

# Pure Food Tech's Pioneering Step for UAE Food Security

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Located in the United Arab Emirates, Pure Food Technology is leading the way with a groundbreaking innovation in vertical farming. This avant-garde technology marries solar power, hydroponics, robotics and artificial intelligence to produce high yields of plant-based crops, utilising 95 percent less water than traditional farming methods.

This transformative technology is poised to revolutionise food production across the UAE, contributing significantly to the nation's food security. It represents a vital step toward reducing the UAE's reliance on imported vegetable foods. Discover how Pure Food Technology's forward-thinking approach is reshaping sustainable agriculture.

## How does this new technology work?

Pure Food Technology's new hydroponic vertical farm is located at Jebel Ali Industrial Area in Dubai. It is the first hydroponic vertical farm to be driven by artificial intelligence, combining multiple technologies to produce high yields with 95 percent less water usage.

Hydroponics is an innovative new technique for growing plants. By using a water-based solution combined with nutrients and minerals, food producers can create more crops with less space. This method also facilitates the creation of nutrient-dense food by allowing precise control over the nutrients fed to the plants.

## What is vertical farming?

Vertical farming is a modern farming method that aims to maximise space by cultivating crops in vertical layers. Most often, vertical farming is done within indoor environments that are carefully controlled.

By using modern technologies such as aeroponics and hydroponics, vertical farming is considered an extremely efficient method for creating a reliable food supply, as it reduced inefficiency, water usage, and any need for traditional soil.

Vertical farms are a great solution for arid weather conditions, as they can operate year-round, no matter the weather. Vertical farming is believed to be one of the most promising solutions for eco-friendly agriculture, helping to bolster food security worldwide.

## The UAE and food security

In a [forum in October 2021](#), the UAE's Minister of Climate Change and Environment Mariam bint Al-Mheiri stated that "The UAE is putting efforts to transition into more sustainable food

systems.” These efforts have expanded across the 2020s, with new strategies launched through time.

Projects such as Pure Food’s vertical farming play a key role in the National Food Security Strategy 2051 employed by the UAE since November 2018. First presented during the UAE government’s second Annual Meetings – this strategy outlines a series of aims including making the UAE the world’s best on the Global Food Security Index by 2051.

These aims include enhancing local production, developing international partnerships, and developing a national system based on sustainable food production with modern technologies. This initiative has already seen the UAE rise on the Global Food Security Index, as number 1 in the Middle East and currently 23<sup>rd</sup> in the world.