Urban farming initiatives promote sustainable lifestyle

TMResearch

By focusing on urban farming, Malaysia aims to cultivate a new generation of entrepreneurs in the agriculture sector

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RECENT global supply chain disruptions have made Malaysia's food security a critical issue.

The government and experts are now focusing on comprehensive strategies to fortify the nation's food supply, with urban farming and self-cultivation emerging as crucial solutions.

Prime Minister Datuk Seri Anwar Ibrahim announced early this year that the government will roll out a targeted urban agriculture programme aimed at enhancing Malaysia's food production and curbing rising costs.

In February, he highlighted the importance of adopting successful urban farming models from Singapore.

He noted that strategies to address limited land availability in urban and suburban areas could be adapted for Malaysia, with a pilot project set to begin in Kuala Lumpur.

Led by the Agriculture and Food Security Ministry, these projects not only provide fresh produce but also engage communities and reduce the carbon footprint associated with food transportation.

By focusing on urban farming, Malaysia aims to cultivate a new generation of entrepreneurs in the agriculture sector.

Successful urban farming projects across the country have demonstrated the potential to supply local markets and empower the food system.

Universiti Putra Malaysia (UPM) has been at the forefront of this movement with several successful projects, notably the Garden 8 initiative which began in 2010.

UPM agricultural officer Mahani Amat @ Halimi emphasised the numerous benefits of urban farming, including producing healthy and fresh food locally, reducing the reliance on expensive raw materials and lowering costs.

"By selling harvested produce and local products, urban farming can generate additional income for the community," she told *The Malaysian Reserve (TMR)*.

The initiative includes better emergency preparedness with enhanced infrastructure such as pedestrian pathways, accessible back gates and fire extinguishers, improving community safety.

SEE PAGE 3

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• FROM PAGE 1

Urban farming also encourages interactions within the neighbourhood, reminiscent of traditional community life.

The project nurtures an interest in gardening among the younger generation, ensuring that these practices continue into the future.

Transforming neglected areas into beautiful gardens provides pleasant recreational spaces for residents, which has led to better physical and mental health among community members.

The Garden 8 initiative supports national agendas such as the Urban Community Garden Policy, Malaysia Healthy Agenda, Malaysia Madani and the Sustainable Development Goals 2030.

The community's engagement with Garden 8 not only promotes sustainable practices but also helps instil a love for nature and a sense of responsibility towards the environment.

The project has transformed idle spaces into productive gardens, providing fresh produce and fostering a sense of community.

Additionally, the initiative inspires others to transform their backyards and urban spaces, promoting a cleaner and safer environment.

It has led to a significant reduction in household waste as people compost and recycle more.

"Overall, urban farming contributes to community safety and wellbeing, creating a healthier and more sustainable living environment," she added.

Asia Smart Farming & Food Security chairman Datuk Syed Munshe Afdzaruddin Syed Hassan echoed Mahani's sentiments but cautioned that from a national and larger-scale perspective, urban farming through urban community mobilisation has so far had limited impact on national food security.

Source: web.upm.edu.my

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Implications of Reliance on Imported Food

Malaysia's extensive dependence on food imports, particularly for essential items such as rice, chicken and eggs, has revealed substantial vulnerabilities.

The halt of rice exports from India led to local shortages and price hikes. Similarly, Malaysia experienced shortages of chicken and eggs, prompting the government to lift price controls to let market forces stabilise supply and demand.

This move, however, sparked debate as it may increase prices, impacting low and middle-income households.

To counter this, the government has allocated RM2.6 billion in subsidies and incentives to support paddy farmers and fishermen, boosting domestic production and self-sufficiency.

Syed Munshe Afdzaruddin said high dependency on continuous food imports is likely to jeopardise national food security in the medium- to long-term.

He cited the Asian Financial Crisis in 1998 and the Food and Fuel Crisis of 2008, during which many trading partner countries that supplied essential food items to Malaysia reduced or stopped their exports to secure their own food supply.

"During this time, Thailand and India completely banned the export of rice to Malaysia except for Basmati rice.

"Disruptions in rice supply could threaten national political stability. Additionally, uncertainty in rice supply would lead to food price hikes, causing social grievances among the populace," he told TMR.

To mitigate these risks, Syed Munshe Afdzaruddin stressed on the critical need for a comprehensive food security policy that focuses on increasing domestic food supply productivity.

"Control over the global food supply chain should also be scrutinised by the government," he said.

However, he acknowledged that complete self-sufficiency may not be feasible as most countries, including Malaysia, cannot merely pursue self-sufficiency and import substitution without considering cost factors.

"We need to find a balance between domestic production and imports.

"Trade policies should be designed in line with agricultural policies to ensure that agricultural outputs are competitive, can be produced optimally and help improve national welfare," he added.

Syed Munshe Afdzaruddin emphasized the importance of technological innovation, government policies and support, education and training, as well as collaboration and community-building to overcome challenges and foster a resilient urban farming ecosystem.

He noted that Asia Smart Farming 2024 provides a platform to share the latest knowledge, technology and best practices in urban agriculture, encouraging collaboration between growers, industry experts, technology providers and government agencies to drive innovation and progress in urban agriculture.

Based on the National Agricultural Policy 2.0 (NAP 2.0), the self-sufficiency level of vegetables is expected to increase from 60% in 2023 to nearly 80% by 2030, he added.

Similarly, Ancom Nylex MD and group CEO Lee Cheun Wei said Malaysia relies heavily on imports for its essential food items, exposing the nation to a "financial burden" from consistently purchasing food from other countries.

He added that Malaysia spends approximately RM71.6 billion on food imports.

This substantial outflow drains the country's financial resources that could have been invested in developing domestic food production capabilities and enhancing self-sufficiency.

Additionally, Lee suggested that over-reliance on imports could leave Malaysia vulnerable to supply chain disruption stemming from potential shipping issues, supply shortfalls or adverse weather in exporting nations.

He is confident that Malaysia can achieve 100% self-sufficiency in rice production, given its arable land size relative to its population.

Currently, Malaysia produces approximately two million metric tonnes of rice annually and imports around one million tonnes.

With the available arable land, he said producing the additional one million tonnes domestically is certainly feasible.

He acknowledged government efforts to boost domestic cultivation of key crops like chilli and shallots to increase production and reduce import reliance.

UPM Leads the Charge on Urban Farming Initiatives

On June 7, 2024, UPM hosted the Food Security Carnival, addressing the critical issue of national food supply sufficiency.

UPM Vice Chancellor Datuk Prof Dr Ahmad Farhan Mohd Sadullah said the university's focus on agricultural disciplines aligns with the national goal of tackling food security challenges.

The carnival provided a platform to educate the campus community on its roles and to outline strategic actions for food security solutions in the country.

He added that the UPM Food Security Blueprint, unveiled during the event, is intended to serve as a reference not only for academia but also for various stakeholders involved in addressing food security issues.

"I hope the blueprint will benefit all parties in strengthening the national agricultural industry, showcasing the university's role in benefitting society," he said.

This blueprint is expected to bolster UPM's capacity in advancing impactful innovations and research in food security in Malaysia.

The carnival also featured the Agriculture and Food Security Forum, which delved into current issues related to agriculture and food security.

This aligns with UPM's ambition to become a leading reference in food security expertise in Malaysia.

The one-day event included an Agriculture and Food Security Exhibition, focusing on crops, livestock, and technology.

This exhibition aimed to educate the public on UPM's research and products related to agriculture and food security.

Visitors had the opportunity to purchase agricultural products, research outputs and seedlings produced by UPM.

Latest Developments in Agricultural Manpower in M'sia

Malaysia is tackling the shortage of manpower in its agriculture sector through a range of initiatives and technological advancements, focusing on modernisation to attract more workers and improve productivity.

According to Syed Munshe Afdzaruddin sudden restrictions on the use of foreign labour have affected production in many sectors, including the commodities and agro-food sectors.

"Most of our food crops, including fruit and vegetable production, are labour-intensive and heavily dependent on foreign labour," he said.

He noted that perhaps more organised management of foreign labour use for selected crops is warranted to help alleviate labour shortages and increase production.

Moreover, the Agriculture and Food Security Ministry (KPKM) is championing smart agriculture as a crucial strategy for transforming the agro-food sector.

By adopting technologies such as precision farming and artificial intelligence, Malaysia aims to address issues such as labour shortages and rising costs. Innovations such as vertical farming and automated systems reduce the need for manual labour while enhancing efficiency and yields.

To gain a deeper understanding of manpower and other agricultural needs, Malaysia will conduct its first Agricultural Census since 2005 this year.

This census will gather data on demographics, land use, irrigation systems, workforce and technology adoption.

The insights from this census will inform policies and initiatives to bolster the agricultural sector's sustainability and productivity.

The government has allocated RM6.17 billion to KPKM in Budget 2024, marking a 14.4% increase from the previous year.

This funding will support new programmes and enhance existing initiatives aimed at boosting crop yields and modernising agricultural practices.

Key areas of focus include exploring new planting areas and utilising advanced technologies to maximise land use and productivity.

Additionally, the Malaysian Pineapple Industry Board and other organisations are conducting workshops and training sessions on the use of drones and other modern technologies in farming.

These initiatives aim to save time and costs, improve labour efficiency and attract younger workers to the agricultural sector.

The government is developing frameworks to assist farmers in adopting new technologies, facilitating a seamless transition from traditional to modern farming methods.

Lee highlighted significant challenges, such as a lack of agricultural knowledge, insufficient skilled labour and inefficient farming practices, which hinder efforts towards achieving food self-sufficiency.

He noted that Malaysian agriculture lags behind Vietnam and Thailand in these areas.

"The urgent need for better agricultural research, training, technology transfer and skills upgrading to bridge these knowledge gaps and improve productivity and yields.

"Labour constraints are significant, with ageing demographics and urban migration severely draining the agricultural workforce," Lee added.

Lee explained that as younger generations move to cities, paddies and plantations depend more on older farmers. Despite government efforts such as training and funding, Lee doubts their effectiveness because urban youth find outdoor agricultural jobs unappealing.

He noted that fundamental agricultural knowledge gaps significantly hinder Malaysian farms' productivity and efficiency compared to regional competitors.

Challenges including inadequate expertise in pest and disease management and small farm sizes create bottlenecks, limiting the ability to achieve economies of scale and increase productivity.

Lee said the combined impact of government support, technological innovation and comprehensive data collection is crucial for building a resilient agricultural workforce for the future.

"The knowledge gap remains the critical bottleneck, with Malaysian farmers lagging regional counterparts in crucial areas hampering their ability to effectively boost productivity, profitability and climate resilience through modern farming techniques and technologies," he added.

He pointed to several government agencies and initiatives aimed at addressing knowledge deficits and supporting the agricultural sector's development, citing Malaysian Agricultural Research and Development Institute (MARDI) as providing research, technological innovations and advisory support to help raise farm productivity and sustainability.

Financial assistance schemes such as fertiliser, pesticide and seed subsidies for paddy farmers were highlighted as measures to reduce input costs and boost output.

Specific initiatives mentioned included the RM2 billion annual subsidy for fertilisers, seeds and pesticides for paddy, as well as a RM3.8 billion subsidy for the poultry industry last year to manage prices.

Lee added that government-backed collaborations between agricultural research institutions like Malaysian Agricultural Research and Development Institute and Malaysian Research Accelerator for Technology & Innovation with farmers to drive innovation, technology transfer and precision farming methods like satellite mapping and drone-assisted farm monitoring.

While acknowledging these various policies and programmes, Lee said that more comprehensive, well-executed strategies were needed to catalyse a significant improvement in Malaysia's food production capabilities and self-sufficiency levels.

"Without a robust plan, the country remains vulnerable to shocks in global food markets," he said.

Overcoming challenges such as labour shortages, skills and knowledge deficits, climate change impacts, land constraints and infrastructure gaps will require concerted, coordinated efforts.

This includes upskilling the agricultural workforce, adopting modernised farming techniques, boosting agricultural research, upgrading infrastructure and formulating a long-term national food security strategy with consistent implementation.