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Global Food Insecurity

Animal Feed & Meat: Asia's Looming Food Crisis

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SYNOPSIS

The impact of the Russia-Ukraine War on the global food situation continues to reverberate around the world, including in Asia. The worst is yet to come as exports of vital livestock feed from Russia and Ukraine are severely affected, causing spikes in retail meat prices, from pork to chicken and fish. Can Asia cope?

The Russian invasion of Ukraine is pushing up food prices and worsening global hunger.
– image from shutterstock

COMMENTARY

THE RUSSIA-UKRAINE War, a conflict between two agricultural powerhouses, is having serious consequences on the export of many key agricultural products. As major grain exporters, Russia and Ukraine account for around 25-30% of the world's wheat exports, 15% of the world's corn exports and 2.1% of the world's soybean exports. While these may seem small relative to the global figures, they are nevertheless important as many Asian countries import from this European region.

The reduction of these three major agricultural products in global supply chains has already caused skyrocketing food prices, food export bans and shortages. For many Asian countries, wheat, corn, and soybeans are used in animal feed to produce beef, pork, poultry and fish for their domestic markets.

Asia's Growing Appetite for Meat

In recent decades, meat production and consumption have increased in Asia, particularly in China where, following market reforms in 1978, per capita meat consumption jumped almost six-fold in four decades alongside the rise of domestic production.

Other Asian countries such as Japan and South Korea as well as the ASEAN economies Indonesia, Malaysia, the Philippines, Vietnam and Thailand are also part of the 'meatification' process of Asia.

The demand for meat (beef, pork, chicken and fish) is driven by urbanisation, improved standards of living, and changing dietary preferences of the region's growing urban middle-class.

In 2021, 47% of Southeast Asia's total 667 million people lived in urban areas. Additionally, Southeast Asian economies are projected to grow collectively by 4.9% this year, leading to increases in GDP per capita.

Disruption in Asia's Feedstock & Meat Production

The three biggest beef-eating countries in Asia – China, India and Japan – are expected to further increase consumption to an estimated 10.2 million metric tonnes (mmt), 2.9 mmt and 1.3 mmt respectively this year.

Pork production in Asia is also expected to rise in 2022 in response to increased consumption demand. China leads in pork production with a forecast of 51.0 mmt this year, 7% higher than in 2021. Southeast Asia's pork production, which increased by 23% during 2009-2018, is expected to soar another 21% by 2028.

Currently, Asia's top poultry producers include China and Thailand which are projected to reach 14.3 mmt and 3.3 mmt respectively this year. In the decade up to 2018, Southeast Asia's poultry production skyrocketed by 56% due to preference for poultry over pork.

In Asia, aquaculture is the biggest source of fish for human consumption.

Although China is the region's biggest farmed fish producer, strong production growth is expected to continue elsewhere such as in India, Indonesia, Vietnam and Thailand.

All the above meat production requires feed, of which the main components are corn and soybean. Asian countries generally do not produce enough corn or soybean, despite countries like China, the Philippines and Thailand having substantial areas of corn.

For soybeans, aside from China, areas grown are low, especially in Southeast Asia where soybean production in 2018 was one-tenth of the amount needed by the livestock industry.

Global Supply Chain Disruption

The Russia-Ukraine war has effectively reduced the global supply of corn, soybean and wheat respectively by 15%, 2% and 25-30%.

Additionally, due to the inter-connected nature of global supply chains (and shipping), blockades in the Black Sea area have created ripple effects in other parts of the world, delaying grain shipments. Furthermore, several Asian countries depend on the Russia-Ukraine area for the above animal feed components.

In 2020, 54.8% of Bangladesh's wheat were from Ukraine and Russia. Other reliant Asian countries include Kyrgyzstan (72.5%), Laos (98.4%), Mongolia (99.9%), Malaysia (21.7%), Pakistan (48.9%), Indonesia (26.6%), the Philippines (7.99%), Thailand (15.7%), and Uzbekistan (98.8%).

The main destinations of Ukrainian corn exports in Asia were China (28.3% of total Ukrainian corn exports), South Korea (4.58%), Vietnam (0.69%) and Bangladesh (0.37%). The most reliant countries on Ukrainian and Russia corn imports include China (51.9%), Kazakhstan (33.3%), Mongolia (87.1%), South Korea (11.1%), and Vietnam (5.9%).

In the same year, Russian soybean exports to Asia were 59% to China, 2.2% to South Korea, 1.6% to Kazakhstan and 0.8% to Uzbekistan. However, 66.6% of Kazakhstan's imported soybeans and 43.7% of Mongolia's were from Russia. In contrast, Southeast Asian countries like Malaysia, Singapore and Thailand were less reliant on Russian soybean.

Outlook for Asia

Any reduction in feed availability will affect Asia's meat production. Supply chain delays arising from the Russia-Ukraine area have caused temporary shortages which drive up commodity prices. In such situations, livestock prices, especially the more feed-intensive poultry and pork sectors, will feel the most impact.

However, countries such as China, which uses a dual strategy to diversify food imports and increase domestic production, are better prepared than others to deal with these challenges.

Alternative sources of imports are also available if supply chains can be created. For example, Australia and Canada are possible sources of corn; Argentina, Brazil and the United States for soybean; and Canada, France and the US for wheat.

Prolonging the Russia-Ukraine crisis will inevitably destabilise production and cause ripple effects throughout the Asian region. Malaysia's chicken export ban from 1 June 2022 due to the shortage and higher feed prices has led to a reduced domestic supply of chicken and increased prices.

Self-Fulfilling Effect?

The number of countries concerned about their own domestic food security may lead to more countries anticipating shortages of key food items and therefore reducing exports or banning them altogether.

This phenomenon has a self-fulfilling effect of aggravating supply shortages further even though stocks *in toto* may be adequate. But with respect to meat, higher priced animal feed can only lead to shortages and higher prices.

For the longer term, Asia needs to redress the large yield gaps in its production of corn, soybean and wheat to ensure that its reliance on imports is lessened. This would require renewed efforts at improving crop yields using modern breeding technologies (like gene editing), improved water and fertiliser supplies, and improving farmer management skills.

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