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NEWS RELEASE

UP's Giving Garden helps community gardeners think differently about growing edible plants

Sonique Deysel and Junhao Fu, second-year students from the Department of Consumer and Food Sciences, harvesting Jerusalem Artichoke flowers in the Giving Garden.

Pretoria - The University of Pretoria's Giving Garden remains true to its name. In 2024 it provided around 100 community food gardens in Gauteng with free cuttings, seedlings and tubers of lesser-known and easily grown crop plants. Situated in the heart of the Manie van der Schijff Botanical Garden on the Hatfield Campus, it is also a valuable space for practical training and research on edible orphan and indigenous crops for UP students and staff.

The 2300m^2 garden is a "living library" of lesser-known crop species, and a "supply store" to home and community gardeners who want to cultivate such edible plants in their gardens. Visitors are encouraged to take plant material,

as sharing is central to the garden's philosophy.

"Our Giving Garden is both a living garden and a philosophy, through which we introduce gardeners to the potential of orphan and indigenous crop plants as sources of food," says Richard Hay, Curator of the Future Africa Indigenous and Orphan Crops Collection at the Manie van der Schijff Botanical Garden.

Orphan crops

Orphan crops were in the past grown for food, but nowadays are seldom cultivated due to various sociopolitical and socioeconomic factors. Such plants' genetic and phytochemical diversity, knowledge about their cultivation, and the heritage they represent are therefore at risk of being lost forever. Over the past century, approximately 75% of the world's crop agrobiodiversity has already been lost. Only six crop species now make up 58% of all agricultural produce grown worldwide.

"Orphan crops were historically domesticated for and by the use of people, without access to the myriad inputs required to produce modern food crops," says Jason Sampson, Head Curator of UP's Manie van der Schijff Botanical Garden and an expert on alternative crops and sustainability practice. "Such plants are thus eminently suited to an agricultural practice that is closer to nature."

Hay and Sampson started the Giving Garden in 2022 on land previously used for flower identification studies. They selected some of the 250 species growing in a specialist collection housed in the Future Africa Campus Orphan and Indigenous Crop Collection (itself Sampson's brainchild, with Hay as curator).

Community outreach

"We are always trying to propagate as much crop material as possible with the biggest potential to feed communities," Hay says. "This is done in consultation with communities, to make sure that they would like to grow and eat such plants. This requires interaction with community groups to raise awareness about agro-biodiversity. We help them select crops that are fairly low maintenance and easy enough for even beginner gardeners to grow, yet still yield enough to eat."

Plant material is donated regularly to community gardeners, such as those supported by the ABBA Embrace Foundation, an NGO that supports community food gardens to improve household food security.

The most recent donation, in December 2024, was of chaya (*Cnidoscolus aconitifolius*) cuttings. This small, hardy South American tree spinach has protein-rich leaves and is very pest-resistant. It's one of the few plants that produces an abundance of edible leaves, which can shade each other out and slow growth.

"The domesticated form is reliant on human intervention. It must be cropped regularly to grow well, or else it stunts itself," Sampson explains.

The garden also houses leafy vegetable Brassica species such as Ethiopian Kale and Mutshaina (a leaf vegetable from Venda), Egyptian Walking Onions (an ancient Silk Road hybrid between the common bulbing onion and the spring onion that produces bulbs on flower stalks instead of seed), Sunchokes (a North American tuberous sunflower), Tsenza (*Coleus esculentus*, an indigenous African root vegetable that was once hugely important to people in Southern Africa before being replaced by such crops as potato and taro), water chestnuts (*Eleocharis dulcis*, an aquatic vegetable native to Asia naturalised in South Africa), water spinach (*Ipomea aquatica*), Kenyan cabbage tree (*Moringa stenopetela*) and Kei apples (*Dovyalis afra*).

Learning space

UP's Consumer and Food Sciences Department uses the garden's plants for teaching purposes and is set to start consumer taste preference trials on some crops. It provides a practical research space for Future Africa researchers interested in, among others, climate-hardy plants and crop interaction using different kinds of leafy vegetables. It is also a teaching and learning space for second-year students doing practical work as part of the undergraduate module in agroclimatology and sustainable crop production systems.

"Students are tasked with growing a crop in a little plot and making a vlog of their learning journey during the course of a semester," Hay explains.

Staff involvement

Earlier this year, UP professional services staff were part of a focus group and tasting session organised through the Transformation Office. Their input on the acceptability of some leafy vegetable cultivars will inform future planting and propagation work.

"The Giving Garden coordinates a skills transfer opportunity for staff and students looking to grow their own food, while facilitating the inclusion of often marginalised members of the University community into research projects that address issues related to their work, everyday lives and their overall well-being. It is a renewed approach to social justice interventions that is holistic, inclusive and affirming," says Tumelo Duke Rasebopye, a Diversity and Inclusion Specialist in the UP Transformation Office.

Sharing the message

Sampson and Hay run workshops and readily provide advice to home and community gardeners and small-scale farmers looking to diversify their cropping options. They recently started writing a column about the cultivation of orphan species for the Botanical Society of South Africa's website, aptly named 'The Giving Garden'.

"In two short years, the 'giving gardens' concept has become part of the 2030 University of Pretoria Spatial Development Plan," Sampson says. "Similar developments on all UP campuses are expected, guided by the successes and lessons learned from the original Giving Garden on the Hatfield Campus."

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ABOUT THE UNIVERSITY OF PRETORIA

The University of Pretoria (UP) is one of the largest contact and residential universities in South Africa, with its administration offices located on its Hatfield Campus in Pretoria. This 115-year-old institution is also one of the largest producers of research in South Africa.

Spread over seven campuses, it has nine faculties and a business school, the Gordon Institute of Business Science (GIBS). It is the only university in the country with a Faculty of Veterinary Science, which is ranked the best in Africa. UP has 120 academic departments and 92 centres and institutes, accommodating more than 56 000 students and offering about 1 100 study programmes. It has the most academic staff with PhDs (70%), NRF-rated researchers (613).

The 2025 Times Higher Education subject rankings placed UP first in South Africa in the fields of Accounting and Finance; Architecture; Electrical and Electronic Engineering; Law; Sport Science; and Veterinary Science. UP's Faculty of Law has been ranked as the top law school in Africa for a remarkable eighth consecutive year.

Quacquarelli Symonds (QS) ranked the University among the top five in Africa, as part of their 2024 World University Rankings (WUR). UP was the only South African university featured in the 2023 World University Rankings for Innovation (WURI), falling within in the 101-200 range of innovative universities.

For more information, please go to www.up.ac.za