

Reforming China's Agricultural Support Policies under the WTO Agreement on Agriculture Framework — Reducing “Amber Box” Measures While Increasing “Green Box” Ones

Tianhui Zhao, Faqin Lin, Mengxun Liu*

Abstract: The development of agriculture in China has entered a new stage faced with external risks of international trade and internal requirements for high-quality development. With the deepened integration of international agricultural markets, China's agricultural support policies need to deal with great pressure and challenges under the restrictions of international trade rules. This paper reviews the pressure upon China's agricultural support policies and its reform of reducing “Amber Box” measures while increasing “Green Box” ones. Based on relevant theories, this paper analyzes the expected overall effects of the reform. The policy package of promoting the full-cost insurance and the planting income insurance through subsidies and progressively lowering the administratively determined support price will improve the fiscal expenditure efficiency, the protection of production income and the expected economic benefits. It helps to maintain the stability of international trade and strengthen the global competitiveness of agricultural products. Based on the common consideration of complying with international trade rules and ensuring the high-quality development of agriculture in China, this paper argues that China's agricultural support policies should continue to promote the progressive reform of reducing “Amber Box” measures while increasing “Green Box” ones under the principle of “market-driven pricing mechanism with decoupled subsidies”. Future policies should shift towards greater internationalization, marketization, and targeting accuracy, enhancing the competitiveness of agricultural products, optimizing domestic support policies and actively participating in the formulation and improvement of international trade rules.

Keywords: Reform of Agricultural Support Policies, Reducing “Amber Box” Measures while Increasing “Green Box” Ones, International Trade Rules

* Tianhui Zhao, PhD. Candidate, College of Economics and Management, China Agricultural University. Email: afreelifeate@163.com.

Faqin Lin, Professor, Beijing Research Center of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, College of Economics and Management, China Agricultural University.

Mengxun Liu, Lecturer, School of Economics and Finance, University of International Relations.

This paper is the phase-based achievement of the “Study on Promoting Reform of WTO Multilateral Trade System by Steadily Expanding Institutional Opening-up” (23LLYJA059), a key program of Beijing Research Center of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. The authors take sole responsibility for the paper.

I. INTRODUCTION

The agricultural reform in China at the end of the 1970s significantly increased farmers' income. China abolished the agricultural tax in 2004 and has provided more agricultural subsidies and better support policies ever since. As the population grows and industrialization deepens in China, with objective constraints such as per capita arable land and water resources, China's agricultural support policies have played an important role in ensuring national food security, improving farmers' income and standard of living, promoting agricultural modernization and other aspects. China has been continuing to expand the scale of international trade in agriculture since its accession to the World Trade Organization (WTO). China's total trade of agricultural products jumped from \$27.45 billion to \$334.32 billion from 2001 to 2022 with an average annual growth rate of 12.6%. The development of agriculture in China has entered a new stage, faced with external risks of international trade and internal requirements for high-quality development of agriculture. Generally speaking, China's import of agricultural products grows faster than the export of agricultural products and the overall trade deficit tends to expand year by year, which to some extent shows the weakness of China in the domestic supply and export competitiveness of agricultural products. Although China has ample grain supplies in the long term and there is no supply gap, China's import of rice, wheat and corn in 2022 exceeded their import quotas.¹ Specifically, domestic and foreign grain prices are inverted, the pressure on grain “excessive import beyond demand gap” has intensified, and agricultural support policies, represented by price support policy, have been restricted by international trade rules while exerting pressure on the operation of the domestic market.

Under the new situation of the new era, China's door of opening-up will not be closed but will only open wider and wider. China's agriculture has begun to rapidly and fully integrate into the global agricultural market since its accession to the WTO. Therefore, when formulating China's agricultural support policies, it is important not only to pay attention to the needs of domestic agricultural and socio-economic development, but also to strengthen

¹ Ministry of Commerce, Analysis on the Changes of the Landscape of Agricultural Trade under Agricultural Opening-up and the Reasons Behind, <http://chinawto.mofcom.gov.cn/article/br/bs/202402/20240203474835.shtml> (Last Visited on March 27, 2024).

its focus on convergence with international trade rules. In 2001, China made ambitious commitments to agricultural opening-up when joining the WTO, retaining limited space for domestic support policies.² China has strengthened the “Amber Box” subsidies for three staple grains (rice, wheat, corn) and other major agricultural products since 2004, pushing the WTO *de minimis* thresholds to the limit. The competition in global agricultural trade is becoming increasingly intense. China has been involved in agricultural disputes as the respondent much more frequently than before since 2016. The United States, a major grain exporter, has brought disputes with China about subsidies for staple grains and the tariff-rate quota to the WTO. Although China’s agricultural support policies were kept within the limits of international rules, the WTO ruling on the dispute between the US and China regarding China’s domestic support for three staple grains in 2019 was against China. This has drawn attention to the significance of reforming China’s agricultural support policies under international trade rules to meet the new requirements of opening-up.

Therefore, it is a core issue and major challenge of China’s reform of domestic support for agriculture under international trade rules that agricultural support policies should: on the one hand, comply with international trade rules while protecting farmers’ interests and ensuring the self-sufficiency of key agricultural products; on the other hand, promote agricultural modernization and coordinate the domestic and international markets and resources. China has made explorations of reducing “Amber Box” measures while increasing “Green Box” ones under the international trade framework since 2016. China’s annual No.1 Central Document for 2019 clearly stated that “we should work on opinions on improving agricultural support policies according to the principles of protecting farmers’ interests and supporting agricultural development while adapting to WTO rules. We should adjust the “Amber Box” measures and expand the scope of the “Green Box” ones.”³

This paper reviews the pressure upon China’s agricultural support policies and its practice of reducing “Amber Box” measures while increasing “Green

2 Xingqing Ye, *Agricultural Development and Strategy Change of China since Its Accession to the World Trade Organization, Reform*, No. 5, 2020, pp. 5–24.

3 Xinhua News Agency, *Opinions of the State Council on Prioritizing Agricultural and Rural Development and Addressing the Issues Relating to Agriculture, Rural Areas and Rural People*, https://www.gov.cn/zhengce/2019-02/19/content_5366925.htm (Last Visited on March 27, 2024).

Box” ones. Based on relevant theories, this paper analyzes the expected overall effects of the reform. The policy package of promoting the full-cost insurance and the planting income insurance through subsidies and progressively lowering the administratively determined support price will increase the level of income security and expected economic welfare of agricultural producers while enhancing the fiscal expenditure efficiency. It helps to maintain the stability of international trade and boost the international competitiveness of agricultural products. Based on the common considerations of complying with international trade rules and ensuring the high-quality development of agriculture in China, this paper believes that China's agricultural support policies should continue to promote the progressive reform of reducing “Amber Box” measures while increasing “Green Box” ones, and shift towards marketization, targeting accuracy, and internationalization under the principle of “market-driven pricing mechanism with decoupled subsidies”. This will enhance the international competitiveness of agricultural products, optimize the design of domestic agricultural support policies, and actively participate in the formulation and improvement of international rules, striving to establish international rules that are conducive to agricultural production and trade in developing countries.

II. PRESSURE ON THE REFORM OF AGRICULTURAL SUPPORT POLICIES UNDER THE INTERNATIONAL TRADE FRAMEWORK

Price support policy (also called minimum support price) was one of the agricultural support measure commonly used by developed countries in the 1990s to avoid price fluctuation and stabilize the market of agricultural products. China's price support policy was crucial measures to maintain stable grain prices and guarantee national food security in the early 21st century. However, the market intervention and distortion of such administratively determined price support policy was impossible to ignore. For this reason, the WTO Agreement on Agriculture (AoA)⁴ identifies such policies as the restrictive “Amber Box”

⁴ Under the current WTO framework, the rules governing the agricultural support policies in international trade are based on the AoA negotiated in the Uruguay Round. The WTO passed the AoA proposed mainly by developed countries. It specifies the rules of conduct for all members in terms of their domestic agricultural subsidy policies and agricultural products export policies under the international trade framework. It aims to

measures. The WTO AoA categorizes domestic agricultural support measures of a member into four categories of “Amber Box”, “Green Box”, “Blue Box” and “Development Box” based on the criterion of whether they are distorting agricultural production and trade.⁵ The “Amber Box” measure refers to the subsidies with significant distortion effects on agricultural production and trade. These supports are subject to limits. Members must control the total support according to the *de minimis* level.⁶ The “Green Box” is the support measure that is decoupled from production and has no or minimal distortion effects on agricultural production and market. These supports are not subject to any limits.⁷

With a long history of implementing agricultural support policies, developed members such as Europe, the US and Japan have built great first mover advantages in international trade by subsidizing domestic agriculture.⁸ After the WTO adopted the AoA, developed members such as Europe, the US and Japan started to adjust their agricultural support policies according to international trade rules to facilitate the transition from price support policy to subsidy policies. In comparison, when China joined the WTO in 2001 as a developing member, China was left far behind in agricultural support, so it did not enjoy the rights under the base-period Aggregate Measure promote the health development of the international trade of agricultural products.

5 The “Blue Box” measure is the subsidies provided on 85% or less of the fixed production of basis period (1986–1990) under production limiting programs. The “Blue Box” measure has never been used in China because it is incompatible with the realities of agricultural production and the fiscal capacity. The “Development Box” measure is designed for developing countries. The investment subsidies available to agriculture and the agricultural input subsidies available to resource-poor producers shall be included in the calculation of the current total aggregate measurement of support (AMS). China was not allowed “Development Box” rights when joining the WTO.

6 For China, the *de minimis* percentage is 8.5% of the total value of production for the total AMS for specific agricultural products and 8.5% of the value of the total agricultural production for the total AMS for non-specific agricultural products.

7 WTO, Domestic Support in Agriculture: The Boxes, https://www.wto.org/english/tratop_e/agric_e/agboxes_e.htm#:~:text=URL%3A%20https%3A%2F%2Fwww.wto.org%2Fenglish%2Ftratop_e%2Fagric_e%2Fagboxes_e.htm%0Avisible%3A%200%25%20 (Last Visited on March 28, 2024).

8 Aggregate measurement of support (AMS) refers to the annual level of support, expressed in monetary terms, provided for an agricultural product in favor of the producers of the basic agricultural product or non-product-specific support provided in favor of agricultural producers in general. This is a quantitative index for the domestic support of a member. According to the AoA, the first members of the WTO are entitled to the base-period AMS, and the constraint level of AMS depends on the average value of agricultural support during the period from 1986 to 1988. This means the US and other first mover members have the historical advantages based on their higher level of historical agricultural support.

of Support (AMS).⁹ China has made explorations in agricultural support policies and strengthened price support for three staple grains and other major agricultural products since 2004. Due to the relatively short history of policy implementation, there is still space for “Amber Box” measures, and the awareness of using international rules in policy design is slightly weak. In 2016, under the multiple pressures, China began to reform its agricultural support policies under the framework of international trade.

As the domestic and international development environment changed, since 2011, the domestic agricultural production costs have been on the rise, and the domestic and international price difference of agricultural products has continuously expanded. China's “Amber Box” measures, represented by the price support policy, have gradually begun to lose the operating conditions and due policy effectiveness, which not only brought about the problem of mismatch of domestic and international resources such as high grain stocks and surging imports, and large financial burden, but also was constrained and questioned by the international trade framework, and there was a greater risk of “AMS breach”.

A. Dilemma of “Floor Effects” in Production and “Ceiling Effects” in Price

At the current stage, China's agricultural production, especially grain production, is facing pressure from cost-push floor effects in production, coupled with the restriction of import-induced price ceiling effects. Agricultural production is in a dilemma facing double pressure.

With the advancement of industrialization and urbanization in China and the outflow of the rural population, the production costs of agricultural products are rising year by year. Labor, land, water resources and other production factors needed for agricultural production in China are facing shortages and rising costs. Despite substantial agricultural policy support in recent years, China's overall support intensity and agricultural infrastructure development

⁹ During the concession base period from 1996 to 1998, the overall tax burden on agriculture was about 12 million yuan. In total, the AMS was approximately -90 billion yuan, which means China's domestic agricultural support level was about -5% and the AMS for the support measures with trade-distorting effects or effects on production was negative. Hence, China did not enjoy the rights under the base-period AMS as stipulated in the Article 6.3 of the AoA.

still lag far behind those of developed members such as the United States and Australia, due to the relatively short implementation period and restrictions imposed by international trade rules on support volume. For these reasons, the production costs of bulk agricultural products in China continue to rise, widening the gap between China and large exporters such as the US and Australia. In 2015, the production costs for corn and soybeans in China were 2151 yuan and 4564 yuan per ton, respectively, while the figures in the US were only 993.7 yuan and 2274.1 yuan per ton.¹⁰ To protect farmers' income and production enthusiasm while avoiding large fluctuations in domestic agricultural production and prices, the government-supported minimum purchase price has been pushed to a higher level.

"Ceiling effects" in price refer to the phenomenon that the prices of products or services on a market are limited by a ceiling and consumers are not willing to or are not able to pay for such products or services if the prices exceed the ceiling. At the current stage, import-induced price ceiling effects are placing more restraints and pressure on China's agricultural product market. With the deepening of agricultural trade liberalization, China's agricultural products are facing more fierce international competition, and the price of agricultural products on the domestic market has approached or exceeded the CIF price.¹¹ The suppressing effect of low-price international grain imports on domestic prices is becoming more and more significant, resulting in the phenomenon of continuous upside-down between domestic prices and international prices, adding huge competitive pressure and reverse-forcing pressure to the domestic grain market.

Therefore, higher production costs and limited market prices have squeezed the income and profit margins of agricultural production in China. To ensure necessary production profits and keep farmers motivated, avoid the weak domestic supply and maintain grain self-sufficiency, the cost-based administratively determined support price has been passively raised while the domestic market price has continued to rise. Since 2009, the domestic prices of

10 Hongxing Ni and Xiangdong Lyu, Understanding of the Difference between China and the World in the Competitiveness of Agricultural Products, *Rural Work Communication*, No. 10, 2018, pp. 59-61.

11 Yang Liu et al., Analysis on the Landscape of China's Trade in Agricultural Products and the Reasonable Import Scale, *Strategic Study of CAE*, Vol. 20, No. 5, 2018, pp. 128-134.

China's three staple grains have shown accelerated growth, consistently outpacing international prices (See Figure 1). This policy-induced market distortion has resulted in a series of abnormal phenomena and negative effects.

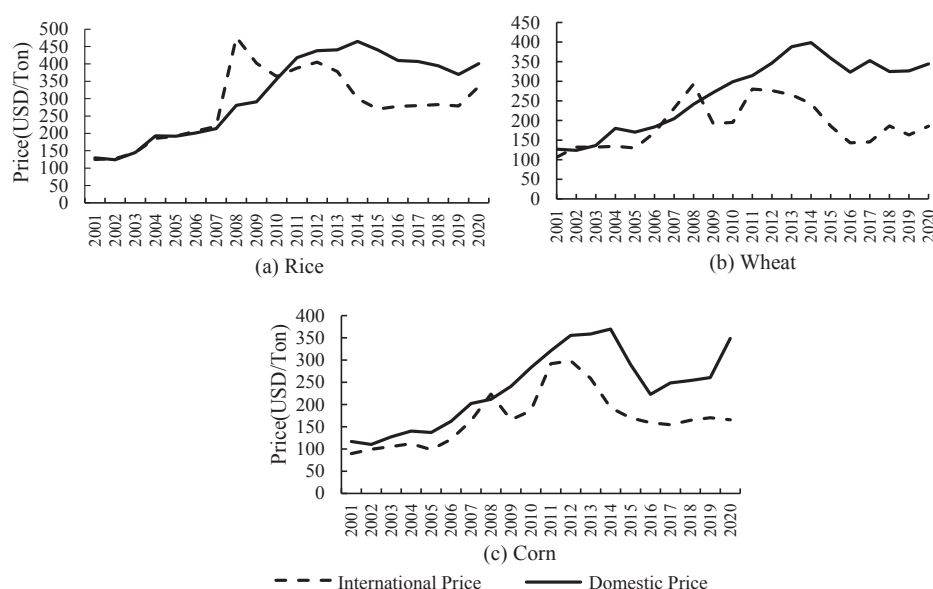


Figure 1: Fluctuations in the International and Domestic Prices of Three Staple Grains
Wheat from 2001 to 2020

Source: Database of the International Monetary Fund for the Statistics of International Prices, <https://www.imf.org/en/Research/commodity-prices> (Last Visited on March 30, 2024); *National Agricultural Product Cost-benefit Data Compilation* for the statistics of domestic prices.

B. Price Support Policy Induces Cross-border Misallocation of Domestic and International Resources

Under the above-mentioned circumstances, the import-induced price ceiling effects further widen the price differences between the domestic and international markets. Driven by such price differences, the phenomenon of excessive imports of China's agricultural products has become increasingly prominent. The percentage of “non-essential imports” beyond the domestic production-demand gap is growing rapidly. According to the research of the group of the Agricultural Trade Promotion Center of the Ministry of Agriculture and Rural Affairs, from 2012 to 2015, the annual gap between domestic grain supply and demand was about 50 million tons and the total import of each year

exceeded 80 million tons.¹²

The administratively determined support price exacerbates the price difference and drives the import of agricultural products, leading to the abnormal phenomenon of “market displacement by underpriced imports alongside domestic surplus stockpiling”.¹³ The large quantities of grains in storage and high fiscal burden caused by policy support are great challenges to the supply-demand equilibrium of agricultural products and government finance. It also increases the production costs of downstream industries which impacts related employment and income. Meanwhile, if the production structure of agricultural products is changed due to excessive imports,¹⁴ the adjustment of bulk agricultural production resources to the market for small-scale agricultural would pose a huge challenge to the equilibrium of supply and demand in the small-scale agricultural market such as vegetables, fruits, and tea. The misallocation of domestic and international resources, caused by the administratively determined support price has triggered a series of “policy costs”.

C. The Pressure of “AMS Breach” from Restrictions in International Trade Rules

Upon its accession to the WTO in 2001, China undertook exceptionally stringent commitments on agricultural support measures. China committed itself to capping “Amber Box” subsidies for non-specified and specified agricultural products at 8.5% of the average total agricultural output value for the period 1996–1998. The percentage is lower than that applicable to developing members (10%), which is within the range of the *de minimis* level. Meanwhile, China was not entitled to the “Special and Differential Treatment (S&DT)” of developing countries, so the “Development Box” measures did not apply. Therefore, China is subject to greater constraints in terms of both WTO negotiations and the scope for adjusting the domestic “Amber Box” measures.

12 Group of the Agricultural Trade Promotion Center of the Ministry of Agriculture and Rural Affairs, Hongxing Ni and Kongyan Yu, Research on Food Security and Control of “Non-essential Imports”, *Issues in Agricultural Economy*, Vol. 37, No. 7, 2016, pp. 53–59.

13 Jing Zhu, Tianxiang Li and Xingyue Zang, Non-traditional Challenges and Policy Transformation of China’s Food Security under High-level Opening-up, *Issues in Agricultural Economy*, No. 1, 2021, pp. 27–40.

14 Hongxing Ni, Agricultural Supply-side Structural Reform from Open Perspective, *Issues in Agricultural Economy*, No. 2, 2019, pp. 9–15.

In other words, if “Amber Box” subsidies are higher than the aforementioned range, there will be an “AMS breach” incident, which will increase the risk of litigation from the WTO and other members.

Under the current global economic landscape, competition in agricultural trade has intensified considerably. The United States, as a leading agricultural exporter, has frequently initiated trade litigation against China's agricultural support policies. Since 2016, China has been involved in agricultural disputes as the respondent much more frequently than before. The number of lawsuits against China was more than that against other members during the same period.¹⁵ A typical case was the complaint made by the US against China in September 2016 regarding China's domestic support for three staple grains that exceeded the *de minimis* level (DS511, *China — Domestic Support for Agricultural Producers*). China refuted the accusations of the US and asserted that China did not violate the WTO rules.¹⁶ On February 28, 2019, the WTO Dispute Settlement Body (DSB) issued its ruling on Case DS511, rejecting the United States' claims about China's corn policy while upholding the US claim about the calculation methodology of China's minimum purchase price support measure on wheat and rice.¹⁷ The ruling puts China at a disadvantage and sets the framework of further improvement of China's agricultural subsidies. Even if China is in compliance with its commitments at its accession to the WTO in terms of the subsidies provided in the form of minimum purchase price after it controls the total volume of grain purchases, the level of support exceeds the quota calculated with the method proposed by the US. Hence, the US refuses to recognize China's policy adjustment and will continue to arbitrate the dispute.

As trade liberalization in agriculture deepens, the global competition in agricultural products becomes more intense. Meanwhile, in recent years, frequent trade frictions between China and the US, coupled with multiple uncertain factors such as geopolitical conflicts, have led to a continuous increase in the agricultural trade risks faced by China. Under these circumstances,

¹⁵ *Supra* n. 13.

¹⁶ Rongzhen Yang and Xiaojing Shi, Compliance Analysis of China's Agricultural Price Support Policy: Based on *US v. China Domestic Support Case*, *Issues in Agricultural Economy*, No. 6, 2020, pp. 87–98.

¹⁷ Department of WTO Affairs, Ministry of Commerce, Briefing on DS511: *China – Domestic Support for Agricultural Producers*, <http://chinawto.mofcom.gov.cn/article/zdjj/202202/20220203281703.shtml> (Last Visited on March 27, 2024).

sustaining stable multilateral trade frameworks (particularly WTO negotiations) and bilateral agricultural partnerships now demands a highly calibrated approach akin to walking on eggshells.

III. PRACTICE AND EXPLORATION OF THE REFORM OF REDUCING “AMBER BOX” MEASURES WHILE INCREASING “GREEN BOX” ONES

After the AoA was adopted by the WTO, Europe, the US, Japan and other developed members have adjusted agricultural support policies to “Green Box” measures under WTO rules and the market-orientation principle. Since 2000, the US has reduced “Amber Box” measures and increased “Green Box” measures to over 90% of the total AMS.¹⁸ Based on the experiences of developed members and the trend of China’s agricultural development, guided by the principle of giving into full play the decisive role of market in resource allocation, to comply with international trade rules, China’s agricultural support policies have gradually formed the reform direction of “market-driven pricing mechanism with decoupled subsidies” and the guidance of reducing “Amber Box” measures while increasing “Green Box” ones.

China’s No.1 Central Document for 2019 clearly stated that “we should work on opinions on improving agricultural support policies according to the principles of protecting farmers’ interests and supporting agricultural development while adapting to WTO rules. We should adjust the “Amber Box” measures and expand the scope of “Green Box” ones. The general idea of reducing “Amber Box” measures while increasing “Green Box” ones is to reduce the reliance on “Amber Box” measures and increase the “Green Box” ones in agricultural support policies to be in conformity with the international trade rules under the WTO framework and promote agricultural modernization.

Since 2016, China has started a new round of supply-side structural reform in agriculture, and began to gradually reduce the distortion of price support policy with “Amber Box” attributes on agricultural production and trade. China lowered the minimum purchase price of early indica rice for the first time in

18 Yang Han, Evolution and Improvement of China-US Agricultural Support Policies: Comparative Study Based on WTO Agreement on Agriculture, *International Economic Review*, No. 6, 2021, pp. 117-140.

2016. China considerably lowered the minimum purchase price of rice and wheat in 2018. In 2020, based on the ruling of the dispute between China and the US about China's domestic agricultural support (DS511), China adjusted the price support policy again under the WTO framework, changing the total purchase volume of the minimum purchase price policy for rice and wheat from unlimited purchase to a limited total purchase volume. Since 2016, China has progressively implemented the reform of the “Three Agricultural Subsidies”,¹⁹ successfully reducing the expenditure on “Amber Box” measures from 134.6 billion yuan to 21.7 billion yuan while increasing the expenditure on “Green Box” measures from 26.2 billion yuan to 141.7 billion yuan.²⁰ By strategically utilizing the permissible flexibilities within WTO framework, China has effectively expanded its policy implementation space, thereby enabling enhanced fiscal support for agricultural and rural development.

The policy of agricultural insurance subsidies is the direction of China's reform of reducing “Amber Box” measures while increasing “Green Box” ones and has attracted the attention of scholars in recent years. Agricultural insurance is a tool of agricultural risk management. Agricultural insurance subsidies are one of the common agricultural support policies in developed members. The US budget for agricultural insurance subsidies from 2014 to 2023 amounts to \$90 billion, which demonstrates its core role in the US agricultural security network.²¹ Under the current international trade framework, the primary advantage of agricultural insurance subsidies lies in their potential qualification as “Green Box” measures under WTO rules when meeting specific criteria. These subsidies, which cause minimal distortion to agricultural production and trade, can functionally substitute the trade-distorting “Amber Box” price support policy. In this way, this substitution enables dual objectives: sustaining domestic agricultural production while mitigating international trade frictions.

Theoretically, agricultural insurance subsidies can replicate the protective mechanisms of price support policy for farmers. To some extent, they may

19 Ministry of Finance & Ministry of Agriculture and Rural Affairs, Notice on Comprehensively Launching the Reform of the Three Subsidies in Agriculture, https://www.mof.gov.cn/gkml/caizhengwengao/wg2016/wg201606/201610/t20161021_2440126.htm (Last Visited on March 27, 2024).

20 Qing Xu, Jin Liu and Qing Yang, Agricultural Subsidy Reform under WTO Rules: Logic, Effects and Direction, *Issues in Agricultural Economy*, No. 9, 2020, pp. 88–100.

21 Xiaowei He et al., Compliance Risk Assessment of WTO Rules and China's Agricultural Insurance Subsidy Policies, *Insurance Studies*, No. 9, 2022, pp. 54–65.

be regarded as a cost-free price insurance. Hence, agricultural insurance subsidies can replace price support policy in terms of their basic functions. The replacement of price support policy with agricultural insurance subsidies goes along with the reform of reducing “Amber Box” measures while increasing “Green Box” ones, addresses the problem of WTO compliance, and bridges with international trade rules. It also, among other benefits, alleviates the fiscal burden and improves the efficiency of market-based allocation.

In the current development conditions, as China’s insurance market and insurance system mature nationwide, compared with price support policy, agricultural insurance has multiple functions, such as mitigating production risks, narrowing market fluctuations, improving social welfare levels, optimizing the efficiency and inter-annual stability of fiscal expenditure, while reducing market distortions and price interventions. It helps to promote the gradual transformation of support policies from direct subsidies to risk management, and ensure national food security and trade stability.

Because of the importance of agricultural insurance promotion and insurance subsidies, since 2016, China’s No.1 Central Document has repeatedly given important instructions and deployed agricultural insurance subsidy policies. The Ministry of Finance launched the pilot program of agricultural catastrophe insurance in major provinces producing grains in 2017.²² In August 2018, the Ministry of Finance, Ministry of Agriculture and Rural Affairs and China Banking and Insurance Regulatory Commission (CBIRC) issued a joint notice²³ on the pilot program of the full-cost insurance and planting income insurance for the three staple grains of rice, wheat and corn in 24 major grain-producing counties of 6 provinces from 2018 to 2020.²⁴ The three Ministries and Commissions issued a notice to expand the scope of subsidies for the full-cost insurance and planting income insurance for the three staple grains

22 Ministry of Finance, Notice on the Pilot Program of Agricultural Catastrophe Insurance in Major Provinces Producing Grains, https://www.gov.cn/xinwen/2017-05/31/content_5198358.htm (Last Visited on March 1, 2024).

23 Ministry of Finance, Central Finance Launches Pilot Program of Full-cost Insurance and Planting Income Insurance for Rice, Wheat and Corn, https://www.gov.cn/xinwen/2018-09/01/content_5318332.htm (Last Visited on March 1, 2024).

24 The full-cost insurance covers the total costs of agricultural production, including the materialized costs, land costs and labor costs. The planting income insurance covers the planting income of the agricultural products and the insurance benefits are related to the price and output of the agricultural products.

to all major grain-producing counties nationwide in July 2023.²⁵ In 2023, the accumulated subsidies for agricultural insurance from central financial expenditure was 47.766 billion yuan²⁶ and the agricultural insurance premiums were 143 billion yuan with the growth rate exceeding 17%, much higher than the average growth rate of the property insurance industry.²⁷ The 2024 No.1 Central Document has stated that China will realize the national coverage of the subsidies for the full-cost insurance and planting income insurance for three staple grains in the future.²⁸

To sum up, to address the external risk of international trade and meet the internal requirement for high-quality development, China has made practical efforts to implement the reform of reducing “Amber Box” measures while increasing “Green Box” ones. Through phased implementation, the reform has steadily expanded its operational scope and progressively refined its policy design. Although China is still making explorations of reducing “Amber Box” measures while increasing “Green Box” ones and improvements should be made to the policy compliance, normalization and targeting accuracy, the reform is a beneficial attempt for China to comply with its international commitments and reform the agricultural support policies.

IV. EXPECTED EFFECTS OF REDUCING “AMBER BOX” MEASURES WHILE INCREASING “GREEN BOX” ONES

China's agricultural subsidy policies need to be transformed in the direction of internationalization, marketization, and targeting accuracy. It should be in line with international trade rules and pay attention to the income and enthusiasm of the production entities in China. While sticking to the reform direction

25 Ministry of Finance, Notice on Expanding the Scope of Subsidies for the Full-cost Insurance and Planting Income Insurance for Rice, Wheat and Corn to the Major Grain-producing Counties Nationwide, https://w3vwr.gov.cn/zhengce/zhengceku/202307/content_6891795.htm (Last Visited on March 1, 2024).

26 People's Daily, Central Finance Fully Supports the Autumn Grain Production, https://www.gov.cn/lianbo/bumen/202308/content_6899417.htm (Last Visited on March 1, 2024).

27 Xinhuanet, Continuous Coverage Expansion, Accelerated Innovation in Agricultural Insurance, <http://wrvw.xinhuanet.com/money/20240206/6652aea2a6f342e68c33236f5c414a19/c.html> (Last Visited on March 1, 2024).

28 Xinhuanet, Opinions of the State Council on Comprehensively Promoting Rural Vitalization with Experience Drawn from the “Thousand Villages Demonstration and Ten Thousand Villages Renovation” Project, <http://www.news.cn/politics/zywj/20240203/3884e317f78c46749d5db9efb62df51f/c.html> (Last Visited on March 1, 2024).

of “market-driven pricing mechanism with decoupled subsidies”, China will progressively reduce price support measures with the attribute of “Amber Box”, while replace them with “Green Box” agricultural insurance subsidies to promote the use of agricultural insurance for risk management among agricultural producers, thus ensuring the compliance with international trade rules and the high-quality agricultural development in China. Therefore, this section will analyze and predict the expected effects of policies in three areas: economic welfare, trade and international competitiveness of agricultural products, and fiscal expenditure efficiency, based on the current exploration of China’s reform of reducing “Amber Box” measures while increasing “Green Box” ones.

A. Effects on Economic Welfare

The progressive small cut of the minimum purchase price on an open market has a minor influence on the domestic grain production and market. Based on the program of adjusting the minimum purchase price of rice in 2017, Hui Cao et al. (2017) found in the research with the Partial Equilibrium Agricultural Trade Simulation (PEATSim) that if the minimum purchase price of rice is cut by 3.4%, there will be a small decrease in the planting area, the yield per unit and the output, i.e. 0.43%, 0.35% and 0.78%. However, the cancellation or big cut of the minimum purchase price will have serious impacts on the grain market. When the minimum purchase price of rice is cut by 10%, the decrease in the planting area, the yield per unit and the output will be three times of that in the previous scenario.²⁹ This will not only change the grain production structure in China and will even influence the global trade and international price of grains.

Theoretically, as the minimum purchase price gradually converges toward the market equilibrium price, price support policy loses their market intervention capacity. At this time, agricultural insurance provides flexible and targeted protection against market price fluctuations and other risks such as natural disasters. Compared to the materialized costs insurance,³⁰ the full-cost insurance covers both the direct costs of agricultural production and the indirect

29 Hui Cao, Yumei Zhang and Hao Sun, Reform Ideas and Impact Analysis of Grain Minimum Purchase Price Policy, *China Rural Economy*, No. 11, 2017, pp. 33–46.

30 Materialized costs insurance only covers the direct materialized costs and is known as the “basic insurance”. The direct materialized costs refer to the direct input in the agricultural production such as the fertilizer, seed and plastic mulch. The full-cost insurance covers the total costs of agricultural production.

costs of labor costs and land costs. The insurance amount increases from about 40% of the yield per acre to about 80% of the yield per acre, doubling the level of protection against these risks.³¹ The full-cost insurance offers high-level protection for the production income of farmers and greater expected economic welfare improvement for farmers. The study of Jiujie Ma et al. (2020) shows that the agricultural insurance pilot program increased the per capita operating income and per capita total income of rural residents by 7.34% and 3.94%³² respectively. Hence, promoting the full-cost insurance with agricultural insurance subsidies can make up for the downward adjustment of the minimum purchase price. The farmers' expected economic welfare will be improved to a certain degree rather than be impaired.

To sum up, the progressive policy adjustments of reducing “Amber Box” measures while increasing “Green Box” ones, a small cut of the minimum purchase price and the promotion of agricultural insurance subsidies will not harm farmers' economic welfare and production enthusiasm but improve their per capita income.

B. Effects on Trade and International Competitiveness of Agricultural Products

Under the international trade framework, the most direct effect of reducing “Amber Box” measures while increasing “Green Box” ones is to relieve the “AMS breach” pressure and reduce the risk of agricultural trade frictions. A good international reputation facilitates the expansion of international trade cooperation in Chinese agricultural products.

In the short term, let us look at the effects of reducing “Amber Box” measures while increasing “Green Box” ones on trade based on domestic supply and demand.

First of all, the agricultural insurance subsidy measures can largely deal with the impact of lowering the minimum purchase price on the planting

31 Economic Daily, Full Implementation of the Full-cost Insurance and Planting Income Insurance for Rice, Wheat and Corn – Wider Coverage and Higher Claim Settlement Standard of Agricultural Insurance to Protect Grain Production, https://www.gov.cn/zhengce/202406/content_6955170.html (Last Visited on August 2, 2024).

32 Jiujie Ma et al., Income Enhancement Effect and Mechanism of Policy-oriented Agricultural Insurance: Quasi-natural Experiment from Progressive Pilots, *Insurance Studies*, No. 2, 2020, pp. 3–18.

structure and output,³³ thus not changing the production structure and output of agricultural products in China.

Besides, because the transition of the population structure and the diet structure in China is slowing down, there is no big change in the current grain demand, and China's grain output and planting structure will remain relatively stable. Because the domestic grain supply and demand reach an equilibrium, the demand for grain imports will not fluctuate violently and will not destabilize the international market of agricultural products. The simulation of the rice market conducted by Jingdong Li and Xiande Li (2022) with partial equilibrium model showed that when the minimum purchase price of rice is canceled and agricultural subsidies are increased, the difference between domestic and international rice prices is obviously narrowed, and the stock and imports of rice slightly decline. Therefore, with the gradual reduction of the minimum purchase price and the cancellation of the purchase and storage policy, the situation of "excessive imports beyond demand gap" driven by the price difference will be changed and the abnormal phenomenon of "market displacement by underpriced imports alongside domestic surplus stockpiling" will be ended in the future.

In the long term, policy adjustments of reducing "Amber Box" measures while increasing "Green Box" ones remove the direct intervention in domestic market prices. The domestic price of agricultural products is decided by the market supply and demand, which makes the market-based allocation of agricultural resources more efficient. Tianchi Ren and Ruihua Yang (2020) concluded in their study based on the microdata of 10270 households collected in the third national agricultural census that the agricultural insurance significantly improved the resource allocation of small agricultural households. After the agricultural households buy the insurance, they will choose "area adjustment" if the operating cultivated area is under 10 acres or choose "structure adjustment" and "mechanization" for better allocation of factors if the operating cultivated area is within 10–50 acres.³⁴ The optimization of

33 Jingdong Li and Xiande Li, Impact of Minimum Purchase Price Policy Adjustments on China's Food Security: A Case Study of Rice, *Chinese Journal of Agricultural Resources and Regional Planning*, Vol. 43, No. 3, 2022, pp. 46–57.

34 Tianchi Ren and Ruihua Yang, Linking Small Holders to Modern Agriculture: Factor Allocation Role of Agricultural Insurance – Micro Evidence from Third National Agricultural Census, *Finance & Economics*, No. 7, 2020, pp. 41–53.

agricultural resource allocation will improve domestic agricultural production efficiency, promote the sustainable development of agriculture and strengthen the international competitiveness of Chinese agricultural products.

C. Effects on Government Fiscal Expenditure Efficiency

During reducing “Amber Box” measures while increasing “Green Box” ones, the gradual replacement of the minimum purchase price with agricultural insurance subsidy measures can improve the efficiency of fiscal expenditure on agricultural support policies through a series of mechanisms. According to the theories of public finance, fiscal expenditure efficiency is evaluated by the contribution to social welfare. The agricultural insurance subsidies contribute to social welfare to the same or higher degree as the price support policy with less fiscal expenditure, which means such subsidies improve fiscal expenditure efficiency.

First of all, as a preventive fiscal expenditure, agricultural insurance subsidies take advantage of the leverage effect of fiscal subsidies but the costs of the minimum purchase price are fully paid for by government finance. In 2020, the annual subsidies for agricultural insurance from central financial expenditure were 28.539 billion yuan, and the risk coverage for 189 million agricultural households reached 4.13 trillion yuan, which is equivalent to 145 times of the effect of central financial expenditure.³⁵ Meanwhile, agricultural insurance, a risk management tool, reduces the high costs of disaster relief in case of extreme events and improves the predictability and efficiency of fiscal expenditure, thus stabilizing the annual government fiscal expenditure.

Moreover, agricultural insurance subsidies can precisely compensate for the actual losses, but the price support policy can only uniformly set the purchase prices of all agricultural products. Agricultural insurance subsidies are very flexible and can be customized for different regions and agricultural products to precisely meet their practical requirements. Wei Ning et al. (2021) used data envelopment analysis (DEA) and stochastic frontier analysis (SFA)

³⁵ People's Daily, Central and Local Finance Provide Premium Subsidies for Insured Agricultural Households: Two Types of Agricultural Insurance Will Cover the Major Grain-producing Counties in 13 Major Grain-producing Provinces, https://www.gov.cn/zhengce/2021-07/07/content_5622922.html (Last Visited on March 1, 2024).

to construct a model of the optimal proportion of different levels of financial inputs into agricultural insurance subsidies based on the environmental variables of rural disposable income per capita, total grain production, and affected area.³⁶ The modern agricultural insurance subsidies rely on the data information system and use technologies to improve the precision and efficiency of insurance services. Loss assessment with the remote sensing technology greatly improves the accuracy of the agricultural support policies. Ensuring the income of agricultural households in case of market price fluctuations or output reduction is more direct and effective than price support policy.

At last, agricultural insurance subsidies do not intervene in the formation of market prices, so they will not distort market supply and demand. Over-production and large stocks caused by the minimum purchase price are avoided. The contribution of fiscal expenditure to the overall social welfare is improved.

In conclusion, in the process of gradual downward adjustment of the minimum purchase price, the government promotes full-cost insurance through agricultural insurance subsidy measures to make up for the minimum purchase price, which can not only improve the efficiency of fiscal expenditure and inter-annual stability, but also the farmers' expected earnings economic welfare will not be lost. The agricultural insurance subsidies limit the direct intervention in the pricing mechanism, promote the market-based optimization of agricultural resource allocation, and improve the international competitiveness of agricultural products while ensuring the stability of international trade. It is expected to create huge advantages.

V. CHALLENGES OF REDUCING “AMBER BOX” MEASURES WHILE INCREASING “GREEN BOX” ONES

Although China's reform of reducing “Amber Box” measures while increasing “Green Box” ones is important in guiding it to adapt to international trade rules and has multiple policy advantages and good expected results, China is faced with potential challenges in increasingly competitive international trade.

³⁶ Wei Ning, Yanchun Li and Jingxian Zhou, Research on Optimal Proportion of China's Agricultural Insurance Fiscal Subsidies: Analysis Based on Three-stage DEA Model, *Price: Theory & Practice*, No. 10, 2021, pp. 106-111.

A. There Is Still a Risk of Categorizing Agricultural Insurance Subsidies into “Amber Box” Measures

With the increase in the scope and intensity of the pilot agricultural insurance subsidy policy in China, although China's agricultural insurance subsidy policies are in line with international rules, domestic scholars have begun to proactively study the compliance of agricultural insurance subsidies. The international disputes of other members about agricultural insurance subsidies also show that agricultural insurance subsidies cannot be simply classified as “Green Box” measures.

According to the relevant provisions of the WTO AoA, agricultural insurance subsidies can be regarded as “Green Box” measures only when certain conditions are met. In Annex 2 of the AoA, it explains whether insurance subsidies can be regarded as the “Green Box” measure in terms of insurance coverage, conditions for payment and sum insured, using income insurance and natural disaster insurance as examples.³⁷ The AoA does not clearly state which insurance subsidies will be judged as “Amber Box” measures or restricted, nor does it mention “Green Box” measures other than income insurance and natural disaster insurance. It does not clearly define the measurement method of the AMS, lags behind the development of agricultural insurance subsidies in various members, and cannot effectively guide and manage members.

In terms of international practices, due to these defects of the AoA, there are different interpretations and measurement methods of agricultural insurance subsidies. The number of WTO dispute cases about the “compliance of agricultural insurance subsidies” is increasing. Brazil filed complaints against the US about its subsidies on upland cotton in 2002 (DS267, *United States — Subsidies on Upland Cotton*). The WTO ruled that insurance subsidies should be measured by the premium subsidies provided by the US government for upland cotton, not by the net amount payable. The agricultural income insurance subsidies in this case are “Amber Box” measures. For China's current agricultural insurance subsidies, Jing Zhu et al. (2020) measured China's income insurance subsidies for corn, and the calculated support level was 4.76%–

³⁷ WTO, Agreement on Agriculture, Annex 2: Domestic Support: The Basis for Exemption from the Reduction Commitments, https://www.wto.org/english/docs_e/legal_e/14-ag_02_e.htm#annII (Last Visited on March 27, 2024).

5.95%, not exceeding the *de minimis* percentage of 8.5% and complying with international rules.³⁸ In accordance with Article 7 of Annex 2 to the AoA, the provisions of China's income-based insurance on product characteristics may be considered "Amber Box specific agricultural product support". Considering that it is still in the pilot stage, the impact of China's insurance subsidies on the overall level of support is relatively limited.³⁹ From the perspective of the WTO's policy orientation of no distortions in trade and production, the current policy design of some agricultural insurance subsidies in China, which is linked to varieties, prices or yields, is prone to creating a "policy expectation" effect and has a certain tendency to be "Amber Box". At present, China's agricultural insurance subsidies are in line with international rules and have not yet caused substantive litigation from other members, but we still need to be vigilant against the potential risk of trade frictions.

B. Lack of Legislation Related to China's Agricultural Insurance Subsidies Increases WTO Compliance Costs

China's legislation on domestic agricultural support policies such as agricultural insurance subsidies is scattered in the Agriculture Law, Forest Law, Fisheries Law, Animal Husbandry Law, Grassland Law and other legislations. Currently, China has not released legislation directly applicable to agricultural insurance subsidies. Although the Agricultural Insurance Regulations entered into force in 2012 are currently the highest-level administrative regulations governing agricultural insurance, the development of current agricultural insurance and agricultural insurance subsidy policy faces new situations and challenges under the international trade framework. There is a legislative gap in agricultural insurance subsidies in China, which makes it hard to ensure the transparency and predictability of agricultural insurance subsidies. It is more likely to cause vagueness in legal interpretation, leading to misunderstandings and potential trade disputes during the process of international trade. In particular, the lack of relevant legislation in line with international standards will lead to the continuous adjustment and revision of agricultural insurance subsidy measures

38 Jing Zhu, Liang Xu and Xuejun Wang, Adaptability of China's Agricultural Income Insurance Subsidies to International Rules under WTO Framework, *China Rural Economy*, No. 9, 2020, pp. 2–20.

39 *Supra* n. 21.

in order to comply with WTO rules during the implementation of agricultural insurance subsidies. The above situations will not only increase compliance costs, but also further affect the timeliness and effectiveness of subsidy measures. From the perspective of reducing the costs of agricultural production, agricultural insurance subsidies can improve the international competitiveness of agricultural products. However, the lack of legislation may lead to rising production costs and reducing the competitiveness of domestic agricultural products in international trade.

C. The Targeting Accuracy of Agricultural Insurance Subsidy Policy Design Needs to Be Improved

Agricultural insurance subsidies have promoted China's reform of reducing “Amber Box” measures while increasing “Green Box” ones after more than a decade of development, but there are still weaknesses in the targeting accuracy of agricultural insurance subsidies in China.

For the insurance subject, the subsidy program funded by the central finance has clarified the criteria of insurance subsidy for 20 subjects in 17 categories, including plantation, animal husbandry, forests, and Tibet-related specific products.⁴⁰ The agricultural insurance should be designed according to the specific risks of different agricultural crops. The current agricultural insurance has not fully considered the diversity of agricultural crops and the features of agricultural products with higher exports from China. For local special agricultural products with higher exports, such as fruits, vegetables, cotton, freshwater aquaculture products, and marine aquaculture products, there are no standards for the insurance products, hence, the insurance products do not match the actual requirements.

For the criteria of insurance subsidies, China's agricultural insurance subsidies tend to take a “one-size-fits-all” approach. There are great differences in the agricultural development, natural environment and risk types in different areas in China. The regional agricultural trade also shows different features. If the subsidies are not tailored according to the trade features and other

⁴⁰ Ministry of Finance, Notice of the Ministry of Finance on Distributing the “Measures for Administration of Agricultural Insurance Premium Subsidies from Central Finance”, https://www.gov.cn/gongbao/content/2022/content_5683856.htm (Last Visited on March 1, 2024).

characteristics of the region, they may not meet the actual requirements of local agricultural households, causing a regional imbalance of agricultural insurance subsidies. For example, in the Xinjiang Uygur Autonomous Region, the main cotton producing area, cotton is the major source of income for cotton farmers in Xinjiang. In 2014, the implementation of the target price subsidy policy for Xinjiang cotton caused fluctuations in cotton farmers' income. The cotton insurance implemented afterwards only responds to the materialized cost risks caused by natural disasters, and cannot compensate the loss of cotton farmers' income caused by market price fluctuations.⁴¹ In addition, the current agricultural insurance subsidies should be more accurate in the assessment of agricultural risks, especially the potential risks during the export of agricultural products. The lack of deep understanding and scientific assessment of the agricultural production risks may further cause unreasonable allocation of subsidies, obstructing the increase of "Green Box" measures under the international trade framework.

Therefore, more attention should be paid to the potential risks and challenges of China's reform of reducing "Amber Box" measures while increasing "Green Box" ones under the WTO rules. In the next section, this paper proposes specific suggestions from the following aspects: (i) path and objectives of China's agricultural support policy reform; (ii) compliance, legislation, and accuracy of agricultural insurance subsidies; (iii) participating in the formulation and improvement of international trade rules.

VI. CONCLUSIONS AND SUGGESTIONS

Under the new situation of the new era, China should pay attention to the international trade rules and the high-quality development of agriculture when adjusting agricultural support policies. This paper reviews the pressure and practice of China's reform of agricultural support policies, and deeply analyzes the expected overall effects of reducing "Amber Box" measures while increasing "Green Box" ones. The policy package of promoting the full-cost insurance and the planting income insurance through subsidies

41 Nana Chao, Ruihua Yang and Shaofan Luo, Cotton Income Insurance Premium Rate Calculation Based on Copula Model, *Statistical Research*, Vol. 34, No. 8, 2017, pp. 92-99.

and progressively lowering the minimum purchase price will improve fiscal expenditure efficiency, the protection of production income and the expected economic benefits. It helps to maintain the stability of international trade and boost the international competitiveness of agricultural products. However, there is a risk of categorizing China's agricultural insurance subsidies into “Amber Box” measures. Based on this, this paper proposes relevant suggestions for the future reform.

Firstly, China should progressively promote the reform of reducing “Amber Box” measures while increasing “Green Box” ones under the international trade framework. (i) China should gradually increase the total amount of agricultural support to reserve space for future adjustment and reduce the “AMS breach” risks. (ii) China should promote the transition to the market-based agricultural support policies under the principle of “market-driven pricing mechanism with decoupled subsidies”, and progressively reduce the minimum purchase price of agricultural products to the real market price, so that they no longer have the function of supporting the market. (iii) It also needs to deepen the reform of the pricing mechanism for agricultural products to remove the “policy expectation” and the reliance of the agricultural market on policy guidance and establish the market-driven pricing mechanism. (iv) It is important to promote the full-cost insurance and planting income insurance through agricultural insurance subsidies to advance the modernization of agricultural risk management with an aim to make up for the pricing mechanism reform, protect farmers' expected income and economic welfare, and ensure their production enthusiasm. The government should improve the efficiency of fiscal expenditure through the modernization of agricultural risk management in order to achieve the goal of stable agricultural development and modernization of agriculture.

Secondly, China should promote the legislation and compliance of domestic agricultural support policies according to the rules on “Green Box” measures and the policy guidance in the AoA. (i) China should promote the legislation work of agricultural support policies such as agricultural insurance subsidies, and formulate legislation in line with WTO rules and international practices. Clarifying the blurred boundaries through legislation can reduce the compliance risk of the notification mechanism. Communication with major trade partners should be strengthened during the legislation process to reduce

misunderstandings and potential trade frictions. (ii) The official expression of agricultural support policies should be carefully adjusted to follow the guidance of international trade rules. If China had mentioned the quantity limit or other restrictions in the official documents of the price support policy, it would have greatly supported the view that China had not violated its WTO accession commitments in the US-China Dispute Settlement case (DS511). In particular, in publicly announced policies to the world, expressions such as “subsidy” should not be used to avoid unnecessary misunderstandings and disputes in international trade. (iii) The compliance-related policy design should be based on the limits of the AoA on agricultural subsidies, especially the *de minimis* percentage of 8.5%, with priority given to subsidies classified as “Green Box” measures, such as agricultural insurance subsidies. When formulating agricultural insurance subsidy policies, the policy-making department should follow international rules that prevent production and trade distortions, actively reducing connections between subsidies and specific crop varieties, prices, or yields. Learning from the US, subsidies can be issued based on the historical output, so as to realize the linkage between insurance subsidies and the producer’s actual income for the current period and the decoupling of insurance subsidies from the actual planting area. When there is insufficient policy space, other types of insurance can be superimposed as appropriate to indirectly protect the income of producers.

Thirdly, China should improve the targeting accuracy of agricultural insurance subsidy policy design. (i) Subsidy policies should be tailored according to the regions and products under uniform management. The parameters of agricultural insurance subsidies should be flexible to meet the requirements of different regions and products, and should be designed to strengthen support for major agricultural products, key counties receiving national assistance for rural revitalization, the Central and Western Regions and the Northeast Region in China. The focus of the policy should be not only on grain crops, but also on important non-grain crops, as well as on remote areas with higher transportation costs, such as the cotton industry in Xinjiang, which should realize the transformation of cotton insurance as the main and target price subsidies as a supplement, to protect the income of farmers and the development of agriculture. (ii) The Government should conduct a comprehensive performance evaluation of support policies such as agricultural insurance subsidies and

make timely adjustments based on the results of the performance evaluation. Performance evaluation should focus not only on the economic welfare effects of farmers, but also on the welfare effects of society as a whole. (iii) Relevant departments should have to promote digital transformation in the field of agricultural insurance and agricultural insurance subsidies, provide early warnings and forecasts of agricultural disasters and their losses by monitoring real-time data on agricultural production and markets, and realize the unified application of agricultural big data platforms in order to enhance the accuracy of agricultural insurance policy support. This will refine and improve the accuracy and effectiveness of agricultural insurance policy support, and truly give full play to the role of agricultural insurance in supporting agricultural production.

Fourthly, China should be actively involved in the formulation and improvement of international rules to safeguard global food security. China should participate in the formulation of WTO rules on international trade of agricultural products and actively strive for reasonable space for domestic policies. In terms of cooperation methods, China can join the Group of 33 (G33) and other interest groups composed of developing countries, so that common demands can be elevated to group proposals, thus strengthening their discourse power and speaking for themselves. At present, many developing countries in the world still face severe challenges of food security, especially the least developed countries (LDCs). At the WTO's 12th Ministerial Conference (MC12) held in 2022, these developing countries emphasized their needs for more policy space to address food security issues, especially the permanent solution for the food security by way of public reserves and a special protection mechanism in case of soaring imports and plummeting prices. It should be noted that China has taken its responsibilities as a major power in the MC12 and MC13 and collaborated with members in the consultations to bring good results in agriculture and other fields. During the MC12, China emphasized the importance of trade in maintaining global food security and participated in the formulation of the Ministerial Declaration on the Emergency Response to Food Insecurity.⁴² During the MC13, China supported the reduction of technical barriers to trade and promoted the adoption of the Declaration on the Precise,

⁴² Ministry of Commerce, Summary of WTO MC12 Outcomes, <http://chinawto.mofcom.gov.cn/article/ap/202209/20220903345433.shtml> (Last Visited on August 2, 2024).

Effective and Operational Implementation of Special and Differential Treatment Provisions under the SPS and TBT Agreements, which will help to enhance the capacity of developing members to effectively participate in the work related to the technical barriers to trade (TBT) measures.⁴³

Fifthly, the objectives of agricultural support policies in the new development phase should be adjusted to improve the quality and international competitiveness of agricultural products. The focus of China's current agricultural support policies is still on "increasing production", with insufficient support for agricultural production efficiency, improving the quality of agricultural products, and the green and sustainable development of agriculture. In addition to agricultural insurance subsidies, there are also "Green Box" policy tools such as infrastructure services and subsidies for research and development of agricultural production technology, which are important for improving the quality of agricultural products. (i) In terms of improving the efficiency of agricultural production, China should continue to promote the construction of farmland irrigation and water conservancy, land consolidation, the transformation of medium- and low-yield fields and the construction of high-standard farmland, strengthen the construction of major production areas for staple grains and other large agricultural products, and promote a shift from small-scale farming to moderately large-scale operations. It should also continue to support universities and research institutions in their research on high-quality seeds and agricultural machinery. (ii) In terms of the green and sustainable development of agriculture, China should continue to promote and enrich agricultural subsidies related to the agricultural ecosystem, agricultural product safety, etc., and provide reasonable subsidies and incentives for environmentally friendly green agricultural production methods such as straw returning to the field, biogas digester construction, soil testing and formula fertilization, and organic fertilizers. China needs to establish a combination of mandatory and voluntary environmental constraints and incentive mechanisms by strengthening the supervision and implementation mechanism of green development support policies. China also needs to fully explore and expand "Green Box" measures that comply with the international trade framework to achieve the goal of improving the quality and international competitiveness of agricultural products.