

Singapore's Food Security and Food Diversification Issues

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Introduction

For Singapore, food security is a crucial concern. Singapore's vulnerability in terms of food safety and security has been highlighted by the rapidly changing and complicated operational environment of today. Only approximately 1% of Singapore's land is designated for agricultural use, and more than 90% of the country's food supply is imported. While there is a significant push towards sustainability, the COVID-19 pandemic's extraordinary disruptions and changes in the global supply chains continue to put strain on the food supply resilience scenario, which is already dealing with the consequences of climate change. The Singapore Food Agency (SFA) released its inaugural Singapore Food Statistics 2021, which shows that Singapore now produces 4% of its vegetables, 8% of its seafood, and 30% of its hen shell eggs domestically. By 2030, it hopes to reach a target of 30% local production altogether¹.

A snapshot of a dish of rice and another lump of rice fashioned like a chicken drumstick were posted online in Singapore during the beginning of June 2022 as part of a meme. Due to Malaysia's restriction on fresh chicken exports, the affluent city state can only purchase frozen chicken at this time. Singapore imports around one-third of its total poultry imports from Malaysia, making it the only nation from which Singapore gets its 3.6 million monthly fresh chicken needs. The de facto national cuisine of chicken rice, which is made with broiled fresh chicken, has been the subject of jokes among residents since the ban was declared. However, the scarcity of one food item points to a larger issue. Your food security is at risk if you are overly dependent on a single source².

Due to land scarcity, Singapore relies significantly on imports for food. Meat is imported from as far away as Brazil, rice from Thailand and India, and eggs from nations as diverse as Ukraine, Poland, and Spain, to mention a few significant food sources. And, in the face of issues such as

¹ <https://www.foodnavigator-asia.com/Article/2022/05/04/singapore-s-challenging-2030-food-security-goals-underlined-by-new-production-data>

² <https://www.scmp.com/week-asia/economics/article/3180330/what-singapore-doing-boost-food-security-urban-farms-homegrown>

climate change, resource depletion, and disruptions to the global food chain, such as the COVID-19 epidemic and the Russia-Ukraine war, the topic of food security has become more prominent. The Singapore Food Agency (SFA) is in charge of Singapore's food security, and it collaborates with numerous other governmental agencies, industry partners, and foreign authorities to guarantee that Singapore has a reliable supply of safe food³.

Singapore is susceptible to new trends, though. First, it is anticipated that by 2050, the worldwide demand for food would have increased by 50% due to population growth. Second, as a result of rising temperatures, the loss of arable land, and an increase in the frequency of irregular weather patterns, climate change will put additional strain on the world's food supply. Third, nations are turning inward more and more, putting domestic needs ahead of foreign commerce⁴.

Singapore's Strategy to Diversify Food Sources

Singapore's food security challenges are acknowledged by its top leadership. Prime Minister Lee Hsien Loong stated on Saturday June 25th that Singapore has to do more to diversify its food supplies since countries across the world are likely to continue preferring local supply despite skyrocketing costs. At an interview with the Singaporean media, Mr. Lee concluded his participation in the Commonwealth Heads of Government Meeting in Kigali, where he also advised nations to prepare for supply chain shocks brought on by pandemics⁵.

The Singapore Food Agency (SFA) is pursuing three main initiatives known as the "3 Food Baskets" to increase Singapore's food security. It tries to diversify import sources in order to lessen the danger of dependence on any one source of food supply. In case of problems in supplies from outside, it intends to produce locally to provide a backup supply. Additionally, it plans to grow internationally to support local businesses' global expansion and food exports back⁶.

Diversification of Import Sources

³ <https://www.psd.gov.sg/challenge/ideas/deep-dive/strengthening-singapore-s-food-security>

⁴ <https://www.sfa.gov.sg/food-farming/sgfoodstory/our-singapore-food-story-the-3-food-baskets>

⁵ <https://www.channelnewsasia.com/singapore/singapore-food-security-diversify-sources-supply-disruptions-lee-hsien-loong-2771441>

⁶ <https://www.sfa.gov.sg/food-farming/sgfoodstory/our-singapore-food-story-the-3-food-baskets>

Diversifying import sources is Singapore's main effort to improve its food security. From around 140 nations in 2004 to more than 170 nations and regions in 2019, it has broadened the sources of its food imports. In order to diversify, SFA works closely with industry participants, particularly importers, as well as with foreign government agencies to open up other sources from which it may import. As a result, when there are supply problems, importers might increase their purchases from alternative sources⁷.

Singapore's food importers take use of the country's connections and the free trade environment across the world to import from various places. Importers can access other food sources in the event that one source is disrupted, ensuring a steady supply.

Lockdown procedures prompted by Covid-19 highlighted Singapore's susceptibility to interruptions in the food supply. The Republic's secure food supply and fast replenishment of market shelves were not accidental; rather, they were the outcome of a purposeful, all-encompassing government policy to diversify food sources.

SFA collaborated closely with the Ministry of Trade and Industry and Enterprise Singapore (ESG) to closely monitor Singapore's food supply situation during the Covid-19 worldwide epidemic⁸.

Along with Enterprise Singapore, SFA also arranges food sourcing excursions to assist businesspeople in locating substitute import sources. These journeys provide importers the chance to look into new sources, uncover commercial prospects, and solidify current trade relationships. It actively involves industry stakeholders, which are essential to attempts to diversify sources of supply (trade organizations, important supermarket retailers, embassies, and trade offices). SFA exchanges information and solicits opinion on issues affecting the industry through industry dialogues, top management meetings, and one-on-one business interactions. It actively connects local industry participants with pertinent international contacts and arranges business networking events with foreign delegations⁹.

⁷ <https://www.sfa.gov.sg/food-farming/sgfoodstory/diversification-of-import-sources>

⁸ <https://www.todayonline.com/commentary/how-singapore-ensures-food-security-despite-odds>

⁹ <https://www.sfa.gov.sg/food-farming/sgfoodstory/diversification-of-import-sources>

Grow Local

By 2030, Singapore wants to provide for 30% of its population's nutritional needs.

The ambitious objective set forward by the Singaporean government is to produce 30% of Singapore's nutritional requirements by 2030. This is a component of the "30 by 30" strategy, which aims to secure the city state's agri-tech sector's vitality and food resilience. A comprehensive and long-term approach to space planning, the advancement of agri-food technology, and the training of regional agri-specialists are required to achieve this. Only 1% of Singapore's land is currently suitable for agriculture, and the majority of food is imported.

The Singapore Food Agency (SFA), Economic Development Board (EDB), and Enterprise Singapore (ESG) seek to cultivate potential local agri-tech enterprises with the intention of assisting them in expanding internationally as well as attract the best-in-class global agri-tech companies. Additionally, the SFA has provided funding for twelve research and development initiatives in sustainable urban food production totaling more than US\$17 million (S\$23 million). The future of food lies on research and development, which will also assist to lessen the effects of climate change, population growth, and shrinking agricultural land on food security. The funded studies will address a number of important scientific domains, including genetics, illness and health management, system optimization, and nutrition¹⁰.

SFA actively encourages the sector to embrace such cutting-edge farming technology. Its \$63 million Agriculture Productivity Fund (APF) is one illustration of this, which provides co-funding for high-tech, productive farming systems with improved environmental management and to increase output capacity. By the end of March, the APF had committed \$38 million to assisting 110 farms¹¹.

But there are few issues which can become stumbling blocks in implementing this "30 by 30" strategy successfully. The "30 by 30" strategy intends to increase Singapore's capacity for self-production so that it can weather economic hardship. Although Singapore might "technically and technologically" accomplish its aim, there are still two problems: costs and customer attitudes toward "novel food." Consumers may not accept "novel food" like lab-grown chicken and other

¹⁰ <https://www.trade.gov/market-intelligence/singapore-food-resilience-road-map>

¹¹ <https://www.sfa.gov.sg/food-farming/sgfoodstory/grow-local>

sources of protein, which is a major component of the "30 by 30" target, because they are fussy about buying "natural food" Unless the government can subsidize the products, people will choose imported food items if they are less expensive than local ones¹².

Grow Overseas: Third basket of the SFA's "three baskets" strategy is to grow food overseas and bring it back to the country. Singapore encourages local food businesses to purchase land abroad to grow food that can be exported back home. This approach is not just used in Singapore. China, the UAE, and South Korea have all acquired agricultural property abroad, at least in part to meet domestic need¹³. The "Grow Overseas" strategy of SFA provides a means for Singaporean businesses to export urban food solutions created in Singapore while also assisting the agency in developing strategic relationships with important partners. SFA continues to assist local businesses in their international development so that they may export their products back home and contribute to the food security of the country. By expanding internationally, businesses may reach new and larger markets by overcoming land and labor limitations. They may then take advantage of economies of scale and export food all the way back to Singapore. In Australia (Barramundi Asia), Brunei (Apollo Aquaculture, Barramundi Asia), Hong Kong (Sustenir), Thailand, and China, several local farms have already expanded (Sky Greens)¹⁴.

Conclusion

When it comes to ensuring food security, Singapore is a pioneer. Since the 1960s, its population has increased by about 350%, whilst its agriculture has virtually disappeared. In order to counteract this dynamic, the government has diversified imports and stocked up on basic goods. It has also looked at the spread of agriculture abroad, as we have seen in China and other places. Locally, it has increased its urban farming capabilities and kept investing in non-meat proteins. Additionally, it has worked to reduce food waste across the supply chain while also pushing for more food to enter the nation. Despite the fact that some of these techniques are older, other countries can benefit from Singapore's tenacious pursuit of food security.

¹² <https://www.cnn.com/2022/06/21/singapore-imports-90percent-of-its-food-how-is-it-coping-with-inflation.html>

¹³ <https://www.chinimandi.com/how-singapore-is-ensuring-food-security-with-just-1-farmland/>

¹⁴ <https://www.sfa.gov.sg/food-farming/sgfoodstory/grow-overseas>