

Pick n Pay spruces up fresh produce retail with in-store vertical farms

Pick n Pay is the first big supermarket chain in South Africa to launch in-store 'vertical farm' displays to show customers a sustainable and locally-grown modern farming solution. The vertical farms will grow various lettuce leaves and herbs from seeds, right in Pick n Pay's fresh produce section.



Pick n Pay Constantia. Source: Supplied

This farming method display in-store is a growing trend globally with supermarkets in Europe and US, such as Marks & Spencer (M&S) and Whole Foods Market, introducing grown in-store leaf.

Flagship stores Pick n Pay On Nicol in Sandton and Pick n Pay Constantia in Cape Town are the first stores to pilot the vertical farms.

Connecting consumers to farming

Vertical farming is a sustainable and low carbon farming method using 95% less water, 85% less fertiliser and no pesticides.

Liz van Niekerk, head of produce and horticulture at Pick n Pay, says the displays should pique the interest of and strongly appeal to environmentally-minded customers, but especially the youth, who will be able to see first-hand how produce grows

and help connect them more to farming.

“Understanding the provenance of our food is really important, and having the opportunity to share this environmentally friendly way of delivering delicious, safe and sustainable produce with our customers, while they shop, is a huge opportunity.”



Francois van der Merwe, CEO Can-Agri with PnP CEO Pieter Boone. Source: Supplied

Can-Agri partnership

The initiative is in partnership with Can-Agri – a vertical, hydroponic, greenhouse farm in Pretoria – which has been a supplier to Pick n Pay for over three years, supplying produce under the PnP label.

The Pick n Pay-Can-Agri in-store vertical farm has eight vertical ‘growing stacks’, each containing 10 plants, and will be a method demonstration of Can-Agri’s commercial facility which has 24 rows with 200 ‘growing stacks’ spanning 6 metres high. While Can-Agri maximises sunlight from its greenhouse, grow lights will be used in-store as the produce won’t have exposure to natural light.

While customers won’t be able to buy produce directly from the in-store vertical farms, Can-Agri will supply a new range of products, pre-packed in punnets made from recycled plastic, from its farm. This will include an assortment of salad leaves with different lettuces and herbs, whole baby butter lettuce heads and cos leaves.



Can-Agri Pretoria. Source: Supplied

Meeting future food demands

Francois van der Merwe, CEO: Can-Agri, says the in-store initiative is a great platform to create more awareness for vertical farming and educate customers about this innovative farming method.

Can-Agri is a South African innovation using its own, globally patented technology. Its 3,200m² growing area has the capacity to grow 384,000 plants. “We’ve harnessed innovative technologies to produce food more responsibly and efficiently, to meet the challenges and demands of years to come,” says van der Merwe.



Can-Agri Pretoria. Source: Supplied

According to [the United Nations](#), the global food supply will have to increase by 50% by 2050 to accommodate the projected demand for the world’s growing population. At the same time, there is an urgent need to cut greenhouse gas emissions but agriculture is one of the greatest contributors to global warming accounting for [24% of greenhouse gas emissions](#) worldwide.

Van der Merwe says that vertical farming is expected to [grow by 25.5%](#) over the next eight years due to the increased demand for urban agriculture and adoption of environment-friendly production of fruit and vegetables.

Van Niekerk adds that Pick n Pay is always looking for alternatives to lessen its impact on the environment, and vertical farming is a way to help increase food supply of certain produce, in a more sustainable way.

Technology-driven, low-energy and sustainable

Van der Merwe explains they grow their produce in a controlled sustainable environment which maximises viability to avoid food waste. “Everything is monitored, from seed to packet.”

Seedlings are grown in seed trays using bio-degradable baskets for three weeks in the nursery greenhouse before they are transplanted into grow tubes in the main greenhouse which has 24 rows spanning 6 metres high. Each row has 200 ‘growing stacks’ that grow 80 plants each.

“The growing stacks are strategically spaced in rows to allow for maximum sunlight. Purified, oxygenated, nutrient-rich water is fed through the top of the grow tubes, it then gravitates down through the tubes flowing over the roots of the plants and is recycled in a continuous closed-loop system.”

The growing stacks are also used to control the climate in the greenhouse. The nutrient-rich water is either cooled or heated, and the grow stacks perform the function of a giant radiator by maintaining an optimum climate.



Pick n Pay On Nicol. Source: Supplied

He says their farming method also trebles the product's shelf life. "Our produce is free of soil or insects so we don't wash the produce. The normal washing process bruises and damages the produce, shortening its shelf-life".

"The controlled growing environment delivers a consistent product and means we only harvest what is ordered. Our technology also helps us do many short growing cycles (three weeks) without any negative effect on our production output. Harvesting a younger plant also helps us deliver flawless leaves that just taste better."

A QR code will be added onto the packaging later this year to let customers track their produce from seed to table.

"Customers will be able to see where their food was grown, when was it planted, what were the environmental conditions it grows in, what nutrients it received, when was it harvested, packed, and supplied to the store," says van der Merwe.

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