

Feeding the City - Foodsheds and Urban Agriculture in San Diego¹

Manuela Ricci*, Claudia Mattogno*, Bruno Monardo*, Anna Laura Palazzo**,
Pietro Antonio Valentino*

* 'Sapienza' University of Rome

** 'RomaTre' University of Rome

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Abstract

'Urban Agriculture' (UA) in its multifaceted forms can give new perspectives to urban revitalization strategies, particularly for fostering social inclusion in contemporary, fragmented communities. The paper aims to explore the most recent general policies in United States and particularly in California both on research and planning practice. Plans, programs and local projects within the general context of 'healthy food access', are exploring new strategies to pursue a valuable framework for agricultural re-use and rezoning of vacant and derelict urban areas. The experience within the distressed neighborhood of City Heights in San Diego, CA, shows intriguing potential, matching social inclusion and physical-economic redevelopment.

1. Healthy food culture and Urban Agriculture phenomenon in America

Policies to sustain Urban Agriculture (UA), although declined in various forms, characterize many US cities. The policies practised in San Diego have many features in common with those experienced in Boston or New York or in many other cities in USA.

It is the relationship between urban and rural that increased in rank, in the last 20-30 years, in many countries and not only in the United States.

The increasing interest for urban rural policies has its origin in the stunning growth of urban population that has created a number of questions over how to deal with sustainability in terms of transportation demand, housing needs, recreational interests, food supply.

As the UN outlook doubles global urban population by 2038, the UA could make a positive impact on the world's food systems. Cities must generate food security for themselves, since food distribution becomes more complicated as a metropolitan area grows (Smit et al.1996)².

The United States is one of the countries with the highest rate of urban population in the world: on the basis of World Bank data, in the period 2009-2013 the 83 percent of population is living in metropolitan areas.

But in this country, UA has been redesigned not only to solve this problem.

1. This paper is related to the dissemination of the EU research project "CLUDs" (Commercial Local Urban Districts), Seventh Framework Programme, Marie Curie Actions People IRSES, 2011-2014. The program implementation is based on networking four EU universities (Mediterranea Reggio Calabria, "Sapienza" Roma, Aalto Helsinki, Salford Manchester) and two USA universities (Northeastern University Boston and San Diego State University).

2. For UN, Urban Agriculture also contributes to a community's nutritional self-reliance, reducing hunger and malnutrition in urbanizing areas around the world.

Many explanations have been given about the importance of this production sector in the American cities. Some have a more 'scientific' basis and others are more 'ideological'. The debate is still open.

In general, UA is not a fairly simple topic because it impacts a community in a variety of ways, from providing food security, environmental benefits, and even modifying a city's urban form.

Yet, UA does not just happen. It is a result of complex policies that include zoning ordinances, comprehensive plans and, in some cases, state legislation.

The specificity and complexity of these policies will be illustrated in the following pages analysing those implemented in San Diego.

Before, it might be useful to summarize the most common explanations about the increasing reputation of urban rural policies without providing any consideration about their level of "scientific".

In the debate, the relevance of UA policies is based at least on three main issues: food security, climate change and healthy food culture.

1.1 Food security

With the increase of metropolitan areas, as already mentioned, it is necessary to reduce the transportation costs, and then the prices of agricultural products, specially to satisfy the demand of disadvantage urban population. Presently, food must travel through a complex network in order to supply American cities.

Generally speaking, food travels between 1,500 and 2,500

miles from farm to fork, about 25% farther than in 1980. “At the same time, people’s expectations of a food’s freshness continue to increase. Only food with a high durability can make a long journey and still appear fresh on the supermarket shelves. Consequently, appearance often trumps taste and nutrition in many supermarkets” (Halweil, 2002). This problem has led to the birth of what has been defined *urban horticulture* (or *agriculture*). The UN provides an exhaustive definition of it. “[Urban horticulture] is an industry that produces, processes and markets food and fuel, largely in response to the daily demand of consumers within a town, city, or metropolis, on land and water dispersed throughout the urban and peri-urban area, applying intensive production methods, using and reusing natural resources and urban wastes, to yield a diversity of crops and livestock” (Smit et al. 1996).

The urban farmers’ markets “flourished in the early 20th century but then disappeared mid-century as downtown districts declined and suburban shopping malls proliferated. Concurrently, processed foods replaced fresh foods in the national diet with the growth of the convenience and fast food industries.

In 1977, the United States Department of Agriculture (USDA) initiated a significant urban gardening program to assist low-income people in cities to grow and preserve vegetables, primarily for nutrition and food security. At its zenith in 1989, almost 200,000 gardeners, of whom 64% were minorities, were producing vegetables on 800 acres of ‘farmland’ in 23 major cities. For every dollar invested by the USDA, gardeners grew an estimated US \$6 worth of food” (Hynes, Howe, 2004).

1.2 Climate change

Since the mid-20th century, most large cities of the United States have been warming at more than twice the rate of the planet as a whole and, on the basis of a large number of studies, the action plans designed to reduce emissions of greenhouse gases have been put into question because they are not the strongest driver of warming in cities. It is better to proceed through the combination of tree planting and vegetative cover (Stone et al. 2012).

More general, many researchers have identified *green infrastructure* as an important means to meet this goal. Green infrastructures are “an interconnected network of natural areas and other open spaces that conserves natural ecosystem values and functions, sustains clean air and water, and provides a wide array of benefits to people and wildlife” (Benedict, Mc Mahon, 2006).

These researchers recognize also *urban forests* as a key green infrastructure element (Amati, Taylor, 2010). Urban forests are defined as “the aggregate of all community vegetation and green spaces that provide a myriad of environmental,

health, and economic benefits for a community”(SUFC, 2010). Urban forests contribute to green infrastructure by providing a spectrum of public goods, including the “psychological, sociological, economic, and aesthetic benefits trees provide society” (Helms, ed. 1998). However, realizing these benefits through planning is still a challenge (Schwab, 2009).

1.3 Healthy food culture

Obesity is one of the most pressing public health issues facing the developed world today. Due to changing social structures, dietary patterns, and urbanization, low-income urban areas in industrialized countries are particularly vulnerable to high obesity rates and inadequate healthful food access. Within the United States, recent government policies have sought to make farmers’ markets sources of fresh, healthy foods in underserved urban communities to combat growing obesity rates.

The United States has the highest rates of overweight and obesity among industrialized nations and the world as a whole. Over one third of US adults are obese (Centers for Disease Control, 2013). One way that the US has sought to combat urban food access disparities and rising obesity rates is by supporting farmers’ markets.

USDA “has implemented several measures to support regional food systems and urban agriculture programs that connect city residents to locally sourced food. The *Know Your Farmer, Know Your Food* program is a USDA-wide effort to carry out President Obama’s commitment to improving local and regional food systems. The initiative increases community viability, promotes new opportunities for farmers and ranchers, supports locally and regionally produced and processed foods, and encourages healthy eating habits by educating and empowering consumers. Such efforts strengthen UA programs, farmers’ markets, and small farms near cities to increase healthy, fresh food production and availability for urban residents” (Campbell, 2013: 7-9).

According to the USDA, farmers’ markets “provide access to fresh fruit and vegetables for consumers - especially minority consumers in the inner city - who would otherwise not be able to get fresh produce” (Friends of the Earth, 2013).

Another argument in favor of UA is the widespread presence of so called ‘food desert’ areas, a term commonly used to define areas where residents have little access to affordable food options owing to households economic conditions and to availability of private transport for commuting³.

3. The USDA defines a *food desert* as a low-income census tract where a substantial number or share of residents has low access to a supermarket or large grocery store. To qualify as a ‘low-income community’, a census tract must have either: 1) a poverty rate of 20% or higher, or 2) a median family income at or below 80% of the area’s median family income. To qualify as a ‘low-access community’, at least 500 people and/or at least 33% of the census tract’s popula-

Under USDA criteria defining food deserts, “about 10 percent of the 65,000 census tracts in the United States meet the definition of a food desert. They contain 13.5 million people with low access to sources of healthful food. The majority of this population — 82 percent — live in urban areas” (USDA ERS, 2012).

2. Policies and strategies for small farms in California and San Diego County

The dimension of farms, specific of periurban territory, is very important for every policy of food security. For this reason the State of California and the San Diego County support, in many ways, the small farms.

Agricultural production in California is large and remarkable, diversified, and high quality. According to data from the California Conservation Center, it includes more than 200 different types of crops from greenhouses, nurseries and farms. The average size of a farm in California is equal to 126.6 hectares (313 acres), while in Europe the average size is 12.6 acres and Italy is only 7.9 hectares. However, in USA small farms are defined in terms of their gross revenues: the farms with less than 250 thousand dollars are considered small (USDA, 2007).

California State supports specific programs of financial education in order to diversify, and improve the quality of small farms. As long ago as 1990, a report published by the UC Davis put in light the State’s interest improving small farms, as they:

- are actively involved in diversified, organic production with high quality crops. Most of small farms are located close to urban center, so they could improve urban agriculture and the supply of the farmer’s market. They are responsible for most of the state’s renowned agricultural diversity;
- are a broad mix of ethnic (first of all Hispanics and Hmong coming from Southeast Asia) and social groups. They enrich local communities by living where they farm, by linking rural and urban life, and by being a part of community’s schools, libraries, and service organizations. They take care of land, contributing to an enrichment of society;
- have to increase their income, which is relatively modest, compared to big companies, which carry out intensive agriculture and raking in a very substantial chunk of revenue;
- are, in general, very sensitive to environmental issues, using renewable energy and organic products. They make a real contribution to environmental protection and demonstrate their ability to form a strong network of resilient and

tion must reside more than one mile from a supermarket or large grocery.

innovative activities;

- are located in the vicinity of urban centers: they are a favorable opportunity for job creation, and a great opportunity to improve the quality of the food system.

One of the most successful State programs is the *Small Farm Program*, launched in the mid-seventies and constantly refinanced. It is a six-month full-time training carried out within Agriculture and Resource Economy Department at the campus of UC Davis, in Yolo County, not far from Sacramento, the state capital. It has been active for years and includes:

- training at various levels from undergraduate to doctorate;
- specific assistance, with the allocation of limited resources to activities relating to valuable crops, such as blueberries, strawberries and melons;
- development and dissemination of programs for proper nutrition, contrasting junk food;
- consultancy to set up innovative practices in marketing and management, also developing farm holidays.

As far as the results of the UC Small Farm Program, recent outcome assessments are focused on four axes without any qualitative or quantitative evaluation: 1) water quality education to underserved farmers, 2) support to agritourism as an economic alternative, 3) help to family farms for avoiding huge fines, 4) incentives to high value crop production⁴ (USDA NIFA 2014).

Agriculture can have many environmental benefits over development, including benefits associated with air quality, aesthetics and wildlife conservation. Agricultural lands can also provide habitat for wildlife.

San Diego County agriculture is unique because most of its production has historically occurred and continues to take place among sensitive habitat and biological communities that include threatened and endangered plants and animals. In San Diego County, agriculture is very important and ranks fifth among the productive sectors, strongly contributing to the local economy. The farms have an average size of just over 2 hectares (5 acres) and, despite their rich production, are constantly threatened by:

- the urban pressure that erodes the agricultural land use;
- the bureaucratic pressure, that requires skills people to be updated in order to extricate themselves within the complex regulations;
- the market competition, and the growing demand for quality by consumers.

So, to support small farms, the County of San Diego has promoted the implementation of specific programs in

4. Only for the fourth axis, and particularly on the creation and expansion of blueberries, which is considered a specialty crop industry in California, it is given some quantitative assessment. Since 2005, harvested acreage has increased from 2,000 to 2,700, and production from 9.1 to 16.5 million pounds (USDA NIFA 2014).

addition to the State (San Diego County Farming Program Plan 2009). This Plan, part of the Strategic one, was made with the support of various departments, including that of Agriculture and Planning of the Territory, and has two main goals:

- to promote economically viable farming;
- to promote land use policies and programs recognizing the value of small farms preserving regional lands.⁵

“In California’s San Diego County, agriculture is the fifth largest industry sector, contributing significantly to the local economy. In this county, with a population of 3,098,269 and a median farm size of five acres, it is a testament to the skills of local farmers that the farm gate value in San Diego County consistently ranks among the top 10 agricultural counties in the state of California” (SDCFPP, 2009). Then, purchasing local food helps the local economy, helps the farmer, and reduces the environmental damage incurred in industrial agriculture and in transporting food long distance.

3. Food and the City. A geography of discomfort and opportunity in San Diego

In recent years, besides the County, the City of San Diego has been launching several initiatives related to UA. The amendments adopted by the latter in its zoning code in January 2012 enhance the ‘zero food miles’ approach by introducing two new categories within the General Plan (‘Farmers’ Markets’ and ‘Retail Farms’). In January 2012, the City of San Diego (1,3 mln inhabitants) has adopted amendments to its municipal code which enhance the ‘zero food miles’ approach by simplifying the process for approving farmers’ markets on private property⁶, making minor adjustments to community garden regulations, and easing restrictions for keeping chickens, goats and bees in single family and multi-family homes⁷.

The amendments follow a \$50,000 grant awarded to the City to pursue municipal code and general plan amendments supporting urban agriculture with the goal of stunting obesity rates by planning communities in ways that support

5. Universities (as UC San Diego Extension) and colleges (as San Diego City College) took up the challenge, using the financial and political support of the county. They have developed training programs to allow adults to get a new job position, as well young people that should be directed to a food and environmental awareness (*Farm to School Program*). The focus on training urban farmers is related to the aging of the current farmers, whose average age is 59 years. In San Diego there is a wide variety of supply also offering sustainable urban agriculture workshops, and training programs to educate young and old alike on how to grow fresh, organic produce at home.

6. Under the amendments, retail farms (produce is grown and sold at the same location) are differentiated from daily, weekly and monthly farmers’markets, under distinct rules.

7. Interview of the Authors with N. Bragado and D. Normandin, City of San Diego, on June the 6th 2013.

increased physical activity and access to healthy foods.

Other funds are available thanks to private bodies advocating for health and health equity, and fighting to expand access to affordable, quality health care for underserved communities.

3.1 Projects against the discomfort: the case study of City Heights

A measure of this discomfort is given by the survey realized within the 14 districts of City Heights, a neighborhood of the city marked by pockets of poverty and illegal immigration (SC 2012)⁸.

On average, residents in the City Heights study area (Population 90,577; Households 26,944; Hispanic 54%; White 10%; Black 14%; Asian 19%; Other 2%) travel a distance of 0.66 miles to reach one of the seven full service grocers in the whole area, yet in some block groups residents travel a greater distance, nearly double the study area average⁹. About 33 percent of the total population reside in ‘critical food access areas’ and roughly 24 percent reside in areas considered underserved, many of which demonstrate market potential that could support additional grocery retail development. However, City Heights is largely defined by its prominent topography: settlements sit primarily atop mesas punctuated by impressive canyon systems and creeks and by an average low density.

Whereas a higher density proves a competitive advantage typical to urban markets, low density could enhance a different consumption pattern related to short food supply chains: at a closer look, urban agriculture and urban farming could easily be accommodated in vacant lands, also considering that husbandry complies with previous activities of the numerous immigrant communities in the area: notably several refugee groups from Somalia, Vietnam, Cambodia¹⁰.

In City Heights, an example of urban geography of discomfort, many projects have been conceived or realized consistent with the healthy and cultural food approach by public and private actors. One of this it is the implementation of a high quality

8. The survey was realized by Social Compact, a Non-Profit Organization inspired by the business sector, and funded by The California Endowment fund, active since 1996. Over the past few years, Social Compact has worked to develop the Grocery Gap analysis, a research methodology that addresses critical questions regarding grocery and food access options in communities nationwide, namely (1) quantifying demand for grocery services and understanding when this demand is not being met, and (2) measuring a community’s access to and the availability of grocery services in a neighborhood and what it means to be underserved.

9. The residents in the quoted area are served, on average, with 1.64 sq.ft. of a grocery retail space per person, compared to an industry standard of 3 sq.ft. per person.

10. At present, weekly farmers’ markets settled in City Heights are: City Heights Farmers’ Market, Sambussas, Pancho Villa’s, Green Butterfly Florist. There is also the initiative ‘New Roots Community Farm’ held by the International Rescue Committee (see below).

market, Latino community oriented. The project was funded by the California FreshWorks, a private-public partnership (PPP) loan fund whose mission is bringing grocery stores and other forms of healthy food retailers to underserved communities. The investment (\$ 8,5 mln) impacted positively on job creation with 122 new units since 2012.

Always in the City Heights neighborhood, the *International Rescue Committee* (IRC) – an important international Non-Profit Organization (NPO) working with a peculiar focus on refugee resettlement in the US – gained better awareness of the food-related problems and began organizing meetings with local communities around this issue. Many immigrant families suffered high rates of obesity and other health problems due to the lack of affordable fresh and healthy food.

IRC started a bottom-up process, working with refugee communities, other residents and local groups to tackle food insecurity and malnutrition. They identified a vacant brownfield public lot in Chollas Creek (2.3 acres) and asked the City for permission to farm that land. Because the City did not yet have a policy for urban farming, IRC – together with residents and non-profit advocates – focused on finding solutions by promoting changes in the laws about land use, community gardens, farmers' markets and other grassroots initiatives.

After several years of bureaucratic process, in 2009 the City of San Diego approved the project and released an 'occupancy permit' on the designated vacant plot. As already mentioned, a significant development in this process was the approval of a city ordinance in January 2012 that dramatically streamlined the city's community garden regulations. On Chollas Creek vacant land a community garden was set up, giving the possibility to develop vegetables and fruit for 85 refugee families (about 350 people).

Since many refugees were farmers in their countries of origin, the strategy was less oriented towards technique, and more towards a better understanding of market dynamics, business and marketing.

The *New Roots Community Farm* is the first of several initiatives put in action by IRC under the broader umbrella of the *Food Security and Community Health* (FSCH) Program.

Other initiatives comprise The *New Roots Aqua Farm*, an 'aquaponics system'¹¹ that employs a closed-loop cycle of tilapia farming with hydroponic vegetable growing. The Aqua Farm is also a small-food-business incubator that gives entrepreneurial residents additional space to grow.

New Roots growers from both the Community and Aqua

11. The 'aquaponic system' is the merging of two farming technologies: hydroponics and aquaculture. The former is growing plants with their roots without soil in water or in an inert medium (expanded clay aggregate, gravel, perlite, or similar), the latter is fish farming. Aquaponics represents a symbiotic relationship, where the fish fertilize the plants with their waste. The plants use that fertilizer, absorb it and send the water back clean to the fish to re-use.

Farms sell their produce on a weekly basis at the City Heights Farmers' Market. Also within the same program, the City Heights Community and Remedy Garden is located in the heart of City Heights with 16 gardening plots for community residents and a herbal medicinal garden, where two high school garden programs train youth in urban farming and food justice advocacy.

This incremental strategy is to ensure that refugees and residents are able to obtain affordable fresh organic food to feed themselves and their families, and also potentially to introduce them to the food business. Training programs are organized by the IRC, and because the community farm has been certified, they are able sell their surplus at City Heights Farmers Market and to restaurants, making it a potential secondary income for a family. This is especially pertinent to women, who generally are more involved in the process. Some farmers have turned this activity into a business, through a food business incubator located in Pauma Valley, 50 miles into San Diego County.

From a micro point of view, the initiative is proactive in meeting its community needs, primarily in terms of food security and nutrition.

In a 'critical food access area' such as City Heights, farmers not only have land to farm and access to fresh ethnic food, but also technical assistance, credit facilities and training to improve their business knowledge.

Locally grown food from *New Roots* may allow households to enhance their income and achieve a better diet. Training programs improve business capacity building, and microenterprises are sustained by a number of IRC facilities. Broadening the perspective, *New Roots* has widened its specific impact via a step-by-step process, and now comprises a network of initiatives serving communities' needs, and developing local economies both within the neighborhood, and beyond its urban borders.

Putting together the IRC initiative and other implemented 'healthy' projects, as the creation of the City Heights farmers' market, it is possible to argue about the first emerging outcomes. Specifically related to farmers' market, recent studies and surveys (Lee, 2011) demonstrate that more than 70 percent of respondents changed their eating behaviors since attending the market. Most patrons spent \$20-29 on fruits and vegetables each week, notwithstanding the majority of them purchased only less than 25% from the farmer's market, probably due to the fact that it is open once a week. On the other hand, 'New Roots' initiative can be considered a sort of pilot project with a relevant social inclusion value and at the same time a limited impact in terms of economic support for immigrants, refugees and low-income households.

4. UA for regenerating San Diego: what lessons and opportunities?

Referring to the topics and issues previously discussed, some important reflections come to light.

First of all, the US and specifically California framework shows many topics as diverse as food, land use, health, social inclusion, agriculture, and transport involved in enhancing urban redevelopment processes. Each topic refers to specific goals and various tools that are built and carried out by central and local administrations (State, County, City) to improve the specific situations, in most cases supported by the private sector.

Whereas, although these themes are often entangled in strategic documents – for instance the ‘Farming Program Plan’ which is one of the topics of San Diego County Strategic Plan – many professionals are asking for to promote the holistic character of the plans, programs or projects aimed at developing a County’s territory or a limited area. This character could allow local government to create a real added value with right way.

On this way, recently William Fulton, who has been leading the San Diego city’s Planning Department for 2011, is working to bring many single redevelopment programs and projects under the General Plan framework (Fulton, Shigley, 2012).

In this respect, boosting integrated policies to connect problems regarding, for example, ‘junk food’, obesity, blight areas, ease of mobility, agriculture, and land use is a major goal. In this framework, strategies and actions linking urban and agricultural planning for regenerating social relationships and urban infrastructures in deprived neighborhoods are crucial to address and modify the geography of “food deserts”, which concerns mainly urban areas. When tackling these issues, urban administrations are prompted to innovate both their environmental policies improving the access to affordable

quality food and their planning tools dealing with environmental preservation and avoiding further land consumption.

These mixed investment sectors necessarily involve the cooperation of many public and private actors in building programs and achieving multi-sectorial goals. In this way, the holistic approach can effectively implement the collaborative models between local government, local communities and various stakeholders.

Second, it comes to light the importance of ‘Conservation’ policy which is an important topic, but not only referred to the food system. In fact, the various policies and cases study previously discussed are reconnected, even though partly, in this context in which land use (General Plan and Zoning Code) acts as both framework and guide for private sector, specifically farmland owners, farmland trusts and non-profit subjects. The private sector is involved in projecting initiatives, especially in his suburban farmland, aimed at preserving agriculture, promoting inhabitants’ quality of life, maintaining identity, creating new food access. Enhancing these actions is usually possible to make use of some tools offered by the General Plan, namely “rights’ transfer” and “easements”, preventing the risk of overbuilding caused by an excess of residential area demand. Parcels can be made available to young people with the goal to maintain and develop the agriculture in suburban and vacant lands.

For this reason, also training and education are important goals of the public sector.

At the end, comparing these agricultural policies with the European policies, some interesting aspects of California come to light, namely several subjects belonging to the private sector (i.e. trusts and non-profit organizations) and specific tools aimed at preserving urban agriculture. Some of these, for instance the ‘rights’ transfer’, could be analysed in the light of the topics that are currently discussed in Europe, specifically in Italy and in France.

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