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Community supported agriculture (CSA): Significance and prospects for growth for individuals, communities, and food systems

Tezcan Mert-Cakal and Mara Miele

Abstract

Community supported agriculture (CSA) is an alternative way of supplying food based on direct interaction between producers and consumers. As an alternative food network (AFN) and a form of civic agriculture, it is considered a more sustainable way of food production and consumption compared to the conventional food system. The number of CSA initiatives has been increasing in the last few decades worldwide parallel to growing scholarly debates about its usefulness, viability, and potential. This article contributes to the review of:

1. The impacts of CSA on individuals and communities, including motives for involvement and benefits received,
2. The impacts of CSA on food systems, particularly on sustainability,
3. The barriers and opportunities for CSA growth.

We conclude that CSA addresses the needs for sustainable and ecologically sound food and contributes to community building by reconnecting urban and rural places and people with their food. It is also an active position against the unsustainable dominant food systems and shows a different way of caring for the planet and the people. However, in order to grow, CSA needs to overcome certain barriers, namely, financial difficulties, unrealistic member expectations, and the need for social justice by providing livelihoods for the farmers and becoming more inclusive in terms of race, income, and gender. The COVID-19 crisis presented an opportunity for CSA to become more effective as the CSA initiatives demonstrated resilience during lockdowns and the demand for their products increased.

Review Methodology

We searched Science Direct and Scopus using the following terms: ‘community supported agriculture’, ‘community shared agriculture’, ‘civic agriculture’, ‘alternative food’. Based on the abstracts, we selected the articles from peer reviewed journals that were directly related to the focus of this article, i.e., the impacts of community supported agriculture on individuals, communities, food systems, and sustainability; motives for involvement; benefits; and barriers/difficulties. We gave priority 1) to the articles that comprised more than one of these themes, and 2) had higher number of citations. The articles on COVID-19 were selected from the interactive database *COVID-19 and Food Systems*

compiled by the Countryside and Community Research Institute, University of Gloucestershire, available on <http://www.ccri.ac.uk/covid19-food-db/>. From the database, we selected the sources related to CSA. In addition, we checked CSA-related organisations' websites. We did not include policy documents because our focus is CSA as a global phenomenon and examining regional and national policies of different countries would exceed the scope of this article.

Keywords:

Community supported agriculture; civic agriculture; subscription farming; alternative food network; short food supply chain

Introduction

Community supported agriculture (CSA) has become increasingly prominent in the last few decades as an alternative food movement and a more sustainable way of producing and distributing food than the conventional agri-food system. It is estimated that there were 2,783 CSA initiatives in Europe in 2015 (1) and over 7,300 in the USA in 2017 (2). In a similar vein, the scholarly interest in this type of agriculture resulted in substantial literature and debates about its financial feasibility, its potential to feed communities equitably or transform the food systems. Our primary goal in this article is to bring forward the scholarly debates in search for an answer to the following question: 'What difference does community supported agriculture make for individuals, communities, and the food systems?'. CSA is a form of direct marketing, bringing consumers and producers together by bypassing intermediaries and enabling the latter to know where their food comes from and how it has been produced (3, 4). In other words, it promotes "food with a farmer's face" (5). Although there are different CSA models and each initiative has its distinctive character due to organisational differences (6), the system relies on subscription or shareholding. Members pay in advance to receive regularly (usually weekly) boxes of fresh food or other farm products. Thus, members share both the rewards and the risks of growing the food. However, there are different types of CSA initiatives according to the level of engagement by the community and the devotion to the CSA values (7, 8).

CSA is considered a part of various value systems that are not mutually exclusive. It is part of a new type of food supply chain – shorter food supply chain (SFSC) – that emerged as a reaction to the growing problems related to food safety, ecological degradation and social justice caused by current

conventional food chains (9). These SFSCs are regarded as "new economic spaces" (10) and alternative food supply systems associated with quality, local character and social embeddedness. Other scholars have considered CSA as part of the 'moral economy' based on wellbeing and trust as opposed to the neo-liberal market economy where there is disconnection between producers and consumers (11-14). Gibson-Graham (15) regard these initiatives as economic autonomy experiments, which they refer to as 'diverse economies'. It is also suggested that CSA initiatives are social innovations addressing specific unsatisfied needs, empowering people, and changing social relations at various levels (16). And finally, with its embeddedness in the community, its local character and quality products, the CSA is also accepted as a form of civic agriculture based on the ecological paradigm (17, 18) .

The recent COVID-19 pandemic presented an opportunity for an increased role of CSA in two ways. Firstly, the pandemic exposed the vulnerability of the globalised conventional food systems and the need for more resilient food systems. And secondly, consumer behaviour has changed during the lockdowns. The vulnerability of the conventional food systems was exposed when the just-in-time supply chains had difficulties coping with the increased demand due to stockpiling, which resulted in empty shelves in supermarkets. This raised concerns about food scarcity and rising prices, reminiscent of the economic crises of 2007-2008 and 2010-2011 when countries issued export bans to staple food leading to price spikes and food riots around the world (19-21). At the same time, demand for food from the hospitality sector and many workplaces plummeted as they closed down and the suppliers had to dump significant amounts of food. There were labour and transportation interruptions to the food supply due to restriction of movement that prevented migrant farmworkers, for example, from travelling (22-24). The pandemic also caused job losses and food insecurity, especially in disadvantaged segments of the population and the developing countries (21). Therefore, the COVID-19 crisis is also viewed by many as an opportunity for building more resilient food systems based on diverse farming, agroecological principles and shorter supply chains (22, 25).

Under quarantine, consumer behaviour has changed and the interest in CSA ventures, box schemes and local food increased rapidly during the pandemic, with long waiting lists and some enterprises reporting twice as many orders (26-28). For example, the UK's CSA box sales went up by 111% in the first months (29). Even though the sudden surge in demand overwhelmed these small-scale enterprises, they could adapt well and cope with the changes (30). Some CSA farms repurposed their production from restaurants to shareholders, and some non-CSA farms became CSA ventures (31). Many started using digital technologies and online platforms (26), while others established mechanisms to help each other and those in need (28, 32). For example, 65% of the UK's CSAs gave

priority to key workers and vulnerable people, and 10% helped people with low income (29). According to a newly published report by the International CSA Network URGENCI based on a research in nearly 40 countries (33), 90% of the local solidarity-based partnerships for agroecology, a third of which are CSAs, reported that they did not experience any interruption with their deliveries during the COVID-19 crisis despite the new health and safety regulations, which demonstrates the resilience of these alternative systems. If the changes that happened because of the crisis – both in consumer behaviour and the way CSA enterprises operate – continue in the long term, this could have a positive effect on food systems (34).

Whether the crisis will be the beginning of a systems' transformation and whether the resilience of local food supply forms will be long-lasting remains yet to be seen. Regardless of the outcome, community supported agriculture creates a wide range of impacts on many levels, which are the subject of this review. The article is organised in the following order: In the next section we examine CSA's impacts on individual and community level, and in the second section we evaluate its effects on a systemic level. We then proceed with a discussion about its shortcomings and outlook for the future.

What difference does community supported agriculture make for individuals and communities?

To evaluate what difference a CSA makes for individuals and community, we examine what people's expectations and motives are in joining or starting the scheme, whether these expectations are met, and what benefits and impact the CSA brings to people's lives. Typically, the two main groups of actors involved in the CSA are consumers and producers. Both groups have different interconnected and complex expectations and motives for becoming involved with a CSA initiative. On the consumers' side, one of the most articulated motive is the desire for quality and nutritious food (35-37), which they expect to be fresh, organic and local (38) and of "highest quality", "superior", "fresh", "flavorful", and "top" (6). However, practical motives can be "nested" within philosophical ones, as depicted by Cox et al. (39). For example, the desire for organic food can be the result of food safety concerns (40). Similarly, behind the desire for local produce there are philosophical motives, such as willingness to support the local food system or broader concerns for the environment and the situation of small farmers, who have been increasingly squeezed out of the agri-food sector (6, 35, 36, 38, 41, 42). In more recent studies, philosophical motives such as supporting sustainable agriculture were found to

be the primary motives for joining CSA schemes (43), while in other studies, political and environmental motives were found to be complementary to food-related or health-related ones (37).

Members' motives can vary depending on their social and economic background. For example, Hinrichs and Kremer's (44) findings suggest that the members who are more privileged in terms of income, education and occupation are looking for "food quality" when joining the CSA, whilst the least advantaged members join for "food availability and affordability". Moreover, some studies in the US examined the motivations in the context of incentivised CSA programs – wellness programs with CSA vouchers provided by workplaces for their employees that became popular during the COVID-19 crisis – and found out that people join these programs to get high-quality food at a discount (31). Another interesting point is that motives can change with time during members' involvement with the CSA, named "graduation effect" (39); for example, people may develop an interest in eating more in season or being part of a community.

On the producers' side, the motives are both monetary and non-monetary and range from accessing alternative markets, increasing awareness of the food systems and building stronger community (35) to providing organic and seasonal produce to the local community, usually related to their environmental concerns (39). CSA can also have different meaning for male and female participants. For example, according to DeLind and Ferguson (45), even though food and environmental concerns and support for the local farmer are common motives for all members, it is the female participants who focus more on community building. In a similar way, Cone and Myhre (46) conclude that the CSA farms depend to a great extent on the labour of women who are homemakers or in part-time employment and that CSA initiatives are spaces where women can express their capabilities and roles. Jarosz (47) interprets these roles as "nourishing themselves and others", which is an expression of "ethics of care"; therefore she regards women's involvement in the CSA as "'making life' rather than making living through farming" (47).

As expected, one of the reported benefits that people get from their involvement with CSA is nutritious, quality food (3, 40). This leads to increased consumption of fruits and vegetables, increased number of home-cooked meals or "shift in food preparation habits" (48, 49), better diet quality (50, 51), especially for lower income members (52), and health benefits such as lower body mass index (53). As a result of these positive effects on diets and health, CSA is suggested as an intervention strategy because of its potential to change consumers' behaviour and cultivate healthier eating habits (54, 55). Apart from health benefits, CSA has economic benefits for the producers due to market

certainty (3) and bypassing the supply system's middlemen (35). Some studies also report economic benefits for the consumers, for example, when food from a CSA is cheaper than from conventional retailers (40) and when lower-income members pay less overall for food (52). On a different level, involvement with CSA can have an impact on people's value systems. It provides a medium where people and their families learn about the food system and its connection to the environment (40), which not only results in better awareness and activism about ecological issues and empowers people to express their values (4, 38, 39) but can also lead to behavioural change related to food (56). Moreover, involvement in CSA can meet certain psychological needs by increasing individuals' senses of autonomy, competence, and relatedness (57).

Community is the vital element and a "major selling point" for the success of CSA initiatives (5). Studies suggest that those who remain members for long are the people who have the strongest feelings about community (58). This is the reason why growers attach so much importance to community-building, and through organising recreational and educational events they build social capital (35) and create "common identity" around food (3). Flora and Bregendahl (59) define social capital as "bridging (within the group) and bonding (to others that are from different groups)"; they emphasise that building different types of capital in the CSA, e.g. natural and built capital, cultural capital and social capital, have positive impact on attracting and retaining members. Although strong community is something that members desire to find in CSA initiatives, "community" is not always the socially bonded, committed group of people. CSA initiatives usually rely on help from their members, be it in the form of physical farm work, distribution, administrative tasks, or legal advice. However, members' participation is often limited to subscribing to the CSA and collecting their share without engaging much in work (46). Therefore, the producers are "burdened" with the extra task of building the community and engaging people (3).

Accordingly, one of the biggest challenges for CSA ventures is member retention. Studies have shown that particularly in the US, the CSA members' drop-out rates are high in the long term, between 25% and 55% (38, 60). The main reason is the mismatch between members' expectation of receiving abundant quality produce all year round and the reality that the producer can only offer quality and quantities of what is grown in the season. Members complain of the types and amounts of food they receive, limited varieties grown, or inconvenient times for visiting the farm and picking up the produce (4, 40, 42). According to more recent studies, members attach great importance to the time and amount of money they spend for receiving food from their CSA, which is probably the reason why the higher-income members are more likely to renew their membership (43). This is a dilemma: on the

one hand are the CSA ideals about sharing the risks and benefits of the produce regardless of whether the year is good or bad and having only what is in the season, while on the other hand is the consumers' anticipation of constantly having good food that even looks perfect. Consequently, producers are under pressure to find solutions, e.g. by buying fruits and vegetables from other producers in order to provide regular, guaranteed amounts in all seasons (5), or choosing the best-looking products for the members and delivering to their doorstep (6). Customisation, or allowing the customers to select the contents of their boxes, is another way farmers endeavour to keep members in the CSA (31, 61).

Galt (62) points out that this relationship is not equitable and reciprocal: the farmer feels an obligation toward members and creates a "self-inflicted economic hit" by working longer hours and only sharing the benefits and "bounty" but not the risks. Another issue is that establishing the price of the share for the CSA requires a delicate balance because if it is higher than the market, the initiative may lose members, and if it is too low, it will not cover the costs and a living wage for the farmer resulting in "self-exploitation" (3), especially given the high "cost of labour and infrastructure" (63). According to one recent study (64), CSA members care about farmers and the situation of inequality but interestingly, they perceive risks and losses from their membership much higher than the gains even when in reality these are balanced, which increases the probability for member drop-out. However, Rossi and Woods (31) draw attention to two risks regarding customisation: the first is about moving away from the CSA values and ideals and the second is about losing the CSA distinctiveness with the increase of various food box delivery schemes, especially due to COVID-19.

In sum, CSA is a medium for providing many individual and community benefits, however, there are certain shortcomings that need to be addressed. Some of these were mentioned earlier and others are explained in more detail further in the discussion section. Nevertheless, CSA provides a system of mutual guarantees for the uncertainties of both producers and consumers; on the producer's side these are economy-related and on the consumers' side, these are related to perceptions of food quality (65). In addition, CSA initiatives are places where the mutual consideration of what both sides need contributes to the economic stability of the enterprise (66). And more importantly, CSA spaces provide an environment where many different priorities, cares and needs are exposed and tolerated in everyday practices towards "constructing a more 'reflexive' politics of place" (67).

What difference does community supported agriculture make on a systemic level?

Beyond the individual and community impact of the CSA, there are impacts on food sustainability and the food economy in general. Many studies emphasise that CSA can address all three dimensions of sustainability – ecological, economic, and social – and more than that, educate people about agriculture and food matters and establish rural-urban connections (38, 59, 68, 69). CSA initiatives are committed to ecological farming methods that preserve the land and biodiversity (70). According to Guthman (71), these methods are "driven by the decommodification of food and land". In addition, CSA initiatives provide "minimally processed and minimally packaged" food and make people more "self-reliant" for food (45) by developing more "independent" ways for food procurement (72). One recent study compared the greenhouse gas (GHG) emissions of local (including CSA) and conventional food enterprises and concluded that those local enterprises that use low electricity and efficient composting have lower GHG emissions than the others (73). According to another comparative study about the economic efficiency and environmental impact of three types of farms in peri-urban areas in China – CSA, organic, and conventional – based on their life-cycle assessment, the CSA farms were found to be both the most cost-effective and the most eco-efficient type by achieving more profit with lower environmental impacts (74).

In terms of economic sustainability, we explained earlier that the CSA operates as a short food supply chain where the number of intermediaries between the producer and consumer is reduced or eliminated. Therefore, the benefits of this "'re-spatialisation' of food supply chains" return to the local economy and contribute to the region's sustainable development (75). Furthermore, shorter supply chains minimise the risks of any potential disruption in the food system due to disaster or other unforeseen circumstances, for example, related to transportation (76). The COVID-19 pandemic is the most recent example of food system disruptions related to transportation. Also, CSA is considered as a way of increasing the economic viability of small farms, which otherwise could not compete on the mainstream market due to insufficient capital or "production volume" (45). The alternative payment and marketing arrangements in CSA initiatives make small farmers – especially young people who want to become farmers - less vulnerable to adversities or debts (72, 76). However, according to a recent study in the US, although CSA farmers are less reliant on working capital due to the financial arrangements, they do not get enough income; in other words, the CSA schemes improve farmers' conditions but do not provide them livelihood (77). Other studies also reported this problem. For example, in their evaluation of the results of the national CSA survey from 2001, Lass et al. (78) report that 34.4 percent of the CSA farmers discontinue their operation because of insufficient income, while 12.5 discontinue because of burnout. In a similar way, Galt (62) points out that few CSA farmers can

get return for their labour and they work longer hours for low earnings, which he describes as 'self-exploitation', as we discussed earlier related to member retention problems. In the UK, there is a similar situation. For example, some CSA farms that need about 70 members to provide livelihood for the farmer, may work with as few as 40 members and even allow them to pay as much as they can afford (16).

Regarding the social dimension of sustainability, Gottlieb and Joshi (79) suggest that CSA has the potential to empower low-income neighbourhoods, vulnerable communities, and immigrants to become self-sufficient by growing and selling their food. Thus, it can be a tool for addressing food justice problems but it must become available to everybody, and especially to those who do not have access to healthy, fresh, and local food (79). This caution is rather pertinent since the CSA initiatives have been criticised for not being adequately inclusive in terms of race and social background. For example, the profile of CSA members in this body of literature is mainly defined as well-educated, predominantly white people from middle-to-higher income backgrounds (36, 38, 52), who are politically progressive (5). Moreover, these places are exposed as serving the privileged consumers at the expense of the hard work of producers and people from lower income groups (80). This marginalisation and exclusion of certain racial and class groups have been observed in other types of AFNs (81), and is interpreted as a reflection of "white desires" and "whitened cultural histories" (82) although some studies concluded that the higher the income of members, the less racially disproportionate they become (52). Even though this is not a deliberate exclusion, there is much work to be done in the CSA enterprises to encourage and ensure the participation of diverse segments of population, particularly the disadvantaged ones. For example, latest studies among lower-income families suggest that their optimal preference for a CSA share in the US is very specific: including eight to nine fruits and vegetables of mixed variety, twice a month, at the cost of less than \$15, and no more than 10 minutes away from the closest supermarket (83). Moreover, to increase their accessibility to the CSA schemes, they need to be offered flexible payment and pick-up options and educated about seasonality and ways to prepare the food (84).

Along with its benefits for sustainability and food security, CSA is also seen as a radical position against the neoliberal economy and the values it represents. For example, it is suggested that by being involved in CSA activity, participants "deliberately resist the dominant food system" and choose to eat what is in season and harvested locally (45). Also, CSA initiatives are seen as types of alternative that oppose the conventional food system, are "politically weighted" (39), and offer an alternative "to the entire system of industrial farming" (71). Moreover, CSA is regarded as an antidote to the mass

consumerism and "a critique of unlimited growth" (45). Related to this, some studies examine CSA practices and relations from the theoretical perspective of economic degrowth. The idea of 'degrowth' has become prominent in the last decades among sustainability scholars and is defined as "an equitable downscaling of production and consumption that increases human wellbeing and enhances ecological conditions at the local and global level, in the short and long term" (85). From this theoretical perspective, it is suggested that, CSA initiatives are examples of economic degrowth on a micro level through their practices of co-production, risk sharing, community participation, and ecological responsibility (86). Moreover, CSA is regarded as an "example of system transition initiated by innovative actors" (59) and as a social innovation in reaction to the global crises and corporate agriculture (87) that has the potential to be part of the food system change by rearranging the power relations between the civil society, state, and the market (16).

Discussion: barriers, criticism, and a way forward

In the previous sections, we demonstrated how CSA is recognised for its multiple positive impacts on various levels. However, the answer to the question of what difference the CSA makes will be incomplete without elaborating on the criticism or barriers to which this phenomenon is exposed. We already touched on two issues attracting criticism: the first is the uneven balance in the producer-member relationship partly caused by discrepancy between the members' expectations and the CSA realities, and the second is related to social justice. The problem about members' expectations is interpreted by Cone and Myhre (46) as the tension between "I" and "We", where members are confronted with opposing powers: on the one hand, the CSA values about community and eating whatever is available in the season, and on the other hand, the choice and convenience offered by the conventional markets. The authors conclude that change in members' shopping and eating habits is needed for the CSA concept to succeed. One suggested solution is to educate members about the types of produce and how to cook or process vegetables and fruits (35). In addition, improving communication between actors in CSA initiatives is considered as a way of increasing the tolerance and engaging the consumers better (39). Customisation was pointed out earlier as a strategy adopted by some CSA farms to retain members. However, Galt et al. (61) argue that although previous findings suggest that customisation can help retaining members, data from 80 CSA farms show that it does not affect the retention rates, which they name 'customisation paradox'. They suggest three routes for CSA enterprises to encourage member retention: addressing some needs for customer choice, finding people who have the CSA mindset, or cultivating people to have the CSA mindset (61). The results of

a recent study of German CSA initiatives show that CSA members have specific distinguishable characteristics such as openness to change, universalism and benevolence; therefore, targeting these characteristics might be a key for member retention (88). The criticism about social justice originates from the fact that the CSA concept is based on up-front payment and the lower-income groups do not have the means to pay large sums to the grower, especially given the risk of not receiving the food if the season is bad. Also, they may not have the time to be involved in CSA work since they are already in productive and reproductive labour, e.g., housekeeping and looking after children and elderly (10). This situation creates exclusion and injustice. It is not a deliberate process in the CSA but is the result of the limits imposed by the dominant economic and political system (89). Therefore, the development of the CSA movement depends on finding a solution to what Allen (10) defines as contradiction between providing affordable quality food to people and decent living to the farmer. According to some scholars, focusing exclusively on local and localness in alternative food movements may also cause social injustices by hiding intolerances (90) through 'defensive localism' when people care only for the problems and the people within their locality and marginalise the 'others' (10, 91) or 'unreflexive localism' when a privileged small group imposes their own vision and ideals on everyone and can undermine the CSA values (92).

A major criticism of alternative food movements, including CSA, is about their failure to challenge and transform the dominant food regime. The alternative food movements are accused of operating within the existing market system (90) and pursuing only economic changes rather than political ones, although they have the potential for radical transformation (45). For example, DeLind (93) makes a similar critique of civic agriculture and points out that even though it has the potential for creating a more "holistic way of being and belonging", it is still about market operations rather than activism and focuses on individual achievements rather than community and common values. Another criticism is that community initiatives take responsibility for solving problems such as poverty and environmental degradation, which are not their making but are created by the neoliberal economy (90, 94). In relation to these points of criticism, Paul (77) concludes that CSA can only grow and become prominent if it succeeds in challenging the dominant food regime in coalition with other forms of civic agriculture. CSA has the potential for radical transformation, but this process is not automatic (39). In order to grow, CSA must overcome the barriers that prevent the economic viability of the initiatives and the scaling up of the movement: from access to land, equipment, and start-up capital to impact on local and national policies related to food and agriculture, particularly policies that recognise, promote, and support community supported agriculture and include it in regional and national food strategies. And more importantly, CSA must address existing inequality and social injustice discussed

earlier in this article. For example, making the subscriptions non-mandatory or selling via other local farm shops to reach people who cannot travel to pick up their food are some of the suggested improvements (34). For now, CSA ventures are autonomous spaces of experimenting with ethical and sustainable production on a small scale and exploring what is possible beyond capitalism (95). However, the COVID-19 crisis opened new opportunities for the inclusivity of CSA. For example, some CSA enterprises are making their websites more visible and innovating with becoming more accessible to lower-income people via voucher programs or payroll deduction (31). Also, in some places CSAs offer 'sliding price' schemes that allow customers to choose a price for the shares or offer discounted shares in poor neighbourhoods (33). And finally, there are emerging examples of 'solidarity payment' where each member is allowed to pay as much as they can afford and those who can afford to pay more, subsidise the rest of the payment until the total budget is achieved (16).

Conclusion

Coming back to our main question about what difference does community-supported agriculture make, we conclude that it is more than just a means for acquiring quality food by a small group of privileged people with food safety concerns and can have significant impacts on individual and food systems level. However, the CSA initiatives need to make changes to address criticisms about its effectiveness and inclusivity while the movement needs to overcome the barriers to its development discussed previously, namely, access to land, equipment, and start-up capital and impact on local and national policies related to food and agriculture. On a micro level, CSA initiatives provide a more sustainable way of producing and consuming food for many people and communities: one that cares for the earth and people, and one that reconnects people and places. On a macro level, CSA can be part of a transition to more sustainable food systems as it addresses all three sustainability dimensions, namely, economic, environmental, and social. Moreover, it stands against the dominant corporate values and presents an example of a moral economy and economic degrowth. However, firstly, CSA needs to find a balance between becoming more affordable to include more diverse populations, on the one hand, and providing livelihoods for the farmers, on the other hand. Secondly, CSA needs to overcome the limitations and barriers that keep the movement from growing. And finally, CSA as a movement must come together with other like-minded movements to influence people and policies and to aid a transition into a more sustainable economy. Unless these happen, CSA may continue only as an experiment rather than an alternative to the current food system. During

the COVID-19 lockdowns, CSA demonstrated resilience by keeping up with the increased demand for food and by helping the vulnerable groups of the population.

In the future, community-supported agriculture would greatly benefit from transdisciplinary research involving scholars, farmers, communities, national and regional CSA networks, and decision-makers at local and national level about several issues. Firstly, since access to land is one of the biggest challenges for the CSA communities, further research can focus on how the existing CSA initiatives acquire their land, what are the biggest problems related to land, what are the current land policies and regulations, and how greater access to land can be achieved. Secondly, since the farmers' livelihoods depend on a larger number of members, further research can explore how CSA can be promoted to the public and how bigger populations can be engaged in this type of agriculture. For example, how can alternative payment schemes discussed in the previous section, such as vouchers, 'sliding price', or 'solidarity payment', be scaled up to reach the wider public? Another potential area for research is the use of CSA initiatives as intervention in food desert areas, i.e., in urban areas with limited access to fruits and vegetables. And lastly, exploring various ways of connecting CSA with other movements and integrating it within sustainable food strategies is another research topic that can contribute not only to the CSA movement but to food sustainability in general.

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