

SURVIVING IN THE CITY THROUGH HOME GARDENS: A Case Study of Home Gardeners in Barangay UP Campus

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Abstract

This article demonstrates the potential of home gardens as a food security strategy that could be adopted by urban residents and as a mechanism that could be integrated in resettlement plans and programs. It examines how gender relations are linked to food security and the right to food, as well as traces the historical development of small-scale home or communal gardens as responses to food insecurity in different localities and time periods. The case study featured in the article surfaces the voices of 13 women and men as they discuss about the economic, social, health, and nutrition benefits of home gardens to their households as well as the problems they face in gardening other peoples' lots. It concludes that home gardens can be a sound strategy for food security in urban communities as well as in resettlements. It also asserts that, for home gardens to be sustainable mechanisms for urban food security, a strong people-government partnership should be forged and the participation of women in decision-making in such partnership should be taken into account since the majority of home gardeners are women.

Introduction

Urbanization and the growth of urban slums are the two aspects to be considered when examining the development of cities. The emergence of megacities, each with at least 10 million residents, is one of the distinct features of urbanization in Asia. These megacities serve not only as magnets to internal migrants but also as entryways to international migrants (Hugo, 2014). Asia is one of the fast-growing regions in the world while Manila is one of the fast-growing cities in Asia. Based on United Nations (UN) estimates, Manila's population had grown from 10.14 million in 2001 to 12.76 million in 2014, and is projected to grow to 16.76 million by 2030 (UN DESA, 2014). Based on the 2010 UN estimates (cited in Mohiddin, Phelps, & Walters, 2012), 828 million urban dwellers in developing countries lived in slums as compared to 767 million in 2000 and 657 million in 1990—growth that was arguably fast over a 21-year period. Consequently, urban

poverty and the growth of urban slums are priority concerns of governments and global institutions adopting urban agriculture as a key strategy to address urban hunger. A parallel development is home gardening, which is an independent initiative of households to address food and nutrition insecurity and to increase their incomes.

In terms of hunger and malnutrition in the Philippines, the 2011 Annual Poverty Indicator Survey (APIS) noted that, at the national level, 6.3% of all families had experienced hunger. Of these families, 2.7% are from the National Capital Region while the Eastern Visayas region has the highest incidence of families experiencing hunger with 16.2%, even higher than the national average (Philippine Statistics Authority, 2013). Based on the 2015 Global Hunger Index (GHI),¹ a tool developed to measure and track hunger, its level of hunger scores 20.1 equivalent to a serious hunger condition. Of the 117 countries measured, the Philippines ranks 51. Considering the multi-dimensionality of hunger, the index uses the following measurement: undernourishment, child wasting, child stunting, and child mortality. Based on these components, stunting—when a child is too short for her/his age—is the most prevalent problem among children in the country. A high prevalence of stunting is considered a sign of chronic malnutrition. The Philippines is one of the 14 countries where 80% of the world's stunted children live (Gavilan, 2015).

Citing data from the 2015 Updating of the Nutritional Status of Filipino Children by the Food and Nutrition Research Institute (FNRI), Save the Children (2016) noted that the country faces the worst condition of chronic malnutrition rates among children aged 0-2 years old at 26.2% in the last 10 years. There is also a significant increase in overall chronic malnutrition or stunting rate for children under five years old from 30.5% in 2013 to 33.5% in 2015. In the case of reduction of acute malnutrition or wasting—when a child suffers from starvation and illness—no progress has been noted. Given the worst condition of hunger and malnutrition in the country, the “Zero Hunger Bill”² is a positive development because, once it is passed, it will provide a policy framework for ensuring the right to food for everyone, especially the vulnerable, disadvantaged, and marginalized groups.

While the above data provide snapshots of hunger and malnutrition in the Philippines, the lack of disaggregated data in terms of rural and urban locations as well as gender, age, and other differences poses constraints in capturing the complete picture of the state of hunger and malnutrition in the country.

Gender, Food Security, and the Right to Food

According to the 1996 World Food Summit, food security is achieved at all levels—individual, household, national, regional, and global—when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO 1996). In the second World Food Summit in 2009, the four pillars of food security—availability, accessibility, utilization, and stability—were identified: food availability refers to the physical presence of food in a given locality; food accessibility is the capacity to have sufficient amounts of food (Ofreneo & Narito, 2012 cited in Barrameda, 2016); food utilization is about the extent to which food is meeting the specific nutritional needs of persons; and stability of food supply specifically refers to the situation of poor countries as it is affected by local, national, and global factors and processes in trade, investment, and finance (Brody, 2016).

It is argued that the presence of all four pillars is necessary to ensure food security for all. Thus, a person is considered food insecure when s/he lacks access to an adequate quantity of safe and nutritious food necessary for normal growth and for enjoying an active and healthy life. Food insecurity can be chronic, seasonal, or transitory and may be due to food unavailability, lack of capacity to buy food, unequal food allocation, or insufficient food utilization at the household level. Poor nutritional status is a result of food insecurity, together with poor health and sanitation conditions, as well as improper care and feeding practices (FAO, IFAD & WFP, 2015).

FAO et al. (2015) further noted that, based on recent global estimates, about 795 million people were undernourished or unable to eat adequate nutritious food to have an active and healthy life. Likewise, Brody (2016) noted that over 60% of those hungry were women and girls as a direct impact of gender inequality and argued that food insecurity and gender inequality are interlinked. The inequitable processes governing the food systems at the local, national, and international levels disadvantaged women and girls more than men and boys. Thus, food insecurity is not only a political, economic, and environmental issue but also a gender justice issue.

Women and girls are involved in the various phases of agriculture—in production, processing, and distribution. As food producers, they are responsible for growing food for family consumption in subsistence farms

and are also the unpaid farm workers in family farms. As food providers, they are responsible for putting food on the table as well as ensuring the survival and nutritional needs of the family in times of economic crises and disasters (Barrameda, 2015). Yet, these contributions are unrecognized and undervalued. They lack access to land, technical and extension support, and agricultural training opportunities. Likewise, their lack of access to capital, credit, information, and market connections prevents them from moving beyond subsistence production.

In terms of gender roles in households, providing food on the table is a primary responsibility of women. O Campos and Garner (2012) noted that, as household meal planners, women resort to prioritizing male family members and children over themselves in the allocation of food in times of food scarcity. However, Neogy (2012) noted that gendered cultural norms in some societies influence household food distribution such that women and girls eat last and least even in times when food is available or affordable. Furthermore, women are not only responsible for ensuring the nutrition of their families but are also the shock absorbers who sacrifice for the sake of family food security by eating less and increasing their workloads to gather fire and water in times of increasing prices, food insecurity, and climate change (Quisumbing, Meinzen-Dick, & Bassett, 2008; Hossain & Green, 2011; O Campos & Garner, 2012). With the pressures of feeding their households, many women coped in times of food price spikes by engaging in informal work such as petty trading and low-paid services (Hossain and Green, 2011) and tending home gardens as safety nets for daily survival and in extreme events (Barrameda, 2016).

Moreover, FIAN International (2013) noted the link of food insecurity to gender-based violence as it can affect women's capacity to grow and market food, as well as to access inputs for food production. Likewise, Hossain and Green (2011) noted that food insecurity can trigger violence against women as household food scarcity causes tensions that can lead to physical or psychological violence perpetrated by men against women or by older women towards their daughters-in-law. Evidence to support this was gathered during the global food price crisis in 2008, when men's inability to support their families led to arguments in the home, triggering alcohol abuse and violence against women.

Despite the central roles of women and girls in ensuring the food security of their households, unequal gender relations reinforce their experiences of food and nutrition insecurity. Since gender inequality is inextricably linked to food and nutrition insecurity of women and girls, the

failure to address its root causes can perpetuate gender injustice, poverty, and food and nutrition insecurity. As the current policy response is limited only to the availability pillar through increased production and imports, Brody (2016) argued that a political approach that integrates gender equality is needed to ensure food and nutrition security for all and proposed that the four pillars should be used to create a framework for integrating gender equality in designing food and nutrition interventions.

Though food security is viewed as an economic goal of governments, it is synonymous to the right to food³ that every person should enjoy as a human being. Like the notion of food security, the right to food entitles every person in all places to have the capacity to produce, purchase, and access safe, nutritious, and culturally acceptable food for an active, healthy, and dignified life. A rights-based perspective complements the notion of food security by way of recognizing the legal entitlements of people as rights holders and the legal obligations of governments as duty bearers towards them (World Bank, 2008). Thus, every citizen has the right to demand from government the latter's obligation in ensuring a food-secure citizenry.

With the current development agenda known as the Sustainable Development Goals, ⁴there is an imperative for governments to promote sustainable development with the aims of ending poverty, promoting prosperity and well-being, as well as protecting the environment by 2030. Particular to the issues of food security, the SDG 2 (zero hunger) targets⁵ provide guidelines to ensure ending hunger by 2030. As these goals are interconnected, the achievement of each goal entails addressing issues related to other goals. As such, the achievement of SDG 2 targets is linked to the achievement of SDG 11, which is having sustainable cities and communities.

Global Trends in Urban Home Gardening/Farming

The growing concern for food security in urban centers became a priority agenda of governments and international institutions in which, through a series of consultations, urban and peri-urban agriculture (UPA) has evolved. UPA refers to “an industry located within (intra-urban) or on the fringe (peri-urban) of a town, a city or a metropolis, which grows and raises, processes and distributes a diversity of agriculture products, using largely human, land and water resources, products and services found in and around that urban area” (World Bank, 2008, p.10). It was officially acknowledged as a key component in food security during the 15th Food Agriculture Organization-Commission on Agriculture (FAO-

COAG) session in Rome in 1999 and by the World Food Summit in 2002 (World Bank, 2008). Despite various initiatives in promoting UPA, the United Nations Standing Committee on Nutrition (2012) noted that it was still part of an informal economy that needed to be integrated into urban planning, national strategies on food security programs, and agricultural policy development.

Although home gardening has existed for more than a hundred years, it has regained popularity among urban residents in recent years, gradually growing into a global movement. People across classes raise their own food in backyards, parks, open spaces, window sills, and porches to ensure food security as well as to have control over the food they eat. Some home gardening practices developed around the globe that are worth noting are:

- In the United States of America, the Three Sisters Iroquois community gardens made use of “companion planting” in the 1200s not only for food security but also to provide the complete dietary needs of the tribe. In the 1890s, “potato patches” were established in vacant lots in response to the economic depression (Andrews, 2016) while growing vegetables in backyards or “victory gardens” served as women’s patriotic response during the wartime economy of the Second World War (Ban Breathnach, 1995).
- In Cuba during the economic crisis in the early 1990s, Cubans established *organoponicos* (organic farms or gardens) in urban and suburban areas by making use of available spaces such as garbage dumps, parking lots, and other abandoned areas. These community efforts were complemented by the government’s land reform measures in which state farms were subdivided into small farms and the farmers were provided with infrastructure support including compost, pest and disease control centers, and farmers’ markets (Danaher, Biggs, & Mark, 2007).
- Recently popularized in Kenya by the Grassroots Organizations Operating Together in Sisterhood (GROOTS) is sack gardening or growing vegetables in burlap bags thus requiring limited soil and water. GROOTS is a global network of women-led groups that assists women to address food security issues in communities (Stone, 2016).
- All over the world, community supported agriculture (CSA) farms are rapidly growing, ranging from individual plots to community

gardens using vacant lots, abandoned buildings, rooftops, and every unused land to grow food and to raise livestock. Part of the produce is sold in community markets in which the clients are members of the neighborhood themselves. Some CSA farms are funded by local governments (Andrews, 2016).

Likewise, the Philippines has a long history of urban home gardening initiatives:

- Home gardening has been part of the historical evolution of Metro Manila since the 16th century as residents grew crops alongside the Pasig River banks, considered as the earliest practice of urban agriculture (Campilan, Boncodin, & de Guzman, n.d.).
- In 1974, the Asian Rural Life Development Foundation (ARLDF) in Davao del Sur promoted the “FAITH” (Food Always in the Home) garden technology to provide enough food for the daily needs of households at lower cost and with minimum labor and minimal land use (Sommer Haven Ranch International, 1998).
- In 1990, the Bureau of Agricultural Research (BAR), through its Urban Agriculture Program (UAP), developed technologies for crop, livestock, and fish production in urban areas such as composting of biodegradable solid waste, waste water recycling, integrated pest management, and herbal fertilizer production (Morcozo, 1995 cited in Nitural, n.d.). The UAP was widely implemented in backyard gardens, in community or local group-managed gardens, and in farms run by schools, civil society groups, church groups, and cooperatives in 1998 (Campilan et al., n.d.).
- In 1999, the Receptacle Farming Model was established in Central Luzon State University, in Muñoz, Nueva Ecija (Nital, n.d.). Now known as container gardening, it is still practiced among households in Quezon City and Makati City, in informal settlements in Mandaluyong, Parañaque, and Las Piñas. Because of the portability of the plants, container gardening has been widely adopted in flood-prone Malabon and Valenzuela City (Duldulao, 2001 cited in Campilan et al., n.d.).
- Bio-intensive gardens in Negros have been instrumental in reducing malnutrition among urban children from 40 to 25%. In Cebu, vegetable gardens complemented public health interventions in increasing the vitamin A levels of children and provided other nutritional benefits (Smit, Nasr, & Ratta, 2001).

- In North Fairview, Quezon City, residents in an urban poor community at the periphery of a 50-hectare subdivision grow vegetables in almost 70% of the unused areas in the subdivision. They entered into agreements with land owners and the homeowners' association in which the local government acts as the mediator and guarantor (Campilan et al., n.d.).
- “The Joy of Urban Farming,” a project initiated in 2010 by Vice Mayor Joy Belmonte of Quezon City in partnership with local barangay councils, aims to reduce poverty and to improve the nutrition of urban residents. It assists households through the provision of start-up seeds, simple farm implements, and training on organic farming (Joy of Urban Farming brochure, n.d.). From three demonstration farms, the project has expanded to 166 urban farms in communities, public elementary schools, day care centers, and parishes in all the six districts of Quezon City (Yap, n.d.).

Home Gardens and the Policy Environment in the Philippines

The Philippine government has put forth efforts to promote urban agriculture as a means to address food insecurity in urban centers through policies and programs that include the following:

- Organic Agriculture Program based on RA 10068 (Organic Agriculture Act of 2010) promoting the implementation and practices of organic agriculture in the country;
- *Gulayan sa Paaralan* Program, established in 2011 to promote self-help food production in schools and communities and to impart the value of agriculture as a life-support system;
- Agri-Pinoy Urban Agriculture, implemented in 2012 to attain self-reliance and sufficiency among urban households by capacitating them to grow their own food through the promotion of the communal garden model showcasing small-scale food production. At present, it is being implemented in 30 Congressional Districts of the National Capital Region (NCR) (PhilFSIS/PSA, 2017); and
- House Bills 2818 (the Integrated Urban Agriculture Act) and 4354 (the Urban Farming Act of 2016)⁶ filed in the 17th Congress that aim to institutionalize urban farming in cities and municipalities in the country to promote food security and minimize the impact of climate change; and Senate Bill 111 (the “Right to Adequate Food Bill”) otherwise known as the “zero hunger bill” filed in the Senate in 2014.

Once enacted, this Bill mandates the government to develop a policy framework for the progressive realization of the right to adequate food and for ending hunger within a 10-year time frame (Micalat-Teves, 2016).

A Case Study of the Home Gardeners of Area 17, Brgy. UP Campus

Area 17 is one of the 12 *puroks*⁷ (zones) situated in the southern sector of Barangay UP Campus in Quezon City. It is the former location of the cottages and self-built houses of employees of the University of the Philippines. In the early 1980s, however, the area was occupied by informal settlers who were not connected to the University (Z. Lectura, personal communication, 28 January 2017). At present, the place is a community of about a hundred households working in the informal economy. It is also a thriving area of home gardens.

Profile of the Respondent Home Gardeners⁸

According to Ched, one of the respondents in this study, there are around a hundred women and men engaged in home gardens in the various parts of the barangay, particularly in Puroks Arboretum, Dagohoy, Palaris, Ricarte, Village B, Daang Tubo, Libis, Area 17, and C.P. Garcia. In Area 17 alone, around 30 women are into home gardens and their planting spaces range from two to 1,500 square meters. For the purpose of this case study, 13 respondents (nine women and four men) were interviewed. The average age of the respondents is 50.9 years, with ages ranging from 26 to 65. Majority are working in the informal economy and engaged in various work activities or livelihoods such as fish vending, street food selling, running a small variety store, and washing/ironing clothes; while five of them are barangay health workers and volunteer counselors in the barangay women's desk, and one is a barangay councilor. The volunteers in the various barangay offices receive a monthly honorarium ranging from 1,000 to 4,000 pesos, while those who are engaged in multiple livelihoods note that their pooled household daily earnings range from 300 to 600 pesos.

The respondents have been engaged in home gardening for a varying number of years. Edna, Ester, and Ched have been into gardening since the 1980s when they first set foot in the area and planted the vacant spaces near their respective houses. The couple Nap and Didith were rice farmers from Mindanao who claimed that their great grandparents had already been farming before the University was established. Hector, Jun,

and Dante went into gardening in the early 2000s when they were laid off as casual janitors in the University because of active involvement in union activities. Verna, Salome, and Olivia started gardening after attending the training conducted by the Department of Agriculture (DA) extension workers facilitated by a Women and Development student doing her practicum in the community. Lastly, Marie and Cristy are beneficiaries of the “Joy of Urban Gardening Program.”

Reasons for Engaging in Home Gardens

The home gardeners have diverse reasons for engaging in home gardens. Didith and Nap shifted to vegetable farming because rice farming was no longer viable as a source of income due to pest infestation, climactic variability, and a longer harvest period. Edna, Ched, and Ester are into gardening to lessen household food expenses, while the rest grow crops mainly for household consumption. Surplus produce is sold for immediate cash to buy either food (e.g., rice, salt, sugar, coffee, condiments) or provide non-food items (e.g., children’s transportation, school supplies, medicines, and other small household expenses). It is also given as gifts to neighbors and friends or swapped with other food crops produced by neighbors.

Didith and Nap earn from 500 to 1,000 pesos daily from their home garden. They sell three pieces of lettuce for 25 pesos and a bunch of spinach for 10 pesos—cheaper than market prices. Residents in Area 17 as well as in other communities within the Barangay UP Campus are among their clients. They also supply vegetables to vendors in the *talipapa* (small wet market) of Krus na Ligas, Daang Tubo, and Libis. Hector, Jun, and Dante supply herbs to a few small canteens and restaurants nearby. They earn from 100 to 500 pesos from the sale of lemon grass and herbs thrice a week. The rest of the women gardeners produce primarily for home consumption and occasionally sell their vegetable crops to walk-in buyers.

In terms of division of labor, Didith and Nap who work full time in the garden claim that they have equal division of labor as well as equal hours spent in tending the garden—from five to ten o’clock in the morning and three to six o’clock in the afternoon. Likewise, marketing is done by both of them. Since they work the entire day in the garden, domestic work is relegated to their older children. According to the couple, other couples working fulltime in gardens have a similar work division. Hector, Jun, and Dante work full time in their gardens and none of their families are involved in gardening. The women home gardeners who have full time reproductive work spend from 30 minutes to an hour in tending their small gardens,

while their husbands who have salaried or waged work do not participate in gardening. The women gardeners who have regular paid work tend their gardens on weekends while cleaning and watering are assigned to both female and male older children. In some cases, husbands and children help in watering the gardens during weekends.

Strategies for Dealing with Limited Space

Except for Didith and Nap who have a larger space, the majority of the home gardeners make do with the limited spaces available to them. Salome, for instance, makes use of two small raised garden beds in her two-square meter space on the side of her house. Hector, Jun, and Dante plant vegetables and herbs in available open spaces near their houses, eventually creating several small pocket gardens along the road to the community. Verna, Olivia, and Cristy who are senior citizens grow vegetables and ornamentals in containers and hang them vertically on the walls and fences at eye level, a practice which has freed them from having to bend while tending their plants. The rest have home gardens in their small backyard spaces and in containers.

Common crops raised in these home gardens include: early maturing crops (those that can be harvested in two to three months) such as tomatoes, pepper, corn, beans, and leafy vegetables like *pechay*, mustard, spinach, and lettuce; semi-annual crops like winged beans, eggplant, okra, different varieties of gourd, ginger, and turmeric; and annual or year-round crops like sweet potato, cassava, peas, *alugbati*, lemon grass, and Chinese *malunggay*. The home gardens are enclosed by recycled wire and stakes. Small-growing trees and semi-permanent plants like *malunggay*, *kakawati*, banana, *atis*, and guava serve as live fencing. Recently, planting of trees and fencing have been discouraged by the University security guards, exposing the gardens to animals and chickens as well as to pilferage.

Some gardeners swap seeds or buy their seeds, while others source their seeds from the office of the “Joy of Urban Farming” Program. The limited space has led the home gardeners to adopt strategies that maximize space, require less labor, and provide a variety of vegetables. Some of these strategies include:

- container gardening which makes use of repurposed styrofoam, fruit crates and all unused containers;

- vertical gardening in which plants in containers are mounted on either walls or fences one on top of each other to maximize the use of space and to save water by watering from the top container and letting the water drip down to the containers below;
- companion planting in which a raised plot or container is planted with two to three kinds of plants to ensure a variety of vegetables;
- bin composting using old pails or drums for collecting kitchen waste to decompose into organic compost;
- mulching by planting sweet potato (*camote*) as crop cover to discourage the growth of weeds;
- raised bed planting to ensure ample drainage;
- maximizing water use by collecting and saving rain water, as well as recycling kitchen and other household waste water; and
- preserving seeds through sharing or swapping with neighbors and friends who are also gardeners.

When asked where they learned these techniques, the respondents had varied responses. Of the 13 respondents, only five noted that they learned them from the seminars conducted by the DA extension workers and the trainers of the “Joy of Urban Farming” Program. Four respondents noted that they farmed during their childhood while the rest considered their knowledge as a result of common sense and a “trial-and-error” mode of learning.

As home gardeners, the common problems they encountered are: theft, pest infestation, non-germinating seeds, and lack of water during summer. However, the most pressing concern is the news of an eviction plan by the University as well as harassment from the University security guards who have begun to prohibit them from cultivating the land or erect fences for their gardens. They, thus, sought the assistance of the local official who authored the Barangay Resolution⁹ that allows residents to plant in unused spaces in the community. The local official wrote a letter to the University officials informing them that residents will plant vegetables in unused spaces in the campus by virtue of the said resolution.

Benefits from Home Gardens

When asked about the benefits of their home gardens aside from monetary rewards, the home gardeners had these to say:

- Lowered household food expenses

“Ang laki ng tipid sa gastusin sa pagkain. Dati, bumibili kami ng gulay, e ang gulay mas mahal pa sa isda.” (We save a lot on food expenses. Before, we bought vegetables more expensive than fish.) – Ester

“Ako nga noong wala pa ang garden ko di na ako bumibili ng gulay dahil mahal, kaya nagkakasya na lang kami ng lutong gulay. Pero ngayon kukuha ka lang sa likod-bahay at di ka na bibili.” (Before when I still didn’t have my garden, I didn’t buy vegetables because they were expensive; I just bought ready-cooked vegetables. But with my garden, I just pick the vegetables. I don’t have to buy them.) – Salome

“Dati ang kita napupunta lang halos sa pagkain. E, maliit lang ang kita kasi kaswal lang kami. Ngayon may income na, may pagkain pa.” (We used to spend a large portion of our income on food. We only earned minimum wages because we were just casual workers. But now we earn and have food besides.) – Hector and Jun

- Developed recycling and solid and water waste management practices for a cleaner and healthier environment

“Natuto akong mag-recycle ng mga bote, iba pang container, kaya walang kalat at kumonti ang basura namin. Dati sako-sako ang basura namin kada linggo.” (I learned to recycle used bottles and other containers, so less garbage. Before, we used to dispose of several sacks of garbage every week.) – Ester

“Mas malinis ang paligid dahil ang basura mula sa kusina ay ginagawa naming compost.” (Our surroundings are cleaner because we make compost out of our kitchen refuse.) – Cristy

“Natuto din kami mag recycle ng gamit na tubig tulad ng hugas-bigas at pinaghugasan ng isda para gawing fertilizer at pandilig, lalo na sa panahon ng tag-init.” (We learned to recycle waste water as fertilizer and for watering the plants, especially during the dry season.) – Salome

- Access to fresh and safer foods

“Natutugunan nito ang pang-araw-araw na gulay, sariwa at ligtas pa dahil walang kemikal.” (It [the home garden] provides us with a daily supply of fresh, safe and chemical-free vegetables.) – Olivia

“Ang saging, kamote at kamoteng kahoy ay mas masustansya kaysa bibili ka ng chichiria ng mga bata. Mas masarap dahil sariwa. Ikaw na lang ang didiskarte kung paano ang luto para di magsawa ang mga bata.” (Bananas, sweet potatoes, and cassava are more nutritious than buying store-bought snacks for the children. They are more delicious because they are fresh. It is up to you to be creative in cooking them so the children won't tire of them.) – Marie

- Improved quality of the surroundings and enhanced sense of well-being

“Ang sarap ng pakiramdam sa malamig na hanging dala ng mga halaman.” (The cool breeze brought by the plants boosts my mood and feelings.) – Edna

“Pag nakikita mong matataba ang mga halaman at luntian ang paligid, kalmado ka rin at nalilimutan ang mga problema.” (Seeing the plants healthy and the surroundings all green, makes you feel calm, too; and problems are temporarily forgotten.) – Hector

“Pag nagtatrabaho ako sa garden, mas malakas ako kahit senior citizen na. Ito na rin ang aking exercise bukod sa zumba sa Circle.” (I feel strong when I'm working in the garden despite being a senior citizen. This is my form of exercise aside from my regular zumba sessions at the [Quezon Memorial] Circle). – Verna

“Masarap ang pakiramdam na ikaw ang nag-produce ng iyong pagkain. Mabuti ito kesa sa mga luoy na gulay na tinitinda sa palengke na may spray lang ng malamig na tubig para magmukhang sariwa.” (It's a nice feeling knowing you raised you own food. This is better than eating wilted vegetables sold in the market which were sprayed with cold water to make them appear fresher.) – Dante

“Parang exercise lang, kaiba naman sa exercise ng gawaing bahay.” (It's like doing exercise, yet different from the exercise of doing housework.) – Ched

- A sense of community among home gardeners

“Dahil nga tabi-tabi ang plot namin dito sa tumana, madalas nagkakasabay kaming maglinis at nakakapagkuwentuhan tungkol sa mga pang-araw-araw na buhay, at mga pamamaraan sa pagtatanim.” (Since our vegetable plots are side by side here in the field, we often have the chance to chat with each other about daily life and about planting techniques.) – Didith

“Ako pag may nagpupunta dito sa bukid, binibigyan ko ng libreng gulay para matikman ang sariwa at ma-encourage na magtanim din. Ang iba nga natutuwa pag nakikita ang berdeng paligid at gusto ring magtanim, kaya binibigyan ko ng binhi.” (I give away free vegetables to those who visit the farm to encourage them to also garden. Others are delighted with the green surroundings and are encouraged to go into gardening, so I give them seeds.) – Nap

“Nagtutulungan kaming magkakapit-bahay—sa pagbibigayan ng ulam, pagtingin sa maliliit na bata kung may aalis at pagbibigayan ng mga gulay lalo na kung maraming ani. Nagpapalitan din kami ng mga binhi para di na bumili.” (We help each other as neighbors in many ways—exchanging viands, taking care of small children when one of us has to leave, and giving away garden produce especially when there is a surplus. We also exchange seeds and seedlings, so that we no longer need to buy them.) – Ched

Aside from these home gardeners interviewed, there are other women and men who are drawn into home gardening either in their spare time from reproductive or productive work. For instance, the driver of the barangay government in the UP Campus has planted a variety of vegetables at the back of buildings within the vicinity of the barangay hall. A group of women from Malinis St. in Area 17 who are beneficiaries of the “Joy of Urban Farming Project” has cleared a garbage dump and transformed it into a vegetable and herb garden and recently received an award for such initiative. The formation of seven chapters¹⁰ of the Joy Belmonte Volunteer Movement in Barangay UP that tend community and backyard gardens is another of the initiatives that show the feasibility and acceptability of home gardens as a strategy for food security.

Some Concluding Notes and Recommendations

Food insecurity is a major challenge to poorer households in urban settings. This particular study examined home gardens as a strategy for food security and found that home gardens, though small in size, play a crucial role in the household food security of informal settlers in urban settings. Thus, home gardening could be a food security strategy for the following reasons:

One, it increases the households' access to safe, nutritious, and sufficient food which cannot be met through market or store-bought food. Since food travels just a few steps from the home garden to the kitchen, households are ensured of fresh, safe, and nutrient-dense food. Likewise, with the use of home-made organic fertilizer, diversified plants, and sustainable gardening systems, the quality of food is ensured. Two, it becomes a reliable source of food supply for the households. Most of the households' daily food consumption is from the limited waged or salaried incomes of one or more members which are sometimes pooled together to constitute the household income. Prior to gardening, the households noted that a large portion of their pooled incomes were devoted to food consumption. With limited purchasing power, they would buy food on a retail basis which is expensive. With home gardening, however, they became less dependent on ready-made food from *sari-sari* stores and markets, eventually making food more affordable.

Three, the knowledge gained by the home gardeners in raising food attuned to seasonal requirements enables them to have sufficient vegetables, herbal plants, and root crops all year round. Their households are provided with a steady and continuous production and supply of home-grown food.

Four, it provides greener spaces in their immediate surroundings. The varied textures and colors of plants provide a sense of well-being that is therapeutic to the mind, body, and emotions. The greenery and the atmosphere provided by the gardens not only uplift the mood but likewise calm the mind, while working in the garden provides a workout for both the body and the mind. In addition, the practice of recycling household waste and refuse not only cleans the surroundings but offers health benefits as garbage is reduced and managed.

Fifth, the interaction of home gardeners, neighbors, and friends within the community fosters a spirit of solidarity and community

connectedness. The sharing and swapping of produce, seeds, and gardening knowledge and techniques strengthen the social networks and support system in the community. At the same time, knowledge on gardening gained through practice, common-sense wisdom, and informal education enables gardeners, especially the women, to reclaim their historic role as food producers.

And most importantly, engaging in home gardens and being at the center of their household food system provides these households with a measure of control over what food to produce and consume, and how to use them. Having control over production, utilization, and consumption of food produced from home gardens gives them a sense of empowerment.

Home gardening has a gender dimension, too. Majority of home gardeners are women. They are drawn into gardening primarily for food consumption and for the nutritional concerns of their families. On the other hand, only those men who do not have paid work are engaged in gardening, making it their primary livelihood. In terms of labor participation in home gardens, four patterns emerged from the study: (1) equal participation of labor in households where gardening is the primary source of livelihood for both women and men, while domestic work is relegated to older children; (2) zero participation of women in home gardens tended by men as their primary livelihood; (3) occasional participation of men in gardens where both women and men have regular paid work, while domestic work and watering the garden are relegated to older children during weekdays; and (4) zero participation of men with paid work in gardens tended by women who are full-time housewives.

The women, being primarily responsible for food preparation and consumption in the household are the ones pressured to look for food when it is not readily available. With women's home gardens, households are able to smoothen out fluctuations in consumption and incomes. Yet, such contribution is not distinctly recognized and valued because it is indirectly masked as part of the women's domestic responsibilities.

As gleaned from the study, home gardening is an important food security strategy of some informal settlers' households. The benefits of home gardens showed that it could be a development strategy to address food insecurity as well as in greening the urban surroundings. At the same time, it could be an integral component of resettlement programs and relocation plans and mechanisms. On the other hand, as competition for

space is a pressing concern of urban areas, home gardens could be factored in in the zoning and land use planning of local governments.

Since home gardens are independent initiatives of households out of economic necessity, these initiatives could be sustained, enhanced, and upscaled through partnership with local governments: 1) by facilitating access of urban households to resources—unused public land and cheaper water costs; 2) by providing technical support to upgrade the gardeners' knowledge and skills in agriculture; and 3) by creating a conducive policy environment for these home gardens to thrive. Further, the government could assist these home gardeners to upscale production by opening more spaces for individual and communal gardens. In line with this, the former could act as mediator or guarantor between the latter and owners in entering into agreement for the temporary use of vacant and unused private land. The local government could also assist by facilitating better markets for the gardeners' produce. Moreover, since majority of those engaged in home gardens are women, provision of day care services would be beneficial to them. On the other hand, organizing these home gardeners is deemed necessary especially when production is geared towards upscaling. Finally, for a truly empowering partnership, a mechanism for participation of home gardeners, especially women, in decision-making over urban gardening/farming, zoning, and land-use planning must be instituted.

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End Notes

¹The Global Hunger Index (GHI) is a tool that comprehensively measures and tracks the hunger situation in a country using four components: undernourishment, child wasting, child stunting, and child mortality. It was developed by the International Food Policy Research Institute (IFPRI). The index notes that as a country scores higher, it faces higher hunger problems based on these measurements: >9.9 score = low level of hunger; 10-19.9 = moderate level; 20-34.9 = serious level; 35-49.5 = alarming level.

²The “Zero Hunger Bill” was filed by Sen. Aquilino (Koko) Pimentel III in 2014 at the higher chamber of Congress. Adopting a rights-based legal framework for food programs, the bill frames the food issue not as a charity but rather an entitlement concern. A similar bill (HB 61) was simultaneously filed by Representatives Karlo Alexei and Jericho Jonas Nograles in the Lower House of Congress (Micalat-Teves, 2016).

³“The right to adequate food is recognized under Article 25 of the Universal Declaration of Human Rights (G.A. Res. 217 A (III), U.N. Doc. A/810, at 71 (1948)), and under Article 11 of the International Covenant on Economic, Social and Cultural Rights (adopted on 16 December 1966, G.A. Res. 2200(XXII), U.N. GAOR, 21st sess., Supp. No. 16, U.S. Doc. A/6316 (1966), 993 UNTS 3), as interpreted by the Committee on Economic, Social and Cultural Rights (General Comment No. 12: The right to adequate food (1999), UN doc. E/C.12/1999/5). The Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security, adopted by the FAO Council in November 2004, provide practical guidance addressed to all States for the implementation of the human right to adequate food” (World Bank, 2008, p.18).

⁴The Sustainable Development Goals (SDGs) or Global Goals consist of 17 development agenda set to be achieved by 2030. These goals took effect in January 2016 and are built from the achievements of the Millennium Development Goals (MDGs). These are considered a universal call to action to end poverty, ensure prosperity and well-being for all people, and protect the environment (UNDP, n.d.b.).

⁵These targets include: (1) ending hunger and ensuring access, particularly for the poor and vulnerable, to safe, nutritious, and sufficient food throughout the year; (2) ending all forms of malnutrition among children and addressing the nutritional needs of women and girls in the different stages of the life cycle; (3) doubling agricultural production and incomes of women and men small-scale food producers through access to land and other productive resources, related services and opportunities for added value and non-farm employment; (4) ensuring sustainable food production systems and agricultural practices that increase production, that help maintain the ecosystems, that increase capacity for adaptation to climate change and other extreme weather events, and that improve soil and land quality (UNDP, n.d.a.).

⁶HB 2818, An Act Promoting Integrated Urban Agricultural Development was formerly filed as HB 5597 in the 16th Congress and was re-filed by Rep. Estrellita Suansing in the 17th Congress. It aims to institutionalize integrated urban farming in urbanized cities and municipalities in the country; while HB 4354, An Act Promoting the Use of Urban Farming in the Metropolitan Regions to Address Food Security Concerns Establishing Ecological Community Functions and for other Purposes, was filed by Rep. Michael Romero in the 17th Congress to highlight the utilization of inactive, unused, and abandoned government lots and buildings owned by the national and local governments as well as other available land areas in state colleges and universities for urban farming, particularly in growing crops, raising livestock, and producing food.

⁷These include: Pook Arboretum, Ricarte, Dagohoy, Palaris, Sumakwel (Area 1, 2, and 3) in the North sector and Area 17, Amado V. Hernandez (Village A, B, and C), C.P. Garcia, Daang Tubo, Purok Aguinaldo (including Hardin ng Rosas and Bougainvilla), Libis/Libis Annex, and Sikatuna BLISS in the South sector.

⁸For consideration of confidentiality and to maintain their anonymity as they fear threats from the security guards of the University, the real names of respondents were not used.

⁹Barangay Resolution #076 Series of 2013 (*Barangay Resolusyon Para sa Pagpapatupad ng Programang Pangkabuhayang Pagtanim ng Ibat-Ibang Uri ng Halamang Gulay sa mga Bakanteng Espasyo/Lugar sa Bawat Pook na Nasasakupan ng Barangay UP Campus*) was passed on March 6, 2013 and authored by Kag. Zenaida Lectura. The resolution promotes gardening in unused spaces as a source of livelihood.

¹⁰These include Area 17, Daang Tubo, Libis, Malinis, Purok Aguinaldo, Village A and C.

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