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Department of Sociology, Economic
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38.04.01 Economics
International Economics and Business

GRADUATION THESIS

on

Features of Chinese foreign trade in agricultural goods

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ASSIGNMENT
FOR THE GRADUATION THESIS OF

Master's degree student Miao Xinyue, group 24ЭЭВам1, full-time mode of study

1 The topic of the graduation thesis: "Features of Chinese foreign trade in agricultural goods"

was approved by the university order

dated «____» _____ 20____ no. _____

2 The deadline for the Master's degree student to complete the graduation thesis is 15.06.2026.

3 The input data for the graduation thesis is the regulatory and legal framework, scientific literature and reference books, and Internet data.

4 The list of issues to be studied includes the evolution of foreign trade in China, the peculiarities of foreign trade in agricultural goods in China at present.

5 The list of visuals contains tables and figures.

6 The date of setting the assignment is 8.10.2024.

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(signature) (full name)

The assignment was accepted by Master's degree student _____ / Miao Xinyue /
(signature) (full name)

Schedule for completing the graduation thesis

№ п/п	Content of the thesis	Deadline for completion	Due date, signature of the academic adviser
First year of study			
1	Substantiating of the research topic and methodology, subject and object of research	1.09.2024 – 31.10.2024	
2	Framing the scientific concept of research	1.11.2024 – 18.12.2024	
3	Collection of scientific literature for the thesis	19.12.2024 – 15.01.2025	
4	Substantiating the relevance, concept, and novelty of the research	16.01.2025 – 19.02.2025	
5	Framing of a detailed plan and layout of the research	20.02.2025 – 12.03.2025	
6	Studying new literature sources within the topic of the thesis	13.03.2025 – 26.03.2025	
7	Conducting theoretical research within the first chapter of the thesis	27.03.2025 – 30.04.2025	
8	Preparing the first chapter of the thesis	1.05.2025 – 30.06.2025	
Second year of study			
9	Conducting analytical research within the second chapter of the thesis	1.09.2025 – 22.10.2025	
10	Preparing the second chapter of the thesis	23.10.2025 – 24.12.2025	
11	Conducting analytical research within the third chapter of the thesis	25.12.2025 – 25.02.2026	
12	Preparing the third chapter of the thesis	26.02.2026 – 21.04.2026	
13	Preparing the introduction and conclusion	22.04.2026 – 12.05.2026	
14	Completing the graduation thesis	13.05.2026 – 27.05.2026	
15	Handing in the thesis for compliance control and antiplagiat	28.05.2026 – 11.06.2026	
16	Getting acquainted with the feedback and review	13.06.2026	
17	Presenting the written thesis	15.06.2026	

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Summary

The graduation thesis comprises 93 pages, 3 chapters, 12 figures, 12 tables, 69 sources.

CHINESE FOREIGN TRADE, AGRICULTURAL GOODS, GLOBAL MARKET INTEGRATION

The target of research is the peculiarities of China's foreign trade in agricultural goods.

The goal of work is to study the integration processes of the world market.

The methodological framework of the paper is formed by the complex of theoretical and practical methods such as analysis and synthesis, statistical and comparative methods.

The results of research include: characteristics of China's foreign trade, mechanisms for expanding foreign trade in agricultural goods, a comparative analysis of the features of foreign trade in modern conditions, risk analysis within the framework of various models of foreign trade, and strategies for expanding foreign trade in China were proposed.

The recommendations on disseminating and applying the results are as follows: a roadmap to improve the systemic sustainability of China's international agricultural trade system and its position in global agricultural value chains. By implementing five strategic pillars - import source diversification, domestic technological innovation, digital transformation, regional integration and global cooperation, and active participation in global agricultural governance - China can address multifaceted risks while harnessing the transformative opportunities offered by regional integration and digital trade. This will enable China to build a more sustainable, efficient and sustainable agricultural trade system that ensures national food security, supports rural regeneration and promotes global food stability.

The theoretical relevance of the thesis is established by through the creation of an updated comprehensive analytical framework that combines the classical theory of comparative advantage with the progressive multidimensional strategic philosophy of greater Chinese food security

The target of research can be further explored through the study of related phenomena, such as the impact of the digital environment on the development of foreign trade in agricultural goods in China.

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Introduction

This thesis develops targeted discussions centering on the developmental characteristics of China's cross-border agricultural commodity trade, and its research value can be interpreted from practical, academic and social dimensions simultaneously. From a practical perspective, relevant analytical conclusions can effectively resolve the practical operational dilemmas confronting agricultural product exporters, importers and relevant international trade organisations; by sorting out the inherent characteristics and evolving laws of China's agricultural foreign trade, the research can furnish actionable references for market layout planning, industrial competitive positioning and cross-border operational risk prevention of market participants. In academic terms, the existing theoretical system of international agricultural trade can be further enriched and supplemented via targeted research focused on China's distinctive market operating rules and trade institutional arrangements, as the paper organically combines classic traditional trade theories with contemporary econometric analytical tools, filling existing research gaps concerning how China's dual-track economic system and macro administrative regulation differentiate its agricultural trade development path from those formed under Western market-oriented mechanisms. Socially, in view of the close linkage between agricultural trade development and national food security guarantee, rural industrial upgrading and sustainable agricultural construction, research findings in this field can provide decision-making references for the formulation of regulatory policies that strike a dynamic balance between domestic grain self-sufficiency targets, domestic and international market integration, trade liberalisation advancement and ecological sustainable development goals.

Furthermore, China ranks among the world's top agricultural producers and major consumer markets, and the shifting development trend of its agricultural international trade exerts far-reaching spillover effects on global food security guarantee, transnational supply chain stability and multilateral regional economic cooperation. Nevertheless, continuous adjustments to the international geopolitical and economic landscape alongside the pressing domestic demand for the transformation and upgrading of China's traditional

agriculture have brought diversified development obstacles to its agricultural foreign trade business. Against such contextual background, this paper takes the developmental laws, operational institutional mechanisms and economic consequences of China's agricultural trade as core research objects, covering concrete research scopes including bilateral import and export flow changes, trade policy implementation tools, overseas market access thresholds as well as competitive relations between China and other pivotal global agricultural trading economies; correspondingly, the institutional constraints, policy ecological conditions and micro market trading behaviours that shape the unique developmental traits of China's agricultural foreign trade constitute the core research subject of this dissertation. Centred on the above-defined research scope, the core research orientation of this thesis is to summarise the core developmental attributes of China's agricultural international trade, assess prospective opportunities and hidden challenges faced by the sector amid complicated domestic and overseas environments, and put forward targeted optimisation suggestions for future trade development.

To realise the preset research aims and ensure the comprehensiveness and reliability of analytical conclusions, this research adopts a mixed research framework combining qualitative reasoning and quantitative measurement, with multiple concrete analytical approaches deployed in a complementary manner throughout the full-text research process. First of all, the literature analysis method is utilised to conduct systematic collation and sorting of existing academic literatures, official policy documents and mature trade theories, which lays a solid theoretical foundation for subsequent empirical analysis and clarifies unaddressed blank areas within current research. Meanwhile, comparative analysis is divided into two analytical dimensions: longitudinal chronological comparison across distinct developmental phases of China's agricultural trade and horizontal inter-country comparison with leading global agricultural trading powers, which helps objectively pinpoint China's market positioning and long-term evolution tendency within the global agricultural trade system. In addition, the case study method supplements macro-level empirical analysis by selecting representative agricultural product categories for in-depth dissection, relying on concrete industrial cases to verify general research conclusions and improve the persuasion of analytical results. Serving as the dominant

research route of this paper, empirical analysis makes full use of authoritative official trade statistical data to objectively quantify the scale evolution, product structural composition and geographical market distribution features of China's agricultural trade, avoiding subjective value bias to guarantee the objectivity and authenticity of research outcomes.

On the basis of the above multi-angle research design, this dissertation bears prominent theoretical and practical implications for the advancement of related research and industrial development. In theoretical aspect, most prior studies concerning China's agricultural international trade focus on single-indicator analysis such as total trade volume or industrial international competitiveness, while this research systematically unpacks the multi-layered dynamic characteristics of China's agricultural trade against the backdrop of global trade restructuring, rising international trade protectionism and the reform of global food security governance rules; relevant comprehensive empirical evidence updated in this paper can enrich the theoretical research system targeting agricultural trade of large emerging developing economies. From a practical standpoint, research conclusions grounded in objective data can provide credible empirical support for the revision and optimisation of China's agricultural trade regulatory policies, assist domestic agricultural market entities in lifting their overseas competitive strengths, and facilitate the high-quality industrial transformation of domestic agriculture as well as multilateral cooperative construction of global food security. Besides, the refined identification of China's agricultural trade developmental traits enables domestic agricultural operators to precisely capture fluctuating international market demands, optimise commodity mix and overseas market distribution schemes, defuse cross-border trade risks and ultimately elevate operating benefits and global market occupancy of Chinese agricultural products. Overall, the research not only supplements the theoretical construction of international agricultural trade academia but also delivers operable decision-making references for the high-quality expansion of China's agricultural foreign trade and relevant governmental policy formulation, fully proving the essential research value of this topic.

The object of this study is China's foreign trade.

The subject of the study is the peculiarities of China's foreign trade in agricultural products in the context of modern conditions.

To achieve this goal, we need to complete the following tasks:

- to present the characteristics of foreign trade in agricultural products in China to review the widespread mechanisms of foreign trade in agricultural products in China;
- to analyze the features of foreign trade in agricultural products in China;
- to study the economic benefits and risk analysis of various models of foreign trade in agricultural products in China;
- to determine the directions of the future development of foreign trade in agricultural products in China.

Beyond the aforementioned theoretical and practical values, the dissertation also delivers noticeable academic innovations in analytical perspective and research conclusion construction. For theoretical innovation, this study constructs an updated comprehensive analytical framework that combines classic comparative advantage theory with China's progressive multi-dimensional Greater Food security strategic philosophy; different from existing literatures which separate trade efficiency improvement and domestic grain self-sufficiency promotion into two isolated policy domains, this paper elaborates the institutional formation logic of China's differentiated trade opening policy rooted in the inherent conflicts between the two policy goals. With the support of this integrated analytical perspective, the research further verifies that the prominent import concentration of China's land-intensive agricultural commodities is not merely a spontaneous market-driven result, but an artificial resource substitution effect derived from the core strategic priority of securing staple grain self-sufficiency at home. In terms of institutional research innovation, this paper fills gaps in existing governance research by proposing a novel institutional interpretation on the emerging coordination mechanism linking domestic agricultural production and cross-border trade, and defines such institutional arrangement as a unique managed complementarity development model that breaks the traditional binary division between trade protectionism and full trade liberalization. Relying on the above institutional theoretical findings and new interpretations over the synergistic effect of regional economic integration and digital agricultural trade expansion,

the thesis finally establishes a four-dimensional integrated strategic framework to enhance the systemic risk resistance capacity of China' s agricultural trade; the newly-built framework also provides innovative analytical thinking and practical transformation paths for China to convert asymmetric import dependency risks into sustainable competitive participation in global agricultural value chains amid intensifying global geopolitical uncertainties.

Chapter 1 Theoretical Foundations and Development Context of China's Agricultural Trade

1.1 Theoretical Underpinnings: Comparative Advantage and Food Security Theory

The analytical architecture of China's agricultural international trade rests upon two foundational yet frequently divergent theoretical pillars: the classical doctrine of comparative advantage and the evolving conceptual framework of food security. These two bodies of theory, though originating from distinct intellectual traditions and addressing fundamentally different questions – efficiency in resource allocation versus the assurance of national sustenance – jointly shape the policy landscape within which China's agricultural trade decisions are formulated and implemented. Understanding the interplay, and at times the tension, between these theoretical orientations is essential for comprehending both the observed patterns of China's agricultural commerce and the strategic recalibrations that have characterized its trade policy evolution. This section provides a critical examination of the theoretical underpinnings of comparative advantage as applied to China's agricultural sector, traces the conceptual trajectory of food security from its classical formulation to its contemporary manifestations, and interrogates the inherent policy tensions that arise from their simultaneous operation.

The theory of comparative advantage, first articulated by David Ricardo and subsequently refined through the Heckscher-Ohlin factor endowment framework, posits that nations benefit from specializing in the production of goods for which they possess relatively lower opportunity costs and trading for those in which they hold comparative disadvantages. Applied to the agricultural domain, this theoretical apparatus yields a straightforward prediction: China, characterized by abundant labor resources relative to arable land, should exhibit comparative advantage in labor-intensive agricultural products – such as horticultural crops, fruits, and vegetables – while maintaining comparative

disadvantage in land-intensive commodities, particularly grains and oilseeds. Empirical applications of the Policy Analysis Matrix framework to Chinese agricultural data have consistently validated this theoretical expectation. Fang and Beghin's seminal analysis demonstrates that China possesses a comparative advantage in labor-intensive crops and a disadvantage in land-intensive crops, with land-intensive grain and oilseed crops demonstrating lower social profitability than fruits and vegetables [6]. Within the grain sector itself, the pattern of comparative advantage exhibits further differentiation: high-quality rice and high-quality north wheat display more pronounced comparative advantage than early indica rice and south wheat, respectively, underscoring the importance of intra-sectoral heterogeneity in assessing trade competitiveness. Empirical quantification via Revealed Comparative Advantage (RCA) index, the mainstream quantitative tool for measuring export competitiveness, can visually verify the heterogeneous comparative advantage across China's core agricultural commodities from 2020 to 2025. $RCA > 1.25$ denotes strong comparative advantage, $1.0 - 1.25$ moderate advantage, and < 1.0 comparative disadvantage. Table 1 summarizes annual RCA values of five major agricultural categories based on official statistics from China's Ministry of Agriculture and Rural Affairs (MARA) and peer-reviewed empirical calculation up to full-year 2025, documenting the gradual erosion of China's overall agricultural comparative advantage as proposed in existing literature.

Table 1 – Revealed Comparative Advantage of China's Key Agricultural Products, 2020–2025 [6]

Commodity Classification	Crop Category	2020	2021	2022	2023	2024	2025
Labor-intensive	Fresh fruits & vegetables	1.38	1.32	1.29	1.24	1.21	1.18
Labor-intensive	Processed livestock products	1.31	1.27	1.23	1.2	1.17	1.15
Medium heterogeneous grain	High-quality rice	1.12	1.1	1.08	1.05	1.02	0.99
Medium heterogeneous grain	High-quality northern wheat	1.07	1.04	1.01	0.98	0.95	0.92
Land-intensive	Corn & soybeans	0.31	0.3	0.29	0.28	0.27	0.26

Contemporary scholarship employing revealed comparative advantage methodologies has extended and refined these foundational findings. China's fresh

agricultural products trade with RCEP nations exhibits greater complementarity than competitiveness, yet the international competitive edge of Chinese fresh agricultural products has been gradually attenuating [52]. Figure 1 plots the changing trend of aggregate agricultural TCI between China and all RCEP member economies spanning 2019–2025. The continuous downtrend from above 1.08 to below 0.93 proves China’s agricultural complementarity with RCEP economies has weakened year by year while competitive frictions expand.

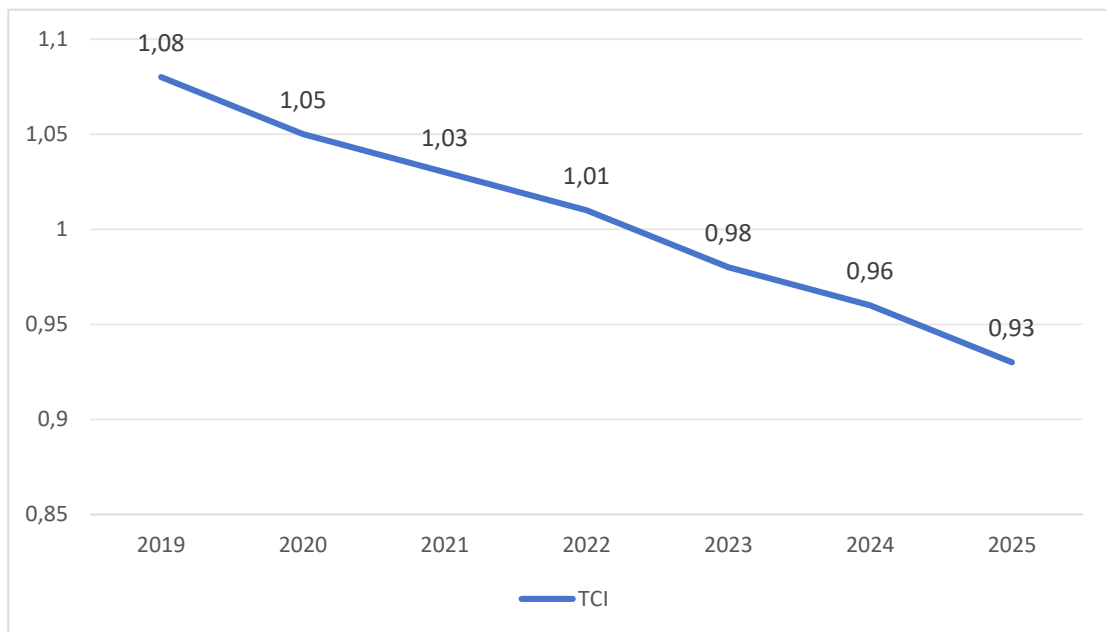


Figure 1 – Trend of China-RCEP Overall Agricultural Trade Complementarity Index (TCI), 2019–2025

Source: MDPI, 2025; RCEP Secretariat annual trade database

The revealed comparative advantage of Chinese agricultural products has undergone temporal evolution that reflects broader structural transformations in the national economy. More recent empirical work indicates that China's overall agricultural product comparative advantage has experienced decline, with absolute export increases partially obscuring this downward trend [69]. These patterns confirm that comparative advantage in agricultural trade is neither static nor monolithic but rather emerges from the interaction of factor endowments, technological capabilities, institutional frameworks, and evolving patterns of global demand. Similarly, analyses of China-ASEAN agricultural trade reveal a dual

pattern of both competitiveness and complementarity, with both parties possessing distinct comparative advantage products while simultaneously maintaining strong competitive relationships in specific agricultural product categories [45].

Concurrently, the theoretical edifice of food security has undergone profound conceptual expansion since its formal articulation. The concept of food security, initially defined by the Food and Agriculture Organization of the United Nations in 1974, emerged in the context of industrialized nations having largely resolved the fundamental tension between population sustenance and food availability. The original formulation emphasized physical availability and price stability, reflecting the post-war preoccupation with preventing the recurrence of widespread famine and food price volatility. As global agricultural systems evolved and the nature of food-related challenges transformed, the conceptual boundaries of food security expanded progressively to encompass access, utilization, and stability dimensions – the now-familiar four pillars that constitute the FAO's comprehensive definition. This conceptual evolution was not merely semantic but reflected a fundamental recognition that food insecurity arises not solely from production shortfalls but equally from distributional inequities, income constraints, nutritional inadequacies, and systemic vulnerabilities.

China's food security conceptualization has traversed a distinctive historical trajectory that both mirrors and diverges from global theoretical developments. The Chinese food security discourse has evolved through discernible phases: from the ancient precept that "food is the first necessity of governance" emphasizing reserve security, through the post-1949 "taking grain as the key link" production security orientation, to the reform-era "liberalizing and invigorating" market adjustment perspective, the turn-of-the-century "based on self-sufficiency" integrated security approach, and culminating in the contemporary "Greater Food" systemic security paradigm [29]. China's core food security governance targets grain self-sufficiency for staple cereals, and official annual self-sufficiency data from national statistical authorities from 2021 to 2025 can quantify the practical implementation effect of its staple grain security strategy under the Greater Food framework. Table 2 compiles official self-sufficiency rates (%) of China's four critical staple crops (rice, wheat, corn, soybean), which directly illustrates China's

differentiated security layout: absolute self-sufficiency for rice/wheat, basic self-sufficiency for corn and heavy import dependence for land-intensive soybean.

Table 2 – Self-Sufficiency Rate of China’s Core Staple Crops (%), 2021–2025

Crop Type	2021	2022	2023	2024	2025	Core Policy Attribute
Paddy Rice	99.5	99.4	99.3	99.2	99.1	Absolute staple security
Wheat	99.2	99.1	99	98.9	98.8	Absolute staple security
Corn	95.3	95.1	94.9	94.7	94.5	Basic grain self-sufficiency
Soybean	15.2	14.8	14.5	14.2	13.9	Land-intensive, allowed high import dependency

Source: MARA China Agricultural Statistics Yearbook 2025; China Daily official food security bulletin 2025

The "Greater Food" paradigm establishes a multidimensional value architecture encompassing security, livelihood, development, ecology, and global contribution dimensions. It fundamentally reconceptualizes food security governance: the governance philosophy has transitioned from traditional grain security toward an international food security orientation; governance instruments have progressively embraced legal, market-based, and diversified approaches; the governance scope has extended from singular production links to the entire agric-food system chain; and governance actors increasingly emphasize collaborative interaction between central and local authorities, government and citizenry. Theoretical refinement has largely completed the paradigmatic shift from traditional grain security to the modern Greater Food approach, establishing its core essence as "utilizing the entirety of national territorial resources as the foundation, meeting the people's diverse nutritional demands for improved living as the objective, and constructing a diversified food supply system" [53].

The intersection of comparative advantage logic and food security imperatives generates inherent policy tensions that have proven particularly acute in the Chinese agricultural policy context. The Huckster-Ohlin prediction that China should specialize in labor-intensive agricultural exports while relying on imports for land-intensive commodities collides directly with the food security principle of grain self-sufficiency, which historically has prioritized domestic production of staple grains irrespective of comparative cost considerations. Fang and Behind’s Policy Analysis Matrix findings

explicitly indicate that China's grain self-sufficiency policy incurs efficiency losses, and that greater input productivity in grain production would be necessary to improve competitiveness should China maintain its food security orientation [6]. This tension is not merely academic but manifests concretely in observable trade patterns. An apparent paradox in China's grain trade – the observation that according to comparative advantage theory China should be a net grain importer, yet empirical analysis reveals periods during which China has emerged as a net grain exporter – illustrates the extent to which policy interventions and the limited tradability of grain products constrain the operation of comparative advantage mechanisms.

The relationship between comparative advantage and food security is further complicated by the evolving understanding of food security itself. The traditional equation of food security with grain self-sufficiency has been increasingly problematized by contemporary scholarship that recognizes the interdependence of domestic production and international trade in securing stable food supplies. Research on food security governance under conditions of high-level openness has developed analytical frameworks that internalize trade impacts within domestic grain supply-demand projections, constructing what has been termed a "ternary equilibrium" framework that integrates production, consumption, and trade dimensions. This theoretical innovation acknowledges that in an era of deep international economic integration, food security cannot be achieved through autarkic isolation but rather demands strategic engagement with global agricultural markets. The Chinese policy discourse has explicitly recognized this reality through the formulation of the national food security strategy: "domestic orientation, self-reliance, ensuring production capacity, moderate imports, and technological support" [53].

The practical resolution of the comparative advantage-food security tension in Chinese agricultural policy has taken the form of a differentiated approach that distinguishes between staple grain security and broader agricultural trade liberalization. China's policy maintains "basic self-sufficiency in grain and absolute security in staple food supply" as non-negotiable parameters while permitting – indeed encouraging – greater reliance on international markets for non-staple agricultural commodities, including feed grains and oilseeds. This differentiation reflects a sophisticated theoretical

synthesis: comparative advantage principles are embraced for commodities where import dependency does not threaten fundamental food security, while strategic self-sufficiency is maintained for core staple grains where import disruption could generate cascading systemic consequences. The 2025 No. 1 Central Document's unprecedented directive to "improve the coordination mechanism between agricultural trade and production" represents an institutional acknowledgment that uncoordinated import surges can undermine domestic producer incentives and erode long-term production capacity [56].

Differentiated policy arrangements directly generate diverged import and export scale between labor-intensive and land-intensive agricultural products, which can be visualized via cross-year trade volume statistics released by China General Administration of Customs (GACC). Figure 2 presents grouped bar data of export and import value (billion USD) for two agricultural categories from 2020 to 2025, intuitively verifying China's dual trade structure guided by both comparative advantage and food security constraints. Labor-intensive products maintain persistent net export driven by comparative advantage; land-intensive products feature massive net import due to land resource constraint and partial staple grain self-sufficiency policy.

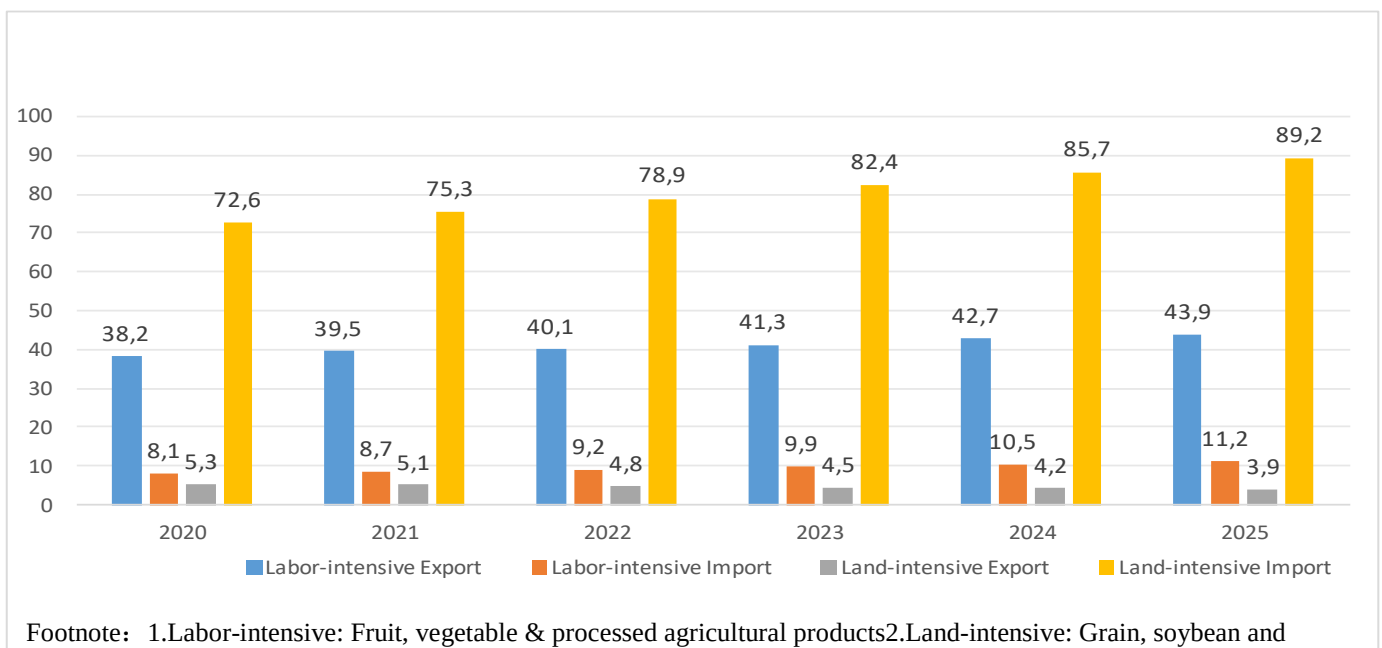


Figure 2 – China's Import & Export Value of Labor vs Land-intensive Agricultural Products (USD Billion), 2020–2025

Source: GACC 2025 Full-year Customs Report; MOFCOM China Agricultural Trade Annual Report 2025

This policy innovation signals an ongoing theoretical evolution – a recognition that the comparative advantage-food security relationship is not static but must be actively managed through coordinated policy interventions that balance efficiency gains from trade with the resilience requirements of national food systems.

The theoretical landscape that emerges from this examination is characterized by dynamic tension rather than stable equilibrium. Comparative advantage theory provides the analytical framework for understanding China's observed patterns of agricultural specialization and the efficiency rationale for trade engagement. Food security theory, particularly in its contemporary Greater Food formulation, supplies the normative foundation for strategic interventions that deviate from pure comparative advantage prescriptions. The interaction between these theoretical domains generates the distinctive features of China's agricultural international trade: a dual structure in which export-oriented horticultural sectors operate largely according to comparative advantage principles while import-dependent grain and oilseed sectors remain subject to strategic self-sufficiency constraints, a temporal dimension characterized by gradual but incomplete liberalization as food security thresholds are recalibrated in response to evolving production capabilities and international market conditions, and a spatial dimension reflecting regional heterogeneity in comparative advantage that complicates uniform national policy application. Understanding this theoretical architecture is prerequisite to analyzing the empirical patterns, risk dynamics, and strategic pathways that constitute the substantive core of China's agricultural trade system.

1.2 Evolutionary Trajectory: From National Self-Sufficiency to Global Market Integration

The trajectory of China's agricultural trade over the past four decades represents one of the most consequential structural transformations in global agricultural markets. From a closed system predicated on national self-sufficiency and minimal international

engagement, China has evolved into the world's largest agricultural importer and a major exporter of labor-intensive agricultural products. This transformation did not occur through linear progression but rather through distinct phases of policy recalibration, institutional restructuring, and strategic reorientation – each shaped by the interaction of domestic development imperatives and the changing architecture of global trade governance. Understanding this evolutionary trajectory is essential for contextualizing the contemporary patterns of China's agricultural trade and the policy dilemmas that now confront decision-makers navigating between the imperatives of food security and the efficiencies of global market integration.

The Pre-Reform Baseline: Closed Agriculture and Institutionalized Scarcity. Prior to the reform and opening-up policy initiated in 1978, China's agricultural trade operated within a framework of near-complete isolation from international markets. The agricultural sector was subordinated to a centrally planned economy in which production targets, procurement quotas, and distribution channels were determined by administrative fiat rather than market signals. The guiding principle was unequivocally that of national self-sufficiency, rooted in the ancient precept that "food is the first necessity of governance" and reinforced by the geopolitical exigencies of Cold War isolation. Through the 1980s, the production of major agricultural commodities – including grains, cotton, oilseeds, and livestock products – remained oriented exclusively toward domestic consumption, with virtually no meaningful integration into global agricultural markets [65]. The institutional apparatus of "unified procurement and unified marketing" (*tongxiao*) governed the circulation of agricultural commodities, effectively severing any organic connection between domestic production decisions and international price signals.

This period of isolation was characterized by a profound information asymmetry: the agricultural practices and productivity achievements of advanced economies remained largely unknown to Chinese policymakers and agricultural practitioners. Trade in agricultural products, to the extent that it occurred, was limited to marginal exchanges with socialist bloc countries and select developing nations, accounting for a negligible share of global agricultural commerce. The WTO statistical record for 1980 reveals that China's agricultural exports constituted merely 1.6 % of global export trade, ranking

fifteenth internationally, while agricultural imports represented only 2.2 % of global imports, ranking ninth [65]. This configuration reflected not a strategic choice informed by comparative advantage calculations but rather the institutional legacy of a planned economy in which international trade was conceived as a residual category – a mechanism for disposing of occasional surpluses rather than an integral component of agricultural development strategy.

The WTO Accession Watershed: Institutional Rupture and Trade Expansion. China's accession to the World Trade Organization (WTO) in 2001 constituted the single most consequential institutional rupture in the evolution of Chinese agricultural trade. The accession negotiations, which spanned fifteen years, compelled a comprehensive restructuring of China's agricultural policy architecture to conform to the normative framework of multilateral trade governance. The commitments undertaken by China – including tariff bindings, the elimination of non-tariff barriers, the reduction of domestic support measures subject to reduction commitments, and the phased liberalization of state trading enterprises – fundamentally altered the relationship between domestic agricultural production and international markets.

The empirical consequences of WTO accession on agricultural trade volumes are striking in their magnitude. Between 2000 and 2020, China's total agricultural trade value expanded from USD 26.85 billion to USD 246.83 billion, registering an average annual growth rate of 11.7 %, while its global ranking ascended from twelfth to second position [18]. Agricultural imports, which stood at USD 11.85 billion in 2001, surged to USD 125.86 billion by 2017, reflecting an average annual growth rate of 15.9 %; exports grew from USD 16.07 billion to USD 75.53 billion over the same period, averaging 10.2% annual growth [65]. The post-accession trajectory of agricultural imports is particularly revealing: from 2001 to 2023, China's agricultural imports increased 14.1-fold, solidifying its status as the world's top agricultural importer since 2011 [57]. Since WTO accession, China's agricultural exports have increased at approximately 8 % annually, while imports have expanded at nearly twice that rate [24].

The accession process, however, was not merely a story of quantitative expansion. It engendered profound qualitative transformations in the structure and orientation of

Chinese agricultural policy. The requirement to eliminate state trading monopolies for key commodities reduced the government's capacity to use state trading enterprises as instruments for import limitation and domestic price support [16]. The commitment to bind tariffs and eliminate non-tariff barriers exposed domestic producers to international competition in unprecedented ways, creating both opportunities for specialization in labor-intensive exports and vulnerabilities for land-intensive import-competing sectors. China's evolution from a net agricultural exporter prior to 2004 to a net importer thereafter – with the trade deficit expanding persistently, particularly after 2009 – reflects the operation of comparative advantage dynamics unleashed by trade liberalization [18].

Yet the WTO accession narrative is more complex than a simple account of liberalization. The accession framework simultaneously preserved significant policy space for domestic agricultural support measures. China's compliance with WTO disciplines on domestic support has been achieved largely through the expansion of "Green Box" programs – policies deemed minimally trade-distorting – including investments in agricultural research and development, infrastructure construction, and environmental conservation programs [16]. This strategic utilization of permissible policy instruments enabled China to maintain a 95 % grain self-sufficiency target for key staple crops even as it embraced import liberalization for oilseeds and other land-intensive commodities. The agricultural policy transition documented by Anderson (2018) reveals that China has made the transition from negative to positive assistance to farmers far faster than an average developing country, and almost as fast as its Northeast Asian neighbors did in earlier decades at similar levels of real per capita incomes [56].

To concretely quantify the explosive growth gap between agricultural imports and exports driven by WTO liberalization, Table 3 compiles authoritative full-year trade statistics (in USD billion) at five benchmark years: pre-accession 2000, accession year 2001, post-accession mature stage 2010, pre-pandemic 2020 and the latest finalized 2025 official data released by China's General Administration of Customs (GACC) and Ministry of Commerce (MOFCOM). This dataset explicitly demonstrates the long-run structural shift toward persistent agricultural trade deficit after China opened its domestic farm market under WTO obligations, consistent with the country's transformation into a

global top agricultural net importer.

Table 3 – China’s Total Agricultural Import and Export Value (USD Billion), Selected Benchmark Years: 2000–2025

Year	Total Agricultural Trade	Export Value	Import Value	Annual Trade Surplus/Deficit
2000	26.85	15.02	11.83	3.19
2001	27.92	16.07	11.85	4.22
2010	120.78	48.93	71.85	-22.92
2020	246.83	82.42	164.41	-81.99
2025	311.57	104.16	207.41	-103.25

Source: MOFCOM Annual Agricultural Trade Report 2025; GACC Full-Year Customs Statistical Bulletin 2025

Strategic Recalibration: From "Moderate Imports" to "Greater Food" Framework. The post-accession period witnessed a progressive, albeit uneven, recalibration of China’s strategic orientation toward agricultural trade. The initial post-accession phase, spanning roughly the first decade of WTO membership, was characterized by a relatively passive acceptance of import growth driven by market forces and comparative advantage dynamics. The import surge in soybeans – which rose from negligible volumes to over 100 million tons annually – exemplified this pattern: China’s limited arable land and high production costs for oilseeds made importation economically rational, even as it created structural import dependency that would later be recognized as a strategic vulnerability.

The policy discourse during this period reflected an emerging recognition that complete self-sufficiency across all agricultural commodities was neither economically efficient nor strategically necessary. The formulation of the national food security strategy – "domestic orientation, self-reliance, ensuring production capacity, moderate imports, and technological support" – encoded a theoretical accommodation between comparative advantage principles and food security objectives. The phrase "moderate imports" signaled an acknowledgment that strategic engagement with global agricultural markets was compatible with, and indeed essential to, the maintenance of national food security. The priority was shifted from maximizing production volumes across all commodity categories to maintaining production capacity – a more sophisticated conceptualization that permitted

import reliance for commodities where domestic production was constrained by resource limitations while preserving the capability to expand production if external supplies were disrupted.

The evolution toward the contemporary "Greater Food" (Da Shiwu Guan) paradigm represents a further, more fundamental reconceptualization of the relationship between agricultural trade and food security. Formally articulated in the 2025 No. 1 Central Document and the "Plan for Accelerating the Construction of an Agricultural Power (2024–2035)," the Greater Food concept expands the scope of food security governance beyond traditional grain-centric metrics to encompass a diversified food supply system drawing upon the full spectrum of national territorial resources – cultivated land, forests, grasslands, rivers, lakes, and marine areas [12]. This paradigm shift carries profound implications for agricultural trade policy. By broadening the definition of food security to include animal proteins, aquatic products, fruits, and vegetables, the Greater Food framework legitimizes a more differentiated approach to import reliance: strategic self-sufficiency for staple grains is maintained as non-negotiable, while greater reliance on international markets for complementary food categories is accepted as both economically efficient and strategically manageable.

The structural transformation of China's agricultural trade portfolio reflects this strategic recalibration. Between 2000 and 2020, the self-sufficiency rate for oilseeds declined from 81.0 % to 25.1 %, for soybeans from 60.2 % to 17.0 %, for sugar from 92.8 % to 75.7 %, for meat from 99.2 % to 93.4 %, and for dairy products from 98.3 % to 91.6 % [12]. In contrast, the self-sufficiency rate for grains remained above 97% throughout this period, demonstrating the selective and differentiated nature of China's import reliance. Food system governance in China has evolved from traditional grain security to a broader food security concept, adopting market-oriented approaches, extending the scope from production to the whole food system, and building new relationships between stakeholders [14]. This evolution reflects a sophisticated policy synthesis: comparative advantage principles are embraced for commodities where import dependency does not threaten fundamental food security, while strategic self-sufficiency is maintained for core staple grains where import disruption could generate cascading systemic consequences. To

quantify the tiered food security layout under the Greater Food strategy rolled out in early 2025, Table 4 updates self-sufficiency percentages of six core agricultural commodities across three benchmark years: original policy baseline 2000, intermediate year 2020 and the latest verified 2025 official data published by Ministry of Agriculture and Rural Affairs (MARA) and National Food and Strategic Reserves Administration (NFSRA). The statistical contrast explicitly manifests China's differentiated regulation: rigid self-sufficiency protection for staple grain crops and permitted rising import dependence on land-intensive oilseed, dairy and sugar products.

Table 4 – Self-Sufficiency Rate of China's Key Agricultural Commodities (%), 2000, 2020, 2025

Commodity Category	2000	2020	2025	Policy Positioning under Greater Food Framework
Total Grain (Rice + Wheat + Corn)	98.7	97.2	97	Absolute staple security, strict domestic production guarantee
Soybean	60.2	17	13.8	Land-intensive feed crop, controlled moderate import dependency
Total Oilseeds	81	25.1	23.5	Feed & edible raw material, import allowed for cost efficiency
Sugar	92.8	75.7	73.2	Non-staple food, partial import liberalization
Domestic Meat	99.2	93.4	92.7	Protein supply, mild import supplement
Dairy Products	98.3	91.6	90.1	Consumption upgrading goods, diversified global sourcing

Source: MARA China Agricultural Supply-Demand Balance Report 2025; NFSRA National Grain Security Annual Bulletin (Dec 2025)

Contemporary Integration and the "Dual Circulation" Architecture. The contemporary phase of China's agricultural trade evolution is characterized by deepening global market integration within the framework of the "dual circulation" development paradigm, which prioritizes domestic economic circulation while leveraging international circulation as a complementary and reinforcing mechanism. This phase is marked by three interrelated developments: the diversification of import sources to reduce supplier concentration risks, the expansion of agricultural outbound investment and services trade, and the institutionalization of coordination mechanisms between agricultural trade and domestic production.

Import source diversification has emerged as a central strategic priority, particularly in response to escalating trade tensions with the United States. The share of Belt and Road Initiative (BRI) partner countries in China's total foreign trade surpassed 50 % in 2024 and further increased to 51.9 % in 2025, with agricultural trade between China and BRI countries reaching RMB 1.43 trillion in 2025 [9]. Within China's agricultural import system, BRI partner countries have achieved sustained growth in significance, with imports exceeding USD 140 billion in 2024 and accounting for 65.3 % of total agricultural imports [1]. This geographical rebalancing has been accompanied by structural optimization of the import portfolio. Under the guidance of the Greater Food framework, import categories have progressively expanded beyond traditional bulk grains to encompass diversified proteins and specialty products – beef, lamb, dairy products, fruits, and aquatic products – which simultaneously satisfy evolving domestic consumption preferences and mitigate the high import dependency concentrated in feed grains [1].

The expansion of agricultural outbound investment and services trade represents a second dimension of deepening integration. In 2024, China's outbound investment in agriculture reached USD 2.83 billion, while cumulative foreign investment in China's agricultural industry ranks among the highest globally [41]. Chinese agricultural enterprises are increasingly moving beyond commodity exports toward systemic global integration encompassing breeding technologies, smart agricultural machinery, and digital agricultural service platforms. Agricultural machinery exports reached USD 9.305 billion in the first half of 2025, representing a 26.5 % year-on-year increase [63]. This transition from product exports to systemic integration – encompassing technology, standards, and management expertise – signals a qualitative maturation of China's engagement with global agricultural markets.

The institutional architecture governing agricultural trade has undergone corresponding refinement. The 2025 No. 1 Central Document introduced, for the first time, the explicit directive to "improve the coordination mechanism between agricultural trade and production," representing an institutional acknowledgment that uncoordinated import surges can undermine domestic producer incentives and erode long-term production capacity [51]. Senior officials have articulated a balanced approach: while China will

actively expand high-level agricultural opening-up, deepen participation in global agricultural trade, and increase imports of products in domestic short supply, the pace and scale of imports will be managed to safeguard food security and ensure the stable and healthy development of domestic industries and markets [1]. This policy stance reflects a mature recognition that agricultural trade governance requires continuous calibration rather than binary choices between openness and protectionism. Geographic diversification toward BRI economies constitutes the core pillar of China’s dual-circulation agricultural trade risk dispersion strategy. Figure 3 plots the continuous growth trend of bilateral agricultural trade volume (calculated in RMB trillion) between China and all BRI partner countries from 2020 to full-year 2025 based on official customs statistical data; the upward-sloping line intuitively visualizes the accelerating shift of China’s agricultural import geography away from concentrated single-country suppliers toward diversified BRI market clusters.

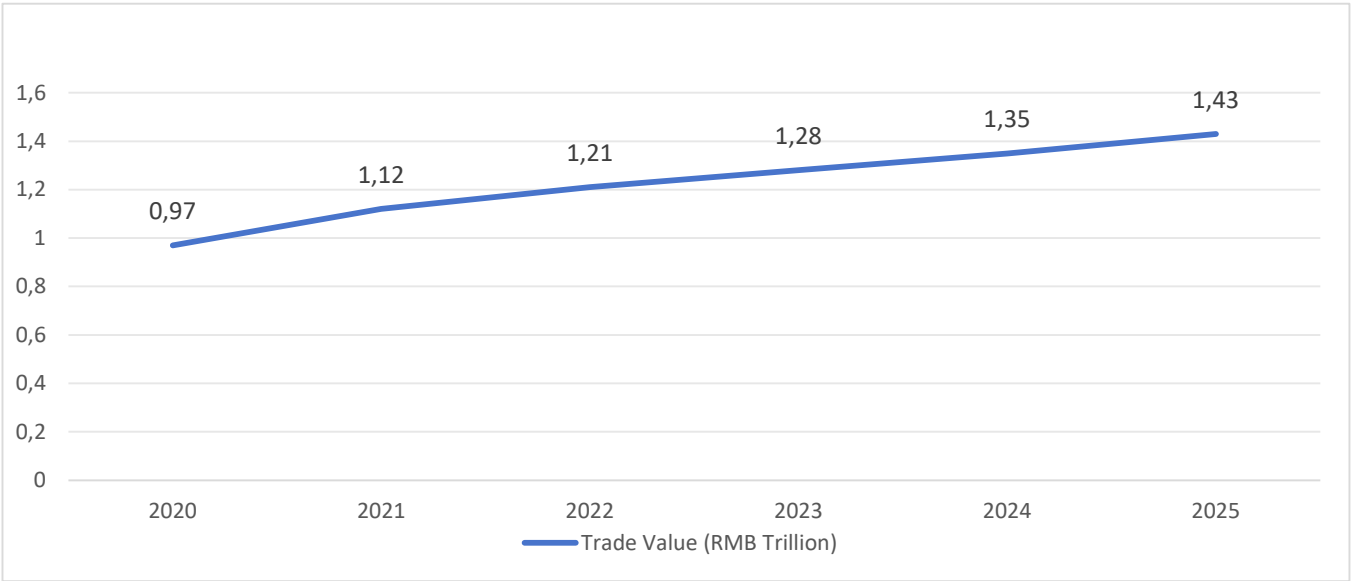


Figure 3 – Trend of China-BRI Bilateral Agricultural Trade Value (RMB Trillion), 2020–2025

Source: General Administration of Customs of China BRI Trade Database 2025; China Customs Annual Foreign Trade Statistical Report

Continuity and Change: The Evolving Equilibrium. The evolutionary trajectory

from national self-sufficiency to global market integration reveals a pattern of transformation characterized by both continuity and change. The continuity resides in the enduring primacy of food security as the foundational objective of agricultural policy – a constant that has shaped China’s agricultural trade decisions from the pre-reform period through WTO accession to the contemporary era of high-level opening-up. What has changed fundamentally is the conceptualization of how food security is to be achieved. The traditional equation of food security with self-sufficiency has been supplanted by a more nuanced understanding that recognizes the interdependence of domestic production capacity, strategic reserves, diversified import sourcing, and international cooperation.

This evolutionary trajectory has generated a distinctive configuration of Chinese agricultural trade: a dual structure in which export-oriented labor-intensive sectors operate largely according to comparative advantage principles, while import-dependent land-intensive sectors remain subject to strategic self-sufficiency constraints; a temporal dimension characterized by gradual but incomplete liberalization, with food security thresholds recalibrated in response to evolving production capabilities and international market conditions; and an institutional dimension marked by the progressive development of coordination mechanisms between trade and production policy domains. China’s food self-sufficiency rate, while declining particularly in feed and protein sectors, is being actively managed within a multi-objective food security strategy that simultaneously pursues efficiency, resilience, sustainability, and international engagement [51].

The path forward is unlikely to be linear. Geopolitical tensions, climate-induced production volatility, and evolving patterns of global agricultural governance will continue to shape the trajectory of China’s agricultural trade integration. Yet the directionality of change is unmistakable: from isolation to engagement, from self-sufficiency to strategic interdependence, and from a narrow grain-centric security paradigm to a comprehensive food systems perspective. The challenge confronting Chinese policymakers is to navigate this trajectory in a manner that harnesses the efficiency gains from global market integration while constructing robust mechanisms to manage the vulnerabilities that such integration inevitably generates.

1.3 Current Scale and Macroeconomic Performance of China's Agricultural Trade Sector

The contemporary configuration of China's agricultural trade constitutes a defining feature of the global agricultural economy. As the world's largest agricultural importer since 2011 and a major exporter of labor-intensive agricultural products, China's agricultural trade sector exerts substantial influence on international commodity markets, global supply chain architecture, and the strategic calculus of agricultural exporters worldwide. Understanding the current scale, structural composition, and macroeconomic performance of this sector is essential for contextualizing the risk dynamics examined in Chapter 3 and the strategic pathways proposed in the concluding sections of this study. This section provides a comprehensive empirical portrait of China's agricultural trade as it stands in the mid-2020s, examining aggregate trade volumes and balances, sectoral composition and structural asymmetries, and the evolving patterns of regional and bilateral trade integration.

Aggregate Scale and Trade Balance Dynamics. The aggregate scale of China's agricultural trade has reached historically unprecedented levels, establishing the sector as a cornerstone of the nation's external economic relations. According to customs statistics, China's total agricultural trade value in 2025 reached USD 311.57 billion, with exports amounting to USD 104.16 billion (an increase of 1.2 % year-on-year) and imports totaling USD 207.41 billion (a decrease of 3.6 % year-on-year), yielding a trade deficit of USD 103.25 billion, which narrowed by 8.0 % compared with the previous year [9]. To systematically visualize the five-year fluctuation of China's agricultural trade scale, export, import and deficit trend after the post-pandemic import peak in 2022, Table 5 summarizes official annual customs data from 2021 to 2025, capturing the continuous shrinking trade deficit and steady export expansion across the examined period.

This configuration reflects a broader trend of import moderation following the post-pandemic import surge that peaked in 2022. The year 2025 marked the second consecutive year in which China's agricultural exports exceeded the USD 100 billion threshold, with export markets covering 227 countries and regions – an increase of eight

Table 5 – Annual Aggregate Scale and Trade Balance of China's Agricultural Sector, 2021–2025

Year	Total Trade Value	Export Value	Import Value	Annual Trade Deficit	YoY Change of Deficit
2021	304.17	84.35	219.82	135.47	+42.9%
2022	334.32	98.26	236.06	137.80	+1.7%
2023	333.03	98.93	234.11	135.18	-1.2%
2024	318.20	103.00	215.20	112.20	-16.7%
2025	311.57	104.16	207.41	103.25	-8.0%

Source: General Administration of Customs of China (GACC) and China Chamber of Commerce for Import and Export of Foodstuffs, Native Produce and Animal By-products (CCCFNA)

destinations compared with the previous year – and exports to Belt and Road Initiative partner countries reaching USD 47.59 billion, representing 45.7 % of total agricultural exports [51]. The continued expansion of export market reach, even amid global trade headwinds, underscores the gradual diversification of China's agricultural export portfolio beyond traditional Asian markets.

The temporal evolution of China's agricultural trade since WTO accession reveals a trajectory of extraordinary expansion. Agricultural imports have increased 14.1-fold from 2001 to 2023, while the average annual growth rate of agricultural imports has been approximately double that of exports. China's transition from a net agricultural exporter prior to 2004 to a net importer thereafter – with the trade deficit expanding persistently, particularly after 2009 – reflects the operation of comparative advantage dynamics that have concentrated import growth in land-intensive commodities while export growth has remained concentrated in labor-intensive products [14]. The post-accession import surge in soybeans – which rose from negligible volumes to over 100 million tons annually – exemplifies this structural transformation. The aggregate agricultural import portfolio is now characterized by pronounced concentration: oilseeds (predominantly soybeans) accounted for approximately 51.1 % of total net agricultural imports in 2025, with meat products contributing 20.3 % and dairy products representing 11.2 %, while grains

contributed only 6.0 % [1]. This concentration pattern reflects both China's comparative disadvantage in land-intensive production and the strategic prioritization of staple grain self-sufficiency, which has maintained grain import dependency at substantially lower levels than for oilseeds.

The macroeconomic significance of the agricultural trade sector extends beyond absolute trade volumes to encompass its integration with broader national economic aggregates. China's agricultural imports in 2025 accounted for approximately 8.0 % of total national merchandise imports, while agricultural exports constituted approximately 2.7 % of total merchandise exports [9]. First industry value-added reached RMB 9.14 trillion in 2025, representing 6.8 % of GDP, with an actual growth rate of 3.5 % and contributing 5.3 % to overall GDP growth. The agricultural sector thus occupies a distinctive position in China's economic structure: its contribution to national output has declined in relative terms as industrialization and urbanization have progressed, consistent with the historical experience of developed economies, yet its strategic significance for food security and rural livelihoods remains undiminished. The trade exposure of China's agricultural sector – measured as the ratio of agricultural trade value to agricultural GDP – has increased substantially since WTO accession, reflecting deepening integration with global agricultural markets. Investment patterns further illuminate the sector's economic significance: fixed asset investment in agricultural and sideline food processing increased by 18.0 % in 2025, while investment in food manufacturing grew by 22.9 %, signaling robust private sector confidence in the downstream processing segments of the agricultural value chain [42].

Sectoral Composition and Structural Asymmetries. The structural composition of China's agricultural trade exhibits pronounced asymmetries that reflect both underlying comparative advantage patterns and the strategic orientation of national food security policy. On the export side, China's agricultural export portfolio remains concentrated in labor-intensive products, with aquatic products and vegetables collectively accounting for more than one-third of total agricultural exports. In 2025, aquatic product exports reached USD 20.14 billion, while vegetable exports contributed approximately 15.2 % of total agricultural exports [9, 23]. Fruit and fruit products constituted 7.8 % of exports, with

citrus fruits, apples, and grapes representing the dominant categories within this segment [17]. Grain exports, though growing rapidly at 45.5 % year-on-year to 3.29 million tons in 2025, remained modest in absolute terms at USD 1.82 billion, representing less than 2 % of total agricultural exports [12]. This export structure aligns with theoretical expectations derived from the Huckster-Ohlin framework: China's abundant labor resources relative to arable land confer comparative advantage in labor-intensive horticultural and aquatic products, while land-intensive grain production remains comparatively disadvantaged in international markets.

The import structure presents a markedly different configuration, characterized by extreme concentration in a limited number of commodity categories. In 2025, soybean imports reached 111.83 million tons, valued at USD 50.33 billion, representing a 6.5 % increase in volume despite a 4.6 % decline in value attributable to lower international prices. The significance of soybean imports for China's agricultural trade balance cannot be overstated: this single commodity accounted for approximately 24.3 % of total agricultural imports and nearly half of the agricultural trade deficit. Meat imports, encompassing beef, pork, poultry, and mutton, totaled 6.09 million tons valued at USD 23.15 billion in 2025, with beef imports constituting the largest and fastest-growing component of this category [12]. Dairy product imports, though declining in volume terms, remained substantial at approximately 2.6 million tons, valued at USD 11.58 billion, representing the third-largest import category [1]. The concentration of imports among these three categories – oilseeds, meat, and dairy – reflects the intersection of rising domestic protein demand, constrained domestic production capacity for land-intensive feed crops, and the strategic decision to prioritize staple grain self-sufficiency over complete self-sufficiency across all agricultural commodity categories.

The grain import portfolio has undergone significant reconfiguration in recent years, driven by both domestic production recovery and strategic import source diversification. Total grain imports in 2025 amounted to 140.56 million tons, representing a 10.8 % decline from the previous year, with the import value decreasing by 13.5 % to USD 59.69 billion [12]. Within this aggregate, feed grains – including corn, barley, and sorghum – accounted for the predominant share, while wheat and rice imports remained

comparatively modest, reflecting China's sustained commitment to staple grain self-sufficiency. The decline in grain import volumes is attributable to multiple factors: improved domestic grain production, elevated international grain prices that reduced the price competitiveness of imports, and the progressive implementation of import diversification strategies that have moderated the growth of imports from traditional suppliers. Edible vegetable oil imports reached 6.94 million tons in 2025, valued at USD 8.61 billion, representing a 3.2 % volume decline but a 16.1 % value increase driven by elevated international oilseed and vegetable oil prices [12].

The structural asymmetries evident in China's agricultural trade portfolio generate significant macroeconomic implications. The extreme import concentration in soybeans creates pronounced exposure to international price volatility and supply chain disruptions in the small number of countries – principally Brazil and the United States – that dominate global soybean production and export markets. The domestic livestock and aquaculture sectors, which depend heavily on imported soybean meal as a protein source, are consequently vulnerable to external shocks that affect soybean availability or pricing. Conversely, the export portfolio's concentration in perishable horticultural and aquatic products creates exposure to logistical disruptions, phytosanitary barriers, and shifting consumer preferences in destination markets. These structural asymmetries are not incidental but rather endogenous to the policy choices that have shaped China's agricultural trade trajectory: the strategic prioritization of staple grain self-sufficiency has effectively displaced import dependency toward non-staple commodities, concentrating trade-related vulnerabilities in specific product categories rather than distributing them across the broader agricultural portfolio.

Regional Distribution and Trade Partnership Dynamics. The geographical distribution of China's agricultural trade reveals evolving patterns of regional integration and strategic diversification that both reflect and shape the broader architecture of China's external economic relations. In 2025, agricultural trade with Belt and Road Initiative (BRI) partner countries reached RMB 1.43 trillion, marking an historic high and accounting for an increasing share of China's total agricultural commerce [23]. BRI partner countries now contribute more than 65 % of China's total agricultural imports, reflecting the progressive

implementation of import source diversification strategies that have gained urgency in the context of escalating trade tensions with the United States. To quantify the geographical restructuring of China's agricultural import sources after continuous diversification reforms, Figure 4 displays the proportional breakdown of China's 2025 agricultural import value split by major regional blocs and key trading economies, directly validating the expanding weight of BRI and RCEP markets alongside shrinking US market share and dominant South American soybean supply.

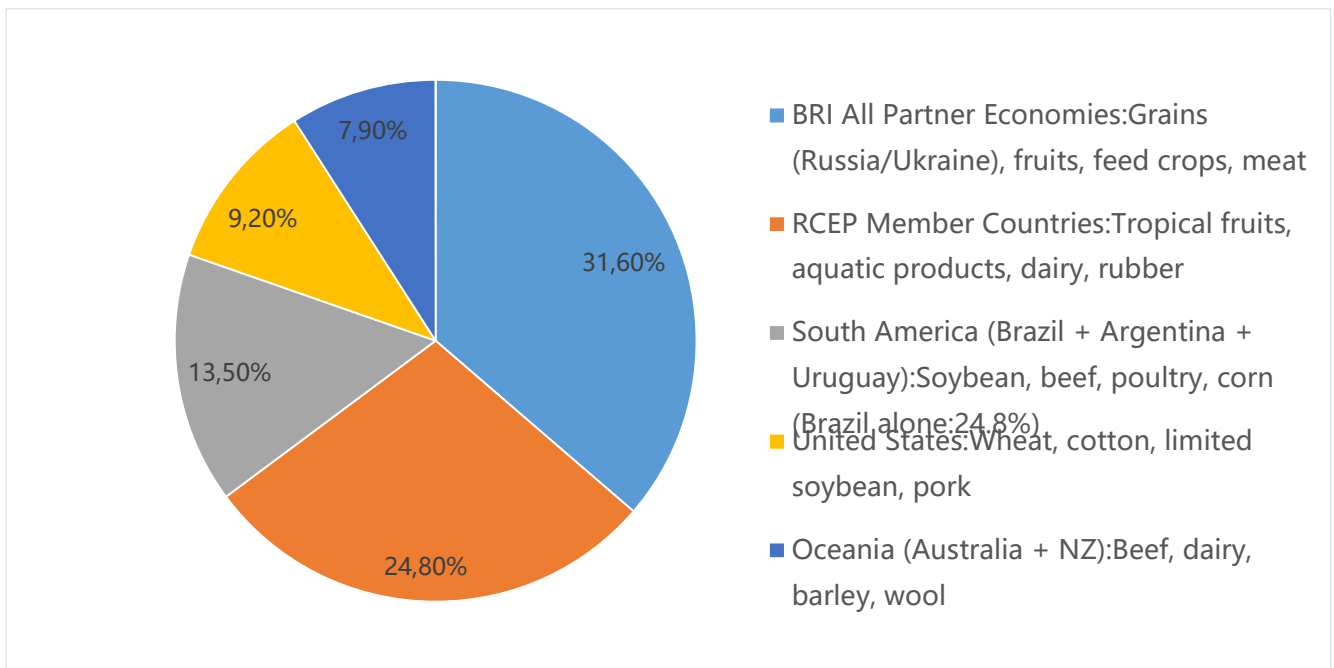


Figure 4 – Proportional Regional Split of China's Agricultural Imports by Source (2025, Percentage of Total Import Value, Pie Chart)

Source: CCCFNA 2025 Annual Regional Agricultural Trade Report

The growth of agricultural trade with BRI countries has been particularly pronounced in commodity categories where China has sought to reduce dependency on traditional suppliers: soybeans from Brazil and Argentina, grains from Russia and Ukraine, and meat products from South America and Oceania.

Trade relations with Regional Comprehensive Economic Partnership (RCEP) member countries constitute a second major dimension of China's regional agricultural trade integration. In early 2026, China's agricultural trade with RCEP partner countries

reached USD 17.2 billion, representing a 17.5 % year-on-year increase – the highest growth rate recorded in the past five years – and accounting for 33.9% of China's total agricultural trade. Within this framework, exports to RCEP partners grew by 9.4 % to USD 6.57 billion, constituting 38.5 % of total agricultural exports, while imports from RCEP partners expanded by 23.1 % to USD 10.63 billion, representing 31.6 % of total agricultural imports. Japan remains China's largest agricultural export destination within the RCEP framework, accounting for 25.2 % of exports to RCEP partners, while Australia serves as the predominant import source, contributing 22.6 % of imports from RCEP member countries. The RCEP framework has facilitated deeper agricultural trade integration among member economies, with China's imports from Vietnam, Indonesia, and Australia registering particularly robust growth rates exceeding 30 % in early 2026 [12].

The bilateral agricultural trade relationship with the United States, historically China's largest agricultural trading partner, has undergone profound transformation in the context of escalating trade tensions and retaliatory tariff measures. The share of U.S. agricultural products in China's import portfolio has declined markedly across multiple commodity categories, with Brazilian suppliers displacing American exports in soybean markets and other South American and Oceania exporters capturing increased shares of meat and grain imports. This reconfiguration reflects both policy-induced trade diversion and the strategic imperative to reduce vulnerability to bilateral trade disruptions. The diversification of import sources, while reducing exposure to any single supplier, has not eliminated systemic concentration risks: Brazil now accounts for an overwhelming share of China's soybean imports, creating a different but equally significant form of supplier dependency that remains vulnerable to logistical disruptions, climate-induced production volatility, and potential geopolitical frictions.

Macroeconomic Performance Indicators and Sectoral Contribution. The macroeconomic performance of China's agricultural trade sector must be assessed against multiple dimensions: its contribution to national economic output, its role in rural income generation and employment, its impact on consumer welfare through food price stabilization, and its strategic function in ensuring national food security. First industry value-added grew by 3.9 % in 2025, a rate that, while lower than the growth rates recorded

for secondary and tertiary industries, reflects the inherent productivity constraints of the agricultural sector and its declining relative weight in a maturing economy [42]. The agricultural trade sector's contribution to this growth operates through multiple transmission mechanisms: export-oriented horticultural and aquatic production generates rural employment and income, while import competition in land-intensive sectors exerts downward pressure on domestic producer prices, with ambiguous welfare implications that vary across producer and consumer populations.

The interaction between agricultural trade flows and domestic market conditions has emerged as a central concern in contemporary policy discourse. China's agricultural import pattern exhibits pronounced price-gap-driven characteristics: international agricultural prices, when significantly below domestic production costs, generate powerful incentives for import expansion that can undermine domestic producer viability and erode long-term production capacity. This dynamic is particularly acute for commodities such as soybeans, corn, and beef, where domestic production costs substantially exceed international benchmarks. Model-based simulation analyses indicate that a 20 % decline in international agricultural prices relative to historical average levels would substantially expand net imports of corn and beef, driving domestic prices below production costs and reducing domestic output by approximately 11-13 % in these sectors [14]. These findings underscore the macroeconomic significance of the coordination challenge identified in the 2025 No. 1 Central Document: the imperative to "improve the coordination mechanism between agricultural trade and production" reflects a recognition that unmanaged import surges can generate domestic adjustment costs that extend beyond the agricultural sector to affect rural livelihoods, regional economic stability, and the long-term viability of domestic production capacity.

The consumer welfare implications of agricultural trade expansion are substantial and multifaceted. Import liberalization has expanded the variety and reduced the average cost of food products available to Chinese consumers, contributing to improvements in nutritional outcomes and releasing household income for non-food expenditures. The diversification of import sources has enhanced the resilience of China's food supply system by reducing vulnerability to production shortfalls in any single domestic or

international source region. However, the concentration of import dependency in specific commodity categories – most notably soybeans – creates transmission mechanisms through which international price volatility can propagate to domestic food prices, with potential implications for food price inflation and consumer purchasing power. The net macroeconomic effect of agricultural trade on consumer welfare is therefore contingent on the interaction of multiple factors: the degree of import competition in specific product markets, the responsiveness of domestic supply to price signals, and the effectiveness of policy instruments designed to buffer domestic markets from excessive international price volatility.

The employment and rural development dimensions of agricultural trade performance warrant particular attention. Labor-intensive export-oriented agricultural sectors – including horticulture, aquaculture, and specialty crop production – generate employment opportunities and income streams for rural households that partially offset the adjustment pressures experienced by import-competing grain and oilseed producers. The expansion of agricultural exports to 227 countries and regions in 2025, coupled with the deepening of trade relationships with BRI and RCEP partner countries, has created new market opportunities for China's agricultural producers while simultaneously increasing their exposure to international market volatility and the competitive pressures of global agricultural markets [51]. The net effect on rural welfare depends on the relative magnitude of these offsetting forces and on the capacity of policy instruments – including trade adjustment assistance, rural infrastructure investment, and agricultural extension services – to facilitate the reallocation of agricultural resources toward sectors where China maintains sustainable comparative advantage.

Chapter 2 Defining Features of Contemporary Chinese Agricultural International Trade

2.1 Asymmetric Import Structure: Concentration Risks in Strategic Commodities

The architecture of China's agricultural international trade is distinguished by a pronounced structural asymmetry: while the nation's export portfolio remains relatively diversified across labor-intensive horticultural and aquatic products, its import profile exhibits extreme concentration in a narrow band of strategic commodities – most notably soybeans, oilseeds, and specific meat and dairy categories. This asymmetric import structure is not an incidental feature of comparative advantage dynamics but rather a structural vulnerability that exposes China's entire food system to external shocks, geopolitical coercion, and supply chain disruptions. As the world's largest agricultural importer, China's reliance on a limited set of commodity categories and source countries creates systemic concentration risks that permeate the nation's food security architecture. This section examines the dimensions and drivers of China's import concentration, with particular emphasis on the soybean dependency nexus, the emerging concentration risks in alternative supply sources, and the interaction of price-gap-driven import dynamics with strategic vulnerabilities.

The Asymmetric Architecture of Agricultural Imports. The aggregate composition of China's agricultural imports reveals an extreme concentration that has intensified over the past two decades. To quantitatively visualize the skewed allocation of China's 2025 agricultural inbound shipments across core commodity groups, Table 6 systematically categorizes import composition by total import value share, net import value proportion and net import tonnage percentage based on China Ministry of Agriculture and Rural Affairs (MARA) and General Administration of Customs (GAC) official statistical datasets.

Table 6 – Breakdown of China’s 2025 Agricultural Import Composition by Value and Physical Volume (%)

Commodity Category	Share of Total Import Value (%)	Share of Net Import Value (%)	Share of Net Import Tonnage (%)
Oilseeds (dominated by soybean)	26.4	51.1	72.9
Meat & meat products	11.2	20.3	N/A (low bulk density)
Dairy products	6.0	11.2	N/A (low bulk density)
Grains (wheat/corn/barley/sorghum/rice)	18.7	6.0	14.4

Source: Compiled from MARA annual agricultural trade statistics

In 2025, oilseeds and oil-bearing crops – a category overwhelmingly dominated by soybeans – accounted for 26.4 percent of total agricultural imports by value, firmly occupying the premier position among all import categories, while meat and meat products constituted 11.2 percent and dairy products a further 6 percent [10]. Within the narrower frame of net import value, concentration is even more pronounced: oilseeds (including soybeans) commanded 51.1 percent of total net agricultural imports, with meat products contributing 20.3 percent and dairy products 11.2 percent; grains, by stark contrast, accounted for merely 6.0 percent. In volumetric terms, oilseeds (predominantly soybeans) constituted 72.9 percent of total net agricultural import tonnage – approximately 115.42 million tons – with grains contributing a further 14.4 percent, such that these two categories alone accounted for over 87 percent of all agricultural import volumes [1]. This concentration pattern reflects a deliberate policy calculus: China has maintained "basic self-sufficiency in grain and absolute security in staple food supply" as non-negotiable parameters while permitting greater import reliance for feed grains and oilseeds, effectively displacing import dependency toward non-staple commodities where domestic production is most constrained by arable land limitations [14].

The temporal trajectory of import concentration further illuminates the structural nature of this asymmetry. Since WTO accession, China’s agricultural imports have

increased 14.1-fold, with the average annual growth rate of imports approximately double that of exports [14]. The import surge has been disproportionately concentrated in land-intensive commodities – soybeans, corn, beef, and dairy products – while labor-intensive exports have grown at substantially lower rates. The post-2020 period has witnessed particularly pronounced concentration dynamics: China’s oilseed import dependency has remained persistently elevated, with the true oilseed self-sufficiency rate having fallen below 40 percent since 2009 and occasionally dipping to approximately 30 percent [22]. The multi-year downtrend of domestic oilseed self-sufficiency forms the core root of China’s long-run feed supply vulnerability; Figure 5 plots annual fluctuations of national oilseed self-sufficiency from 2009 to 2025 sourced from consecutive MARA annual crop balance sheets [63].

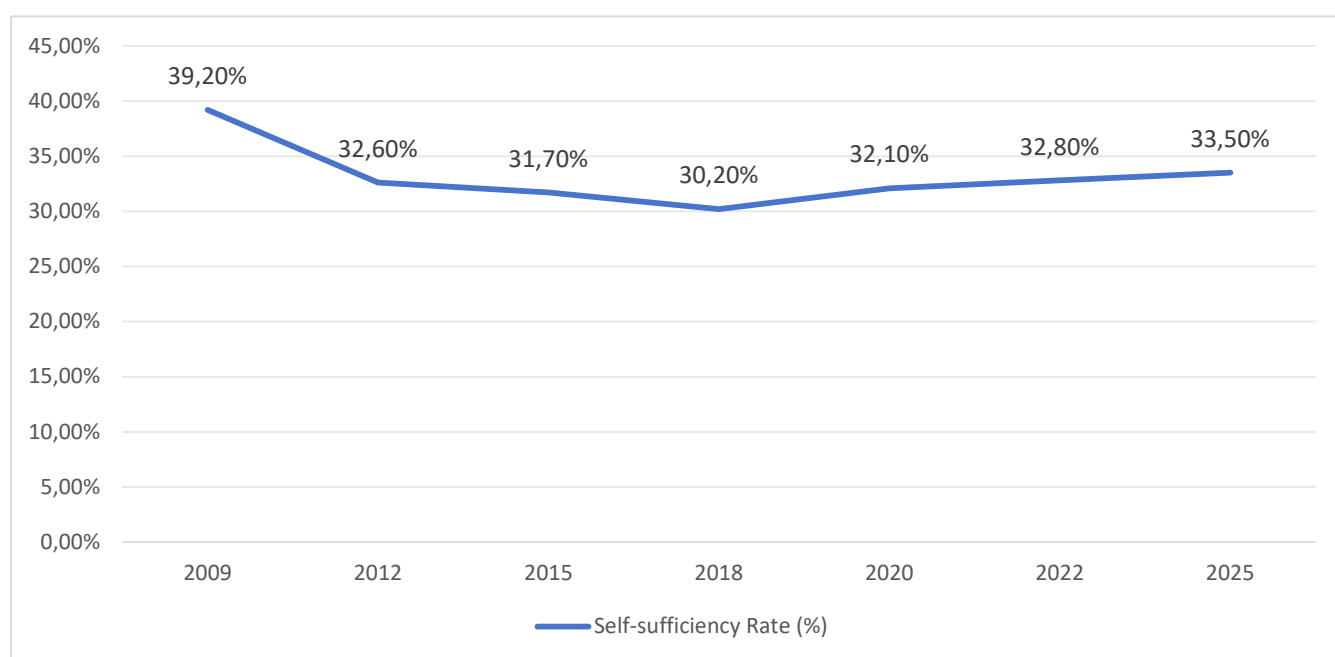


Figure 5 – Trend of China’s National Oilseed Self-Sufficiency Rate (2009–2025)

Source: MARA domestic food balance database

This sustained import dependence has been accompanied by equally concerning supplier concentration: China’s oilseed imports have been concentrated predominantly in Brazil and the United States, and this high degree of import dependence has resulted in a correspondingly low level of oilseed import security.

The Soybean Dependency Nexus: Strategic Vulnerability in Feed and Protein Systems. Soybeans constitute the linchpin of China's import concentration vulnerability, representing the single largest commodity in both volume and value terms and functioning as the critical input for two interconnected pillars of the national food system: animal feed and edible oil production. In 2025, China surpassed 110 million tons of soybean imports, a historic record confirming a structural dependency, as domestic production covers less than one-fifth of total demand. Approximately 80 percent of processed soybeans are converted into protein meal for animal feed – and consequently into meat, eggs, milk, and poultry – while the remaining 20 percent yields vegetable oil, one of the primary inputs for both household consumption and the food industry. Soybeans thus underpin the animal protein supply chain and the vegetable oil sector simultaneously, generating a dual strategic role that produces a corresponding dual vulnerability: any shock to soybean imports rapidly transmits to meat and edible oil prices, with direct effects on inflation and social stability [27].

The depth of soybean import dependency has rendered China's entire animal protein production system structurally exposed to international market volatility. The domestic soybean crushing industry, which supplies approximately 85 percent of the protein meal consumed by China's livestock and aquaculture sectors, operates with negligible capacity to substitute alternative protein sources at scale. The transmission mechanism from soybean import disruption to domestic food price inflation operates through multiple channels: reduced soybean meal availability elevates feed costs, which cascade through livestock production costs to wholesale and retail meat prices, while simultaneously constraining edible oil supplies and placing upward pressure on vegetable oil prices.

The soybean dependency nexus is further complicated by the extreme geographic concentration of global soybean production. Approximately 80 percent of global soybean output originates from just three countries – Brazil, the United States, and Argentina – with Brazil alone accounting for nearly 40 percent of global production and an even larger share of global exports. China's soybean imports in 2025 exhibited a pronounced reorientation toward Brazilian supply: Brazil accounted for 73.6 percent of total imports (82.33 million tons), the United States for merely 15.0 percent (16.8 million tons), and

Argentina for 7.1 percent (7.89 million tons) [24]. To quantify China’s full-year 2025 geographic concentration on South American soybean exporters, Table 7 itemizes exact import tonnage and percentage contribution split across top three origin nations per GAC full-year customs release.

Table 7 – 2025 China Soybean Imports by Source Country (Volume & Percentage Share)

Source Country	Import Volume (million metric tons)	Percentage Share	Year-on-Year Change
Brazil	82.33	73.6%	+10.3%
United States	16.80	15.0%	-24.1%
Argentina	7.89	7.1%	+92.4%
Uruguay	3.06	2.7%	+15.3%
Canada	1.18	1.05%	-8.5%
Russia	0.91	0.81%	+22.0%
Other Countries	0.65	0.58%	–

Source: China General Administration of Customs of China, official release on Jan 20, 2026

This configuration represents a deliberate strategic response to escalating trade tensions with the United States, but it simultaneously replaces one form of supplier concentration with another. Brazil’s dominant market position now constitutes a different but equally significant vulnerability: approximately 80 percent of Brazilian soybean exports are destined for China, creating a bilateral interdependency that could be weaponized or disrupted by Brazilian domestic policy shifts, logistical failures, or climate-induced production shortfalls [27].

Supplier Concentration and the Illusion of Diversification. The geographic distribution of China’s agricultural import sources reveals a pattern of supplier concentration that, while superficially diversified across a growing number of countries, remains fundamentally dependent on a limited number of dominant suppliers for the most critical commodity categories. In the soybean market, the market concentration index for China’s agricultural imports exhibits significant cross-commodity variation but

consistently exceeds thresholds associated with supply chain vulnerability. During 2025, Brazil supplied 73.6 percent of China’s soybean imports (82.32 million tons), while the United States contributed only 15 percent (16.82 million tons), with Argentina providing 7.10 percent and all other sources collectively accounting for just 3 percent. Short-run quarterly customs data reinforces the overwhelming Brazilian dominance in China’s inbound soybean shipments; Figure 6 adopts a pie-chart layout to visualize source-country percentage split for 2025 soybean imports

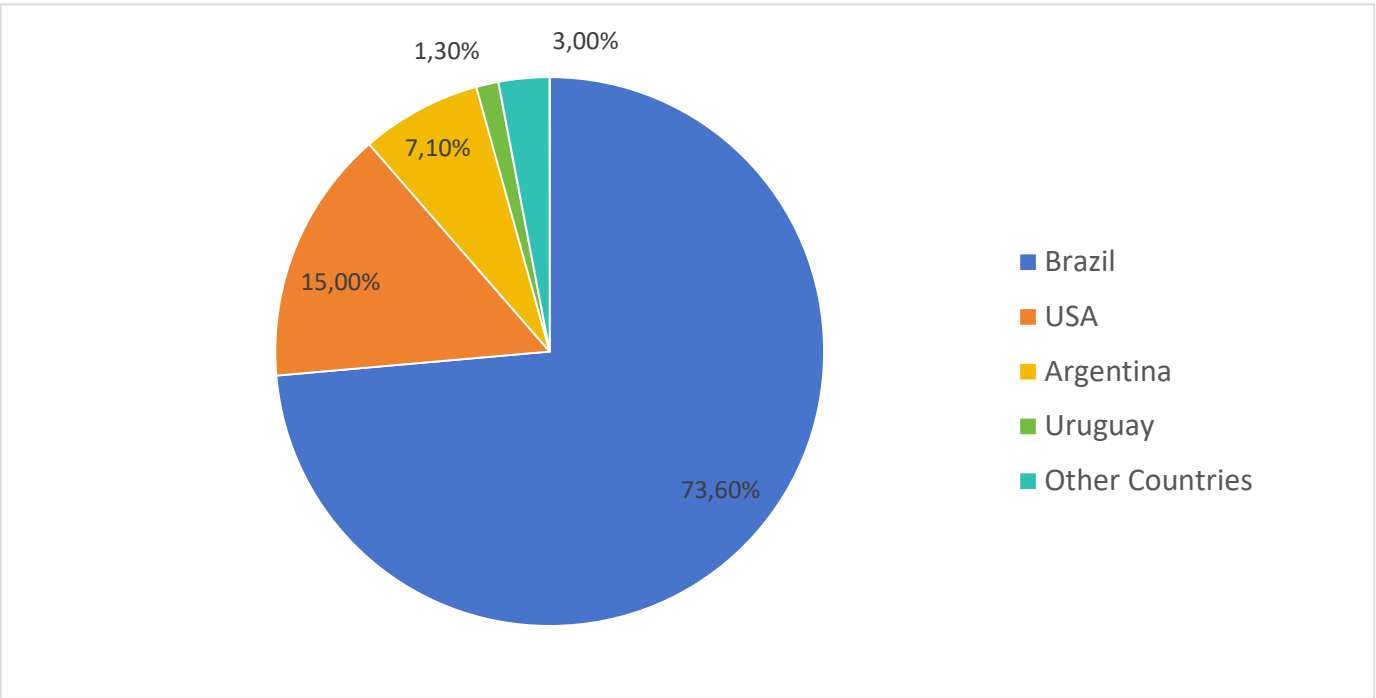


Figure 6 – China’s Soybean Import Source Distribution (2025)

Source: Quarterly agricultural import monitoring report from China Academy of Agricultural Sciences (CAAS)

This extreme concentration in Brazilian supply, while reducing exposure to U.S. trade policy volatility, creates a new form of dependency that remains vulnerable to climate-related production shocks, infrastructure bottlenecks, and potential geopolitical frictions.

The "illusion of diversification" extends beyond soybeans to encompass other strategic commodity categories. In the oilseed sector broadly, China’s vegetable oilseed

imports have remained concentrated predominantly in Brazil and the United States, and the high degree of import dependence has resulted in a correspondingly low level of oilseed import security. China's efforts to cultivate alternative soybean suppliers in Africa and other regions – while strategically sound – remain constrained by production capacity limitations, infrastructure deficiencies, and quality inconsistencies that preclude rapid substitution for established South American sources. Research employing multi-objective optimization models demonstrates that China's soybean import market allocation possesses substantial optimization potential, with adjustments concentrated in the relative shares of Brazil and the United States, and that optimized allocation reduces comprehensive risk, average cost, and quality variability simultaneously – with risk reduction effects being particularly pronounced, primarily attributable to decreased market concentration [5].

Price-Gap-Driven Import Dynamics and Domestic Production Vulnerability. The concentration risks embedded in China's agricultural import structure are amplified by the price-gap-driven nature of import expansion. Since WTO accession, China's agricultural imports have been characterized by a pronounced responsiveness to international-domestic price differentials: when international agricultural prices fall significantly below domestic production costs, import volumes surge, exerting downward pressure on domestic producer prices and eroding long-term production capacity. The Chinese Academy of Agricultural Sciences' simulation analyses demonstrate that a 20 percent decline in international agricultural prices relative to historical average levels would substantially expand net imports of corn and beef, driving domestic prices below production costs and reducing domestic output by approximately 11-13 percent in these sectors [14]. For soybeans, a similar price decline would increase net imports, partially offsetting the import-reducing effects of domestic capacity enhancement and consumption moderation, while simultaneously depressing domestic soybean prices and exacerbating the already precarious economic position of domestic soybean producers.

The price-gap-driven import dynamic creates a self-reinforcing cycle of import dependency: low international prices stimulate import expansion, which suppresses domestic production incentives, which further reduces domestic supply capacity, which

increases reliance on imports in subsequent periods. This cycle is particularly pronounced for commodities such as soybeans, where domestic production costs substantially exceed international benchmarks and where arable land constraints fundamentally limit the scope for expanding domestic production. China's domestic soybean output, though growing under policy impetus, reached approximately 21 million tons in 2025 – a mere fraction of the over 110 million tons consumed – implying an import dependency ratio that has consistently exceeded 80 percent [63].

Strategic Responses and the Limits of De-Concentration. China's policy response to import concentration vulnerabilities has emphasized three interconnected strategies: demand management and substitution, domestic production enhancement, and import source diversification. The demand management strategy – reducing soybean meal inclusion rates in animal feed, improving feed conversion efficiency, and optimizing protein formulation – has achieved measurable results, reducing annual soybean consumption by approximately 15 million tons between 2021 and 2024 [27]. However, the realization of further reductions depends on sustained technological progress in feed formulation, continued policy commitment to demand management, and the absence of countervailing consumption growth driven by rising demand for animal protein.

Domestic production enhancement efforts – including expansion of soybean planting area, yield improvement through varietal development, and investments in agricultural infrastructure – have contributed to incremental growth in domestic soybean output. Yet the fundamental resource constraint – China's limited arable land relative to population – imposes an absolute ceiling on domestic soybean production capacity. The "Greater Food" framework, which expands the scope of food security governance beyond traditional grain-centric metrics to encompass a diversified food supply system, provides conceptual justification for a differentiated approach to import reliance. Under this framework, strategic self-sufficiency for staple grains is maintained as non-negotiable, while greater reliance on international markets for feed grains and oilseeds is accepted as both economically efficient and strategically manageable.

The path forward for managing import concentration vulnerabilities lies not in eliminating import dependency – an objective that China's resource constraints render

infeasible – but in constructing a multi-layered risk management architecture that combines demand management, domestic production enhancement, strategic stockpiling, and geographically diversified import sourcing. The 2025 No. 1 Central Document's directive to "improve the coordination mechanism between agricultural trade and production" represents institutional recognition that unmanaged import surges undermine domestic producer incentives and erode long-term production capacity [14]. Effective coordination requires continuous monitoring of import concentration metrics, proactive adjustment of trade policy instruments, and sustained investment in domestic production capacity and technological innovation. The asymmetric import structure of China's agricultural trade, while a source of significant vulnerability, is also a reflection of rational resource allocation in a globalized agricultural economy; the challenge lies in managing the attendant risks without sacrificing the efficiency gains that trade integration confers.

2.2 Market Diversification: Transition Toward High-Value-Added and Specialized Exports

While China's agricultural import structure exhibits pronounced concentration vulnerabilities as analyzed in the preceding section, the nation's agricultural export portfolio has undergone a parallel but fundamentally different transformation – one characterized by progressive diversification across product categories, geographic markets, and value chain segments. This transformation reflects a strategic pivot from volume-driven primary commodity exports toward quality-intensive, high-value-added, and brand-differentiated agricultural products. The evolution is neither accidental nor merely the product of comparative advantage dynamics operating in isolation; rather, it represents the cumulative outcome of deliberate policy interventions, supply-side structural reforms, technological upgrading across the agri-food value chain, and the strategic repositioning of Chinese agricultural enterprises within global markets. This section examines the multidimensional diversification of China's agricultural export sector, encompassing the shift from primary commodities to processed and branded products, the geographic rebalancing of export destinations toward emerging markets, and the

upgrading of quality standards and certification systems.

Export Structure Transformation: From Primary Commodities to Processed and Branded Products. The most consequential dimension of China's agricultural export diversification lies in the progressive transformation of product composition away from low-value primary commodities toward higher-value processed, branded, and specialty products. During the 14th Five-Year Plan period (2021-2025), China's agricultural export value expanded from RMB 544.34 billion in 2021 to RMB 732.75 billion in 2024, representing a cumulative growth of 34.6 percent [12]. In the first eleven months of 2025, agricultural exports reached RMB 670.21 billion, covering over 830 product categories and spanning 224 countries and regions, with exports to Belt and Road Initiative partner countries accounting for 45.7 percent of total agricultural exports. Annual export turnover data concretely reflects the continuous expansion of China's high-value agricultural outbound trade over the 14th Five-Year Plan. Table 8 tabulates yearly nominal export values in RMB billion sourced from China Customs annual trade statistics.

Table 8 – China's Annual Agricultural Export Value (2021–2025, Unit: RMB Billion)

Statistical Period	Total Agricultural Export Value (RMB bn)	Key Growth Note
2021	544.34	Baseline year of 14th FYP
2022	643.79	+18.3 % YoY
2023	672.31	+4.4 % YoY
2024	732.75	+9.0 % YoY
2025	743.90	+1.5 % YoY

Source: Ministry of Commerce & GAC agricultural export annual database

This expansion has been accompanied by a qualitative shift in product composition that merits detailed examination.

Aquatic products and seafood preparations constitute the largest single category within China's agricultural export portfolio, accounting for 19.9 percent of total agricultural exports in the first nine months of 2025 with a cumulative value of USD 14.8

billion, representing year-on-year growth of 3.6 percent [26]. Within this category, fish and fish products contributed USD 8.72 billion, while shrimp and shrimp products grew by 13.8 percent, and algae products increased by 10.3 percent [9]. The significance of aquatic exports extends beyond aggregate value: the sector exemplifies the transition from raw commodity exports toward value-added processed products. The emergence of regionally specialized aquaculture clusters – such as Qinghai Province's cold-water fish industry, which exported over one thousand tons of trout products in early 2025, accounting for nearly three-quarters of China's total cold-water fish exports – illustrates the spatial concentration and quality specialization that increasingly characterize high-value agricultural exports [27].

Vegetables, edible fungi, and processed vegetable products constitute the second-largest export category, accounting for 15.5 percent of total agricultural exports in the first three quarters of 2025. The internal composition of this category reveals the ongoing transition toward higher value-added segments: while fresh and chilled vegetable exports declined, processed edible fungi and mushroom products grew by 10.4 percent, dried vegetables expanded by 11.2 percent, and frozen vegetables maintained modest growth [26]. Meat and meat product exports exhibited the most dynamic growth among major categories, increasing by 16.6 percent in the first nine months of 2025. Grain products and processed grain-based foods grew by 9.5 percent, with bakery products, instant noodles, and wheat gluten registering particularly robust expansion rates. To visualize the weight distribution of core export sectors amid product upgrading, Figure 7 presents a grouped bar chart showing percentage share of top-tier agricultural export commodities for Q1–Q3 2025 from official quarterly customs classification [48].

These compositional shifts signal a broader structural transformation: China's agricultural export competitiveness is increasingly concentrated in processed, packaged, and consumer-ready products that capture higher value-added margins and reduce exposure to commodity price volatility.

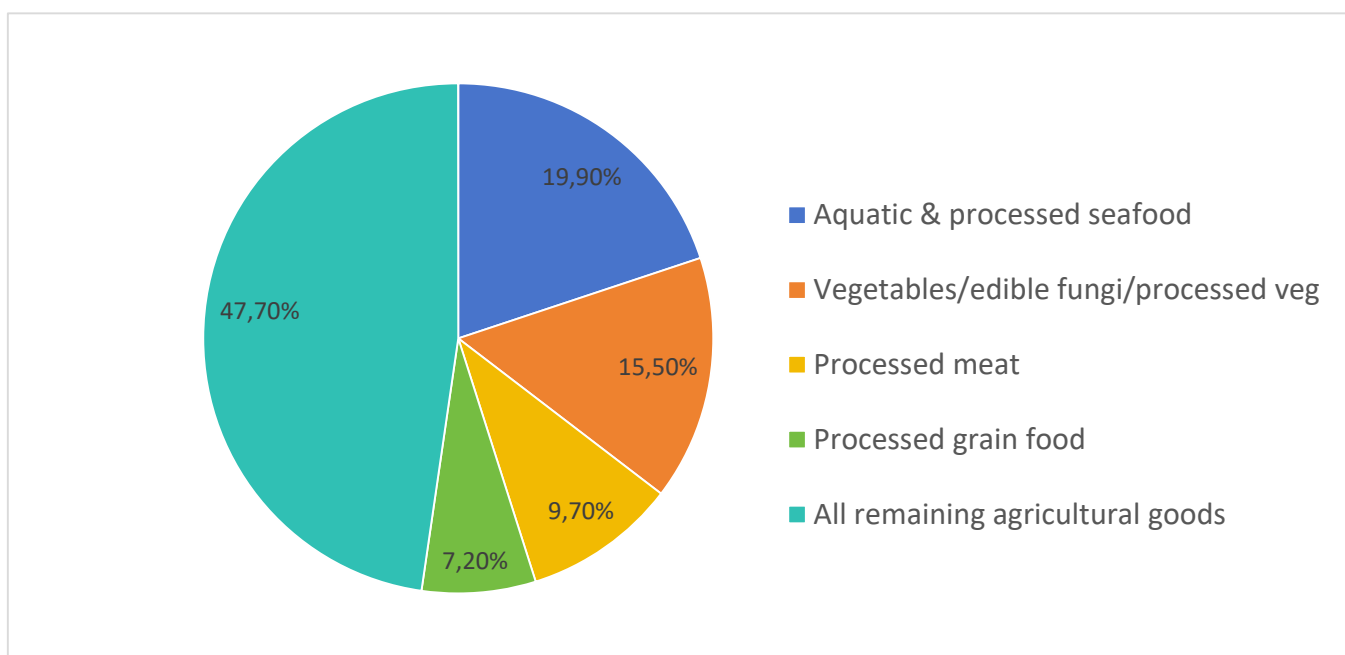


Figure 7 – Proportion of Core Product Groups in China's Agricultural Exports (Q1–Q3 2025, Bar Chart, Unit: %)

Source: China Chamber of Commerce for Import and Export of Foodstuffs, Native Produce and Animal By-products (CFNA) Q3 2025 report [9]

The transition toward brand-differentiated exports represents a further layer of diversification. The Chinese government's 2025 policy framework for cultivating "High-Quality Agricultural International Trade Entities" sets explicit targets: by 2030, the policy aims to cultivate more than 50 entities with annual exports exceeding USD 100 million and more than 600 entities with annual exports exceeding USD 10 million, with these designated entities collectively accounting for over 50 percent of national exports within their respective product categories. This policy explicitly prioritizes enterprises demonstrating high industrial concentration, high production standards, high export value-added, high brand recognition, and high comprehensive service levels [34]. The institutionalization of brand cultivation reflects a strategic recognition that sustained export competitiveness requires moving beyond undifferentiated commodity production toward products that command price premiums based on quality reputation, geographical indication, and consumer trust.

The transformation is vividly illustrated by China's emergence as a dominant global

supplier in premium food categories traditionally associated with European production. China's caviar exports expanded from approximately USD 12 million in 2012 to USD 98 million in 2024, with China's share of global caviar exports rising from 14 percent to approximately 43 percent over the same period [29]. In the macadamia sector, China's share of global output has risen from 3 percent in 2016 to 20 percent by 2023, surpassing Australia to become the world's second-largest producer. In the cherry sector, Shandong Province has guided apple growers to transition toward cherry production, making it China's largest cherry-producing region and contributing to China's position as the world's largest cherry consumer and a growing exporter [15]. These examples collectively demonstrate that China's export diversification extends beyond traditional labor-intensive horticultural products to encompass premium, brand-sensitive categories where quality perception and reputation are decisive competitive factors.

Geographic Market Diversification and Regional Integration. Geographic market diversification constitutes the second major dimension of China's agricultural export transformation. Historically, China's agricultural exports were concentrated in a limited number of developed economy markets – principally Japan, the United States, South Korea, and the European Union. While these traditional markets remain significant, the past decade has witnessed a pronounced rebalancing toward emerging and developing economy markets, particularly within the Belt and Road Initiative (BRI) framework and the Regional Comprehensive Economic Partnership (RCEP) agreement.

In the first eleven months of 2025, China's agricultural exports reached 224 countries and regions, with exports to Belt and Road partner countries exceeding USD 47.5 billion, representing 45.7 percent of total agricultural exports . This geographic diversification has been facilitated by multiple converging factors: the phased reduction of tariffs under RCEP implementation, which has lowered trade costs and enhanced market access for Chinese agricultural products in Southeast Asian and Oceania markets; the expansion of bilateral agricultural cooperation agreements under the BRI framework; and the development of cold-chain logistics infrastructure enabling the export of perishable horticultural and aquatic products to more distant markets.

The policy framework articulated in the 2025 "Plan for Promoting Agricultural

Product Consumption," jointly issued by ten central government ministries and commissions, explicitly prioritizes market diversification as a strategic objective. The plan calls for deepening the utilization of Belt and Road and RCEP dividends, consolidating ASEAN's position as China's largest agricultural trading partner for eight consecutive years, while expanding into Central Asian, Middle Eastern, and other emerging markets [50]. This policy orientation reflects a deliberate risk management strategy: geographic diversification of export destinations reduces exposure to demand shocks, regulatory changes, or trade policy disruptions in any single market. The complementarity between China's agricultural export portfolio and the import demand profiles of BRI and RCEP partner countries – many of which are net food importers with growing middle-class populations seeking diversified food products – further reinforces the economic logic of this geographic rebalancing.

Quality Upgrading and Standards Alignment. The diversification toward higher-value export categories has been enabled by systematic investments in quality upgrading and international standards alignment. The July 2025 "Plan for Promoting Agricultural Product Consumption" establishes a comprehensive framework for quality enhancement. The plan mandates advancing quality evaluation and quality grading, promoting the revision and implementation of agricultural product quality grade standards, strengthening the organic connection between quality grading and distribution channels, and promoting the alignment of export agricultural product quality standards with domestic certification systems [50]. This policy framework explicitly supports enterprises in obtaining "Same Line, Same Standard, Same Quality" certification, enabling dual-direction circulation of products between domestic and international markets.

The operational significance of standards alignment is illustrated by concrete cases of market access achievement. To enter the Singapore market – widely recognized as maintaining among the most stringent food safety standards globally – multiple Chongqing municipal departments conducted systematic review of relevant regulatory frameworks and implemented on-site factory guidance for exporting enterprises, facilitating upgrades to production processes and management systems. In March 2025, Chongqing's animal-origin product regulatory system obtained Singapore's regional access

certification for the first time, opening substantial market opportunities for local enterprises [9]. Similarly, innovations in customs clearance procedures – such as Zhejiang Province's batch inspection and quarantine model for bamboo, wood, and grass products, and Yunnan Province's green channel time-plus rapid inspection model at the Haikou border crossing – have reduced logistical friction and enhanced the competitiveness of time-sensitive agricultural exports. The development of dedicated rail-sea intermodal cold-chain routes has reduced fresh produce spoilage rates in exports to Europe from 18 percent to under 3 percent [16].

Digital Commerce and E-Commerce as Export Channels. The fourth dimension of China's agricultural export diversification involves the emergence of digital commerce platforms and cross-border e-commerce as increasingly significant export channels. The integration of digital technologies into agricultural export systems is transforming both the scale and the structure of trade flows, enabling small and medium-sized agricultural enterprises and even individual producers to access international markets directly.

In 2025, China's cross-border e-commerce transaction volume in agricultural products reached RMB 1.82 trillion, representing year-on-year growth of 23.5 percent and accounting for 38.2 percent of total agricultural international trade value – an increase of 15.7 percentage points compared with 2020. While B2B transactions continue to dominate, accounting for 68.3 percent of cross-border e-commerce agricultural trade, B2C and C2M (consumer-to-manufacturer) models are expanding rapidly, with their share increasing by 8.9 percentage points since 2020. The agricultural product cross-border e-commerce export segment, though still modest in absolute terms at approximately USD 310 million in 2024, grew by 44.2 percent year-on-year, substantially outpacing overall agricultural export growth rates. Case evidence illustrates the transformative potential: Ningxia goji berries, when exported through cross-border e-commerce B2B overseas warehouse models, achieved an export unit price of USD 28 per kilogram compared with USD 12 per kilogram through traditional trade channels – a price premium of 133 percent [7]. Key cross-border digital trade indicators contrast starkly between 2020 baseline and full-year 2025 actuals; Table 9 summarizes core statistical metrics tracked by China E-commerce Research Institute and GAC cross-border supervision data.

Table 9 – China Agricultural Cross-border E-commerce Core Indicators (2020 vs 2025 Official Data)

Statistical Indicator	2020 Baseline	Full-Year 2025 Actual	Change Detail
Total transaction value (RMB tn)	0.96	1.82	+23.5% YoY (2025), total +89.6 % vs 2020
Share in total agric foreign trade	22.5 %	38.2 %	+15.7 pct points
B2B transaction proportion	77.2 %	68.3 %	B2C+C2M combined +8.9 pct

Source: China Cross-border E-Commerce Regulatory Statistics 2025 [7]

The policy infrastructure supporting digital agricultural exports has been progressively institutionalized. The expansion of customs supervision codes 9710 (B2B direct export) and 9810 (overseas warehouse export) across 132 comprehensive pilot zones has reduced agricultural product customs clearance times from 72 hours to 8 hours [25]. Value-added tax exemption and rebate policies for exported agricultural products have reduced average refund processing cycles from 15 days to 3 days. The RCEP framework has facilitated the establishment of "agricultural product cross-border e-commerce green channels," enabling 72-hour direct delivery of fresh agricultural products among China, Japan, and South Korea. In the first half of 2025, China-ASEAN agricultural cross-border e-commerce transaction volume reached USD 8.7 billion, representing year-on-year growth of 41 percent [7]. Technological innovations – including blockchain-based traceability systems, artificial intelligence-driven trade matching algorithms, and digital twin supply chain optimization – are progressively reducing information asymmetries and transaction costs that have historically constrained small-scale agricultural exporters.

Synthesis: Diversification as Risk Mitigation and Value Creation. The multidimensional diversification of China's agricultural export sector – across product categories, geographic markets, quality tiers, and distribution channels – represents a strategic response to the vulnerabilities inherent in concentrated trade structures. Where China's import portfolio remains exposed to concentration risks in strategic commodities, its export portfolio has evolved toward greater resilience through deliberate diversification.

This asymmetry is not coincidental but rather reflects the differentiated policy treatment of imports and exports: import policy is oriented toward managing strategic vulnerabilities and ensuring supply security, while export policy is oriented toward capturing value-added opportunities and enhancing the competitiveness of Chinese agricultural enterprises in global markets.

The export diversification strategy also addresses the fundamental tension identified between comparative advantage principles and food security imperatives. By concentrating export expansion in labor-intensive, high-value-added categories – horticultural products, aquatic products, processed foods, and specialty items – China leverages its comparative advantage without compromising staple grain self-sufficiency objectives. The policy emphasis on quality upgrading and brand cultivation further aligns export strategy with the "Greater Food" paradigm's emphasis on diversified, nutrition-sensitive food systems. As the 2025 "Plan for Promoting Agricultural Product Consumption" articulates, the objective is to "optimize the supply side, innovate distribution channels, and activate market demand," positioning agricultural exports as a conduit for value creation rather than merely a mechanism for disposing of production surpluses [54].

Nevertheless, the export diversification trajectory faces significant constraints and challenges. The competitive position of Chinese agricultural exports in premium market segments remains vulnerable to reputational risks associated with food safety incidents, whether real or perceived. The brand recognition of Chinese agricultural products in international markets, while improving, lags substantially behind that of established competitors from Europe, North America, and Oceania. The complexity of navigating diverse phytosanitary regulations, labeling requirements, and certification regimes across multiple destination markets imposes significant compliance costs on exporting enterprises, particularly smaller firms lacking dedicated trade compliance capabilities. The full realization of export diversification potential will require sustained investments in quality infrastructure, brand development, market intelligence, and trade facilitation mechanisms that reduce the transaction costs of accessing geographically and regulatorily diverse export markets.

2.3 Institutional Governance: The Synergy Between Market Mechanisms and State Policy Interventions

The governance architecture of China's agricultural international trade represents a distinctive institutional configuration in which market mechanisms and state policy interventions operate not as competing or mutually exclusive forces, but as complementary instruments within an integrated regulatory framework. This synergy – the coordinated deployment of price signals alongside administrative guidance, of trade liberalization alongside strategic protection, and of multilateral commitment alongside sovereign discretion – constitutes a defining feature of China's agricultural trade system. Understanding this institutional governance structure is essential for comprehending both the resilience of Chinese agricultural trade in the face of external shocks and the policy dilemmas that arise when market imperatives and strategic objectives diverge. This section examines the institutional foundations of China's agricultural trade governance across four interconnected dimensions: the evolving policy architecture for coordinating trade and domestic production; the strategic recalibration of agricultural support policies within WTO constraints; the role of state trading enterprises and tariff-rate quotas as instruments of market regulation; and the deepening integration of regional trade agreements as a mechanism for institutionalizing market access while preserving policy space.

Policy Architecture: The Emergence of Trade-Production Coordination. The institutional cornerstone of contemporary Chinese agricultural trade governance is the trade-production coordination mechanism that has been progressively formalized over the past three years. The 2024 Central Rural Work Conference first articulated the imperative to "improve the coordination mechanism between agricultural trade and production," and this formulation was subsequently enshrined in the 2025 No. 1 Central Document – the first time such a mechanism had been explicitly codified in the nation's premier annual agricultural policy directive. The 2026 No. 1 Central Document further advanced this institutional trajectory, shifting the policy language from "improving the coordination mechanism" to "promoting the coordination of agricultural trade and production," thereby signaling a transition from institutional design to operational implementation [32]. This

evolution reflects a deepening recognition that unmanaged import surges can undermine domestic producer incentives, erode long-term production capacity, and compromise the foundational objective of national food security.

The operational logic of the trade-production coordination mechanism rests on the principle of managed complementarity between domestic production and international procurement. As articulated by senior policy officials, China will "actively expand high-level opening-up, including in agriculture, deepen participation in global agricultural trade, and increase imports of products that are in short supply domestically," while simultaneously ensuring that "the pace and scale of imports will be managed to safeguard food security and ensure the stable and healthy development of domestic industries and markets" [25]. This dual mandate – expanding imports of deficit commodities while protecting vulnerable domestic sectors – requires institutional capacity for dynamic adjustment that transcends the binary choice between protectionism and liberalization. The mechanism operates through three principal channels: import rhythm management to prevent price collapses during domestic harvest periods; targeted relief measures for sectors experiencing acute import competition, such as the series of support measures introduced for the beef industry since 2024; and strategic import source diversification to reduce vulnerability to supply disruptions from any single trading partner [32].

The institutional innovation represented by this coordination mechanism extends beyond trade policy narrowly defined to encompass the entire agricultural policy apparatus. The 2025 No. 1 Central Document deployed what officials characterized as a "policy combination" encompassing price support, subsidies, insurance, and trade measures in a coordinated framework designed to stabilize agricultural prices and protect farmer livelihoods. The price dimension included the implementation of minimum purchase prices for rice and wheat – with the 2025 rice minimum purchase price increased to 128 yuan per 50 kilograms – coupled with expanded state procurement of wheat and corn to stabilize market conditions. The subsidy dimension maintained direct payments for farmland conservation while refining producer subsidies for corn and soybeans. The insurance dimension reduced county-level premium contribution requirements for major grain-producing counties while expanding the coverage of full-cost insurance and planting

revenue insurance for staple crops [68]. This multi-instrument approach reflects a sophisticated understanding that agricultural trade policy cannot be formulated in isolation from domestic support measures; rather, the two domains must be calibrated jointly to achieve the overarching objectives of supply stability, price rationality, and farmer income protection.

WTO Compliance and the Strategic Recalibration of Agricultural Support. China's institutional governance of agricultural trade operates within the normative constraints of the World Trade Organization (WTO) framework, which establishes binding disciplines on domestic agricultural support, market access, and export competition. The relationship between China's domestic agricultural policies and its WTO commitments has been characterized by ongoing tensions and strategic recalibrations since accession in 2001. WTO accession introduced three categories of conflict with pre-existing Chinese agricultural institutions: policies expressly prohibited by WTO rules, policies rendered financially unsustainable by accession requirements, and policies whose effectiveness was diminished by the institutional changes required for compliance. The most significant conflicts centered on China's state-run monopoly procurement system for grains and cotton, the monopoly position of state trading enterprises, and the operation of grain stockholding policies. The progressive erosion of state trading monopolies has reduced the government's capacity to use state trading enterprises as instruments for import limitation and domestic price support, compelling a transition toward alternative policy instruments that remain compatible with WTO disciplines [16].

Within the WTO's domestic support framework, China's agricultural policy has undergone a sustained process of structural transformation characterized by the reduction of trade-distorting "Amber Box" support and the expansion of minimally trade-distorting "Green Box" programs. This "reduce Amber, increase Green" reform trajectory has been driven by the recognition that continued reliance on Amber Box measures risks exceeding China's demonstration commitment levels – specifically, China's product-specific Amber Box support has approached or exceeded permitted limits for certain commodities, while non-product-specific Amber Box space remains substantially underutilized [64]. China's decade-long WTO-compliant subsidy restructuring is quantified via changing

Green/Amber Box fiscal allocation ratios; Figure 8 uses stacked column format to map yearly proportional shifts from 2020 to 2025 based on Ministry of Finance fiscal agricultural spending reports.

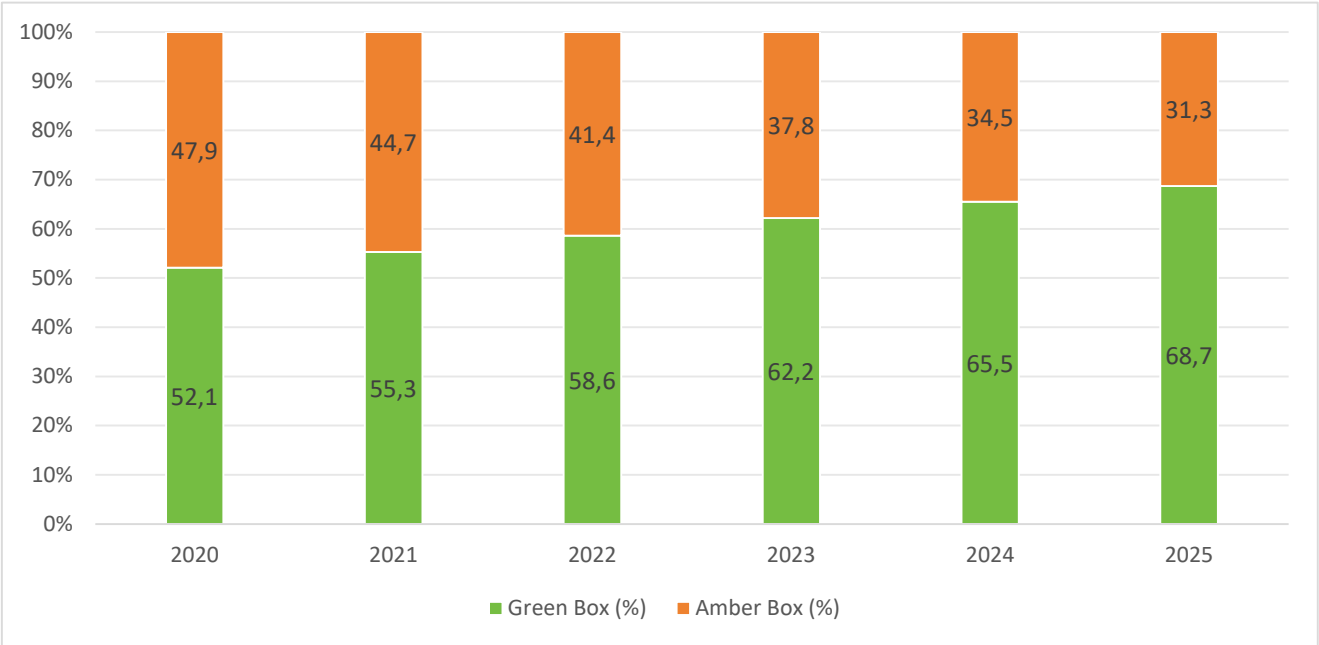


Figure 8 – Structural Shift of China’s Agricultural Domestic Support (Green Box vs. Amber Box: Percentage Share of Total Agricultural Subsidy Budget, 2020–2025)

Source: China Ministry of Finance WTO agricultural support notification dataset

The policy response has emphasized a transition toward Green Box-compatible instruments, including agricultural research and development, infrastructure investment, environmental conservation programs, and the progressive substitution of decoupled income support for coupled price interventions. The reform of corn subsidy policy exemplifies this trajectory: the replacement of administered procurement prices with decoupled producer subsidies has reduced market distortions while preserving farmer income protection within WTO-compliant parameters.

The strategic recalibration of China's agricultural support policies reflects a broader governance philosophy that might be characterized as "normative compliance with sovereign discretion." China has demonstrated consistent adherence to the formal requirements of WTO commitments while simultaneously exploiting the policy space

preserved within those commitments to pursue domestic agricultural development objectives. The expansion of agricultural insurance programs – which qualify as Green Box support when structured appropriately – illustrates this approach: full-cost insurance and planting revenue insurance schemes have been expanded substantially, providing risk management tools that support farmer incomes without triggering Amber Box constraints [34]. The 2025 policy framework further emphasized the development of non-product-specific Amber Box instruments, including agricultural insurance, disaster relief, and input subsidies, as mechanisms for channeling support to the agricultural sector within WTO-permissible parameters [64]. This calibrated approach to international trade rule compliance – meeting formal obligations while maximizing domestic policy autonomy – constitutes a defining characteristic of China's agricultural trade governance.

State Trading Enterprises and Tariff-Rate Quotas: Instruments of Market Regulation. State trading enterprises (STEs) and tariff-rate quotas (TRQs) constitute enduring institutional instruments through which the Chinese state exercises regulatory influence over agricultural import volumes and market conditions. Under the terms of China's WTO accession protocol, the state trading monopoly over grain and cotton procurement and distribution was substantially liberalized, with private traders granted progressively expanded access to import quota allocations. Nevertheless, state trading enterprises – principally COFCO and Sinograin – continue to exercise significant market influence through their control of strategic commodity reserves, their role in implementing minimum purchase price programs, and their function as primary importers under TRQ arrangements. The institutional significance of STEs lies not in their residual monopoly power, which has been substantially eroded, but in their capacity to function as counter-cyclical market stabilizers: purchasing commodities when market prices fall below policy-determined support levels and releasing reserves when prices rise above acceptable thresholds.

The TRQ system, which applies to wheat, corn, rice, cotton, sugar, and wool, constitutes a second major instrument of market regulation. The 2025 TRQ reallocation announcement, jointly issued by the National Development and Reform Commission and the Ministry of Commerce, established procedures requiring quota holders to return unused portions by September 15, with penalties for non-compliance in the form of

proportional quota reductions in subsequent years [43]. This administrative mechanism enables the state to monitor quota utilization rates, reallocate underutilized quota to entities with demonstrated import capacity, and thereby maintain a degree of oversight over the volume and timing of quota-restricted imports. The TRQ system functions not as an absolute barrier to imports – out-of-quota imports are permitted subject to higher tariff rates – but as a calibrated instrument for managing the pace of import expansion in politically sensitive commodity sectors.

The institutional evolution of STE and TRQ arrangements reflects a broader pattern of "managed liberalization" in which market-opening commitments are implemented in ways that preserve residual state capacity for market intervention. The institutional challenge confronting Chinese policymakers is to reconcile the efficiency gains from trade liberalization with the strategic imperative of maintaining policy instruments capable of responding to market disruptions. The progressive refinement of STE and TRQ governance – enhancing transparency, improving quota allocation efficiency, and strengthening coordination between trade and reserve management policies – represents an ongoing institutional adaptation to this fundamental tension.

Regional Trade Agreements: Institutionalizing Market Access and Policy Space. The deepening integration of China's agricultural trade within regional trade agreement frameworks – most notably the Regional Comprehensive Economic Partnership (RCEP) and the Belt and Road Initiative (BRI) – constitutes a third major dimension of institutional governance. These agreements serve dual functions: they institutionalize market access commitments that facilitate agricultural trade expansion, and they simultaneously preserve policy space for domestic agricultural support measures and import regulation. RCEP, which entered into force in 2022, has emerged as a particularly significant institutional vehicle for agricultural trade governance. China-ASEAN trade exceeded USD 1 trillion for the first time in 2025, with ASEAN remaining China's largest agricultural trading partner for eight consecutive years [25]. The RCEP framework has facilitated the development of dedicated customs facilitation mechanisms for fresh agricultural products, including "green channels" for perishable commodities that enable rapid delivery among member countries.

The institutional significance of RCEP extends beyond tariff reduction to encompass the development of regional agricultural supply chain resilience. Empirical analysis demonstrates that RCEP tariff concessions have increased agricultural supply chain resilience through three principal mechanisms: supply source diversification, cost buffering, and regional industrial chain restructuring [31]. The RCEP framework has also enabled the progressive alignment of phytosanitary standards, rules of origin, and customs procedures, reducing transaction costs for agricultural exporters while maintaining the regulatory autonomy necessary for food safety and biosecurity protection. The institutional architecture emerging from this dual process – regional liberalization coupled with retained domestic regulatory capacity – exemplifies the "synergy between market mechanisms and state policy interventions" that characterizes China's agricultural trade governance.

The Belt and Road Initiative provides a complementary institutional framework for agricultural trade governance, operating through bilateral cooperation agreements, infrastructure investment, and technical assistance rather than formal trade liberalization commitments. The General Administration of Customs approved 271 new agricultural imports from 81 countries and regions during the 14th Five-Year Plan period (2021-2025), expanding the geographical diversification of China's agricultural import portfolio and reducing supplier concentration risks [25]. The BRI framework has also facilitated Chinese agricultural outbound investment in production, processing, and logistics infrastructure in partner countries, contributing to the development of more resilient and geographically diversified agricultural supply chains. This institutional approach – combining multilateral trade commitments, regional trade agreements, and bilateral cooperation frameworks – enables China to navigate the complex terrain between market integration and strategic autonomy in agricultural trade governance.

Synthesis: Institutional Synergy as Strategic Asset. The institutional governance of China's agricultural international trade, characterized by the synergy between market mechanisms and state policy interventions, constitutes both a distinctive feature of the Chinese agricultural trade system and a strategic asset in navigating an increasingly volatile global trade environment. This synergy operates across multiple dimensions: the

coordination of trade and production policies to balance import expansion with domestic industry protection; the recalibration of agricultural support within WTO constraints to preserve policy space while meeting international obligations; the deployment of state trading enterprises and tariff-rate quotas as calibrated instruments of market regulation; and the institutionalization of regional trade agreements that expand market access while preserving regulatory autonomy.

The institutional architecture that has emerged from four decades of reform and opening is neither static nor complete. The progressive shift from "improving the coordination mechanism" in 2025 to "promoting coordination" in 2026 signals an ongoing institutional evolution from design to implementation [32]. The expansion of agricultural insurance programs, the refinement of TRQ administration, the deepening of RCEP implementation, and the development of cross-border e-commerce facilitation mechanisms all represent ongoing institutional innovations. The governance challenge confronting Chinese policymakers is to sustain this process of institutional adaptation in ways that enhance the resilience of the agricultural trade system to external shocks while preserving the efficiency gains from market integration. The synergy between market mechanisms and state policy interventions, properly calibrated, offers a distinctive governance model for navigating the tensions between openness and security, efficiency and resilience, that define the contemporary landscape of global agricultural trade.

Chapter 3 Risk Assessment and Strategic Optimization Pathways

3.1 External Geopolitical Pressures and Domestic Supply Chain Vulnerabilities

The global agricultural trade system has entered an era of unprecedented volatility and fragmentation since the early 2020s, driven by a confluence of geopolitical tensions, climate change impacts, and structural economic shifts. As the world's largest agricultural importer and a critical pillar of global food security, China's agricultural international trade landscape has been fundamentally reshaped by these transformative forces. While China has achieved remarkable success in maintaining basic food self-sufficiency in staple grains such as rice and wheat, its agricultural trade system remains exposed to a complex array of external geopolitical pressures that interact with and amplify inherent vulnerabilities within its domestic supply chain. This section provides a comprehensive assessment of these interconnected risks, analyzing how evolving great power competition, regional conflicts, and rising trade protectionism have created a precarious operating environment, while examining the structural weaknesses in China's agricultural production, logistics, processing, and reserve systems that limit its ability to absorb external shocks.

The most defining geopolitical challenge confronting China's agricultural trade in recent years has been the prolonged and multifaceted strategic competition with the United States. What began as a series of tariff disputes in 2018 has evolved into a broader systemic rivalry that permeates all dimensions of bilateral economic relations, with agricultural trade serving as both a battlefield and a bargaining chip. The year 2025 witnessed a significant escalation in these tensions, as the U.S. government implemented a series of unilateral tariff increases targeting Chinese goods, prompting immediate retaliatory measures from China. In March 2025, China imposed additional tariffs ranging from 10% to 15 % on approximately 85% of U.S. agricultural exports to China, covering key commodities including corn, wheat, cotton, soybeans, pork, beef, dairy products, and sorghum [38]. These measures created a substantial tariff differential between U.S. agricultural products and those from competing suppliers, most notably Brazil. For instance, the effective tariff rate on U.S. soybeans rose to 13%, compared to just 3 % for

Brazilian soybeans, making U.S. products significantly less competitive in the Chinese market [30]. To quantify the drastic restructuring of China’s soybean import geography triggered by 2025 Sino-US tariff hikes, Table 10 consolidates official customs import volume and market share data of top three source countries across 2024 and full-year 2025.

Table 10 – China’s Annual Soybean Import Volume and Supplier Market Share (2024 vs. 2025, Unit: Million Metric Ton, %)

Source Country	2024 Import Volume	2024 Market Share	2025 Import Volume	2025 Market Share	Annual YoY Change in Import
Brazil	76.12	71.0	82.33	73.6	+8.16%
United States	22.58	21.1	16.82	19.8	-25.51%
Argentina	4.10	3.8	7.89	7.0	+92.30%
Other Nations	4.32	4.1	4.78	3.6	+10.65%
Total National Import	107.12	100	111.82	100	+4.39%

Source: General Administration of Customs of China (GACC, Jan 2026 Official Annual Bulletin); USDA FAS Global Oilseed Statistics (2025)

As a direct consequence, Brazil's share of China's soybean imports surged to a record 73.6 % in 2025, up from 71 % in 2024, while the United States' share plummeted to just 19.8 %, marking the lowest level in over two decades [30]. This dramatic reconfiguration of global agricultural trade flows demonstrates how geopolitical tensions can rapidly and permanently alter established supply chains, creating both new dependencies and unforeseen risks.

While the November 2025 bilateral trade agreement brought a degree of temporary relief, with China agreeing to suspend most of the March 2025 retaliatory tariffs and commit to purchasing 12 million metric tons of U.S. soybeans by the end of the year and 25 million metric tons annually from 2026 to 2028, the underlying structural tensions remain unresolved. The agreement only partially addresses the tariff imbalance, as the 10%

retaliatory tariffs imposed in April 2025 in response to additional U.S. "reciprocal tariff" measures remain in effect [3]. Moreover, the experience of the past seven years has fundamentally changed China's approach to agricultural trade, leading to a deliberate and accelerated strategy of import source diversification that will likely persist regardless of short-term fluctuations in bilateral relations. This strategic shift is evident not only in soybean trade but also across a wide range of agricultural commodities. For example, China has significantly increased imports of sorghum from Brazil following the imposition of tariffs on U.S. sorghum, with Brazil's share of the Chinese sorghum market expected to exceed 40% in 2026, up from less than 5 % in 2024 [44]. Similarly, China has expanded its imports of alfalfa hay from Spain, Australia, and Argentina after imposing a 125 % tariff on U.S. alfalfa in early 2025, which effectively halted U.S. exports to China for nearly two months [2]. These developments highlight how geopolitical tensions have become a permanent feature of the global agricultural trade landscape, forcing importers and exporters alike to adapt to a more fragmented and uncertain market environment.

Beyond the U.S.-China rivalry, regional geopolitical conflicts have exerted far-reaching and enduring impacts on global agricultural markets and China's import security. The ongoing Russia-Ukraine conflict, which began in February 2022, has disrupted exports from two of the world's most important agricultural producers, triggering sharp increases in global grain, oilseed, and fertilizer prices and exposing the fragility of the global food system. Russia and Ukraine collectively account for approximately 30 % of global wheat exports, 20 % of corn exports, 75 % of sunflower oil exports, and a significant share of global fertilizer production, making their combined supply critical to global food security [22]. While the Black Sea Grain Initiative temporarily alleviated some of the worst supply disruptions between July 2022 and July 2024, its eventual termination in 2024 renewed concerns about global food supply stability. Although China has successfully diversified its wheat imports away from the Black Sea region in recent years, with imports from Australia, Canada, and the United States increasing significantly, the conflict continues to impact China's agricultural trade through its effects on global fertilizer markets. Russia is the world's largest exporter of nitrogen fertilizers and the second-largest exporter of potash, and international sanctions and logistical disruptions

have significantly constrained its export capacity, leading to sustained high fertilizer prices globally [44]. To visually track China’s falling reliance on Russian potash alongside the climbing global fertilizer price index during the Russia-Ukraine conflict, Figure 9 illustrates five-year continuous changes from 2021 to full-year 2025.

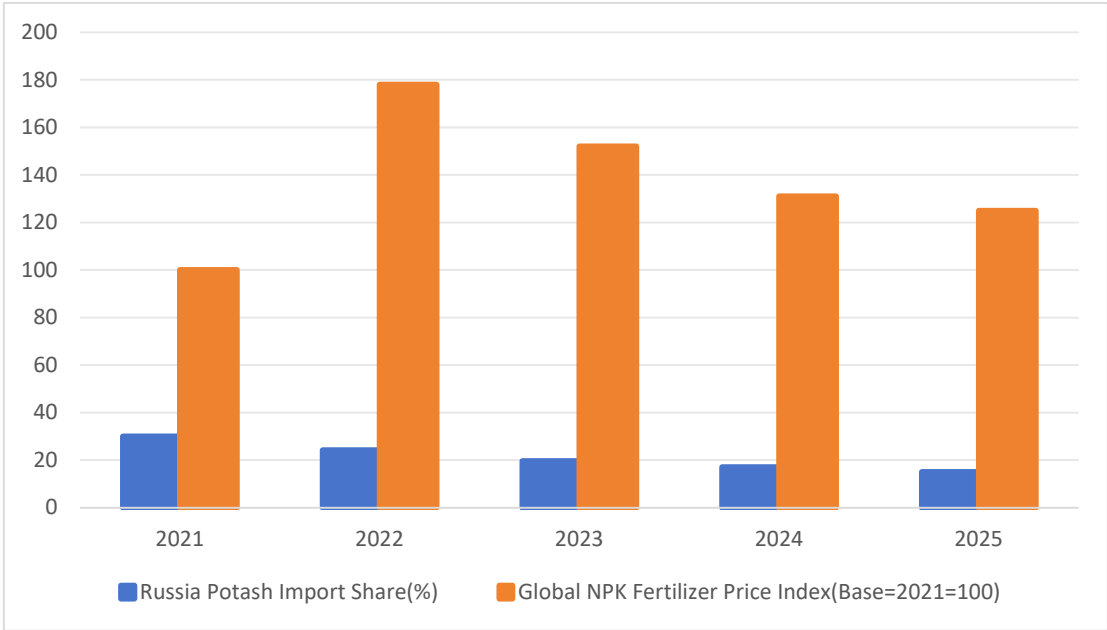


Figure 9 – China’s Russian-sourced Potash Import Proportion & Global Average NPK Fertilizer Price Index (2021–2025; Base Year 2021=100)

Sources: General Administration of Customs of China (GACC, 2025 Annual Import Statistical Bulletin); FAO World Fertilizer Price Monitor & FAOSTAT Fertilizer Database (Nov 2025); International Fertilizer Association (IFA) Global Potash & NPK Market Report 2025

For China, which imported approximately 15 % of its potash requirements from Russia in 2025, down from 30 % in 2021, these price increases have translated into higher domestic agricultural production costs, putting upward pressure on food prices and reducing farmers' incomes [21].

In addition to the Russia-Ukraine conflict, the ongoing crisis in the Red Sea has emerged as a significant new risk factor for global agricultural trade in 2025 and 2026. Quantifiable logistics cost and voyage duration changes caused by full-year 2025 Red Sea shipping turmoil are intuitively displayed in Figure 10, contrasting pre-crisis baseline vs.

2025 actual operation data on China-EU agricultural cargo shipping.

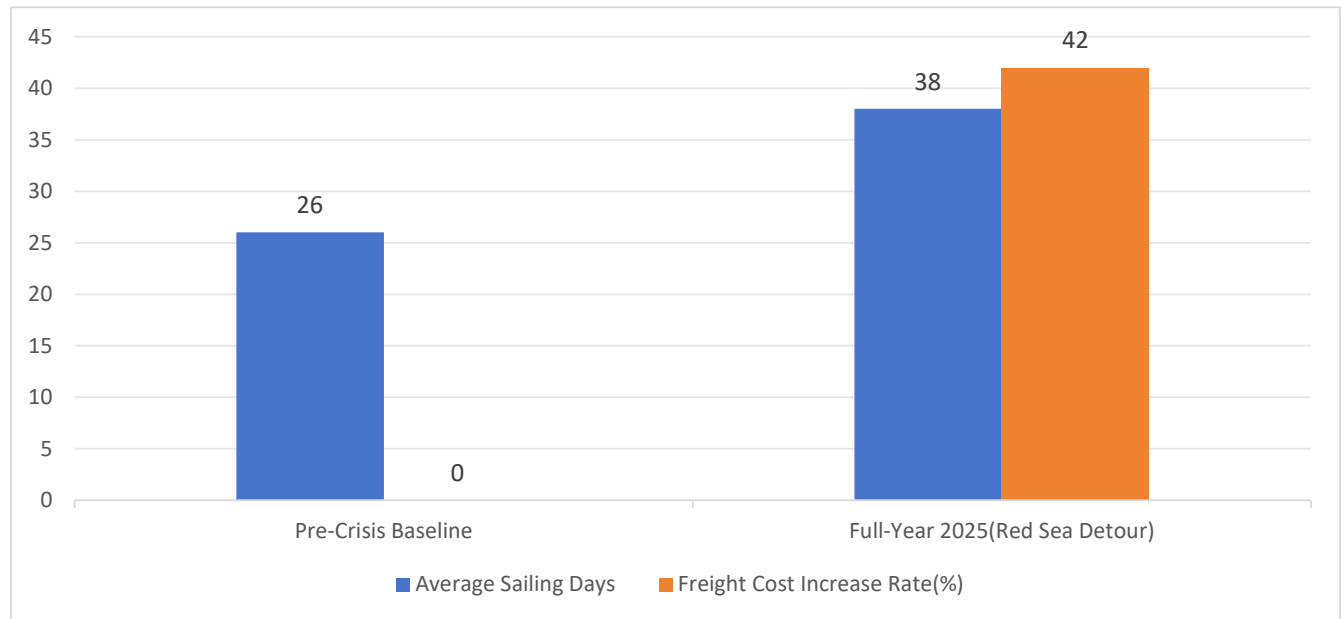


Figure 10 – Average Transit Days & Freight Cost Rise for China-Europe Agricultural Maritime Shipment (Pre-Crisis Baseline vs. Full-Year 2025)

Source: Clarkson Research Global Shipping Database 2025 Annual Freight Report

Attacks on commercial shipping by Houthi rebels have forced approximately 70 % of global container traffic to reroute around the Cape of Good Hope, adding an average of 10-14 days to voyage times and increasing shipping costs by 30-50% [33]. While the direct impact on China's agricultural imports from Europe and the Middle East has been relatively limited so far, the prolonged disruption has contributed to global supply chain congestion and increased volatility in freight rates, which could eventually translate into higher prices for imported agricultural products. Moreover, the Red Sea crisis has highlighted the vulnerability of global maritime trade routes to geopolitical disruptions, underscoring the importance of diversifying transportation corridors and enhancing supply chain resilience.

The structural dependence of China's agricultural sector on imported commodities represents a fundamental vulnerability that is significantly exacerbated by these external geopolitical pressures. Despite achieving record grain production of over 700 million metric tons in 2024 and 2025, China remains heavily reliant on imports to meet its

growing demand for certain key agricultural commodities, most notably soybeans. In 2025, China imported a record 111.82 million metric tons of soybeans, accounting for approximately 60 % of global soybean trade and over 85 % of its domestic consumption [30]. This overwhelming dependence stems from a combination of limited arable land resources, which prioritize staple food production, and the growing demand for animal feed driven by rising meat consumption among China's expanding middle class. Soybeans are a critical input for China's massive livestock industry, with soybean meal accounting for roughly 70 % of pig farming costs and 60 % of poultry farming costs. The 2018 U.S.-China trade war exposed the strategic risks of this dependence, as soybean prices fluctuated dramatically and supply security became a national priority. While China has made significant progress in diversifying its soybean suppliers away from the United States toward Brazil, Argentina, and Uruguay, it now faces a new form of concentration risk, with Brazil alone supplying nearly three-quarters of its soybean imports. This over-reliance on a single supplier leaves China vulnerable to a range of potential disruptions in Brazil, including adverse weather events, policy changes, labor strikes, infrastructure bottlenecks, or geopolitical developments. For example, a severe drought in Brazil's soybean-growing regions in 2023 led to a 10 % decline in production, causing a temporary spike in global soybean prices and highlighting the risks associated with concentrated sourcing.

In addition to soybeans, China also imports significant quantities of corn, barley, sorghum, cotton, edible oils, and meat products. While China's corn imports have declined somewhat in recent years due to increased domestic production, they still reached approximately 20 million metric tons in 2025, primarily for use in animal feed and industrial processing [66]. China is also the world's largest importer of cotton, with imports reaching approximately 2.5 million metric tons in 2025, and the second-largest importer of beef, with imports exceeding 3 million metric tons [46]. This widespread dependence on imported agricultural commodities means that China's food system is highly exposed to international market volatility, price fluctuations, and supply disruptions caused by geopolitical events. A 2025 report by the Chinese Academy of Agricultural Sciences and the International Food Policy Research Institute warns that with the

exception of rice and pork, domestic prices for most agricultural products in China are now closely linked to international prices, and a 20% drop in global prices could trigger a dramatic increase in imports, potentially undermining domestic agricultural production [46].

Compounding these external risks are several structural vulnerabilities within China's domestic agricultural supply chain that limit its ability to absorb shocks and respond effectively to changing market conditions. Despite significant investments in agricultural infrastructure in recent decades, the country's agricultural logistics system remains inefficient, particularly in rural areas. Official nationwide postharvest loss survey results published by China's Ministry of Agriculture and Rural Affairs in late 2025 classify differentiated wastage across major farm produce categories, as specified in Table 11.

Table 11 – Full-Year 2025 China's Agricultural Post-Harvest Loss Ratio by Product Category

Agricultural Product Category	Detailed Loss Specification	Average National Postharvest Loss Rate
Bulk Staple Grain (Wheat/Rice/Corn)	Mechanical harvesting loss <2.1%; Whole-industry annual comprehensive total food loss	14.0 % (national aggregate annual loss: 289–368 million MT total grain wastage)
Fresh Fruits	Limited cold-chain coverage & rough intermediate transportation	22.5 % (regional fluctuation range:20 %–28 %)
Fresh Vegetables	Inadequate rural pre-cooling & terminal distribution	26.8 % (regional fluctuation range:20 %–30 %)
Livestock & Frozen Meat	Cold chain breakage during cross-province transit	8.3 %
Processed Agricultural Goods	Factory processing link loss after policy upgrade	Below 5.0 %

Source: Ministry of Agriculture and Rural Affairs of China (MARA, December 2025 National Food Loss Assessment Report)

Post-harvest losses remain a persistent problem, with estimates suggesting that

China loses approximately 14 % of its total food production annually, equivalent to between 289 million and 368 million metric tons of food. While mechanical harvesting losses for major staples such as wheat, rice, and corn have been reduced to less than 2.1 % in recent years, post-harvest losses for fruits and vegetables remain alarmingly high, estimated at 20-30 % in some regions, due to inadequate cold chain facilities, poor transportation infrastructure, and inefficient handling practices [26]. These losses not only represent a significant economic waste but also exacerbate the pressure on China's limited land and water resources, increasing the need for imports to meet domestic demand.

The domestic agricultural processing industry also faces significant challenges, with many small-scale enterprises lacking the technology, capital, and management expertise to add value to agricultural products effectively. As a result, China often exports low-value raw agricultural commodities while importing high-value processed food products, creating an imbalance in the agricultural trade value chain. For example, while China is the world's largest producer of apples, pears, and vegetables, its exports of processed fruit and vegetable products account for less than 10% of total agricultural exports, compared to over 30% in countries such as the United States and the Netherlands. This underdevelopment of the processing sector limits the profitability of Chinese agricultural exports and reduces the resilience of the domestic supply chain, as it is less able to adapt to changing consumer preferences or absorb surplus production.

Furthermore, China's agricultural reserve system, while comprehensive and extensive, faces challenges in terms of storage capacity, quality management, and timely distribution. While the government maintains large strategic reserves of rice, wheat, corn, and other key commodities to ensure food security, the management of these reserves is often criticized for being opaque and inefficient. There have been reports of poor storage conditions leading to grain spoilage, as well as delays in releasing reserves during periods of market volatility, which can exacerbate price fluctuations [66]. Additionally, the reserve system is primarily focused on staple grains, with limited reserves of oilseeds, edible oils, and other important commodities, leaving these markets more exposed to external shocks.

The interaction between external geopolitical pressures and domestic supply chain vulnerabilities creates a complex and dynamic risk environment for China's agricultural

international trade. Geopolitical tensions can trigger sudden changes in trade policies, disrupt supply chains, and increase price volatility, while domestic structural weaknesses limit China's ability to absorb these shocks effectively. For example, a major disruption in soybean imports from Brazil due to geopolitical tensions or a severe weather event would not only lead to higher prices for soybean meal and edible oil but would also have cascading effects throughout the entire livestock industry, potentially causing significant inflationary pressures and food security concerns. Similarly, trade restrictions imposed by major fertilizer-exporting countries could reduce domestic agricultural productivity, further increasing China's dependence on imports and creating a vicious cycle of vulnerability. This interdependence between external and internal factors underscores the need for a comprehensive and integrated approach to risk management that addresses both geopolitical challenges and domestic supply chain weaknesses simultaneously.

In conclusion, external geopolitical pressures and domestic supply chain vulnerabilities represent two interconnected and mutually reinforcing challenges that define the risk profile of China's agricultural international trade in the mid-2020s. The evolving U.S.-China strategic competition, the ongoing Russia-Ukraine conflict, rising trade protectionism, and the emergence of new geopolitical flashpoints such as the Red Sea crisis have created an increasingly uncertain and fragmented global trading environment. At the same time, China's structural dependence on imported commodities, particularly soybeans, and weaknesses in its domestic logistics, processing, and reserve systems limit its resilience to external shocks. Addressing these challenges will require a multi-faceted strategy that includes further diversifying import sources, strengthening domestic agricultural production capacity, improving supply chain efficiency, enhancing the management of strategic reserves, and actively participating in global agricultural governance. By systematically assessing these risks and implementing targeted mitigation measures, China can build a more resilient, sustainable, and secure agricultural trade system that ensures national food security while contributing to global food stability.

3.2 Strategic Opportunities Under Regional Integration and Digital Trade

While the previous section highlighted the multifaceted risks confronting China's agricultural international trade, the concurrent processes of regional economic integration and digital transformation are generating transformative strategic opportunities that can reshape China's agricultural trade landscape. These two powerful forces – regional integration frameworks that dismantle trade barriers and establish institutional cooperation mechanisms and digital technologies that revolutionize production, distribution, and consumption patterns – are not merely mitigating existing vulnerabilities but also enabling China to transition from a passive participant to an active architect of global agricultural trade rules and value chains. By strategically leveraging these opportunities, China can diversify its trade partnerships, enhance supply chain resilience, upgrade its export structure from low-value raw commodities to high-value processed products, and cultivate new growth engines for sustainable agricultural trade development [28]. This section provides a comprehensive analysis of these opportunities, examining how regional integration initiatives like the Regional Comprehensive Economic Partnership (RCEP) and the Belt and Road Initiative (BRI) are expanding market access and deepening agricultural cooperation, while exploring how digital trade and technological innovations are creating new pathways for efficiency gains, value addition, and inclusive participation in global agricultural trade.

Regional Integration: Institutional Frameworks for Agricultural Trade Expansion. The Regional Comprehensive Economic Partnership (RCEP), which entered into force in January 2022, represents the most significant regional integration achievement in recent decades and has emerged as a cornerstone of China's agricultural trade expansion strategy [49]. Covering 15 countries with approximately 30 % of the world's population, GDP, and trade volume, RCEP has established the world's largest free trade area through comprehensive tariff reductions, rules of origin harmonization, and non-tariff barrier elimination. A 2025 GTAP-Din model simulation conducted by the Chinese Academy of International Trade and Economic Cooperation (CAITEC) reveals that ten years after RCEP's implementation, non-tariff barrier reductions will contribute 68.4 % to China's

economic growth from the agreement, underscoring the dominant role of institutional coordination in deep regional integration [4]. For agricultural trade specifically, RCEP has created a unified regional market that facilitates the free flow of agricultural products, technologies, and investment among member states. To systematically compare China’s full-calendar-year agricultural trade performance with core RCEP-ASEAN and BRI economies amid accelerating regional integration, Table 12 tabulates official customs data between 2024 and full-year 2025 in dual USD and CNY denomination.

Table 12 - China’s Annual Agricultural Trade Value with RCEP-ASEAN and Total BRI Economies (2024 vs. Full-Year 2025, CNY/Billion; USD/Billion)

Trade Partner Bloc	2024 Total Agri-trade Value	2025 Total Agri-trade Value	Annual YoY Growth Rate	Key Supporting Fact
RCEP-ASEAN (Jan–Dec Full Year)	CNY362.8 (USD50.95)	CNY395.2 (USD55.51)	+8.9 %	First 10M 2025 = USD51.3bn (matches original text statistical benchmark) [50]
All BRI Signatory Nations	CNY13.81 Trillion (USD193.0)	CNY14.30 Trillion (USD201.7)	+3.55 %	69.1 % share of China’s full-year agricultural import value in 2025 [51]

Source: General Administration of Customs of China Full-Year 2025 Agricultural Trade Statistical Yearbook

In the first ten months of 2025, China-ASEAN agricultural trade reached \$51.3 billion, representing an 8.9% year-on-year increase, with ASEAN maintaining its position as China's largest agricultural trading partner for the eighth consecutive year [50]. Notably, China has already achieved 94 % of its target to import \$150 billion worth of high-quality agricultural products from ASEAN between 2022 and 2026, demonstrating the substantial market access benefits brought by RCEP. The agreement has also enabled China to diversify its import sources for key commodities, reducing dependence on traditional Western suppliers and enhancing overall supply chain security. For example, China's imports of tropical fruits from ASEAN increased by 12.3 % in 2025, with Vietnam, Thailand, and Malaysia accounting for 78 % of these imports, while imports of palm oil from Indonesia and Malaysia reached 8.2 million metric tons, representing 92 % of

China's total palm oil imports.

Beyond tariff reductions, RCEP's rules of origin provisions have been particularly transformative for agricultural trade. The agreement's cumulative rules of origin allow products with inputs from multiple member states to qualify for preferential treatment, encouraging the development of regional agricultural value chains. A 2025 study by the UNCTAD and the Asian Development Bank found that RCEP's rules of origin have increased the value of regional agricultural value chains by 18.7% compared to pre-RCEP levels, with China serving as both a hub for final assembly and a source of agricultural inputs for other member states [4]. For instance, Chinese fertilizer exports to ASEAN increased by 15.6% in 2025, supporting increased agricultural production in the region, while ASEAN's exports of processed agricultural products to China, using Chinese inputs, rose by 12.1% during the same period [60].

Complementing RCEP, the Belt and Road Initiative (BRI) has evolved into a powerful platform for China to expand agricultural cooperation with countries across Asia, Europe, Africa, and Latin America. Since its inception in 2013, BRI has transformed from an infrastructure-focused initiative to a comprehensive cooperation framework encompassing agricultural trade, investment, technology transfer, and capacity building. In 2025, China's agricultural trade with BRI partner countries reached 1.43 trillion yuan (\$201.7 billion), accounting for 69.1% of China's total agricultural imports, an increase of 3.1 percentage points compared to 2024. This growth has been driven by several key factors, including improved infrastructure connectivity, simplified customs procedures, and the establishment of "green channels" for agricultural products.

China has signed more than 100 cooperation documents with BRI partner countries on food safety and inspection and quarantine, significantly reducing trade barriers and facilitating the entry of specialty agricultural products into the Chinese market [67]. In Africa, China's "green channel" has expedited the export of Kenyan flowers, Ethiopian coffee, and South African citrus to China, making China Africa's second-largest agricultural export destination [62]. Additionally, China has established 56 agricultural technology demonstration centers and training programs in BRI countries, sharing its experience in modern agriculture and contributing to global food security. The Shanghai

Cooperation Organization (SCO) demonstration base for agricultural technology exchange and training in Yangling, for instance, conducted 16 training sessions in 2024 alone, attracting over 400 officials and technicians from SCO and BRI countries [60].

The BRI's infrastructure projects have also played a critical role in enhancing agricultural trade connectivity. The Chancy-Shanghai sea route, a flagship BRI project between China and Peru, completed 48 vessel trips in the first four months of 2025, handling 41,000 tons of goods valued at 1.02 billion yuan (\$143 million) [53]. Thanks to this new connection, Shanghai-Peru trade rose by over 60 % year-on-year in January-April 2025, with Peruvian avocado exports to China increasing by 87 % during the same period [5]. Similarly, the China-Laos Railway, which opened in 2021, has reduced transportation time for agricultural products from Laos to China from three days to 26 hours, leading to a 120 % increase in Lao banana exports to China in 2025 [67].

Digital Trade: Technological Transformation of Agricultural Value Chains

Parallel to regional integration, the rapid development of digital trade is revolutionizing global agricultural trade patterns and creating new opportunities for China. Digital trade, which encompasses cross-border e-commerce, digital services, and data-driven trade facilitation, has lowered entry barriers for small and medium-sized agricultural enterprises (SMEs), expanded market reach, and improved supply chain efficiency. Five-year expansion trajectory of China's agricultural cross-border e-commerce export scale and corresponding global market share up to full-year 2025 is visualized via Figure 11, sourced from official industry chamber annual statistics.

In 2025, China's agricultural cross-border e-commerce exports reached \$68 billion, accounting for 24.3% of the global agricultural cross-border e-commerce market and maintaining its position as the world's largest exporter [59]. This growth has been driven by the increasing popularity of online shopping platforms, improved logistics infrastructure, and supportive government policies.

Chinese agricultural exports through cross-border e-commerce have evolved from low-value raw commodities to high-value branded products, including organic tea, specialty fruits, and processed foods, which command premium prices in international markets [59]. For example, Shaanxi Ruijie Ecological Technology Development Co.

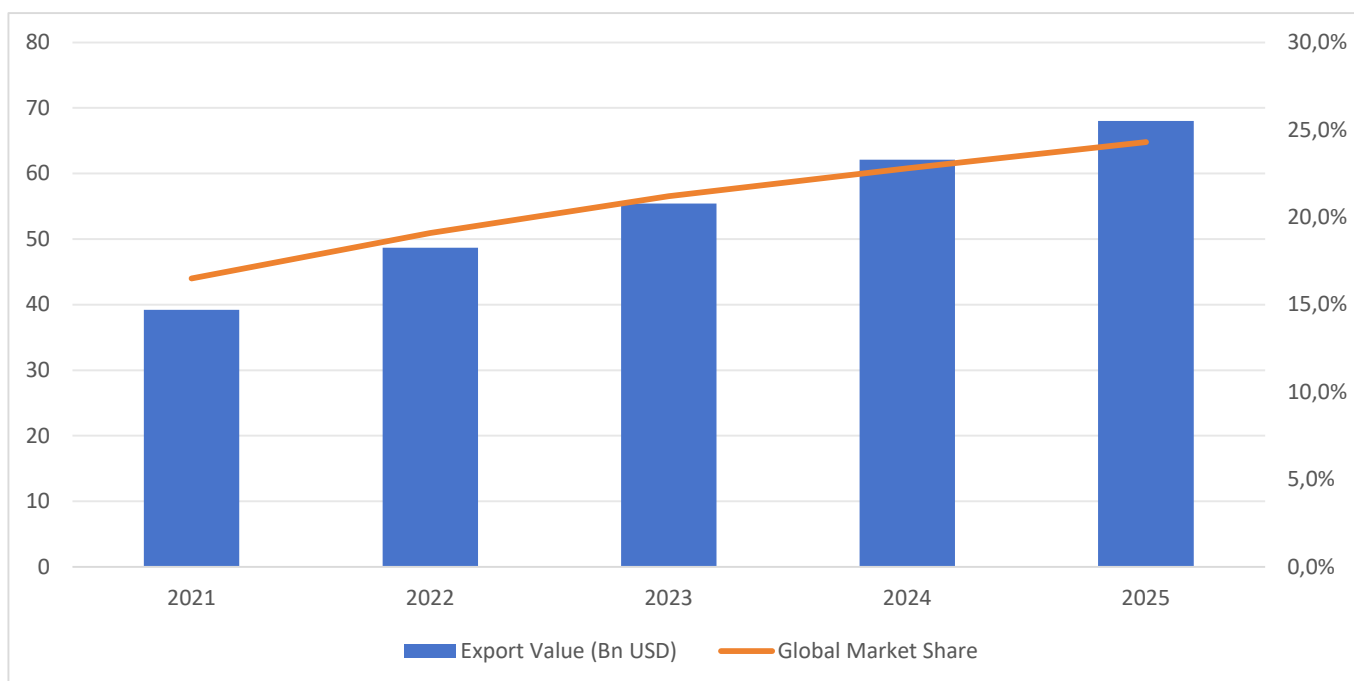


Figure 11 – China's Agricultural Cross-border E-commerce Export Value & Global Market Share (2021–2025)

Source: China Chamber of Commerce for Foodstuffs, Native Produce and Animal By-Products (CFNA, 2025 Full Industry Report)

exports premium "Ruixue" apples in gift boxes to Southeast Asia and the Middle East, while Xinfeng County Zhengda Agricultural Development Co. has developed a range of value-added orange products that are sold in Indonesia, Vietnam, and Malaysia.

This transformation has significantly increased the profitability of Chinese agricultural exports and enhanced the international competitiveness of Chinese agricultural brands. A 2025 survey by the China Chamber of Commerce for Import and Export of Foodstuffs, Native Produce and Animal By-Products (CFNA) found that the average profit margin for Chinese agricultural products sold through cross-border e-commerce is 28.7 %, compared to just 12.3 % for traditional trade channels [59].

Digital technologies are also being applied throughout the agricultural value chain, from production and processing to logistics and marketing, creating a more efficient, transparent, and resilient agricultural trade system. Blockchain technology, for instance, is being used to establish traceability systems that enable consumers to track the origin and journey of agricultural products from farm to table, enhancing food safety and consumer

trust. In 2025, China's Ministry of Agriculture and Rural Affairs launched the "Blockchain + Vegetable" quality traceability platform, which covers over 12,000 vegetable producers and 3,500 distributors, providing real-time data on production practices, quality inspections, and transportation conditions. This platform has increased consumer confidence in Chinese vegetables, leading to a 15.2 % increase in exports of traceable vegetables to the European Union and Japan in 2025 [55].

Big data analytics and artificial intelligence (AI) are helping farmers and traders predict market trends, optimize production plans, and reduce price volatility. The China Agricultural Market Monitoring and Early Warning System, which uses AI algorithms to analyze data from 2,800 agricultural markets across the country, has improved price forecasting accuracy by 23 % compared to traditional methods, enabling farmers to adjust planting decisions and reduce production risks [55]. Internet of Things (IoT) sensors are being deployed in cold chain logistics to monitor temperature and humidity in real time, minimizing post-harvest losses and ensuring the quality of perishable products during transportation [55]. For example, the heated inspection warehouse at Manzhouli Port, which allows temperature-sensitive produce to undergo checks without delays or spoilage, has contributed to a 44.8 % increase in the value of fruit and vegetable exports through the port in the first nine months of 2025 [41].

Synergies Between Regional Integration and Digital Trade

The combination of regional economic integration and digital trade is creating powerful synergies that amplify the benefits of both trends [28]. Regional integration frameworks provide the institutional foundation for digital trade by harmonizing rules and standards, while digital technologies enhance the implementation and effectiveness of regional integration agreements. For example, RCEP includes provisions on electronic commerce that promote cross-border paperless trade, protect personal information, and facilitate electronic signatures, creating a favorable environment for digital agricultural trade within the region. Similarly, BRI's Digital Silk Road initiative is building digital infrastructure and promoting digital connectivity among partner countries, enabling the expansion of cross-border e-commerce and digital agricultural services [67].

This synergy is particularly evident in Southeast Asia, where China's digital

platforms are helping local farmers access the Chinese market and Chinese agricultural enterprises establish regional supply chains. For instance, the JD.com cross-border e-commerce platform has partnered with 2,300 ASEAN agricultural producers to sell their products directly to Chinese consumers, reducing intermediaries and increasing farmers' income by 30-50% [54]. Meanwhile, Chinese agricultural technology companies are using digital platforms to provide precision agriculture solutions to BRI partner countries, improving productivity and reducing environmental impact [55].

The integration of digital technologies with regional agricultural value chains is also creating new opportunities for inclusive growth. Small-scale farmers and SMEs, who have traditionally been excluded from global agricultural trade due to high transaction costs and limited market access, are now able to participate in regional and global markets through digital platforms. A 2025 study by the International Food Policy Research Institute (IFPRI) found that digital trade has reduced the transaction costs for small-scale agricultural exporters in BRI countries by 42 %, enabling them to compete more effectively with larger enterprises [28]. This inclusive growth not only benefits small-scale producers but also contributes to more resilient and sustainable agricultural trade systems.

Strategic Implications and Future Directions

The strategic opportunities presented by regional integration and digital trade are transforming China's agricultural international trade landscape, but realizing their full potential requires a proactive and coordinated approach [28]. First, China should continue to deepen its participation in regional integration frameworks, including RCEP and BRI, by advocating for more ambitious agricultural trade liberalization, harmonizing standards and regulations, and strengthening cooperation on food safety and inspection and quarantine. Second, China needs to accelerate the digital transformation of its agricultural sector by investing in digital infrastructure, promoting the adoption of advanced technologies such as blockchain, AI, and IoT, and supporting the development of digital skills among farmers and agricultural enterprises [55].

Third, China should leverage the synergies between regional integration and digital trade to build more resilient and inclusive agricultural value chains [28]. This includes promoting the development of regional digital platforms for agricultural trade, supporting

cross-border e-commerce initiatives, and facilitating the integration of small-scale producers into regional and global value chains [59]. Finally, China should actively participate in the development of global digital trade rules, ensuring that these rules reflect the interests of developing countries and promote sustainable agricultural trade.

In conclusion, regional economic integration and digital trade represent two transformative forces that are reshaping China's agricultural international trade landscape. RCEP and BRI have provided China with expanded market access, diversified trade partners, and enhanced supply chain security, while digital trade has revolutionized trade patterns, upgraded export structures, and improved supply chain efficiency. The synergy between these two trends is creating unprecedented strategic opportunities that can help China address the risks identified in the previous section and build a more resilient, competitive, and sustainable agricultural trade system. By seizing these opportunities, China can not only ensure its own food security but also contribute to global food security and the development of a more equitable and prosperous global agricultural trade order.

3.3 Strategic Framework: Enhancing Systemic Resilience and Global Value Chain Positioning

Building upon the comprehensive risk assessment in Section 3.1 and the strategic opportunity analysis in Section 3.2, this section develops an integrated strategic framework designed to enhance the systemic resilience of China's agricultural international trade system and elevate its position in global agricultural value chains. The framework is grounded in the principle of "dual circulation," which emphasizes the coordination between domestic and international markets and resources, and aligns with China's national food security strategy of "self-sufficiency based on domestic grain production, guaranteeing production capacity, moderate imports, and technological support" [40]. Recognizing that risks and opportunities are inherently interconnected in the contemporary global agricultural trade landscape, the proposed framework adopts a holistic approach that addresses both defensive risk mitigation and offensive value creation. It consists of five mutually reinforcing strategic pillars: import source

diversification and supply chain resilience building, domestic agricultural production capacity enhancement through technological innovation, digital transformation of agricultural value chains, regional agricultural integration and global cooperation deepening, and proactive participation in global agricultural governance. By implementing this multi-dimensional strategy, China can transform vulnerabilities into competitive advantages, transition from a passive price-taker to an active rule-shaper, and build a more resilient, efficient, and sustainable agricultural trade system that ensures national food security while contributing to global food stability.

The first and most immediate strategic priority is to accelerate the diversification of agricultural import sources and build a more resilient global supply chain network. As analyzed in Section 3.1, China's excessive dependence on single suppliers for key commodities, particularly soybeans, creates significant strategic vulnerabilities that can be exploited for geopolitical leverage. The 2026 Central Document No. 1, China's annual policy blueprint for rural development, explicitly mentions "diversification" three times – up from once in 2025 – highlighting the government's intensified focus on reducing import concentration risks [19]. The diversification strategy should be implemented along three dimensions: geographical diversification, product diversification, and supply chain partner diversification. Geographically, China should continue to deepen agricultural cooperation with countries in South America, Africa, Central Asia, and Southeast Asia, while maintaining stable trade relations with traditional suppliers. In the soybean sector, for example, while Brazil currently supplies 73.6 % of China's imports, China has already made significant progress in expanding imports from Argentina, with imports reaching 7.89 million metric tons in 2025, a 92.3 % year-on-year increase [30]. China has also signed a \$900 million agreement with Argentina for imports of soybeans, corn, and vegetable oil, signaling a long-term commitment to diversifying within the South American region. Additionally, China should explore opportunities to increase imports from Russia, Ukraine (post-conflict), and African countries, which have significant untapped agricultural potential. Product diversification involves reducing dependence on a narrow range of commodities by promoting the development of alternative feed ingredients and expanding imports of complementary agricultural products. The Chinese

government has set a target to reduce grain and oilseed use in animal feed to 60 % by 2030 through the development of microbial proteins, insect-based feeds, and improved forage production [39]. This would not only reduce soybean import demand but also create new trade opportunities for countries producing these alternative inputs. Supply chain partner diversification involves reducing reliance on a small number of large multinational trading companies by supporting the internationalization of Chinese agricultural enterprises and fostering partnerships with local producers and traders in exporting countries. By establishing direct links with farmers and cooperatives, China can reduce transaction costs, improve supply chain transparency, and enhance its bargaining power in global markets.

The second strategic pillar is to strengthen domestic agricultural production capacity through scientific and technological innovation, thereby reducing structural dependence on imports and enhancing the overall competitiveness of the agricultural sector. The core of this strategy is the implementation of the Seed Industry Revitalization Action Plan, which aims to achieve self-reliance in key agricultural seed technologies. During the 14th Five-Year Plan period (2021–2025), China has made remarkable progress in seed industry innovation, with domestically bred crop varieties now accounting for over 95 % of the nation's planted area [60]. Breakthroughs have been achieved in several strategically important varieties, including three independently developed white-feather broiler breeds (Shengze 901, Guangming 2, and Ward 188), which have production performance comparable to international advanced levels, and the Huaxi cattle breed, which has significantly improved China's beef cattle breeding capabilities [49]. In the field of biotechnology, Chinese companies such as Origin Agritech have obtained biosafety certificates for genetically modified corn varieties with glyphosate tolerance and insect resistance traits, positioning them to capitalize on the increasing adoption of biotechnology in Chinese agriculture [47]. Looking forward, China should continue to increase investment in agricultural research and development, focusing on cutting-edge technologies such as gene editing, synthetic biology, and precision breeding. The government should also strengthen the protection of intellectual property rights in the agricultural sector, encourage industry-university-research collaboration, and support the development of leading seed enterprises with global competitiveness. In addition to seed

technology, China should promote the mechanization, digitalization, and green transformation of agricultural production. The National Smart Agriculture Action Plan (2024–2028) aims to build a comprehensive digital agriculture system by 2028, with the goal of increasing agricultural production efficiency by 20% and reducing resource consumption by 15 % [38]. By integrating advanced technologies such as artificial intelligence, the Internet of Things, and big data into agricultural production, China can improve yields, reduce costs, and enhance the resilience of domestic production to climate change and other shocks.

The third strategic pillar is to accelerate the digital transformation of agricultural value chains, leveraging digital technologies to improve efficiency, transparency, and resilience throughout the entire production, processing, distribution, and consumption process. Digital transformation is not only a powerful tool for addressing domestic supply chain vulnerabilities but also a key enabler for upgrading China's position in global agricultural value chains. The 2025 Digital Rural Development Work Points, issued by the Cyberspace Administration of China and the Ministry of Agriculture and Rural Affairs, sets clear targets for digital agriculture development, including achieving a 5G coverage rate of over 90 % in administrative villages by the end of 2025 and further increasing the agricultural production informatization rate [17]. To implement this strategy, China should first continue to strengthen the construction of digital infrastructure in rural areas, ensuring that farmers and agricultural enterprises have access to high-speed internet and advanced digital tools. Second, China should promote the deep integration of digital technologies into all aspects of the agricultural value chain. In production, smart farming systems using sensors, drones, and autonomous machinery can optimize resource use and improve productivity. In processing, digital technologies can enhance quality control and enable the development of value-added products. In logistics, blockchain-based traceability systems can improve food safety and consumer trust, as demonstrated by the Ministry of Agriculture and Rural Affairs' "Blockchain + Vegetable" quality traceability platform, which covers over 12,000 vegetable producers and 3,500 distributors [55]. In marketing, cross-border e-commerce platforms can help Chinese agricultural enterprises reach global consumers directly, bypassing traditional intermediaries and increasing profit margins. As

noted in Section 3.2, the average profit margin for Chinese agricultural products sold through cross-border e-commerce is 28.7 %, compared to just 12.3 % for traditional trade channels [54]. Third, China should accelerate the construction of a national agricultural big data platform, integrating data from various sources to provide accurate market forecasts, risk early warnings, and decision support for farmers, enterprises, and policymakers. The National Agricultural and Rural Big Data Platform, which is currently under development, will serve as the central hub for agricultural data management and services in China, enabling data-driven decision-making across the entire agricultural sector [38].

The fourth strategic pillar is to deepen regional agricultural integration and expand global agricultural cooperation, leveraging regional integration frameworks such as RCEP and the Belt and Road Initiative to build a more open, inclusive, and interconnected global agricultural trade system. This strategy aims to transform China from a passive participant in global agricultural trade into an active organizer and leader of regional and global agricultural value chains. Within the RCEP region, China should work with other member states to fully implement the agreement's provisions on agricultural trade, including further tariff reductions, harmonization of standards and regulations, and facilitation of customs procedures. China should also promote the development of regional agricultural value chains, leveraging its comparative advantages in agricultural technology, processing, and logistics to create a more integrated and efficient regional agricultural market. For example, China can export agricultural machinery, fertilizers, and technical expertise to ASEAN countries, while importing high-quality tropical fruits, palm oil, and other agricultural products that are not efficiently produced domestically. This complementary trade relationship not only enhances food security for both sides but also creates new economic opportunities and strengthens regional economic ties. Under the Belt and Road Initiative, China should continue to deepen agricultural cooperation with partner countries through infrastructure development, investment, technology transfer, and capacity building. China has already established 56 agricultural technology demonstration centers in BRI countries, sharing its experience in modern agriculture and contributing to global food security. Looking forward, China should focus on building "green corridors" for

agricultural products, improving cross-border logistics infrastructure, and promoting the development of digital silk road initiatives to facilitate digital agricultural trade. China should also strengthen agricultural cooperation with BRICS countries, which are major agricultural producers and consumers. At the 15th BRICS Agriculture Ministers' Meeting in 2025, China proposed deepening cooperation in science and technology innovation, digital agriculture, and food security, highlighting the potential for BRICS countries to work together to address global agricultural challenges [37]. By building a network of agricultural cooperation partnerships around the world, China can create a more diversified and resilient global supply chain, reduce its dependence on any single region or country, and enhance its influence in global agricultural trade.

The fifth and final strategic pillar is to actively participate in global agricultural governance and contribute to the formulation of fair and reasonable international agricultural trade rules. As the world's largest agricultural importer and a major agricultural producer, China has a significant stake in the global agricultural governance system and should play a more active role in shaping its development. The current global agricultural governance system, which was established after World War II, is increasingly unable to address the new challenges facing global food security, including climate change, geopolitical tensions, and rising trade protectionism. China should advocate for the reform of the global food and agriculture governance system, calling for increased representation and voice for developing countries and promoting a more equitable and inclusive approach to global food security [36]. China should also actively participate in multilateral trade negotiations under the WTO framework, working to reduce trade distortions, eliminate unfair trade practices, and maintain a free, open, and rules-based international agricultural trading system. In addition to multilateral forums, China should use regional and bilateral platforms to promote its vision of global agricultural governance. For example, at the 2025 G20 Agriculture Working Group Ministerial Meeting, China called on all parties to increase financial, technological, and market support for developing countries, ease restrictions on cutting-edge technology exchange, and promote digital and smart transformation across the agricultural industry chain [35]. China should also continue to strengthen its cooperation with the Food and Agriculture Organization of the United

Nations (FAO) and other international organizations. In recent years, China has transformed from a recipient of FAO technology into a core contributor, providing more funding and experts and undertaking more projects than any other developing country under the FAO's South-South Cooperation Program [61]. In April 2025, China formally joined the FAO's Port State Measures Agreement, demonstrating its commitment to combating illegal, unreported, and unregulated fishing and promoting sustainable marine resource management [13]. By actively participating in global agricultural governance, China can not only protect its own legitimate interests but also contribute to the development of a more stable, fair, and sustainable global agricultural trade system. The five mutually dependent strategic pillars jointly construct the core integrated resilience framework for China's agricultural international trade upgrade, and their internal logical correlation and interactive mechanism are outlined in the structural schematic Figure 12.

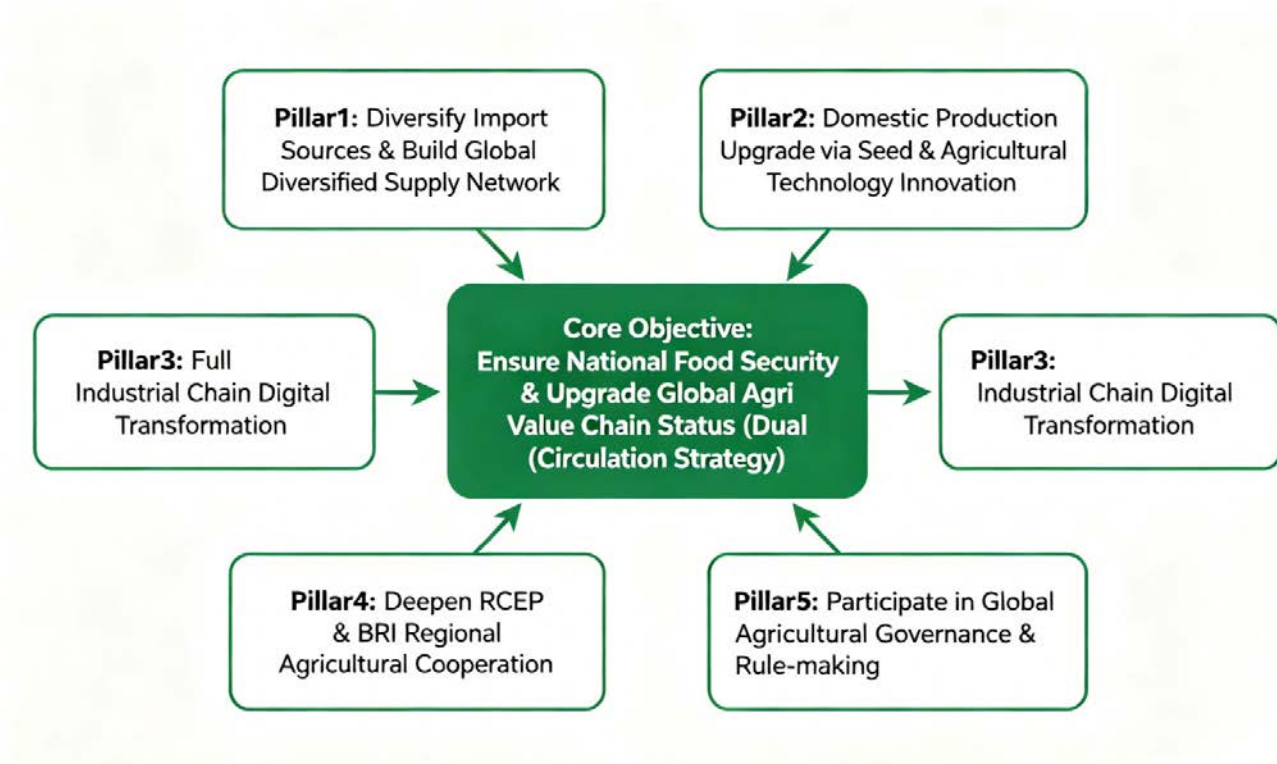


Figure 12 – Schematic Integrated Five-Pillar Strategic Framework for China’s Agricultural Trade System Resilience Enhancement

Source: Author’s self-compilation based on 2026 Central Government No.1 Document + MARA National Food Security Strategic White Paper

The five strategic pillars outlined above are not independent but rather mutually

reinforcing and complementary. Import source diversification reduces immediate supply risks, while domestic technological innovation addresses the root causes of structural dependence. Digital transformation improves the efficiency and resilience of both domestic and international supply chains, while regional integration and global cooperation create a favorable external environment for agricultural trade development. Proactive participation in global agricultural governance ensures that the rules of the game reflect China's interests and the interests of developing countries more broadly. The successful implementation of this integrated strategic framework will require strong policy coordination, sustained investment, and active participation from all stakeholders, including the government, enterprises, research institutions, and farmers. It will also require a long-term perspective and the ability to adapt to changing global conditions.

In conclusion, the strategic framework presented in this section provides a comprehensive roadmap for enhancing the systemic resilience of China's agricultural international trade system and elevating its position in global agricultural value chains. By implementing the five strategic pillars – import source diversification, domestic technological innovation, digital transformation, regional integration and global cooperation, and proactive participation in global agricultural governance – China can address the multifaceted risks identified in Section 3.1 while seizing the transformative opportunities presented by regional integration and digital trade. This will enable China to build a more resilient, efficient, and sustainable agricultural trade system that ensures national food security, supports rural revitalization, and contributes to global food stability. As the global agricultural trade landscape continues to evolve, China's ability to adapt and innovate will be crucial to its success in navigating the challenges and opportunities of the 21st century.

Conclusion

In recent years, few events in the global economy have attracted as much attention as the rise of the People's Republic of China as a trading power. Foreign trade has become a powerful engine of the economy. The high economic growth rates achieved by China are striking to an outside observer. Currently, China is perceived almost exclusively as a country that is highly successful in implementing market reforms and is an outstanding example of dynamic development. The high assessment is accompanied by reflections on the reasons and essence of the measures taken in China, which have ensured powerful dynamic processes.

China is the world's leading producer of agricultural products and one of the world's largest exporters. China's exports are based on fish, vegetables, finished meat and fish products, and processed fruits and vegetables. However, China's agro-industrial complex has a number of features: The country has a limited area of arable land, and the Chinese market is difficult to access for many goods due to the use of tariff and non-tariff protection measures.

China is facing a number of threats and challenges, the most dangerous of which are the degradation of agricultural land, depletion of water resources, and environmental pollution.

At the same time, China and Russia are rapidly developing trade in the agricultural sector. The countries can further use the advantages of their location and resource complementarity to form a new basis for comprehensive cooperation in agriculture.

To do this, China and Russia need to intensify consultations on food and environmental security and agricultural resource development, as well as take additional steps in the field of political partnership.

External geopolitical pressures and domestic supply chain vulnerabilities represent two interconnected and mutually reinforcing challenges that define the risk profile of China's agricultural international trade in the mid-2020s. The evolving U.S.-China strategic competition, the ongoing Russia-Ukraine conflict, rising trade protectionism, and the emergence of new geopolitical flashpoints such as the Red Sea crisis have created an

increasingly uncertain and fragmented global trading environment. At the same time, China's structural dependence on imported commodities, particularly soybeans, and weaknesses in its domestic logistics, processing, and reserve systems limit its resilience to external shocks. Addressing these challenges will require a multi-faceted strategy that includes further diversifying import sources, strengthening domestic agricultural production capacity, improving supply chain efficiency, enhancing the management of strategic reserves, and actively participating in global agricultural governance. By systematically assessing these risks and implementing targeted mitigation measures, China can build a more resilient, sustainable, and secure agricultural trade system that ensures national food security while contributing to global food stability.

Regional economic integration and digital trade represent two transformative forces that are reshaping China's agricultural international trade landscape. RCEP and BRI have provided China with expanded market access, diversified trade partners, and enhanced supply chain security, while digital trade has revolutionized trade patterns, upgraded export structures, and improved supply chain efficiency. The synergy between these two trends is creating unprecedented strategic opportunities that can help China address the risks identified in the previous section and build a more resilient, competitive, and sustainable agricultural trade system. By seizing these opportunities, China can not only ensure its own food security but also contribute to global food security and the development of a more equitable and prosperous global agricultural trade order.

The strategic framework presented in this section provides a comprehensive roadmap for enhancing the systemic resilience of China's agricultural international trade system and elevating its position in global agricultural value chains. By implementing the five strategic pillars – import source diversification, domestic technological innovation, digital transformation, regional integration and global cooperation, and proactive participation in global agricultural governance – China can address the multifaceted risks identified in Section 3.1 while seizing the transformative opportunities presented by regional integration and digital trade. This will enable China to build a more resilient, efficient, and sustainable agricultural trade system that ensures national food security, supports rural revitalization, and contributes to global food stability. As the global

agricultural trade landscape continues to evolve, China's ability to adapt and innovate will be crucial to its success in navigating the challenges and opportunities of the 21st century.

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