Commercial Urban Agriculture in the United States: Growing More Than Just Food

Maritza V. Sazo

ABSTRACT

Commercial urban agriculture (CUA) is a growing economic sector that offers opportunities for increased food access and improved food security in cities. It may also provide opportunities for economic growth and enhanced connectivity to food sources for city residents in ways that non-profit urban farming and rural farming may not. Through an online literature review and interviews with commercial urban farmers, this study how commercial urban agriculture manifests in the United States, seeking to understand its unique role in the larger food system. CUA operations are generally small urban farms and urban farm installation and consulting businesses. Each type of venture faces similar barriers and challenges presented by the urban environment that lead to a unique set of business strategies. Most commonly, commercial urban farms must deal with limited access to land, high resource costs, soil contamination, and inadequate land use and tenure policies. To succeed, CUA businesses must diversify their income streams and directly involve city residents in the workings of the farm. They may be true models of civic agriculture in that they can offer social benefits, provide opportunities for economic participation, and add environmental value to cities. Their freedom from grant funding cycles and their role as job creators also allows CUA businesses to impact city residents in a unique way.

KEYWORDS

Civic agriculture, small businesses, urban land use, urban farming, food security

INTRODUCTION

The establishment and growth of urban agriculture (UA) has been touted as a sustainable and secure option to feeding the urban mega-populations of the future (Montenegro de Wit 2014). Urban populations in the United States have increased from 130 million in 1960 to 259 million in 2010 and are projected to increase to 291 million by 2020 (Lal 2011). With growing urban populations comes a greater need for food in urban spaces (Fedoroff et al. 2010). UA can increase the security and resiliency of urban food systems by creating local sources of food and opportunities for local communities to become involved in the production and distribution of healthy, sustainable, and affordable food (Montenegro de Wit 2014). UA manifests in many different forms, including farmer's markets, community supported agriculture (CSAs), co-ops, and urban farms, with each form occupying a particular niche in the urban food system (Cohen 2014).

Recently, a paradigm has emerged that offers a new way to understand UA in terms of the economic, social, and environmental benefits it creates. First coined by Cornell University sociologist Thomas Lyson, "civic agriculture" describes a food system in which food and farming enterprises are aligned with the needs and demands of local growers and consumers, integrating communities and food production (DeLind 2002, Lyson 2000). According to this paradigm, UA is most successful and impactful when food production and distribution symbiotically interact with the urban environment, economy, and people, wherein the goals of producers encompass more than just economic gain and the goals of consumers are more than merely to consume food (DeLind 2002).

Current UA enterprises vary in economic and social scope, some being more civic-oriented than others. The most expansive forms of UA are also the narrowest in terms of who is able to benefit from their services. According to the USDA, farmer's markets have increased in number more than four-fold since the mid-1990s, but they mostly serve the white upper class (Cohen 2014). More socioeconomically inclusive forms of UA such as many CSAs strive to provide healthy and affordable food and foster community empowerment in low-income urban communities (White 2011, Cohen 2014). However, these types of UA are often non-profit, and thus, suffer from unmet financial, time, and labor demands, which diminishes the benefits these services may provide for low-income community residents (Montenegro de Wit 2014).

At the intersection of these two sectors of UA are commercial urban farms, which combine the for-profit initiative of farmer's markets and the community-supported model of CSAs (Cohen 2014). According to the model set forth by civic agriculture, commercial urban agriculture (CUA) is the form of UA most likely to unify economic growth and opportunity with positive social impact (DeLind 2002). Through efficient business strategies, CUA can sustain a productive farm that helps meet the needs of a growing urban population (Cohen 2014). Yet, there are currently no widely applicable and successful business models for commercial urban farms (Cohen 2014). Few studies acknowledge CUA or assess its scope or feasibility (Ganguly et al. 2011). Identifying the barriers faced by commercial urban farms and the business strategies they employ is essential to establishing successful commercial urban farms within the larger food system in a way that makes CUA accessible to a diversity of urban residents.

The objective of this study is to assess the current impact of commercial urban agriculture (CUA) in the United States, and how CUA fulfills a role different from non-profit urban agriculture and rural agriculture. Using data collected from the literature and interviews, I identified the forms and scales of CUA and the services CUA businesses provide. I also documented the challenges of starting and maintaining a commercial agricultural business, including business strategies employed, types of barriers faced (e.g., financial, political, agricultural), and social dynamics between farmers and community members.

The Potential of Commercial Urban Agriculture

The majority of food consumed in cities is produced on industrial-scale rural farms (Lyson 2002). Commercial rural agriculture in the United States is a massive industry, both in terms of scale and in profits generated. Over the last three decades, the number of individual farmers has decreased and the size of commercial farms has increased (Sumner 2014) Furthermore, corporate entities such as Monsanto and Dow Chemical have come to largely dominate food production and distribution by maintaining control over the seeds, fertilizer, and machinery used by many rural farmers (Lyson 2002). These companies have greatly benefitted from large federal subsidies (Sumner 2014). Urban agriculture (UA) offers urban residents an alternative to the dominant industrial agribusiness system that can decrease the environmental, social, and economic tolls levied by current food production systems, especially those intended

to feed urban areas (Brown 2010). UA represents a diversification of food sources for urban residents; UA can promote and ensure food security and resiliency as the productivity of industrial agricultural systems decreases due to imminent effects from climate change and population growth (Altieri 1999). UA has grown steadily in popularity as more city residents face food insecurity and have become interested in the source and production of their food (Altieri 1999). UA has the potential to increase the incomes of urban residents who can produce and sell food and thereby increase the food security for themselves and their communities (Brown 2010).

Successful large-scale commercial urban agriculture is not unheard of on the global scale. An excellent example of the potential and success of commercial urban agriculture can be seen in Cuba, which turned to organic urban farming for primary food production in the 1990s when the collapse of the Soviet Union caused a shortage of petroleum-based fertilizers and pesticides (Ellinger 2010). Commercial urban farming in Cuba takes the form of cooperative farms that produce food in raised bed systems called "organopónicos" or intensive gardening systems specifically designed to produce high volumes of food in small spaces (Altieri 1999). Furthermore, the entirety of Cuban urban agriculture follows agroecological principles that prohibits the use of chemical fertilizers and pesticides and encourages growing a biodiverse range of food, recycling, and using local resources (Altieri 1999). Today, over 60% of Cuba's food is grown in urban organoponicos, with the majority of citizens consuming an adequate amount of fruits and vegetables daily (Ellinger 2010).

METHODS

Study system description

Each study site was a commercial urban farm operating as a small business (Table 1).

Table 1: Study Sites and locations

Farm	City
Little City Gardens	San Francisco, CA
Farmscape	Bay Area/Los Angeles, CA
LA Urban Farms	Los Angeles, CA
The Side Yard	Portland, OR
Zenger Farm	Portland, OR
Seattle Urban Farm Co.	Seattle, WA
Magic Bean Farm	Seattle, WA
Detroit Market Garden	Detroit, MI
Hantz Farms	Detroit, MI
Keep Growing Detroit	Detroit, MI
Big Delicious Planet	Chicago, IL
Chicago Lights Urban Farm	Chicago, IL
Patchwork Farms	Chicago, IL
City Farm	Chicago, IL
Urban Farm Co. of Colorado	Boulder, CO
Eagle Street Rooftop Farm	New York City
Brooklyn Grange	New York City
Gotham Greens	New York City

Data collection

To identify forms and scales of CUA operations in the United States, I conducted a review of available online literature related to the study sites. Online literature included farm websites, farm Facebook pages, academic articles written about the farms, and journalistic pieces written about the farms. By reviewing these resources, I gathered the following characteristics for each site: size/scale (e.g., ½-acre), services provided (e.g., CSA box, farm stand for local residents), amount of time in operation, and number of employees. If the literature review failed to provide satisfactory information for a particular site and a particular characteristic, I used information gathered in the interviews to fill in the blanks.

To identify how CUA operations maintained their businesses, I conducted semi-structured interviews with farmers at three CUA farms—Little City Gardens, The Side Yard, and City Farm; two CUA consulting and installation businesses, Farmscapes and Hantz Farms; and with one of the initial funders of the Detroit Market Garden. My interview questions focused on business models and practices, barriers to entry, and the civic nature of the businesses (Table 2).

Table 2: Categories of interview questions

Area of interest	Question Category
Business models and practices over time	Procurement of property and landholding status
	Production and distribution
	Income streams
Barriers to entry and success	Urban benefits and challenges
	Local Policy
	Economic barriers and successes
	Ecological/agricultural maintenance
Civic aspects and community involvement	Customer base
	Community involvement
	Interactions between farm and city residents

*See Appendix A for a complete list of interview questions.

RESULTS

Commercial urban agriculture enterprises show great variation in scale, but offer similar services (Table 3).

Table 3: Commercial urban farm business types, scales, and services

Farm (location)	Size	Available Services	Time in Operation	# Employees
Little City Gardens (San Francisco, CA)	¾-acre	Vegetable/flower sale to restaurants and local markets; CSA shares; educational workshops; sale of value-added goods; volunteer opportunities	9 years (2007-2016)	3
Hantz Farms (Detroit, MI)	180 acres total across city	Management of properties growing fruits and vegetables; consulting services to clients who are working to establish large-scale urban agricultural initiatives.	8 years (2008-present)	4
Farmscape (Bay Area and Los Angeles, CA)	n/a; installed 600 urban farms and maintain 250 of them	Design, installation, and maintenance of urban farms in corporate, school, restaurant, and home settings	7 years (2009-present)	22
City Farm (Chicago, IL)	n/a	CSA shares; onsite farm stand; participation at farmers' markets; educational workshops and volunteering; composting; sale to restaurants	14 years (2002-present)	n/a
The Side Yard (Portland, OR) – 3 sites	(1) ¼ acre, (2) 1/3 acre, (3) 1 acre	Sale to restaurants; farm supper club; private catering; educational workshops; sale of specialty herbs and micro crops; sale to community members	7 years (2009-present)	3
Zenger Farm (Portland, OR)	4 acres	Sale to restaurants; sale at farmers' markets; CSA shares; educational workshops; farmer training and internship programs;	17 years (1999-present)	n/a

		summer camp programs		
Magic Bean Farm (Seattle, WA)	~1/2 acre	CSA shares; sale to restaurants;	6 years (2010-present)	n/a
LA Urban Farms (Los Angeles, CA)	n/a	Installation and maintenance of aeroponics systems; main greenhouse sells to restaurants	8 years (2008-present)	27
Seattle Urban Farm Company (Seattle, WA)	n/a	Design, installation, and maintenance of edible landscapes, backyard and rooftop farms; Classes and workshops	9 years (2007-present)	15
Detroit Market Garden (Detroit, MI)	3 acres	Training for urban farmers; direct sale to consumers through farmers markets	4 years (2012-present)	n/a
Keep Growing Detroit (Detroit, MI)	1.75 acres	Sale of fruits, vegetables, flowers at farmers markets; training for urban farmers; sale to restaurants; sale of seeds and transplants; classes and workshops	5 years (2011-present)	18
Big Delicious Planet (Chicago, IL)	2 city lots, acreage n/a	Use of produce in connected restaurant; urban farm dinners; private events and catering; summer internship program	4 years (2012-present)	n/a
Chicago Lights Urban Farm (Chicago, IL)	n/a	CSA shares; farm stand; mobile market; classes and workshops; sale of allotment plots	n/a	n/a
Patchwork Farms (Chicago, IL)	>1 acre	Farm stand; CSA shares; sale at local farmers' markets	5 years (2011-present)	2
Urban Farm Co. of Colorado (Boulder, CO)	n/a	Design, installation, and maintenance of urban farms in backyards	4 years (2012-present)	7
Eagle Street Rooftop Farm (New York, NY)	6000 ft^2	Onsite farm stand; sale to restaurants; educational and volunteer programs	6 years (2010-present)	n/a
Brooklyn Grange (New York, NY)	2.5 acres	Sale of vegetables and herbs to restaurants and community through CSA and farm stand; urban farming and green roof consulting and installation;	6 years (2010-present)	15

		sale of eggs; educational tours and workshops; event hosting		
Gotham Greens (New York, NY and Chicago, IL)	>170,000 ft^2	Sale of vegetables and herbs to retail and restaurant outlets	5 years (2011-present)	n/a

DISCUSSION

Commercial urban agriculture (CUA) currently operates on a small-scale, with considerably less economic power than its rural counterpart and industrial agribusinesses. The social impacts that distinguish it from other forms of agriculture must be emphasized in order for CUA operations to grow. Currently, large industrial farms and rural farms largely outnumber CUA operations (Lyson et al. 2004). Although much of the food production and distribution system in the United States is corporate controlled, there is a clear demand among many Americans for fresh food grown closer to home, outside of this system (Fedoroff et al. 2010). CUA operations struggle to meet this demand due to financial limitations, environmental obstacles, and inadequate land use policy. Interview respondents indicated that the engagement of a community in the environmental and social significance of urban farming is a key factor in the overall economic success of a CUA venture. Thus, CUA cannot merely be another cog in the larger economic, profit-driven machine; it must offer social value to urban residents in order to enact lasting change.

Barriers and business strategies

CUA business models and practices must differ drastically from conventional commodity agriculture models, in large part due to the differences in scale of the two types of operations. According to Caitlyn, a farmer at Little City Gardens in San Francisco, urban food production is not "as efficient or high-yielding as rural farming." Primarily, CUA businesses are small-scale operations with few employees. Most urban farms considered in this study were less than an acre in size and have fewer than ten paid employees. Urban farm installation and consulting

businesses generally maintain several sites across a city and employ larger numbers of people. In contrast, rural farms such as Riverdog Farm in Guinda, CA, (a 450-acre farm employing over 50 people) can operate on a much larger scale due to improved availability of land and lower costs of production.

This small-scale presented several barriers that were fairly common across all farms considered in this study. Limited land access and the high cost of land were common barriers faced by the respondents. However, land availability and costs are variable in cities across the country. For example, farmers at the Detroit Market Garden found that prime open land was relatively easy to find, as nearly 40% of public land in the city of Detroit is vacant (Detroit Market Garden interview). In San Francisco, where rapid land development and issues of land use and gentrification are exploding, the story is different. Limited land tenure has been the biggest issue plaguing the farmers at Little City Gardens, whose property has been in the hands of different owners many times with no guarantee security of tenure (Little City Gardens interview). Without land security, commercial urban farmers are unable to create effective business plans, as a large time investment is required to work in the farming business. Land security is a key factor in business success, as the initial years of the farm are spent building the physical components of the soil, knowledge of the space, a customer base, and the reputation of the business (Angotti 2015, Ganguly et al. 2011, Little City Gardens interview).

Many respondents noted that the contamination of urban soils is a significant barrier to the success of commercial urban agriculture (Angotti 2015, Ganguly et al. 2011, Hantz Farms interview, Farmscape interview). Urban soils, particularly in the vacant lots and open spaces typically transformed into urban agriculture spaces, often have high rates of metal and metalloid contamination (Carpenter and Rosenthal 2011). In many cases, these spaces were previously used for residential or industrial purposes (Carpenter and Rosenthal 2011). When confronted with soil contamination, urban farmers must undergo a variety of costly procedures to ensure the health and safety of the food grown in the space, as well as of those people coming into contact with the soils. These procedures include soil testing, soil excavation and replacement, cementing over the existing soil, and installing raised beds or using other forms of crop growing techniques that involve the purchase and installation of growing mediums (Carpenter and Rosenthal 2011). Dealing with contaminated soils is an essential component to the wellbeing of an urban farm, and

can be a steep upfront cost that affects the implementation and success of a commercial urban agriculture business.

Despite the unique barriers presented by the urban environment, commercial urban agriculture appears to be thriving. Many of the farms considered in this study share common business strategies that display the many ways commercial farming could be adapted to succeed in cities. The primary way the considered commercial urban farm businesses economically sustain themselves is by creating diverse income streams. Unlike commodity agribusiness farms, which are able to specialize in one or a few staple crops (Cohen 2014), commercial urban farms find success in growing as many different crops as they can. Many farms specialize in certain value-added goods that are uncommon in other agricultural retail markets, allowing them to sell these goods at increased prices for a larger profit margin. For example, The Side Yard in Portland, OR, sells specialty herbs and micro greens, while Little City Gardens sells flowers and a specialty salad mix. Furthermore, the majority of considered CUA farms offer educational and recreational workshops, CSA shares, and farm stands onsite or at farmers' markets. Many also form partnerships with local restaurants, which guarantees a regular income stream. In these ways, CUA operations offer services that cannot be offered by agribusinesses and other forms of agriculture.

Community interaction and engagement

Although CUA operations focus on the establishment and maintenance of economically successful businesses, these operations must also partake in the civic-oriented models of urban farming. The common linkage running through the business strategies and philosophies of all of the considered farms is that connection to the local community is key. Commercial urban agriculture must be civic agriculture in order to succeed, as the distinguishing and most obvious difference between urban agriculture and rural agriculture is proximity to the customer (Hantz Farms interview). The development of familiarity between CUA farmers and consumers redefines the producer-consumer relationship. Successful CUA business practices involve creating experiences that involve and invest the customer in the workings and success of the operation, rather than viewing it as a mere source of food. Urban farming has historically been characterized as an activity meant to unify and empower underserved communities; the addition

of economic incentives into the equation has not superseded the importance of retaining these ties to community (DeLind 2002, Lyson et al. 2004).

Community involvement and engagement serves many functions, including relieving some of the financial pressure faced by CUA operations. Many respondents noted much of their operations costs are alleviated by volunteer work, and note that volunteer involvement is key to the success of their farm (The Side Yard interview, Little City Gardens interview). The land tenure battle experienced by Little City Gardens throughout 2015 serves as another example of the importance of community. The property owners informed Little City Gardens that their tenancy would end in May 2016. Strong community support from neighbors and San Francisco residents precipitated a struggle to keep the farm in business, resulting in a renegotiation of their land tenure agreement.

Urban farm businesses enable the public to view their food sources as something other than mere economic enterprises. Urban farms are not perceived in the same way as traditional supermarkets. Although they are sources of food, urban farms are also meeting places, relaxation spaces, and living connections to nature in urban environments (Angotti 2015, DeLind 2002). Volunteer opportunities and CSA shares allow urban residents to directly influence and participate in the production of their own food.

The significance of commercial urban agriculture

CUA allows urban communities to partake in a form of civic agriculture that still operates within the market economy. Although CUA redefines the producer-consumer relationship, the relationship still exists in a way that is largely absent in non-profit urban agriculture. There is still a seller and a buyer and an economic transaction taking place. In this way, CUA offers an alternative to supermarkets and other rural agribusiness supply chains that is a more noncommittal and less habit-changing, fitting more easily into the lives of busy city residents.

CUA operations in large part follow identical community-oriented models as non-profit urban farming, and encounter the same set of barriers to implementation and maintenance (Farmscape interview). Differences between for-profit and non-profit enterprises exist that allow commercial urban agriculture to hold a unique role in the food system. Interview respondents noted that an important difference between for-profit and non-profit urban farming is in funding

schemes (Hantz Farm interview, Farmscapes interview). Many non-profits are dependent on grants and grant funding cycles that often come with strings attached, preventing the allotted money from being used in any other way than its intended purpose. This can limit the services that non-profit urban farms provide and decrease their long-term financial security. For-profit CUA businesses do not operate under these limitations, and thus are free to pursue their own missions and agendas with financial freedom.

Commercial urban farms are also sites of job creation. Daniel Allen, CEO of Farmscape, noted that CUA businesses allow city residents passionate about pursuing farming as work to continue living in big cities. Some CUA businesses such as the Detroit Market Garden exist specifically to train urban farmers and provide them with a direct market outlet to the consumers. The Detroit Market Garden is located directly adjacent to Detroit's oldest and largest farmers' market, the Eastern Market, allowing farmers to easily transport their products for sale.

Limitations and Future Directions

No studies document the number of CUA operations existing in the U.S. and I contacted relatively few. While my arguments apply to my study sites, it is difficult to say if they are widely applicable to all CUA operations in all regions of the country.

My study focused specifically on commercial urban farms, the establishment of which is contingent upon beating several odds (access to land, soil/water/air contamination, competition, etc.). Many peri-urban and rural farms that do not face the same limitations provide exceptional service in terms of contributing to rural economies, using sustainable and organic farming methods, and creating sources of fresh and relatively local food for city residents. These farms should not be discredited in any way for the services they provide.

Future research in commercial urban agriculture should seek to conduct surveys targeting more commercial urban agriculture operations, as well as surveys and interviews with community members and city residents that engage with CUA. Furthermore, I was unable to adequately develop ideas and conclusions on how land use policy affects the growth of CUA. Interview respondents noted that current land use policies do little to support CUA, so future studies may look to perform policy analyses and revisions that will improve land use patterns in urban areas to increase the spread of commercial urban agriculture.

Broader Implications

The largest overarching goal of urban agriculture is to reconnect the isolated urban populations of the world with greenery and food production, thereby transforming the way food is grown, how it is perceived, and how it is consumed. Although the scale and economic power of commercial urban agriculture is relatively small, it succeeds in growing connections between people and food. In the United States, food production and distribution has long been treated as a commodity, which is incongruous to the way many people view the consumption and sharing of food. The acts of cooking and eating are deeply meaningful in many different cultural and sociological contexts. Commercial urban agriculture gives many more people an opportunity to extend these same meanings to food production.

ACKNOWLEDGEMENTS

Many thanks to my family and friends, for their support throughout my undergraduate career; ESPM 175 professors Kurt Spreyer and Tina Mendez; ESPM 175 workgroup, the Salad Bowl; all my ESPM 175 classmates for providing a stimulating and engaging work environment.

REFERENCES

Altieri, M.A. 1999. Applying agroecology to enhance productivity of peasant farming systems in Latin America. Environmental Development and Sustainability 1:197-217.

Angotti, T. 2015. Urban agriculture: long-term strategy or impossible dream? Lessons from Prospect Farm in Brooklyn, New York. Public Health 129:336-341.

Brown, B. 2010. West Oakland: A Community's Response to Food Injustice. The Berkeley McNair Research Journal.

Cohen, B.R. 2014. Don't mono-crop the movement: toward a cultural ecology of local food. Gastronomica 14:5-8.

DeLind, L.B. 2002. Place, work, and civic agriculture: Common fields for cultivation. Agriculture and Human Values 19:217-224.

Ellinger, M. 2010. Urban agriculture in Cuba. Race, Poverty & the Environment 17:14-17.

Fedoroff, N.V., D.S. Battisti, R.N. Beachy, P.J.M. Cooper, D.A. Fischhoff, C.N. Hodges, V.C. Knauf, D. Lobell, B.J. Mazur, D. Molden, M.P. Reynolds, P.C. Ronald, M.W. Rosegrant, P.A. Sanchez, A. Vonshak, and J.K. Zhu. 2010. Radically Rethinking Agriculture for the 21st century. Science 327:833-834.

Ganguly, S., P. Kujac, M. Leonard, J. Wagner, and Z. Worthington. 2011. Lively'Hood Farm Financial Analysis: A Feasibility Study of Commercial Urban Agriculture in the City of San Francisco. Published by SF Environment.

Lal, R. 2011. Improving Soil Quality for Urban Agriculture in the North Central U.S. Carbon Sequestration in Urban Ecosystems 279-313.

Lyson, T.A. 2000. Moving toward Civic Agriculture. Choices, the Magazine of Food, Farm, and Resources 3:42-45.

Lyson, T.A., and A. Guptill. 2004. Commodity agriculture, civic agriculture, and the future of U.S. farming. Rural Sociology 69:370-385.

Montenegro de Wit, M. 2014. A Lighthouse for Urban Agriculture. Gastronomica 14:9-22.

Sumner, D.A. 2014. American farms keep growing: size, productivity, and policy. The Journal of Economic Perspectives 28:147-166.

White, M.M. 2011. Sisters of the soil: urban gardening as resistance in Detroit. Race/Ethnicity: Multidisciplinary Global Contexts 5:13-28.

APPENDIX A: Complete List of Interview Questions

1. Demographic information about the farmers – where are they from, when did they move to the area the farm is located in, ethnicity, age, gender
2. Is the farm located in a food desert? Does it serve an underprivileged community? Can community members buy the products from the farm?
3. How do community members participate in the farm? Is community perception of the farm generally positive or negative?
4. How did you obtain the land you currently use to operate the business? Do you own or rent the land?
5. How did you pay the startup costs of the farm? How did you procure the necessary materials and employees?
6. Did the farm experience a turnover time, where expenses exceeded profits? If yes, how long was this period, and what strategies did you employ to generate income (were these strategies external to the farm?)?
7. What has the farm grown and produced for sale, both in the past and present? What is the market value of these products, i.e., are they specialty products that sell for higher prices, or are they essential foods sold for lower prices
8. What entities are the main customers of the farm, e.g., restaurants, farmers' market customers, community members? Have sales changed (i.e., increased/decreased) over time?
9. Does the farm provide other services to generate income (e.g., educational workshops, sale of value-laden products such as honey or eggs)?
10. What are the future plans of the farm, in terms of all of the factors listed above?
11. Has the farm experienced financial barriers? Consider the following factors procurement of property and landholding status, generation of startup costs and materials, current expenses and profit margin, other financial burdens, e.g., installation of water meter, soil testing, etc.
12. What local policies affect the establishment and operation of commercial urban farms in the area? Do these policies help or hinder the operation of the farm?
13. How has the farm sustained itself economically? Consider the following factors: building a reliable customer base, maintaining consistent production and upkeep of reputation of business, diversifying income streams.
14. Are there competitors for the land? E.g., developers or industry
15. Has the farm experienced setbacks in terms of the ecological/agricultural functionality of the farm? For example, soil contamination, high plant mortality, pests, etc.
16. How has the farm surpassed these barriers? Do they continue to affect the operation of the farm?
17. What do you believe to be the current and potential role of commercial urban farms in the urban economy and in the larger food system?