6

China's Accession to the WTO and Its Impact on Global Agricultural Trade

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I Introduction

China's rapid rise as a leading global exporter of manufacturing goods since its accession to the WTO in 2001 has been the focus of both admiration and, increasingly, concern (Mavroidis and Sapir, 2021). But it is sometimes overlooked that China is also a large importer of goods, particularly agricultural products. Since China's accession to the WTO, China's agricultural exports have increased by 8 per cent annually while imports have risen by almost twice that rate. China has become the world's largest importer of agricultural products and the first or second largest destination for many of the world's top agricultural exporters such as the US, Brazil, Australia, New Zealand, Canada, and Argentina.

Under terms of its accession agreement, China agreed to bind its agricultural tariffs at low levels relative to many other developing (and developed economies). China established tariff rate quotas (TRQs) for a number of commodities and significantly, agreed to liberalize commercial imports by phasing out or limiting the operation of state trading enterprises (STEs).

Many analyses conducted at the time of accession projected increased wheat and maize imports by virtue of the creation of tariff rate quotas and increased imports of meat and dairy products as growth in China's per capita income was projected to result in shifts in diets to include more meat and dairy products (Tuan and Hsin-hui, 2001; USITC, 1999). Those expected gains were a primary reason why US producer groups provided large political support for the passage of Permanent Normal Trade Relations with China in 2000 (Glauber and Lester, 2021).

While food and agricultural disputes have accounted for almost 45 per cent of total disputes brought to the WTO Dispute Settlement Body since 1995 (Bianchi, 2021), agricultural disputes involving China have been relatively rare, particularly over the first 15 years of China's membership in

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the WTO. Since 2016, however, China's trade and agricultural policies have become an increasing focus of attention in the WTO. Trade wars, first with the United States, and then with Canada and Australia, have disrupted agricultural trade, and have threatened to disrupt the pattern of growth experienced over the past 20 years.

This paper examines the evolution of China's agricultural trade since its accession. It will examine how China's trade has grown over the past 20 years. It will also discuss how agricultural trade policy and domestic support policies have evolved, and how trade disputes have arisen within this context, with particular emphasis on China's experience as complainant and respondent in WTO trade disputes. Lastly, it will conclude with thoughts on the outlook for China's agricultural trade and trade policy.

II Evolution of China's Agricultural Trade

Since 2000, China has gone from being a net exporter of agricultural products,[1] with a positive net trade balance of USD 2.3 billion in 2000, to a larger net importer, with a net deficit of over USD 100 billion in 2020 (Figure 6.1). Exports have grown by over 8 per cent annually over the past 20 years, but imports have skyrocketed, growing by an average of 15 per cent per year.

Despite its large negative trade balance, China was the world's fourth largest exporter of agricultural products in 2020 (behind the EU-27, United States, and Brazil), exporting over USD 57 billion. Annual growth rates for China over the last 20 years were about one-third higher than that of global agricultural export growth (8.2 per cent compared to 6.5 per cent). With the exception of the EU-27 and the US, China's main markets for agricultural products are in East Asia (Hong Kong, Korea, and Japan) and the growing markets of Southeast Asia (Vietnam, Thailand, Malaysia, Indonesia, and the Philippines) (Table 6.1).

The composition of China's agricultural exports has changed over the past 20 years (Figure 6.2). In 2000, almost one third of China's agricultural exports were grain and grain products (14 per cent of total agricultural exports) and meat (17 per cent of total exports). By 2020, those categories had fallen to 3 per cent and 8 per cent respectively, as China became a net importer of those products by the late 2000s. At the time of accession, a number of

[1] Unless otherwise specified we use the definition of agricultural products defined in Annex 1 of the Agreement on Agriculture. This excludes, for example, fish and forestry products. It also includes various degrees of processing for different commodities (WTO, 2003).

Table 6.1 *Top 10 markets for China agricultural exports, various years*

Rank	2000	2010	2020
1	Japan	Japan	Hong Kong
2	Hong Kong	European Union	European Union
3	European Union	Hong Kong	Japan
4	South Korea	United States	Vietnam
5	United States	South Korea	United States
6	Malaysia	Indonesia	South Korea
7	Indonesia	Malaysia	Thailand
8	India	Vietnam	Malaysia
9	Singapore	Russia	Indonesia
10	Taiwan	Thailand	Philippines
Percent of trade accounted for by top 10 markets	82%	73%	74%

Source: United Nations (2021).

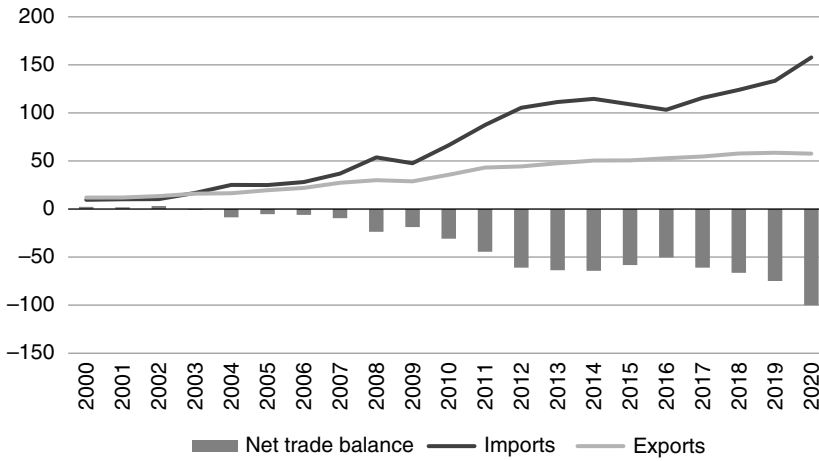

Figure 6.1 China's agricultural trade 2000–2020 (USD billion)
Source: United Nations (2021).

studies (e.g., Colby et al., 2000; Coleman et al., 2003; USITC, 1999) projected that China's exports of fruits and vegetables and processed foods would grow. Indeed, since 2000, exports of fruits and preparations, vegetables and preparations, and food preparations have soared, accounting for 50 per cent of total exports in 2020 compared with 32 per cent in 2000.

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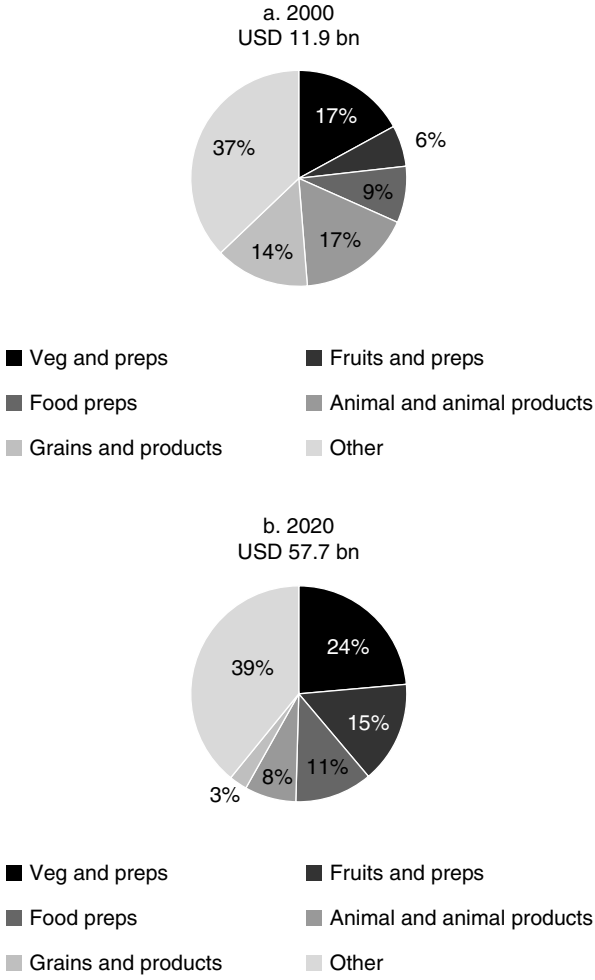

Figure 6.2 China's agricultural exports by product type, 2000 and 2020
Source: United Nations (2021).

In 2020, China was the world's largest importer of agricultural products, importing over USD 157 billion. From 2000 to 2020, China's agricultural imports grew by an annual rate of 14 per cent and over that time, China became a major destination for the largest exporting countries in the world. Table 6.2 shows the 15 top import suppliers to China in 2020 and how China was ranked as the destination for those countries' agricultural exports in 2000 and 2020. Of the 15, only Vietnam counted China

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Table 6.2 *Top 15 agricultural import suppliers to China, 2020*

Rank	Exporter	Bilateral agricultural imports in 2020 (USD million)	China's rank as a destination for exporter's agricultural exports	
			2000	2020
1	Brazil	35,271	5	1
2	United States	22,826	7	1
3	European Union	22,148	15	3
4	Australia	8,920	3	1
5	New Zealand	8,531	6	1
6	Thailand	7,383	8	1
7	Canada	6,388	5	2
8	Indonesia	6,090	6	1
9	Argentina	5,986	4	1
10	Ukraine	3,668	27	2
11	Chile	3,361	16	1
12	Malaysia	3,148	4	1
13	Vietnam	2,760	1	1
14	Russia	2,121	7	3
15	India	1,876	17	4

Source: United Nations (2021).

as its top destination in 2000. By 2020, China was the largest or second-largest destination for 12 of the 15 top suppliers.

At the time of China's accession, China was viewed as a large potential market for global feed grain exports (Crook and Colby, 1996; U.S. Department of Agriculture, 1997; Wailes et al., 1998). Lester Brown's 1995 report, *Who Will Feed China? Wake-up Call for a Small Planet* warned that China's rising consumption of animal protein and domestic resource limits would cause rapid growth in import demand and disrupt global grain markets (Brown, 1995).[2] A 1996 study by Crook and Colby reviewed several projections of China's grain imports for various years in the twenty-first century and found a broad range of estimates from 15 million tonnes to over 200 million tonnes (Crook and Colby, 1996).

[2] Similar concerns were voiced during the agricultural price spikes of 2007–2011, when China was accused of buying up foreign cropland in Africa and elsewhere to feed its population – charges that were shown to be grossly exaggerated (Brautigam, 2015).

Table 6.3 *The composition of China's agricultural imports, 2000 and 2020 (USD million)*

Commodity	2000	2020	Annual percent change 2000–2020
Oilseeds, oils and fats	4,071	55,530	14
Grains and preps	841	11,917	14
Meats	732	31,198	20
Dairy products	289	13,323	21
Fruits and veg	548	15,827	18
Cotton	74	3,563	21
Other	3,059	26,415	11
Total	9,614	157,772	15

Source: United Nations (2021).

A 2000 study by the US Department of Agriculture (USDA) concluded that China's accession to the WTO would increase the value of annual US grain exports by about $1 billion (5 per cent) from 2000 to 2009 (Colby et al., 2000). In its analysis of the impacts of China's accession to the United States, the United States International Trade Commission (USITC) concluded that wheat exports to China would increase by $43 million (21 per cent increase) while corn and other feed grains would increase by $66 million (34 per cent) (U.S. International Trade Commission, 1999).[3] By contrast, because of Chinese rice policies aimed at maintaining self-sufficiency, China remained a small, but significant net exporter of rice throughout the 30 years and was not viewed as a growing market for global rice exports (Colby et al., 2000; Tuan and Hsu, 2001; USITC, 1999). The analyses projected small gains in the oilseed sector though it was projected that China would import fewer soybeans and more oilseed products such as soybean oil and soybean meal (Colby et al., 2000). Cotton exports were also projected to grow significantly.[4]

Table 6.3 shows the growth in China's agricultural imports between 2000 and 2020. What is striking is the size of annual growth over most product categories. As predicted, grains and oilseed imports increased over the period but at slightly smaller annual growth rates than the

[3] Impacts assume full implementation relative to the 1998 base year (USITC, 1999).

[4] Neither the USDA nor the USITC studies made projections regarding livestock or dairy products, or fruits and vegetables though the USDA study noted that there would likely be gains in those sectors as well (Colby et al., 2000).

average. The relative importance of oilseeds and products declined marginally relative to other product groups, but they still account for 35 per cent of total agricultural imports in 2020. Meat and dairy product imports increased by over 20 per cent *per year* over the past 20 years and account for 28 per cent of total imports in 2020 compared to just 10 per cent of total imports in 2000. Fruit and vegetable imports increased by over 18 per cent per year and accounted for 10 per cent of total imports in 2020 compared to 6 per cent in 2000.

III Drivers of China's Food Demand

The rapid growth in China's agricultural trade has been driven by several interrelated factors, including population and income growth, urbanization, economic reforms, and trade liberalization, including reforms associated with China's accession to the WTO (Alexandratos and Bruinsma, 2012; FAO, 2017). Table 6.4 presents a number of development indicators for China showing its growth over the past 20 years. While population grew annually by less than 1 per cent per year, real per capita income growth averaged over 8 per cent annually over the past 20 years. The rapid industrialization of the China economy resulted in increased urbanization as job growth stimulated rapid rural-to-urban migration. In 2000, less than 36 per cent of China's population lived in urban areas. By 2020, over 60 per cent lived in urban areas. With rising incomes, per capita food consumption[5] rose from 2,815 kcal/day in 2000 to over 3,200 kcal/day by 2020, while the percent of the population that is undernourished fell to less than 2.5 per cent from 10 per cent over the same period.[6]

Accompanying the significant increases in overall calorie availability have been reductions in the shares of calorie intakes from cereals and roots and tubers and increases in the shares of livestock products, vegetable oils, sugar, and processed foods. Figure 6.3 shows China's per capita meat consumption versus inflation-adjusted per capita GDP drawn from data from 1961 to 2018.[7] As households earn more income, they tend to spend purchase more income, particularly at lower income levels (Popkin, 2014). In China, per capita income reached USD 2000 (in $2015) in the late 1990s, at

[5] Per capita food supply is a proxy measure for per capita consumption and includes both food consumption and food waste (FAO, 2021).

[6] Undernourishment means that a person is not able to acquire enough food to meet the daily minimum dietary energy requirements, over a period of one year (FAO, 2021).

[7] Note that FAO changed its methodology for calculating per capita food consumption (availability) in 2014 (FAO, 2021).

Table 6.4 *Selected China indicators*

Indicator	2000	2005	2010	2015	2020
Population (billions)	1.283	1.322	1.360	1.397	1.425
Rate of urbanization (percent)	35.9%	42.5%	49.2%	55.5%	61.4%
Per capita income (2015 USD)	2,194	3,391	4,712	8,067	10,431
Per capita food supply (Kcal/cap/day)	2,814	2,883	3,044	3,188	3,203
Prevalence of undernourishment (percent)	10.0%	7%	2.8%	<2.5%	<2.5%

Sources: United Nations (2019); World Bank Group (2021); UN Food and Agriculture Organization (2021).

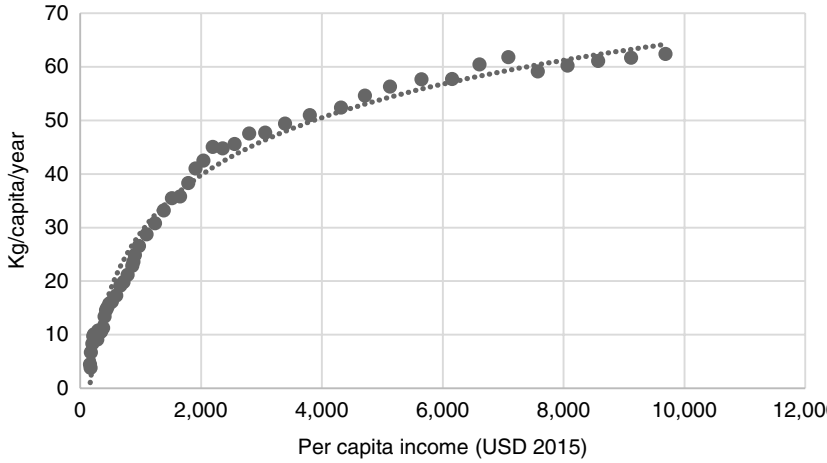

Figure 6.3 China's per capita meat consumption and income, 1961–2018
Source: UN FAO (2021).

which point the rate of growth in consumption began to slow and flatten out. Nonetheless, it was this shift in diets that has propelled (and continues to propel) the growth in imports of dairy, meats, feedstuffs, and fresh fruits and vegetables since 2000.[8]

To meet the increased demand for meat, China's livestock production has increased in numbers and production efficiency (Gale, 2015). Hog and

[8] China imports fresh fruits such as cherries, durians and grapes and vegetables (primarily fresh peppers). It exports largely processed rather than fresh fruits and vegetables.

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poultry production has been transformed from "backyard operations," where households kept a few animals for home consumption and occasional sale, to more industrialized production practices, based on confined feed operations and processed feeds for inputs.[9] The growth of factory-style livestock and poultry operations has fueled demand for feedstuffs such as maize and other feed grains and soybean meal. While China grows ample supplies of food-grade soybeans (for tofu and other food products) it imports most of its feed-grade soybeans to be crushed into soybean meal and soybean oil. Feed grain imports have grown in importance as well, particularly since 2010 (Gale, 2015).

The growth in China exports is expected to continue in the future (Alexandratos and Bruinsma, 2012; FAO, 2017; OECD/FAO, 2021; USDA/ERS, 2021). For example, USDA's Economic Research Service (2021) projects that about half of the growth in global soybean consumption over the next 10 years will be in China. It is projected that the growth in China soybean imports over 2021–2030 will account for 80 per cent of the growth in global soybean imports over that period (USDA/ERS, 2021). China is also expected to continue to increase its imports of meat products and is projected to account for 40 per cent of the growth in global pork imports and 49 per cent of the growth in global beef imports over 2021–2030 (USDA/ERS, 2021).

IV China Trade and Agricultural Policies

China supports its agricultural producers through a variety of policy instruments including tariffs and other border measures and direct price and income support measures (WTO, 2021a). On occasion, the government has intervened to restrict exports to maintain lower prices as they did to restrict rice exports during the price spikes of 2007–2008 (Slayton, 2009).

(i) Market Access

Prior to accession, China's imports of agricultural products were largely in the hands of China State Trading Enterprises (STEs). Import quotas were arbitrarily set on an annual and often as-needed basis. With accession, China agreed to bind its tariffs at then-applied levels.[10] As a result, the

[9] Gale (2015) notes that over the period 2006–2010, a renewed push for livestock industry modernization under the 11th Five-Year Plan prompted greater use of manufactured feed.

[10] Agricultural products are, with the exception of some animal products, subject to *ad valorem* applied rates (WTO, 2021a).

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Table 6.5 *Average China tariff rates for various agricultural product groups, 2020*

Product group	Average bound tariff	Average applied MFN duty
Animal products	14.9	13.2
Dairy products	12.2	12.3
Fruits, vegetables and plants	14.8	12.2
Coffee, tea	14.9	12.3
Cereals and preparations	23.7	19.5
Oilseeds, fats and oils	11.1	10.9
Sugars and confections	27.4	28.7
Beverages and tobacco	23.2	18.2
Cotton	22.0	22.0
Other agricultural products	12.1	9.3
All agricultural products	15.7	13.8

Source: WTO/ITC/UNCTAD (2021).

difference between applied and bound rates is relatively small compared to many other developing (and developed) countries.[11] In 2020 the average applied MFN duty across all agricultural products was 13.8 per cent (compared with an average bound tariff rate of 15.7 per cent). Table 6.5 shows average bound tariffs and average applied MFN duties across a variety of agricultural product groups (WTO/ITC/UNCTAD, 2021). The oilseed sector has generally lower protection than other sectors. For example, the bound tariff rate on soybeans is 3 per cent. Sectors receiving higher than average protection include beverages and tobacco (average applied MFN duty of 18.2 per cent), cereals and preparations (19.5 per cent), cotton (22.0 per cent), and sugars and confections (28.7 per cent).

China continues to operate tariff rate quotas (TRQs) on a number of tariff lines, which are administered through import licenses (WTO, 2021a). China's accession to the WTO was particularly significant for commodities such as soybeans where quotas were phased out and commercial traders were allowed to import agricultural productions in place of STEs. For grains, cotton, and sugar, TRQs were established and while their operation was partially liberalized to allow commercial traders, STEs

[11] For example, the simple average bound tariff for agricultural goods for India was 113.1 per cent while the simple average MFN applied rate was 34 per cent in 2020 (WTO/ITC/UNCTAD, 2021).

Table 6.6 *Tariff rate quotas on agricultural products and their utilization, 2019–2020*

Product	Out-of-quota rates	In quota rates	Tariff quota quantity	In-quota imports Tonnes		Percent of TRQ allocated to STEs
	Percent		Tonnes	2019	2020	
Wheat (7 lines)			9,636,000	3,487,625	5,151,565	90%
Wheat and meslin (4 lines)	65	1				
Wheat or meslin flour (1 line)	65	6				
Groats and meal of wheat (1 line)	65	9				
Pellets of wheat	65	10				
Corn (5 lines)			7,200,000	4,793,424	7,200,000	60%
Maize (corn) seed (1 line)	20	1				
Maize (corn), other than seed (1 line)	65	1				
Maize (corn) flour (1 line)	40	9				
Groats and meal of corn (1 line)	65	9				
Rolled or flaked corn (1 line)	65	10				
Rice (14 lines)			5,320,000	2,545,726	2,911,467	50%
Rice, other than broken (8 lines)	65	1				
Broken rice (2 lines)	10	1				
Rice flour (2 lines)	40	9				
Meal of rice (2 lines)	10	9				
Sugar (7 lines)	50	15	1,945,000	1,945,000	1,945,000	70%
Cotton (2 lines)	40	1	894,000	894,000	894,000	33%

Source: WTO (2021a, 2021c).

continued to play a significant role. Table 6.6 shows tariff rates (both out-of-quota and in-quota) and the tariff quota quantity for various agricultural products. Generally, fill rates for TRQs have been high for sugar, cotton, and wool. Fill rates for grains, by contrast, were until recently generally low, often below 50 per cent (Glauber and Lester, 2021). In 2016, the United States requested consultations under the WTO dispute settlement understanding (DSU) over China's administration of its TRQs for corn, rice, and wheat. The case is discussed more fully in Section 4. In 2020, the fill rates for corn, wheat, and rice were 100 per cent, 53 per cent, and 55 per cent, respectively, in part due to commitments under the Phase 1 agreement and in part due to strong import demand for cereals.

(ii) Domestic Support

Under the terms of accession to the WTO, China has no domestic support entitlements under Article 6.3 of the Agreement on Agriculture (AoA). In practical terms, support is thus capped at the *de minimis* threshold for trade distorting support set out in Article 6.4 of the AoA and in China's Schedule of Commitments, and equal to 8.5 per cent of the value of production for the commodity receiving support.[12] The *de minimis* threshold is higher than that for developed countries (5 per cent) but less than the *de minimis* threshold for most developing countries (10 per cent). China has access to other support provisions of the AoA including Article 6.5, which exempts production-limiting measures from reduction commitments (the so-called blue box), and Annex 2 of the AoA which exempts measures that are minimally production- and trade-distorting (the so-called Green Box). However, China agreed to forego recourse to Article 6.2 of the AoA which exempts investment aids and certain input subsidies from reduction commitments for developing countries.

At the time of accession, China taxed many of its agricultural producers by offering procurement prices below global market prices and imposing other duties (Gale, 2013). In 2004, authorities began eliminating an agricultural tax on farmers and introduced a broad program of agricultural support that included tax reductions, direct subsidies, price supports, policy loans, expenditure on infrastructure, and intergovernmental transfers (Gale et al., 2005). Price floors for rice and wheat were introduced in 2004–2006 while price supports for corn, soybeans, and rapeseed

[12] Non-product specific support is capped at 8.5 per cent of the total value of China's agricultural production.

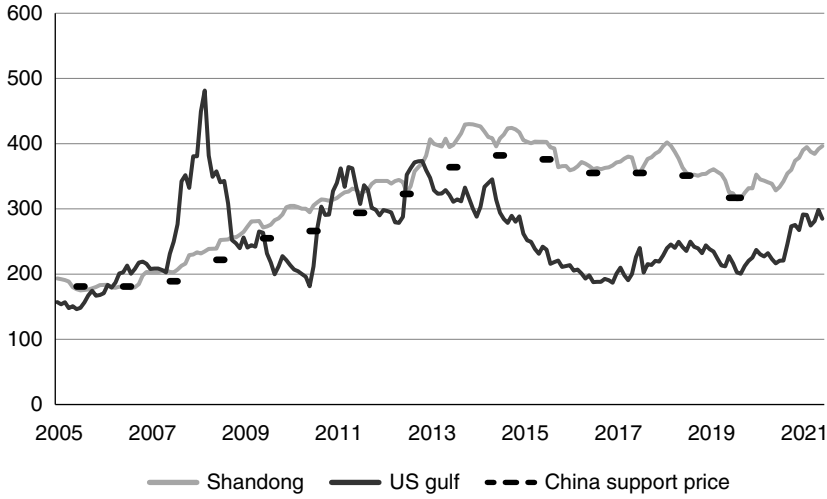

Figure 6.4 Wheat prices (USD/tonne)
Source: Gale (2013) with updates from Gale (2021).

were introduced in 2008. Cotton price support was introduced in 2012 (MacDonald et al., 2015).

Global prices rose in the late 2000s due to several factors including the growth of biofuels (primarily in the US), strong import demand from emerging markets like China, and production shortfalls in Australia (Abbott et al., 2011; Alexandratos and Bruinsma, 2012). As global prices rose from 2005 to 2013, China raised its support prices, but starting in 2013, global supplies recovered and by late 2013, world market prices had fallen and were significantly less than China's domestic prices, as shown in Figure 6.4 for wheat. Domestic grain production was increasingly finding its way into government stockpiles to maintain prices above support levels. While there is a paucity of reliable data on China stocks, available estimates suggest that government stockpiles by the mid-2010s were ample enough to satisfy nearly a year's worth of domestic consumption (Figure 6.5).

Reforms began in 2015 as cotton price supports began to be phased out and in 2016, corn supports were eliminated (MacDonald et al., 2015). Price supports for wheat and rice were maintained but lowered to minimize acquisitions. Stock levels have decreased since then as the government has taken advantage of higher prices to release grain and cotton from their stockpiles.

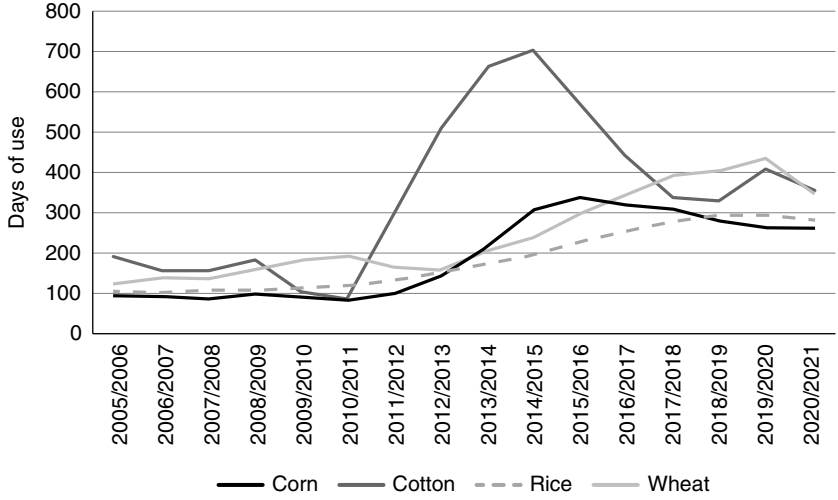

Figure 6.5 China's stocks of corn, cotton, rice, and wheat (measured in days of use)
Source: US Department of Agriculture/Foreign Agricultural Service (2021).

Figure 6.6 shows the evolution of China's producer support as measured by the Organization for Economic Cooperation and Development (OECD) over the period 1993–2020. China's Producer Support Estimate (PSE), measured as a percent of the value of agricultural production, peaked in 2015 and 2016 at just over 16 per cent.[13] Since then, their PSE has fallen relative to production value, reflecting, in part, lower support prices and other reforms, including the growth of its subsidized insurance program (Kenderdine, 2018).

In 2016, the United States requested consultations with China over its support measures for maize (corn), wheat, and rice (Ahn and Orden, 2021). That case is discussed in more detail below.

(iii) Export Subsidies and Restrictions

Exports of cotton, rice, maize, and tobacco are subject to state trading (WTO, 2021a). These products, except for tobacco, are also subject to export quotas and are allocated only to state trading enterprises. Wheat

[13] The PSE represents the value of transfers to producers, unlike support under Amber, Blue, and Green Boxes that measure compliance with WTO commitments. Therefore, the value of support as notified to the WTO is neither compatible nor comparable with the values calculated by the OECD (WTO, 2021a). In China's most recent Trade Policy

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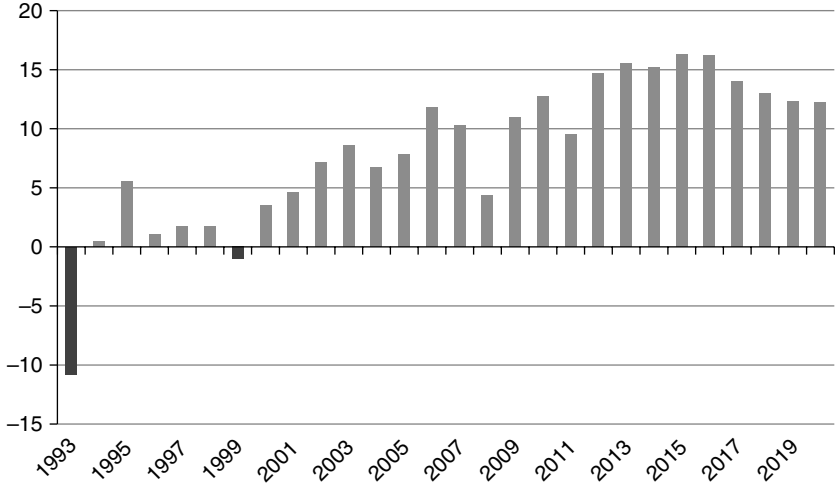

Figure 6.6 China's Producer Support Estimate (PSE) as a percent of the value of agricultural production
Source: OECD (2021).

is also subject to export quotas. As part of its accession, China agreed to forego the use of export subsidies for agricultural products.

In 2008, there was much concern over the use of export taxes by a number of countries, including China, in response to global price spikes in wheat and rice prices. Such actions were seen as beggaring-thy-neighbor policies that exacerbated price volatility (Bouët and Laborde Debucquet, 2012; Martin and Anderson, 2012; Slayton, 2009). Between 1 January and 31 December 2008, China imposed interim export tariffs, ranging from 5% to 25% on 57 tariff lines (HS 8-digit) covering wheat, corn, rice, and soybeans. In China's third Trade Policy Review, Chinese officials maintained that the objective of such measures was to conserve natural resources or to protect the environment (WTO, 2010). On 1 July 2009, some of these export taxes were removed or lowered, including on wheat and rice. Slayton (2009) points out that, unlike other large Asian rice exporters (such as Vietnam and Thailand), China did not prohibit exports during this period.

Review, officials reiterated that "OECD data do not reflect China's official position and that they could not confirm OECD estimates; they do not agree with the methodologies or data source of the estimation." (WTO, 2021a, p. 131).

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V China and the WTO

Over the past 20 years, China has become increasingly active in WTO committees dealing with agriculture issues such as the Committee on Agriculture and the Sanitary and Phytosanitary (SPS) Committee. Agricultural disputes involving China, while limited in the first 15 years following China, have increased over the past 5 years as trade wars with some of its large partners have been brought to the WTO Dispute Settlement Body for adjudication.

The WTO's Committee on Agriculture oversees the implementation of the Agriculture Agreement and provides a forum for members to raise and address related questions and concerns. Its key responsibility is to monitor how WTO members are complying with their commitments. Over the first 15 years following accession China was relatively quiet in the Committee on Agriculture, raising only 13 questions about other members' notifications and policies. Over the same period, WTO members raised 231 questions to China. Over 2017–2021, China raised 31 questions to other WTO members compared to 125 questions raised by other members of China's policies and notifications.

Of the 44 questions raised by China, all were directed at developed country members, with 25 being addressed to the United States, 10 to the European Union, and 7 to Japan. Of those questions addressed to China, 141 of the 356 (40 per cent) were by the United States (Table 6.7).

The SPS Committee is the forum where WTO members discuss issues related to the implementation of the SPS Agreement and potential trade concerns. China has been an active member since its accession. As with the Committee on Agriculture, a majority of the questions asked by China have been directed to developed economies such as the US, EU, and Japan. The EU and the United States have accounted for most of the questions directed to China concerning SPS issues (Table 6.8).

Since China acceded to the WTO in 2001, they have been involved with 69 disputes: 22 as a complainant and 47 as a respondent.[14] Surprisingly only 10 have involved agriculture and food products, about 15 per cent. By contrast, Bianchi (2021) estimates that 45 per cent of disputes brought by all Members before the DSB over 1995–2020 involved agricultural or food products.

China was a complainant in three disputes involving food products (Table 6.9). Two of those disputes involved poultry exports to the

[14] China was an interested third party in 190 disputes as of 4 November 2021.

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Table 6.7 *Number of questions involving China in the Committee on Agriculture*

Period	Questions posed to other members by China	Questions posed to China by other members
2002–2006	0	35
2007–2011	11	75
2012–2016	2	121
2017–2021	31	125
Total	44	356
Member	**Questions posed by China to:**	**Questions posed to China by:**
Australia	1	50
Brazil	0	14
Canada	0	50
EU	10	65
Japan	7	25
Korea	1	0
Pakistan	0	1
Russia	0	7
Taipei	0	2
Thailand	0	8
USA	25	141

Source: WTO (2021b).

Table 6.8 *Number of questions involving China in the SPS Committee*

Period	Questions posed to other members by China	Questions posed to China by other members
2002–2006	17	10
2007–2011	12	10
2012–2016	7	12
2017–2021	9	11
Total	45	43
Member	**Questions posed by China to:**	**Questions posed to China by:**
Argentina	0	1
Australia	1	5
Brazil	1	2
Canada	2	4

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Member	Questions posed by China to:	Questions posed to China by:
China Taipei	0	1
EU	15	14
India	1	6
Indonesia	1	2
Israel	0	1
Japan	8	2
Mexico	2	3
Norway	0	2
Paraguay	0	1
Philippines	1	0
Russian Federation	0	1
Ukraine	0	1
USA	15	15

Source: WTO (2021d) Sanitary and Phytosanitary Management Information System.

Table 6.9 *Disputes brought by China before the WTO Dispute Settlement Body involving agricultural and food products*

Dispute number	Respondent	Request for consultations	Short title	Most recent action/date
DS392	United States	17/04/2009	US – Poultry (China)	Panel report adopted 23/07/2010
DS422	United States	28/02/2011	US – Shrimp and Diamond Sawblades	Panel report adopted 23/07/2012
DS492	European Union	08/04/2015	EU – Poultry Meat (China)	Panel report adopted 19/09/2017

Source: WTO (2021c).

US (DS392) and the EU (DS492). The third involved shrimp exports to the US (DS422) (Ahn and Messerlin, 2014). All three disputes went to panel determination where the reports were ultimately adopted by the DSB. Despite positive rulings on claims made in the poultry cases against the EU and United States, China's exports remain minimal due to SPS

Table 6.10 *Disputes brought against China before the WTO Dispute Settlement Body involving agricultural and food products*

Dispute number	Complainant	Request for consultations	Short title	Most recent action/date
DS427	United States	20/09/2011	China – Broiler Products	Art. 21.5 report adopted 28/02/2018
DS511	United States	13/09/2016	China – Agricultural Producers	Art. 21.5 request referred to original panel 28/09/2020
DS517	United States	15/12/2016	China – TRQs	Art. 21.5 request referred to original panel 30/08/2021
DS568	Brazil	16/10/2018	China – Certain Measures concerning Imports of Sugar	In consultations
DS589	Canada	09/09/2019	China – Canola Seed (Canada)	Request for panel 17/06/2021
DS598	Australia	16/12/2020	China – AD/CVD on Barley (Australia)	Panel composed 03/09/2021
DS602	Australia	22/06/2021	China – AD/CVD on Wine (Australia)	Request for panel 16/09/2021

restrictions in those countries. US imports of shrimp from China were almost USD 340 million in 2018 but have fallen since then to less than USD 56 million in 2020 as a result of anti-dumping actions by the US Department of Commerce.

As of November 4, 2021, there have been seven requests for consultations with China involving food and agricultural products; all but one of those disputes were initiated within the last 5 years (Table 6.10). In 2011, the United States requested consultations with China concerning China's

measures imposing anti-dumping and countervailing duties on broiler products from the United States (DS427). The Panel report was adopted in 2013. In 2016, the United States requested a compliance hearing under Article 21.5. That report was adopted in 2018. US chicken product exports to China totaled USD 759 million in 2020.

In 2016, the United States requested consultations with China on the level of subsidies provided to agricultural producers (DS511) and consultations on China's administration of its TRQs (DS517). In *China – Agricultural Producers* (DS511), the issue was China's provision for domestic support, in the form of market price support, in excess of its product-specific *de minimis* level, provided to agricultural producers of wheat, India rice, Japonica rice, and corn in 2012, 2013, 2014, and 2015 (Ahn and Orden, 2021). The Panel sided with the United States on its claim that China's support had exceeded *de minimis* levels for India rice, Japonica rice and wheat and hence was in excess of its commitment level of "nil"[15] under China's Schedule of Concessions on Goods. The Panel report was adopted in 2019, but in 2020, the United States requested a compliance panel under Article 21.5 of the DSU, which has been referred to the original panel for deliberation.

In *China-TRQs* (DS517), the United States requested consultations with China regarding its administration of TRQs for wheat, rice, and corn. A key finding of the Panel was the administration of state-trading-enterprises (STE) and non-STE portions of TRQs was inconsistent with the obligations to administer TRQs on a transparent, predictable, and fair basis, using clearly specified administrative procedures, and in a manner that would not inhibit the filling of each TRQ (Glauber and Lester, 2021; WTO, 2021c). The Panel Report was adopted by the DSB in 2019. In August 2021, the United States requested the DSB to establish a compliance panel under Article 21.5 of the DSU.

Four additional trade disputes involving agricultural products have been brought against China. In *China – Certain Measures affecting Imports of Sugar* (DS568), Brazil requested consultations with China in 2018 concerning (i) a safeguard measure imposed by China on imported sugar, (ii) China's administration of its tariff-rate quota for sugar, and (iii) China's import licensing system for out-of-quota sugar. The European

[15] The Panel concluded that the reform to China's corn policy removed an essential element (the Applied Administrative Price) of the challenged corn measure, thus marking the expiry of this measure in years 2012 through 2015. As such, despite this corn measure being within the Panel's terms of reference, the Panel did not find any reason to make a ruling on this measure (WTO, 2021c, p. 226).

Union, Thailand, and Guatemala have also requested consultations. In *China – Canola Seed (Canada)* (DS589), Canada requested a consultation with China in 2019 concerning two sets of measures allegedly affecting the importation of canola seed (intended for processing and consumption, not for planting) from Canada: (a) measures suspending the importation of canola seed from two Canadian companies; and (b) measures applying enhanced inspections on all imports of Canadian canola seed. In June 2021, Canada requested a Panel to be formed.

Lastly, two disputes have been brought by Australia regarding recent actions taken by China affecting barley and wine imports from Australia. In *China – AD/CVD on Barley (Australia)* (DS598), Australia requested consultations with China in 2020 regarding its use of anti-dumping and countervailing measures against barley imports from Australia. A Panel was formed in September 2021. In *China – AD/CVD on Wine (Australia)* (DS602), Australia requested consultations with China in 2021 with respect to anti-dumping and countervailing measures on bottled wine in containers of 2 liters or less imported from Australia. In September 2021, Australia requested the establishment of a Panel.

Over the next couple of years, China will face Panel decisions on a number of disputes involving agricultural products including two disputes with Australia (barley and wine), one dispute with Canada (canola), and two compliance hearings with the United States (agricultural subsidies and TRQ administration). Zhou (2019) has pointed out how China has had a high rate of compliance with WTO rulings in the past. The current impasse in the Appellate Body means that Panel rulings that are appealed face an uncertain future and this may affect China's compliance with future Panel and compliance rulings.

(i) China's Trade War with the United States

In addition to trade disputes within the WTO, China has also been embroiled in a trade war with the United States (Bown and Irwin, 2019; Bown and Kolb, 2021). In 2018, in response to duties placed on China goods by the United States, China placed counter-retaliatory duties on a number of US agricultural exports, including soybeans. Total US agricultural exports to China fell to $9.1 billion in 2019 and soybean exports fell by almost 75 per cent, to USD 3.1 billion, the lowest level since 2006 (Glauber, 2020). Brazil was a big beneficiary as China sourced most of its soybean imports from them in 2018 and 2019, and while the United States was able to send some of its soybeans to markets that would have normally

imported from Brazil, overall, US soybean exports fell by USD 4 billion in 2018 and USD 3 billion in 2019 and US soybean receipts in 2019 fell by 12 per cent from 2017 levels (Adjemian et al., 2021; Carter and Steinbach, 2020).

On January 15, 2020, China and the United States signed The Phase One Economic and Trade Agreement. The agreement included chapters addressing intellectual property protection, technology transfer, trade in food and agricultural products, some new market access in China for financial services, exchange rates and transparency, and a government-to-government enforcement mechanism that could result in unilaterally determined trade sanctions if one side did not live up to the agreement (Bown, 2021a). China agreed to import USD 36.5 billion in US agricultural goods in 2020 and USD 43.6 billion.[16] Actual China agricultural imports from the United States in 2020 totaled USD 23.6 billion, about 64 per cent of the target. Based on import data through November 2021, Bown (2021b) estimates that China is on track to achieve 87 per cent of the targeted level for agriculture for 2021.

In their analysis of the Phase One Agreement, Feenstra and Hong (2021) pointed out the adverse impact of the agreement on other export suppliers to China, particularly Australia, and Canada, followed by Brazil, Indonesia, Malaysia, Thailand, and Vietnam. At the WTO Committee on Agriculture meeting in March 2021, in response to questions concerning trade diversion and deviation from MFN treatment as a result of the Phase One Agreement, China assured Members that:

> *Purchases are based on commercial considerations and market conditions. In 2020, COVID-19 severely hit global economy, trade flow, and transportation. These unexpected factors, among others, could influence the market. China is a large market. We welcome competitive products from all Members. We will continue to import products based on market conditions in line with WTO rules. As the economy recovers, we expect that the demands would increase. China will continue to facilitate trade from all Members based on market conditions and in line with WTO rules.* (WTO, 2021)

Figure 6.7 shows that China's agricultural imports from the United States in 2020 increased by almost 80 per cent over imports from the United States in 2019. The large increase was due to the low level of imports in 2019 due to the trade war. Compared to 2017 – the last year before the trade war started in 2018, imports from the United States in 2020 were up only 1 per cent. Moreover, China showed a very large increase in total agricultural

[16] Chapter 3 of the Phase One agreement also included a number of provisions that addressed more substantive trade issues such as biotechnology approvals, SPS concerns, and TRQ administration (USDA, 2020).

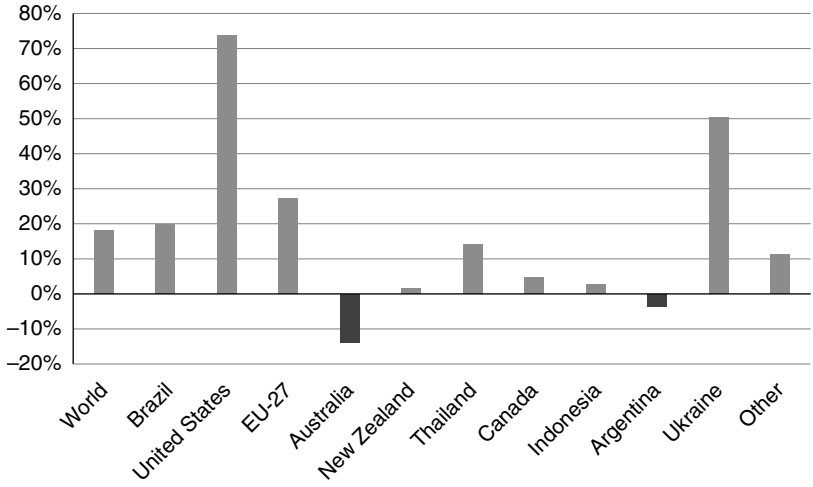

Figure 6.7 China's agricultural imports, change from 2019 to 2020
Source: United Nations, COMTRADE.

imports in 2020, up 18 per cent over 2019 levels. Agricultural imports from most of China's top 10 suppliers showed large gains. Agricultural imports from Brazil, for example, increased by USD 5.8 billion over 2019 levels (up 20 per cent) while agricultural imports from the EU-27 were up USD 4.7 billion (27 per cent). By contrast, agricultural imports from Australia were down due to Chinese restrictions on barley and wine imports. Overall, the data suggest that much of the increase in imports was due to factors other than Phase 1 such as the rapid recovery in hog populations in China in 2020 after herds had been sharply reduced in 2018–2019 due to African Swine Fever (USDA/FAS, 2021).

Chapter 3 of the Phase One agreement also included a number of provisions that addressed more substantive trade issues such as biotechnology approvals, SPS concerns, and TRQ administration (USDA, 2020). Significantly, however, supplemental duties remain on key agricultural products lending uncertainty to what is now a tenuous truce in agricultural trade relations between the two parties.

VI Conclusions

Twenty years after its accession to the WTO, China has become the world's largest agricultural importer and one of the top export destinations for the world's largest agricultural exporters. Population, income

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growth, and increased urbanization have driven dietary changes and consumption growth that have outpaced domestic production and required China to import an increasingly larger share of its consumption needs. Those trends are projected to increase over the next 10 years, and likely beyond.

Accession to the WTO has been a significant factor in the growth of agricultural trade (both exports and imports). Binding tariffs at relatively low rates provided certainty to exporters and the phase-out of some tariff rate quotas and operation of importing STEs has allowed commercial interests to flourish. Moreover, WTO trade disciplines have arguably shaped China's agricultural policies. China's agricultural support has fallen in recent years, in part due to adverse rulings at the WTO Dispute Settlement Body but also in part due to domestic reforms to correct unsustainable policies that distorted internal market prices.

Recent WTO disputes on agricultural support and TRQ administration point to the challenge of how to support domestic producers and be consistent with WTO trade rules. Further, trade wars with trade partners such as the United States, Australia, and Canada have disrupted trade patterns, not just bilaterally, but because of the size of China's imports, have been disruptive to world trade as well. Worse, they threaten to undermine liberalization trends by raising tariff levels and placing importing decisions back into the hands of STEs and other government entities. A functioning WTO DSB helps ensure compliance with WTO trade rules, but the current impasse over appointing new members of the Appellate Body undermines its function (Bown and Irwin, 2019; Glauber and Xing, 2020; Mavroidis and Sapir, 2021).

Time will tell whether these recent trends will be reversed but growing China food demand will likely keep pressure on the China government to keep markets open to agricultural imports.

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