

Growing need for urban farming in Malaysia

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Sprawling spaces filled with sprouting vegetation and farm animals, and celebrities such as Natalie Portman investing in vertical farm start-ups — urban farming is often romanticised, yet, in its truest form, is indeed beneficial for urbanites.

Its influence is growing, and transcending borders. One of my first-hand encounters with urban farming was with an interviewee, a hydroponic enthusiast, back in 2015. He had passionately showcased his cultivated fresh kangkong, rosemary, turmeric and fishes all in his backyard. Over the years, I have also seen several verdant vertical gardens in high-rise developments.

Urban farming involves the act of cultivating, processing and distributing food in urban areas and cities, with the aim of providing food security, being sustainable and giving access to fresh goods such as vegetables, fruits and meats. It is multi-faceted and covers a wide range of activities such as aquaculture, agriculture, fisheries and forestry, and its benefits are aplenty such as improving the health of urban communities, reducing food expenditure and cost of groceries, and reducing the carbon footprint.

Today, the concept is being adopted more extensively and commercially. Some of the most notable urban farms in the world include Nature Urbaine in Paris, Brooklyn Grange in New York, Melbourne Skyfarm in Australia, Pasona Urban Farm in Japan, and Food Forest in Singapore.

Zooming into local real estate, emerging players such as test lab Sunway XFarms, Sime Darby Property's recent collaboration with BoomGrow, Penang-based HAVVA Agrotech and independent efforts such as Babylon Vertical Farms show that the demand for urban farming has grown among the local communities.

Movements in Malaysia

These efforts have been observed by Institute of Landscape Architects Malaysia (ILAM) president Dr Nor Atiah Ismail. "The pandemic has [accelerated] areas of security, technological competition and digital transformation, and the fight against the pandemic is still ongoing. Food scarcity and inconsistent food chain supply during the pandemic also brought the idea of edible cities and productive landscapes into Malaysia," she says in an email interview.

Atiah, who is also a professor of the Faculty of Design and Architecture in Universiti Putra Malaysia, highlights, "Farming used to be the lifestyle of community living in the rural areas. However, it is now [widely] practised by urbanites, and is considered part of the contemporary urban infrastructure; for example, from home kitchens and edible gardens to bigger community gardens where people can grow their own food."

An effective strategy, she adds, is to artistically and systematically integrate agriculture into our urban fabric, and "to understand that it is an essential component of urban life".

"We have to start thinking of agriculture as necessary infrastructure for a city. Landscape planning needs to have an agriculture overlay from the beginning of the urban development process," opines Atiah.

"Parks, gardens and green spaces are healing and restorative outdoor spaces, and are beneficial for public health. The government sees public urban landscape systems as a prerequisite for building healthy communities. Urban farming activities provide an opportunity to create connections within the communities and all living matters," she adds.

One such project is agritech company Sunway XFarms by Sunway Group, which launched the largest indoor vertical farm in the KL city centre in the third quarter. The urban farm occupies three floors equivalent to 37,000 sq ft in



Melbourne Skyfarm is one of the notable urban farms in Australia



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the 33-storey Sunway Tower. The farm is slated to produce about 13,000kg of fresh, healthy and pesticide-free vegetables per month.

Sunway XFarms chief operating officer Eleanor Chong says, "There has been a growing demand for fresh, quality and pesticide-free food, both from direct consumers as well as F&B partners. Many F&B outlets struggle with inconsistent supplies that get affected by weather fluctuations or poor yield, especially during the monsoon season. We are able to bypass this from our indoor growing to provide them with the same high-quality produce all year round, hence the ever-growing demand."

Chong highlights the opportunities in urban farming. "In the Klang Valley alone, more than 35% of buildings are underutilised or vacant. Urban farming can turn such spaces into green ones, not only making use of these spaces but helping local food security by providing better-quality food to the people near them."

"Depending on the techniques used, non-conventional crops may be grown, meaning food that are usually imported can be grown locally and enjoyed fresher instead. We can reduce up



BoomGrow has introduced its first urban farm in Serenia City, Sepang

to 9,000 food miles when we choose local food over imports, and save up to 90% water while growing up to 15 times more yield per sq ft compared with traditional soil farming," she says in an email reply.

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Offering unique solutions to the market

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BoomGrow Productions Sdn Bhd co-founder Jayanthi Desan agrees that there is rising demand and opportunities. "We have gained significant traction since our e-commerce launch in 2020, with multiple distribution channels across B2B (business-to-business), and direct to B2C (business-to-consumer) through our e-commerce channel. Our vision is to see BoomGrow in the heart of Malaysian neighbourhoods, delivering fresh, pesticide-free produce for the consumer and the planet.

"Opportunities in urban farming include enabling delivery of produce at the height of freshness to urban areas ... we deliver within a few hours of harvest, creating jobs and reducing the carbon footprint in the food supply chain," says Jayanthi.

Recently, Sime Darby Property partnered with BoomGrow to introduce the first urban farm in its township of Serenia City, Sepang, on Oct 7. It is part of the developer's sustainable farming initiative "The Greener Good" in a bid to shape a resilient, healthy community with access to safe, sustainable produce, and its goal to achieve a minimum of one urban farm in each of its townships by 2030.

"Controlled environment farming [in urban farming] also solves challenges in traditional farming by using technology to optimise the growing environment in space-constrained environments. This allows for year-round production in a smaller space, and reduces natural resource consumption. Additionally, we grow 100% pesticide-free produce, which not only means that it is better nutritionally for the consumer but also for the environment as we don't have any run-offs that impact biodiversity," says Jayanthi.

Babylon Vertical Farms co-founder Stuart Thomas, whose company runs an urban farm in Kota Damansara, opines, "The level of awareness definitely seems better than when we started six years ago. Moving forward, I believe urban farming does offer unique solutions to the market."

He highlights the importance of understanding the mechanism of urban farming, and identifying the right target market. "Opportunities are there if you listen closely, but it is important to know who will buy your product and what they want to buy before you even invest to grow any crop."

Challenges

Along with its implementation comes the obstacles in urban farming. ILAM's Atiah says, "[From our perspective,] the challenges are for landscape architects to design public spaces that are regenerative; meaning public spaces that are characterised by a capacity for renewal and growth of living systems that are functional landscapes for health, emotion and food productions."

She adds, "Regenerative spaces are dynamic, diverse, adaptable and multifunctional. Further, regenerative spaces facilitate symbiotic relationships and equitable social structures to meet the needs of



Urban farming is gaining popularity globally, as pictured here in Pasona Urban Farm in Japan



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communities across all demographics. Landscapes should be green infrastructures that a nation 'must have' and no longer something that is 'nice to have'; it is a necessity that provides multiple benefits to the people, environment and the economy."

Atiah highlights, "Some of the current practices and policies by the local authorities do require urgent changes and flexibility. More urban open spaces should be open or legalised as urban farming plots for the community. The communities should also continue to learn about plants and planting methods, sharing experiences and knowledge with their [respective] neighbours, [and] sharing the urban farming process and the fruits of their labour on platforms such as social media."

Sunway XFarms's Chong says, "At our end, challenges include higher rental for being in the city, as we want to be close to our consumers. With crop quality consistency from growing in a controlled environment comes a higher energy cost as well, and currently, renewable energy isn't very accessible locally. Even the installation of solar panels requires observation of how much direct sunlight a building gets in a high-rise jungle."

Meanwhile, Babylon Vertical Farm's Thomas says implementing the right market strategy and gaining capital investment are also crucial — tough tasks in urban farming.

"Changing regulatory [policies] and mindset are challenging as well. We need regulation to inform consumers on pesticide-free standards. This will inform and build capacity for consumers in terms of making better choices," opines BoomGrow's Jayanthi.

What the future holds

Despite the challenges, urban farming continues to grow and is inevitably becoming an integral



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Brooklyn Grange in New York

part of the community and real estate landscape in Malaysia.

ILAM's Atiah says, "The lessons we learn from this pandemic will have a deep impact on the future of design, cities, public spaces and infrastructure. Post-pandemic landscape architecture will require the government to invest on public works and public infrastructure with the idea of going local, doing more with less, and accommodating a variety of bigger spaces that act as urban retreats or parks and natural spaces around cities."

She adds, "One of the key realisations brought by this pandemic to everyone was of the concept of sustainability — which is the basis of landscape architecture. Urban farming will reinforce the value of community, local neighbourhoods, green spaces and natural systems close to home as everyone wants to get out of their closed walls and connect to nature and get some fresh air; it is one of the best solutions in the city."

There is an urgency, she highlights, for landscape architects to come up with the new, creative ideas of connecting people to nature in high-density environments "for the benefit of the community's well-being and health. Urban farming is now no longer concerned just for the poor; it is a sustainable lifestyle for better health, food and level of happiness".

Sunway XFarms Chong opines, "As technology development advances, the cost to operate urban farms reduces, in turn resulting in more affordable crops.

"In general, the public is slowly starting to become more aware of urban and pesticide-free farming, and we hope to further increase their awareness of safe and sustainable food grown close to their homes."

"By growing right in the city where the people are, we are able to demonstrate a sustainable model for food security, building their trust, awareness and support," she adds.

Globally, more urban farming start-ups are utilising state-of-the-art software, technologies and robotics to grow their crops and minimise their resources while maximising their outputs and produce.

"With advancing technology, urban farming is here to stay. We are cutting down on imports and hyper-local production; consumers have better choices for fresh and quality produce, while reducing our reliance on imports and creating agritech jobs," says BoomGrow's Jayanthi.

"With innovations, manufacturers are always pushing the envelope with indoor lighting technology, but I prefer paying more attention to smarter business innovations such as how we can better streamline farm supply chain management as it reaches the end user," says Babylon Vertical Farm's Thomas.

"I think that moving forward, focusing our efforts on the value we can bring to the end user will benefit all of us in the long run."