

Community Sponsored Agriculture in Florida

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Introduction

In recent years, there has been a significant growth in the public's interest in sustainability. Defined in the 1980's as development that meets the needs of the present without harming future generations (World Commission on Environment and Development, 1987), sustainable development is supported by three pillars of environment, equity, and economic development. The notion of sustainability is highly applied since it is a results-oriented approach that requires benchmarking and outcomes assessment. For example, the U.N. Millennium Goals and other international agreements target particular outcomes to make improvement in local, regional, or global sustainability.

Since the 1980s the United States has struggled with its national sustainability policy and has not developed significant sustainability targets that are embedded within national public policy (Brinkmann & Garren, 2011). Because of this, national sustainability efforts are scattered and more meaningful efforts are being enacted at the regional or local scales by communities, non-profits, businesses, schools, and other organizations. For example, the Florida Green Building Coalition certifies local governments as "green" within benchmarking systems that were developed for the subtropical climate (Upadhyay & Brinkmann, 2010). New York City, with its well-regarded PlaNYC (City of New York, 2013) developed a wide range of ambitious targets to improve the overall sustainability of the city. Each of these approaches takes a holistic view of sustainability and contextualizes sustainability within regional needs.

Others have focused on one or two aspects of sustainability such as energy consumption, waste management, or environmental equity. For example, Drexel University is purchasing all of its energy from alternative energy sources (Drexell University, 2013). Also some states, have invested heavily in alternative energy infrastructure. Some cities have focused on particular projects like green streets programs or environmental education. Regardless of approach, little of this work is being benchmarked or compared nationally and it is difficult to assess the benefits of these programs, particularly in the absence of any national, regional, or local targets.

One area of sustainability, food production, has gotten a tremendous amount of attention in recent years. Certainly the promotion of local and healthy food and gardening by Mrs. Obama, the popularity of Michael Pollin's book, *The Omnivore's Dilemma* (2007), and the growth of the slow and local food movements help to popularize food sustainability. Plus, there is growing public concern over the corporate food system. But, it is unclear if the new approach to sustainable agriculture is having an impact on the cultural landscape of the United States.

The sustainable food production movement largely focuses on organic farming, community gardens, and community sponsored agriculture. Organic farming requires precise land management in order to allow for sustainable approaches toward pest control, weed management, and fertilization. While some have criticized this approach as too standardized and

corporate-friendly (Salatin, 2007), others have pointed to the rapid expansion of the organic industry in the last decade as a testament to success. Though the organic movement has expanded in the farming community over the past decades, the rate of conversion has not been evenly distributed across the country (Taus, Ogneva-Himmelberger, Rogan, 2013). New England and the western part of the United States more specifically, California, Washington, Great Plains, and Oregon had the highest rates of organic farming conversion compared to the rest of the country (Taus, et al., 2013). The disparity of conversion across the United States is related more to the share of existing organic farms, prevalence of full-time operators, and average farm size than community interest and culture (Taus, et al., 2013).

Community gardens have also seen a rapid increase in response to the public's desire to grow more of its own food. Most major cities have seen the development of new or expanded gardens and there are more gardens associated with schools and other institutions such as business parks.

Community sponsored agriculture (CSA) is one type of sustainable agriculture that has seen significant expansion in recent years. CSA's are typically membership-driven farms with paid or volunteer managers or farm workers. Subscribers receive weekly food harvested from the farm during the growing season. In most cases, the allotments consist of vegetables and fruits, although there are some CSA's that provide meat, dairy products, or seafood. Because one must subscribe to a farm, there is a sense of ownership and community that develops around a CSA. The farms often have classes or workshops on things like canning or home gardening, and they often have special events such as picnics, concerts, or farm tours. Thus, the CSA farm is not just a source of food for subscribers; they are also places for community building and diffusion of sustainability-related information to people who live in suburbs or cities. Therefore, the location of CSA farms becomes an interesting issue given their significance for diffusion of ideas and for their growing significance as a food source for many Americans. To this end, this paper summarizes research on the location of CSA farms in Florida in order to understand the geographic nature of where these places are located and the economic potential for expansion of CSA farms.

Background

The number of farms in the United States has been on a steady decline since the 1940s, however in 2007, there was 4% increase from 2002, bringing the total of farms to 2,204,792 (Census of Agriculture, 2007). But overall, the United States agricultural industry over the past 20 years has shifted from an ecological system to an industrial system. Moving parallel to this shift has been a transformation of consumer perspectives and attitudes toward these farming factories and practices. Consumers in increasing numbers no longer desire the pesticide and speed driven agricultural industry and prefer farm to table, local, sustainable, slow, and organic foods. Appeasing the consumer demand, farmers and ranchers have diversified agricultural operations adding directly to consumer sales, agri-tourism, and other production to generate new income (Census of Agriculture, 2007).

Due to suburban encroachment into rural farm areas, the distance between farmers and consumers has declined, resulting in large farms splitting into smaller farms, outreach to more residents, and positive economic and social impacts (Gale, 1997). In some cases, densely populated rural areas can have negative impacts on farming by increasing competition and land

prices (Berry, 1978; James & Blaine, 2000). Some farmers in rural-urban environments have used direct marketing as a way to stay afloat despite development pressures (Sharp, Imerman, & Peters, 2002). In Cleveland, Ohio, farmers were able to adapt to the urban pressures in high-growth areas, adding more farms in urban centers and decreasing farms in rural areas despite the land cost advantages in rural areas (James et al., 2000).

As noted earlier, community supported agriculture (CSA) is one method of direct sales that has aided in agricultural growth. Eighty percent of all CSA's are located near large metropolitan areas (Lass, Stevenson, Hendrickson, & Findings, 2003) and near large populations, in places like Maryland, Maine, Florida, Great Lakes, the West Coast and Hawaii, and locations where vegetable and fruit production is common (Gale, 1997).

CSA inception can be dated back to 1960s Japan and 1970s Europe. In the mid 1980s, inspired by the European CSA tradition, the first CSA's opened in Massachusetts and New Hampshire, thus birthing a movement that continues today. Currently, there are over 1,500 CSA programs in the United States (McFadden, 1997; USDA, n.d. <http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>). USDA (n.d.), describes community supported agriculture as a community consisting of:

Individuals who pledge support to a farm operation so that the farmland becomes, either legally or spiritually, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production. Typically, members or "share-holders" of the farm or garden pledge in advance to cover the anticipated costs of the farm operation and farmer's salary. In return, they receive shares in the farm's bounty throughout the growing season, as well as satisfaction gained from reconnecting to the land and participating directly in food production. Members also share in the risks of farming, including poor harvests due to unfavorable weather or pests. By direct sales to community members, who have provided the farmer with working capital in advance, growers receive better prices for their crops, gain some financial security, and are relieved of much of the burden of marketing. (<http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>)

CSA's provide a direct link between communities and farmers. The farm's proximity to the community reduces transportation costs thereby directly benefiting the consumer by providing fresh quality produce, and directly benefiting farmers by receiving income and production costs through shareholders (Sharp, et al., 2002). For example, central coast California CSA members live approximately 19 miles from the farm and 45% live less than three miles from the pick-up site (Perez, Allen, & Brown, 2003).

In a CSA, the farmer grows food for a group of community members who support the farmer by purchasing shares at the beginning of the farm season. In return, the farmer commits to a season of weekly or monthly quality produce. Benefits and risks are shared by the farmers and the shareholders. Consumers support the local food system and participate to build a stronger community and environment (Sharp et al., 2002). CSA's can be found within growing urban and suburban areas (Schnell, 2007). The northeast, the west coast, and north central states with large metropolitan areas have the largest concentration of CSA farms (Lass, et al., 2003; McIlvaine-Newsad, Merrett, & McLaughlin, 2004; Schnell, 2007). The Great Plains are less

likely to support CSA's due to low population density (Schnell, 2007), while poverty rate, education level, college towns, and urban areas are other deciding factors for CSA locations (Schnell, 2007; Gale, 1997).

Twenty-six percent of the 12,549 farms that marketed products via CSA's were located in California, Iowa, Kentucky, Michigan, and Texas (Census of Agriculture, 2007). Despite findings that show that CSA's are not supported in rural areas (Lass, et al., 2003; McIlvaine-Newsad, Merrett, & McLaughlin, 2004; Schnell, 2007), 50% of Iowa's CSA's serve rural areas and urban border lands (Wells, Gradwell, & Yoder, 1999).

Collectively, in 2007, the United States saw a growth in farms. Eleven states had a decline in numbers and 39 states had an increase in numbers, with Florida seeing a 5.1% positive change (Census of Agriculture, 2007). 2007 also saw an increase in percentage of beginning farm operators with the south and west having the largest increase, and the midwest with the lowest.

Over the decades, Florida has seen an increase in land in farms, farms, and farm operators. Florida had a 38% increase in new farm operators between 1997 and 2007 (Census of Agriculture, 2007). In 1978 there were 36,109 farms accounting for 13,016,288 acres of land. In 1997, there were 45,808 farms, accounting for 10,659,777 acres of land. In 2007 the number of farms continued to increase, however the acreage of land decreased: there were 47,463 farms, accounting for 9,231,570 acres of land. These farms over the years had 4,298,952, 3,610,304, 2,953,340 acres of cropland, respectively (Census of Agriculture, 2007). Clearly farming is changing in Florida.

With the growth and expansion of farms, farm land, and farm operators in Florida, there has also been an increase in total farm production expenses. In 1997 Florida farms production expenses totaled \$4,553,217; amounting to \$6,137,802 in total sales, and in 2007 it increased to \$5,762,883, amounting to \$7,785,228 in total sales (Census of Agriculture, 2007). In both years, crops, including nursery and greenhouse crops, brought in more sales than livestock, poultry, and their products; 1997 crops totaled \$4,853,417 in sales and livestock total \$1,284,285. In 2007 crops totaled \$6,256,228 in sales and livestock totaled \$1,529,000 (Census of Agriculture, 2007). The majority of the Florida farms in 2007 suffered from net losses, with 30,364 of the farms averaging \$21,924 net losses; while 17,099 of farms had \$171,587 in net gains. In 2007 these farm operators typically made \$46,857 net cash farm income, up approximately ten thousand dollars from 2002 (Census of Agriculture, 2007). Policies have resulted in payments to farmers and land owners to make up for the cost of production and low commodity prices (Jordan, Boody, Broussard, Glover, Keeney, McCown, et al., 2007). Though many of these farms saw a net cash farm income increase, in the decades prior to 2007, 30% of net farm income was in the form of direct government payments.

The changing nature of Florida's agricultural landscape creates unique opportunities for innovative small local farmers. Larger agricultural operators dominate the current situation, with small and mid-sized operators having difficult times. This paper looks at how CSA's are managing their operations in Florida during these unique times by looking at their distribution and overall operations.

Methods

In order to locate CSA farms in Florida, we completed a search of all the CSA farms on the website, Local Harvest (2012). Local Harvest is arguably the leading index of independent agricultural operations in the United States and has a well-regarded list of CSA's. While the list differs from that developed by the U.S. Department of Agriculture (Census of Agriculture, 2007), Local Harvest believes their list to be the most accurate listing of active CSA farms in the United States (localharvest.org). The listing is voluntary and CSA managers must register their farm to be included in the index.

We collected the names of all active CSA's that were on the list. From this list we eliminated farms that self-identified as CSA's but that clearly were not CSA's in that they did not supply a variety of food to subscribers. For example, farms that produced only one product were eliminated from the list. The same is true for farms that called themselves CSA's but were actually farm stands. Therefore, for the purpose of the study, a CSA farm was defined as a farm offering weekly shares of vegetables and/or fruits to local customers. A total of 67 CSA farms were identified compared to the 193 identified by the Census of Agriculture (2007). Once the list was compiled, each farm was studied in detail by examining the farm's website or by contacting the farm by phone or email. The address and size of the farm was obtained, as was general information about the farm such as crops grown, season of operations, and costs for membership. We also examined whether or not the farm provided community education, outreach, or community building activities. A database of this information was created for analysis. Finally, the location of each farm was mapped using basic GIS software. The location of the farms was compared with the location of metro and city boundaries.

Results and Discussion

Numbers of CSA's

Based on the Local Harvest database and our definition of CSA, there are 67 CSA's in Florida. The majority of them have subscribers pick up their shares from the farms. However, ten farms had pick up locations or delivery options for subscribers. These locations vary in number depending on the farm. For example, Bee Heaven Farm is located in Homestead, Florida, but services parts of Miami-Dade County by offering 19 pick-up options for residents.

Sixty-one of the CSA's are single farms, farms that have a single grower, with six being multiple farms, farms that have several growers. Both single and multiple farm CSA's grow vegetables and fruits, with several offering animals, eggs, nuts, seeds, herbs, honey, milk, and other products as options for the shares. Most are conventional farms and only a few have obtained organic status. Six farms did not have farm share numbers available, the remaining 61 farms serviced a total of 5948 subscribers, which accounts to an average of 97.5 subscribers per CSA.

Community Connection

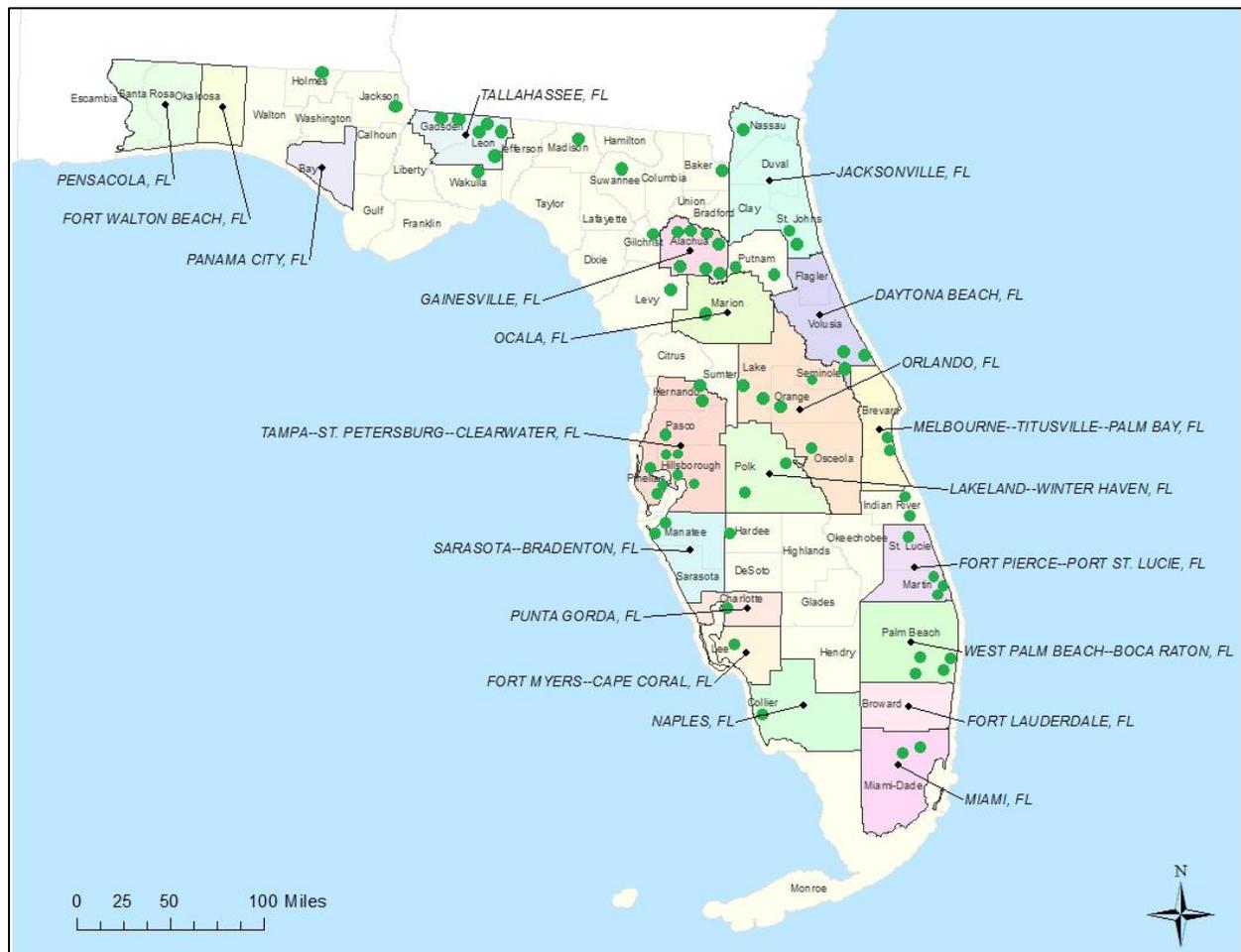
The majority of the farms have stepped out of the confines of the traditional farming business model and into several other approaches for profit generation that open the farm to community members, thus building a community connection. Many of the farms offer culinary space to bakers and chefs, as well as incubators for rent for entrepreneurs. In addition to offering space,

these farms offer a space for social gatherings, farm tours, educational field trips, workshops, farm to table dinners, and apprenticeships. These farms also have welcomed social networking and offer a communication line to subscribers by having social media accounts and consulting options.

Distribution of CSA's

The CSA's are not distributed evenly across the state of Florida (Figure 1). Many areas of the state do not have CSA's at all, particularly in extreme southern Florida, the Big Bend region, and the western Panhandle. Most CSA's are located in clusters associated with larger communities. For example, there are distinct clusters of CSA's in Tampa, Tallahassee, and Gainesville. When we started this work, we anticipated finding most CSA's within the metro regions. Our analysis proves this to be true. Most of the CSA's are indeed found in the metro areas. However, upon further examination, it is also evident that not all metros give birth to CSA's. Some have none, some have a small number, but others, seem to support many.

Figure 1: Location of CSA's relative to metro regions of Florida.



Source: Sandra Garren

What is striking about the data is the number of CSA's associated with the university towns of Gainesville and Tallahassee. Their presence in Gainesville makes some sense. It is the home of the state's agricultural school and there is tremendous talent in the community for innovative agricultural practices. Yet, the high numbers in the Tampa and Tallahassee areas are less easy to explain. It could be that they are there due to the high number of universities in the region, since university communities tend to be strong supporters of alternative agricultural practices. Or, it could be a matter of distinct cultural diffusion based on the transmission of ideas.

Table 1: Number of people per CSA

Metro Statistical Area	Population	Total # of CSA Farms	Total # of Shares	# of People per CSA	# People Per Share
Daytona Beach	494,593	3	180	164,864	2,747
Fort Myers-Cape Coral	618,754	1	24	618,754	25,781
Fort Pierce-Port St. Lucie	146,318	3	474	48,773	308
Gainesville	247,336	7	371	35,334	666
Jacksonville	263,353	3	395	87,784	666
Lakeland-Winter Haven	602,095	2	100	301,048	6,020
Melbourne-Titusville-Palm Bay	543,376	2	60	271,688	4,528
Miami	2,496,435	2	700	1,248,218	3,566
Naples	159,978	1	300	159,978	533
Ocala	331,298	1	30	331,298	11,043
Orlando	2,134,411	5	97	426,882	22,004
Port Pierce- Port St. Lucie	277,789	1	400	277,789	694
Punta Gorda	159,978	1	300	159,978	533
Sarasota-Bradenton	322,833	2	300	161,417	1,076
Tallahassee	321,876	6	510	53,646	631
Tampa-St. Petersburg-Clearwater	2,783,243	14	757	198,803	3,676
West Palm Beach-Boca Raton	1,320,134	4	350	330,034	3,771

Source: Author

Table 1 shows the number of CSA's in each metro region as well as the number of memberships available. The table also displays the number of people in each metro per CSA's and the number of people in each metro per CSA share. Gainesville clearly has the greatest coverage of CSA's with approximately 35,000 people per CSA. But many of the metro regions do not have nearly that degree of CSA coverage. Clearly there is room for expansion of CSA's in the metro statistical areas of Florida. For example in Miami, which has a large population of 2,496,435 people, there are only two CSA farms which accounts for 1,248,218 people per CSA in the area. Orlando and Fort Myers-Cape Coral are another area of Florida with few CSA's, yet they have a large population that does not have access to a CSA. Fort Pierce-Port St. Lucie and Tallahassee are other area of Florida with a relatively supportive ratio of people per CSA.

Discussion and Conclusions

There is no doubt that CSA's are growing in Florida. They offer a rich diversity of crops and a range of opportunities for community involvement. Yet, there is limited coverage of CSA farm operations in the state. They are heavily concentrated in the college towns of Gainesville and Tallahassee, and in the burgeoning Tampa Bay area. However, many metro areas have very low numbers of CSA operations, particularly in the metro areas of south Florida. Plus, the real impact of CSA's is relatively small in most communities. The vast majority of Floridians purchase their food from grocery stores. CSA's, while growing, are still a relatively new and small feature of the Florida agricultural landscape.

Therefore, there are distinct opportunities for CSA growth in Florida. Many successful farms are in operation, but there is plenty of room to expand CSA offerings. While Gainesville has the densest concentration of CSA farms within its region, many areas are CSA poor and would certainly support CSA operations. The paucity of CSA operations in some key metro regions suggests opportunities for agricultural entrepreneurs interested in capitalizing on the public's interest in local and organic food. The Miami area is particularly CSA poor and there are opportunities for agricultural economic development in this region.

This research highlighted several interesting attributes of the new sustainable food movement in Florida. However, more research needs to be done. We have noted that the distribution of CSA's is uneven. Yet it is not entirely clear why such differences exist. In addition, those seeking to promote the new agricultural movement would be wise to learn from the successful infusion of CSA's in communities like Gainesville and Tallahassee in order to promote best practices from these regions.

Finally, it is clear that CSA's are much more than farms. They provide a strong sense of community and a connection to the land that is missing from the industrial food system. They serve as anchors for those interested in a different way of eating and a different way of living. They help to diffuse ideas and build connections between like-minded people. A deeper understanding of how these connections impact the lives of others would be a fascinating follow up to this largely quantitative work.

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