



# URBAN AGRICULTURE falls short of reducing hunger in South Africa's informal settlements

Photo: Lettuce Grow, Unsplash

South Africa is facing a food insecurity crisis. According to the United Nations, 45% of the population was facing moderate or severe food insecurity between 2018 and 2020. Determining the most effective ways to support low-income households is critical, particularly in response to COVID-19. Despite receiving considerable attention from urban decision-makers, urban agriculture in informal settlements in the Western Cape does little to keep hunger at bay, a recent study found. By *Andrea Teagle*

Urban agriculture has intuitive appeal as a tool for reducing poverty. On the face of it, backyard gardens are a direct means for low-income households to supplement their food consumption.

The Department of Agriculture in the Western Cape's Farmer Support and Development Programme provides assistance for urban agriculture in a number of informal settlements. However, previous research has revealed mixed results on the impact of urban agriculture on food security in South Africa.

Dr Jan Swanepoel and Prof Johan van Niekerk of the University of the Free State, and the HSRC's Dr Precious Tirivanhu set out to investigate the impact of household food gardens on low-income households in Cape Town.

The team recruited 154 farming households in the Cape Town informal settlements of Kraaifontein, Khayelitsha,

Philippi, Mitchell's Plain, Bonteheuwel and Gugulethu to take part in the [study](#). These households all benefitted from the government-funded food gardening project. The study also included a control group of 66 randomly selected households that did not grow food gardens.

Participants completed a survey that included questions about food security and income, and related to gardening, such as what kinds of vegetables their households grew (if any) and whether they had access to water, markets and government support programmes.

## Who engages in urban agriculture?

The farming households grew a variety of vegetables. Spinach was most popular for both male- and female-headed households. Maize is an almost surefire indicator of a male-headed household, with just 1.7% of female farmers growing it compared to 11% of men. The authors

speculate that this finding might reflect the relatively intensive labour involved. Other commonly grown vegetables included cabbages, onions and carrots.

To what extent were these gardens benefitting the growers, either by directly supplementing their diets or adding to their incomes?

To answer this, Swanepoel and his colleagues needed to account for factors that influence whether households grow vegetables, because these might independently affect the household's food security.

A [previous study](#) showed that access to sufficient land, gender of the household head and distance to markets where produce could be sold are the most significant factors that affect households' decision to grow food gardens. Based on these factors, the research team used an analysis method known as 'propensity score matching' to calculate the probability that each household would engage in farming. They then matched each farming household with its 'twin' – the non-farming household with the closest probability score – and compared average income and food security across the pairs.

The researchers found that on average, the total value of the food consumed by farming households was slightly higher than that consumed by non-farming households. However, farming had no significant impact on food access, dietary diversity or income, and did not significantly reduce food insecurity, which affected over 75% of farming and non-farming households in the study.

### Food insecurity

The UN's *State of Food Insecurity and Nutrition in the World 2021* report found that close to half of South Africa's citizens are experiencing moderate or severe food insecurity; 12% are experiencing severe insecurity. Undernourishment affected 6.5% of the population between 2018 and 2020, and almost a quarter (23%) of children under the age of 5 years were stunted. South Africa was analysed as one of 20 countries experiencing a food insecurity crisis, exacerbated by drivers such as economic downturn and climate extremes.

The [NIDS-CRAM](#) household survey (a national survey tracking the impacts of COVID-19) showed that food insecurity increased significantly during the lockdown. Household hunger levels remained '[disturbingly high](#)', according to the authors of the corresponding [policy report](#).

According to the UN report, transforming food systems to address food insecurity depends on two broad categories of accelerators: effective governance and institutions, and access to technology, data and innovations.

A [2017 study](#) of food governance in South Africa found that a promising holistic approach reflected in the policy framework broke down into 'technical, one-dimensional problem framing' during implementation. Additionally, departments tended to work separately and inflexibly, without including those most affected by food insecurity.

Studies in low-income countries, including in sub-Saharan Africa, find that [urban agriculture can help to supplement diet](#) and income in some settings. However, the findings of the University of the Free State and HSRC study underscore the importance of policy decisions based on localised evidence. The authors conclude that policy-guiding research should be undertaken on sustainable urban agricultural systems and production of high-valued produce on small areas.

Additionally, job creation in informal settlements and [continuation of social grants](#) implemented during COVID-19 are critical to alleviating poverty and heightened food insecurity.

### Definitions (Source: UN)

*Undernourishment:* Where an individual's habitual food consumption is insufficient to provide the amount of dietary energy required to maintain a normal, active, healthy life.

*Severe food insecurity:* The level of severity of food insecurity at which people have likely run out of food, experienced hunger and, at the most extreme, gone for days without eating, putting their health and well-being at grave risk.

*Moderate food insecurity:* The level of severity of food insecurity at which people face uncertainties about their ability to obtain food and at times during the year have been forced to reduce the quality and/or quantity of food they consume due to lack of money or other resources. This lack of consistent access to food diminishes dietary quality, disrupts normal eating patterns, and can have negative consequences for nutrition, health and well-being.

**Author:** Andrea Teagle, a science writer in the HSRC's Impact Centre [ateagle@hsrc.ac.za](mailto:ateagle@hsrc.ac.za)

**Research contact:** Dr Precious Tirivanhu, an African research fellow in the HSRC's Developmental, Capable and Ethical State research division [ptirivanhu@hsrc.ac.za](mailto:ptirivanhu@hsrc.ac.za)