

Research on the Impact of COVID-19 on China's Agricultural Products Import

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Abstract. In December 2019, the COVID-19 first broke out in China. The socio-economic turbulence brought about by the epidemic triggered panic in many countries and adopted measures to restrict exports. As the COVID-19 spreads globally, the epidemic will inevitably affect china's agricultural imports. Moreover, the sources of my country's agricultural imports are too concentrated, and the spread of the epidemic will inevitably bring uncertainty to china's agricultural imports. This article mainly uses china's agricultural product trade data in 2020 to analyze the impact of the outbreak of the COVID-19 on china's agricultural imports, and what impact it will continue to have in the future, and uses the gravity model to study the pandemic-related demand weakening and the long-term impact of non-tariff barrier measures on China's agricultural imports. Through the analysis, it can be concluded that the international price of grain will still rise, the domestic grain reserves need to be appropriately increased, and the meat trade deficit gradually narrows.

Keywords: COVID-19; Agricultural Products Import; Impact

1. Introduction

Since China joined the World Trade Organization (WTO), China's agricultural products trade has developed rapidly. From 2001 to 2020, the total trade in agricultural products increased from \$28billion to US \$246.8 billion (Un comtrade, 2021), and is currently the world's largest importer and third largest exporter.

The agricultural products imported in China are mainly land intensive products, such as grain, soybean, etc. This is closely related to the low per capita cultivated land area in China. China accounts for 7% of the world's cultivated land area, but the per capita cultivated land area is far lower than that of some developed countries. In 2020, China's net import of agricultural products reached 94.77 billion US dollars, and the trade deficit of agricultural products continued to expand. General Secretary Xi made clear in 2018 that Chinese people should firmly hold their jobs and put their own food on their hands. The document No. 1 of the Central Committee in 2019 also shows that, based on me, we should base on our country, ensure the capacity, moderately import and support science and technology. Since China joined WTO in 2001, China's agricultural products import has also increased continuously, from US \$11.8 billion in 2001 to US \$170.8 billion in 2020, with the import volume increasing by more than 14 times. With the expansion of the scale of agricultural products import, there are some problems in the import of agricultural products, such as the imbalance of import commodity structure and the concentration of source of importing countries.

Since the outbreak of new crown pneumonia in December 2019, the total number of confirmed cases in the world has exceeded 180million by June 25, 2021. The number of confirmed cases in China is 5058, with a total diagnosis of nearly 110000. At present, the domestic epidemic situation is basically controlled, but the risk that the foreign epidemic may cause can not be ignored. Therefore, the work to prevent cases imported from abroad continues. The new crown pneumonia epidemic is still spreading around the world. According to statistics on June 23, Brazil has become the country with the largest number of newly diagnosed cases, followed by India and more than 40000 new confirmed cases in India on June 24. Since March 2020, the new crown pneumonia outbreak has

occurred in the United States. As of June 25, the cumulative number of confirmed cases in the United States has exceeded 34 million, and nearly 5 million people have not been cured.

Since March 2020, the new crown pneumonia epidemic began to spread globally. On April 30, 2021, due to the outbreak in India, more than 800,000 new diagnosis cases were found in the world in one day, among which more than 400,000 new cases were newly diagnosed in India. From May 2021 to June 25, 2021, the global epidemic situation gradually slowed down, and the number of new diagnosed cases in the world continued to decline, and the new crown pneumonia epidemic was gradually controlled in the global scope. Since May 2021, the new crown pneumonia vaccine developed in China has been certified by the World Health Organization. As of June 24, the number of new crown vaccines in China has exceeded 900 million. According to our world data, as of June 14, 2021, Canada has completed 65% of the total population, followed by 61% of the total population in the UK; And then it was the United States, which was 24.4 percent.

With the epidemic being controlled globally, what will the global outbreak of new crown pneumonia have on China's agricultural imports? What will the new crown pneumonia epidemic have on the future import of agricultural products?

2. Literature review

China plays a major role in the global agricultural trade, and since China entered WTO, the trade volume of agricultural products in China has increased significantly, so the outbreak of new crown pneumonia will inevitably impact the agricultural trade in China. China is a traditional large agricultural country, but China's resource endowment determines that it is difficult to meet the needs of all agricultural products and food by relying on domestic resources. The import trade of agricultural products plays an important role in China's national economy, and the external dependence of agricultural products is increasing [1].

In terms of trade volume, from January to April 2020, the total import and export trade of China's agricultural products reached US \$74.41 billion, a year-on-year increase of 4.3%. Among them, the import volume was 51.5 billion US dollars, a year-on-year increase of 7.8%; The export volume was 22.91 billion US dollars, a year-on-year decrease of 2.7%; The trade deficit was \$28.59 billion, an increase of \$4.38 billion over the same period in 2019 [2]. Covid-19, we can see that the import of agricultural products still kept increasing in the early stage of the outbreak of new crown pneumonia, but exports declined. With the increasing dependence of China's meat import on the world market, the change of world meat price is bound to respond to the change of China's meat import demand [3].

During the covid-19 outbreak, the trade of agricultural products between China and other countries in the world has been affected to varying degrees. Compared with the same period in 2019, imports from the United States, Chile, New Zealand and Brazil increased, with the largest increase of 68.6% (an increase of 1.04 times in the first quarter); Imports from Australia and Thailand declined, with the largest decline of 11.3%. The growth of China's agricultural imports and the decline of exports to the United States are mainly affected by the signing of the China US phase I economic and trade agreement between China and the United States in January 2020 [4]. According to the data of USDA Economic Research Service (2020), the inflation adjusted net agricultural income in 2020 is still 25% lower than the peak in 2013. The covid-19 pandemic has also significantly reduced the prices of major agricultural products, especially livestock and ethanol products. It is expected that agricultural loan arrears and farm bankruptcy will further increase [5]. Wang, Qingbin et al. used data from China and the United States to analyze and compare the mechanism of the pandemic affecting their dairy industry. Through similar mechanisms, the epidemic has seriously affected the dairy industry in China and the United States, such as reducing the price of milk, interrupting and difficult supply chain, labor shortage, moving milk within, and increasing production costs, And lack of working capital. As a neighbor of China, Japan has a similar food culture with China, so it has very close economic ties with China. Moreover, Japan's land resources are scarce, and its main domestic food consumption depends on imports. Affected by the initial stage of the epidemic, the trade volume of agricultural

products between China and Japan decreased most significantly in February. China imported 73 million US dollars of agricultural products from Japan, a year-on-year decrease of 7.1%; Exports of agricultural products to Japan amounted to 401 million US dollars; A year-on-year decrease of 18.1%; The total trade volume of agricultural products with Japan was 474 million US dollars, a year-on-year decrease of 15.1%; In China's export of agricultural products to the world, the proportion is the lowest, accounting for 3.33% [6].

In terms of trade measures, although the trade of agricultural products only accounts for 8.5% of the total global trade in goods, the import restrictions on agricultural products accounted for 52% of all measures during the new pneumonia epidemic. As of January 1, 2021, a total of 19 countries and regions in the world have implemented 1019 import restrictions on 202 kinds of agricultural products (HS4), which has affected the export of agricultural products of US \$56.4 billion, accounting for 3.7% of the total world agricultural trade [7]. Specifically, Bian Yongmin has adopted a series of measures to limit or restrict international trade under the New Coronavirus epidemic, which are divided into three categories, namely, limiting international travel, limiting international transport and directly restricting the output or importation of products. After the emergence of the overseas epidemic, by the end of April 2020, more than 20 countries had taken restrictive measures on the trade of agricultural products [8]. For example, Vietnam and Cambodia restrict rice export; India suspended grain export business from March 25; Russia imposed strict export quotas on wheat, barley, corn and other agricultural products from April 1 to June 30; Kazakhstan restricts the export quota of wheat and flour; Argentina raised the soybean export tax from 0% to 33% [9].

China's new covid-19 pneumonia epidemic has not only affected China, but also has had a great impact on the global trade in agricultural products.

2020 Since the beginning of the year, the COVID-19 has been raging around the world, which has greatly affected the global economy and trade. The IMF estimated that the world economy in 2020 shrank by 3.5%, and the world trade volume in 2020 dropped by 9.6%, and the decline was more than the financial crisis. China is the only major economy in the world to achieve positive growth in trade and trade [10]. The new crown pneumonia epidemic has been a global crisis. It has been affected by a single public health event to food security. The crisis has shown a comprehensive and profound remarkable feature, and has an omnipresent impact on the global economy, politics, society and trade, which leads to the aggravation of global economic risks and significant increase of instability and uncertainty [11]. The new crown pneumonia pandemic has brought unprecedented pressure to the food supply chain. As a result of the increasing degree of globalization, these supply chains often cross international borders.

In the short term, the supply chain of some agricultural exporting countries is blocked and panic and phased export restrictions are introduced, which will lead to the increase of market uncertainty expectations and sharp price fluctuation. The increase of uncertainty and instability will impact the enthusiasm of market participants in international trade and the confidence of some countries to guarantee domestic agricultural products supply by relying on international market, which will lead to the reduction of trade investment and the decline of international agricultural products trade scale [12]. As concerns about the spread of the epidemic and the adoption of measures to prohibit or restrict the import country's commodities in other countries and regions, the epidemic may also have further adverse economic impact by worsening the trade environment [13].

3. The status quo and problems of imported agricultural products in China

3.1 The scale of agricultural products imported in China

The import scale of agricultural products in China has been expanding year by year [14]. It can be seen from Figure 1 that the import of agricultural products in China has continued to rise in the year after the outbreak of new crown pneumonia, but the proportion of agricultural products import in the world total agricultural products has declined.

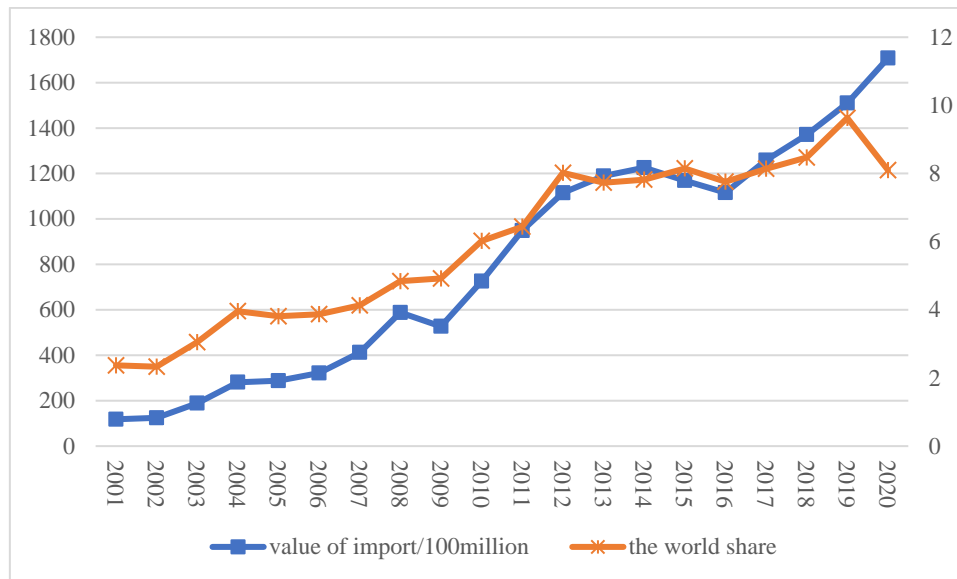


Figure 1. import volume and world share of agricultural products in China from 2001 to 2020

Data source: uncomtrade

3.2 The structure of agricultural products imported in China

The import of agricultural products in China is growing rapidly, but there is obvious structural imbalance [15]. The structure of China's imported products is mainly land intensive agricultural products, such as grain and cotton [16].

The data of 2019 are used to illustrate the structure of imported agricultural products in China. As shown in the figure, the quantity of imported soybean in 2019 is far more than that of other agricultural products, and the import of tea and pork in China is less, and the import of tea is less than one thousandth of the soybean import. This shows that there is structural imbalance in the import of agricultural products in China.

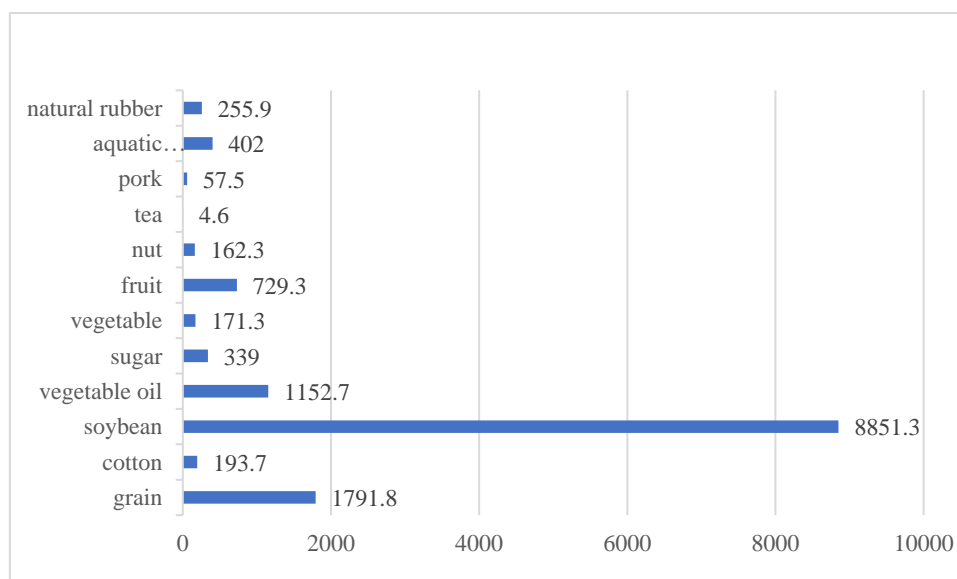


Figure 2. import volume of main agricultural products in 2019

Data source: uncomtrade

3.3 The main trading partner of agricultural products imported in China

From the perspective of the intercontinental structure of import, China's agricultural products import source is highly concentrated in the new mainland countries, North America, South America and Oceania are the main agricultural products importing countries in China, accounting for more than 60% of the total imports [17]. China relies too much on the import of existing agricultural products, especially the major trade partners and FTA partners, which may increase the trade risk of China; The import price of agricultural products in China is higher than the world average for a long time, and the import of high quality and high price products increases, and the right to price the import of agricultural products is relatively weak; The contribution and quantity margin of the breadth margin representing the import types of agricultural products to the import growth are relatively small, but the total types of imported agricultural products are relatively rich, and the substitutability of agricultural products import is gradually enhanced [18]. As shown in the table below, the import sources of agricultural products in China are mainly concentrated in the United States, Brazil, Australia, Canada and other American countries.

Table 1. import of main agricultural products in 2019(%)

category	Source of import	Import volume	market share
grain	Ukraine, Canada, Australia, France and the United States	1389.1	77.6
cotton	Brazil, Australia, the United States, India and Uzbekistan	154.8	83.7
soybean	Brazil, the United States, Argentina, Canada, Uruguay	8781.5	99.1
Edible vegetable oil	Indonesia, Malaysia, Canada, Ukraine, Argentina	977.7	90.8
sugar	Thailand, South Korea, India, Malaysia, Guatemala	46.56	98.7
Vegetables	New Zealand, Indonesia, India, Germany, Vietnam	4.7	69.0
Fruits	Vietnam, Thailand, USA, Brazil, Philippines	217.8	92.2
nut	Mexico, South Africa, Australia, USA, Vietnam	10.4	78.7
Tea	India, Sri Lanka, Taiwan, Vietnam and Indonesia, China	3.6	78.1
Livestock products (pork)	Spain, Germany, Canada, USA, Denmark	35.3	73.97
aquatic product	Russia, Ecuador, United States, Vietnam, India	366.8	84.6
Natural rubber	Thailand, Vietnam, Laos, Malaysia, Myanmar	55.4	94.0

Data source: FAO Database

4. The influence of new crown pneumonia on agricultural products import

4.1 The influence of new crown pneumonia on the import of agricultural products in China

The new crown epidemic has intensified trade protection. As a result of the social and economic turmoil caused by the epidemic, many countries have been panic, and measures to limit exports have been taken. In agriculture, China has felt fluctuations in the global food market, although it has a solid foundation for ensuring the absolute safety of rations.[19].

According to the statistics of the Ministry of Commerce of China, in January 2020, the import amount of agricultural products in China was US \$13.69 billion, down 9.0% on a month-on-year basis, and 8.5% lower than that of the previous year. Among them, the import amount of meat products in China is US \$8.765 million, which is 40.5% lower than that of January 2019. The amount of grain imports was \$387.318 million, a 48.5 per cent decrease from January 2019. In February 2020,

China's agricultural products import amount was US \$10.96 billion, down 19.9% on a month-on-year basis, with an increase in the import amount over the same period of the same period.

2020The reasons for the increase of aquatic products, beef, dairy products, grain oil and sugar import in China from January to February, 2019: since June 2019, China's pig production capacity has declined, market supply is tight, and the price of pig and beef and sheep meat has been rising continuously due to the comprehensive influence of pig cycle and swine plague in Africa. As a substitute for meat, meat, aquatic products and dairy products have increased in China market. Meanwhile, consumption demand is booming during the Spring Festival, which jointly drives the increase of meat, aquatic products and dairy imports.

The main reason for the decline of China's short-term imports is that some countries take measures to limit the import of Chinese agricultural products under the pretext of epidemic situation, which creates trade barriers to China's imports. At the same time, the operation efficiency of foreign ports is not high, and some countries even close the ports, which seriously affect the normal unloading and customs clearance process. For example, with the outbreak worsening, the Queensland Maritime Safety Agency (MSQ), where Brisbane port is located, Australia, prohibits all foreign merchant ships from docking ports in all parts of Queensland for a period of 14 days.

5. Conclusions and policy recommendations

Through the above analysis, we can know that China's agricultural products import is still facing a series of problems, such as the unbalanced structure of imported agricultural products and the excessive concentration of import sources. The covid-19 pneumonia epidemic will have a continuous impact on the import of agricultural products in China, which may lead to an increase in international grain prices, a narrowing of the deficit in meat trade, a slowdown in international trade in aquatic products, and a continued increase in dairy imports.

Policy suggestions: first, an important way for China's agricultural trade to make profits is to improve the competitiveness of domestic agricultural products through appropriate scale operation and scientific and technological progress. When there are a large number of low-cost and high-quality similar agricultural products in the international market, the domestic price can neither rise with the increase of production cost nor with the increase of demand. Only in economies of scaleSeek breakthroughs in scientific and technological progress, improve the quality of domestic agricultural products and enhance the competitiveness of agricultural products. Second, make full use of the "green box" and "yellow box" policy space given by the WTO, further increase financial support and strengthen productive support for agricultural products; Make full use of tariff quota management and non-tariff measures to strengthen the reasonable protection of the production of bulk agricultural products (Chen Rong, Xu Lianhe, 2018).

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