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# RSIS COMMENTARIES

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## **Singapore's Growing Role in Asian Food Security**

By Yang Razali Kassim

### **Synopsis**

*In seeking to ensure its own food security Singapore, may be transforming itself from a passive food importer to an active contributor to the regional and global food system - through research and development in urban agribusiness.*

### **Commentary**

SINGAPORE'S APPROACH to food security is set to undergo a fundamental rethink -- from being a passive food importer to a more active contributor to the regional and global food system. A mental map of a multi-pronged strategy, spearheaded by research and development, is emerging on Singapore's food security front that could turn old limitations into new strengths.

Certain realities clearly define food security planning: Singapore is not an agricultural country, has not much land to grow its own food, and is almost totally dependent on food imports. As a food importer Singapore has been perpetually subject to the vagaries of external forces when it comes to feeding its own people. This picture may soon change.

### **Singapore's multi-pronged food security strategy**

The clearest indication came out of the recent International Conference on Asian Food Security (ICAFS 10-12 August 2011) in Singapore, initiated by the Centre for Non-Traditional Security (NTS) Studies of the S. Rajaratnam School of International Studies (RSIS). Senior Parliamentary Secretary for Defence and National Development Dr Mohamad Maliki Osman spelt out how Singapore is moving to become a contributing player to support the global quest for a more stable global food system in the face of volatile food prices and supplies.

There are at least four prongs in this strategy: The first, and perhaps the most important, is through research and development. For this, Singapore will leverage on its excellent infrastructure, intellectual property regime, a pro-enterprise tax structure and a financial eco-system that supports both publicly and privately-funded research.

Its National Research Foundation recently awarded a US\$8.2 million grant to a joint project between the National University of Singapore (NUS), the Temasek Life Sciences Laboratory (TLL) and the International Rice Research Institute (IRRI) to address pressing food concerns such as the need to develop rice strains that can adapt to climate change. They hold out potential benefits for the whole of Asia, including Singapore.

The second strategy, related to the first, is to grow Singapore into an agribusiness hub, in which the private sector will play a key role. The Economic Development Board is encouraging big players to set-up their

operational headquarters and trading operations as well as engage in upstream research in Singapore. The research laboratories of two of them, Sygenta and Bayer CropScience, are developing “elite” crop varieties for the region.

### **Urban Farming and Domestic Food Resilience**

The third strategy is to turn Singapore’s own domestic market into a “test-lab” for urban agriculture. Singapore’s highly urbanised population could be turned into an advantage by pursuing urban farming and seeking unique, urban solutions to food security. Agricultural production can be creatively brought within the city space, such as through “rooftop farming”. Besides reducing Singapore’s reliance on food imports, the success of urban farming can eventually be shared and replicated in other Asian cities.

In one pilot project on rooftop farming started last year the Agri-Food and Veterinary Authority (AVA) engaged a local company, SkyGreens, to do a commercial “vertical farming” prototype. More such projects may be pursued in future with the aim of turning Singapore into a centre for urban farming.

Singapore’s potential in urban farming has attracted international attention. The Urban Agriculture Network (UAN) under the auspices of the UN Development Programme (UNDP) once declared Singapore as a possible world leader in some aspects of urban agriculture - food production from its residential and commercial rooftops. While the rooftops of thousands of HDB blocks can potentially be turned into urban farms, new economic opportunity for Singapore could come from two particular techniques - aeroponics (growing plants without soil and water) and aquaponics (growing plants using recycled fish waste).

According to the UAN’s Western Pacific branch in Australia, these two technology spinoffs from hydroponics and aquaculture could make Singapore a world leader in rooftop production of fresh vegetables, fruit and flowers as well as certain types of seafood in specially-designed containers. They would also make for a greener, cleaner cityscape that contributes less to global warming and climate change.

A fourth but no less important strategy is the shift towards greater local production of three key food items – eggs, leafy vegetables and fish. A \$20 million Food Fund, launched in December 2009, is in place to incentivise farms to explore new farming technologies to ensure Singapore’s food supply resilience.

Singapore’s multi-pronged strategy fits in with the search for holistic solutions to solve food security issues. It dovetails at least three fronts in the global action to tackle food security: ASEAN, through the ASEAN Integrated Food Security Framework (AIFS); the Asia Pacific Economic Cooperation (APEC) through measures to enhance food security around the region; and thirdly, the G20 which aims to tackle food price volatility such as through international coordination.

In a nutshell, Singapore’s overall strategy is to seek win-win partnerships locally, regionally and globally as food security issues transcend national boundaries. By taking care of its own needs while being useful to the world, Singapore is poised to play its part in tackling the global food security problem.

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