

Does it really matter where our food is grown?

A stable supply through trade is the key to food security in land-scarce Singapore, though local farming has a role to play.

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When Malaysia halted chicken exports, supermarket shelves in Singapore emptied almost overnight. Many Singaporeans rushed to stock up, unsure when supplies would return. That moment revealed how exposed a small, import-reliant nation can feel when key supply lines are disrupted.

But it also showed something else that is important: Our food security does not depend on growing everything ourselves. Instead, it depends on whether our supply pipelines stay open, diverse and reliable.

Singapore has long cherished a “30 by 30” target, which is to locally produce 30 per cent of its food needs, including fish, eggs and vegetables, by 2030.

In November this year, the target was revised to a more focused “fibre-20 + protein-30 by 2035” which entails producing 20 per cent of a smaller fibre category comprising leafy and fruited vegetables, beansprouts and mushrooms as well as 30 per cent of a protein category of eggs and seafood all by 2035.

The message is clearer today than ever – the country must be realistic in view of the trade-offs with more critical and competing uses of land resources. More fundamentally, the new mindset is that food security is about dependable access through trade, not about where the food is grown.

WHAT DOES FOOD SECURITY REALLY MEAN?

Singapore’s local production figures underline this point. In 2024, we met just 8 per cent of our fibre needs and 26 per cent of



Singapore must be realistic in view of the trade-offs with more critical and competing uses of land resources, the writers say. Food security is about dependable access through trade, not about where the food is grown. ST PHOTO: LIM YAOHUI

our protein needs. The numbers are even lower for specific items such as vegetables (3 per cent) and seafood (6.1 per cent), with eggs being the only strong performer at 34.4 per cent.

These low numbers are not failures. They reflect our physical limits. Just as national defence does not require us to build our own tanks or aircraft, food security does not require Singapore to grow all its vegetables or fish. What matters is whether we can secure a stable supply through any combination of sources.

Land scarcity makes this clear. Housing, industry, commerce and transport already take up large areas of land, and even golf courses and horse racing have had to make way for critical economic needs. This leaves little room for large-scale farming.

And even where land can be found, high-tech urban farms face their own constraints. They use significant energy, depend on specialised talent and often struggle to scale up or break even. Building a full ecosystem for profitable urban agriculture, from workers to technology to consumer demand, remains challenging.

Minister for Sustainability and the Environment Grace Fu recently highlighted the nation’s four-pronged strategy: diversifying imports, local production, stockpiling and global partnerships. This is akin to a

“Four National Taps” for food, which is analogous to Singapore’s Four National Taps for water.

BUILDING A MORE RESILIENT FOOD SYSTEM

Our new food strategy also requires rethinking what “food production” looks like. While local farms are constrained by both technology and land, Singapore has already seen examples of how it can still build community-rooted resilience.

Edible Garden City, whose co-founder Bjorn Low was recently named Impact Leader of the Year in the Sustainability Impact Awards, has shown how small urban farms can turn unused spaces into productive gardens.

Likewise, another local farm Gardenasia has helped reconnect Singaporeans with local agriculture through initiatives that promote the message “no farmers, no food” and make it easier for consumers to support local produce. These efforts show that local farming has a role to play, but they also highlight its limits.

While growing vegetables and rearing fish will remain part of the picture, Singapore must innovate along the entire food chain. The shift from the broad “30 by 30” target to the more targeted “fibre-20 + protein-30 by 2035” underscores this move towards more flexible and

forward-looking approaches to food production and security.

This means prioritising near-term innovations that maximise the value of the crops and staples we already use. It also calls for rethinking the role of staples themselves. Even carbohydrate-rich foods can become part of the solution when reformulated to be higher in fibre, richer in protein and designed with nutritional value in mind.

One promising approach is upcycling. Singapore may not produce much food, but it does process a large number of imported grains such as barley and wheat into foods like beer, malt drinks and flour.

This creates a strategic opportunity: Some of the by-products from these processes are rich in nutrients and they can be upcycled for use in staples such as noodles, making them more nutritious, without needing additional land or farming.

This is already happening. Local products like WOW® Barley Fresh and WOW® ProTEGO noodles by KosmodeHealth Singapore are both made with upcycled ingredients – spent barley grains and peanut meal to produce high-protein, high-fibre, low-glycaemic index options that are also more environmentally friendly.

Singapore can also consider stockpiling these repurposed ingredients instead of finished staples. This would allow rapid

production of more nutritious foods when needed, adding a new, resilient layer to our food security strategy.

RETHINKING FOOD SECURITY

Food manufacturers operate on very thin margins, and reformulating products, sourcing new ingredients or upgrading equipment all carry high costs. Innovation therefore, needs to be supported by policy.

Through Singapore’s upcoming Budget 2026, the Government could strengthen agri-food technologies and innovation by offering targeted tax incentives or support schemes to help companies adopt new technologies. More resilient practices can also take root when there is a sufficient shift in mindsets about local and upcycled food.

Local innovation, however, cannot fully address Singapore’s food challenges in the short term. International supply lines will remain essential, which makes it timely for Singapore to strengthen its position as a global hub for food flows.

Such a hub would not only bring economic benefits but also bolster food security. By mapping risks along supply routes and developing strong cold-chain systems, specialised storage and purpose-built port facilities, Singapore can secure more reliable access to food.

In times of crisis, being a major transit and storage point means supplies are more likely to reach us quickly and consistently.

At the same time, community efforts and public education remain vital foundations for long-term food security.

Expanding grants in Budget 2026, or enhancing leasing schemes for community and rooftop gardens, would enable more neighbourhoods and schools to participate in small-scale cultivation. The goal is to deepen an understanding among Singaporeans about where food comes from and why sustainable choices matter.

In the bigger picture, food security is not only about keeping shelves stocked. Food is more than a commodity. It shapes how people live, stay healthy and cope with shocks.

For example, a group of alumni in food start-ups at NUS Business School are banding together to spawn a new initiative called Green Living for Optimal Well-being, where new food sources are curated to be sustainable while also promoting well-being.

Singapore’s long-term food security will depend not on how much we grow, but on how smartly we source, innovate and manage risks and opportunities. The shift in national strategy reflects an important realisation: Resilience comes from strong and diverse pipelines, not from forcing production lines to do what the land cannot support. In a more uncertain world, the goal is not self-sufficiency, but to be confidently, consistently and intelligently well-sourced.

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