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The role of urban agriculture in Philadelphia: A sociological analysis from a city perspective Summary report

Philadelphia, USA 02/12/2015-03/10/2015



The role of urban agriculture in the context of Philadelphia:

A sociological analysis from a city perspective

Summary report

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Purpose of the research project

This report summarizes the findings for the research project performed in the period of February 12th to March 10th 2015 in Philadelphia, USA. This work is part of a doctoral research project 'Governance of Urban Agriculture' (2013-2017) organized by the Institute of Agriculture and Fisheries Research (ILVO) and Ghent University (Belgium). The results in this report represent a first step in conducting future analyses, which will ultimately be integrated into the PhD project. The research in Philadelphia was realized thanks to the assistance of the local host Penn State Extension Philadelphia. This report hopes to reach and serve anyone involved or interested in urban agriculture activities and the wider food system of Philadelphia.

The purpose of the doctoral research project is to develop, from a sociological point of view, a broader understanding of the dynamics underlying urban agriculture and based on that insight, formulate how governance processes can best address current developments within that field. Many cities worldwide have started a conversation on 'urban agriculture' and its role in the urban food system. This movement is supported by a wide variety of stakeholders ranging from non-profits to for-profits, supporting organizations, governments at all levels, academic institutions and a diversity of individuals at the local level. However, it is unclear where all these efforts will lead to. In order to get a deeper understanding of the role of urban agriculture, a comprehensive (historical) analysis including all actual and potential stakeholders provides fruitful insights. Additionally, a comparative perspective is adopted in the PhD project to learn how different cities respond (differently) to this upcoming trend.

Additionally, within this larger research project, the focus is on environmental justice issues within urban agriculture development. In short, environmental justice is about inequalities in the distribution of environmental benefits and burdens (Beretta, 2012; Bickerstaff & Agyeman, 2009; Connelly & Richardson, 2005; Rhodes, 2003; Sze, 2007; Towers, 2000; Walker, 2012; White, 2004). While urban agriculture is not the first topic that comes to mind as an environmental justice theme, it is a worthwhile undertaking to look at the concept through this lens. Urban agriculture can take many forms, have different functions and meanings. As a consequence, we should wonder who benefits from these activities and how people benefit from them. Where can we identify processes of inclusion or exclusion? Initial questions related to environmental justice will point at inequalities in urban agriculture development and how stakeholders identify and experience them. The research project in Philadelphia is set up in a way that allows us to explore these environmental justice questions. After exploring existing literature and consulting with key stakeholders, Philadelphia was considered as a good opportunity to learn about both urban agriculture within the broader urban food system and justice issues related to urban agriculture. The main challenge of this research project was to get an overview of the current network of stakeholders, identifying the key initiatives, projects and organizations and grasp the historical process that forge the work done for urban agriculture.

Upon arrival, ideas were exchanged with the Penn State Extension on the methodology and research questions that would benefit both Philadelphia stakeholders and fit within the PhD research. Broadly, the following questions have been addressed:

- Who are the actors involved in urban agriculture in Philadelphia & what is their role?
- How do these actors perceive urban agriculture?
- What are the current opportunities and constraints of urban agriculture in Philadelphia?
- Which efforts are done to promote urban agriculture in Philadelphia?
- And, what are the outcomes of these combined efforts?
- How are inequalities related to environmental and social justice integrated in projects and initiatives?
- And ultimately, which are the important questions to address in the future?

These questions serve as the guiding tool in analyzing and structuring the data. In the next section, the methodological choices will be clarified. The results section covers the urban and regional context for agriculture in Philadelphia and outlines the current efforts, initiatives and stakeholders of urban agriculture, together with a presentation of the current opportunities and constraints. In the discussion section, we will reflect on the overall situation and describe the dynamic that both influences and underlies current efforts. Some concluding remarks propose food for thought for future avenues of urban agriculture in Philadelphia.

Methodology

Methodological choices

For this research project, it proved the most practical and consistent to design the research project based on methods and tools used within the larger PhD research. For example, the use of previously developed questionnaires and looking at urban agriculture from a *city perspective* whereby all relevant stakeholders (and not one particular group) for the development of urban agriculture are included.

First, we clarify what is understood in this report as urban agriculture. In order to include a wide array of perspectives, a broad definition is preferred. One that allows for a diverse inclusion of stakeholders (and perspectives is the definition of Mougeot (2005, which is also adopted by the RUAF¹): “*Urban agriculture is located within (intra-urban) or on the fringe (peri-urban) of a town, a city or a metropolis, and grows or raises, processes and distributes a diversity of food and non-food products (re-)uses largely human and material resources, products and services found in and around that urban area, and in turn supplies human and material resources, products and services largely to that urban area*”. While arguably there is a distinction to be made between urban gardening, urban farming and many other terms, we prefer to not exclude certain food growing methods of projects beforehand and instead, let the definition of urban agriculture come from the respondents themselves. To avoid confusion, we have decided to define the aggregate collection of all the different food growing methods, projects and supporting organizations as “urban agriculture activities”. Another term that is often used jointly with urban agriculture is local agriculture or local food. There is no agreement on what is to be understood as local. Moreover, we argue that it very much depends on the context of the city and even the situation the stakeholder is in. Again, in this report we do not define local in the context of Philadelphia as a preset distance, but try to understand what each stakeholder understands as ‘local’, in order to grasp the different understandings within the context of Philadelphia. In taking such perspectives, it allows us - from a city region perspective - to analyze the role of urban agriculture in the broader context of the city. By aggregating all (different) efforts and (different) visions, we can identify tensions and opportunities within the urban agriculture movement.

Upon arrival, it soon became clear that urban agriculture is a fairly well-explored topic in Philadelphia. Analyses are and have been covered by a number of institutes and research centers. Many studies have been focused on food justice, sustainability of urban agriculture and geographical issues related to urban agriculture (through GIS-analyses). The results of these papers have been included in our analysis. Nevertheless, not all research questions formulated above could have been answered by the literature review. With the comparative analysis in mind, it seemed appropriate to perform this exploratory research to gain a comprehensive understanding of the current situation in Philadelphia.

Table 1 below presents the types of stakeholders which are looked for. In order to provide a structured overview, they have been organized into four broad groups of stakeholders: policy/government, market, civil society and research. Two remarks. First, depending on the mission or goal of an actor, he/she could arguably be located in several categories. Second, research institutes are here considered as a distinct category of stakeholders as they seem to play a unique role in the network of stakeholders in Philadelphia. Moreover, they seem to establish their role through a combination of market and civil society co-operations.

Table 1. List of potential urban agriculture stakeholders

Stakeholders located in:			
Public officers	Research	Market	Civil Society
International level	Research institutes	For-profit farming	NGO's
National level (USDA)	University	Farmer's associations	Non-profit farms/ organizations
State level (PDA)	Extension center/community outreach	Private actors	Funders
Local government		Entrepreneurs	Artists
Council level		Funders	(Public & private) Schools
Government led organizations			Churches
			Individual supporters
			Volunteers

¹ Resource Centers on Urban Agriculture and Food Security, The Netherlands

Taken together, data used in this report is based on in-depth interviews with stakeholders, secondary data and available literature. Data will also consists of observational data as well as data obtained from informal conversations held at visited sites and within Penn State Extension.

Research process

In a first step, a literature study was performed in order to gain an overall understanding of the current situation of agriculture in Philadelphia and the larger Philadelphia region. An overview of the consulted literature can be found in the references section at the end of this report. Based on an initial web search to look for key stakeholders, subsequently a snowball procedure was used until references to new stakeholders became scarce. In addition, I also consulted the list of contacts within the Penn State Extension. The types of actors interviewed were: farmers (for-profit and non-profit), founders of projects and organizations, employees within projects, funders, public officers, supporting organizations, lawyers, educators and academic researchers.

All the interviewees were enthusiastic and very motivated to participate. Only one person has rejected the interview. Two stakeholders agreed, but eventually did not engage for an interview. Overall, there were more respondents than could have been interviewed within the research period. It is planned to continue interviewing stakeholders through phone conversations in the near future.

Before conducting interviews, the existing questionnaire was reviewed and expanded with questions related to environmental/social justice. The set of questions inquire into the experience of the interviewee of working on urban agriculture in the context of Philadelphia. Important topics to discuss are: the mission, motivation and vision of the project and interviewee, the network and collaboration, the opportunities and barriers, the policy framework and the overall experience with urban agriculture in Philadelphia. In annex, a sample of the questionnaires are presented (one for “grassroots” organization and one for public agencies and supporting organizations).

In total, 23 meetings with stakeholders are considered as in-depth interviews. These have all been recorded and transcribed. Transcriptions have been used as the basis for in-depth analysis. Below, table 2 shows the dates and lists the urban agriculture activities where either an interview was held, the site was visited or participation in an event or meeting took place.

Table 2. Timetable of interviews, visits and meetings/events

Date	Interview	Visit	Meeting/ Event	Project/organization
Friday 02/13	X			PHS City Harvest program
Friday 02/13	X			Penn State Extension
Friday 02/13		X		South Street Garden
Friday 02/13	X	X		Emerald Street Urban Farm
Saturday 02/14				Clark Park Farmers market
Saturday 02/14	X			Somerton Tank Farm
Saturday 02/14		X		Fittler Square Farmers market
Monday 02/16	X			The Merchants Fund
Monday 02/16	X			Farm to City
Monday 02/16	X			Fairfood Philly
Monday 02/16			X	Reading Terminal Market
Tuesday 02/17	X			Heritage Farm
Wednesday 02/18	X			Mill Creek Farm
Wednesday 02/18	X	X		Weaver's way Coop
Wednesday 02/18		X		W.B. Saul High School (Henry got crops)

Wednesday 02/18		X	PHS Growers meeting
Thursday 02/19	X		Philadelphia LandCare program (PHS)
Friday 02/20	X		Urban Tree Connection
Saturday 02/21		X	SHARE Food Program
Saturday 02/22	X	X	Greensgrow Farms
Tuesday 02/24	X		Historic Fair Hill Burial Grounds Healthy Foods Green Spaces
Tuesday 02/24	X	X	Earth's Keepers Urban Farm
Wednesday 02/25			Department of Parks and Recreation
Wednesday 02/25		X	USDA Programs for Small Scale Producers
Wednesday 02/25	X		Philadelphia Redevelopment Authority (part 1)
Thursday 02/26	X		East Park Revitalization Alliance
Friday 02/27	X		Teens 4 Good
Saturday 02/28		X	Mill Creek Farm
Sunday 03/01		X	Mariposa Food Co-op
Monday 03/02	X		Philadelphia Orchard Project
Monday 03/02	X		Philadelphia Redevelopment Authority (part 2)
Tuesday 03/03	X		Food Policy Advisory Council
Tuesday 03/03	X		Temple University
Thursday 03/05	X		Bartram's Garden (UNI)
Thursday 03/05	X		Public Interest Law Center of Philadelphia
Friday 03/06	X	X	Tour of several urban farming projects, supermarkets and corner stores
Friday 03/06		X	PHS Flower Show 2015

Results

In this section, the results of the data collection and data analysis are presented. It consists of a combination of interview transcripts, field observations, field notes, current academic literature & research reports, agricultural censuses, and formal & informal information sources. In a first section, the broader agricultural context in the Philadelphia region/Pennsylvania is discussed. Next, we summarize relevant information for food production in the urban context of Philadelphia. In the remaining sections, the results deal with the overarching governance framework that structures the scope of action for UA activities, then we describe the UA activities more in-depth and discuss opportunities and barriers.

Agriculture in the greater Philadelphia region



Philadelphia², located in the North-Eastern part of the country, is the fifth largest city in the US -in terms of population- , after New York, Los Angeles, Chicago and Houston. Philadelphia is the largest city in the state of Pennsylvania, located in the south-western corner of the state and in proximity to the states of Delaware and New Jersey.



Agriculture is Pennsylvania number one industry (PHMC, 2015). About 27% of the total land in Pennsylvania is devoted to farmland - hobby farming, woodland, land under farm buildings, orchards, etc. included (USDA 2012 Census Publications). Trends of decreasing numbers of farms and increasing scale of farms also counts for Pennsylvania: 59 309 farms with an average of 124 acres in 2012 as compared to 63 163 farms with an average of 130 acres in 2007³. Of those, 600 farms are certified organic producers. The largest share of farm income comes from livestock, dairy products, egg production and greenhouse and nursery products. Main crops are corn, soybean, wheat, oats & hay. Fruits are apples, cherries, peaches and grapes. Vegetables are sweet corn, potatoes, beans and cabbage. The state is also the largest producer of mushrooms in the country (Agclassroom, 2010).

Due to its location in the bottom corner of the state, it merits to share some results from the report of the Delaware River Valley Planning Commission (DVRPC). The DVRPC is the federally designated Metropolitan Planning Organization for the Greater Philadelphia Region⁴. It includes nine counties: Bucks, Chester, Delaware, Montgomery and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester and Mercer in New Jersey. In 2010, the DVRPC has conducted a comprehensive study on the Greater Philadelphia food system. This region covers the area of a 100 mile radius from a point in Center City Philadelphia (29 910 mi²) and thus consists of 70 counties in the five states of Pennsylvania, Delaware, New Jersey, New York & Maryland. In 2003, this area had a population of about 31 million, representing more than 10% of the US population. In other words, it was and still is one of the largest metropolitan areas of the country. It is a very densely populated region (1034/mi²), including major cities Philadelphia, New York and Baltimore. The current trends are population growth and continuing suburbanization, mainly due to an influx into the city region.

² Upper map retrieved from <http://www.dvrpc.org/food/foodsystemstudy.htm>

³ Comparisons between different censuses should be dealt with care and attention. Questionnaires have changed over time and terms have been redefined. Therefore, more or less acreage has rather to do with redefinition than actual farm land loss or increase.

⁴ Bottom map retrieved from http://www.philadelphia-phl.airports-guides.com/phl_airport_maps.html

Despite the increasingly urbanizing landscape, the Greater Philadelphia region is known in the country for its highly productive soils and qualitative agricultural products. The main reasons for this are: a humid continental climate that allows to grow a wide variety of crops and grains, the quality of the soil and well-known traditional farming areas in the region, such as Lancaster County, PA; Sussex, DE & Chester, PA. Within the Greater Philadelphia region, about 27% of the land (cfr. number in Pennsylvania State) is counted as farmland in the US Census of 2003. The top commodities (2007) are similar to the ones for Pennsylvania, namely poultry, dairy products, nursery & greenhouse, and grains (see DVRPC, 2010, p.31). According to the DVRPC report (2010), the number of agricultural holdings within 100 miles of Philadelphia is about 45 673 (2003). The majority of these holdings farm according to conventional farming methods (about 1.5% reported organic production), meaning that they are not certified organic and do not officially take any measures on pesticide & herbicide use and animal wellbeing that alternative farming systems prescribe. In the region, more than half of the agricultural land was lost between 1910 and 2007. However, over the last decades the Censuses of Agriculture have shown an increase in farm holdings and a decrease in farm acreage in the Greater Philadelphia region, which is most likely due to an increase in hobby farming, land pressure and cost of land within the region. About 86% of the farms are under family ownership, while there are only few large farm corporations.



Greater Philadelphia region and the city, the location of these farms can be used strategically for high-value and perishable crops. In addition, the region has a well-developed transportation system. The DVRPC study (2010) has

Farm located in Lancaster County

necessarily mean that these farms are tied to the local food system. Processed food can also be exported outside the region (most Washington DC) or mainly to one city (New York). Besides, the study also emphasizes that the region, for its processing industry and general consumption is highly dependent on food from outside the region and the global food market in general. Given the above, it can be suggested that the farms in the Greater Philadelphia region currently specialize in high value products that can be grown on smaller family-sized farms.

A growing interest in local and urban food systems has been perceived over the last years in studies, reports and by most of the respondents. Increasingly, links are forged between producers and consumers and these efforts are becoming more and more visible. These are partly initiated by organizations operating from within the city of Philadelphia and partly by programs and policies of the US Department of Agriculture (USDA) and the Pennsylvania Department of Agriculture (PDA). Examples of programs and initiatives (without the intention to be exhaustive) that benefit or could benefit a local agriculture and food system are listed below:

Grassroots level:

- **Fair Food Philly.** A non-profit organization dedicated to bringing local food to the marketplace by tying local farmers to businesses and consumers.
- **Common Market.** Connects wholesale customers to farmers in New Jersey, Pennsylvania and Delaware by marketing and distributing *good* food to schools, hospitals, grocers and workplaces. They aggregate food in their warehouse from about 75 regional producers.
- **Farm to City.** A Philadelphia-based program whose goal is to unite communities, families, and farmers year-round through CSA's, farmers markets, buying clubs and web services.
- **The Food Trust.** This nationally recognized non-profit has developed a comprehensive approach to improved food access that combines nutrition education and greater availability of affordable, healthy food. In partnership with Get Healthy Philly, it operates more than 25 farmers markets in Philadelphia.



Fair Food Philly farm stand at Reading Terminal Market



Pennsylvania Department of Agriculture⁵:

- **Healthy Farms and Healthy Schools Grant Program.** Provides matching funds to educational institutions located in Pennsylvania that have a Kindergarten program (whether they be public, private or charter schools). The goal is to educate kindergarten students and their families about the importance of choosing healthy, locally produced foods while increasing awareness of Pennsylvania agriculture.

- **PA Preferred®.** The PA Preferred Program has a registered logo that serves both producers and consumers by identifying locally grown, harvested and if possible, processed in Pennsylvania.

- **Specialty Crops Block Grant.** Program intended to increase production and consumption of specialty crops. Specialty crops are defined as fruits, vegetables, tree nuts, dried fruits, horticulture, and nursery crops. State and/or local organizations, producer associations, academia, community based organizations, and other specialty crops stakeholders are eligible to apply.

- **Direct Farm Sales Grant Program.** Provides funding for Pennsylvania-based businesses that manage or operate a farm stand or farmer's market, non-profit organizations, farmers and local governments for projects intended to promote new or existing farmers markets. (The website states that this program is currently not active)

- **Farmers Market Nutrition Program (FMNP) & Senior Farmers Market Nutrition Program (SFMNP).** The WIC FMNP serves over 140,000 women and children throughout the state. The Senior Farmers Market Nutrition Program provides eligible recipients with checks to use for the purchase of fresh Pennsylvania fruits and vegetables grown by over 1,000 approved farmers. The Senior FMNP serves over 170,000 qualified seniors.

US Department of Agriculture⁶

- **Farm To School.** Through research, training, technical assistance, and grants, the USDA encourages to source more foods locally and to provide complementary educational activities to students that emphasize food, farming, and nutrition.

- **Know Your Farmer, Know Your Food.** Started in 2009, the initiative brings together staff from across USDA to coordinate, share resources, and publicize USDA efforts related to local and regional food systems.

- **Healthy Food Financing Initiative.** This initiative supports projects that increase access to healthy, affordable food in communities that currently lack these options.

- **Local Food Promotion Program (LFPP).** is a component of the Farmers Marketing and Local Food Promotion Program (FMLFPP), authorized by the Farmer-to-Consumer Direct Marketing Act of 1946, as amended (7 U.S.C. 3005). Under FMLFPP, two competitive grant programs are available: the Farmers Market Promotion Program (FMPP) and the Local Food Promotion Program (LFPP).

- **The Community Food Projects Competitive Grant Program (CFPCGP).** Provides grants for projects that fight food insecurity and help promote the self-sufficiency of low-income communities. Food Project funds have been supporting food production projects, including urban agriculture.



Increased regulation and new laws might be the other side of the story in supporting small-scale local produce. In 2011, president Obama signed the Food Safety Modernization Act⁷ into law, which increases food safety controls in order to prevent food hazards rather than responding to it. Even though it is not clear to what extent this will affect small-scale urban producers, some will have to comply with the Produce Rule and/or the Preventive Controls Rule.

⁵ More information on the PDA Programs see http://www.agriculture.state.pa.us/portal/server.pt/gateway/PTARGS_6_2_75292_10297_0_43/AgWebsite/ProgramBrowse.aspx?action=view-all&navid=12&parentnavid=0&searchq=all&

⁶ For a complete overview of programs see www.usda.gov

⁷ For more information see <http://www.fda.gov/Food/GuidanceRegulation/FSMA/>

The former sets new standards for farmers that grow, harvest, pack and hold produce for human consumption. The latter sets forth requirements for facilities that manufacture, process, pack, or hold food for human consumption. Without taking a stance in this matter, this will lead to increased administrative and operation costs and become an additional barrier to some urban agriculture activities.

A major focus in the future will be the question how to safeguard farmland from development. Land trusts and other initiatives will likely play a significant role in this. One example is the Lancaster farmland trust. From a (federal and state) policy perspective the number of programs, grants and initiative demonstrate a clear problem recognition that the current agricultural sector is facing, and wherein solutions are (partly) sought at the local level. The DVRPC report concludes that food production in the Greater Philadelphia region is far from sufficient to feed its population and will most likely never be. However, given the strong agricultural sector and the current opportunities to enhance the local aspect of the agriculture and food system, it merits to increase all efforts that work towards these goals. In addition to the programs in effect to stimulate agricultural production in the region, there are others that focus on including the socially and economically vulnerable people. Access to fruits and vegetables is facilitated through programs such as the Supplemental Nutrition Assistance Program (SNAP), or commonly called food stamps (see below). While not directly affecting the production side of the story, these food assistance programs play a role in food access and providing the people in need with healthy and nutritious food. Ultimately, the goals of all these programs combined are to increase the viability of the farming sector, to create awareness through education, to promote local produce among citizens, and to increase food safety and transparency.

Agriculture in the urban context of Philadelphia



Before we focus on urban agriculture activities more in detail, the current context in which these activities are taking place is discussed. The city of Philadelphia counts a population of about 1,553,165 (2013 estimate) (United States Census Bureau, 2015⁸) and its administrative boundaries cover an area of 134.10 mi². The population density is 11 379.5/mi². For many years the city has known a population decrease, where respondents referred to post-industrialization and “white flight”, which caused the large amount of vacant land (see below). The past decade, however, population is increasing again and many cities including the outskirts of the city are gentrifying at a fast pace. Often mentioned

gentrifying neighborhoods were located in North, South and West Philadelphia. The current growth in population is largely due to immigration from outside the US.

The four major racial population groups (2013) are White (45.2%), African-American (44.2%), Hispanic (13.3%) and Asian (6.9%) (United States Census Bureau, 2015⁹). Compared to other cities, a large proportion of the population is African-American. Philadelphia is one of the poorest city in the country (Philly.com, 2014). The city is facing major budget constraints which is currently threatening public schools and infrastructure. As these are the most pressing issues, they are a major focus of attention. When we are talking about the residents, in 2009, about 30% had an income below the poverty level, and 12% an income which lies 50% below the poverty level, known as deep-poverty (city.data.com, 2015). The majority of the poor are African-American, which indicates that there are racial discriminatory dynamics at play. Consequently, the city of Philadelphia is dealing with earnest hunger and diet-related diseases.

The Supplemental Nutrition Assistance Program (SNAP or ‘food stamps’) provides assistance to about 478 000 people (April, 2014¹⁰) in Philadelphia. Even more people would qualify, but have not applied. In addition, the Philadelphia region has numerous non-profits that are fighting against the issue of hunger. Some serve as food distributors, some help people get enrolled in government supported programs, and some engage in research and act as advocates for policy changes. The most prominent are:

⁸ State & County QuickFacts - Philadelphia County, Pennsylvania". United States Census Bureau. Retrieved March 15, 2015 from <http://quickfacts.census.gov/qfd/states/42/42101.html>

⁹ State & County QuickFacts - Philadelphia County, Pennsylvania". United States Census Bureau. Retrieved March 15, 2015 from <http://quickfacts.census.gov/qfd/states/42/42101.html>

¹⁰ See <http://www.hungercoalition.org/>

- Community Action Agency of Delaware County
- Food Bank of South Jersey
- Greater Philadelphia Coalition Against Hunger
- MANNA
- Philabundance
- SHARE Food Program

Philadelphia also has about 700 food cupboards and soup kitchens. In addition, numerous initiatives within food related programs target the low-income population (e.g. the Double Dollar Program, Philly Food Bucks, etc.).



Example of a vacant, blighted lot near city center (North Philadelphia).

The many decades of de-industrialization and population decrease have resulted in a tremendous number of vacant, abandoned lots all over the city (Hess, 2005). While it is only an 'educated guess', most of the respondents repeatedly referred to a number of 40 000 vacant lots and abandoned houses. Many of these lots are used for dumping of waste or other illegal activities. Previous and ongoing research have already shown that there is a

negative correlation between crime, poverty rates and health impacts on the one hand and the development of green space in the immediate environment (Joyce & Schweig, 2014). Vacant land reduces property values in the neighborhood and cost local governments millions in uncollected property taxes and maintenance costs.

Despite the grim presentation of Philadelphia's current condition, a reverse trend of re-investment, redevelopment and gentrification was mentioned multiple times during interviews, but was also a visible aspect throughout field trips in the city. Philadelphia seems to have regained a vibrant energy accompanied with future perspectives. Housing, industry, manufacturing, green spaces are all fields in which developers are currently very active. In this report we focus on how urban agriculture activities are set up, respond to and deal with the issues mentioned above. First, we elaborate on the steps the city government has taken over the last few years in response to the growing number of civil society organizations and initiatives.

The Philadelphia governance framework

Current governance initiatives

Over the past few years, the city of Philadelphia has taken some measures that at its best (will) stimulate urban agriculture activities, but in general create opportunities for grounding urban agriculture activities and allow a broader scope of action from a policy perspective. The programs, initiatives and institutions impacting on urban agriculture development are discussed separately below:

Philadelphia's Greenworks Plan

Mayor Michael Nutter has established the Mayor's Office of Sustainability in 2008 with the overarching goal to make Philadelphia the greenest city in the USA. A plan was drafted, setting out 15 targets in the areas of energy, environment, equity, economy and engagement (with target 10: local food production). The plan provides a city wide focus on sustainability and holds the potential to link many different stakeholders. The Mayor's Office of Sustainability provides in a food charter and houses the Philadelphia Food Advisory Council (which was set up, to focus more specifically on the topic of food within the Greenworks Plan).



Philadelphia food charter

The Philadelphia Food Charter presents a vision for a food system that benefits Philadelphia's community, economy and environment and helps push Philadelphia further towards becoming the Greenest City in America. It establishes the City of Philadelphia's commitment to the development of a coordinated municipal food and urban agriculture policy, and articulates the intention of establishing a Food Policy Council populated by key city and regional stakeholders who can inform and advise the city's efforts while helping to provide coordination, momentum and support for the significant activities already underway throughout the city and region.

Philadelphia Food Policy Advisory Council (FPAC)

The FPAC was set up in 2011 to focus more specifically on the development of policies that *"improve access for all Philadelphia residents to culturally appropriate, nutritionally sound, and affordable food that is grown locally through environmentally sustainable practices"*. The council meets monthly and is made up of mayoral appointed members and two staff members. They are structured in subcommittees: anti-hunger, local food procurement, vacant land and zero waste.

Farm Philly Program (Department of Parks and Recreation)

Department of Parks and Recreation is a land management organization, owning and maintaining a significant amount of public land. As no entity so far had taken up the mantle of the urban agriculture targets formulated in the Greenworks Plan, this department set up the Farm Philly Program that would meet these targets. In addition, it was expressed that the role and responsibilities of the different public agencies should become easier to approach: *"It is a very confusing system for the outsider. And part of the mission is to make this open and transparent, user-friendly...the goal of the program is to become the front door of urban agriculture in the city"*. In practice, the program creates and maintains urban agriculture projects on its own land and partner with other organizations to ensure long-term protection of gardens and farms. The program is only in its second year. Besides, the resources of this program are limited and will in the future depend on Mayoral elections. It is therefore unclear what role this program will play in the future. Some stakeholders expressed concerns of overlapping roles within the city system of urban agriculture. Others expressed excitement that the city now employs an 'urban agriculture ambassador'.

Urban agriculture as land use category in the Zoning Code

In 2012, the City Council passed a new Zoning Code¹¹ that recognizes urban agriculture as a new land use category in the zoning code. It includes gardens, farms, and orchards that involve raising and harvesting of food and non-food crops and the raising of farm animals¹². It defines four subcategories: animal husbandry, community gardens, market or community-supported farm and horticulture nurseries or greenhouses. As a result, community gardens and market farms in most areas are now allowed, with slightly more restrictions on market farms. While this does not change much for (legally) existing gardens and farms, the result of this is that zoning restrictions should become less difficult in the future to deal with. Moreover, urban agriculture as a recognized category helps to strengthen support for this activity.



View of South-East Philadelphia from Bellevue Hotel

Neighborhood Transformation Initiative (NTI)

NTI, initiated in 2001, is a strategy to rebuild Philadelphia's neighborhoods as thriving communities with clean and secure streets, recreational and cultural outlets and quality housing. NTI takes a multifaceted, comprehensive approach that stresses interagency cooperation and coordination in addressing every aspect of neighborhood development. The initiative also creates opportunities for government and citizens to work together, restoring civic pride and building community spirit. NTI strives to build the capacity of community-based organizations to identify needs and develop new housing and employment strategies within their communities while garnering the support of the private sector through innovative partnerships and by leveraging resources.

¹¹ The modified Zoning Code to be consulted at: <http://www.phila.gov/Map#id=757bbd2d07704a9bb684a1e88ca681c9>

¹² Source: Philadelphia Zoning Code, effective Aug 22, 2012

Philadelphia Land Bank

Topic of much current debate is the formation of the land bank, which went into business as of early 2015. For years there had been few -if any- disagreements within the discussion on the vacant land management system. A more transparent, straightforward and quicker acquisition process was (and is) needed to drive forward vacant land redevelopment. Dealing with this vacant land is urgent, for reasons already discussed above. The land bank is a public authority that streamlines procedures *“to clear title, transfer properties to responsible owners, and acquire tax delinquent properties without risking their sale to speculators”*. Different kinds of stakeholders such as The Food Trust, Public Interest Law Center of Philadelphia, Pennsylvania Horticultural Society, Philadelphia Association of Community Development Corporations, and Campaign to Take Back Vacant Land, are cooperating to build an effective land bank. Traditionally, land can be owned by a number of public agencies (such as OPP, PHCD, OHCD, PRA, PHA¹³). The land bank has started by transferring available public land into the land bank (from several of these agencies) and will work on transferring private land in the future as well. A major goal is to forge one acquisition process, instead of each public agency having its own procedure, by having the land for these public agencies transferred into the land bank. This transparency will also make it harder for speculators to buy land. However, ultimately the amount of lots in the land bank will depend on the district Council members: each has to approve the transferring of deeds to the land bank and again when a property is sold. Again, the future role of the land bank is unsure and its success will depend on the cooperation and contribution of many different stakeholders. Also here, respondents were divided on the expected impact the land bank will have in the future. Some claimed it to be the necessary simplification and transparency needed, others mentioned yet another land governance mechanism and it not necessarily serving the communities who are in most need.

Philadelphia City Council

Is the legislative body of Philadelphia. It consists of ten members elected by district and seven members elected at-large. A term is four years, with no limit on the number of terms to serve. The City Council is taken up in the analysis because numerous times, stakeholders reported the district councils often having the last and most powerful voice in what eventually will happen in their district. In other words, whether a property will be used for food growing, or whether a community garden is at stake, all efforts to start a project or safeguard one can become undone if the council person is unsupportive. During interviews, it became clear that some stakeholders find themselves in a favorable position because the council person shares the vision of the urban agriculture stakeholders, while others have more difficulty in establishing a good understanding with their council person. Despite all the efforts, the quality, success and eventual location of a project has a more voluntary basis than all the other governance initiatives discussed above let assume.



Map of Philadelphia by council districts

Even though the majority of the respondents say that access to land and land tenure is still a major barrier, the recent adjustments in the policy framework and governance of urban agriculture in the local government have at least made farming in the city more formal/legitimized, appreciated and in some cases even viable. Based on the overview above, it seems promising that the city approaches a systems thinking perspective, linking sustainability, poverty (and associated hunger and health) and urban development. From an optimistic point of view, it appears that some individuals, offices and agencies within the city have an increasing awareness of the role the city can play in urban agriculture development. However, care should be taken with uncritically positive conclusions. There remains the problem of city expenditure which does not allow significant financial support for actual urban agriculture activities. The city budget is seriously constrained and priorities are in the public school system and public infrastructure (re)development. In addition, one of the city's main goals is to transform the vacant lots and abandoned houses into developed areas. But as income revenue is high upon the agenda, the city would favor development projects that generate the highest tax revenues. It can therefore be expected that development for housing or commercial development will be preferred over other uses. Some respondents also mentioned New York, San Francisco, Cleveland, and Boston as examples of cities that are very progressive and ahead of the curve. Philadelphia, by contrast is *“always a bit behind, looking at other cities and copying or borrowing from their best practices”*. The lack of financial support might also play a role in this finding. To conclude, given the pressing budget constraints, the Nutter administration has taken remarkable steps. It seems that, from a policy level, food growing activities have gained wide acceptance and gained steady ground in the Philadelphia urban landscape. However,

¹³ City's Office of Public Property, Philadelphia Housing Development Corporation, Office of Housing and Community Development, Philadelphia Redevelopment Authority, Philadelphia Housing Authority

upon discussing these governance mechanisms, it became very clear that eventual effects and outcomes of these initiatives will ultimately depend on available resources and collaboration between the different stakeholders.

Urban agriculture activities

In this section, we focus on the findings of the actual urban agriculture activities, or the initiatives and programs intended to support these activities. The structure is based on the questions formulated in the 'purpose of the research project section': Who are the actors involved in urban agriculture activities and what is their role? How is urban agriculture perceived? And which efforts are done to promote urban agriculture?

Who are the actors involved in urban agriculture activities and what is their role?

Even though many respondents reported that there are no farms in the city of Philadelphia, the USDA 2012 Census Publications reported 22 farms who, combined, produce on a surface of 285 acres. Average farm size is 13 acres and about 15 farms are between 1 and 9 acres. Most likely the cost of land and availability of large plots of land play a role in the small size. The estimated market value of the farm holding (land + buildings) is 45 338\$ per acre, compared to the average in Pennsylvania state of 5425\$ (USDA 2012 Census Publications). Another major explanation may be that these farms are educational or experimental in essence and therefore do not require as much resources than conventional farms require as the major focus is not on production. Among the respondents, there have been several initiatives which aim is to prove that an urban farm can become a viable business. Even the city of Philadelphia has formulated the following goal in its Greenworks plan: *"Greenworks Philadelphia recommends that twelve commercial agriculture projects be established in the city over the next 8 years. In order to do this, the Mayor's Office of Sustainability, in partnership with other City departments and external organizations, will help develop the infrastructure necessary to support urban farming. This infrastructure includes distribution facilities, agricultural supply centers, reliable water sources and processing facilities."* (City of Philadelphia, 2009). However, these initiatives currently get little resonance, and if they do, most often not for their business-related or economic aspects. The majority of the respondents stated not to believe in the pure for-profit urban farming model in Philadelphia. This for several reasons. First, it is practically impossible to obtain a large enough plot of land to produce enough. Second, the land available at the moment would never generate a sufficient sustainable livelihood for a decent income. As a consequence, farmer's income would still be insufficient to allow farming as a viable. Third, in order to generate income, produce would have to be sold at very high prices. This would exclude the majority of the population in Philadelphia and such a system was unacceptable to many respondents. In the following section we will focus more in detail on the diversity of the objectives found within the urban agriculture movement.

By all means, urban agriculture is a well-understood and developed concept in Philadelphia (and many other cities in the United States). Urban agriculture certainly isn't about farming or food production alone. In addition to food producing stakeholders (or farmers), many different stakeholders are involved. At least, when we include e.g. educational farms, rehabilitation gardens and supporting organizations. In taking this position, the number of urban agriculture initiatives exceeds well above the 22 farms and the list of stakeholders and the role they play is much more extensive. This is illustrated below:

Farmers. Most people involved in the on the ground management of projects have professional farming knowledge to a certain extent, either through experience or education. In other words, there is quite some farming expertise available within the context of Philadelphia. According to the following quote, this doesn't seem to be very extraordinary: *"I know people [farmers] that are moving to Philadelphia to get a job in urban agriculture. That is kind of cool that it is happening here."* This points to an understanding of urban agriculture wherein farming is taken seriously.

Gardeners. Philadelphia is characterized by a historical commitment to open space and community gardening. Hess (2005) describes the community gardening as a well-organized movement with clearly defined goals. There is a tremendous amount of community gardens in Philadelphia, very visible in the urban landscape. They vary in size from a large acreage to one plot of vacant land, from historical and well-known to spontaneous and more indeterminate, and from permanent to temporary. In other words, community gardens are characterized by a variety of performances. Due to different conceptions of community gardens, studies conducted at different times and the short lifespan of some community gardens, the estimated number of community gardens varies widely, but a



Community garden on South Street

comprehensive study found 300 gardens in the year 2012. Vitiello and Nairn (2008) documented a sharp decline in community and squatter vegetable gardens between 1994 and 2008 from 501 to 226. After World War 2, gardens lost popularity, but experienced resurgence from the 1970s onwards as a coping strategy for the de-industrialization process happening in the city (Levy, 2008; Vitiello & Nairn, 2008). Even though many gardens have disappeared due to redevelopment and gentrification processes, they remain rooted in cultural values of the city. In taking a tour, it was surprising to see how many places and spaces are used to serve as a community gardening project.

Educators. A large portion of the urban agriculture initiatives focus on or have programs running on food and nutrition education wherein a target group – such as students, children, neighborhood members, or specific social or cultural groups – are encouraged to learn how to grow, cook and eat the nutritious food. In some cases, the farmer in the project would also run the education programs within the project. In other cases, an educator or social worker is employed to focus explicitly on these extension activities.

Distributors. Locally sourced or produced food has several ways to be distributed throughout the city. Own consumption and distribution, and farm stands already distribute a large portion of the locally produced food. Additionally, other initiatives are set up to operate on a wider scale. Examples are: Common Market, a distributor of locally grown sustainable food to communities and institutions that serve communities; the numerous vegetable box schemes as part of many CSA farms or other projects; and the fresh-food truck of Greensgrow Farms that distributes urban produce in underserved neighborhoods. Then there are the food banks. There are multiple examples, but two renowned programs are Philabundance and SHARE food program that specifically target underserved people by distributing (partly) local and fresh produce.



SHARE Food Program

Cooperatives. The growing number of food cooperatives in Philadelphia points at an increasing involvement of citizens to get access to products that are (but not always) high quality, local and fairly priced. Co-ops can be an important stakeholder as their members are the customer base that is looking for locally produced food. Examples are the Mariposa food co-op who sells produce from several urban agriculture projects in the neighborhood and Weaver's Way Co-op who started their own food production programs.



Weaver's Way Co-operative

Farmers markets. The number of farmers markets in Philadelphia is remarkable. Some respondents are concerned about the small size and seasonality of many of these markets. They expressed the need for larger, more significant farmers that serve the citizens all year round (most of them only operate during the summer). In any case, these markets have a role in addressing community food security (Young, 2011). The reasons are that farmers markets bring more fresh produce into the neighborhood, decrease the distance between farmer and consumer and expose vulnerable people to these foods. Especially the markets where visitors can pay with food stamps or other types of coupons that encourage economically disadvantaged people to purchase food at these markets.



Farmers Market at Clark Park



Fitler Square Market

Vendors. Some neighborhoods are seriously constrained by access to supermarkets or other food stores (such as Strawberry Mansion). In many parts of the city, people are relying on corner stores for their access to food. But these stores rarely have any fresh produce for sale. This was also experienced through visits to corner stores in North Philadelphia. There are initiatives that focus on supermarkets, corner stores and other convenience stores to stimulate fresh produce supply. An example of this is The Healthy Corner Store Initiative piloted by the Food Trust¹⁴. It attempts to motivate the purchase of healthy food items through education and direct marketing. In this program, communities, local farmers and healthy food suppliers are linked.



Gardens supported by City Harvest (PHS)

Supporting organizations. It is hard to overstate the number and efforts of supporting organizations that either promote the productive aspect of the urban food system (e.g. Philadelphia Horticultural Society's City Harvest Program, Farm To City) or address the legal aspects of farms and gardens (such as Neighborhood Gardens Trust, Healthy Food Green Spaces). It will be elaborated on more in detail below, but they have an important role in linking different stakeholders, consolidating the mission of urban agriculture, promoting urban agriculture as a movement and bridging gaps within that movement.

Research institutes. Upon examination of the research profile of Drexel University Temple University, University of Pennsylvania and PennState University two observations were made. The first is that each has been doing research on the topic of urban agriculture, mostly from a strong food justice or geographic perspective. The second is that each has community outreach mechanisms (centers, projects or programs) aiming to co-operate with and serve communities in Philadelphia. For example, Penn State Extension -located in Center City- is a community outreach center whose mission is to *"facilitate community-focused learning, engaged scholarship, and solution-oriented research to help enrich the lives of urban citizens, improve the quality of communities, and enhance the success of local entrepreneurs"*. They translate research findings into community practices, provide gardening education and internships, and support urban farming projects with technical and material assistance. They have been providing projects with high-tunnels throughout the city for several years. Some of the many results of these outreach centers is that students are encouraged to engage in community work, that research centers formulate research questions in alignment with community needs, that research is conducted in partnership with communities, and that projects and programs are embedded in an institutional setting (potentially relieving these from land tenure or funding issues). When asked a professor what role universities can play for urban agriculture in Philadelphia, the answer was: *"They can play a huge role, but it also depends on the community. I don't believe universities can go to a community and apply their findings on the community and say: this is what you should or should not do. I think it has to come from a really good understanding of what they need and what would be good for them. It should be done through lots of dialogues"*. This points to the commitment of research institutes in Philadelphia in serving the needs of the local communities. In this analysis, it was only focused on research institutes located within the Philadelphia regions. Consequently, relevant studies, reports or community outreach at other research institutes are not included in this analysis.



Penn State Extension, located in Center City.

Participants/beneficiaries. While every urban agriculture activity has a rough idea of the number of people they succeed in involving in their programs or projects (varying from less than a hundred to several thousands), it is hard to estimate how many citizens are impacted in one way or another by the urban agriculture movement in Philadelphia. Founders of projects all stated that participants are generally motivated, eager to learn and be part of the projects. Some founders also mentioned waiting lists. In other words, we can state that urban agriculture activities are broadly supported by the wider public and driven by a strong demand in the city.

Finally, from our European (or Belgian) point of experience, two remarkable types of stakeholders are active in the context of Philadelphia which have been very successful in pushing urban agriculture development forward.

¹⁴ The food trust is a large nonprofit organization working on a national scale, but located in Philadelphia that has been working for more than 20 years on a comprehensive approach towards affordable, nutritious food and nutrition education. More information: <http://thefoodtrust.org/>

Those are lawyers defending the legal case of urban agriculture projects and funders focusing on urban agriculture projects. It is stated by many stakeholders that legal issues are complex and most often, urban agriculture practitioners do not have the knowledge, know-how or voice to stand up and protect their projects. In addition, the proliferation of urban agriculture activities is not followed by a sufficient amount of (financial) resources for developing and sustaining these. Resource funding is complex and a major barrier next to land issues. There are still many questions regarding how to finance urban agriculture. Therefore, funders who are open to support urban agriculture activities are thus remarkable at this early stage.

The Public Interest Law Center of Philadelphia (PILCOP). Together with partner organizations, they have convened a constituent-led coalition to advocate for healthy foods and green spaces in Philadelphia. In almost every in-depth interview, a reference was made to the lawyer Amy Laura Cahn, stating that she has done a tremendous amount of work by defending the legal status of urban agriculture gardens and being part of several organizations (such as Healthy Food Green Spaces and Garden Justice Legal Initiative –GJLI) that bring together relevant stakeholders. The goal of the GJLI is to provide pro bono legal support, policy research and advocacy, and community education and organizing to community gardeners and market farmers in the Philadelphia region. Amy Laura Cahn herself stated that she came into the Philadelphia context intentionally, to work on environmental justice. Upon identifying the land access and land tenure issues many urban agriculture activities face, funding at PILCOP was sought for Amy Laura Cahn to intervene and tackle these issues. She is still doing similar work to date, pointing at a continuing relevance in the context of Philadelphia.

Funders. The majority of the urban agriculture projects are partly or entirely dependent on grants or funds. Remarkable are foundations like The Merchants Fund and FELS fund who have laid their eye on urban agriculture and provide funding for projects or organizations that match their requirements. They can play a significant role in for example start-up costs that could otherwise not be overcome.

How is urban agriculture perceived?

The majority of the urban agriculture initiatives link their efforts to problems associated with poverty and/or vacant land. Often, motivations are rooted in these urban issues. This shared mission by all stakeholders - regardless of their background- has been productive in several cases. First, contradictory problems of vacant land and land access is a shared issue. Respondents stated that all stakeholders -even council members- find win-win opportunities in the establishment of a Land Bank which role will be to speed up the redevelopment process to the benefit of the communities. Second, during the last decade, the city has seen a large growth in youth-oriented educational projects. These projects focus on nutrition education, job skills training, youth empowerment and advocacy. They are very often supported by a wide array of other organizations. Third, community gardens are now considered as a strategic way *“to manage the vacant lots within the city and thus reduce the burden of the city to clean and maintain these lots”* (Levy, 2008). As such, community gardens and other food growing spaces are gaining wide acceptance among the citizens. Although it must be noted that there have been some cases where urban agriculture activities were held back due to community resistance.

However, urban agriculture sits at the intersection of many important areas of the urban system. This is already fully demonstrated in academic literature on urban agriculture. As such, a wide array of visions can be found within the context of Philadelphia in an attempt to tackle issues of poverty and vacant land redevelopment. By way of illustration, table 3 below describes the diversity of visions found within urban agriculture activities to illustrate the multiple (and sometimes incompatible) ways urban agriculture activities tackle issues related to poverty and vacant land. In short, at first sight the urban agriculture activities appear to be united by a shared mission of poverty alleviation, food justice and vacant land redevelopment. However, the formulated visions point at a gamut of approaches that inform us about the different views of what role urban agriculture can play in the urban system.

Table 3. Visions within urban agriculture activities on the role of urban agriculture

Core	Vision
Health	<i>“You know, what if the day ever comes that we get these people to try our vegetables and say: You know, this is better than the other stuff I usually eat. If they could understand that it is better for them....That would be great!”</i>
Nutrition	<i>“One of the projects that we do is to research everything that is grown. We now have signs, for instance, the eggplant: what is the nutritional value of the eggplant? And then the children build a sign. It gives the nutritional value. So the children have to do the research and they have to paint and make the signs. They are not only learning</i>

	<i>about eating good food, but the actual nutritional content of that product is what they learn about. They learn about things that are healthy."</i>
Education	<i>"The mission of the organization is... definitely education. And obviously a commitment to organic growing. And...introducing kids to where food comes from. Getting them used to soil and familiar with the growing process."</i>
Cultural valuation	<i>"People would come to our market but not recognize our vegetables. So that is why we provide kind of traditional African American foods like sweet potatoes. These are things that we want to provide because they are recognized by the community."</i>
Racial integration	<i>"It is a tool for community development, sure. To bring people together. The neighborhood also has a rich agricultural history. A lot of people here come from the Southern States. Or have family from there. And so there was already a lot of gardening work going on in this neighborhood. For me then, I need to step back as a white person. I need to learn to accept leadership from these folks that already have been growing food for years."</i>
Poverty	<i>"...And it is also a very poor neighborhood. So it is also a pragmatic way to get...There is no grocery store in the neighborhood...so it is literally a way to get food in people's mouth as well as kind of activating the community."</i>
Community development	<i>"It is our mission to operate a grocery-based consumer organization that is owned and governed by its members, and to build community, both within its membership and our larger area."</i>
Neighborhood greening	<i>"The intention is to involve community organizations in the maintenance of blighted land in their own neighborhood"</i>
Job skills training	<i>"So...we work across different high schools. And our teenagers all get paid. There is a lot of job training infused in our programs... And this is also a fundamental: that participants become deliverers of services and not receivers of services"</i>
Recreation	<i>"Well it kind of fits into our overall mission. We see gardening as a recreational activity. And it kind of makes sense. Our office is like the natural home for this type of work..."</i>
Crime reduction	<i>"It began as urban ecology. Environmental reclamation of crime-ridden lots... Some of them were really quite sweet. Others were more of a tangled mess. Especially where there is a lot of short dumping and a lot of crime. A lot of drug dealing. A lot of these places were used to hide drugs or beat people up. It was just yucky."</i>
Food production	<i>"So... One thing that I kind of noticed, I have seen some farms that are really focused on education. If that is your focus, I notice that at some point, your farm is kind of starting to fall apart, like the actual production model. I think this will eventually affect your ability to educate people. And so, I want to create the best production model first, before I really properly inspire and educate people."</i> <i>"It is all non-profit and they are not interested in the business aspect. I want to produce farmers not grant writers. I want to produce business people."</i>
Sustainable/profitable agriculture	<i>"And what I have determined is that urban agriculture is an emerging market. It is something that is coming out of locally driven economy. Urban farming is a for-profit pursuit that you do for a living. What I have figured out is that very few people can make an actual living of the farming because the land parcels are so small. And it is very hard to consolidate because of our land use policies in the city."</i>
Local economy	<i>"Our mission is to strengthen regional farms while making the local bounty accessible to communities and the institutions that serve them."</i>
Environmental remediation	<i>"I was interested in the economic aspects of urban farming, but I got someone at the Water Department interested in urban farming as a way to storage water – a huge problem in Philadelphia. I proved my project was successful. But no interest afterwards."</i>
Food access	<i>The Greenworks plan of the city of Philadelphia calls for: "Bringing local food within 10 minutes of 75 percent of residents and creating an additional 86 fresh food outlets by 2015"</i>

By aggregating all the different visions presented above, we have pointed out that urban agriculture activities all operate in their own unique way. To speak of an urban agriculture movement is thus problematic in the sense that some visions are not compatible (e.g. visions focused on food production compared to visions focused on education). To forge an urban agriculture movement then, requires in the first place to recognize these different visions and to work out strategies in which cooperation can be promoted while each activity can stay true to their own vision. Tensions within the urban agriculture movement will be reflected in the discussion section.

Which efforts are done to promote urban agriculture?

While it would be too much out of the scope to make a comprehensive list of all the efforts done in Philadelphia that promote urban agriculture activities, there are two very generic ones that merit a closer look: networking efforts and data collection processes.

Networking

Generally, respondents agreed that there is an identifiable network of urban agriculture activities. Its characteristics usually mentioned are: well-connected, small, open, inclusive (which doesn't mean all groups are represented), growing and dynamic.

When asked how the network was constituted, several key figures and organizations were mentioned that are capable of bringing a lot of people together (though not everyone referred to the same ones). Key figures/initiatives in constituting a network are:



+/- 70 members of the City Harvest Program (PHS) participated in a grower's meeting

-Philadelphia Horticultural Society. Obviously as one of the largest, most established and resourceful organizations in Philadelphia, this organization has the ability to establish a wide network of urban agriculture activities. While they play a fundamental role in supporting these activities, some critical voices raise concerns: *"if you are not down to the PHS model you are kind of excluded from the community"*.

-Healthy Food Green Spaces. This is a coalition that promotes city wide advocacy to magnify a voice for food growing initiatives. A member of the coalition states: *"Well just by being a coalition, it is able to connect people to each other. And that is really important. So there is that kind of insular benefit where people come and are supported by other gardeners and farmers in Philly"*.

-Philadelphia Urban Food Network. Also called PUFN, is an online platform where several hundred people interact on topics related to urban agriculture. It is an open and actively used platform and engages people in spreading information, exchanging resources and linking stakeholders to each other.

-Amy Laura Cahn. In the majority of the interviews, a reference was made to the work Amy Laura Cahn has done. She clarifies that: *"One of the roles that PILCOP plays really well is the one of the convener"*. In addition, she has managed to bring the topic of urban agriculture under the attention in the media. Several websites, blogs and magazines report on the work of Amy Laura. As such, PILCOP has managed to engage stakeholders and the wider public around the legal issues of urban agriculture activities and urban agriculture as a topic in general.

Optimistically, the current network also promotes collaborations with potential partners. Mechanisms are set up to distribute the produce to the underserved and lower income populations. Either through informal distribution (and own consumption), sales at lower prices, or donation to food banks, churches, schools etc. (Meenar & Hoover, 2012). Even though a social network analysis is not part of this project, it was questioned where and what partnerships have been established. It became very clear that many projects have connections with or collaborate with a multitude of different urban agriculture activities. By way of illustration, and certainly without the intention to draw the complete network, the figure on the following page is an example of how different organizations connect to each other and create synergies in this way.



Example of the collaborations between urban agriculture activities. Arrow meaning '...provides...to...' and dotted line pointing at the missing collaboration between supporting organizations

The above figure illustrates that urban agriculture activities collaborate and support each other through the sharing of land or growing space (e.g. green houses, high tunnels), providing resources (e.g. manual labor, material resources such as seedlings, orchards and land), offering additional distribution channels and participating in more

than one urban agriculture activity at the same time (e.g. staff in Mill Creek Farm part of the Board Members of Philadelphia Orchard Project). The figure also points out that there are supporting organizations like City Harvest Program, Penn State Extension and FarmPhilly Program at Department of Parks and Recreation that provide resources, but at the same time do not –or only to a limited extent- co-operate as resource providers.

In addition, there is a lot of media attention for the topic. Web articles, web pages, magazines, etc. One example is the free and widely distributed GRID magazine that is on sustainability in Philadelphia. It is well-known: *“If you pick up a GRID magazine while you’re in town...the sustainability magazine...It is probably one of the most exciting publications in Philadelphia... And it is totally dedicated to urban sustainability and a lot on food stuff”*. Another example is the free magazine of PHS called GROW. It regularly reports on urban agriculture activities as well. Besides the magazines, there are many other visual symbols and signs throughout the city that draw attention towards urban agriculture activities (see pictures below). On the left, one of the many stalls for the GRID magazine. In the middle, large signposts to inform on local produce. On the right, a few of the many banners advertising the PHS’s yearly flower show that welcomes about 250 000 people.



GRID, a free magazine on sustainability with strong focus on food. Distributed all over the city in public places



i'm local – signpost at produce stand



PHS's flower show banners in Center City

While the majority of the respondents were overly positive of the urban agriculture network in Philadelphia, some respondents have drawn attention to some more critical points. First, as the network is maturing but new players keep entering the field, non-transparent and overlapping roles are one of the consequences. This is expressed by one of the respondents:

Interviewee: “The city has so many resources and all these organizations have been doing this work for more than a decade. But in the last two years, the city has decided to start this FarmPhilly Program. And instead of working with these organizations that have foot holes all over the city... They created this new program. I think they are not able to run all these gardens without resources...I would rather encourage to strengthen the existing organizations and provide support for them.”

Second, respondents repeatedly referred to different urban agriculture ‘scenes’ in Philadelphia which are 1) the new young urbanites who form part of the trend, 2) the many different cultural and ethnic groups that traditionally have been gardening for many reasons in their neighborhoods and 3) the older generations. It has been pointed out that these different groups are not well-connected to each other. It would also be the new, younger group of urban farmers that constitute the face of urban agriculture in the media. As a consequence this is the ‘scene’ that is most visible throughout the city. The implications of these different scenes are laid out by the following fragment of an interview:

CP: If you look at everything that is going on in Philly, do you experience it as a network? How connected is that network?

Interviewee: It depends on who you are. It is definitely ...a good 75-80% of my friends are people I met through urban farming. So in that sense it is definitely a network. And I feel it is still a small enough community that we are all pretty...I feel like I know a lot of people in that community. But at the same time I think that – when you think about the urban farming community – you think of a certain subset of the community like the young, white, transplants of the city. And there are other people that have been involved in urban farming for a really long time, they maybe don’t call it urban farming, they would call it gardening.

CP: They are not necessarily connected?

Interviewee: No, they are not necessarily connected to each other and they are not necessarily connected to the scene, you know, whatever the scene is.

CP: What do you mean with the scene?

Interviewee: Yeah you know the Philly Urban Farming Network? They might even not have email. And when the city organizes stuff, you see the same people always. But it is not necessarily the people who have been farming in the poorer neighborhoods.

Data gathering

It was interesting to learn how many urban agriculture initiatives over the last few years started producing their own data. As the movement is growing and gaining ground in Philadelphia, many initiatives have felt the need to provide some proof that demonstrates their role in or impact on the communities or the city. During the conversations, it was also asked what kind of records were kept and what was done with the results. Most of the urban agriculture activities are in preliminary stages of data gathering, but it is important to point out that these are the first steps in playing the role of the legitimate expert, in addition to academic institutes or government agencies in defining which issues need to be tackled. This means that, as these activities will generate knowledge, in the future they will have a stronger stance in defining agriculture as an urban issues and how it should be dealt with. As Di Chiro (1997) points out: *“knowledge production is a critical stage of self-empowerment”*. As such, it can be expected that the level of knowledge production and what is afterwards done with that knowledge, will play an important role in the environmental justice aspect of urban agriculture. It will most likely have an impact on for example whose voice will be heard or how resources will be distributed.

Opportunities and barriers

A large proportion of the barriers identified by the respondents were situated at the level of the local government and its policy making. Opportunities and barriers for the development of agriculture at the level of the local government, the level of the research institute and other supporting organizations, and at the level of the community are discussed in this section. Because it would take us too far to discuss all of these in detail, they are merely summarized in table 4 below:

Table 4. Opportunities and barriers situated in the local government sector

Opportunities	Barriers
Local government level	
A large amount of vacant lots in public ownership	Land access and land tenure
Forward thinking, open local government	Budget of the city does not allow (sufficient) financial support
Mayoral elections 2016. Can be an opportunity if efforts done in current administration will continue or be reinforced	Mayoral elections 2016. Depending on the new administration, efforts might become undone such as the FPAC or the Farm Philly Program
Voluntary governance: dependence on goodwill or visions of District Council Members. If positive, urban agriculture can –through district council- move forward given the existing governance framework	Support for urban agriculture depends on the mayoral elections and appointed officials. Much power attributed to the Council members, who take final decisions
	Insufficient transparency according to civil society actors. Lack of information, or information needed is difficult to find
	Due to (amongst others) budget issues, the city of Philadelphia is often forced into a wait and see position, extracting ideas and copying initiatives from other cities. Little room for experimentation or pioneering initiatives
Level of research institutes	
Community outreach centers: Bridge between universities and communities	Research opportunities dependent on funding
Engaging students actively in the food and agriculture system	Success in bridging dependent on many external factors (funding, community needs, interests of the students and staff)
Providing data to identify role and impact of urban agriculture activities. Is a necessary prerequisite to put the topic on the urban agenda	
Community level	
Shared mission of tackling poverty and vacant land	Competition for funding among urban agriculture activities

Positive attitudes towards context of Philadelphia. Generally, the city is evaluated	Cultural, spatial and social disconnection of different stakeholders.
Accessible network of urban agriculture movement	Cultural gaps in the public representation (e.g. media, internet) of the urban agriculture movement
A large amount of urban agriculture activities in the city	Overlapping roles among stakeholders, organizations and programs
	Largely dependent on funding and external resources - insecurity



Mill Creek Farm



The Nationalities Service 'Refugee Garden'



Earth's keepers farm

Discussion

In this section, we take the analysis one step further and reflect on the implications of the findings. The following questions are asked: What outcomes do the combined efforts currently produce; what tensions can be found in the urban agriculture movement; and how are inequalities of environmental justice integrated or dealt with in urban agriculture activities?

What outcomes do the combined efforts produce?

The results of this analysis have shown that there is a very broad variety of stakeholders, situated in many different domains, promoting urban agriculture activities either directly or indirectly. In addition, there is a wide variety of food growing methods and types of projects linking public agencies, entrepreneurs, practitioners, consumers and citizens to food in many ways. However, this should not lead us to conclude that the urban agriculture movement is a uniform and consolidated system. We have to take into account the small-scale and temporary nature of many of these initiatives. In some instances, projects are rather isolated from the larger network. We have also highlighted the multitude of visions played out within urban agriculture activities. Consequently, picturing urban agriculture activities as constituting a movement is a complex undertaking. Nevertheless, we succeeded in understanding much of the underlying dynamic influencing the development process of urban agriculture in Philadelphia. This dynamic is context-specific and may be explained by a combination of the following points:

First, the problems of vacant land, poverty and food insecurity are strongly identified. These issues are so visible and widely experienced that there is little disagreement on urban gardening and farming as one strategy to address them. As such, urban agriculture activities are generally rooted in the framing of these issues and become strongly community-oriented. Many of the urban agriculture activities are located in underserved, blighted or underdeveloped areas of the city.

Second, the network in Philadelphia is described as broad, open and consisting of many interacting stakeholders. Remarkable is that goals and objectives of the public agencies seem to be aligned (if not the same) with the ones from urban agriculture activities. As such, stakeholders are linked by a shared vision and shared concerns about poverty, urban development (and vacant land), sustainability and justice within the food system (cfr. 'Equity as one of the five goals in the Philadelphia Greenworks Plan'). Efforts made at the level of the local government can then be expected to be directed towards both the communities and the needs of the urban agriculture stakeholders on the ground.

Third, and likely as a consequence of the former two, the majority of the urban agriculture activities collaborate or share resources to a different degree with other organizations. Through these co-operations, (part of) the produce is distributed among underserved groups in the city. In this way, access to food and resources is an actively promoted strategy among many activities and does not remain merely a written project objective.



Fourth, the use of and attitude toward space remains ambiguous. Even though the amount of vacant land and abandoned houses characterizes a post-industrial city, the amount of land available in Philadelphia is extraordinary. Nevertheless, land access and tenure are still the most identified barriers among all (types of) respondents. A tremendous amount of work has been done and is being done by different stakeholders and supporting organizations to either redevelop the vacant land, preserve existing gardens or make land access and tenure less arduous. As discussed in the first point, people are well aware of the issues associated with vacant land and poverty. Many have taken steps independently by using vacant lots in their neighborhood to fight blight, but their status remains in a grey zone. This leads to the question whether availability of land for urban agriculture has more to do with the legitimization of urban agriculture as a land use – and its (economic) value compared to other land uses –, rather than the physical availability of land.



Fifth, the current economic status of Philadelphia puts a strain on progressive redevelopment initiatives. Several respondents have expressed that Philadelphia is located between other major US cities that on the one hand are wealthier in general; and on the other hand, have more budget available to experiment with urban agriculture. As a consequence, the city of Philadelphia is often in the wait and see position, slow in its implementation and obliged to hold off until best practices can be borrowed or copied. This means that Philadelphia has little budget for experimenting with opportunities that urban agriculture could offer. A careful attitude is required that leaves little room for trial and error. In this situation, the responsibility is shifted even more toward civil society and market stakeholders in taking initiative, acquiring funding, tackling legal issues and supporting community work.

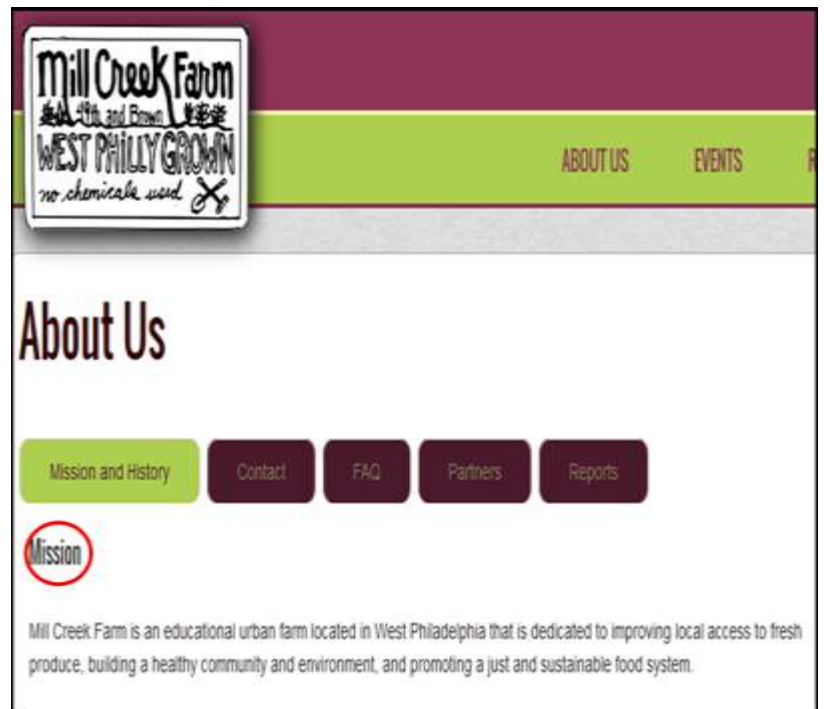
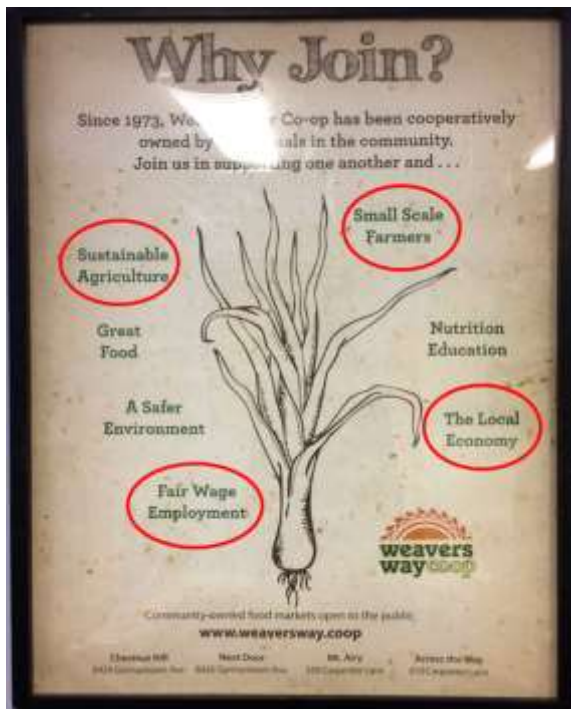
And lastly, from a historical perspective, Philadelphia has been dealing with the classical issues of a post-industrialized city characterized by a loss of population, community resources, economic growth, and by continuing suburbanization (Meenar et al., 2012). These issues are crime, vacant lots, poverty, addiction and food insecurity. A large part of the story of urban agriculture can thus be told from this perspective. However, the collected data clearly observes a reversing trend. Many neighborhoods in the city are gentrifying and part of the renewed interest among in urban agriculture is coming from younger generations who start farming more from value-based motivations seek value in their work. As such, urban agriculture could be labeled as a trend as much as in any other city. Also here, respondents express concerns about the temporality of trends, the need to grasp the current momentum for urban agriculture in Philadelphia and the opportunities to ground these urban agriculture activities into the system of Philadelphia. Contrastingly, doubts about current urban agriculture enthusiasm were also expressed. The presence of successful urban agriculture activities have set in motion gentrification processes in certain neighborhoods that could ultimately disadvantage the communities are in most need.

Tensions in the urban agriculture movement

We have already pointed at the complexity of considering all the urban agriculture activities as constituting a movement. By doing it anyway and aggregating all the information gathered, some internal tensions or dilemmas came to the surface. It should be clarified that there is by no means an intention to provide a right or wrong answer. Given the diversity and complexity, we merely provide interesting points of reflection on what constitutes the urban agriculture movement.

1- Social vs. economic goals

The majority of the urban agriculture activities take on justice issues related to the current food system as a founding principle. As such, there are concerns about farming as a viable, worthy profession. But there are equal concerns of food access and providing lower income populations with healthy, nutritious food. It became clear that balancing between these two concerns is a very difficult exercise. The core of the work seems to be either social or economic in focus. On the one hand, there are several initiatives in the city that take on the challenge to prove that farming can be a profitable business, or at least set up their business in a way that secures the farmer's income and well-being in the first place. Organizations like Farm to City, Somerton Tanks Farm and Weaver's Way Co-op are examples. On the other hand, the numerous non-profits spread out over the city are primarily concerned with the social aspects related to the current food system. Their food production activities first and foremost benefit the underserved groups. This automatically has consequences for pricing of the produce, the amount of food produced and also the income of the farmers. Whereas the first group of activities most likely have to search for best value prices, the latter group makes locally produced food affordable through a series of mechanisms (double dollar value, food stamps, food cupboards, farm stands etc.). Currently it seems to be an either/or situation where the core of the project depends on which aspect of justice in the food system receives the focus. In other words, in the current



context social and economic goals appear to be incompatible to a great extent. This is exemplified by the pictures above. Left is a picture of a poster on the wall of the Weaver's Way Co-op offices. It clearly shows that farmer's well-being is of focal attention, while the mission of Mill Creek Farm (picture on the right) stresses community-building and food accessibility.

2- Lay knowledge vs. scientific knowledge

This tension refers to the location of different types of knowledge. On the one hand, there are hundreds of gardens in the city represented by a wide diversity of cultural groups (e.g. Asian, African-American, Latino, European). These groups often hold a wealth of farming and gardening knowledge, either brought in by migration groups or passed on from generation to generation. Most of these groups are growing food because *"they always have done this"* or *"it is one of the only means for them to access produce"*. On the other hand, there is a vast group of young urban 'farmers', mostly highly educated that show a renewed interest in food production. The motivation of these people often starts from a discomfort with the current food system. Through either learning experiences or their educational background, this group starts farming intentionally, seeking empowerment to tackle issues they associate with the current food system. This is in line with Di Chiro (1997) who states that a global sense of place is a privilege of the educated people. While this representation might be somewhat simplistic, it does point out that often, a discrepancy can be found between where the lay knowledge of farming and the (more scientific and technical) knowledge about the food system is located.

3- Competition vs. collaboration

A third tension within the urban agriculture movement is the balance between collaborating with other stakeholders and focusing on the mission of the organization. First of all, the bulk of the urban agriculture activities is largely grant-funded. On the positive side, urban agriculture receives a lot of attention currently - funders and foundations included. However, there is only so much money available and therefore *"everybody is competing for the same piece of the pie"*. Many organizations do similar work. To ensure funding, each has to make efforts into being innovative or distinguishing themselves. This grant system will always put urban agriculture activities to a certain level of competition. In addition tensions also occur through collaborations. The network is vast and well-developed which spurs co-operation between different activities. But unavoidably, a larger network also entails frictions and to some extent competition. Some respondents have reported interpersonal issues over time related to collaborations. As exemplified by the section on networking above, many organizations do collaborate or link with a variety of different partners. In fact, in this research project an organization working in isolation would only rarely be found. However, even if opinions among respondents were somewhat divided, it became clear that a more intense collaboration was desired. For some there wasn't nearly enough collaboration within the urban agriculture movement. By doing so, respondents assumed that resources could be shared, communication among different

cultural groups and social categories would be stimulated, experiences would be shared and larger amounts of funding could be obtained. While on the one hand intense collaboration and thus a more horizontal alignment of urban agriculture activities across the city would benefit the consolidation of the urban agriculture movement, respondents have identified a list of barriers which made collaborations very complex (due to lack of resources, resource competition, divergent missions or approaches, interpersonal issues, or other conflicts).



Murals of a Burmese community garden

4- Neighborhood/local approach vs. system approach

A fourth tension found within the context of Philadelphia is one of scales. On the one hand, stakeholders of urban agriculture activities easily point at flaws and the malice of the current (food) system. On the other hand, the actual work on the ground is very much targeted at the immediate community. Even though many respondents clearly locate the role or impact of their work within the current (food) system, the actual impact is only measured against the local community. Some respondents referred to a vertical alignment of the urban agriculture movement, in which all the initiatives could actually be measured against the current (food) system. It thus becomes a difficult balance between what the city needs vs. what the needs of the immediate neighborhood or block are, which are not necessarily the same. However, there are city-wide organizations and the networking events do play their role. One organization referred to the work that needs to be done by urban agriculture activities as a “puzzle”. By identifying gaps in the puzzle and formulating goals and objectives based on these gaps, the consolidation of a more “regionally” oriented urban agriculture system could be achieved. At this moment, respondents generally agreed that the city-wide impact is rather limited. The question to be raised is then: At what scale do you connect your project to the urban system: the neighborhood, city, region or even wider?

How are issues of environmental justice integrated?

As mentioned before, a clear and explicit focus on justice and community food security was identified within the bulk of the urban agriculture activities. As stakeholders move forward with the promotion of urban agriculture, our initial questions related to environmental justice have shed light on potential inclusionary and exclusionary mechanisms at play in Philadelphia. While not asserting that they produce injustices per se (Walker, 2012), they are sources of inequality that potentially might produce injustices. The most obvious question related to environmental justice is the one that explores the location of food production spaces. In this research project, no research was done on this, because of a lack of time, a lack of data and no access to e.g. GIS analysis programs. In addition, previous studies have already done related research. We can therefore include their findings in this section. These studies have shown that community gardens and farmers markets play an important role in food access in low income neighborhoods (Kremer & DeLiberty, 2011; Dunham, 2007; Young et al., 2011). In addition, the community gardens seem to be located most often where distance to other open public spaces are largest in comparison and thus where the need for these spaces are highest (Dunham, 2007). While this suggests a fair distribution of open green spaces and local food access, we also agree with Kremer and DeLiberty (2011) that the local food movement is more complex and is currently targeting middle and high income populations. This discrepancy thus suggests that there are more complex dynamics at play. In addition to these geographical results and in order to gain a better understanding of this complexity, our data has identified a series of concerns related to environmental justice -sometimes referred to as social or food justice. It will be shown that these environmental justice concerns related to urban agriculture can be positively addressed in Philadelphia, positively but with limited impact, not or negatively addressed. They are listed here and briefly discussed. Further research is planned to accurately explore and then explain processes of environmental (in)justices in urban agriculture development.

Inclusion of certain groups/individuals. An often heard critique was that the people doing the actual work 'on the ground' are often not the ones taking part in the public discussions on urban agriculture. In addition, they are often not part of the decision-making process and are excluded from available resources. This is illustrated by the following quote: *"There are lot of resources going into urban farming right now...but they are all going to one population. And I think they are kind of overlooking the people who have been doing it for a long time. These things become cool and popular and get a lot of attention, but the people who started it don't get attention. And don't get the resources....In order to be fully equitable...and socially just I would argue that we really have to include everyone. Especially the people who have been doing it for a really long time"*. Within urban agriculture activities, there is in most cases no specific selection procedure to target members or participants who are most needy. One of the explanations by interviewees is that some neighborhoods are deprived to such an extent that every participant is assumed to benefit. However, given the high demand for participation –which makes active recruitment unnecessary- and the non-specific targeting, it should be questioned how more isolated people can also become a part of these projects. Questions such as travel cost to the project and available time due to several low wage jobs, household chores or certain disabilities should be asked.

Media coverage. From our experience, the topic of urban agriculture in general and the happenings in Philadelphia are very well covered through all types of media. Magazines like GRID and Grow are freely distributed throughout the city. Events, debates, workshops and meetings are continuously organized and usually succeed in gathering an enthusiastic number of people. As such, urban agriculture has a very public face in Philadelphia. But again, we should refer to the fact that the media usually does not cover the whole scene of urban agriculture in Philadelphia. This could in turn lead to an intensification of exclusionary processes.

Resources. The second most mentioned barrier was the lack of steady funding. Grant writing are complicated processes that require specific skills. It often is a yearly returning issue to find the needed budget. The competition with other urban agriculture activities makes this work even more complicated. Besides the funding, there are supporting organizations that provide technical, logistical or material supplies to urban agriculture activities. The ability to be part of a network thus becomes an essential step in getting access to different resources.

Legal tenure. Leasing or buying public or private land has proven to be a complex issue, even in a city like Philadelphia with a wealth of vacant land at its disposal. Reasons are multiple public agencies where each has a land acquiring process of their own, inadequate lease contracts, bureaucratic issues, gentrification processes, etc. In many cases, urban agriculture activities do not have the skills or knowledge to tackle legal barriers. This poses a threat to the possible eviction or elimination of activities. On the positive side, the focus of PILCOP on these issues is exceptional. Thanks to their efforts and the other organizations and initiatives that have been coming forth from that, the issue has become better understood and brought under the attention among all stakeholders in Philadelphia. One example is the work of Neighborhood Gardens Trust who is advocating for space conservation (see picture below). Right now, they have about 30 gardens under their management.



Community garden „Proudly preserved by NGT“

Dispute settlement procedures. Even though work is done on the legal tenure of land, there are examples of excessive duration of dispute settlements too. Some gardens have been under threat for several years and the

procedures to deal with these are very complex. Some respondents stated that it is discouraging for people to take initiative or continue with these activities.

Institutional support. The local government of Philadelphia is very much on track with what is happening in other cities around the country. It has its own unique approach to urban agriculture and even succeeds in playing a pioneering role (e.g. with the Zoning Code). The local government is pro-active in the sense that it links sustainability (Greenworks plan), the core urban problems and urban agriculture. As such, urban agriculture activities have the opportunity to become grounded in the strategic urban development goals, which are in this cases directed towards poverty and vacant land redevelopment.

Expenses of participation in the local food movement. The tension between social and economic goals of urban agriculture activities explains why local food, when fairly priced for the farmer, usually has a higher price than wholesale food prices. Within the local food system then, low income groups are easily excluded from access to this produce. On the positive side, there is a strong focus on (youth) education that focuses on food growing activities, nutrition education, job training skills and food access. In addition, there are a series of assistance programs that encourage underserved people to participate in farmers markets, CSA food programs, and food growing activities (e.g. food stamps, WIC Farmers Market Nutrition Program, Senior Farmers Market Nutrition Program, low income CSA shares) Data collection at farmers markets and other vending points have shown that these assistance programs are usually intensively used for their purpose.

Gentrification. The paradox of gentrification through urban agriculture is already been analyzed in academic literature. Therefore we will here not do much more than recognizing the issue also plays a role in Philadelphia. Gentrification as a consequence of thriving urban agriculture activities was acknowledged by some stakeholders as an emerging process. However, this concern is to date only passively expressed. As real estate prices go up in some neighborhoods, attention should be paid to who is moving in and out of those neighborhoods as a consequence.

Available data. As mentioned before, data on the role and impact of urban agriculture activities helps in the formulation of a voice and the growing of decision-taking power. Many projects throughout the city are starting to understand the role they could play with the data they dispose of. In addition, academic and other research institutes have -in strong cooperation with the communities- conducted several research projects over the last few years. Even though their impact will depend on what is eventually done with the data, these initial undertakings are a first good step toward putting urban agriculture activities on the map in Philadelphia.

Recognition of justice issues. It is remarkable that the actual expression of justice issues is well-integrated (implicitly or explicitly) into the objectives of urban agriculture activities. This might have to do with the widely recognized issues Philadelphia is dealing with and the overall history of environmental justice in the United States. By all means, advocacy within the local food movement is strongly focusing on justice within Philadelphia. As such urban agriculture activities accommodate multiple layers of meaning in addition to growing food.

It can be concluded here that there are a variety of environmental justice issues at play within the urban agriculture movement in Philadelphia. While some of the issues are positively dealt with and consequently promoting environmental justice in Philadelphia, other issues are dealt with less successfully or left unaddressed.

Conclusion

This report has pictured the wealth of urban agriculture activities taking place in Philadelphia. From loose informal gardening activities to commercial farms, a series of different food growing strategies are gaining ground in Philadelphia. When seeing the local urban food system as a ‘puzzle’, it seems that all aspects are (partly) addressed: from funding to distribution, payment assistance programs, education, awareness raising, legal assistance, material and technical assistance to food processing and so on. In that puzzle a shared mission has been identified among stakeholders: that of addressing the issues of poverty and vacant land.

Though the shared mission sets eyes in the same direction, we have learned that individual projects often have their own vision and strategies that are not always compatible (see ‘tensions within the urban agriculture movement’). A key point in this issue was addressed by a respondent, stating that an urban agriculture activity will *“always fit in the urban system, but the question is how these different projects connect to each other”*. In other words, urban agriculture activities are of a cross-cutting and multidimensional nature, so that they will always fulfill one or the other urban function. However, the more valuable question to ask is what the broader societal role of urban agriculture can be, by aggregating all the urban agriculture activities of one context. As such we obtain a better understanding of what we can expect from this trend. And with that, we arrive at the concept of environmental justice.

Upon a closer look, and through the lens of environmental justice, the urban agriculture movement becomes more complex from what it seemed at first glance. Different scenes of urban agriculture have been outlined, exclusionary and inclusionary mechanisms have been exposed, and taken together, it needs to be acknowledged that urban agriculture is in the margins of the current (food) system of Philadelphia. The picture below neatly illustrates this: a raised beds project has to compete against the very visible advertising for convenience food (2 hamburgers for 2\$).



Nice Roots Farm – 2 hamburgers for \$2

In order to continue the debate on the future of urban agriculture in Philadelphia, important questions to ask are proposed as follows:

- How to create synergies between current initiatives?
- How to improve communication between different stakeholders?
- How to manage the ever-expanding network?
- How to balance between economic and social goals of urban agriculture activities?
- How to prove the impact of activities on communities and targeted social groups?
- How to grasp the current energy for healthy food and turn the trend into basic societal values?
- How to reach out to isolated people? How to give them a voice and let them participate in the conversation?

By raising these last issues, I hope to have provided some food for thought. Finally, some last remarks. The duration of the research project was short, especially considering the amount stakeholders that were relevant for this research project. The list of stakeholders keeps expanding and hopefully in the future I will have a chance to include them as interviewees in my database. Philadelphia has seen one of the worst weather in February and March ever recorded. Snow, ice, wind and cold challenged my bike and me to get around the city at ease. These two aspects lead to my overall feeling that there was much more to see and hear than I was able to manage -even though a wealth of information has come my way. My impression is that I have spoken mainly with that '*most accessible scene of urban agriculture*', even though, entry points into those 'other, less connected scenes' of urban agriculture have been explored. Opportunities are definitely sought to include more diverse perspectives into the dataset in the future. I also felt that trust and safeguarding privacy when criticism was expressed were of importance during the research. Even though I believe it is important to include certain critical aspects within the context of Philadelphia, this report in no way intends to infringe on any person's wish not to expose internal issues to the wider public.

Acknowledgements

The Institute of Agricultural and Fisheries Research (ILVO) and I would like to thank the Penn State Extension for their open attitude, collaboration and contribution to this research project. The available time to do research was limited, but staff at the center went out of their way to help make this project succeed. Thanks especially to John Byrnes and Tom McCann for their active cooperation and genuine involvement. We truly hope that this is the start of future discussions – or even collaborations.

I am most thankful for all the people who made time for me in their busy schedules and made the effort to talk about their work, their mission and perspectives on food production activities in Philadelphia. All the people whom I have spoken to have been very friendly and open in helping me to understand the context of urban agriculture in Philadelphia. I hope that this report, in return, can be of any significance to them. It was a great pleasure to have met all of these interesting personalities.

Finally, a special thanks goes out to Lisa Mosca and Lucy Lehman, from the City Harvest Program of PHS and the staff of Weavers Way Co-op for giving me a tour of the urban agriculture landscape in the city and offering several other opportunities.

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City of Philadelphia: <http://www.phila.gov/Pages/default.aspx>

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Emerald Street Urban Farm: <https://emeraldstreeturbanfarm.wordpress.com/>

East Park Revitalization Alliance: <http://epralliance.org/>

Fair Food Philly: <http://www.fairfoodphilly.org/>

Farm To City: <http://www.farmtocity.org/>

FELS Fund: <http://www.samfels.org/>

Food Safety Modernization Act: <http://www.fda.gov/Food/GuidanceRegulation/FSMA/>

Garden Justice Legal Initiative: <http://www.pilcop.org/garden-justice-legal-initiative-gjli/#sthash.h4hzvG5t.dpbs>

Greensgrow Farms: <http://www.greengrow.org/>

Grounded in Philly: the Zoning Code. <http://www.groundedinphilly.org/growing-food-philadelphia/>

Healthy Food Green Spaces: <http://www.pilcop.org/take-action-to-protect-urban-agriculture-in-philadelphia/#sthash.wHseJq59.dpbs>

Heritage Farm: <http://www.heritagefarm.com/>

Mill Creek Urban Farm: <http://www.millcreekurbanfarm.org/>

Neighborhood Garden's Trust: <http://ngtrust.org/>

Neighborhood Transformation Initiative: <http://www.phila.gov/ohcd/conplan31/strategy.pdf>

Lancaster Farmland Trust: <http://www.lancasterfarmlandtrust.org/about/history.html>

Landcare Program (PHS): <http://phsonline.org/greening/landcare-program>

Penn State Extension – Engaging Philadelphia: <http://extension.psu.edu/philadelphia/penn-state-center>

Philadelphia City: Poverty numbers: <http://www.city-data.com/poverty/poverty-Philadelphia-Pennsylvania.html>

Philadelphia Department of Parks and Recreation:

<http://www.phila.gov/ParksandRecreation/environment/Pages/UrbanAgriculture.aspx>

Philadelphia Food Policy Advisory Council: <http://phillyfpac.org/>

Philadelphia Horticultural Society: <http://phsonline.org/>
Philadelphia Land Bank: <http://www.phillylandbank.org/>
Philadelphia Land Bank: <http://www.philadelphialandbank.org/>
Philadelphia Landworks: <https://secure.phila.gov/PAPLPublicWeb/Landing.aspx>
Philadelphia Orchard Project: <http://www.phillyorchards.org/>
Philadelphia Redevelopment Authority: <https://www.philadelphiaredevelopmentauthority.org/>
Philadelphia Urban Food Network (PUFN): <https://groups.google.com/forum/#!forum/pufn>
Philadelphia Water Department: <http://www.phila.gov/water/Pages/default.aspx>
Public Interest Law Center of Philadelphia: <http://www.pilcop.org/#sthash.OIWNcB5o.dpbs>
SHARE Food Program: <http://sharefoodprogram.org/>
Somerton Tanks Farm: <http://www.somertontanksfarm.org/>
Teens 4 Good: <http://teens4good.orbius.com/>
The Food Trust: <http://thefoodtrust.org/about>
The Hunger Coalition: <http://www.hungercoalition.org/about-us>
The Merchants Fund: <http://www.merchantsfund.org/>
Urban Agriculture Law: <http://www.urbanaglaw.org/planning-and-zoning/philadelphia-pennsylvania/>
Urban Girls Produce: <http://www.schuylkillcenter.org/news/13>
Urban Nutrition Initiative: <http://www.urbannutrition.org/>
Urban Tree Connection: <http://urbantreeconnection.org/>
W. B. Saul High School: <http://webgui.phila.k12.pa.us/schools/s/saul/>

Questionnaires

A. Demographic info

Personal characteristics:

- Age
- Sex: M / F
- Education (level and or subject)
- Occupation
- Marital status
- Children
- Nationality
- Role in the project
- N° of years involved in the project
- How would you describe your farming knowledge?

Characteristics of the project:

- Type of project
- What year did the project start?
- What is the output of the project? What do you produce?
- Area cultivated (approximately)
- How many people are involved in the day-to-day management of the project? And ratio paid/volunteers within the project?
- How much money is needed yearly to sustain the project?.
- Is the project formal or informally organized?
- How is the land use arranged?
- Are there revenues? Which? And how much?

B. Questionnaire for advocates and supporting organizations

Context and background

1. What is your role in the project?
2. What is the mission and vision of the organization/project?
3. Why and how did you get involved? What would you like to achieve?
4. Which sources did you use obtain the relevant knowledge?
Friends / Family / Colleagues / School/ University / Educational setting / Books or magazines/ Internet / Examples in other cities

Network and decision-power in project

1. In general, do you know many people who are involved in similar activities? Who are they? What do they do? (age, profession, economic situation, gender).
2. Is there a lot of cooperation? Who are the partners in the project (organizations or people)? What is their role?
3. Do you partner with community interest groups, if so who are they?
4. Do you have a community involvement/community engagement plan? If yes, explain the plan please.
 - Do you assess the impact of your project/organization on low-income communities? If so, how?
 - Minority communities?
 - Elderly?
 - People with disabilities?
 - Women?
 - Children?
5. How do you determine or define the extent of environmental impacts on the community?
6. How is the decision structure in the organization/project arranged?

Opportunities

1. What are the opportunities for the development of your ambitions/project/organization in Philadelphia?
- *On geographical level*
City Philadelphia

Region of Philadelphia
 Province
 National
 Global
 - *On bureaucratic level*
 Rules, laws, permissions
 Certification
 - *On market level*
 Sale
 Customers
 Infrastructure
 Competition
 - *On operational level*
 Production problems (weather, diseases, plagues)
 Management
 Staff
 Financing

2. What motivates you in relation to the project?

Constraints

1. What are the constraints you think there are for the development of your work/ambitions in Philadelphia?
At which level are they situated? (same as opportunities)
2. What is discouraging for you?

Policy

1. What do you know about the current policy or urban planning regarding your project/organizations?
2. Do you experience the existing policy framework as hindering or stimulating?
3. How did the local government receive your initiative? (Support? Attention? Funding? Recognition?)
4. What can the local government do for your project/organization?

Meaning of urban agriculture

1. In the literature and scientists often refer to this as it being urban agriculture. Question: How would you define your project?
2. Can you please give your own definition of urban agriculture? Have your ideas changed about urban agriculture since the start of your involvement?
3. How do you think people of Philadelphia look at projects like yours?
4. How will urban agriculture evolve in the future in Philadelphia, according to you? How would you like to see it?

Environmental justice

Please read the following text:

Urban agriculture may advance food access for communities living in food deserts. Urban agriculture may reduce racial and class disparities in access to healthy food. Urban agriculture leads to greater equity in rich and poor neighborhoods.

Urban agriculture can help improve conditions in poor communities, where residents lack control over the quality of their lives and thus alleviate psychosocial stresses in poor communities.

Urban agriculture may improve the livability and built environment in communities. Urban farmers who follow sustainable agriculture methods can not only help to build local food system infrastructure, but can also contribute to improving local air, and water and soil quality. When agricultural products are produced locally within the community, they do not need to be transported, which reduces CO2 emission rates and other pollutants. Sustainable urban agriculture can also promote worker protection and consumer rights.

However, urban agriculture can also present urban growers with health risks if the soil used for urban farming is contaminated. The soil contaminated with high lead levels often originates from old house paint containing lead, vehicle exhaust, or atmospheric deposition. Without proper education on the risks of urban farming and safe practices, urban consumers of urban agricultural produce may face additional health related issues.

1. Can you please tell me what you read? What do you think about the text?

2. How do you relate the above to the project/organization you are involved in?

C. Questionnaire for public officers/city plans & programs

Tasks department

1. Can you briefly describe the tasks of your department concerning agriculture?
2. -Which tools do you have to support or make the link with agriculture?
-The other way around: what can agriculture do for your department?
3. What is the position of the department with regards to promoting agricultural activities in Philadelphia?
4. Who are your partners (organizations or people)? How intense is the contact? What is their role?

Current issues

1. Problems in relation to agricultural activities: Land? Population pressure? Resources? Globalization? Mobility?
2. Which other departments are needed for the development of agriculture?
3. How are farmers, minority communities, women, children, elderly, etc. integrated into the programs of the department? Is there room for improvement?
4. Do you work together with e.g. other department regarding agricultural activities?
5. Are there any conflicts of interest between different departments or between departments, policies and other organizations?
(Are there any conflicts in land use between agriculture and green or other open, public areas?)
6. Do you consider environmental implications in the policies/programs? For example, air, noise, and/or water pollution; soil contamination; nuisance odors; greenhouse gases; etc. If yes, please explain.

Urban agriculture

1. Can you give your own definition of urban agriculture?
2. For who is urban agriculture/ who are the consumers and producers?
3. Do you have specific tools to support it?
4. Which levels should have responsibility? Local/regional/State?
5. Can USDA support this?
6. Does your department have project/organizations to integrate agriculture with the city?

Opportunities and constraints

Similar to questions on opportunities and constraints questionnaire for UA stakeholders

Environmental justice

Similar to environmental justice question in questionnaire for UA stakeholders

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