

Impact of Russia-Ukraine War on China's Food Security

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1. News Highlights

On February 23, 2022, the General Administration of Customs of China released the Announcement Regarding the Approval of Wheat Import from All Regions of Russia (hereafter as the Announcement), allowing the import of wheat from all regions of Russia, except regions where dwarf bunt of wheat has occurred, and only limited to spring wheat used for processing. With the war going on in Russia and Ukraine, the breadbasket of the world, food supply shortfalls in the world may intensify and even lead to

a food crisis.¹ Coinciding with the 20th National Congress of the CCP, China as the net importer of food sees food security as one of the foremost priorities in maintaining social stability, hence this article will elaborate on the impact of the Russia-Ukraine War on food security in China.

2. Security Implications

1. China allows wheat from Russia to ensure stability of its grain supply

China is a large producer and

1. "Announcement No. 21 [2022] of the General Administration of Customs (Regarding the Approval of Wheat Import from All Regions of Russia)," *General Administration of Customs of the People's Republic of China*, February 23, 2022, <https://pse.is/429v7s>; "Russia-Ukraine War Adds Pressure to Already High Food Prices, Threatening Food Security for Millions," *The Wall Street Journal*, March 19, 2022, <https://reurl.cc/nE34q2>.

consumer nation of wheat and has basically been able to self-sustaining. However, the annual wheat import began increasing greatly in 2020, compared to the mere 3 million tons prior to 2019. The import volumes in 2020 and 2021 were 8.38 million and 9.77 million tons, respectively. Of the imports, over 80% came from Australia, the United States, and Canada, comprising 28%, 27.9%, and 26%, respectively.² Meanwhile, the share of wheat from Russia to China, merely 0.5% in 2021, has been limited by three conditions: an import quota, the difference in Chinese and Russian quarantine standards, and impediments in logistics and delivery.

In addition, China is also seeing an increase in demand for corn imports due to the impact of plant disease and insect pests, climate change, and a boost in pig farming. Prior to 2019, corn import in China came mainly from Ukraine, comprising 80%, but since the China–United States trade war, China committed to importing US agricultural products,

leading to the United States as the main source of corn imports for China in 2021, comprising 73%, and leaving less than 30% of import quota for Ukraine.³ With the current war going on, corn in Ukraine can no longer be exported via shipping. This could cause a serious deficiency in animal feed, and in turn impacting the development of animal husbandry.

During supply chain adjustments due to COVID-19, increasing inventory and diversifying supply sources have been the way to strengthen supply chain resilience. However, the excessive dependency of China on wheat and corn imports from potentially hostile Western countries being subject to possible sanctions in the future, therefore, a modest increase in the imports of wheat from Russia will help strengthen food security in China.

2. Stable supply of vegetable oil in China may be impacted

Since Russia and Ukraine are both major producers of vegetable oils, the outbreak of war not only posed an impact

2. “Wheat Import in China is Record High: 80% From Australia, the U.S., and Canada, Less than 1% From Russia,” *news.sina.com*, March 3, 2022, <https://news.sina.com.tw/article/20220303/41309340.htm>.

3. “Ukraine Corn Percentage Lowered in Total Corn Import Volume to China in 2021,” *finance.sina.com*, February 24, 2022, <https://finance.sina.com.cn/money/future/agri/2022-02-24/doc-imcwipih5137568.shtml>.

on their exports but could also very well implicate the stability of the vegetable oil supply in China. Take sunflower oil, for example, the import volume from Ukraine to China in 2021 was 878,500 tons, 69.39% of its total import volume; followed by 358,500 tons from Russia, 28.32% of its total import volume.⁴ As for soybean, the total soybean production in China in 2021 was 16.4 million tons versus the import volume of 96.518 million tons, demonstrating a high dependency on soybean imports by China. According to Bloomberg, China is panic-buying soybean from the United States, a clear indication of China's concern for soybean supply, hoping thus to lower the effect and impact of war.⁵

In the meantime, according to the 2021 Annual Reports on Global Ecosystem and Environment Observation, the annual increase rate of major cereal and oil crop production in China was

0.5%. With the current war impacting the export of cereal and oil from the two countries,⁶ the stability of the vegetable oil supply in China may also be impacted.

3. Fertilizer embargo could lead to decreased production of food in China

Russia is the largest exporter of nitrogen, the second largest exporter of potash, and comprises 20% of world phosphorous export. In 2020, China imported 1.85 million tons of potash from Russia, accounting for 20.38% of the total import volume in China, a small amount of nitrogen, and no import of phosphorous. Furthermore, since Belarus is also facing sanctions, its exports will also be constrained. In 2020, China imported from Belarus 1.71 million tons, accounting for 18.86% of the total potash import volume in China. Together, the two countries make up 40% of potash imports in China.⁷

4. "The Sunflower Oil Market Overcast by the Russia-Ukraine Situation," *finance.sina.com*, March 7, 2022, <https://finance.sina.com.cn/money/future/agri/2022-03-07/doc-imcwipih7061451.shtml>.

5. "Food Stocking while War Continues! China Buying U.S. Corn and Soybean," *Liberty Times*, March 4, 2022, <https://ec.ltn.com.tw/article/breakingnews/3848542>; "Increased Gap in Production Demand and Dependency on Export, How to Increase Soybean Self-sufficiency Rate," *People's Daily Online*, February 12, 2022, <http://finance.people.com.cn/BIG5/n1/2022/0212/c1004-32350588.html>.

6. "Major Oil Crop Yield Increase Rate 0.5% in Recent Decade in China," *People's Daily Online*, December 21, 2021, <http://finance.people.com.cn/BIG5/n1/2021/1221/c1004-32313278.html>.

7. Fertilizer import data in China from Trade Map database: <https://www.trademap.org>.

With concerns of hindered import, the price of potash in China continues to spike, with an increase of 0.66% in just four days from March 11-14. The current price of imported muriate of potash is RMB 5,000 to RMB 5,500 per ton, which is more than a 22% increase compared to the price of RMB 4,166 per ton early this year, and an 80% year-on-year increase.⁸

The lack of potash can cause lower turgor pressure in plants, making plants less durable against drought and cold, and more sensitive to fungi infection. Therefore, insufficient import of potash could lead to decreased agricultural product yield in China this year.

3. Trend Observation

1. Dwarf bunt of wheat may thus be brought into China

According to the Catalogue of Quarantine Pests for Import Plants to the

People's Republic of China announced in 2021, the dwarf bunt fungus of wheat is listed as quarantine pests No. 278. It is one of the most hazardous quarantine pest diseases in the common bunt of wheat and is extremely difficult to prevent, can be transmitted via seeds and soil, and can survive for 10 years in the soil.⁹ In the past, to prevent this fungus from entering China, China imported only a small amount of wheat from Russia, with a mere 48,800 tons of imports in 2021. Now, to cope with the hike in grain price and the tension of food security strain, China is allowing wheat import from all regions of Russia, excluding areas where “dwarf bunt of wheat” has occurred and limited to only spring wheat used for processing, and the Announcement clearly stated that Russia should provide the results of monitoring and that the exported wheat must not be mixed with wheat produced from areas of dwarf bunt of wheat. However, this will

8. “Russia-Ukraine Conflict Leads to Price Hike in Fertilizer,” *news.sina.com*, March 14, 2022, <https://finance.sina.com.cn/wm/2022-03-14/doc-imcwiwss6028902.shtml>.

9. “Catalogue of Quarantine Pests for Import Plants to the People's Republic of China,” *General Administration of Customs of the People's Republic of China*, April 9, 2021, <http://www.customs.gov.cn/dzs/2746776/3699554/2021060516253673681.pdf>; “What is the dwarf bunt of wheat mentioned in the Announcement of the General Administration of Customs?,” *eastday.com*, February 24, 2022, <https://j.eastday.com/p/1645696609042834>.

10. China has previously discovered dwarf bunt disease in wheat imported from the U.S., Canada, and Romania, for details, refer to Cui Lianggang & Cheng Yimei, “The Occurrence and Prevention of the Dwarf Bunt of Wheat,” *Jilin Agriculture*, Vol. 2, 2003, P. 22-23.

not eliminate the possibility of such plant disease entering China,¹⁰ since there is the potential problem of falsifying monitoring reports and inadequate quarantine measures. China must therefore be more stringent in quarantine measures, so as to end all possible ways of the disease entering.

2. China to continue to expand soybean farming

According to statistics, compared to 2020, the soybean production in China in 2021 is 16.40 million tons versus 96.51 million tons in imports, a decrease of 3.2 million tons and 3.81 million tons respectively.¹¹ To supplement the gap in soybean demand and increase self-sufficiency, in addition to the CCP emphasizing in its 2021 Central Rural Work Conference to “greatly increase soybean and oil crop production”, the Meeting of Directors of the National Agriculture and Rural Affairs Department

held in December of the same year again emphasized the need to increase soybean and oil crop farming, naming it the major political mission to be completed the following year. Also, policies include restoring the soybean farming areas in the four northeast provinces, promoting corn-soybean intercropping, and accelerating the promotion of the new model and technology are adopted to assist the increase of soybean farming.¹²

Furthermore, the Russia-Ukraine war will no doubt implicate the import of oil crops including soybean, sunflower seed, and vegetable seed. Therefore the 2022 No. 1 Central Document clearly pointed out the need for “vigorous implementation of soybean and oil crop yield improvement”. Therefore, to solve the structural problem of “lower self-sufficiency rate in soybean and oil crop”, Minister Tang Renjian of Agriculture and Rural Affairs stated in the press conference on February 23, 2022, that

11. “Increased Gap in Production Demand and Dependency on Export, How to Increase Soybean Self-sufficiency Rate,” *People's Daily Online*, February 12, 2022, <http://finance.people.com.cn/BIG5/n1/2022/0212/c1004-32350588.html>.

12. Corn-soybean intercropping refers to growing corn and soybean at appropriate proximity, allowing the harvest of an additional season of soybean without loss in corn yield. See “The Meeting of Directors of the National Agriculture and Rural Affairs Department Held in Beijing,” *Ministry of Agriculture and Rural Affairs of the People's Republic of China*, December 27, 2021, http://www.moa.gov.cn/ztl/zyncgzh2021/zxdt/202112/t20211227_6385698.htm.

China must expand the soybean and oil crop farming, emphasizing that “every little bit helps, expand and harvest as much as possible, we should have China-produced oil in China-produced oil bottle.”¹³ Hence to lower the dependency on soybean import in China and increase the soybean self-sufficiency rate, according to the “14th Five-Year” Plan on National Crop Farming Industry Development, China shall attempt to expand the soybean farming area by expanding the corn-soybean intercropping area to 50 million acres, expand the scale of crop rotation, and hope to increase the soybean farming area to 0.16 billion acres and up to 23 million tons of crop yield.¹⁴

3. China will continue to adopt policies and measures toward reinforcing "food security"

Even though China continues to

claim that its food supply is secure, with the Russia-Ukraine war leading to the shortage of grain supply, and strong rain last autumn delaying the sowing of wheat, and this being the year of the 20th National Congress, it is essential to reinforce their food security and avoid impacting the livelihoods, and social and political stability. Therefore, leaders in China and concerning official documents repeatedly emphasized the importance of “food security”. For example, the 2022 No. 1 Central Document pointed out the need to stabilize the year-round food farming area and yield, ensure the stability of the food farming area, and maintain the yield at above 1.3 trillion jin (650 million metric tons). In the meantime, Xi Jinping and Li Keqiang pointed out respectively in the 2022 Chinese People's Political Consultative Conference and Report on the Work of the Government that

13. “SCIO Press Conference on Key Tasks in Comprehensively Promoting Rural Revitalization in 2022,” *State Council Information Office of the People's Republic of China*, February 23, 2022, <https://reurl.cc/Rjlm0g>.

14. “Central Rural Work Conference Held in Beijing,” *People's Daily Online*, December 27, 2021, <http://politics.people.com.cn/BIG5/n1/2021/1227/c1024-32317329.html>; “The Meeting of Directors of the National Agriculture and Rural Affairs Department Held in Beijing,” *Ministry of Agriculture and Rural Affairs of the People's Republic of China*, December 27, 2021, http://www.moa.gov.cn/xw/zwdt/202112/t20211227_6385696.htm; “Notification from the Ministry of Agriculture and Rural Affairs on Printing and Circulating the ‘14th Five-Year’ Plan on National Crop Farming Industry Development,” *Ministry of Agriculture and Rural Affairs of the People's Republic of China*, December 29, 2021, http://www.moa.gov.cn/govpublic/ZZYGLS/202201/t20220113_6386808.htm.

“protecting *food security* is the foundation to realizing economic development, protecting social stability, and maintaining national security”, and to “fill *the rice bag* and fill the vegetable basket, hold steadily in our hands the food of the 1.4 billion Chinese people.”¹⁵

Hence, in order to lower the effect and impact brought about by concerns internally and externally, China shall continue to adopt policies and measures related to reinforcing “food security”. The first is to ensure the area of arable lands. In addition to issuing in 2020 the Implementation Program to Prevent the Non-grain Use of Arable Lands and Secure Food Production, China further adopted in 2021 the Regulation on the Implementation of the Land Administration Law of the People’s Republic of China (draft amendment) to

effectively contain the “non-agricultural use of arable land”, and prevent “non-grain use of arable land”. Meanwhile, the third national soil survey was launched this year, hoping to “hold fast the red line for arable land”.¹⁶ Second, to ensure a sufficient supply of crop seeds, China is adopting measures including dispatch and storage of seeds to ensure successful sowing in spring and summer.¹⁷

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(The contents and advice in the assessments are the personal opinions of the authors, and do not represent the position of the Institute for National Defense and Security Research)

15. “Xi Jinping Visits the Social Welfare and Social Guarantee Commissioners of the Agriculture Sector Attending the CPPCC,” *People’s Daily Online*, March 7, 2022, <http://cpc.people.com.cn/BIG5/n1/2022/0307/c435113-32368302.html>; “Li Keqiang Mentions in the Report on the Work of the Government to Make a Good Effort on Agricultural Production and Comprehensively Promote Rural Revitalization,” *Central People’s Government of the People’s Republic of China*, March 5, 2022, <https://reurl.cc/Rjlm0x>.

16. “Notice of the State Council on Launching the Third National Soil Survey,” *Central People’s Government of the People’s Republic of China*, February 16, 2022, http://www.gov.cn/zhengce/content/2022-02/16/content_5673906.htm.

17. “Ministry of Agriculture and Rural Affairs: Guarantee for Planting Crops in Spring and Summer This Year,” *Central People’s Government of the People’s Republic of China*, March 2, 2022, http://www.gov.cn/xinwen/2022-03/02/content_5676493.htm.