

# CITY FARMS

Food security is a far-reaching issue linked to rapid urbanisation. Urban farming is a response to the challenges of feeding a growing urban population, while also greening a city.

WORDS FRANCINI VAN STADEN



© Angus D. Campbell



© iStockphotos



© iStockphotos

The United Nations (UN) Food and Agricultural Organisation (FAO) considers South Africa as food secure. This is largely based on the country's staple food production and its ability to import food when needed. South Africa's per capita food supply has increased in the past two decades, according to the FAO, in line with the country's food security strategy. But this does not necessarily reflect the situation on the ground when it comes to food on the table for individual families, or the difficulties some experience in gaining access to food.

According to the South African Cities Network, 77.31% of South Africans living below the minimum living level live within 60km of the country's main cities. Parallel to this rural-urban population shift, food insecurity has become more pronounced in the urban environment.

Unpublished 2013 research by Dr Jane Battersby-Lennard of the University of Cape Town's African Centre for Cities shows that "where moderately and severely food insecure categories were considered together, it accounted to 76% of the 2500 Cape Town low-income households surveyed."

Food insecurity, however, is not limited to low-income communities. "For middle income areas, we found just under 20% of households to be moderately to severely food insecure," she adds.

### URBAN FARMING POLICIES

Urban farming includes the production, processing, marketing and distribution of crops, livestock and other agricultural products within an urban environment, while relying on resources that are readily available in the urban context. Linked to food

security, urban farming becomes a social issue, which extends to city sustainability.

"We believe urban farming is extremely important for so many reasons: local community resilience; making people less vulnerable to energy, food and fuel price hikes; social cohesion; and so on," says Leigh Brown, founding member and director of SEED in Cape Town.

South African urban land use planning over the last two decades has started to incorporate urban farming strategies in response to booming urban populations and associated socio-economic challenges.

The City of Cape Town introduced its first urban agricultural policy in 2007. According to the policy, urban agriculture will form an integral part of future development planning.

Durban also boasts a pro-urban agriculture policy, carried out by the regeneration of public spaces within the city as food gardens.

The City of Johannesburg is implementing its first urban agriculture policy, in accordance with the city's larger food security initiative. "The City of Johannesburg is in the process of rolling out regional Agri Resource Centres that aim to provide information for any farmer (including help in registering their food garden)," says Angus Campbell of the University of Johannesburg's Department of Design. "This will provide one-on-one information for potential farmers from experts." Campbell is a coordinator of Izindaba Zokudla, a Design Society Development (DSD) project under the guidance of the university's Faculty of Art, Design and Architecture.

### URBAN FARMING IN SOUTH AFRICA

Cape Town has many well-established urban farms. The Abalimi Bezekhaya (Farmers of Hope) project has over 3000 women farmers. Local NGO Soil for Life has been advocating urban agricultural projects in Cape Town for over a decade. SEED, located in Mitchell's Plain on the Cape Flats, was established 12 years ago, and continues to pioneer community-based food production. Then there are the Philippi urban farmers, and the prominent Oranjezicht City Farm (OZCF).

Described as a community garden, OZCF produces over 25 varieties of vegetables and fruit, many of

them heirloom and heritage varieties, on roughly 700m<sup>2</sup>.

The OZCF "is an important way that we can come to understand and deal with a multitude of urban issues that is constructive, collaborative and sustainable," says Sheryl Ozinsky of the farm's management team.

Johannesburg and surrounds include the Bertrams Inner City Farm where organic vegetables, fruits and herbs are cultivated. In the Bezuidenhout Valley Park one finds the Siyakhana Food Garden Project. The Izindaba Zokudla (Conversations about Food) – Innovation in the Soweto Food System project is working with about 30 farming sites within Soweto, located on school premises and community grounds.

"Some of these farms are up to a hectare, located on the outskirts of Soweto, while others are about the size of a tennis court. Their produce varies between spinach, morogo beans and tomatoes, even coriander in some regions," says Campbell.

Durban has urban farming initiatives that extend over the last two decades. A 1992 survey by Smith and others, published in *Urban Agriculture Magazine*, recorded that 25% of households in the expanded eThekweni municipal region were actively participating in farming at urban household level. Today, urban farming has taken root in Durban's city centre as part of corporate, social and community projects.

Durban's Urban Management Zone (UZM) includes the UZM Roof Top Farm, which was showcased at COP17. A small piece of public open space adjacent to the busy Mynah Bus Rank now boasts an established pawpaw farm. Durban's City Parks department initiated a food garden adjacent to the City Hall. Known as the City Hall Vegetable Garden, conventional inner city landscaping has been transformed into a food producing garden, encouraging citizens to start their own. Corporate groups are catching on as well – the Mr Price Group in Durban has taken inspiration from the UZM Roof Top Farm and has transformed the unused roof of the Durban Station into a functional food garden.

### TALKING START-UP AND CHALLENGES

Contemporary urban land use, planning and developing for urban farming means navigating several obstacles. As is the case in any other land use

01



02



03



04



© Angus D. Campbell

© Coco Van Oppens

**01.** SEED (Rocklands, Mitchell's Plain): An initiative that provides roots for community investment

**02.** Siyakhana (Bez Valley, Johannesburg): Brings fresh food to the city centre

**03.** Oranjezicht City Farm (Cape Town): A project at the heart of a weekly market

**04.** Izindaba Zokudla (Soweto): Cultivates about 30 farming sites in the area

**05.** UZM Roof Top (Durban): Corporates provide inspiration through rooftop gardens

05



© Greg Lomas

development, planning and processes are necessary. But what is an administrative task for an urban developer becomes a challenge for urban farming projects, which are usually headed by volunteers.

Through a process of multi-stakeholder workshops, the Izindaba Zokudla initiative engaged with Soweto farmers, local government departments, NGOs, businesses and academic institutions. “We’ve identified the four key challenges for urban agriculture in Johannesburg,” says Campbell. These are land tenure, marketing, technology and education.

Land tenure and access to urban land are key challenges as local government typically owns urban properties suitable for farming, such as vacant plots or school grounds. “In order to negotiate official leases, farmers are required to follow a rather onerous administrative process of officially registering their farm as a food garden,” explains Campbell.

But official progress has been made. “The City of Johannesburg has put in place a process for farmers to negotiate the use of government land,” he adds.

OZCF in Cape Town faced similar difficulties. “The site that the farm occupies is a Provincial Heritage site. The founding volunteers had to comply with a range of legal requirements from Heritage Western Cape, including an Archaeological Sensitivity Report, site survey, business plan, public stakeholder meetings and more,” explains Ozinsky.

In September 2012, the City of Cape Town Parks Department entered into a Co-operative Agreement with the OZCF, allowing them to establish a community vegetable garden on the disused bowling green. Although they had the backing of the city’s urban agricultural policy, the policy still needs to evolve.

To be successful, urban farming cannot merely replicate large-scale rural farming practices. “The majority of agricultural research and development in the South African context has focused on large-scale farming,” says Campbell.

This creates challenges, but also new opportunities. A key focus of the Izindaba Zokudla project is to “co-create appropriate technologies for Soweto farmers to increase productivity in a sustainable manner and on limited land, through design”, he says, adding that various departments

of the University of Johannesburg are currently developing such technologies.

### SCALE & PRACTICAL FARMING

Undertaken at different scales, urban farming can serve various communities and economic sectors. “Our home garden projects involve a hundred individual home farmers and provide for individual families, while the group gardens offer retail produce,” says SEED’s Brown.

Wim van Averbeke of Tshwane University of Technology’s Centre for Organic and Smallholder Agriculture points out that hand cultivation limits the scale of operation of urban farms. “I would say the upper limit for hand cultivation would probably be 1000m<sup>2</sup>,” he explains. “Anything above this would require mechanical cultivation.” But mechanical cultivation is expensive, and has implications for the financial sustainability of urban farming projects.

There is also the issue of preparing the land for cultivation. “Most of the land in cities needs careful regeneration,” says Campbell. “A small amount of soil preparation effort, coupled with agro-ecological principles, can enable years of productivity – without the need for additional fertiliser expenditures.”

Soil & More International promotes the optimal use and management of natural resources in an urban context. “Cities are the dead-end of the food chain, which used to be a closed cycle. Tons and tons of organic matter ends up at landfill sites, while many cities depend on imported food,” says Aart van den Bos, managing partner of Soil & More International, which provides micro-scale composting solutions for urban farmers.

An integral part of urban farming is local, small-scale composting or biomass recycling for generating compost. This is the basis for improving soils and growing food. Carefully developed composting methods should be applied that maximise the output while minimising pollution and contamination risks,” he says.

SEED believes in applicability. “The large focus of our work in Mitchell’s Plain is to demonstrate applicable urban farming,” says Brown. “Food production is tricky. You’re not going to get kilograms of food from a small garden. We’re also looking at the range of food people eat, and its nutritional value.”

Applying technology is central to success. “Technology, whether in the form of tunnels, automated irrigation, composting or aquaponics, can sustainably intensify production on even a small area of land,” explains Campbell.

## WHO BENEFITS?

Urban farming should aim to benefit the surrounding residents and communities. The UMZ Roof Top farm’s produce “goes to charities in and around our area, including the Durban Children’s Home, the Nest Shelter and The Association for the Aged,” says Wendy Gibson-Taylor, UMZ senior facilities manager of the eThekweni Municipality’s Architectural Department. Locals passing by the Mynah Bus Rank benefit from the pawpaw farm produce.

Other farms sell their produce via Farmers’ Markets to the public. At OZCF, the public can pick fresh produce from the farm or buy produce on market days. OZCF also sells to local restaurants. Urban farming provides nutrient-dense food, which is healthier for those who are able to benefit from the produce.

Where economic viability lacks, there is the added social and community benefit of urban farms. For OZCF, having established this project on public land with volunteer labour and minimal funding, “we can now provide mentoring, administrative support, education and additional resources to help catalyse and inspire other groups who are keen to create similar projects in different communities”, says Ozinsky.

“There is evidence that urban agriculture projects can increase social cohesion, which ensures social sustainability,” adds Battersby-Lennard.

Aside from being a key driver of sustainable cities, urban farms have the potential to re-green our cities. “There is certainly a case for urban farming reclaiming and rehabilitating previously abandoned urban spaces,” she says.

Being sustainable means involving the community. “We receive bokashi (Japanese for fermented organic matter) kitchen waste from many residents and local restaurants. An anaerobic fermentation process, rather than composting,



© Liezel Malherbe/ 9Lives.co.za

bokashi is very easy, and is generally odour-free,” explains Ozinsky. Their bokashi programme provides residents with a bucket and lid, and bokashi mixture. The residents add their organic waste, and return their mixture to the farm. Besides educating the community, “organic waste tossed into garbage makes up a considerable portion of the total waste stream that ends up in the landfill,” she says.

Linking urban farms to sustainable cities also means changing how we see resources. “As urban citizens we need to realise that there is no organic waste, it’s a resource that should be used, recycled to re-build soils, even on small scales,” explains Van den Bos. “Urban farms produce food locally within the city context, but on the other hand, urban farms need to take care of the necessary natural resources.”

It’s important to develop urban farms based on ecological principles. Where these principles are applied, “urban farming will rehabilitate soils, and provide a means to reduce flooding through slowing the water flow and promoting infiltration of water,” says Battersby-Lennard.

## THE DICHOTOMY: URBAN FARMING AND FOOD INSECURITY

Urban farming may seem to be the perfect opportunity to alleviate urban food insecurity while creating a sense of community, but empirical work is raising uncertainty.

“Why do we assume that if people have access to fresh produce, that they’re going to eat it?” asks

OZFC Market happens weekly with fresh produce on sale.

“

Group gardening has greater potential for food security due to increased plot size, the availability of water and more likelihood of support from government and NGOs.

- WIM VAN AVERBEKE

”

Leonie Joubert, science writer and author of *The Hungry Season*. “Truth is that in the context of urban farming projects aiming to support the food insecure, many won’t make use of fresh produce for reasons that are complex, rational and often intractable. Reasons are linked to culture, biology, city geography, marketing, time, monetary budgets and more,” she adds.

Battersby-Lennard agrees: “Our 2008 survey for the African Urban Food Security Network in the City of Cape Town found that just 2.3% of households in the sampled low income areas ever sourced food from their own production, compared to 7.5% and 9.6% for middle and high income areas. Our 2013 survey (as yet unpublished) recorded the same scenario. This is consistent with international literature, which indicates that it is not the poorest households that are engaged in household food production.”

Urban food issues are hugely complex – and urban farming as a food security strategy cannot resolve these issues in isolation.

But scale is important. “Group gardening has greater potential to contribute to food security,” says Van Averbeke. “This is due to increased plot size, the availability of irrigation water and the greater likelihood of material and advisory support from government and NGOs. Upscaling and the provision of irrigation water are push factors that can enhance the contribution of urban farming to livelihoods in

general and food security in particular.”

For South Africa, food insecurity is becoming an urban issue. “If we extend our understanding of what urban farming is, offer trader support and buffering against seasonal price fluctuations, there is evidence that urban farming contributes to food security,” concludes Battersby-Lennard.

Where incorporated as a component of urban planning, urban farming fosters part solutions for various urban and development challenges, including revitalising neglected space and community involvement – fostering more resilient communities and cities. “We are finding that urban farming is recreating a sense of (urban) place,” concludes Brown.

We are seeing more and more South African urban farms that can be utilised by families in need. Yet, obstacles – from land tenure, practical farming, economic and social complexities, and preferences – are standing in the way of urban farming as a solution to urban food insecurity. To remain intrinsically sustainable and feasible in the long term, the deep-rooted urban food complexities of our cities need specific attention from the professional industry, academic environment, and city administration, if community members are to really benefit.

Responsive solutions are arising though – sustainable soil solutions, social development designed initiatives aimed specifically at bridging these obstacles – all edging forward for meaningful urban farming. ◉

## SOURCEBOOK

- eThekweni Municipality's Architectural Department • Wendy Gibson-Taylor • 031 332 0441 • Wendy.GibsonTaylor@durban.gov.za
- Izindaba Zokudla (Conversations about Food) • Angus Campbell & Naude Malan • 011 559 1390 •  
[www.designsocietydevelopment.org/project/izindaba-zokudla](http://www.designsocietydevelopment.org/project/izindaba-zokudla)
- Oranjezicht City Farm • Sheryl Ozinsky • 083 628 3426 • sheryl@ozinsky.co.za • [www.ozcf.co.za](http://www.ozcf.co.za)
- SEED • Leigh Brown • 021 671 6912 • leigh@seed.org.za • [www.seed.org.za](http://www.seed.org.za)
- Soil & More International • Aart van den Bos • 031 174 625 344 • aart.vandenbos@soilandmore.com • [www.soilandmore.com](http://www.soilandmore.com)
- The Hungry Season: Feeding Southern Africa's Cities* • Leonie Joubert • 021 685 8971 • leonie@scorched.co.za
- Tshwane University of Technology: Centre for Organic and Smallholder Agriculture • Wim van Averbeke • [www.tut.ac.za](http://www.tut.ac.za)
- University of Cape Town: African Centre for Cities • Dr Jane Battersby-Lennard • [www.africancentreforcities.net](http://www.africancentreforcities.net)