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Evaluation of International Competitiveness of Chinese Agricultural Products, Analysis of Consumer Preference and Research on Promotion Path

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Abstract:

With the deepening of economic globalization, major economies are more closely connected, and factors of production can flow freely internationally, thus realizing the reorganization of resources. Under the trend of globalization, all countries hope to establish a complete industrial chain and gain a dominant position in the international division of labor through the free flow of production factors in the international market, so as to stand in a favorable position in the international market. In the process of agricultural internationalization, international technology and capital will flood into China and integrate agricultural resources, which will promote the industrial upgrading of China's agriculture to a certain extent. However, at present, China's agricultural resources are characterized by scattered land and small-scale farming, and the agricultural development level is low, and a complete industrial chain has not been formed. In this case, if China can not clearly use the advantage of agricultural resources to form a strong agricultural competitive advantage, it will easily lead China's agriculture to a disadvantageous position. In addition, with the general improvement of Chinese people's living standards, consumers' demands for Chinese agricultural products have been dramatically changing. Chinese consumers require for more diversified, higher quality, greener and healthier agricultural products. However, the production structure of agricultural products in China is relatively single, which could not meet the growing demands of consumers. As a result, a large amount of high-income consumers choose to buy imported agricultural products one after another, further weakening the international competitiveness of China's agricultural products. Under the new economic development situation, people urgently need to notice the real situation of the development of China's agricultural trade, carry out a scientific assessment and comparison of its international competitiveness, find out the reasons for the existence of problems, put forward solutions, and then form a lasting competitiveness, so that China's agricultural trade in the international market competition to master the initiative. The data of this paper are collected from the world trade organization (WTO) database, the People's Republic of China Ministry of Commerce website and the National Bureau of Statistics database. Based on China's main agricultural products on the basis of the relevant data of import and export (including the total amount of China's agricultural products import and export, import and export source distribution, import and export of agricultural products, the main species amount and composition, etc.), From international market share (MS), dominant comparative advantage index (RCA), dominant competitive advantage (CA) and trade competitiveness

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index (TC), a total of four indicators to objective measure of international trade competitiveness of China's agricultural products, through the analysis of the vertical agricultural international competitiveness and international competitiveness of agricultural products are mainly exported to countries. The study found that: although the absolute value of China's export of agricultural products shows a trend of continuous growth at present, the international competitiveness of agricultural products is still weak. In view of the problems existing in the development of China's foreign trade of agricultural products, this paper argues that we can draw lessons from dividend type national industrial policy. Firstly, we could integrate rural land resources and agricultural production factors to improve agricultural production efficiency; Secondly, putting forward industrial integration to promote the overall development of agricultural power mechanism, thus promoting the overall international competitiveness of agricultural products; Finally, the implementation of agricultural and rural development policies, accelerate the supply-side reform of agricultural products, to meet the increasing consumer demand of China, and ultimately improve the overall international competitiveness of agricultural products. This paper also hopes to provide forward-looking experience for other emerging economies, and the research has strong practical significance.

Keywords: Economic globalization, Agricultural products, Foreign trade, International competitiveness, International Interaction in Agriculture, Consumer preference, Factor marketization.

I. INTRODUCTION

As a traditional agricultural country, China has always attached importance to the development of agricultural trade. Since China's joint WTO in 2000, Chinese government has fulfilled its commitments by making a fundamental adjustment to the current agricultural policy, aiming at promoting the effective supply of agricultural products and the increase of farmers' income. However, since the reform and opening up, the development process of agricultural trade is relatively slow, which is restricted by China's agricultural level on the one hand, and affected by the world trade environment on the other hand. From the perspective of agricultural development situation, China's agricultural development is characterized by low level, backward technology, slow growth rate and so on. There is a large gap between agricultural and industrial development, and the reserve force of overall agricultural growth is insufficient. From the perspective of trade environment, since the financial crisis, international trade protectionism has been rising. From time to time, China's agricultural trade is subject to anti-dumping, countervailing and technical barriers to trade by European and American countries, which further worsens the international trade environment. In the process of agricultural internationalization, international technology and capital will flood into China and integrate agricultural resources, which will promote the industrial upgrading of China's agriculture to a certain extent. But at present, the agricultural development level of our country is low and has not formed a complete industrial chain. And with the general improvement of Chinese people's living standards, consumers' demand structure for agricultural products is also constantly adjusting. Facing the continuous improvement of consumers' demands for the variety, quality and use of agricultural products, the supply structure of agricultural products in China's single agricultural production system is far from meeting the growing market demand. This phenomenon leads many high-income

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consumers to buy imported agricultural products, which weakens the international competitiveness of China's agricultural products. Under the new situation of economic development, the trade of agricultural products in Our country must be fully and scientifically evaluated and compared with the international competitiveness of agricultural products, so as to find out the causes of the problems and put forward countermeasures, so as to form lasting competitiveness and master the initiative of the trade of agricultural products in the international market competition.

II. LITERATURE REVIEW

2.1 Evaluation Method of Competitiveness of Agricultural Products Index Research

Since the beginning of the 20th century, the United States began to study international competitiveness. At present, the representative research results are Michael Porter's classic works "National Competitive Advantage", "Competitive Advantage -- Creating and Maintaining Excellent Performance" and "Competitive Strategy -- Analyzing Industries and Competitors' Technology". The evaluation indexes include Balassa's Explicit Comparative Advantage Index (RCA) and Vollrath, Thomas L and De Huu Vo's trade Competitiveness Index (TC). Domestic research results of agricultural competitiveness evaluation indicators are as follows:

Mei-ling zhao, Wang Shuying [1] (2005) use of economics, management and statistics of the basic theory and method, according to certain principles, setting out the agricultural international competitiveness evaluation index system, the index system consists of a display competitive elements, product competitiveness, competitiveness and environmental competitiveness of four parts, 40 further decomposed into specific indicators; Shen Pengyi [2] (2012) established a specific evaluation model by using fuzzy comprehensive evaluation method. Using this method to measure the competitiveness of regional brand of agricultural products, it can help to improve the competitiveness of regional brand of agricultural products. Wang Baoli and Yao Yanting [3] (2007) studied the brand competitiveness of agricultural products by principal component analysis, and proposed a multiple regression model to evaluate the brand competitiveness of agricultural products on this basis.

2.2 Study on the Factors Affecting the Competitiveness of Agricultural Products

Min-li Yang [4] (2003) combined qualitative and quantitative analysis, taking the factors that affect the international competitiveness of agriculture as two aspects of competitiveness (internal cause) and competitive environment (external cause), and it is concluded that the conditions of agricultural production factors affect is the conclusion of the root cause of the agricultural international competitiveness strength, think about the level of agricultural mechanization is the key factor that influence the competitiveness of agricultural products; Hu Xiaoping and Yin Zhichao [5] (2003) classified the factors affecting the competitiveness of agricultural products into two aspects: product and price. Through empirical analysis, they concluded that the circulation cost of agricultural products accounted for a large proportion in the

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final price and believed that circulation cost was the key factor determining the competitiveness of agricultural products. Wu Yang [6] (2007) used empirical analysis to conclude that China does not have a comparative advantage in the production of land-intensive and capital-intensive agricultural products, but has a comparative advantage in the production of labor-intensive agricultural products.

2.3 Study on the Path to Enhance the Competitiveness of Agricultural Products

He Feng (2006) believed that the construction of modern third-party logistics of agricultural products could help to improve the connection between the domestic market and the international market and improve the international competitiveness of agricultural products. Through empirical measurement and analysis, Zhang Qingzheng [7] (2014) proposed to enhance the competitiveness of Agricultural products in China by giving full play to comparative advantages, optimizing industrial structure and building service platforms. Zhang Xiaofei (2018) puts forward that product brand effect can be formed by improving the quality of agricultural products, which can improve the development of regional brands and origin brands, and finally form a virtuous cycle effect between various brands. Tong Yun [8] (2018) believes that developing e-commerce for agricultural products is an important way to upgrade the quality of agricultural products, and the government should focus on talent training to develop rural e-commerce.

2.4 Research Review

Through observation and comparison of academic researches on agricultural competitiveness, the main characteristics of relevant researches are as follows: (1) the advantages and disadvantages of agricultural production in China are comprehensively analyzed. (2) To promote the value realization and competitiveness of agricultural products by the development of supporting industries. International trade of agricultural products is affected by many factors, but its competitiveness is mainly determined by product quality and product price. Therefore, studying the status quo and summarizing problems of agricultural trade has reference significance for improving agricultural production conditions, reducing agricultural production costs and ultimately improving the competitiveness of agricultural products.

III. CURRENT SITUATION OF FOREIGN TRADE OF CHINESE AGRICULTURAL PRODUCTS AND EXISTING PROBLEMS

3.1 The Development Status of Foreign Trade of China's Agricultural Products

(1) The total trade volume has maintained an upward trend, but the growth rate slowed down and the deficit continued to widen. China's total volume of import and export of agricultural products continued to expand, rising from us \$30.244 billion in 1997 to US \$277.961 billion in 2018, ranking second in the world. Except year 1997 and 1998, the foreign trade of agricultural products has been in a deficit position for a long time, and the trade deficit continues to expand. The absolute value of export of agricultural products increased greatly from 2009 to 2011, but the increase of import of agricultural products was more obvious and lasted for a long time, which mainly due to the development of regional trade cooperation and

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the high complementarity of bilateral agricultural products (Table I). Generally speaking, the growth rate of China's agricultural trade has been increasing, and the import growth rate of most agricultural products is far faster than the export growth. In recent years, the growth of total trade in agricultural products tends to slow down. The growth of trade in agricultural products mainly depends on the degree of world economic and trade cooperation and domestic economic development situation.

Table I: Statistics of China's foreign trade volume of agricultural products from 1996 to 2018 (Unit: US \$100 million)

Project	imports	exports	Total volume	The trade	Import	Export	Import and
			of foreign	deficit	growth rate	growth rate	Export growth
			trade				rate
year							
1996	153.00	149.44	302.44	3.56			
1997	146.33	157.32	303.65	-10.99	-4.36%	5.27%	0.40%
1998	126.10	143.14	269.24	-17.04	-13.82%	-9.01%	-11.33%
1999	138.53	142.09	280.62	-3.56	9.86%	-0.73%	4.23%
2000	195.44	163.84	359.28	31.60	41.08%	15.31%	28.03%
2001	201.25	166.26	367.51	34.99	2.97%	1.48%	2.29%
2002	218.48	187.96	406.44	30.52	8.56%	13.05%	10.59%
2003	304.82	221.58	526.40	83.24	39.52%	17.89%	29.51%
2004	422.79	241.21	664.00	181.58	38.70%	8.86%	26.14%
2005	451.89	287.11	739.00	164.78	6.88%	19.03%	11.30%
2006	516.53	325.42	841.95	191.11	14.30%	13.34%	13.93%
2007	653.69	388.62	1042.31	265.07	26.55%	19.42%	23.80%
2008	868.07	422.58	1290.65	445.49	32.80%	8.74%	23.83%
2009	766.17	408.83	1175.00	357.34	-11.74%	-3.25%	-8.96%
2010	1082.6	516.07	1598.67	566.53	41.30%	26.23%	36.06%
2011	1447.24	646.13	2093.37	801.11	33.68%	25.20%	30.94%
2012	1568.35	661.75	2230.10	906.60	8.37%	2.42%	6.53%
2013	1654.76	701.59	2356.35	953.17	5.51%	6.02%	5.66%
2014	1707.08	744.76	2451.84	962.32	3.16%	6.15%	4.05%
2015	1596.21	726.78	2322.99	869.43	-6.49%	-2.41%	-5.26%
2016	1548.59	754.76	2303.35	793.83	-2.98%	3.85%	-0.85%
2017	1809.01	784.38	2593.39	1024.63	16.82%	3.92%	12.59%
2018	1951.68	827.93	2779.61	1123.75	7.89%	5.55%	7.18%

Source: World Trade Organization database

(2) The single market for agricultural imports and exports accounts for a high proportion

A. Export market analysis

The main export markets of China's agricultural products are the European Union, ASEAN, Japan and South Korea. The proportion of the trade volume of agricultural products exported to ASEAN in the total

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export of agricultural products increased rapidly after the official launch of China-Asean Free Trade Area in 2010, becoming the largest export market of China's agricultural products. Differences in natural conditions such as latitude between China and ASEAN countries make agricultural products of both sides highly complementary (as shown in Table II). Japan and South Korea are limited by available territories, and the domestic production of agricultural products is in short supply. Influenced by geographical factors and the developed economic demands of Japan and South Korea, Japan and South Korea have become important markets for China's agricultural products export. The European Union and the United States have also become an important part of China's agricultural export market due to their developed economies. It is worth noting that while the proportion of agricultural products exported to Japan, South Korea, Europe and the United States has decreased, but the export market is still relatively concentrated, and the export of agricultural products is facing greater market risks.

Table II: Distribution of main agricultural export markets of China from 2009 to 2018

Region	The	ASEAN	The	Japan	Korea	Canada	Russia	Hong	Taiwan	Other
	European		United					Kong		regions
Year	Union		States							
2009	14.68%	13.63%	11.99%	19.60%	7.22%	1.69%	3.04%	9.07%	2.03%	15.61%
2010	14.03%	15.26%	11.83%	18.71%	7.22%	1.64%	3.14%	8.75%	2.37%	15.66%
2011	13.48%	16.40%	11.14%	18.28%	6.94%	1.52%	3.24%	9.39%	2.51%	15.61%
2012	12.08%	16.16%	11.48%	19.16%	6.65%	1.61%	3.10%	10.28%	2.95%	15.08%
2013	12.05%	17.72%	10.86%	16.74%	6.54%	1.42%	3.13%	11.44%	3.14%	15.46%
2014	11.86%	18.98%	10.40%	15.60%	6.82%	1.41%	3.23%	12.10%	3.25%	14.93%
2015	11.61%	21.02%	10.47%	14.53%	6.19%	1.40%	2.57%	12.61%	3.11%	15.12%
2016	10.74%	20.18%	9.66%	13.17%	6.12%	1.40%	2.52%	13.01%	3.02%	18.90%
2017	11.56%	21.08%	10.19%	13.60%	6.33%	1.50%	2.60%	13.05%	3.30%	15.45%
2018	11.40%	21.49%	10.40%	13.55%	6.60%	1.49%	2.54%	12.74%	3.43%	15.05%

Data source: Calculated from the website of Ministry of Commerce, PRC and the database of National Bureau of Statistics

B. Analysis of import market

As shown in Table III, Latin America, ASEAN and the United States accounted for large and stable proportions of agricultural products imported by China from 2009 to 2018. China's agricultural imports from Latin America accounted for the proportion of total imports of agricultural products and the proportion of agricultural products from the United States in 2018 as a result of the bilateral trade friction presents evident in the reverse change, most of China's agricultural imports from the United States are soybean such commodities, and the region's agricultural commodities production and the United States has a great alternative, Under the influence of trade friction, bulk agricultural products are imported from Latin America. Influenced by trade facilitation factors such as the implementation of the Belt and Road Initiative, the proportion of China's agricultural imports from the EU in its total agricultural imports has continued to increase since 2013. Although the proportion of agricultural products imported from Canada, Australia, New Zealand and Russia is lower than that of the United States and Latin America, they are still

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important sources of China's agricultural products import, and the imported products also meet the consumer demand of the domestic market to a large extent. The import market of China's agricultural products tends to be further concentrated. Relying on a single market, domestic consumers are expected to be greatly affected by the changes in the production of agricultural products in a certain country, and are faced with a high risk of market fluctuations.

Table III: Distribution of main sources of China's agricultural imports from 2009 to 2018

Region	Latin	The	ASEAN	The	Canada	Australia	New	Russia	Japan	Other
	America	European		United			Zealand			regions
Year		Union		States						
2009	15.56%	3.70%	9.38%	15.32%	2.90%	2.73%	1.48%	1.41%	0.49%	47.04%
2010	16.13%	4.04%	8.86%	15.41%	2.49%	3.25%	1.83%	1.15%	0.49%	46.35%
2011	16.31%	4.55%	9.47%	15.10%	2.04%	4.18%	1.94%	1.10%	0.23%	45.08%
2012	16.44%	4.81%	9.28%	16.52%	3.08%	4.26%	2.19%	0.89%	0.24%	42.29%
2013	17.81%	5.52%	8.02%	14.37%	3.11%	4.64%	3.03%	0.85%	0.24%	42.41%
2014	16.61%	5.68%	8.31%	14.87%	2.89%	4.23%	3.52%	0.80%	0.29%	42.79%
2015	16.78%	7.11%	8.49%	13.25%	2.81%	4.33%	2.38%	0.92%	0.35%	43.58%
2016	15.42%	7.52%	7.76%	12.76%	2.87%	3.58%	2.41%	1.07%	0.40%	46.20%
2017	17.35%	7.39%	8.08%	12.05%	3.31%	4.50%	3.01%	1.06%	0.40%	42.86%
2018	20.15%	7.37%	8.48%	7.48%	3.67%	5.01%	3.30%	1.48%	0.54%	42.52%

Data source: Calculated from the website of Ministry of Commerce, PRC and the database of National Bureau of **Statistics**

C. The structure of import and export of agricultural products is relatively stable

As shown in Table IV and Table V, the proportion of aquatic seafood and vegetables in agricultural products exported by China from 2009 to 2018 is the highest, and the absolute growth of export amount is obvious, indicating that China has advantages in the production of aquatic seafood and vegetables. The proportion of oranges, oranges, apples and tea exports increased, but remained low. Soybean is the most important agricultural product in import direction, indicating that China has no competitive advantage in soybean production and relies heavily on imports. Compared with main kinds of export agricultural products amount is accounted for by the rising trend, and main kinds of imported agricultural products amount proportion showed a trend of decline, at the same time reflects in agricultural exports, shown in table III-IV and tendency to further enhance the competitive advantage of agricultural products, and agricultural product categories shown in table V present advantages weakening trend in import trade.

Table IV: Amount and composition of main types of agricultural products exported by China from 2009 to 2018

Year	2009		2010		2011		2012		2013	
	Amount (\$100 million)	Percentage (%)								
Total	408.83	100%	516.07	100%	646.13	100%	661.75	100%	701.59	100%
Live pigs and pork products	6.90	1.69%	7.77	1.50%	9.04	1.40%	9.05	1.37%	9.34	1.33%

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Live pigs and pork products Cercal a and 7.16 1.65% 88.02 17.06% 198.44 17.00% 181.18 27.38% 194.29 27.69%											
Percental Perc	pork products	68.09	16.65%	88.02	17.06%	109.84	17.00%	181.18	27.38%	194.29	27.69%
Oranges Signature Signat		7.16	1.75%	6.61	1.28%	7.53	1.17%	5.94	0.90%	6.64	0.95%
Apple Section Content Conten	Vegetables	49.96	12.22%	79.81	15.46%	93.50	14.47%	75.59	11.42%	90.06	12.84%
Percentage Color	oranges	5.06	1.24%	5.21	1.01%	6.37	0.99%	8.39	1.27%	9.91	1.41%
Casing C	apples	7.12	1.74%	8.32	1.61%	9.14	1.42%	9.60	1.45%	10.30	1.47%
Padded Feathers Feather Feat	tea	7.05	1.72%	7.84	1.52%	9.65	1.49%	10.42	1.58%	12.46	1.78%
Eather 2.48 0.61% 3.67 0.71% 5.52 0.85% 7.54 1.14% 10.02 1.45%	casing	7.88	1.93%	8.29	1.61%	11.00	1.70%	10.97	1.66%	9.62	1.37%
Medicinal materials and ma	*	2.48	0.61%	3.67	0.71%	5.52	0.85%	7.54	1.14%	10.02	1.43%
and obsect paper tobacco 6.91 1.69% 7.50 1.45% 8.54 1.32% 9.13 1.38% 9.47 1.35% tobacco Others 235.36 57.57% 286.72 55.56% 368.61 57.05% 325.45 49.18% 327.50 46.68% Year 2014 2015 2016 7.07% 2017 2018 2018 Total 744.76 100% 726.78 100% 754.76 100% 784.38 100% 827.93 100% Live pigs and pork products 10.33 1.39% 9.35 1.29% 8.88 1.18% 8.41 1.07% 7.96 9.96% Live pigs and pork products 3.95 0.53% 3.95 0.54% 4.89 0.65% 7.57 0.96% 1.066 1.29% Live pigs and pork products 98.00 13.16% 10.70.8 4.89 1.69% 26.49% 204.07 26.02% 20.01 26.57% Cereals and cereal meal 10.28 1.316%	medicinal materials and Chinese patent medicine	4.85	1.19%	6.32	1.22%	7.38	1.14%	8.47	1.28%	11.98	1.71%
Year	and paper	6.91	1.69%	7.50	1.45%	8.54	1.32%	9.13	1.38%	9.47	1.35%
Amount (\$100 Percentage (\$00 million) Percentage (\$00 million)	Others	235.36	57.57%	286.72	55.56%	368.61	57.05%	325.45	49.18%	327.50	46.68%
Common C	Year	2014		2015	•	2016		2017		2018	
Live pigs and pork products 10.33 1.39% 9.35 1.29% 8.88 1.18% 8.41 1.07% 7.96 0.96%		(\$100		(\$100		(\$100		(\$100	_	(\$100	
Dork products 10.33 1.39% 9.35 1.29% 8.88 1.18% 8.41 1.07% 7.96 0.96%	Total	744.76	100%	726.78	100%	754.76	100%	784.38	100%	827.93	100%
Description Cereals and cereal meal 3.95 0.53% 3.95 0.54% 4.89 0.65% 7.57 0.96% 10.66 1.29%		10.33	1.39%	9.35	1.29%	8.88	1.18%	8.41	1.07%	7.96	0.96%
cereal meal 3.95 0.53% 3.95 0.54% 4.89 0.65% 7.57 0.96% 10.66 1.29% Vegetables 98.00 13.16% 107.08 14.73% 122.95 16.29% 131.52 16.77% 126.15 15.24% oranges 10.28 1.38% 10.62 1.46% 10.37 1.37% 8.36 1.07% 9.73 1.17% apples 10.28 1.38% 10.31 1.42% 14.66 1.94% 14.56 1.86% 12.99 1.57% tea 12.73 1.71% 13.82 1.90% 14.85 1.97% 16.10 2.05% 17.78 2.15% casing 10.29 1.38% 10.14 1.39% 10.73 1.42% 13.47 1.72% 13.56 1.64% Padded feathers; feather 9.97 1.34% 5.16 0.71% 4.32 0.57% 6.31 0.80% 8.26 1.00% Chinese medicinal medrials 1.00 1.00%		208.64	28.01%	195.68	26.92%	199.96	26.49%	204.07	26.02%	220.01	26.57%
oranges 10.28 1.38% 10.62 1.46% 10.37 1.37% 8.36 1.07% 9.73 1.17% apples 10.28 1.38% 10.31 1.42% 14.66 1.94% 14.56 1.86% 12.99 1.57% tea 12.73 1.71% 13.82 1.90% 14.85 1.97% 16.10 2.05% 17.78 2.15% casing 10.29 1.38% 10.14 1.39% 10.73 1.42% 13.47 1.72% 13.56 1.64% Padded feathers; feather 9.97 1.34% 5.16 0.71% 4.32 0.57% 6.31 0.80% 8.26 1.00% Chinese medicinal materials and Chinese patent medicine 15.27 2.05% 13.05 1.80% 12.38 1.64% 12.18 1.55% 11.02 1.33% Cured tobacco and paper tobacco 10.21 1.41% 11.07 1.47% 10.90 1.39% 11.69 1.41%		3.95	0.53%	3.95	0.54%	4.89	0.65%	7.57	0.96%	10.66	1.29%
Description	Vegetables	98.00	13.16%	107.08	14.73%	122.95	16.29%	131.52	16.77%	126.15	15.24%
tea 12.73 1.71% 13.82 1.90% 14.85 1.97% 16.10 2.05% 17.78 2.15% casing 10.29 1.38% 10.14 1.39% 10.73 1.42% 13.47 1.72% 13.56 1.64% Padded feathers; feather 9.97 1.34% 5.16 0.71% 4.32 0.57% 6.31 0.80% 8.26 1.00% Chinese medicinal materials and Chinese patent medicine Cured tobacco and paper 9.34 1.25% 10.21 1.41% 11.07 1.47% 10.90 1.39% 11.69 1.41%	oranges	10.28	1.38%	10.62	1.46%	10.37	1.37%	8.36	1.07%	9.73	1.17%
casing 10.29 1.38% 10.14 1.39% 10.73 1.42% 13.47 1.72% 13.56 1.64% Padded feathers; feather 9.97 1.34% 5.16 0.71% 4.32 0.57% 6.31 0.80% 8.26 1.00% Chinese medicinal materials and Chinese patent medicine 15.27 2.05% 13.05 1.80% 12.38 1.64% 12.18 1.55% 11.02 1.33% Cured tobacco and paper tobacco 9.34 1.25% 10.21 1.41% 11.07 1.47% 10.90 1.39% 11.69 1.41%	apples										
Padded feathers; 9.97	tea										
feather 9.97 1.34% 5.16 0.71% 4.32 0.57% 6.31 0.80% 8.26 1.00% Chinese medicinal materials and Chinese patent medicine 15.27 2.05% 13.05 1.80% 12.38 1.64% 12.18 1.55% 11.02 1.33% Cured tobacco and paper tobacco 9.34 1.25% 10.21 1.41% 11.07 1.47% 10.90 1.39% 11.69 1.41%		10.29	1.38%	10.14	1.39%	10.73	1.42%	13.47	1.72%	13.56	1.64%
medicinal materials and Chinese patent medicine 15.27 2.05% 13.05 1.80% 12.38 1.64% 12.18 1.55% 11.02 1.33% Cured tobacco and paper tobacco 9.34 1.25% 10.21 1.41% 11.07 1.47% 10.90 1.39% 11.69 1.41%		9.97	1.34%	5.16	0.71%	4.32	0.57%	6.31	0.80%	8.26	1.00%
and paper 9.34 1.25% 10.21 1.41% 11.07 1.47% 10.90 1.39% 11.69 1.41% tobacco	medicinal materials and Chinese patent medicine	15.27	2.05%	13.05	1.80%	12.38	1.64%	12.18	1.55%	11.02	1.33%
	and paper	9.34	1.25%	10.21	1.41%	11.07	1.47%	10.90	1.39%	11.69	1.41%
- Carero	tobacco										

Source: China Statistical Yearbook

Table V: Amount and composition of main types of imported agricultural products in China from 2009 to 2018

Year	2009		2010		2011		2012		2013	
	Amount (\$100 million)	Percentage (%)								
Total	766.17	100%	1082.6	100%	1447.2	100%	1568.3	100%	1654.8	100%
Cereals and cereal meal	8.98	1.17%	15.27	1.41%	20.44	1.41%	4.79	0.31%	51.01	3.08%
soybean	187.87	24.52%	250.81	23.17%	298.34	20.61%	349.90	22.31%	380.09	22.97%
Edible	58.95	7.69%	60.27	5.57%	77.14	5.33%	96.92	6.18%	80.75	4.88%

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vegetable oil		1				1				
sugar	3.78	0.49%	9.06	0.84%	19.43	1.34%	22.44	1.43%	20.69	1.25%
rubber	58.14	7.59%	99.37	9.18%	147.42	10.19%	119.10	7.59%	108.21	6.54%
Wool and sliver	15.40	2.01%	20.43	1.89%	29.25	2.02%	27.10	1.73%	28.40	1.72%
cotton	21.15	2.76%	94.69	8.75%	94.69	6.54%	118.04	7.53%	84.41	5.10%
loog	40.87	5.33%	60.71	5.61%	82.73	5.72%	72.53	4.62%	93.20	5.63%
Sawn timber	23.19	3.03%	38.69	3.57%	57.12	3.95%	55.17	3.52%	68.26	4.13%
pulp	68.44	8.93%	88.18	8.15%	119.40	8.25%	109.73	7.00%	113.75	6.87%
others	279.39	36.47%	345.13	31.88%	501.29	34.64%	592.62	37.79%	625.99	37.83%
Year	2014	•	2015		2016	•	2017	•	2018	
	Amount (\$100 million)	Percentage (%)								
Total	1707.1	100%	1596.2	100%	1548.6	100%	1809	100%	1951.7	100%
Cereals and cereal meal	62.17	3.64%	93.91	5.88%	57.05	3.68%	64.85	3.58%	59.12	3.03%
soybean	402.62	23.59%	347.69	21.78%	339.81	21.94%	396.38	21.91%	380.87	19.51%
Edible vegetable oil	59.32	3.47%	50.11	3.14%	41.64	2.69%	45.31	2.50%	47.28	2.42%
sugar	14.94	0.88%	17.74	1.11%	11.71	0.76%	10.78	0.60%	10.29	0.53%
rubber	89.24	5.23%	78.10	4.89%	87.11	5.62%	133.90	7.40%	112.29	5.75%
Wool and sliver	25.08	1.47%	25.74	1.61%	23.87	1.54%	27.99	1.55%	32.78	1.68%
cotton	49.91	2.92%	25.72	1.61%	15.70	1.01%	21.90	1.21%	31.72	1.63%
loog	117.82	6.90%	80.63	5.05%	80.85	5.22%	99.21	5.48%	109.85	5.63%
Sawn timber	80.86	4.74%	75.04	4.70%	81.38	5.25%	100.65	5.56%	101.31	5.19%
pulp	120.66	7.07%	127.55	7.99%	122.41	7.90%	153.42	8.48%	197.16	10.10%
others	684.45	40.09%	673.99	42.22%	687.06	44.37%	754.62	41.71%	869.02	44.53%

Source: China Statistical Yearbook

3.2 Major Problems

(1) Poor awareness of ecological protection and deteriorating business environment

In the process of production and operation, the protection of ecological environment is not sufficient, resulting in the deterioration of production conditions. For example, the reclamation of grassland area leads to the aggravation of land desertification, thus affecting the development of local animal husbandry; Excessive exploitation of groundwater in coastal areas leads to seawater backflow, and improper irrigation in plain areas leads to land salinization, which affects agricultural production. Environmental degradation has further compressed available production space, leading to a limit on total output and affecting the quality of agricultural products. In order to improve the production environment, more funds and resources need to be invested in governance, which brings additional costs and ultimately leads to poor agricultural operation efficiency.

(2) Poor scale effect of agricultural production and weak price competitiveness

Small-scale family-based management is the main form of agricultural production in China, which has advantages and disadvantages. On one hand, the small-scale operation ensures the efficient use of production materials, which is typical of intensive agricultural production. On the other hand, the small scale of operation also leads to the low efficiency of some elements, which can not effectively reduce the

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production cost of unit product. At the same time, the system and mechanism of the flow of factors of production are not perfect, which makes the scale of agricultural operation face more problems. Especially in the production of bulk agricultural products such as soybeans, compared with the production and operation mode of large farms abroad, China's agricultural production scale is relatively small, and the unit cost of agricultural production is high, resulting in weak price and market competitiveness of final products and unable to obtain more economies of scale.

(3) Agricultural production is highly blinded and greatly affected by market fluctuations

The level of knowledge of agricultural practitioners is relatively low, and the ability to judge market conditions is weak. When the price of a product is high, farmers have a good expectation of its market situation, and then they will large-scale planting and breeding. However, when the product can be marketed, the supply will exceed the demand, resulting in unsalable products. In this case, they can only sell the product at a price lower than the cost. The planning of agricultural production is not clear enough, and the relevant guarantee and support mechanism is not perfect. As a result, agricultural production is greatly affected by the fluctuation of market prices, and farmers' profits in production are reduced and their enthusiasm for production is weakened.

(4) No obvious features and weak brand effects

Agricultural operation in different regions lacks obvious characteristics, which is mainly reflected in the convergence of products. When products are introduced to the market, they are mostly simply packaged without being combined with regional characteristics such as the culture of the producing area, and the economic value of products is not improved enough. At the same time, in the process of agricultural operation, the brand building is not strong enough, resulting in low brand awareness and consumers' recognition of products, low brand added value of agricultural production, and great difficulty in realizing the market value of agricultural products.

IV. ANALYSIS OF INTERNATIONAL TRADE COMPETITIVENESS OF AGRICULTURAL PRODUCTS

4.1 International Market Share

International market share refers to the proportion of a country's total exports in the world's total exports, which can reflect the changes in the international competitiveness or competitive position of an industry or product of a country. An increase in the proportion indicates that the export competitiveness of the industry or product of a country is enhanced. Its calculation formula is as follows:

Where, Xij and Xwj represent the export volume of country i and industry j in the world respectively.

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When applied to the calculation of international market share of agricultural trade of a country, Xii represents the export volume of country i's agricultural products and Xwj represents the total export volume of world agricultural products. The international market share of agricultural products trade of each agricultural trade entity is calculated by selecting the relevant trade data of the main agricultural trade entities from 2005 to 2018, as shown in Table VI.

Table VI. International market share of agricultural trade by country from 2005 to 2018

Nation Year	China	The United State	Canada	Brazil	Argentina	Thailand	Indonesia	Japan	Australia	New Zealand
2005	3.39%	9.78%	4.86%	4.13%	2.26%	2.10%	1.66%	0.71%	2.50%	1.54%
2006	3.45%	9.83%	4.69%	4.19%	2.27%	2.29%	1.90%	0.69%	2.35%	1.41%
2007	3.43%	10.05%	4.31%	4.27%	2.55%	2.21%	2.10%	0.67%	1.98%	1.42%
2008	3.15%	10.42%	4.03%	4.57%	2.79%	2.36%	2.45%	0.62%	1.95%	1.33%
2009	3.47%	10.16%	3.71%	4.90%	2.39%	2.38%	2.15%	0.67%	2.00%	1.31%
2010	3.81%	10.53%	3.85%	5.07%	2.56%	2.59%	2.65%	0.75%	2.00%	1.44%
2011	3.92%	10.20%	3.65%	5.24%	2.74%	2.89%	2.92%	0.66%	2.27%	1.46%
2012	4.00%	10.40%	3.80%	5.24%	2.61%	2.54%	2.72%	0.66%	2.32%	1.46%
2013	4.05%	10.15%	3.79%	5.25%	2.43%	2.33%	2.46%	0.62%	2.17%	1.55%
2014	4.25%	10.39%	3.89%	5.03%	2.16%	2.27%	2.52%	0.60%	2.20%	1.65%
2015	4.65%	10.45%	4.07%	5.12%	2.22%	2.34%	2.55%	0.66%	2.30%	1.52%
2016	4.78%	10.40%	3.99%	4.87%	2.34%	2.34%	2.48%	0.67%	2.14%	1.50%
2017	4.52%	9.79%	3.84%	5.06%	2.05%	2.50%	2.84%	0.64%	2.43%	1.58%
2018	4.58%	9.49%	3.83%	5.17%	1.90%	2.45%	2.55%	0.66%	2.02%	1.60%

Source: Calculated from the World Trade Organization database

The table VI shows that America's agricultural products trade in the international market share in a leading position, and its agricultural exports accounted for the proportion of total exports of agricultural products, reflects the important position in the international market for agricultural products in the United States, also suggests that America's agricultural production has a larger influence to the world agricultural trade. The international market share of China's agricultural products is similar to that of Canada and Brazil, showing an overall growth trend, but its proportion is still smaller than that of the United States, and the international competitiveness of China's agricultural products needs to be further improved. Thailand, Indonesia, New Zealand and Argentina are also important subjects in the international trade of agricultural products in the world, and their agricultural exports account for a relatively stable proportion in the total world agricultural exports. Compared with the United States, China and Canada, agricultural production in these countries accounts for a larger proportion in the national economy. However, the total amount of agricultural exports is largely limited by its relatively small land area and the area available for agricultural production. Although these countries are both important trade subjects in the agricultural products world market, their share of the international market of agricultural products is relatively low compared with China and the United States and other big countries. The export of agricultural products of Japan is more obviously affected by its small territorial area. The small territorial value and huge population make the demand for agricultural products of Japan far exceed its supply. In addition to the small export volume, Japan still needs to import a large number of agricultural products every year to meet domestic needs.

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4.2 Index of Dominant Comparative Advantage

Indicative comparative advantage index (RCA index) refers to the ratio between the share of a certain commodity's export value in the total export value of a country and the share of this commodity's export value in the total world export value, and its calculation formula is as follows:

Xij and Xwj represent the export volume of country i and industry j in the world respectively, Yi and Yw respectively represent the total export volume of goods and services in country i and the world. In the analysis of agricultural trade competitiveness, Xij and Xwj represent the export volume of agricultural products of country i and the world respectively. Table VII shows the index of dominant comparative advantage of agricultural trade of main subjects in international trade of agricultural products from 2005 to 2018.

Table VII: Index of dominant comparative advantage in agricultural trade of different countries from 2005 to 2018

Nation Year	China	The United State	Canada	Brazil	Argentina	Thailand	Indonesia	Japan	Australia	New Zealand
2005	0.53	1.01	1.52	4.06	6.36	2.11	2.18	0.13	2.38	6.34
2006	0.49	1.03	1.56	4.06	6.29	2.24	2.50	0.14	2.24	6.60
2007	0.45	1.08	1.54	4.07	6.81	2.11	2.84	0.14	1.88	6.48
2008	0.40	1.16	1.53	4.04	6.93	2.26	3.19	0.14	1.67	6.39
2009	0.42	1.05	1.56	4.38	5.84	2.11	2.61	0.15	1.62	6.02
2010	0.42	1.10	1.59	4.19	6.07	2.19	2.92	0.16	1.45	6.46
2011	0.42	1.10	1.55	4.07	6.33	2.49	2.95	0.16	1.56	6.51
2012	0.41	1.09	1.61	4.29	6.38	2.10	2.93	0.16	1.70	6.65
2013	0.40	1.06	1.64	4.46	6.44	1.93	2.85	0.17	1.66	6.98
2014	0.40	1.06	1.66	4.59	6.39	1.94	3.04	0.17	1.78	7.13
2015	0.40	0.99	1.78	4.90	6.80	1.82	3.17	0.18	2.04	6.69
2016	0.44	0.99	1.78	4.69	6.91	1.74	3.11	0.17	1.80	6.49
2017	0.42	0.97	1.75	4.65	6.47	1.86	3.39	0.17	1.90	6.76
2018	0.42	0.96	1.78	4.77	6.35	1.84	3.10	0.18	1.57	7.13

Source: Calculated from the World Trade Organization database

Table VIII: RCA specifications

Index range	Competitive advantage	Nations
RCA≥2.5	Extremely Strong international competitiveness	Brazil, Argentina, Indonesia, New Zealand
1.25≤RCA<2.5	Strong international competitiveness	Canada, Thailand, Australia
0.8≤RCA<1.25	Generally strong international competitiveness	The United States
RCA<0.8	Week international competitiveness	China, Japan

As shown in Table VII and Table VIII, Brazil, Argentina, Indonesia and New Zealand have the most significant explicit comparative advantages. Among them, the dominant comparative advantage of Brazil,

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Argentina and New Zealand is more prominent and the overall fluctuation is small, while the dominant comparative advantage of Indonesia shows a trend of slowly increasing. In addition, Canada, Thailand and Australia also have superior dominant comparative advantages. Dominant comparative advantage in the United States, by contrast, is more general, the reason is that compared with roughly described earlier, exports of agricultural products in the United States in its total exports accounted for is lower, while in the country of export goods mainly agricultural products, agricultural output value more fundamentally proportion in the gross national product (GNP) in the United States is far lower than the state, Therefore, the explicit comparative advantage of agricultural products in these countries is stronger than that in the United States. The dominant comparative advantage of agricultural products in China and Japan is weak, on one hand, the reason lies in the limited arable land and the large population. As the most populous country in the world, China has a low matching degree of population and resources due to the lack of arable land and environmental deterioration. Although Japan's population is far lower than China's, its narrow land area determines its agricultural production potential. On the other hand, both China and Japan are relatively large economies in the world, but the agricultural output value in the GNP is relatively low.

4.3 Indicative Competitive Advantage Index

Indicative competitive advantage index (CA index) subtracts import comparative advantage based on export comparative advantage of an industry or product. Compared with RCA index, this index excludes the influence of import factors, so as to obtain the real competitive advantage of a country's foreign trade. Its calculation formula is as follows:

Among them, the *RCAi* represents i dominant comparative advantage index, *Mij* and *Mwj* respectively represent the total import volume of country i and industry j in the world respectively. *Yi* and *Yw* represent the imports of goods and service in country i and industry j in the world. Table IX shows the index of dominant competitive advantage in international trade of agricultural products from 2005 to 2018.

As shown in Table IX and X, Argentina and New Zealand have the strongest explicit competitive advantages and are generally stable. At the same time, Brazil is also relatively superior in the explicit competitive advantage of agricultural products, while Thailand, Indonesia and Australia have relatively stable performance in the index of explicit competitive advantage, maintaining positive values all the year round, with strong competitive advantage. Most of these countries are countries with high agricultural output value in their GNP. The United States, Canada, the dominant competitive advantage is more general, the United States, Canada, while maintaining the larger exports of agricultural products due to the huge domestic consumption to keep large amount of imports, under the condition of considering the effects of import factor, its comparative advantage is abate, dominant competitive advantage relative to Latin America, Asean countries and Australia, New Zealand. It is worth noting that the dominant competitive advantage of China and Japan is weak, but the two countries are different. China's dominant competitive advantage shows a weakening trend, while Japan's dominant competitive advantage shows a strengthening

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trend while maintaining a relative disadvantage. Japan's huge domestic population, developed economic level and limited supply of agricultural products make the import amount of agricultural products remain high all the year round, but relying on science and technology, Japan's agricultural products competitive advantage is still improved. Although the absolute value of China's export of agricultural products keeps growing, the export growth rate is lower than the import growth rate due to a variety of reasons, such as large domestic demand and deteriorating agricultural production environment, and the competitive advantage of agricultural products continues to weaken.

Table IX: Index of indicative competitive advantage in agricultural trade of different countries from 2005 to 2018

Nation	China	The	Canada	Brazil	Argentina	Thailand	Indonesia	Japan	Australia	New
		United								Zealand
Year		State								
2005	-0.38	0.30	0.69	3.42	5.85	1.38	1.06	-1.38	1.76	5.38
2006	-0.42	0.31	0.69	3.37	5.78	1.53	1.35	-1.29	1.59	5.54
2007	-0.46	0.39	0.67	3.40	6.21	1.40	1.50	-1.19	1.25	5.41
2008	-0.58	0.50	0.66	3.42	6.26	1.50	1.94	-1.12	1.06	5.27
2009	-0.47	0.37	0.64	3.77	5.34	1.36	1.31	-1.13	1.01	4.88
2010	-0.53	0.42	0.71	3.60	5.66	1.45	1.58	-1.10	0.86	5.31
2011	-0.55	0.42	0.69	3.48	5.96	1.74	1.51	-1.09	0.98	5.39
2012	-0.62	0.39	0.72	3.71	5.98	1.31	1.66	-1.05	1.12	5.48
2013	-0.58	0.35	0.75	3.88	6.09	1.17	1.54	-0.98	1.04	5.82
2014	-0.56	0.33	0.74	4.03	6.03	1.13	1.63	-0.93	1.10	5.94
2015	-0.62	0.24	0.80	4.32	6.43	0.94	1.74	-1.04	1.32	5.42
2016	-0.57	0.23	0.81	3.93	6.48	0.82	1.52	-1.06	1.04	5.26
2017	-0.62	0.20	0.80	3.95	5.98	0.97	1.83	-1.05	1.16	5.51
2018	-0.60	0.17	0.82	4.13	5.55	0.98	1.56	-1.03	0.79	5.84

Source: Calculated from the World Trade Organization database

Table X: CA index

Index range	Competitive advantage	Nations
< 0	Absolute competitive advantage	Chnia, Japan
= 0	Self-balancing of trade	
> 0	Comparative competitive Advantage	USA, Canada, Brazil, Argentina, Thailand, Indonesia, Australia, New Zealand

4.4 Trade Competitiveness Index

The trade competitiveness index (TC index) shows the proportion of a country's import and export balance in its total import and export trade. Its calculation formula is as follows:

$$TCi=Xij-Mij+Xij+Mij$$

Where Xij represents the export amount of j industry of country i, Mij represents the import amount of

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j industry of country i, which is used to measure the trade competitiveness of agricultural products of a country, Xij represents the export amount of agricultural products of country i, Mij represents the import amount of agricultural products of country i. Table XI shows the agricultural trade competitiveness index of main subjects in international trade of agricultural products from 2005 to 2018.

As shown in Table XI and XII, the agricultural trade competitiveness of Argentina, New Zealand and Brazil still belongs to the first tier, with strong competitive advantages. Secondly, the agricultural trade competitiveness of Canada, Thailand, Indonesia and Australia is also strong. These countries are important agricultural exporting countries in the world, and agricultural output value accounts for a relatively high proportion of their GROSS national product. Although the competitive advantage of the United States is weak, the OVERALL TC index of the United States is positive, and the absolute value of the export of agricultural products has been in a leading position for a long time. The high economic development provides good conditions for its consumer demand, while maintaining a large number of imports of agricultural products, weakening its own competitive advantage. In contrast, in terms of agricultural trade competitiveness, China shows a weakening trend, while Japan shows a slight strengthening trend. Compared with Japan, the biggest advantage of agricultural production in China is more vast land area, but its's vast populations mean huge consumption, while maintaining the growth of absolute value of exports of agricultural products are also high-speed growth of value, and import growth than export growth, agricultural products export competitiveness needs further improve.

Table XI: Trade competitiveness index of agricultural products of different countries from 2005 to 2018

Nation	China	The	Canada	Brazil	Argentina	Thailand	Indonesia	Japan	Australia	New
		United								Zealand
Year		State								
2005	-0.22	-0.07	0.32	0.78	0.88	0.43	0.32	-0.83	0.53	0.71
2006	-0.23	-0.06	0.30	0.76	0.88	0.49	0.41	-0.82	0.51	0.70
2007	-0.25	0.02	0.28	0.74	0.86	0.49	0.39	-0.80	0.43	0.70
2008	-0.35	0.09	0.28	0.73	0.84	0.46	0.42	-0.81	0.43	0.68
2009	-0.30	0.09	0.21	0.75	0.87	0.50	0.38	-0.79	0.41	0.68
2010	-0.35	0.10	0.24	0.73	0.88	0.49	0.39	-0.77	0.42	0.71
2011	-0.38	0.10	0.25	0.73	0.89	0.52	0.36	-0.80	0.47	0.71
2012	-0.41	0.10	0.25	0.74	0.89	0.43	0.37	-0.79	0.46	0.70
2013	-0.40	0.09	0.26	0.73	0.89	0.42	0.33	-0.78	0.44	0.71
2014	-0.39	0.07	0.26	0.73	0.89	0.42	0.33	-0.77	0.42	0.71
2015	-0.37	0.02	0.25	0.77	0.88	0.39	0.37	-0.76	0.42	0.68
2016	-0.34	0.02	0.25	0.73	0.87	0.39	0.32	-0.75	0.39	0.68
2017	-0.40	0.00	0.26	0.76	0.83	0.42	0.38	-0.75	0.44	0.69
2018	-0.40	-0.02	0.26	0.77	0.74	0.41	0.30	-0.75	0.36	0.69

Source: Calculated from the World Trade Organization database

Table XII: TC indices

Index range Competitive advantage		Nations		
0.5≤TC≤1	Extremely strong competitive advantage	Brazil, Argentina, New Zealand		
0.2\le TC<0.5	Relatively strong competitive advantage	Canada, Thailand, Indonesia, Australia		

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0 <tc<0.2< th=""><th>Relatively week competitive advantage</th><th>The United States</th></tc<0.2<>	Relatively week competitive advantage	The United States
-0.2≤TC<0	week competitive advantage	
-0.5≤TC<-0.2	Relatively strong competitive disadvantage	China
-1≤TC<-0.5	Extremely strong competitive disadvantage	Japan

4.5 Summary

Through the comparative analysis of the evaluation indexes of the international competitiveness of agricultural products of the above major trading countries, it can be concluded that although the export of agricultural products of China accounts for a high proportion in the total export of agricultural products of the world, the international competitiveness of China's agricultural products is still weak compared with the above-mentioned countries. The international trade in agricultural products increased year by year, but the growth rate of import of agricultural products was much higher than that of export during the same period, and the trade deficit in agricultural products continued to expand. No matter in the index of dominant comparative advantage, dominant competitive advantage index or trade competitiveness index, China is in a relatively low position. The weak index of dominant comparative advantage indicates that the proportion of export in China's agricultural trade is relatively small, while the low index of dominant competitive advantage and trade competitiveness indicates that China's agricultural trade structure is unbalanced and the deficit is large. In short, although the absolute value of China's export of agricultural products has kept growing, the international competitiveness of agricultural products is still weak, and there is a large space for improvement.

V. SUGGESTIONS ON ENHANCING INTERNATIONAL COMPETITIVENESS OF CHINESE AGRICULTURAL PRODUCTS

5.1 Advancing Agricultural Supply-Side Reform on the Premise of Consolidating the Basic Rural Operation System and Ensuring Food Security

Although agricultural trade has different characteristics from other commodity trade, the basic form of its international competitiveness is still price competition, so it is necessary to firmly grasp the price advantage to promote the export of domestic agricultural products [9]. Production cost is the main factor affecting the price of agricultural products. In order to enhance the competitive advantage in the price of agricultural products, it must be guided by reducing production cost. People can form moderate scale operation through rural land circulation and capital investment, that is, to achieve economic benefits of agricultural production scale operation and reduce production cost through the revitalization of factors. However, the revitalization of rural agricultural production factors needs to be carried out under the premise of guaranteeing the basic system of collective ownership of rural land. China is a country with a large population and has a huge demand for food consumption. Therefore, agricultural supply-side reform must be carried out on the basis of guaranteeing national food security. Guided by market demand, we will consolidate China's agricultural production capacity, raise agricultural production efficiency and fully transform agricultural production from increasing output to improving quality by optimizing grain

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production capacity, improving production technology and equipment, improving land quality and effectively protecting cultivated land.

5.2 Improving the Property Rights System and Market-Based Allocation of Factors of Production, and Fostering New Types of Agricultural Business Entities

The effective input of agricultural production factors is the necessary condition to ensure agricultural production. It is necessary to invigorate agricultural production factors and improve the input and use efficiency of agricultural production factors. Optimizing resource allocation of capital, labor, land and other important factors of production through the market and allocating resources to the most effective place based on market supply and demand can not only greatly improve resource utilization efficiency, but also promote two-way free flow of factors between urban and rural areas and promote integrated development of urban and rural areas. Through the improvement of the property rights system to clarify the rights of rural resources, to protect the rights and interests of operators, on this basis, to promote the reform of agricultural land contract system and the development of shareholding cooperation system. According to the report to the 19th National Congress of the CPC, we will "consolidate and improve the basic rural operation system, deepen reform of the rural land system, and improve the system of separating contracted land rights, ownership rights, and ownership rights". Through confirming the right of land property, clarifying the ownership of land ownership, contracted areas and management rights, revitalizing rural land and improving the efficiency of agricultural land use. We will strengthen the principal role of farmers in operation, and take farmers' share of value-added benefits as the basic starting point. We will encourage farmers to carry out joint stock system cooperation in the form of land, forest rights and other assets, and strengthen their right to participate in decision-making and operation so that they can share in the fruits and benefits. Provide more perfect agricultural development programs, encourage enterprises to invest in rural areas, increase capital investment in agricultural projects, so as to achieve mutually beneficial results with farmers [10]. Through the reform of the household registration system, the dual structure of urban and rural areas will be broken and the free flow of labor force will be promoted. With the help of perfect property right system and market resource allocation, agricultural production factors should be revitalized, the initiative of main body and factors should be brought into play, and a good cycle of mutual promotion of factors and market should be formed.

5.3 Combining Moderate Scale of Agricultural Production and Operation with Diversity of Form

From the perspective of operators, the scale of agricultural operation must be moderate. Based on the principle of scale economy and comparative benefits, too small scale of operation hinders operators from obtaining the best benefits, while too large scale of operation is likely to lead to extensive agricultural production [12]. The production scale of traditional agriculture with family as the main body is relatively small, the proportion of constant cost is large, and the production cost per unit of agricultural products is high, so economies of scale cannot be realized. In the modern society with intensive land and accelerated urbanization, the income level of laborers is on the rise, which increases the opportunity cost of farmers engaged in agricultural production. It is difficult for farmers to gain more benefits from small enterprises,

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which leads to the difficulty in improving farmers' production enthusiasm. In the agricultural scale operation, due to the relative weight of the fixed cost and variable cost changes, compared with the traditional family, the units are more likely to reduce the production cost of agricultural products, agricultural operators are more likely to gain scale economic benefit from agricultural production, reduce the opportunity cost of operators, improve the comparative advantage. However, excessive scale operation may lead to extensive agricultural operation, reduce the use efficiency of production factors, and is not conducive to the acquisition of comparative benefits. Therefore, on the basis of grasping the two operating principles of "scale economy" and "comparative benefits", it is necessary to accurately evaluate the appropriateness of agricultural operation scale.

Due to the diversity of agricultural products for the quantity of production factors there is a greater difference in the requirements of the type of scale management should be a more detailed distinction. According to the types of agricultural products, the main types include labor intensive, land intensive, capital intensive three categories. According to the division of types of agricultural products, the land scale management is mainly used for land intensive agricultural products, while for other types of agricultural products to form through a variety of ways to obtain the scale economic benefit, such as farming system innovation, by developing agriculture and complex form of agriculture to achieve the effect of scale operation.

Anyway for agricultural scale management, should not be simply thought to expand farmland area can achieve economies of scale, but through the deep analysis of the types of agricultural products, according to the characteristics of products targeted by a variety of forms and ways to achieve economies of scale, combining the moderation of scale management and diversity.

5.4 Developing Modern Ecological Agriculture with Regional Characteristics in Light of Local Conditions

According to the resource endowment conditions of different regions, the layout of professional production mode with regional characteristics should be constructed to develop and construct modern agricultural experimental zones. We will implement the strategy of high-quality agriculture by taking the market as our orientation, raising the level of science and technology in our products, reducing the production of low-end products, increasing the supply of green, organic, and high-quality agricultural products, and maximizing the balance between supply and demand. Relying on financial support and policy support, it will provide a sound policy environment for the development of modern agriculture and sufficient financial guarantee for the construction of agricultural production infrastructure. We will increase input in agricultural science and technology, rely on the combination of production, education and research in agriculture, promote the progress of agricultural science and technology, strengthen the protection and restoration of the rural ecological environment, and develop green agriculture. To build agricultural products brands with regional characteristics, endow the brand with local cultural connotation, improve the added value of agricultural products, promote agricultural products through a variety of

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channels, improve consumers' sense of brand identity, and promote the realization of market value of agricultural products.

5.5 Improving the Level of Agricultural Protection and Support System

We should increase policy preference for agriculture, rural areas and farmers and increase financial input to provide a favorable policy environment for agricultural development. Guide financial institutions to go to the countryside to serve agricultural development, for example, banks can go to the countryside to set up service stations, simplify the loan procedures needed for agricultural production; Insurance companies can develop related insurance products suitable for agricultural production to improve the ability of farmers to cope with agricultural risks; Futures companies can develop the option futures market of agricultural products and carry out rural futures business through the popularization of financial knowledge. In practice, we should constantly improve the price mechanism of agricultural products, avoid agricultural producers and operators blindly following the trend due to the price fluctuations of agricultural products, resulting in the sudden expansion or contraction of the production of single agricultural products in a short period of time, reduce market risks and ensure the efficiency of agricultural production. Timely draw lessons from successful experience at home and abroad, make use of the dual functions of market and government, so as to take the market as the leading, the government to support, constantly optimize the price formation mechanism of China's agricultural products, to ensure that China's agriculture towards high-quality development.

VI. CONCLUSION AND PROSPECT

The international trade of agricultural products redistributes the global agricultural and sideline products. The development of agricultural trade greatly boosts the development of China's overall agriculture. At present, the export competitiveness of China's agricultural products has been weak, the quality and production cost of agricultural products are also inferior to those of developed countries. By taking advantage of the dividends of national industrial policy, we can improve the efficiency of agricultural production by integrating agricultural production factors such as rural land. By promoting industrial integration, we can improve the overall dynamic mechanism of agricultural development and promote the overall international competitiveness of China's agricultural products. Through the implementation of agricultural and rural development policies, accelerate the reform of the supply side of agricultural products and enhance the overall international competitiveness of agricultural products. The improvement of the overall international competitiveness of agricultural products in turn promotes the development of agriculture and the increase of farmers' income, thus accelerating the realization of rural revitalization. In the future, the comprehensive competitiveness of "quality, price and brand" of China's agricultural products will be further enhanced, and the types and regional structure of import and export of agricultural products will be more reasonable.

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