

Urban agriculture: a new deal on food supply system?

Urbanization is a global phenomenon, as it is a basis of contemporary spatialization of society, settled on big cities and on their integrated networks spread throughout the countryside. As the United Nations' data shows, more than two-thirds of global population have been forecast to live in urban areas by 2050, up to 56% more than today's rate.

Therefore, the coronavirus crisis has a close relationship with worldwide urbanization, which creates conditions for generation and spread of multiple zoonosis. Since the first COVID-19 case registered ~~on~~in the mega-city of Wuhan (December 2019), the contamination's path was clearly observed as attached to human flow across great urban centers in the world, occurring the disease's "jump of scales". Countryside population faces great risks with the spread of the COVID-19 disease, especially in regions with precarious health-care systems; still, cities are the starting point for hierarchical contamination and the head challenge for social isolation policies.

Over the past decades, a significant number of deaths related to zoonosis had lighted a warning sign on cities' food supply systems, mostly based on extreme conditions of animal confinement or management that favor biological mutation, environmental impacts, and health damage. During coronavirus crisis, urban citizens from all over the world are questioning their way of life; some analysts even play with Horace's and Rousseau's notion of "fugere urbem", to speak of the rich famous families movement towards their vacation houses on countryside areas as they keep on working from their "home offices". Stereotypes aside, many citizens, now deprived of urban parks or beaches, started looking after their own gardens.

It is unknown how the perspectives emerged during the current quarantine will affect cities post COVID-19, but certainly they should continue to play a great role on societies' spatialization. On the other hand, this lockdown period comes as a great window to rethink urban space and food industry.

Urban agriculture: not an exotic solution

There is a modern myth, shaped during industrialization, about a natural apartheid between city and agriculture. This principle emerged upon post 19th century scientific society, describes the city, stating dualism as bedrock of scientific study of social and spatial concepts, diffusing a thesis on incompatibility between food production and modern spatial form. Paraphrasing M. Castells, industrialization built a false myth of an "urban culture"¹, where, supposedly, people are not even concerned about where their food comes from.

There is some truth to the statement that capitalist economies tend to push food production out of the city's borders. In truth, the history of cities, in either 'traditional' or 'modern' configurations, indicates a variety of experiences in which agriculture is a relevant function inside city's limits. Smit, Nasr and Ratta² present hundreds of cases where fresh food production occur in urban or peri-urban areas. For Native American societies, Urban Agriculture (UA) technologies were important. Aztec chinampas (figure 1), Inka terraces and Mayan agrarian urbanism are notable examples.

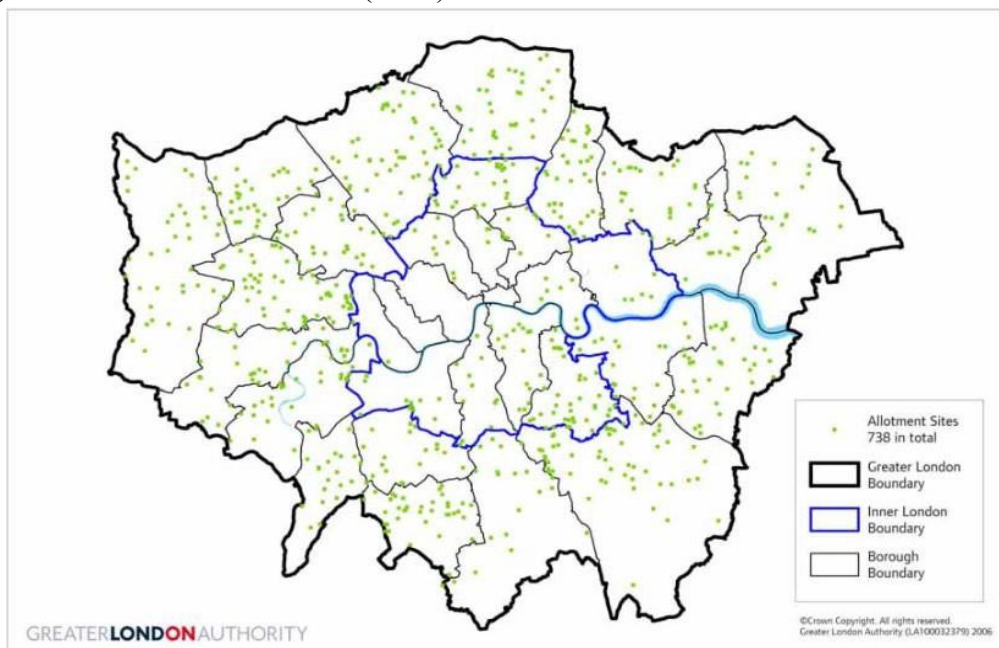
Figure 1 – Diego Rivera' painting (1929-35) shows Aztec chinampas



Some may say UA is common to ‘non-complex societies’, but not applicable to ‘modern societies’, which is a false affirmation, as pictured by industrial pioneer cities of Paris and London. For instance, in the Paris of the 19th century, UA was necessary for food supplying and sanitation, the styles of *jardins ouvrier* (worker’s gardens) and *marais* (swamps) fed people and contributed to composting.

London had agricultural fields, mechanized or not, during its industrialization (17th, 18th and 19th centuries). The comprehension of food production as an urban necessity and right became an English law since 1908. It became mandatory to all municipalities to guarantee allotments, public fields for food production, which could be required for any citizen (figure 2).

Figure 2 – London’s allotment (2006)



In addition, UA has proved to be an efficient tactic during wars or economic breakdowns, moments when governments have used patriotic discourse to stimulate families to grow their own food in individual or collective gardens (figure 3). Currently, cultivation inside cities has become not only a hobby or protest, but in many cases, enables families' subsistence. Indeed, historical and geographical approach shows that agriculture location maintains a close relationship with societies' spatial strategies.

Figure 3 - United States campaign



Food supplying and agriculture in times of pandemic

In the matter of food industry, the past 10 years register a growing interest for local production and healthier food, and the coronavirus crisis seems to be a catalyst for this trend. According to UK's Soil Association Certification, organic food sales increased by 50% in the past decade. Meanwhile, considering only March and April of 2020, a 25.6% growth in this indicator was registered. In its turn, Ecovia Intelligence reveals growth of organic and local food consumption in different countries (such as India and China), suggesting a worldwide acceleration on the rate of food industry transformations, also evidenced on eastern countries during the SARS crisis.

Food supply circuits could be undergoing changes. Researches from Mintel in France showed an increase of 29% on local retail consumers during lockdown, and, even with the lift of restrictions made by the French government on 11 May of 2020, the new habit still does not seem to have retracted. Another trend of partial shortening in food supply circuits can be demonstrated in Paris' policy concept of "quarter-hour city", where all daily needs have to be attended to within a 15-minute distance to reduce congestion, pollution and to prepare the city for possible future pandemic crisis.

A clear symbol of new strategies regarding food industry in this crisis is Singapore, a city-state which used to import more than 90% of its food and has now changed its policy by investing, until 2022, US\$21 million to encourage local farming production of eggs, vegetables and fish. The goal is that the city produces at least 30% of its needs before 2030³.

Private sector has also been playing a role on the growing interest on local food supply, beside governmental initiatives. In New York's case, many platforms are promoting innovations to attend and induce demand. Companies such as Smallhold Farms, Square Roots, and Brooklyn Grange are improving their delivery mechanisms on product purchase.

During the pandemic, actions to reduce cities' poverty are promoting policies in agriculture, especially in peripheral countries. For instance, 250 Bolivian families of urban farmers from El Alto are receiving extra support from the Food and Agriculture Organization of the United Nations to create systems of home delivery and to attend houses and markets located in La Paz's metropolitan region (fig); these new circuits could persist even post COVID-19.

Urban agriculture agenda is increasing regarding the perspective of community organizations, as what's happening with the Serra da Misericórdia's Integration Center (Non-Governmental Organization) on the poor areas of "Complexo da Penha" in Rio de Janeiro (Brazil). There, a new project has been developed to assure local food security by donating, provisionally, food for 200 families that will receive an education to become urban farmers after coronavirus crisis.

Families' interest towards urban agriculture during the coronavirus crisis is increasing not only among those in poverty and it is not unusual a crescent demand for individual gardening, as presented by the association, Casa da Videira, (Curitiba, Brazil). They have designed an online course to attend those who want to reconstruct or start their own home gardens.

Multiple examples could show those new approaches toward food industry during the COVID-19 period, similarly to other difficult periods. The engagement in UA among different social segments has made this dreary pandemic into a fertile soil for changes in food habits, favoring new concepts and perspectives between city and agriculture lifestyles.

Can we talk about long-term changes after corona crisis?

Although the future can't be predicted, current challenges reveal possibilities of changes in concepts and policies in many areas. The first great pandemic of the century made it unavoidable to deal with environmental issues, thus giving humanity a dramatic opportunity to "find its feet" and introduce new habits and public principles in everyday life.

Defining the importance of urban agriculture and local circuits in cities post COVID-19 is certainly not possible, but we can notice a potential increase of such activities:

- i) Individual interest on gardening as therapeutic or recreational practices;
- ii) familiar production as a way to deal with poverty;
- iii) private companies' innovations to sell, produce or purchase local and organic food;
- iv) arrangements to reduce distances between production and consumers;
- v) Institutions paying closer attention towards public health and environmental issues ~~on~~ in cities. A Ppandemic period demands innovation, and new attitudes are needed toward environmental impacts, so that making cities greener is not just an option, but has become an emergency. In this matter, interdisciplinary knowledge becomes quite important and comes to show how urban agriculture, and other successful experiences, can help humanity to deal with its own issues whilst thinking of better ways to construct our cities' future.

¹CASTELLS, Manuel. Imperialismo y urbanización en America Latina. Gustavo Gili: Barcelona, 1973.

²SMIT, J.; NASR, J.; RATTA, A. Urban agriculture: food, jobs and sustainable cities. EUA: The Urban Agriculture Network, 2001

³ Reuters Agency and Singapore Food Agency, 2020