

# URBAN AGRICULTURE IN CUBA: AN UPDATE

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Urban agriculture in Cuba transitioned from a “crisis model” that emerged as a response to the economic crisis of the 1990s to a permanent model characterized by its local focus, diversity of economic actors, and relative decentralization. While accounting for a relatively small of total agricultural output, and a correspondingly small share of total agricultural employment, urban agriculture plays an important role in the partial satisfaction of local demand for fresh products, and as a source of local employment, particularly in the City of Havana.

This paper examines the origins, recent evolution, and future prospects for urban agriculture in Cuba since the onset of the “Special Period” in the early 1990s. The first section analyzes the origins of urban agriculture in Cuba, its guiding principles, the main type of productive entities engaged in urban agriculture, the types of crops produced, the policies and practices applied to support and promote urban agriculture, and its impact and spillover effects. The second section examines the challenges and opportunities confronted by urban agriculture in Cuba, and its future prospects.

## THE ORIGINS AND EVOLUTION OF URBAN AGRICULTURE IN CUBA

Urban agriculture emerged in the early years of the “Special Period” as an alternative to the input-intensive, State-centric, agricultural production model implemented in Cuba since the early days of the 1959 revolution (Rosset & Benjamin, 1994; Koont, 2009). Cuba’s urban agriculture movement was formally recognized on September 27, 1997, when then Minister of the Armed Forces (FAR), Raúl Castro, declared this day as “National Urban Agriculture

Day” (FAO, 2013). Urban agriculture was formally recognized by Resolution 208 by the Ministry of Agriculture in 1998. This measure created the National Group for Urban Agriculture (“*Grupo Nacional de la Agricultura Urbana [GNAU]*”) in an effort to institutionalize the country’s (until then) ad hoc urban agriculture movement, which emerged spontaneously as a response to the challenges confronted by Cuban agriculture during the early years of the “Special Period” (Rosset & Benjamin, 1994; Koont, 2009). In 1999, Havana’s Physical Planning Directorate (“*Dirección de Planificación Física*”) recognized urban agriculture as a permanent form of agricultural production, differentiated from traditional agriculture, consisting of *organopónicos* (raised-bed plots or gardens), *huertos* (orchards), *parcelas* (parcels) and *patios* (backyard plots).

Urban agriculture in Cuba is guided by six fundamental principles:

1. Sustainable, agro-ecological, production;
2. Production of diversified crops and livestock;
3. Small-scale crops (or plantings) by State producers (e.g., State enterprises and farms), and non-State producers (e.g., cooperatives and private farmers);
4. The use of adequate economic incentives to stimulate efficient, but sustainable, agricultural production in urban and peri-urban areas;
5. Harmony with the urban environment and its surroundings; and
6. Production with maximum efficiency, on a sustainable basis, using “calibrated decentralization,” based on the principle of “decentralization

without losing control, and centralization without hindering initiative.”

Cuba’s National Urban Agriculture Program is headed by the National Urban Agriculture (UA) Group, which includes a Provincial UA Delegate, responsible for overseeing the functions of two subordinate groups at the municipal level: (1) the Municipal Urban Agriculture Enterprise Council, which includes several municipal enterprises involved in urban agriculture (e.g., *Empresa Cultivos Varios*, *Empresa Comercializadora El Trigal* (temporarily closed in May 2016), *Empresa Proyectos Agropecuarios*, etc.); and (2) the Municipal Urban Agriculture State Council, which is responsible for overseeing State enterprises engaged in urban agriculture (e.g., State farms, and auto-consumption plots adjacent to non-agricultural State-owned enterprises [SOEs]) (Herrera Sorzano, 2009).

Cuba’s National Urban Agriculture Program also includes 28 sub-programs, specialized in the production of specific crops and livestock (Herrera Sorzano, 2009). Under these subprograms, different types of productive entities (or units) are able to produce diversified crops, and to raise various types of livestock (Herrera Sorzano, 2009). The predominant productive units that participate in the urban agriculture subprograms are: (1) auto-consumption plots; (2) producers of protected crops; (3) backyard plots and parcels; (4) intensive orchards; and (5) *organopónicos* (Herrera Sorzano, 2009).

The City of Havana remains as the epicenter of urban agriculture in Cuba. The productive units involved in urban agriculture in the City of Havana include 97 *organopónicos*, 700 diversified farms, 170 livestock farms, 27 forested areas, 2 provincial enterprises specialized in porcine livestock, 20 *Unidades Básicas de Producción Agropecuaria (UBPC)* (Basic Units of Cooperative Production), 91 *Cooperativas de Créditos y Servicios (CCS)* (Credit and Services Cooperatives), 89,000 backyard plots, measuring less than 800 square meters (m<sup>2</sup>), and 51,000 parcels, also measuring less than 800 m<sup>2</sup> (FAO, 2013).

In 2013, production by all types of entities engaged in urban agriculture in Havana was as follows: 63,000 tons (t) of vegetables, 20,000 t of fruits, 10.5

million liters (l) of milk, and 1,700 t of beef, pork, and poultry (FAO, 2013). Total sales of all urban agriculture products reached 58,000 t in 2013; of these, 26,000 t (or 44.8%) were sold directly to the population, of which 21,000 t (or 80.8%) were sold in agricultural markets (FAO, 2013). An estimated 6,770 t of various urban agriculture products, representing 11.7% of the total sold in 2013, were distributed to more than 300,000 individuals at “socially-prioritized entities” (e.g., schools, daycare centers, hospitals, maternity wards, etc.) in the City of Havana (FAO, 2013).

Between 300,000 and 400,000 persons were employed in urban agriculture at the national level (FAO, 2013). Of these, an estimated 167,000 were women, and 40,000 were retirees (FAO, 2013). Some 35,500 hectares (ha) were dedicated to urban agriculture nationwide, and there were 145,000 parcels, 385,000 backyard plots, 6,400 intensive orchards, and 4,000 *organopónicos* dedicated to urban agriculture throughout Cuba (FAO, 2013).

Urban agriculture is supported by 11 research institutes, 5 specialized provincial programs in Havana, and the 28 aforementioned urban agriculture subprograms (FAO, 2013). In addition, there are 52 *Consultorios-Tiendas Agropecuarios (CTA)*, located in 15 municipalities in the Capital, which provide urban agriculture producers with seeds, postures, and organic matter for soil improvement and management (FAO, 2013). Urban agriculture producers also have access to microcredits from State-run *Banco Metropolitano* in Havana (FAO, 2013).

Cuba’s National Urban Agriculture Program is based on the tenet, “decentralize without losing control, centralize without hindering initiative,” which applies to production, commercialization, and to the technical support provided to the national Urban Agriculture Program (FAO, 2013). Urban agriculture in Cuba is also supported by a “holistic approach” focusing on fostering the relationship between producers, crops, animals, and the environment, minimizing the use of external inputs, and prohibiting the application of chemicals (FAO, 2013). This “holistic approach” to support urban agriculture also focuses on plague control, and the pro-

duction of compost and organic matter (FAO, 2013).

There are several positive externalities or spillover effects associated with urban agriculture in high-density urban environments.<sup>1</sup> Urban agriculture can make valuable contributions to community development and community revitalization by transforming blighted urban spaces, and providing a wide range of opportunities for social integration, local self-sufficiency in the production of some agricultural products, and engagement opportunities for community members, particularly women, youth, and the elderly (Earth Institute, 2012; Policy Link, 2012). Urban agriculture can also contribute to improved nutrition and health outcomes, through greater access to locally-produced healthier foods (Policy Link, 2012), and to the development of new agricultural extension programs and the formation of new technical personnel (Golden, 2013).

In the case of Cuba, particularly in the City of Havana, the principal contributions of urban agriculture have been in the areas of employment (or job creation), which are directly connected to community development and the improvement of social capital), increased biodiversity, and the transformation of blighted urban areas into green spaces (FAO, 2013). Nationwide, an estimated 300,000 to 400,000 individuals are employed in urban agriculture, of which 20% are women, another 20% are young workers (between the ages of 17–30), and 10% are retirees (FAO, 2013). In 2003, when the National Urban Agriculture Plan was created, nationwide employment in urban agriculture was estimated at around 326,000; two years later (in 2005), it reached an estimated 384,000, representing an increase of 17.8% (FAO, 2013). In the City of Havana an estimated 15,000 individuals work in urban agriculture; of these, 3,770 (25.1%) are women; and 7,840 (52.3%) are 60 years of age or older (FAO, 2013).

The expansion of urban agriculture since the early days of the “Special Period” in the 1990s has also

contributed to improved plant and crop biodiversity, particularly in the City of Havana and its periphery. There are 28 seed planting units (or stations) in the City of Havana, in addition to 10 municipal horticultural seed farms, which currently supply about 40% of the lettuce seeds and 20% of the radish seeds used by urban farmers, just to cite two examples (FAO, 2013). Since the mid-1990s, urban agriculture has contributed to the development of 56 species of vegetables and fresh condiments, and in order to encourage plant (or crop) biodiversity, *organopónicos* and intensive orchards are required to plant (or produce) a minimum of 10 different species annually (Herrera Sorzano, 2009).

## FUTURE PROSPECTS

The origins of Cuba’s urban agriculture movement can be traced back the economic crisis resulting from the disappearance of the Socialist Camp in 1989 and the disintegration of the Soviet Union in 1991. Until 1989, Cuba’s agricultural model was characterized by a “high degree of modernization, the dominance of export monocultures over food crops, and a heavy dependence on imported inputs and raw materials” (Rosset & Benjamin, 1994). This is demonstrated by the relatively high import coefficients of selected agricultural products and the high levels of merchandise trade (i.e., exports and imports) with the Socialist Bloc at the onset of the “Special Period.” In 1989, Cuba imported 100% of its cereals, 90% of its beans, 49% of its rice, 94% its fertilizer, 98% of its herbicides, and 97% of its animal feedstocks, mostly from the members of the socialist Council for Mutual Economic Assistance (CMEA) (Mesa-Lago, 1993; Rosset & Benjamin, 1994). An estimated 82.7% of Cuba’s merchandise exports were destined to CMEA countries (66.7% to the USSR; 15% to the rest), and the Socialist Bloc supplied 84.6% of the island’s merchandise imports in 1989 (70.8% came from the USSR, and 13.8% from the rest) (Rosset & Benjamin, 1994).

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1. Given existing similarities between New York City (NYC) and the City of Havana, in terms of population density, some aspects of the built environment, etc., we believe that some of the key findings of this report with regards to the benefits of urban agriculture in NYC are also applicable to the City of Havana.

Given the relatively-high levels of external dependency of the Cuban economy during the 1959–1989 period, its highly-mechanized and export-oriented agricultural sector suffered an unprecedented shock after the disintegration of the Socialist Camp in the early 1990s. Imports of essential agricultural inputs declined significantly between 1989 and 1993 (the worst years of the “Special Period”), severely affecting production, and forcing Cuba to realign its agricultural model, paving the way for the expansion of urban agriculture, particularly in the City of Havana. Between 1989 and 1993, petroleum imports fell 53%, from 13 million to 6.1 million t; imported fertilizer declined 77%, from 1.3 million to 300,000 t; similarly, imports of pesticides decreased 62.5%, and imported animal feedstock fell 70%, from 1.6 million to 475,000 t during the same period (Rosset & Benjamin, 1994).

The principal types of productive entities engaged in urban agriculture in Cuba include: *organopónicos*, intensive orchards, parcels, backyard plots, specialized farms, and cooperatives. Most are concentrated within urban and peri-urban perimeter of the 15 municipalities that comprise the City of Havana. The capital area has 97 *organopónicos*, 700 diversified farms, 170 livestock farms, 27 forested areas, 2 provincial enterprises, 20 UBPC, 91 CCS, 89,000 backyard plots, and 51,000 parcels, all dedicated to urban agriculture (FAO, 2013).

Urban agriculture in Cuba faces several challenges, structural constraints, and regulatory limitations. The potential of Cuban urban agricultural producers is limited by the country’s deteriorated physical infrastructure, its inefficient transportation system, and the primitive state of its telecommunications infrastructure. Producers must regularly contend with insufficient domestic production of organic matter, compost, and other essential inputs (FAO, 2013). They also face limited access to water, reliable irrigation systems, and adequate transportation and refrigerated storage facilities. Due to the inability of the

Cuban economy to produce essential inputs (e.g., irrigation, refrigeration, and packaging equipment), urban agriculture producers remain excessively dependent on imported inputs, limiting their ability to increase output, make substantial value-added improvements, and attain higher yields.

The potential of Cuban urban agricultural producers is also limited by the lack of existence of input markets where producers could obtain essential inputs in regular Cuban pesos (CUP) at prices that correspond to their real purchasing power. Their potential is also limited by their inability (at the present time) to successfully insert themselves in global agro-industrial value chains. In addition, like most agricultural producers in Cuba, urban agriculture producers are constrained by the existing regulatory framework that limits producers’ autonomy with regards to the commercialization of their products, their ability to freely contract labor, and prohibitions against foreign investment, the accumulation of private property, and the concentration of wealth.

Despite these challenges, and limitations, Cuba’s urban agriculture offers some attractive medium-term and long-term possibilities, and has the potential to make more significant socioeconomic contributions, particularly in the City of Havana and in other major urban centers on the Island. Cuban urban agriculture, particularly in the City of Havana, also has the potential to develop strong linkages with its vibrant tourism sector. According to official Cuban statistics, the number of international tourists (or visitors) increased 17.4%, from 3,002,745 in 2014 to 3,524,779 in 2015; similarly, overnight stays rose 17.9%; the occupancy rate in tourism establishments grew 6.5%, from 46.1% to 49.1%, and gross tourism receipts increased 10.7%, from 1.7 billion convertible pesos (CUC) to 1.9 billion CUC during the same period (*Turismo Internacional Indicadores Seleccionados, Enero-Diciembre, 2015*, Oficina Nacional de Estadística e Información [ONEI], 2016).<sup>2</sup>

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2. Gross tourism receipts include expenditures by international visitors in tourism establishments, including payments to national enterprises for transportation services. It excludes expenditures in non-State, or private, establishments, and wholesale purchases of raw materials and other inputs by tourism enterprises (Anuario Estadístico de Cuba 2014 [AEC]).

Improved diplomatic relations and commercial ties with the United States are likely to contribute to significant increases in the number of international tourists visiting Cuba, and the City of Havana, in the near future. The potential influx of American visitors, including larger numbers of Cuban-Americans, offers the potential for increased linkages between urban agriculture and tourism. Similarly, the possibility of exporting to the U.S. market, under a scenario of “normalized” bilateral trade, represents another potential opportunity for Cuban urban agriculture. This would, of course, require legislative changes by the U.S. Congress with respect to U.S. policy towards Cuba, and the successful insertion of Cuban urban agriculture producers in global agricultural value chains with a strong presence in the highly-competitive, and profitable, U.S. market.

In the case of Cuba, as in many highly-urbanized, lesser-developed countries (LDCs), successful urban agriculture strategies also require a participatory, lo-

cally-oriented, approach and strong institutional support. They also require building strong linkages with key sectors of the national economy, such as tourism, and the successful integration of urban agricultural producers into global agricultural value chains. From a profit-maximization perspective, allowing producers the freedom to choose which crops they will produce, when they will produce them, and to whom their crops will be sold are essential to ensure the success and long-term viability of urban agriculture at the local and national levels. However, given the excessive levels of State intervention and paternalism, the strict limitations of private property rights, the well-documented irrationalities and inefficiencies, and the “inner contradictions” that characterize the Cuban economy at the present time, it is clear that allowing urban agriculture to reach its full potential requires the political will (on the part of the Cuban leadership) to implement profound and radical economic, legal, and political reforms.

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