

The Impact of RCEP Agreement on China-ASEAN Agricultural Trade

---An Analysis Based on GTAP Model

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ABSTRACT

Agricultural trade between China and ASEAN is an important part of bilateral trade and plays an important role in promoting agricultural development and advancing rural revitalization. The trade ties between China and RCEP member states, especially with ASEAN countries, have increased with the implementation of the RCEP. Although the development of agricultural trade between China and ASEAN has already reached a considerable scale. As an important partner of China in agricultural trade, studying the impact of the RCEP agreement on China's agricultural trade with ASEAN has practical significance in strengthening agricultural trade cooperation between China and ASEAN countries and fully utilizing the policy benefits of the RCEP agreement to release the potential of agricultural trade.

KEYWORDS

RCEP; Agricultural trade; GTAP model; Trade potential

1. RELATED CONCEPTS AND THEORETICAL BASIS

1.1. Related Concepts

1.1.1. RCEP

Before the RCEP came into force, China and ASEAN opened a dialogue in 1991, and trade has gradually deepened since. China and ASEAN launched the "Early Harvest Program" in January 2004 to enable both sides to enjoy the benefits of the FTA as soon as possible. The China-Asean Free Trade Area was officially established in January 2010, becoming the largest free trade area among developing countries [1]. The RCEP was first proposed by ASEAN in 2012, and after eight years of negotiations, it was finally reached by 15 member countries, including China, Japan, South Korea, Australia, New Zealand and ten ASEAN countries [2]. The RCEP is wide-ranging and covers preferential measures in the areas of tariffs, technical standards, trade in services and investment. In terms of tax rates and technical standards, the RCEP has formulated high-standard rules to effectively enhance the competitiveness of member countries' agricultural products. At the same time, China continues to expand the opening-up of trade in services and investment, enhancing the confidence of investors in RCEP countries. In terms of agricultural market access, the RCEP has simplified customs procedures, improved customs clearance efficiency, and removed technical barriers. In addition, the RCEP also puts forward detailed requirements for intellectual property protection. In terms of tariff policy, most member countries have achieved zero tariff on 90% of agricultural products, which

provides new development opportunities for member countries, and agricultural enterprises can take advantage of preferential tax rates to reduce trade costs. In terms of trade in services, the tariff rates of member countries have been significantly reduced. China, along with Indonesia and Malaysia, has increased tax incentives on aquatic products and expanded the scope of market opening. At the same time, China has implemented more preferential policies in the fields of agriculture, forestry, fishery and mining.

1.2. Theoretical Basis

1.2.1. Trade creation theory

Trade creation theory is a core concept in the study of regional economic integration. It points out that when a free trade area or customs union is formed, the member countries will increase the trade of goods and services due to the reduction or elimination of inter-tariff and other trade barriers. This increased trade volume is often referred to as the "trade creation effect". It helps boost economic welfare and unlock its trade potential. In the process of trade creation, due to the removal of tariffs and other barriers, member countries can allocate resources more efficiently, resulting in more efficient production. When China and ASEAN countries implemented the free trade agreement under the RCEP framework, tariffs on both sides were significantly reduced, and this policy of reducing tariffs and other non-tariff barriers made the flow of goods in the region smoother and cheaper, thus unlocking greater trade potential.

1.2.2. Trade diversion theory

Trade diversion theory is a key concept proposed by Jacob Wiener in his theory of customs unions, corresponding to the trade creation effect. The trade diversion effect refers to the fact that when a free trade area or customs union is formed, goods originally imported from non-member countries are transferred between member countries because of tariff differences, even though non-member countries' products may be more competitive without taking into account tariffs. This effect has to some extent affected the structure of global trade and has important implications for trade potential among member countries. A typical example of trade diversion can be seen in the agricultural trade between China and ASEAN. Under the RCEP framework, agricultural tariffs between China and ASEAN countries have been significantly reduced or eliminated, which has significantly reduced the cost of agricultural trade between the two sides. Therefore, China may import fruits, coffee and other products from ASEAN countries, but no longer import similar goods from non-member countries, even though the products of these non-member countries may be comparable in price or quality to ASEAN countries. This transfer effect leads to an increase in intra-regional trade and a decrease in trade volume with non-member countries, thus changing the trade structure of China and ASEAN.

1.3. GTAP Model

The GTAP model is mainly used to predict the economic effects of member countries in an economy [3]. It has been widely used in research fields such as international trade and international finance, and has achieved remarkable application results. Its core lies in the database, which constructs the world economic framework applicable to the given base year of the computable general equilibrium model and contains a variety of domestic policy information. Such as producer subsidies, value-added tax and consumption tax [4]. Through quantitative analysis, the GTAP model deeply discusses the effects of policy implementation and provides specific and accurate suggestions for decision makers [5]. Its operating mechanism involves setting variables such as tariffs and technical barriers to trade to simulate the economic effects caused by policy changes [6]. Therefore, the Global Trade Analysis Model (GTAP) can assess the implementation effect of the RCEP policy agreement and measure its impact on the potential and future trends of agricultural trade between China and ASEAN countries.

2. OVERVIEW OF AGRICULTURAL TRADE BETWEEN CHINA AND ASEAN UNDER THE BACKGROUND OF RCEP

Based on the statistical data released by the UN COMTRADE database, this paper makes a statistical analysis on the proportion of agricultural trade between China and ten ASEAN countries in 2022, with the statistical unit being 100 million US dollars. The results are shown in Table 2.1.

Table 2.1. Proportion of agricultural trade between China and ten ASEAN countries in 2022

nation	Exports (\$100 million)	Take up a proportion of	nation	Imports (US \$100 million)	Take up a proportion of
Singapore	14.24	6%	Singapore	10.96	3%
Malaysia	53.52	23%	Malaysia	36.51	11%
Indonesia	26.85	12%	Indonesia	98.02	29%
Vietnam	54.82	24%	Vietnam	63.50	19%
Thailand	48.21	21%	Thailand	100.43	29%
Laos	0.56	0.2%	Laos	3.81	1%
Burma	4.75	2%	Burma	13.71	4%
The Philippines	27.13	12%	The Philippines	9.71	3%
Brunei	0.24	0.1%	Brunei	0.05	0.01%
Cambodia	2.10	1%	Cambodia	4.65	1%
total	232.43	100%	total	341.36	100%

Source: UN COMTRADE database

According to China's agricultural exports to the ten ASEAN countries, Vietnam is the largest export market, accounting for 24 percent of the total agricultural exports to ASEAN. It is followed by Malaysia with 23 per cent. Thailand was third with 21%. Indonesia and the Philippines tied for fourth place with 12% each. Singapore ranks fifth with 6 per cent. All other ASEAN countries share less than 2% of exports. In terms of imports, China imports the most agricultural products from Thailand and Indonesia, which together account for 30% of ASEAN's total imports. Vietnam came in second with 19 percent. Malaysia was third with 11 per cent; Myanmar's import share of 4% ranks fourth, while the rest of the countries' import share is below 3%.

Overall, in the agricultural trade between China and the ten ASEAN countries in 2022, the exports and imports of China and Thailand account for a relatively high proportion. The situation of China's agricultural exports to ASEAN from 2004 to 2022 is shown in Figure 2-1 below.

According to Figure 2.1, China's agricultural exports to ASEAN have increased since 2004 and reached a peak in 2022. Specific data show that exports increased from \$2.056 billion in 2004 to \$23.243 billion in 2022, an almost 11-fold increase. This growth is mainly attributed to the active negotiations between China and ASEAN in the Free Trade Area and the signing of a series of agreements, such as the Agreement on Trade in Goods and the Agreement on Trade in Services, especially the formal establishment of the China-Asean Free Trade Area in 2010, which contributed to the significant growth of exports in 2011.

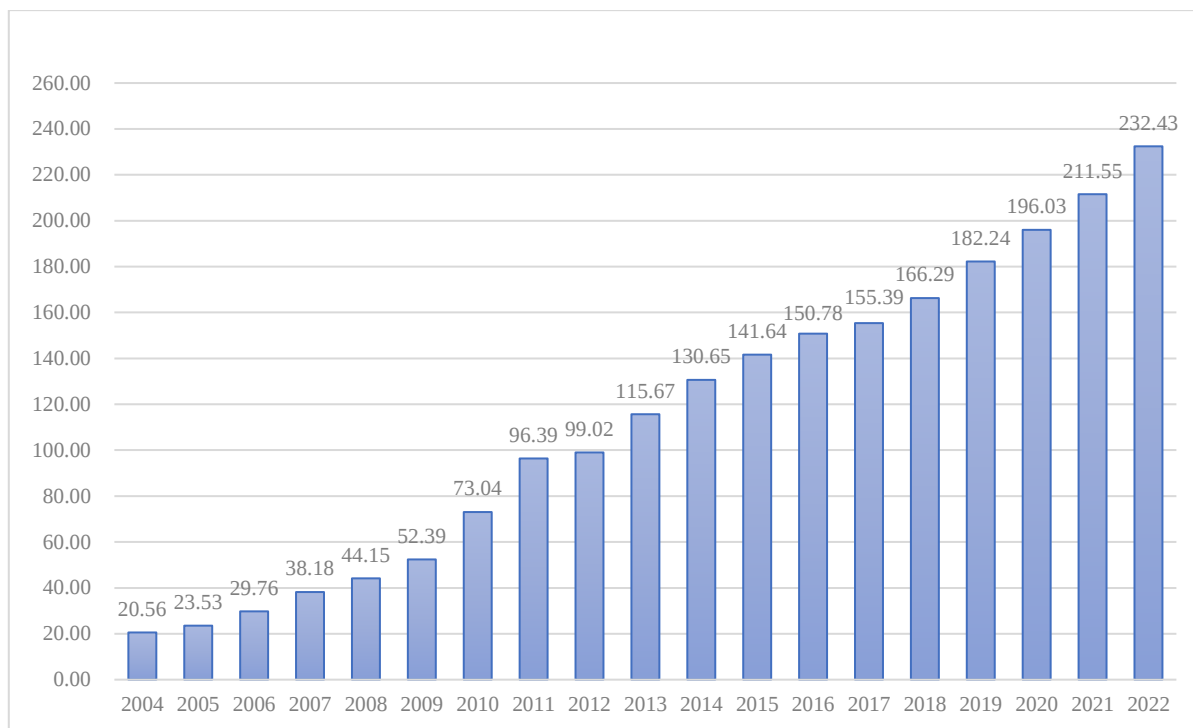


Figure 2.1. China's agricultural exports to ASEAN, 2004-2022 (USD 100 million)

Source: UN COMTRADE database

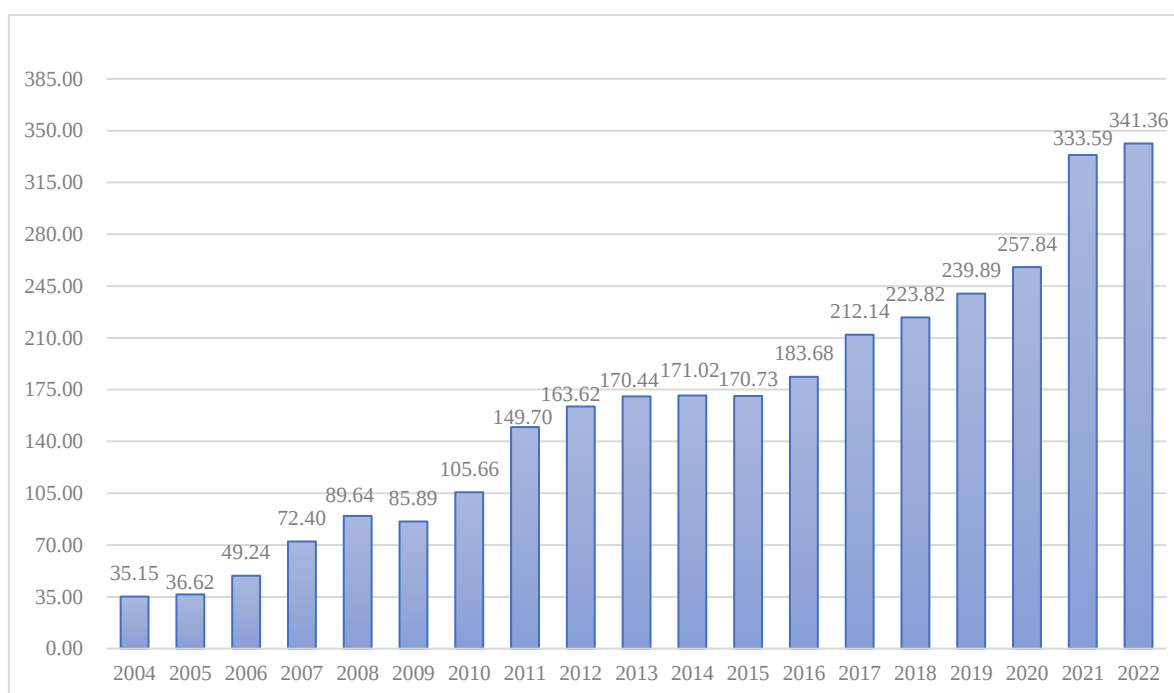


Figure 2.2. China's import of agricultural products from ASEAN, 2004-2022 (US \$100 million)

Source: UN COMTRADE database

Figure 2.2 shows the situation of China's agricultural imports from ASEAN between 2004 and 2022, which shows an overall upward trend and reaches the highest point in 2022. The growth of import value is divided into three phases: the first phase (2004-2008), thanks to the signing of the Agreement on Trade in Goods in 2005, import value increased significantly in 2006; In the second stage (2009-2020), with the formal establishment of CAFTA, bilateral trade in services and investment will be

further deepened, and ASEAN countries such as Vietnam, Laos, Cambodia and Myanmar will achieve zero tariff on agricultural trade with China; The third phase (2021-2022) saw a significant increase in imports due to the full entry into force of the Protocol on upgrading the Free Trade Area in 2019 and the signing of the RCEP in 2020.

According to the trade volume of agricultural products import and export between China and ASEAN, although the trade volume of agricultural products between China and ASEAN shows a growing trend, China has a large trade deficit of agricultural products compared with ASEAN, and the trade volume of agricultural products imported by China from ASEAN is relatively large.

3. THE IMPACT OF RCEP'S ENTRY INTO FORCE ON AGRICULTURAL TRADE BETWEEN CHINA AND ASEAN: AN ANALYSIS BASED ON GTAP MODEL

3.1. Data Processing

As the RCEP agreement will come into effect in 2022, the GTAP database takes 2014 as the base year and uses the practice of Peng Shuijun and Wu Lamei (2022) [7] as the base year to update data by dynamic recursion method, and regards tariff as a policy impact variable. To study the impact of the full implementation of RCEP tariff commitment table on agricultural trade between China and ASEAN countries. Under standard closure conditions, GDP is set as exogenous variable, while factor of production technology is endogenous variable, and the change rate of GDP, population, labor force and capital stock of China and ASEAN countries compared with 2014 is calculated based on the data released by CEPII [8].

Referring to the research of Wei Jingfu (2022) [9] et al., before conducting quantitative research on GTAP model, data in GTAP10.0 database should be pre-processed, and GTAPAgg2, the software provided in GTAP, should be used for data processing. Due to the lack of data in Myanmar, it was excluded from the research object. Considering that this paper focuses on China and ASEAN countries, the research area is divided into China, Japan, ASEAN, South Korea, Australia, New Zealand, the European Union, the United States, Russia, India and other countries or regions, with a total of 11 categories, as shown in Table 3.1.

Table 3.1. Region division of the GTAP model

ID	region	Description
1	China	China
2	Japan	Japan
3	ASEAN	Asean
4	Korea	Korea
5	Aus	Australia
6	NZea	New Zealand
7	EU_27	European Union
8	USA	America
9	Rus	Russia
10	India	India
11	Rest	Other countries or regions
Data source: GTAP10.0 database and GTAPAgg2 software summary		

The research object of this chapter is mainly the agricultural products sector, which only considers the impact on import tariffs. In terms of sectoral classification, referring to the practice of Xue Kun

(2017) [10], the original 65 industries are classified into 11 categories, including cereal products, fruit and vegetable products, sugar products and other departmental products, as shown in Table 3.2.

Table 3.2. Divisions of the GTAP model

GTAP model number	Industry category	Included industries	HS code
1	Grain product	1. Rice 2. Wheat 3. Other food crops 23. Processed rice	Chapters10,11,19
2	Fruit and vegetable products	4. Fruits and vegetables, nuts	Chapters7,8,20
3	Sugar product	6. Sugarcane, beet 24. Sugar and sweets	Chapter17
4	Oil grease	5. Oil crops 21. Animal and vegetable oils	Chapters12,15,13
5	Plant fibre	7. Plant fiber	Chapters14,52
6	Animal product	9. Livestock, goats, sheep, horses 10. Other live animals 19. Meat products of livestock, goats, sheep, horses, etc 20. Other meat products	Chapters 1,2,5
7	Milk and its products	22. Cheese and its products	Chapter4
8	Aquatic product	14. Aquatic products	Chapters3,16
9	Beverages and tobacco	26. Beverages and tobacco	Chapters9,22,24
10	Other agricultural products	12. Wool, silk 8. Other agricultural products 25. Other processed foods	Chapter18,21,23, 51
11	Products of other departments	Products of other departments	
Data source: GTAP10.0 database and GTAPAgg software			

Table 3.3. China's rate of tax reduction for other RCEP member States in the fifth year (%)

industry	China - Japan	China-south Korea	China-Australia	China - New Zealand	China-Asean
Grain product	4.51%	3.04%	2.71%	8.09%	3.54%
Fruit and vegetable products	5.12%	6.84%	10.95%	6.07%	11.65%
Sugar product	0.01%	0.00%	3.25%	6.60%	7.89%
Oil grease	0.88%	5.76%	6.07%	6.21%	1.77%
Plant fibre	4.23%	2.24%	0.00%	6.36%	3.13%
Animal product	3.37%	6.20%	2.81%	6.93%	8.42%
Milk and its products	4.94%	0.60%	0.36%	0.20%	12.38%
Aquatic product	4.12%	4.30%	7.25%	7.02%	6.36%
Beverages and tobacco	2.33%	0.44%	11.69%	10.29%	4.03%
Other agricultural products	3.19%	3.62%	1.38%	3.13%	5.82%
Products of other departments	1.87%	1.43%	0.58%	2.75%	2.22%
Data source: GTAP10.0 database and GTAPAgg software					

With reference to the research of Wei Jingfu (2022) [9] et al., according to the requirements of the RCEP agreement on reducing agricultural tariffs and breaking technical trade and the Annex I tariff commitment table in RCEP, the tariff commitment table is calculated and processed as follows: First,

the arithmetic average method is used to calculate the benchmark tax rate of HS6-digit coded commodities from the benchmark tax rate of HS8-digit coded commodities, and the benchmark tax rate of other RCEP member countries and other RCEP member countries to China on various agricultural products is calculated with the five-year average import volume from 2017 to 2021 as the weight, based on the benchmark tax rate in the tariff commitment table. The tariff change ratio [9] of HS6-digit coded goods in the fifth year obtained by means of arithmetic average is calculated and converted into the tax intensity change ratio to impact tms variables, as shown in Table 3.3 and Table 3.4.

Table 3.4. Reduction rate of other RCEP member states on China's tax intensity in the fifth year (%)

industry	Japan-China	south Korea -China	Australia - China	New Zealand -China	Asean - China
Grain product	0.37%	0.66%	2.16%	1.76%	7.02%
Fruit and vegetable products	0.39%	1.64%	3.28%	0.92%	8.66%
Sugar product	1.07%	1.11%	4.31%	1.75%	7.28%
Oil grease	0.13%	0.88%	0.85%	0.15%	2.28%
Plant fibre	0.19%	2.93%	4.11%	0.00%	3.50%
Animal product	0.08%	3.16%	0.40%	0.02%	3.54%
Milk and its products	-1.62%	0.41%	0.00%	0.32%	5.55%
Aquatic product	0.57%	2.74%	0.09%	0.59%	4.31%
Beverages and tobacco	0.13%	2.18%	1.64%	1.13%	2.59%
Other agricultural products	0.07%	1.84%	2.13%	1.30%	3.68%
Products of other departments	0.40%	2.21%	2.71%	1.58%	1.79%
Data source: GTAP10.0 database and GTAPAgg software					

3.2. Scenario Setting

Before the quantitative study of GTAP model, the corresponding exogenous variable impact is set, and RunGTAP software is used to simulate the general equilibrium solution. Specific scenarios and technical routes are set as follows:

Scenario 1: Based on the actual tariff changes of specific agricultural products between China and ASEAN countries in accordance with the provisions of the RCEP agreement, the tax intensity reduction rate after 5 years is set as scenario 1, as shown in Table 3-3 and Table 3-4.

Scenario 2: According to the actual tariff changes of specific agricultural products between China and ASEAN countries under the terms of the RCEP agreement, combined with the setting of scenario 1, and according to the requirements of the RCEP agreement on the elimination of technical barriers to trade in agricultural products, the reduction of technical barriers to trade by 5% is set as scenario 2.

Scenario 3: Based on the practice of Feng Zixuan (2023) [4] and the setting of scenario 1, the reduction of TBT by 10% as an external impact is set as scenario 3 according to the requirements of the RCEP agreement on the elimination of TBT for agricultural products.

3.3. Empirical Research

From scenario 1 to scenario 3, under different tariff reduction and non-tariff barrier reduction scenarios, China's import scale expands significantly, increasing by 20.05%, 75.18% and 134.70% respectively. At the same time, the scale of China's exports declined, decreasing by 20.28%, 78.23% and 134.30% respectively. Thus, the trade balance changes from a surplus in scenario 1 to a deficit

in scenario 2 and scenario 3, with deficits of \$454 million, \$0.06 million and \$0.03 million, respectively. For details, see Table 3.6.

Table 3.6. Changes of import and export scale of classified agricultural products in China under different scenarios

industry	exit (%)			Entrance (%)			Trade balance (million USD)		
	Scenar io 1	Scenar io 2	Scenar io 3	Scenar io 1	Scenar io 2	Scenar io 3	Scenario 1	Scenario 2	Scenario 3
Grain product	0.50	-5.24	-10.81	0.32	8.02	16.49	347.88	23364.36	45828.69
Fruit and vegetable products	7.44	2.43	-2.15	-5.27	-0.97	3.38	1028.07	-27186.15	-46669.46
Sugar product	-7.74	-13.75	-19.35	7.71	14.96	22.31	-6.68	-4064.22	-8142.11
Oil grease	-3.11	-7.41	-11.81	2.41	4.14	6.30	2026.22	-4073.49	-5474.18
Plant fibre	-1.20	-5.84	-10.43	0.61	3.10	5.73	-38.13	-1258.66	-3033.50
Animal product	-2.26	-7.86	-13.75	1.81	6.76	12.41	1365.35	-54.62	-255.77
Milk and its products	-9.33	-20.78	-31.01	8.25	22.41	37.89	-580.03	9793.06	15535.72
Aquatic product	0.40	-1.60	-3.45	0.11	2.76	5.36	142.21	-2144.60	-4204.51
Beverages and tobacco	-2.50	-3.82	-5.14	2.39	4.00	5.67	110.99	-585.65	-1283.18
Other agricultural products	-1.04	-5.36	-9.63	1.07	5.30	9.78	6005.72	3094.39	3896.79
Products of other departments	-1.44	-9.00	-16.77	0.64	4.70	9.38	-9946.90	3108.73	3798.51
Total	-20.28	-78.23	-134.30	20.05	75.18	134.70	454.70	-6.85	-3.00
Data source: GTAP10.0 software forecast and collated									

From the perspective of exports, in the specific agricultural products, under scenario 1, the exports of cereal products, fruit and vegetable products and aquatic products increased, while the exports of other products shrank. In scenario 2 and scenario 3, China's exports of all agricultural products decrease, which may be related to the increased tariff reduction among RCEP member countries, resulting in a gradual decrease in the proportion of China's agricultural exports to member countries. In terms of imports, in addition to fruit and vegetable products, other sub-agricultural products have increased, especially cereal products, sugar products and milk and products, which increase by 0.32%, 7.71% and 8.25% respectively in scenario 1. In scenario 2, the increase was 8.02%, 14.96% and 22.41%, respectively. In scenario 3, the increase was 16.49%, 22.31% and 37.89%, respectively. Overall, the RCEP's tariff reductions and the reduction of non-tariff barriers have contributed to the increase in China's agricultural imports. From the perspective of trade balance, in scenario 1, there is a trade deficit in sugar products, vegetable fiber, milk and other products, while other agricultural products remain in surplus. In scenario 2 and scenario 3, cereal products, milk and its products, other agricultural products and other products maintain a trade surplus, while other agricultural products

maintain a deficit and show a gradually widening trend. Overall, with the reduction of RCEP tariff and non-tariff barriers, most of China's agricultural products are in a trade deficit.

In scenario 2, overall, China's agricultural exports to Japan, ASEAN, South Korea, Australia, and New Zealand will increase, while exports to the United States, Russia, India, the European Union, and other countries and regions will decrease.

Table 3.7. Changes in China's agricultural exports to other countries and regions under Scenario 2 (%)

	Japan	Asean	Korea	Australia	New Zealand	America	Russia	India	EU	ROW
Grain product	505.49	6.98	64.14	7.62	9.88	-5.78	-5.60	-5.08	-5.46	-5.41
Fruit and vegetable products	20.71	-13.94	274.84	-1.20	6.29	-4.43	-3.53	-4.14	-4.05	-4.01
Sugar product	90.03	-13.74	238.77	7.84	7.99	-5.42	-5.30	-5.44	-5.26	-5.43
Oil grease	10.26	13.54	231.73	17.67	22.50	-4.67	-4.37	-2.97	-4.21	-4.40
Plant fibre	13.31	6.12	20.55	-1.49	18.65	-3.92	-4.28	-3.42	-3.47	-4.29
Animal product	64.25	22.06	55.82	32.16	25.53	-6.05	-7.24	-6.22	-6.54	-6.73
Milk and its products	567.35	-6.81	571.79	31.66	31.96	-5.32	-5.92	-5.82	-5.52	-5.49
Aquatic product	9.70	1.70	17.35	2.34	-1.90	-3.76	-4.34	-3.08	-3.70	-3.51
Beverages and tobacco	16.53	52.63	43.26	4.08	2.43	-1.72	-1.84	-1.90	-1.73	-1.80
Other agricultural products	45.54	5.86	94.84	10.24	7.31	-3.56	-3.84	-3.41	-3.71	-3.82
Products of other departments	26.64	15.83	25.73	20.04	12.71	-2.76	-2.90	-3.15	-3.49	-3.12
Data source: GTAP10.0 software forecast and collated										

In terms of subdivided agricultural products, firstly, in terms of cereal products, China's export scale to Japan, ASEAN, South Korea, Australia and New Zealand has increased, of which Japan has the largest increase, reaching about 505.49%; The scale of exports to the United States, Russia, India, the European Union and other countries decreased, especially the decrease of about 5.78% to the United States. Secondly, in terms of fruit and vegetable products, the scale of China's exports to Japan, South Korea and New Zealand increased, with the largest increase in South Korea, about 274.84%; Exports to other countries declined, with ASEAN experiencing the largest decline of about 13.94%. Third, in terms of sugar products, China's exports to Japan, South Korea, Australia and New Zealand increased, with the largest increase in South Korea, about 238.77%; Exports to other countries declined, with ASEAN experiencing the largest decline of about 13.74 per cent. Fourth, in terms of oil and fats, animal products, milk and its products, beverages and tobacco, other agricultural products and other products, the scale of China's exports to Japan, ASEAN, South Korea, Australia and New Zealand has increased, but exports to other countries have decreased. Fifth, in terms of plant fiber, China's export scale to Japan, ASEAN, South Korea and New Zealand increased, of which the largest increase to South Korea, about 20.55%; Exports to other countries declined, with the remaining countries and regions experiencing the largest decline of about 4.29 per cent. Finally, in terms of aquatic products, China's export scale to Japan, ASEAN, South Korea and Australia increased, with the largest increase

in South Korea, about 17.35%; Exports to other countries declined, with the United States recording the largest decline of 3.76 percent.

In scenario 2, China's agricultural imports from Japan, ASEAN, South Korea, and Australia will increase overall, while imports from New Zealand, the United States, Russia, India, the European Union, and other countries will decrease.

Table 3.8. Changes in China's imports of agricultural products from other countries and regions under Scenario 2 (%)

	Japan	Asean	Korea	Australia	New Zealand	America	Russia	India	EU	ROW
Grain product	8.40	5.60	11.30	18.58	-19.70	0.29	0.44	0.32	-0.21	0.33
Fruit and vegetable products	37.94	-17.96	118.23	2.00	13.03	6.80	6.82	6.93	6.33	6.61
Sugar product	175.73	33.16	91.23	74.26	-19.85	-9.09	-8.97	-8.57	-9.31	-8.64
Oil grease	76.28	44.25	553.81	16.13	-14.47	-2.23	-2.98	-2.58	-3.42	-2.53
Plant fibre	18.38	0.83	27.14	18.04	-13.77	-1.48	-1.91	-1.57	-2.13	-1.64
Animal product	6.02	-22.27	21.29	75.04	-6.11	-1.53	-1.33	-0.86	-1.94	-1.07
Milk and its products	21.54	-51.38	180.55	90.94	39.83	-16.13	-15.82	-	-	-
Aquatic product	10.51	-2.28	18.25	0.88	-2.83	1.66	3.32	15.39	16.44	15.74
Beverages and tobacco	53.19	18.09	52.02	1.87	-16.96	-2.23	-2.05	1.74	1.57	1.81
Other agricultural products	42.01	1.91	83.84	20.09	4.39	-1.56	-1.33	-2.00	-2.27	-2.01
Products of other departments	41.63	13.60	30.31	20.47	5.86	-4.87	-4.41	-1.10	-1.76	-1.24
Data source: GTAP10.0 software forecast and collated										

In terms of subdivided agricultural products, firstly, in terms of cereal products, China's import scale from Japan, ASEAN, South Korea, Australia, the United States, Russia, India and other countries has increased, of which Australia has the largest increase, about 18.58%; On the other hand, imports from New Zealand and the European Union decreased, with the largest decrease from New Zealand, reaching 19.70%. Secondly, in terms of fruit and vegetable products, China's imports from Japan, South Korea, Australia, New Zealand, the United States, Russia, India, the European Union and other countries have increased, among which the largest increase from South Korea, reaching 118.23%; Imports from ASEAN, on the other hand, decreased by 17.96%. Third, in terms of sugar products, China's imports from Japan, ASEAN, South Korea and Australia increased, of which the largest increase from Japan, up to 175.73%; However, imports from New Zealand, the United States, Russia, India, the European Union and other countries have decreased, especially from New Zealand, the largest decline of about 19.85 percent. Fourth, in terms of oil and fats, vegetable fibers, beverages and tobacco, other agricultural products and other products, China's imports from Japan, ASEAN, South Korea and Australia have increased, but the scale of imports from other countries has decreased. Fifth, in terms of animal products, China's imports from Japan, South Korea and Australia all increased, with the largest increase from Australia, reaching 75.04%. Imports from other countries decreased, with the largest decrease from ASEAN, reaching 22.27 percent. Sixth, in terms of milk

and its products, China's imports from Japan, South Korea, Australia and New Zealand have increased, especially from South Korea, the largest increase of 180.55%; In relative terms, the volume of imports from other countries decreased, with the largest decrease in ASEAN, reaching 51.38%. Finally, in terms of aquatic products, the scale of China's imports from ASEAN and New Zealand has decreased, among which the decrease from New Zealand is the largest, 2.83%; South Korea saw the largest increase, at 18.25 percent.

4. MAIN CONCLUSIONS AND POLICY RECOMMENDATIONS

4.1. Main Conclusions

Based on the relevant theoretical basis, this paper analyzes the trade scale of agricultural products between China and ASEAN from 2004 to 2022, and studies the effect of the RCEP agreement on the promotion of the trade potential of agricultural products between China and ASEAN. The research finds that the trade of agricultural products between China and ASEAN continues to grow, but the trade of agricultural products imported by China from ASEAN is greater than the trade of agricultural products exported by China to ASEAN, and there is an obvious deficit in the trade of agricultural products between China and ASEAN. Based on the GTAP model, the impact of the RCEP agreement's entry into force on the trade of agricultural products between China and ASEAN is analyzed. With the reduction of RCEP tariff and non-tariff barriers, China's trade in most agricultural products is in a deficit state. For RCEP member countries, the overall trade in agricultural products between China and ASEAN has increased after the entry into force of the RCEP agreement, while the trade in agricultural products with non-member countries has decreased relatively, indicating that with the entry into force of the RCEP agreement, RCEP will play a role in trade creation and trade transfer. It will effectively increase the total trade volume of agricultural products between China and ASEAN.

4.2. Policy Recommendations

At the national level, China should focus on agricultural products with weak export competitiveness, improve labor productivity, promote agricultural modernization, develop special agricultural products according to local conditions, and implement the rural revitalization strategy to promote the "one village, one product" project. The government needs to implement the subsidy policy for agricultural machinery production to reduce production costs, organize agricultural experts to spread knowledge in rural areas, enhance the training of agricultural talents, and build talent reserves. China should make full use of the opportunities brought by RCEP to achieve high-quality development of agricultural trade with ASEAN countries. Conduct policy publicity and training on the preferential tax rates, cumulative rules of origin and customs clearance procedures in the RCEP agreement, enhance the understanding of export enterprises on the RCEP content, and unlock the potential of agricultural trade between China and ASEAN.

From the perspective of industry, the high-quality development of agriculture is the basis for improving the quality of agricultural exports. Enterprises and relevant departments should focus on supporting local characteristic agricultural products, build brand characteristic industries, and promote the branding and scale of agricultural products in combination with the rural construction of "one village, one product" to improve export competitiveness. Accelerate the development of cross-border agricultural e-commerce, create a good business environment, shorten the transaction process, improve efficiency, reduce payment risks, and provide support for both China and ASEAN; In terms of infrastructure construction, China can provide special loans through the AIIB and the Silk Road Fund to attract private capital to participate in ASEAN's infrastructure construction, promote cooperation in ecological agriculture, tourism agriculture and agricultural products processing,

promote deeper market integration, and build a solid platform for bilateral agricultural products trade and production capacity cooperation.

From the enterprise level, enterprises should learn advanced production technology, build smart agricultural production base, and combine intelligent technology with agricultural production to achieve a new production mode; Agriculture-related enterprises need to strengthen the research and development of new varieties, according to the consumption demand of the ASEAN market, produce agricultural products that meet local needs, and increase the investment of capital, technology and talents to enhance the added value of agricultural products. Fully understand the rules and contents of the RCEP agreement, make full use of its regional cooperation provisions, and avoid losses caused by unfamiliar provisions; Enterprises can establish training bases for schools and enterprises to enhance the cultivation of agricultural science and technology talents.

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