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# Challenges to Safeguarding China's Food Security

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## SYNOPSIS

*The recently proposed food security law in China demonstrates the Chinese government's dual approach to food security. However, the central leadership's grand ambitions of achieving its food security goals are facing significant international and domestic challenges as well as concerns arising from new threats. Given such circumstances, it remains to be seen whether Beijing's responses to these challenges are sufficient.*

## COMMENTARY

In early March, a work report submitted to the 13th National People's Congress (NPC) by the NPC Standing Committee announced that China will formulate a food security law this year. The announcement comes amid an increasingly complex geopolitical environment, including lingering tensions between the United States and China over the trade war and the Ukraine-Russia war. The ramifications of that environment and other issues such as domestic deficits in production have forced Beijing to rethink how its national goals can be achieved and demonstrate through legislation that significant challenges must be overcome before China's food security can be ensured.

### Beijing's Dual Approach to Food Security since 2013

Since the 2013 reform of its food security strategy, Beijing has broadly adopted a dual approach to safeguard its food supplies. This dual approach can be summarised as follows: achieving self-sufficiency in staples (rice and wheat) and key protein sources (particularly pork) while relying on the international market for supplies of non-staples, particularly soybeans.

Domestically, China has sought to concentrate its limited agricultural resources (particularly land and water) in meeting the domestic demand for staples and key proteins (pork in particular) while also investing in agricultural technologies. For historical reasons and the country's dietary structure, China's biggest food security challenge is ensuring a stable supply of grains, particularly staples (rice and wheat).

China has limited agricultural space to meet domstic demand for grains, such as rice. *Image by Arry Yan on Unsplash (https://unsplash.com/photos/oARffXjtd-k)*

Given that grain self-sufficiency has been the overarching goal of China's food security strategy, China has undertaken enormous political and fiscal efforts alongside spatio-temporal changes in its grain production patterns to strengthen domestic grain production. To ensure a stable supply of staples (rice and wheat) and feed grain (especially corn for pork production), China has introduced a wide range of policies, from restricting the use of arable land to grain production, providing billions of grain subsidies, and making grain production a political responsibility for local governments to encouraging land consolidations to boost grain productivities. Furthermore, investing in agricultural technology is considered a key to China's food security problems. Notably, China has been investing in yield argumentation technologies, from hybrid rice and wheat to genetically modified (GM) crops.

Internationally, China has adopted a global agricultural policy to meet rising domestic demand for food. This outward-looking food security approach has four major aspects. Firstly, Beijing plans to import more food from the international market, not only soybeans, cotton, edible crops, sugar, dairy, and other agricultural products, but also grains. Secondly, as its agricultural and food imports soar, China has been following a diversification strategy regarding sources of imports and the variety of crops and food products, agricultural trade routes, and modes. Thirdly, Beijing has attempted to

boost the country's food supply by expanding its agricultural operations overseas and exerting control over all stages of global food supply chains. Thus, China has become a significant player in overseas agricultural investment and related infrastructures, particularly under its Belt and Road Initiative (BRI). Lastly, China aims to play a more significant role in shaping global food governance. In its 2019 Food Security White Paper, Beijing stated that it will actively engage in international and regional food security governance.

**Long-term Challenges and New Threats**

However, Beijing's dual approach to safeguarding food security has met substantial domestic and international challenges in recent years.

Domestically, it is hindered by heavy contamination of the country's limited land and water resources and labour shortages. Although the country is home to nearly one-fifth of the world's population, it has only 7% of the world's arable land. Moreover, the actual amount of arable land is much less when considering the severe contamination of China's land and water supplies, accelerated by the heavy use of fertilisers.

Similarly, China is grappling with water concerns. Despite being one of the top five countries with large freshwater resources, China faces serious water quality issues as well as quantity issues owing to highly uneven spatial distribution. These concerns are compounded by precipitation and pollution. China is also dealing with rural labour shortages due to rapid urbanisation, an ageing population and a rapidly declining fertility rate, leaving questions over who will make up the rural workforce in the future.

Further providing a challenge to Beijing's food security ambitions is climate change. Over the past few years, climate-induced disasters like severe flooding have increased in intensity and frequency. These have caused significant crop damage and further reduced China's limited supply of arable land, lowering crop yields. For instance, record-high flooding in autumn last year put China's summer grain crops at risk, including an estimated one-third of domestic wheat production.

Internationally, China's global quest for food security has met new threats. The first is the ongoing trade tensions and growing strategic rivalry between China and the United States. As the United States has been China's largest food supplier for years, the growing bilateral tensions and strategic distrust between the two countries have made Chinese leaders wary about such reliance. Since the signing of the Phase One trade deal with the United States in early 2020, China has been increasing its agricultural imports from the latter. Yet, China's top leaders have continued to stress the importance of controlling their own rice bowl while also attempting to diversify the country's imports amid continued disruptions to global supply chains arising from the COVID-19 pandemic. At the same time, China's relationships with other major western food exporters, such as Canada and Australia, have also become strained. To diversify its agricultural imports, China has pinned its hopes on the BRI countries, especially Russia and Ukraine. Yet, the lingering pandemic and the ongoing Ukraine-Russia war have created more challenges to China's diversification efforts, especially for imports of animal feed, fertilisers and wheat.

**Latest Policy Adjustments**

In response to mounting food security concerns triggered by the deteriorating external environment, Beijing has renewed its push towards grain self-sufficiency in the past few years while continuing to diversify its agricultural imports. In April 2020, the Politburo of the Chinese Communist Party made food security one of its six guarantees to the public in response to the pandemic and disruptions to global food supply chains. Having publicly linked food security to China's national security, President Xi Jinping has also called for further efforts to safeguard grain acreage and protect farmland with a view to increasing domestic production.

Additionally, Chinese authorities have set out extra measures, including a new grain security law, annual grain production targets, a soil and underground-water pollution prevention plan, and planting acreage targets alongside a farmland construction plan and a "red line" specifying minimum levels for arable land. As President Xi and other top Chinese officials have publicly noted, these efforts will help ensure that "Chinese bowls are mainly filled with Chinese food".

In terms of meat and dairy, the Ministry of Agriculture and Rural Affairs recently released a national five-year plan, which has set a target of producing 95% of its protein needs domestically until 2025: China aims to become fully self-sufficient in poultry and eggs, 85% self-sufficient in beef and mutton, 70% in dairy, and 95% in pork.

To support these efforts, Chinese policymakers continue to look to biotechnology to answer food security concerns. According to the "No 1 central policy document" for 2022, China's agricultural policy blueprint, Beijing will introduce measures to vitalise the seed sector. These include undertaking efforts to strengthen intellectual property rights protection in the seed sector and advancing progress on agricultural seed sources. Speculation has been growing recently over the likelihood of the Chinese central government approving the commercialisation of GM crops and "future foods" (such as lab-grown meat and plant-based eggs) to increase China's self-sufficiency and safeguard the country's food security.

Another policy adjustment is reducing domestic food demand through policies and campaigns. Although China has seen consecutive bumper harvests, Chinese leaders have frequently pointed out the necessity of preventing food waste, reducing undernourishment, and generating benefits for retailers and consumers. For example, President Xi launched nationwide campaigns against food waste in 2013 and again in 2020.

To support these campaigns, in April 2021, the national "Anti-Food Waste Law" was passed by the NPC Standing Committee and came into effect immediately. The law was introduced in part due to a report produced by the Chinese Academy of Sciences on behalf of the Standing Committee. The report found that in 2015 residents in megacities, such as Beijing, wasted 17 to 18 million tons of food, or enough to feed 30 to 50 million people. Another study, which includes food loss, showed that over 35 million tonnes of food, or 6% of all the food China produces, is "lost" due to processing, transport, and storage.

In conclusion, food security has always been a top priority for China's leaders and this remains the case for the current generation, as shown by the newly proposed food security law. At present, Beijing's dual approach to safeguarding its food supplies aims to achieve self-sufficiency in staples (rice and wheat) and pork while also relying on the international market for non-staples like soybeans. However, China remains under pressure from a series of inter-connected long-term domestic challenges, which will be exacerbated by Beijing's renewed push towards self-sufficiency. Furthermore, new international threats to China's food security, like the Ukraine-Russia war, will further hinder efforts to diversify imports of food and fertiliser, especially if the conflict is prolonged. As China's grain imports (corn, soybeans and wheat) have skyrocketed to unprecedented levels, the country's vulnerability to trade tensions and supply shocks has increased. In response, Beijing has undertaken policy adjustments to boost agricultural production at home to safeguard food security as well as reduce domestic food demand and wastage. Nonetheless, it remains to be seen whether these efforts are sufficient to counter mounting threats to food security.

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