

Urban gardens in Bogotá

services and motivations beyond food production

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Abstract – This paper takes its cue from a PhD fieldwork investigation that gathered detailed information for 15 urban gardens in Bogotá together with a large dataset developed by the Bogotá Botanical Garden to further explore the values and motivations that bring people to grow food in this city. The database includes 1,216 private and community gardens over the entire urban area, hence representing a unique opportunity to evaluate motivations for urban food production for diverse communities. The analysis of the database followed by a comparison with the fieldwork findings enables the identification of clusters of urban farmers, defined by aims behind their practices and socio-economic conditions. It offers a nuanced understanding of the role of urban agriculture in this context and contributes to further define food security.

Keywords – urban agriculture, Global South, food security, database elaboration

INTRODUCTION

Bogotá houses roughly 16% of the total inhabitants of Colombia (Gómez-lee and Burq, 2018) and its population is expected to increase by 160,000 per year (Duqiño Rojas and Ñustes, 2018).

The city has been growing exponentially in the last decades due to the expansion of its periphery, where developers aimed at capitalising on the mass migrations from the countryside that were happening for two main reasons; firstly, because of the economic opportunities triggered by a free-market economy (Leandro Hernandez, 2013; Molina-Murillo, 2018); and secondly, because of people escaping from rural areas as a consequence of the *conflicto armado*, an ongoing low-intensity war between the state and insurrectionist para-military groups. Throughout the years this conflict has generated a considerable number of refugees: for example, in 2018, Gómez-lee and Burq stated that between 1985 and 2018, 14% of the Colombian population has been displaced, 50% of which moved to cities.

This constant exodus of people from the countryside triggered a vicious circle whereby rural areas are less serviced and have weaker economies as their population drops (Molina-Murillo, 2018). Bogotá, on the other hand, has been constantly battling with resource scarcity (Duqiño Rojas and Ñustes, 2018). In particular, Gómez-lee and Burq noticed in 2018 how food insecurity affects 24% of the households. As in Bogotá fruit and vegetables are scarce and expensive, the diet of low-income groups is high in carbohydrates

and red meat, which are cheaper, albeit with serious repercussions on their health (Nail, 2018).

Urban agriculture (UA) was first recognised institutionally in Bogotá in 2004 by the city Mayor at that time, Lucho Garzon, within policies tackling the population's undernourishment by fostering economic development and establishing social safety networks (Barriga and Leal, 2011; Wurwarg, 2014). One of the programmes implemented under these policies is "*Agricultura Urbana: Sostenibilidad ambiental sin diferencia para Bogotá*", under the supervision of the Botanical Garden "José Celestino Mutis".

It comprised initiatives with an educational focus (teaching citizens about self-sustenance through UA) and others to support existing networks of urban farmers (Caquimbo-Salazar and Hernández-García, 2018). The programme was successful, and it was renewed by the following administrations under the names "*Bogotá bien alimentada*" and "*Bogotá te nutre*" (Gómez Rodriguez, 2014; Caquimbo-Salazar and Hernández-García, 2018). Currently, the Bogotá Botanical Garden is in charge of the urban agriculture programme with the following four aims: a) investigative (recording the range of edible and ornamental plants cultivated in the urban gardens), b) formative (focusing on capacity building for the management of community gardens), c) technological (recording current irrigation and fertilisation practices) and d) social (improving the social fabric) (Gómez Rodriguez, 2014).

It should be noted that UA has traditionally been presented in the Global South as a solution adopted by the lowest strata of the population to increase their food security. This is the case also for Colombia, where according to the FAO report of 2014 on UA in the Global South, UA is primarily practiced in Bogotá by its most vulnerable social groups such as adult women, elderly men, children in schooling age, people with mental or physical conditions, convicts and migrants from the countryside escaping from the armed conflict (FAO, 2014). Although it is true that some Bogotáños may undertake UA to tackle food insecurity, this article argues that this is only a partial representation of the role of this practice within the city; this is confirmed by Caquimbo-Salazar and Hernández-García who in 2018 remarked how urban farming is also instrumental to connect migrants from the countryside to their rural identity. In support of this Hernández-García et al. (2018) stated that UA is used by immigrants from the countryside as "a way

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to transform and appropriate open space, a community learning and empowerment experience, an artistic representation, and even an ideological statement”.

This suggests that urban food production is underpinned and driven by social and environmental values that are part of these people’s culture (Hayes-Conroy and Sweet, 2015). It also suggests that the concept of food security is often used in a limited way and that other concepts such as food sovereignty (Hayes-Conroy and Sweet, 2015) and even food justice when referred to inequalities in food provision and food systems (Glennie and Alkon, 2018) are more appropriate to characterise the essence of UA practices in cities from the Global South. In fact, a study by Schwab et al. in 2018 suggests that UA may be perceived at a government level as an easy solution to improve globally livelihoods in poorer urban areas, without a critical, nuanced reflection on the real advantages that this practice can generate in each specific context. The purpose of this article is to investigate what other services, beyond food production, UA provides in Bogotá; thus, contributing to the contemporary discussion on the role of UA in the Global South.

METHODOLOGY

This section illustrates the data gathering phase which took place during the author’s fieldwork experience in Bogotá, where she collaborated with the Bogotá Botanical Garden (BBG) while collecting data on urban gardens across the city for the doctoral investigation “*The Urban Agriculture Nexus of Bogotá*”. This project aims to identify the role that this practice plays in the sustainable development of the city; more information on the fieldwork activity can be found at <https://research.kent.ac.uk/food-energy-water-meter-bogota/>.

Over the course of five months (Jan-Jun 2022), detailed information on the productivity, energy consumption, and social impacts of UA for 15 gardens across Bogotá was collected. At the same time, the author was given access to an Excel database compiled by the BBG officers in 2021. The database reports information collected during visits to approximately 3,500 gardens to support farmers through technical assistance, training workshops, and delivery of equipment. It contains data on the services provided by 1,216 of these gardens. For the purpose of this paper, such data were compared and analysed with findings observed during the visits to the 15 case studies. The analysis sheds a light on the role played by UA in the development of Bogotá other than food production.

The BBG database includes information on each garden about: cultivated surface area, number of farmers and their social class, year of foundation, amount of compost and food produced, type of garden- i.e., homestead, institutional, educational, community garden-, and the main declared service provided by the garden. The initial database, an Excel spreadsheet, contained 9,338 entries; however, on a few occasions, the BBG officers visited some gardens more than once. After a check for consistency, the final dataset included 3,573 gardens.

The most relevant feature for this study was the column that described the “*services offered by the garden*”. This column included 1,216 entries which consisted of a brief text description of what the main function (i.e., service) of each garden was. The information contained in this column was very rich in content, albeit without any systematic coding in place. In order to understand what the main services provided by urban gardens in Bogotá were, it was therefore necessary to homologate, codify and elaborate this 1,216 entries column.

This process led to the identification of 31 umbrella terms defining the services provided by UA in Bogotá. The 31 terms were re-grouped under 8 macro-categories, which in turn were subdivided in 23 meso-categories: *connectivity* (knowledge exchange, workshops, skill learning), *society* (community building, individual well-being, education, economic), *space* (embellishment, space recovering), *food self-supply* (supply of food, herbs and medicinal plants), *health* (occupational therapy, therapy), *relationship with nature* (environmental decontamination, recycling, compost making, seedlings), *cultural heritage* (heritage, love for agriculture, cultural exchange), *human rights* (women’s empowerment, peace-making, food sovereignty).

Subsequently, each of the 1,216 gardens was re-assigned a service by matching their original description to the 31 new terms; however, since some of them had more than one service declared, the final count included 998 gardens with one declared service, 168 gardens with two declared services, and 50 gardens with three declared services, for a total of 1,484 declared services.

RESULTS

The results of this re-classification exercise are illustrated in Fig.1. Food self-supply makes up for the 50% of the services provided by urban gardens in Bogotá with 750 entries, roughly corresponding to half of the 1,484 services provided by the 1,216 gardens. It is followed by social purposes (488 entries and 33%), human rights (81 entries and 5%), health (58 entries and 4%), relationship with nature (58 entries and 4%), connectivity (23 entries and 2%), cultural heritage (14 entries and 1%), space (12 entries and 1%).

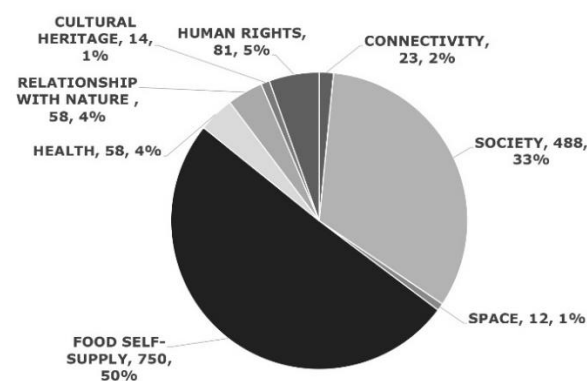


Figure 1. Services provided by urban agriculture in Bogotá

INTERPRETATION OF RESULTS

What becomes clear from these preliminary results is that, although predominant, food production for self-supply is not the only motive for undertaking urban agriculture in Bogotá, nor the only service this activity provides, as a considerable share of other important motivations for the implementation of this practice in the city are socio-cultural.

The data elaborated in the pie chart, showing the share of services within the garden sample of the BBG database, is further elaborated in this section. This elaboration builds on the visits to the 15 case studies during the author's fieldwork across 5 months. 74 urban farmers who worked or volunteered in such spaces were interviewed to identify their motivations for undertaking UA and the impacts that this practice had on them. This provides an explanation as to how the services provided by these gardens address socio-cultural issues and lived experiences of the farmers. The gardens were located in different parts of the city and varied for dimension, organisational structure, age and social extraction of their participants.

Table 1. Services provided by urban agriculture in the 15 case studies

Service	Number of gardens within the sample	Motivations for delivering this service
Productive	4	Self-supply, entrepreneurial, well-being
Socio-cultural	4	Recovery of ancestral culture, social welfare, collective learning, territorial reclamation
Other	7	Space recovery, environmental rehabilitation, recycling, environmental education, reintroduction of native species, leaving something to future generations, career change

As shown in Table 1, when asked which services they shared with those found through the analysis of the BBG database, four gardens declared that their function was mainly productive, four had a socio-cultural vocation, while seven fell within two of the minor categories, here identified as "other". Precisely, six gardens had an environmental mission, and one had an economic purpose. The following sub-sections illustrate in detail these findings.

Productive services

In these case studies, crop production is not only a means for food security but also for the improvement of the local socio-ecological conditions. "En-verdesiendo" is a home garden run by Diana and Ivan, two high school professors who are passionate about sustainable living and decided to turn their house into a productive space. Mrs. Consuelo was tired of living in a polluted neighbourhood; consequently, she started the community garden "Mundo verde Corazón verde" on the rooftop of her building,

where she and other gardeners cultivate edible plants while providing a habitat for the local bird population.

"Hojas de Esperanza" is run by four volunteers who share the produce among the residents of the nearby social housing estate. Most people in this community are migrants from the countryside, and the garden is run in parallel with an association that aims to promote sustainable living and peasant culture. Mrs. Maria Isabel started "Huerta de Micaela" to provide for her family, but soon was producing enough to open her own business, which is currently thriving.

Socio-cultural services

In these case studies, tradition and innovation (e.g. hydroponics) are used to strengthen the local social fabric. The mission of "Huerta hidropónico de la plaza" is to raise awareness on alternative farming techniques while providing employment to disabled people, who help Mr. Guillermo growing and selling his produce at the nearby artisanal square. Community building and environmental education are similarly the core missions of "Huerta Santa Matilde" and "Huerta San Francisco", two small community gardens where neighbours gather weekly to experiment with growing and composting techniques.

"Huertopía" is a peaceful act of territorial reclamation by the community of Alto Fucha, who was being threatened of eviction by local authorities; under the supervision of Jhody, who founded this garden as a manifesto for eco-territories, the community children gather once a week to learn about their ancestral culture and agroecology principles, discuss about feminism and land rights, and find a safe space where to debate personal issues.

Other services: environmental

"Huerta Doña Mariela" was created by Mrs. Mariela to clean and protect the river canyon area in a neglected neighbourhood in the district of Ciudad Bolívar, where she cultivates and sells fruits, vegetables, and aromatic herbs; Mrs. Mariela is an active member of her community who frequently attends and hosts workshops on sustainable livelihood strategies. The members of "Huerta La Libélula" started cultivating in a public park to rehabilitate a dangerous and polluted area of their neighbourhood; this garden also serves as a meeting point for people who recently moved to the neighbourhood from outside or other parts of the city.

"Huerta AsChircales" started as a landscape embellishment project in a former kiln area and is currently a day-care centre for the neighbourhood's kids, with workshops on UA and sustainability. "Huerta JAC de San Eusebio", is a community garden among the rooftops of the district of Puente Aranda, where Diana and Ivan run workshops on growing techniques, reintroduction of native species, and recycling methods for the local community.

Similarly, the environmental workshop "La Estancia de Piwam" often hosts university students for research projects on recycling and reintroduction of native species; the garden also processes and sells a small amount of officinal plant ointments. "Huerta comunitaria Villa Ines" is a community workshop run by a group of elderly ladies who meet on a weekly basis

to grow and harvest produce for personal consumption; besides social reasons, the members of this garden mentioned leaving a productive and well-preserved environment to future generations among the main reasons for practicing UA.

Other services: economic

“Cobá, el hogar de las abejas” is the only garden with an economic vocation; it was founded by Johnny, a former environmental technician who left a demanding job to undertake UA in the land in front of his house. Although this urban farm is mainly oriented to produce selling, it should be noted that Johnny organises eco-tours on his land on a regular basis, trains women for skill development programmes and supports pollinators through beekeeping.

In conclusion, it is worth mentioning that all gardens manifested, albeit at different degrees, an interest in reconnecting with an ancestral identity through the cultivation of native plant species and the reproduction of indigenous cultural traditions.

These findings altogether show how UA in Bogotá is a multi-faceted activity, practiced for an array of practical, social, ideological reasons by diverse groups of citizens, regardless of their socioeconomic condition or cultural background.

CONCLUSION

This study suggests that urban agriculture in Bogotá serves many purposes and even when is practiced for food security, such a purpose is mixed with others. Hayes-Conroy and Sweet (2015) argue that often the focus on food security does not help questioning the political context that generates this insecurity. They promote the idea of *food adequacy* – which emphasises the local social and ecological values of the food insecure groups – that seems appropriate to the Bogotá context.

In fact, the multifunctionality of these case studies (and of the other urban gardens in the BBG database) suggests that concerns on food security are layered with motivations such as environmental justice and the nurturing of traditional knowledge on food and plants, hence responding at a specific socio-political context. Equally, the focus of some gardens on socio-cultural or health issue captures the breadth of meanings that food represents for these residents.

In conclusion, the function of urban agriculture in the Global South, which is too often presented as a means of survival for the poor, is reductive and perhaps influenced by neo-colonialist visions (Gray et al., 2020). As such, this study shows, it needs to be questioned and revisited.

ACKNOWLEDGEMENTS

We would like to thank the officers of the Botanical Garden of Bogotá “José Celestino Mutis” for their kind help and support in the data provision phase.

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