



Urban Agriculture in Cuba: 30 Years of policy and practice

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Mutistructured intercropping at Organopónico Alamar. Photo by Margarita Fernandez

It is estimated that by 2050, 80% of the global population will live in urban areas, a reality that is changing priorities for urban planning and policy. For many years, Cuba has already reflected what that future global reality will be, with close to 80% of its population living in cities across the island. This dynamic, along with a combination of conviction and necessity, is one of a handful of reasons the urban agriculture movement in Cuba took hold in the early 1990s.

For more than two decades, Cuba has been a global leader in the policy, science and practice of agroecology in general and of urban agriculture based on agroecological principles in particular. While the term 'urban agroecology' is not commonly used in Cuba, instead 'urban agriculture' or 'urban agriculture based on agroecology', agroecological principles are fundamental to the movement.

In the 1990s, Cuba was plunged into an era of severe food and fuel shortages as a result of the fall of the Socialist Bloc, the source of more than 80% of their imports at the time. This forced a transition from a centrally-planned, large-scale, high external input, capital intensive monocultural system to a decentralised, small-scale, low external input, diversified, knowledge-intensive system. The transition required a restructuring and decentralisation of land tenure and management, food distribution, technical assistance and knowledge exchange.

Urban agriculture was one of the most important strategies responding to the food crisis initially and has over the years established a stable role in national food and agriculture policy and practice. Bringing the producer closer to the consumer was essential in a country that faces fuel shortages and whose population is 80% urban. This article describes the evolution of the multi-actor, multi-scale institutional and management structures that engage with and service urban agriculture. It outlines the policy environment that has enabled urban agriculture in Cuba to be successful, and summarises key social, economic and ecological benefits achieved to date.

Multi-scale, multi-sector, multi-actor management structure and programmes

The urban agriculture movement, based on agroecological principles, has been and continues to be successful because of the diversity of actors deeply engaged across sectors and scales. Even in 1987, before the crisis, Raul Castro, as head of the Armed Forces, initiated the production of cafeteria food through intensive production in raised beds called *organopónicos*. When the food crisis hit, the *organopónicos* became a popular form of production that spread throughout cities in Cuba. Ministries, institutions and schools were encouraged to tear up their lawns and produce food for self-provisioning. Urban gardens sprouted up all over the city, mostly as home gardens, at community centres, and in vacant lots. Recognising its power to solve the food and fuel crisis, in 1994, the Ministry of Agriculture (MINAG) established a Department of Urban Agriculture, one of the first of its kind in the world. Today, it has evolved into the Urban and Periurban Integrated Agriculture Program (PIAUS by its acronym in Spanish), and remains one of the seven most important programmes of MINAG to this day.

PIAUS is managed by a diverse set of government and non-government actors, allowing for distinct needs from the national to the local level to be met (see Figure 1). The central axis of the programme, the National Urban and Suburban Agriculture Group (GNAUS) is housed under one of MINAG's key research institutes, the National Institute of Tropical Agriculture (INIFAT). This group has members from six Ministries and 16 institutions including the Ministries of Education, Public Health, Science, Technology and Environment, as well as the National Association of Small Farmers (ANAP), the Cuban Association of Agronomists and Foresters (ACTAF), the Cuban Association of Animal Production (ACPA) and the Fundación Antonio Núñez Jimenez (FANJ). GNAUS directs the strategic plan of the movement and the methodologies for implementing activities of the 31 subprogrammes.

The subprogrammes represent areas of work promoting agroecological principles, including land use, soil fertility and organic fertiliser, seeds, pest management, water use, animal health, marketing, capacity building and training, apiculture, and more. PIAUS has a group in each province with representation from the Vice President of the Provincial Governments as well as a Provincial Representative for the programme. There are 168 Municipal Groups, one for each municipality in the country, Municipal State Agricultural Enterprises, 168 Urban Farms and 1452 Popular Councils. The productive base is made up of all the farmers involved. This structure has allowed for systematic, efficient and diverse

support to be provided to the movement. Within INIFAT, the programme has also established the first urban agriculture Master's Program in the country.

Enabling policy environment

The organisational structure serves as a legal guideline, (in Spanish *lineamientos*), providing a set of rules and principles prescribed by the government to implement the PIAUS. But there are other policies that support urban agriculture and agroecology at the national and municipal levels. The highest form of policy in Cuba is released every five years at the conclusion of the Communist Party Congress in the form of a document entitled *Guidelines for the Social and Economic Policy of the Party and the Revolution*. The 2011 and 2016 Guidelines there are two (#205 and #206) specific to urban agriculture:

205: *Effectively develop the municipal food self-sufficiency programme, relying on urban and suburban agriculture*

206: *Implement the suburban agriculture programme efficiently using the land that surrounds cities and towns, with the least possible expenditure of fuel and imported inputs by utilising local resources and use of animal power*

While the term agroecology is not explicitly used in the guidelines, there are several that outline principles associated with agroecology. Guideline #185 discusses the

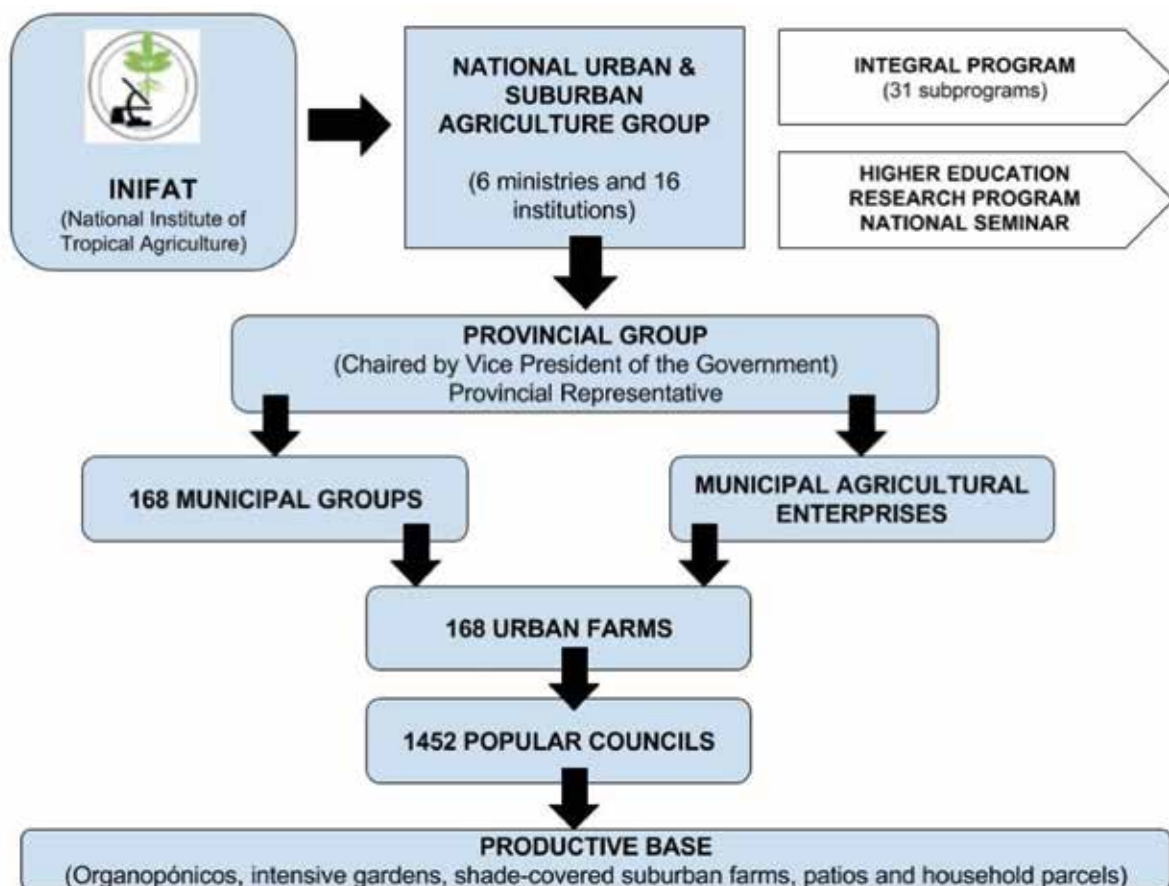


Figure 1. Organisational Structure of Urban Agriculture Program (GNAUS, 2015).



Farm participating in the Farmer to Farmer Movement lists the agroecological practices they implement. Photo by Margarita Fernandez

importance of import substitution by prioritising a territorial view of agriculture, incentivising local production for local consumption through the urban and suburban programme. Guideline #187 discusses the importance of using agroecology practices to increase yields through diversification, crop rotation and polycultures and to “develop a sustainable agriculture in harmony with the environment, that provides the efficient use of phyto and zoo genetic material, including seeds, technology, and the use of organic fertilisers, biofertilisers and biopesticides”.

Another important policy that supports urban agroecology is MINAG’s Policy for the Municipal Food Self-Provisioning Program from 2015. This states that food sovereignty is a top priority of the State and the Cuban government and that the key strategy for achieving this is by decentralising the agricultural sector by increasing communities and municipalities’ capacity to feed themselves. The policy states that a municipality’s capacity to guarantee food for the population should include the “participation of all actors in the territory (individual producers, cooperative members, state enterprises, municipal agriculture delegations) in order to succeed in developing a solid economy at the municipal level, based on agroecological principles, following local climatic and demographic contexts, integrating all facets of municipal livelihoods, including traditional agrarian culture and food of the population”.

Finally, a key land distribution law, one of the most progressive in the Americas, has contributed to the increase in land under urban and suburban production. Decree-Laws 259 and 300, passed in 2008 and 2012 respectively, allow landless citizens to gain usufruct rights to up to 13.42 hectares (1 caballería) of land, and allow existing farmers to gain usufruct rights that extend their farm sizes up to 67.1 hectares. This policy has granted land access of more than 1.7

million hectares of mostly idle rural and urban/suburban agricultural lands to more than 200,000 farmers, many of whom are new to farming.

Key social, economic and ecological benefits

One of the main contributions of the urban agriculture movement has been Cuba’s increased access to a diversity of fresh fruits, vegetables, small livestock and medicinal plants. This has served to increase dietary diversity and improve nutrition. Across the country’s cities, more than 50% of the fresh produce consumed is produced by urban farmers, surpassing one million tons in 2014. The urban agriculture movement has generated more than 300,000 jobs and trained tens of thousands of farmers, technicians, and government officials in agroecological techniques through a diversity of formal and informal trainings and exchanges including strong influence from the ANAP’s Farmer to Farmer Movement. Urban farms run educational programmes with elementary schools and supply highly-subsidised foods to schools, hospitals, retirement homes and other social institutions.

The 31 subprogrammes of PIAUS that provide services and training in different aspects of the food system, prioritise local sovereignty through production of diverse agroecological inputs such as seeds, organic fertilisers, biological controls, innovative irrigation techniques, animal traction, and wind and solar energy. The use of these locally-produced items has avoided 50 million dollars-worth of imported inputs annually.

Finally, the management and tenure structures in urban agriculture, as in the rural sector, are dominated by cooperatives, although there are some private farmers as well. There are three types of cooperatives – the Credit and Service Cooperative (CCS) formed in the 1960s, the



Shade cover netting to control solar intensity at Organopónico in Matanzas. Photo by Margarita Fernandez

Agricultural Production Cooperative (CPA) formed in the 1970s and Basic Unit of Cooperative Production (UBPC) formed in the 1990s. The CCS farmers own or lease their land under usufruct rights, but share credit, infrastructure, and markets. The CPA farmers share and work the same piece of land. The UBPCs are state-owned farms that were broken up into smaller cooperatives during the food and economic crisis to decentralise management and production. Cooperatives are an important economic expression of agroecological principles of equity, participation, diversity, multifunctionality, and resilience. In terms of market, urban farms, whether in a cooperative or private, tend to sell most of their harvest directly to the community from an on-site farm-stand. Many urban farms also sell directly at farmers markets, and to restaurants and institutions.

Conclusion

Since the beginning of the urban agriculture movement in Cuba, it was clear to movement leaders that, because urban food production is both intensive and in such close proximity to dense human populations, toxic agricultural inputs should not be used. An agricultural approach that follows principles of diversity, resource recycling, local production of inputs, etc. was thought most appropriate. More than two decades later, due to strategic alliances between farmers, scientists, and the government, Cuba has one of the most advanced urban agriculture systems based on agroecological principles in the world, with strong policies in place that support it. There are national, provincial and municipal policies that guide production, distribution, consumption, education, and services provided by the diversity of actors involved in the food system. The PIAUS engenders key principles of agroecology and food sovereignty that have nourished an urban agriculture system that is socially just, economically viable, and ecologically resilient. Robust participation from key ministries and institutions has

solidified urban agriculture's role in Cuba's agrifood system as not just a strategy to confront crises but as the best approach to sustainably feed the island's population in a nutritious, equitable, environmentally sound and resilient way. The Director of PIAUS, Nelso Companioni, recently stated "Urban agriculture is no longer an agriculture only for crisis situations but is an agriculture for a resilient and sustainable today and tomorrow".

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