policy Report*; International Food Policy Research Institute: Washington, DC, USA, 2016.
- Pollan, M. *The Omnivore's Dilemma: A Natural History of Four Meals*; Penguin Press: New York, NY, USA, 2006.
- Renting, H.; Marsden, T.K.; Banks, J. Understanding alternative food networks: Exploring the role of short food supply chains in rural development. *Environ. Plan. A* **2003**, *35*, 393–411. [[CrossRef](#)]
- Forssell, S.; Lankoski, L. The sustainability promise of alternative food networks: An examination through “alternative” characteristics. *Agric. Hum. Values* **2014**, *32*, 63–75. [[CrossRef](#)]
- Stagl, S. Local organic food markets: Potentials and limitations for contributing to sustainable development. *Empirica* **2002**, *29*, 145–162. [[CrossRef](#)]
- Tregear, A. Progressing knowledge in alternative and local food networks: Critical reflections and a research agenda. *J. Rural Stud.* **2011**, *27*, 419–430. [[CrossRef](#)]
- US Department of Agriculture. *1992 Census of Agriculture*; US Department of Agriculture: Washington, DC, USA, 1994.
- US Department of Agriculture. *2012 Census of Agriculture*; US Department of Agriculture: Washington, DC, USA, 2014.
- US Department of Agriculture. *2015 Local Food Marketing Practices Survey*; US Department of Agriculture: Washington, DC, USA, 2015.
- Kolodinsky, J.M. Community Supported Agriculture. In *The Sage Encyclopedia of Food Issues*; Albala, K., Ed.; Sage: Los Angeles, CA, USA, 2015; pp. 204–209, ISBN 978-1-4522-4301-6.
- Cox, R.; Holloway, L.; Venn, L.; Dowler, L.; Hein, J.R.; Kneafsey, M.; Tuomainen, H. Common ground? Motivations for participation in a community-supported agriculture scheme. *Local Environ.* **2008**, *13*, 203–218. [[CrossRef](#)]
- Galt, R.E. The moral economy is a double-edged sword: Explaining farmers’ earnings and self-exploitation in community-supported agriculture. *Econ. Geogr.* **2013**, *89*, 341–365. [[CrossRef](#)]
- Ostrom, M.R. Community supported agriculture as an agent of change: Is it working. In *Remaking the North American Food System: Strategies for Sustainability*; Hinrichs, C.C., Lyson, T.A., Eds.; University of Nebraska Press: Lincoln, NE, USA, 2007; pp. 99–120.
- Vassalos, M.; Gao, Z.; Zhang, L. Factors affecting current and future CSA participation. *Sustainability* **2017**, *9*, 478. [[CrossRef](#)]
- Moskin, J. When community-supported agriculture is not what it seems. *New York Times*, 21 July 2016.
- Low, S.A.; Adalja, A.; Beaulieu, E.; Key, N.; Martinez, S.; Melton, A.; Perez, A.; Ralston, K.; Stewart, H.; Suttles, S.; et al. *Trends in U.S. Local and Regional Food Systems*; U.S. Department of Agriculture: Washington, DC, USA, 2015.



19. Paul, M. Farmer Perspectives on Livelihoods within Community Supported Agriculture. Available online: [https://scholarworks.umass.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1213&context=econ\\_workingpaper](https://scholarworks.umass.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1213&context=econ_workingpaper) (accessed on 3 May 2018).
20. Galt, R.E. Eroding the community in community supported agriculture (CSA): Competition's effects in alternative food networks in California. *Sociol. Rural.* **2016**, *56*, 491–512. [CrossRef]
21. McKee, E. "It's the Amazon world": Small-scale farmers on an entrepreneurial treadmill. *Cult. Agric. Food Environ.* **2018**. [CrossRef]
22. DeLind, L.B. Close encounters with a CSA: The reflections of a bruised and somewhat wiser anthropologist. *Agric. Hum. Values* **1999**, *16*, 3–9. [CrossRef]
23. Woods, T.; Ernst, M.; Tropp, D. *Community Supported Agriculture: New Models for Changing Markets*; US Department of Agriculture, Agricultural Marketing Service: Washington, DC, USA, 2017.
24. Woods, T.A.; Tropp, D. CSAs and the battle for the local food dollar. *J. Food Distrib. Res.* **2015**, *46*, 17–29.
25. Kolodinsky, J.M.; Pelch, L.L. Factors influencing the decision to join a community supported agriculture (CSA) farm. *J. Sustain. Agric.* **1997**, *10*, 129–141. [CrossRef]
26. Lang, B.K. Expanding our understanding of community supported agriculture (CSA): An examination of member satisfaction. *J. Sustain. Agric.* **2005**, *26*, 61–79. [CrossRef]
27. Pole, A.; Kumar, A. Segmenting CSA members by motivation: Anything but two peas in a pod. *Br. Food J.* **2015**, *117*, 1488–1505. [CrossRef]
28. Galt, R.E.; Bradley, K.; Christensen, L.; Fake, C.; Munden-Dixon, K.; Simpson, N.; Surls, R.; Van Soelen Kim, J. What difference does income make for community supported agriculture (CSA) members in California? Comparing lower-income and higher-income households. *Agric. Hum. Values* **2017**, *34*, 435–452. [CrossRef]
29. Rossi, J.; Allen, J.E.; Woods, T.A.; Davis, A.F. CSA shareholder food lifestyle behaviors: A comparison across consumer groups. *Agric. Hum. Values* **2017**, *34*, 855–869. [CrossRef]
30. Hayden, J.; Buck, D. Doing community supported agriculture: Tactile space, affect and effects of membership. *Geoforum* **2012**, *43*, 332–341. [CrossRef]
31. Cooley, J.P.; Lass, D.A. Consumer benefits from community supported agriculture membership. *Rev. Agric. Econ.* **1998**, *20*, 227–237. [CrossRef]
32. Goland, C. Community supported agriculture, food consumption patterns, and member commitment. *Cult. Agric.* **2002**, *24*, 14–25. [CrossRef]
33. Freedman, M.R.; King, J.K. Examining a new "pay-as-you-go" community-supported agriculture (CSA) model: A case study. *J. Hunger Environ. Nutr.* **2016**, *11*, 122–145. [CrossRef]
34. Valchuis, L.; Conner, D.S.; Berlin, L.; Wang, Q. Stacking beliefs and participation in alternative food systems. *J. Hunger Environ. Nutr.* **2015**, *10*, 214–229. [CrossRef]
35. Russell, W.S.; Zepeda, L. The adaptive consumer: Shifting attitudes, behavior change and CSA membership renewal. *Renew. Agric. Food Syst.* **2008**, *23*, 136–148. [CrossRef]
36. Zepeda, L.; Reznickova, A.; Russell, W.S. CSA membership and psychological needs fulfillment: An application of self-determination theory. *Agric. Hum. Values* **2013**, *30*, 605–614. [CrossRef]
37. Bonney, L.; Clark, R.; Collins, R.; Fearn, A. From serendipity to sustainable competitive advantage: Insights from Houston's Farm and their journey of co-innovation. *Supply Chain Manag.* **2007**, *12*, 395–399. [CrossRef]
38. Coyne, K.P. Sustainable competitive advantage—What it is, what it isn't. *Bus. Horiz.* **1986**, *29*, 54–61. [CrossRef]
39. Grivins, M.; Keech, D.; Kunda, I.; Tisenkopfs, T. Bricolage for self-sufficiency: An analysis of alternative food networks. *Sociol. Rural.* **2017**, *57*, 340–356. [CrossRef]
40. Lohr, L.; Diamond, A.; Dicken, C.; Marquardt, D. *Mapping Competition Zones for Vendors and Customers in U.S. Farmers Markets*; US Department of Agriculture: Washington, DC, USA, 2011.
41. McCarthy, E.J. *Basic Marketing*; Irwin: Homewood, IL, USA, 1960.
42. Becot, F.; Conner, D.; Nelson, A.; Buckwalter, E.; Erickson, D. Institutional demand for locally-grown food in Vermont: Marketing implications for producers and distributors. *J. Food Distrib. Res.* **2014**, *45*, 99–117.
43. Seguin, R.A.; Morgan, E.H.; Hanson, K.L.; Ammerman, A.S.; Jilcott Pitts, S.B.; Kolodinsky, J.; Sitaker, M.; Becot, F.A.; Connor, L.M.; Garner, J.A.; et al. Farm Fresh Foods for Healthy Kids (F3HK): An innovative community supported agriculture intervention to prevent childhood obesity in low-income families and strengthen local agricultural economies. *BMC Public Health* **2017**, *17*, 306. [CrossRef] [PubMed]



44. McGuirt, J.T.; Jilcott Pitts, S.B.; Ward, R.; Crawford, T.W.; Keyserling, T.C.; Ammerman, A.S. Examining the influence of price and accessibility on willingness to shop at farmers' markets among low-income eastern north carolina women. *J. Nutr. Educ. Behav.* **2014**, *46*, 26–33. [[CrossRef](#)] [[PubMed](#)]
45. McGuirt, J.T.; Jilcott Pitts, S.; Hanson, K.; DeMarco, M.; Seguin, R.; Kolodinsky, J.; Becot, F.; Ammerman, A. A modified choice experiment to examine factors influencing willingness to participate in a Community Supported Agriculture (CSA) program among low-income parents. *Renew. Agric. Food Syst.* **2018**, in press.
46. Edin, K.; Boyd, M.; Mabli, J.; Ohls, J.; Worthington, J.; Greene, S.; Redel, N.; Sridharan, S. *SNAP Food Security In-Depth Interview Study*; Mathematica Policy Research: Alexandria, VA, USA, 2013.
47. Yu, Q.; Campbell, B.; Liu, Y.; Martin, J. A choice based experiment of community supported agriculture (CSA): A valuation of attributes. *Agric. Resour. Econ. Rev.* **2018**, 1–20. [[CrossRef](#)]
48. Macias, T. Working toward a just, equitable, and local food system: The social impact of community-based agriculture. *Soc. Sci. Quart.* **2008**, *89*, 1086–1101. [[CrossRef](#)]
49. Kogut, T.; Ritov, I. The “identified victim” effect: An identified group, or just a single individual? *J. Behav. Decis. Mak.* **2005**, *18*, 157–167. [[CrossRef](#)]
50. Jenni, K.E.; Loewenstein, G. Explaining the “identifiable victim effect”. *J. Risk Uncertain.* **1997**, *14*, 235–257. [[CrossRef](#)]
51. Pole, A.; Gray, M. Farming alone? What's up with the “C” in community supported agriculture. *Agric. Hum. Values* **2013**, *30*, 85–100. [[CrossRef](#)]
52. Hinrichs, C.C. Embeddedness and local food systems: Notes on two types of direct agricultural market. *J. Rural Stud.* **2000**, *16*, 295–303. [[CrossRef](#)]
53. Jordan, J.; Constance, D. Sustainable agriculture and the social sciences: Getting beyond best management practices and into food systems. *South. Rural Sociol.* **2008**, *23*, 1–22.
54. Pilgeram, R. “The only thing that isn't sustainable...is the farmer”: Social sustainability and the politics of class among Pacific Northwest farmers engaged in sustainable farming. *Rural Sociol.* **2011**, *76*, 375–393. [[CrossRef](#)]
55. Bauman, A.; Thilmany, D.; Jablonski, B.B.R. Evaluating scale and technical efficiency among farms and ranches with a local market orientation. *Renew. Agric. Food Syst.* **2017**, 1–9. [[CrossRef](#)]
56. Bauman, A.; McFadden, D.T.; Jablonski, B.B.R. The financial performance implications of differential marketing strategies: Exploring farms that pursue local markets as a core competitive advantage. *Agric. Resour. Econ. Rev.* **2018**, 1–28. [[CrossRef](#)]



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