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No.09: ENHANCING FOOD SECURITY THROUGH URBAN AGRICULTURE IN KINGSTON, JAMAICA

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ENHANCING FOOD SECURITY THROUGH URBAN AGRICULTURE IN KINGSTON, JAMAICA

by Elizabeth Thomas-Hope, Robert Kinlocke and Therese Ferguson

Key Points

- Much focus has been accorded rural agriculture, both in the literature and in practice. Yet urban agriculture is both a viable and necessary area of focus as it pertains to food security in Jamaica.
- An education and communication strategy is required to ensure that attitudes towards nutrition and poor food choices are changed (within the range of affordability) in efforts to achieve food security.
- Given the threats posed by climate change, the development of urban agriculture should incorporate not only previously designated sites through zoning for small-scale livestock and produce rearing; it also should incorporate backyard farming/gardening, housetop farming, school gardens and composting, hydroponics, greenhouses, and rainwater harvesting consistent with Jamaica's Vision 2030.
- A comprehensive focus on urban agriculture must incorporate all relevant stakeholders including ministries; the National Water Commission; community organizations and faith-based organizations; global entities for resources and expertise; international and national funding agencies; and research institutions.

Introduction

Jamaica's sustainable development strategy, articulated in its Vision 2030 document (PIOJ, 2019), emphasizes food security under various national outcomes, including Outcome One – A Healthy and Stable Population, and Outcome Twelve – Internationally Competitive Industry Structures (PIOJ, 2009). Jamaica's capital city, Kingston, is fed through a combination of food imports (e.g. key dietary staples such as rice and flour) and domestic food production from agricultural areas in various parishes; primarily, St Elizabeth, Trelawny, Manchester, Westmoreland and Clarendon (Thomas-Hope et al., 2017). Food grown within Jamaica is primarily transported into Kingston through informal vendors or higglers whose functions include trade, harvesting, post-harvest processing, re-distribution, and sales (Thomas-Hope et al., 2017). Jamaica's Vision 2030 strategy, as well as the Food and Nutrition Security Policy, stress the need to focus on aspects of urban agriculture (Ministry of Agriculture and Fisheries and Ministry of Health, 2013; PIOJ, 2009). Strategies such as urban backyard gardens, school gardens, and greenhouse clusters are articulated in Vision 2030.

The Vision 2030 document states that "despite progress, we have not fully achieved the objectives of the Food and Nutrition Policy to provide adequate food and nutrition

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for all, due in part to issues of affordability and poor food choices" (PIOJ, 2009, p. 47). In promoting the role of urban agriculture in a policy framework, it is important to begin with evidence on the current prevalence and types of urban agriculture and the obstacles to its expansion. As part of the research conducted by the Hungry Cities Partnership (HCP), a household survey was conducted in Kingston to examine the extent and nature of food security and insecurity across the urban socio-economic range, and the prevalence of urban agriculture in the city (Kinlocke et al 2019). The survey was conducted between July and September 2015, and sampled households from seven communities across a range of income groups in different parts of the city. It covered demographic characteristics in addition to various measures of the dimensions of household food security, places of food purchase, and attitudes towards various components of the food system.

This policy brief proposes that whilst several existing national policies and strategies speak to various issues surrounding food and nutrition, there must be greater and enhanced policy coherence and coherence of government's overall strategy for food security across policies. Additionally, existing and emerging policy frameworks must prioritize food security and speak to particular issues including the informal food retail sector and urban agriculture. Further, given the country's vulnerability to climate change and its impacts, any policy that is articulated must incorporate strategies and mechanisms to facilitate climate change adaptation. This brief focuses on the dimensions and implications of household food insecurity in Kingston and considers the policy implications in relation to the sustainable development strategy articulated in Vision 2030 and the Food and Nutrition Security Policy.

Findings

In order to do a rapid assessment of the food security status of Kingston households, several food security access measures developed by the Food and Nutrition Technical Assistance (FANTA) project were utilized (Coates et al 2007, Kinlocke et al 2019). Here we report on the findings from: (a) the Household Food Insecurity Access Prevalence (HFIAP); (c) the Household Dietary Diversity Score (HDDS; and (d) the Months of Adequate Household Food Provisioning (MAHFP). Using the HFIAP, over one-third of households (37%) were severely food insecure, with another 37% experiencing moderate or mild food insecurity (Figure 1). Only 26% of surveyed households were completely food secure.

Figure 2 shows the frequency-of-occurrence responses to the nine HFIAP questions and indicates that absolute shortages of food are only experienced by a minority of households (less than 20% sometimes/often). More common are eating fewer and smaller meals (around 30%) and having to eat unwanted, non-preferred and a limited selection of foods.

The Household Dietary Diversity Score (HDDS) captures the number of food groups (out of 12) that were consumed within the 24 hours prior to the survey. There were low to moderate levels of dietary diversity in the overall sample (Figure 3). Nearly 60% of households had scores of 4 or less, which is inadequate for a balanced and nutritious diet. The HFIAP and HDDS results suggest that food insecurity in Kingston relates more to the poor quality of people's diets than to hunger and lack of food. The HDDS is also clearly related to income with households in the lowest income quintile only scoring a mean of 3.87 on the 12-point scale. Given also that one of the most common food groups consumed is sugars, the overall nutritional quality of the diet is further reduced.

FIGURE 1: Levels of Food Insecurity in Kingston

The HFIAP indicator is based on 9 frequency-of-occurrence questions and uses a scoring algorithm to categorize households into four levels of household food insecurity:

- food secure
- mildly food insecure
- moderately food insecure
- severely food insecure

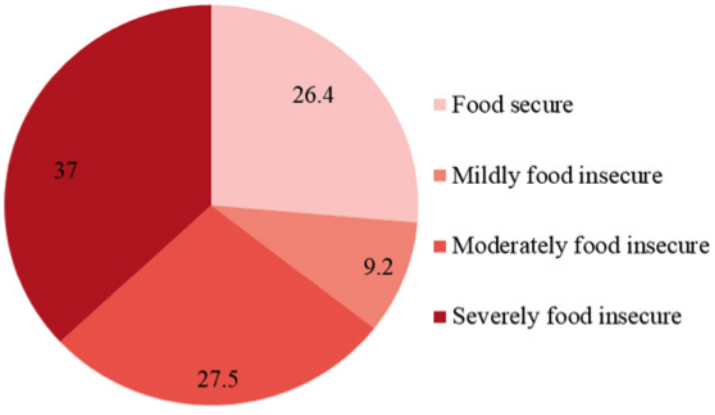


FIGURE 2: Frequency of Experience of Food Insecurity

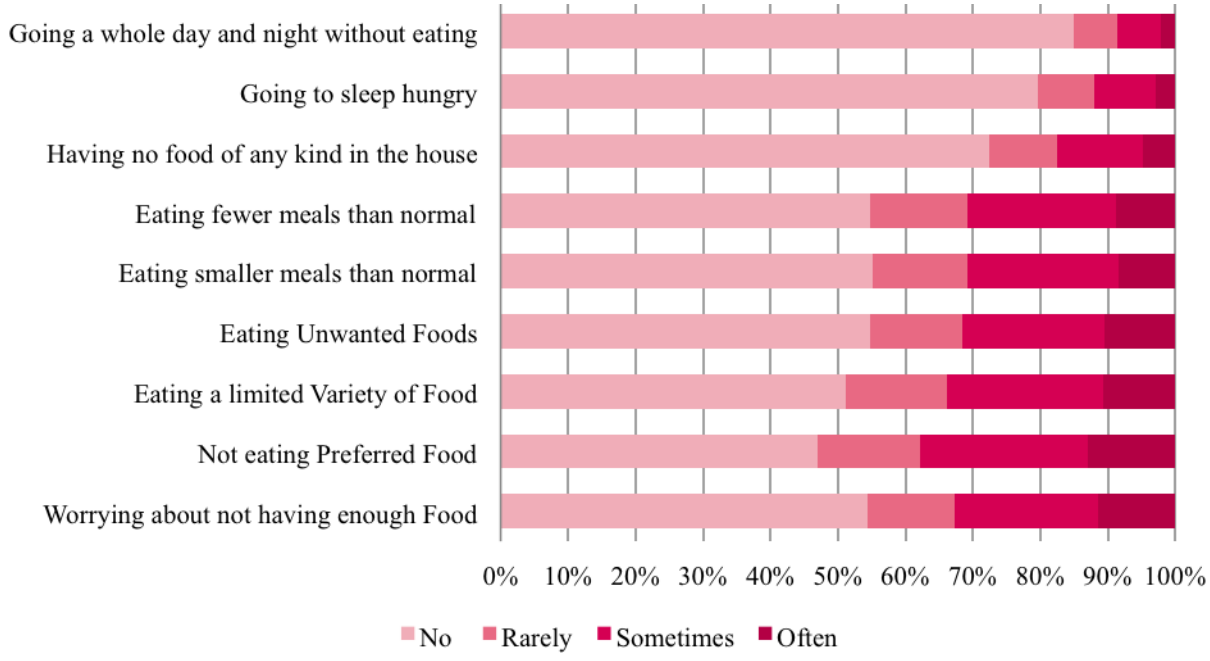
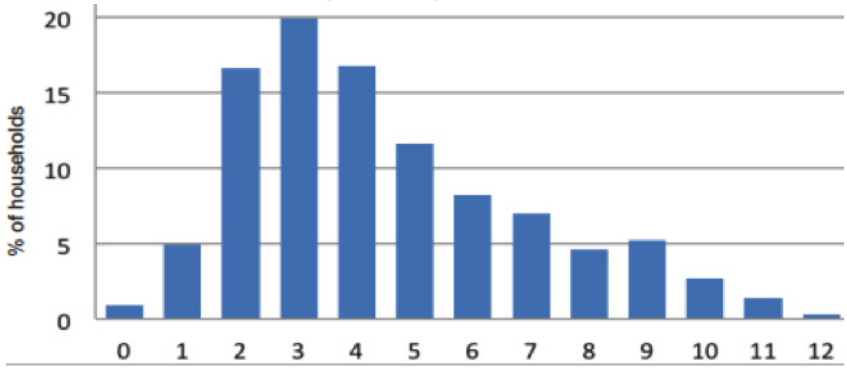


FIGURE 3: Household Dietary Diversity Scores



Number of food groups consumed within 24 hours prior to survey

The MAHFP indicator measures a household's ability to ensure that food is available above a minimum level throughout the year. The indicator asks how many, and which, months in the previous year the household had adequate food supply and scores each response out of 12. In general, most households had adequate access to food for the 12 months prior to the survey. However, as Figure 4 shows, adequacy was related to income, with households in the lowest two income households scoring much lower than households in the upper income quintiles.

FIGURE 4: Months of Adequate Household Food Provisioning (MAHFP) by Income Quintile

Table 1 lists the non-market sources of food for households in the previous year, including rural-urban food transfers and rural and urban agriculture. While one-quarter of all households receive food transfers from rural areas (8% weekly and 46% monthly), only 8% of the households practise urban agriculture, and 6% grow food in rural areas. Of those households that do practise urban agriculture, only 13% consume home-grown food on a daily or weekly basis. The majority do so less frequently.

The most common crops were vegetables (grown by 46% of participants) and fruits (36%). These patterns align well with anecdotal observations of the city where fruit trees and small vegetable gardens are common sights. Keeping livestock (mainly chickens) in the city is rare. The main reasons given by non-participants are that – if they did take part in urban agriculture – they would be victims of theft (70% in agreement), that it was easier to buy food than grow it (60%), that they did not have land on which to grow food (59%), that they did not have the time or labour (47%), and that they did not have access to relevant inputs (45%) (Table 2). Only one-third said they had no interest in urban agriculture and even fewer believed that farming was only for rural people.

Policy Implications

Urban agriculture is viewed as an important guarantor of food security in official plans and strategies. The HCP survey certainly confirms that food insecurity, and particularly the lack of dietary diversity, is a significant challenge for policymakers in Kingston. Yet, it appears that urban agriculture is not widely practiced so its potential to improve food security outcomes remains unproven. In terms of recommendations to support and expand the practice and impact of urban agriculture, we suggest the following:

- A clear acknowledgement of urban agriculture as a key pathway to food security is needed, including a clear definition of urban agriculture with relevant guidelines (e.g., legislation, training, sanitation, zoning, food safety).
- A central entity needs to lead policy articulation and to mainstream urban agriculture into existing and emerging policy frameworks (e.g., the Ministry of Health and Wellness and Ministry of Industry, Commerce, Agriculture and Fisheries).
- Funding should be made available to pilot urban agriculture in selected communities. Urban agriculture should incorporate designated sites through zoning for

TABLE 1: Non-Market Food Sources by Frequency of Access

Food sources	% of households	At least five days a week	At least once a week	At least once a month	At least once in six months	At least once a year
Food sent by relatives in rural areas	24.6	0.6	7.5	45.7	31.2	15.0
Household grows food in urban areas	7.5	1.9	11.3	26.4	52.8	7.6
Household grows food in rural areas	5.7	5.0	10.0	62.5	15.0	7.5
Livestock owned by household	3.3	8.7	4.4	39.1	43.5	4.3

TABLE 2: Attitudes to Urban Agriculture

	Agree (%)	Disagree (%)	Neither (%)
People would steal whatever we grow	70.2	21.5	8.3
It is easier to buy our food than grow it	60.3	31.0	8.7
We have no land on which to grow food	59.4	37.5	3.2
We do not have the time or labour	47.1	45.3	7.6
We do not have access to inputs (seeds, water, fertilizer)	44.8	48.4	6.8
We have no interest in growing food	32.8	61.9	5.3
We lack the skills to grow food	32.2	62.3	5.5
Farming is for rural people only	13.3	84.4	2.3

small-scale livestock and produce rearing; and include backyard farming/gardening, housetop farming, school gardens and composting, hydroponics, greenhouses and rainwater harvesting.

- An education and communication strategy must be developed to ensure that attitudes towards and perceptions of nutrition are changed. The perceived obstacles to participation in urban agriculture also need to be addressed, particularly the fear of crime, and the absence of land and inputs.
- A comprehensive focus on urban agriculture must incorporate all relevant stakeholders including ministries (Ministry of Health and Wellness; Ministry of Industry, Commerce, Agriculture and Fisheries; Ministry of Transport, Works and Housing; Ministry of National Security; Ministry of Education, Youth and Information); the National Water Commission; community-based organizations; the Social Development Commission; global entities such as the Food and Agriculture Organization; Pan American Health Organization; and World Health Organization); funding agencies and research institutions and entities.

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