

RSIS Commentary is a platform to provide timely and, where appropriate, policy-relevant commentary and analysis of topical and contemporary issues. The authors' views are their own and do not represent the official position of the S. Rajaratnam School of International Studies, NTU. These commentaries may be reproduced with prior permission from RSIS and due recognition to the author(s) and RSIS. Please email to Yang Razali Kassim, Editor RSIS Commentary at RSISPublications@ntu.edu.sg.

Global Food Insecurity

Food Import: Reducing ASEAN's Dependency

By Paul Teng

SYNOPSIS

The current food insecurity caused by the three Cs -- COVID-19 pandemic, climate change and conflicts -- has highlighted the reliance of many ASEAN states on imported staple food and feed. ASEAN needs to seriously re-examine its priorities to reduce import dependency.

COMMENTARY

THE NEW president of the Philippines has announced he is taking over the [agriculture portfolio in his cabinet](#) – one of the rare occasions when the country's head of state takes up a concurrent cabinet position to address food insecurity. But in the region, he appears to be alone in taking such an unconventional approach. Indeed, ASEAN as a grouping does not have a coordinated strategy to food production as each state has its own agenda and priorities. This is in spite of the world-wide food insecurity caused by the 3Cs -- COVID-19, climate change and conflicts.

While ASEAN's main staple is rice, there are other important agricultural commodities that have seen increased demand in the past decade. These are namely wheat, soybean and maize – all of which have required large imports from outside ASEAN. Food insecurity has highlighted [ASEAN's vulnerability](#) to its imports of foodstuffs, generally. Several ASEAN states are now rethinking their agrifood policies in favour of more localised production and shorter (and more reliable) supply chains.

Current Food Production Capacities

Wheat, soybean and maize are the produce that have seen the increase in demand that cannot be met by ASEAN production. Soybean and maize in particular are important as animal feed to grow the exponential livestock demand.

[The ASEAN Secretariat](#) estimated that in 2020, ASEAN imported US\$61 billion of agricultural commodities from outside ASEAN. This reflects insufficient production within ASEAN of the region's main foodstuffs (and feedstuffs).

ASEAN member states differ widely in their production capacities of rice, wheat, soybean, maize, vegetable oil, and livestock, including fish. In 2020, [ASEAN](#) grew 9.5 million hectares (ha) of maize, one million ha of soybean, and 60,000 ha of wheat.

From these areas were produced 46 million metric tonnes (mt) of maize, 735,000 mt of soybean and 113,400 mt of wheat.

For maize, ASEAN production meets about 75% of the region's needs. Maize production is 13.3 million mt in Indonesia, 8.3 million mt in the Philippines, 5.2 million mt in Thailand and 4.7 million mt in Vietnam, according to the International Grains Council (IGC) [forecast 2019-20](#).

ASEAN produces less than one-tenth of its soybean needs, mainly from Indonesia (395,000 mt), Myanmar (195,000 mt), Vietnam (81,000 mt), Cambodia (31,000 mt) and Thailand (27,000 mt) in 2020. [ASEAN also produced less than half a percent of its wheat, some 113,400 metric tonnes](#), almost all from Myanmar, with a small amount from Thailand.

Plugging Shortfalls through Imports

ASEAN states are among the world's largest importers of wheat, together with significant amounts of soybean and maize. In fact, ASEAN takes up 15% of global wheat imports in 2021. Of this, 11.4 million mt is for Indonesia, 6.8 million mt for the Philippines, 4.4 million mt for Vietnam, 3.2 million mt for Thailand and [1.8 million mt for Malaysia](#).

Wheat imports exceed production in ASEAN by a whopping ratio of 244:1. Much of this comes from Ukraine. Not surprisingly, the Russia-Ukraine war has disrupted the export of wheat to Southeast Asia and caused prices to spike.

Within ASEAN, Indonesia is the world's largest wheat importing country, at [6.1% of global imports worth \\$3.5 bil](#) and uses it for producing noodles (70%), followed by bread (20%) and cakes/biscuits (10%). The country has total reliance on imports of wheat for food and feed.

About 7.5 million mt of soybeans were imported in the 2018-19 period into ASEAN for animal feed and food, and [is the largest dollar value](#) of any food import. Soybean imports exceed local production in a ratio of 10:1.

The Unique Rice Story

Rice is still the main staple for ASEAN states. In 2020, [ASEAN](#) grew 48 million ha of

paddy rice which produced 191 million mt of rice. So rice takes up about 66% of the total arable land area in ASEAN of 73 million ha.

Rice is the only food staple for which ASEAN produces a surplus, as a region. Two ASEAN states are mainly responsible for this -- Thailand and Vietnam. Many other ASEAN states are net rice importers, with Indonesia and the Philippines being the largest importers of rice.

In 2020, ASEAN states imported 76.5% of their rice from within ASEAN. The remainder comes from other geographic regions like South and East Asia and the United States.

Increasing rice production will require combinations of technological innovations like biotechnology-improved rice; infrastructural improvements; input financing; and improved smallholder farmer management skills.

The large rice area also makes ricelands the largest emitters of the greenhouse gas, [methane](#), in ASEAN. This creates a dilemma for policy makers on balancing the need to reduce global warming with more rice production.

Need for Coordinated Strategy

ASEAN countries clearly need to work together and pursue a coordinated strategy to reduce the region's dependency on food imports – not only for human consumption but also for the animals that humans feed on.

There is also scope to increase the average on-farm yields of locally-preferred varieties of rice in ASEAN member states. This can be achieved through technological innovations; infrastructural improvements; input financing; and improved smallholder farmer management skills. Although proven in small field trials, there is as yet no scale up of biotechnology-improved rice.

With maize, current yields are relatively low when compared to the major maize exporting countries in the Americas and Europe. Experience with biotechnology-improved maize in the Philippines and Vietnam has shown the potential to increase on-farm yields.

The areas grown with soybean and wheat are relatively small in ASEAN, and the gaps between imports and production are large. This strongly suggests the potential to increase area grown and yield per hectare.

This requires not only a well thought-out and coordinated strategy. It needs to be backed by significant investment that addresses all aspects of the tropical soybean and wheat agronomy, from breeding to crop pest management. New varieties need to be expeditiously made available using breeding innovations and improved pest management.

Nothing short of an ASEAN-wide initiative with supporting scientific and financial resources will produce results in a timeframe that can increase the region's supply resilience in wheat, soybean and maize. ASEAN further needs to tap into its rich

biodiversity and large numbers of under-utilised plants to reduce reliance on the imports of the few staple food and feed crops.

Paul Teng is an Adjunct Senior Fellow and Food Security Adviser at the Centre for Non-Traditional Security Studies (NTS Centre), S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University (NTU) Singapore. He led the mid-term review in 2019/2020 of the Vision and Strategic Plan for ASEAN Cooperation in Food, Agriculture and Forestry (SP-FAF), 2016-2025. This is part of a series.

S. Rajaratnam School of International Studies, NTU Singapore
Block S4, Level B3, 50 Nanyang Avenue, Singapore 639798
T: +65 6790 6982 | E: rsispublications@ntu.edu.sg | W: www.rsis.edu.sg