

May 2018 Policy Brief
CAT-2018-05



Center for
Agricultural
Trade

**The Role of State
Owned and Private
Enterprises in
China's Agricultural
Imports**

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I. Background

China's continuing urbanization, rising incomes, growing economy, and evolving domestic and trade policies make it one of the most dynamic and complex participants in global agricultural markets. Although China is the world's largest food producer in volume terms, it has become a net importer of food products since 2003. Since joining the World Trade Organization (WTO) on December 11, 2001, China's share of global agricultural imports has increased nearly four-fold from 2.2% in 2002 to 8.6% in 2016. At the same time, China's agricultural import values have risen from \$10.3 to over \$102 billion over the same time period, representing an annual average growth rate of 17.8%.¹ China is projected to surpass the United States to become the world's largest agricultural importer by 2020.

However, China's evolving agricultural policies make it one of the more complex participants in the global agricultural economy. For example, in addition to its domestic price support programs, China maintains a number of trade policy measures on key sectors of export interest including Tariff Rate Quotas (TRQ) on grains, bean and palm oils, sugar and cotton imports. TRQs are a two-level system of tariffs with a quota separating the two tariff levels. Imports less than the quota, referred to as "in-quota" imports, generally face a low in-quota tariff rate (e.g., 1% tariff applied to China's in-quota TRQ grain imports). Imports exceeding the quota, referred to as "out-of-quota" (or over-quota) imports, are subject to a much higher, often prohibitive out-of-quota tariff (e.g., 65% tariff applied to China's out-of-quota TRQ grain imports). Because in-quota imports are subject to a favorable tariff rate, a key question is: who gets the right to import at the favorable in-quota tariff rate? Since 2004, China's notified tariff-quota levels are 9.636 million metric tons (mmt) for wheat, 7.2 mmt for corn and 5.32 mmt for rice. The quota amounts have remained unchanged through 2017.²

China's TRQ administration method for grain imports are unique for two reasons. First, import quotas, which are administered annually by the National Development and Reform Commission (NDRC), for wheat, corn and rice (and also cotton) have a specific reservation for state owned enterprises (SOEs).³ The SOE share of China's grain TRQs is most prominent in wheat at 90%, followed by corn and rice with a 60% and 50% SOE-designated allocation, respectively. Second, firms with unused quota certificates are to return the unused TRQ allocations prior to September of each year in order to be reallocated to new applicants or existing applicants that have used or exceeded their quota allotment.

¹ UN Comtrade Statistics available at: <https://comtrade.un.org/>.

² China's rice quotas are further split into 2.66 million metric tons for long grain and 2.66 million metric tons for short and medium grain rice.

³ See <http://www.mofcom.gov.cn/article/b/f/200310/20031000135653.shtml> for the full Chinese version of the Interim Measures for the Administration of Import Tariff Quotas of Agricultural Products.

On December 15, 2016 the United States requested formal consultations with China regarding China's administration of its tariff-rate quotas (TRQs) for wheat, corn and rice. Consultations between the two countries occurred on February 9, 2017 but no resolution of the trade dispute was achieved.⁴ On August 21, 2017, the United States requested the establishment of a panel to adjudicate the dispute. Australia, Brazil, Canada, Ecuador, the EU, Guatemala, India, Japan, Kazakhstan, Korea, Norway, the Russian Federation, Singapore, Taiwan, Ukraine and Vietnam have engaged as third party members with substantial interest in the dispute. On February 1, 2018, the United States requested WTO Director-General to compose the panel and on February 12, 2018, the panel was composed.

II. Chinese Firm-Level Data

One unique feature of our data is the ability to observe China's agricultural imports by firm name and type. This is an important dimension to our data because of the reserved state and non-state quota allocations as well as the ability to track the activity and participation of different types of firms engaged in trade. While country level import statistics are useful for an overall picture of China's commodity imports, they cannot tell us the underlying participation of firm types making up these imports. Our data consist of annual firm import and export transactions for certain agricultural products over the 2000-2016 time period at the 8-digit (and in some cases 10-digit) product level of China's Harmonized Tariff Schedule (HTS). We pay particular attention to the product codes comprising firm imports under Chapter 10 (Cereals), as well as select firm import statistics in other sectors such as soybeans, sugar, and cotton for comparative purposes.

III. Role of SOEs in China's Total Agricultural Imports

Figure 1 illustrates the growth of China's agricultural imports from 2004 through 2016. Annual agricultural imports are divided into SOE imports and an aggregate category of all other (mostly private) firms collectively referred to as non-SOE. Also plotted on the secondary vertical axis of Figure 1 is the share of SOE firms' agricultural imports in China's total agricultural imports. China's agricultural imports peaked in 2014 at \$107 billion. \$21 billion, or 20% of China's 2014 imports were imported by SOEs and \$86 billion, or 80% of China's 2014 agricultural imports by non-SOE firms. Imports have remained near \$100 billion in 2015 and 2016. SOEs imported 27% of China's agricultural imports in 2004 (and close to 50% prior to its accession to the WTO in 2001) and remained at or above 20% of China's agricultural imports through 2016. Although not shown in Figure 1, it is interesting to note that approximately 1,000 firms operate as Chinese designated SOEs as identified by their unique firm ID out of a total of over 20,000 firms importing agricultural products into China in 2016. Thus, while SOEs account for approximately 5% of the total number of firms engaged in China's agricultural imports, they import 20% of the total value. Thus, SOEs continue to play an important role in China's agricultural product imports.

⁴ See https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds517_e.htm for key facts and current status of the dispute and https://ustr.gov/sites/default/files/enforcement/DS/US.Sub1_0.pdf for the first written submission by the United States (DS517).

IV. Role of SOEs in China's Grain Imports

Figure 2 takes a closer look at select grain imports in HS Chapter 10: Wheat (HS 1001), Corn (HS 1005), Rice (HS 1006), and Sorghum (HS 1007). While wheat, corn and rice imports are governed by TRQs, grain sorghum is not. For comparison, the last two graphs in Figure 2 include Cotton (HS 5201) and Sugar (1701) – two commodities also subject to TRQs but outside of Chapter 10. Plotted are the annual Chinese import quantities (values for cotton and sugar) as well as the SOE and non-SOE share of imports over the 2004-2017 time period. SOE imports are consistently high in China's wheat imports. From 2004-2006 the SOE share was more than 90%. More recently, since 2011 the SOE share of China's wheat imports has averaged 67% with a low of 55% in 2011 and 80% in 2013. It is interesting to note that the SOE share of wheat imports is consistently below its 90% designated state-owned allocation equivalent to 8.7 mmt (0.9*9.636mmt). The average fill rate for China's National Cereals, Oils and Foodstuffs Import and Export Corporation (COFCO-Trading)⁵ designated portion of the overall wheat TRQ (8.7 mmt) since 2011 is just 26% with a high of 48% in 2013 when China's wheat imports reached 5.5 mmt and the SOE share was 80% and a low of 7.6% in 2011 when China's wheat imports were 1.25 mmt and the SOE share was 55%.⁶

The SOE share is the most volatile for China's corn imports where large swings in the SOE and non-SOE share of imports is evident. For example, the SOE share of China's corn imports stood at 67% in 2005 before dropping to 11% in 2009 and then rebounding to 95% in 2011 and then falling again to 37% in 2014. The SOE share of corn imports remained near 45% over the 2015-2017 period. Similar to wheat, the TRQ fill rate on the SOE-designated portion of China's corn TRQ of 4.32 mmt (0.6*7.2mmt) appears to be under filled. Different from wheat, however, the activity of non-SOEs is more pronounced in corn. Since 2011 the average fill rate on the state-owned portion (COFCO-Trading) of China's corn TRQ was 38%.⁷ The SOE fill rate reached a high of 90% in 2012 and a low of just 4% in 2014. Interestingly, the average fill rate of the non-SOE reserved portion of the corn quota (0.4*7.2mmt) is often much lower compared to wheat despite more activity of non-SOE firms in China's corn imports given corn's relatively larger non-SOE quota allocation (40% for corn vs. 10% for wheat).

The SOE share of China's rice imports (HS 1006) has consistently diminished. SOE and non-SOE imports were roughly equal in 2004 (50% each) before diverging considerably

⁵ The following link lists all SOEs recognized by China's Ministry of Commerce:
<http://www.mofcom.gov.cn/aarticle/bh/200301/20030100064118.html>

⁶ SOEs include COFCO-Trading and other designated state owned enterprises even though the former is the only authorized SOE eligible to apply for the state owned portion of the TRQ quota for wheat, corn and rice. Fill rates based on 10% of the 9.636 mmt wheat TRQ reserved for non-SOEs can also be computed and yield higher fill rates (close to and exceeding 100% in some years). However, we have to be cautious when interpreting these figures for the non-SOE portion of the wheat TRQ because it is unclear how much reallocation of unused quota takes place in September each year, which could effectively increase the TRQ reservation for non-SOE firms depending on the reallocation method. Moreover, the fill rates may be marginally smaller than what we have computed here because there is a small amount of out-of-quota trade in some of China's grain imports which goes unnoticed when using the 8-digit product codes.

⁷ The Office of the United States Trade Representative also reports relatively low fill rates:
https://ustr.gov/sites/default/files/enforcement/DS/US.Sub1_0.pdf.

through 2017 where the non-SOE share of China's rice imports exceeds the SOE share by a factor of nine. A similar SOE/Non-SOE pattern exists for China's cotton imports which are also subject to TRQs (HS 5201), although overall imports have been declining.

Grain sorghum (HS 1007) provides an interesting comparison to wheat and corn because it is not subject to a TRQ with SOE and non-SOE quota allocations but can be used for livestock feed. Beginning in 2013, China's sorghum imports have increased rapidly reaching over 10mmt in 2015 with over 80% of imports sourced from the U.S. At the same time, Chinese SOE activity for sorghum imports increased, reaching 50% or 5.7mmt of imports by 2015, before falling to 40% through August of 2017.

V. SOE and Non-SOE Activity in China's Soybean Imports

As a final graphical comparison and the activity of SOEs and non-SOEs, Figure 3 plots the value of China's soybean imports (HS 1201). China is the world's largest importer of soybeans, importing over \$40 billion in 2014. Like grain sorghum, soybeans are not subject to TRQs. Unlike grain sorghum, however, SOE activity in China's soybean imports is relatively muted. For example, the SOE share of China's soybean imports rarely exceeds 20%, compared to grain sorghum where SOEs participated in 50% of China's imports. As we will see in the next section, the smaller SOE share in China's soybean imports compared to wheat, for example, is to a large extent driven by the inactivity of China's state run enterprise - COFCO-Trading - in this sector. 80% of China's soybean imports are contracted by privately held firms and foreign-owned multinationals.

VI. COFCO-Trading, Other SOEs, and Domestic Private Firm Activity

Table 1 compares China's imports from the U.S and World for wheat, corn, rice, sorghum, soybeans and cotton decomposed into three types of firms: (i) China's state-run enterprise (SRE) (COFCO-Trading), (ii) Other designated SOEs, and (iii) Non-SOE firms. In principle, COFCO-Trading is the only authorized firm eligible to apply for China's reserved state-owned grain TRQ allocation, and thus plays a critical role in the procurement of these commodities. Several findings emerge from the Table 1.

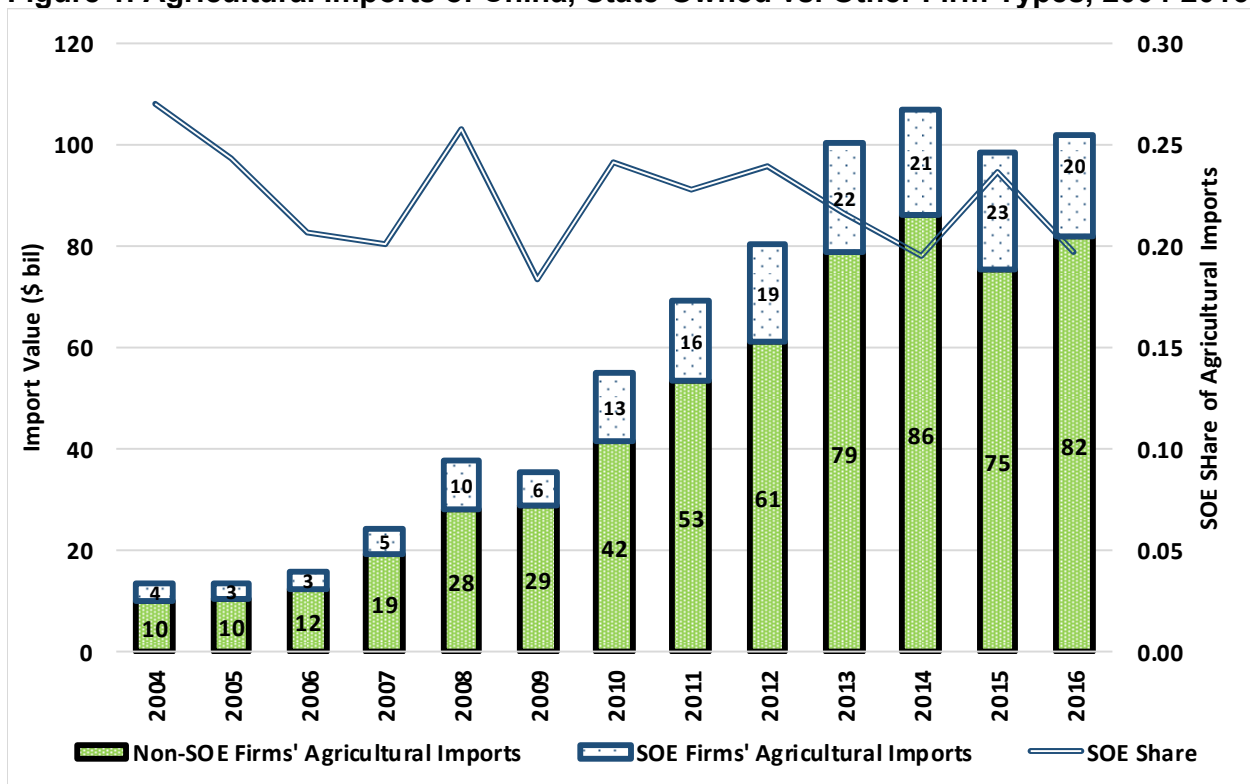
First, participation of COFCO-Trading is most prominent in wheat, importing 53.4%, 72.6%, and 69% of China's world wheat imports in 2014, 2015, and 2016, respectively. While COFCO-Trading is also active in China's wheat imports from the U.S. at 61% in 2014, the SRE's share has been falling reaching 44% in 2016, roughly 25 percentage points smaller than its activity in wheat imports from the world (69%). The number of Chinese firms importing from the US declined from 23 in 2013 (not shown) to 17-19 firms in 2014-2016 (Table 1). Australia surpassed the U.S. becoming China's leading wheat supplier since 2014. The number of firms importing wheat from Australia (not shown) increased from 26 in 2013 to 42 in 2014 before falling to 35 and 31 in 2015 and 2016, respectively. In 2016, COFCO-Trading was responsible for 86.7% of wheat imported from Australia compared to 44% from the US.

Second, participation of COFCO-Trading in China's corn imports is significantly smaller than that of other non-SOE types of firms. China's corn imports from the U.S. peaked in 2012 at \$1.6 billion before falling to \$56 million in 2016. Ukraine, who exported very little corn to China before 2015, surpassed the U.S. as the leading corn supplier since 2015. In 2016, Ukraine exported \$508 million worth of corn to China. Consistent with Chinese firms' imports of wheat, the total number of Chinese firms importing corn from the US declined from 60 in 2014 to 15 in 2016. Meanwhile, the total number of Chinese firms importing from Ukraine rose from 19 in 2014 to 28 in 2016. The number of SOE firms importing corn from the US declined by 75% (from 12 in 2014 to 3 in 2016). By comparison, the number of SOEs transacting with Ukraine for corn imports increased by 60% from 5 in 2014 to 8 in 2016 (with a high of 10 firms in 2015). In contrast to wheat, 80.9% of corn imported into China from the US was conducted by Chinese private domestic firms and foreign invested firms. Notably, the non-SOE firm share of corn imports (and wheat in 2015 and 2016) from the U.S. is significantly higher compared to the 56% share of non-SOE corn imports from the world.

Third, although 60% of China's rice TRQ is reserved for COFCO-Trading, its participation in rice imports has been minimal in the last three years recording a smaller import share than grain sorghum which is not subject to TRQs. Instead, privately owned firms and foreign invested firms were responsible for over 80% of Chinese rice imports.

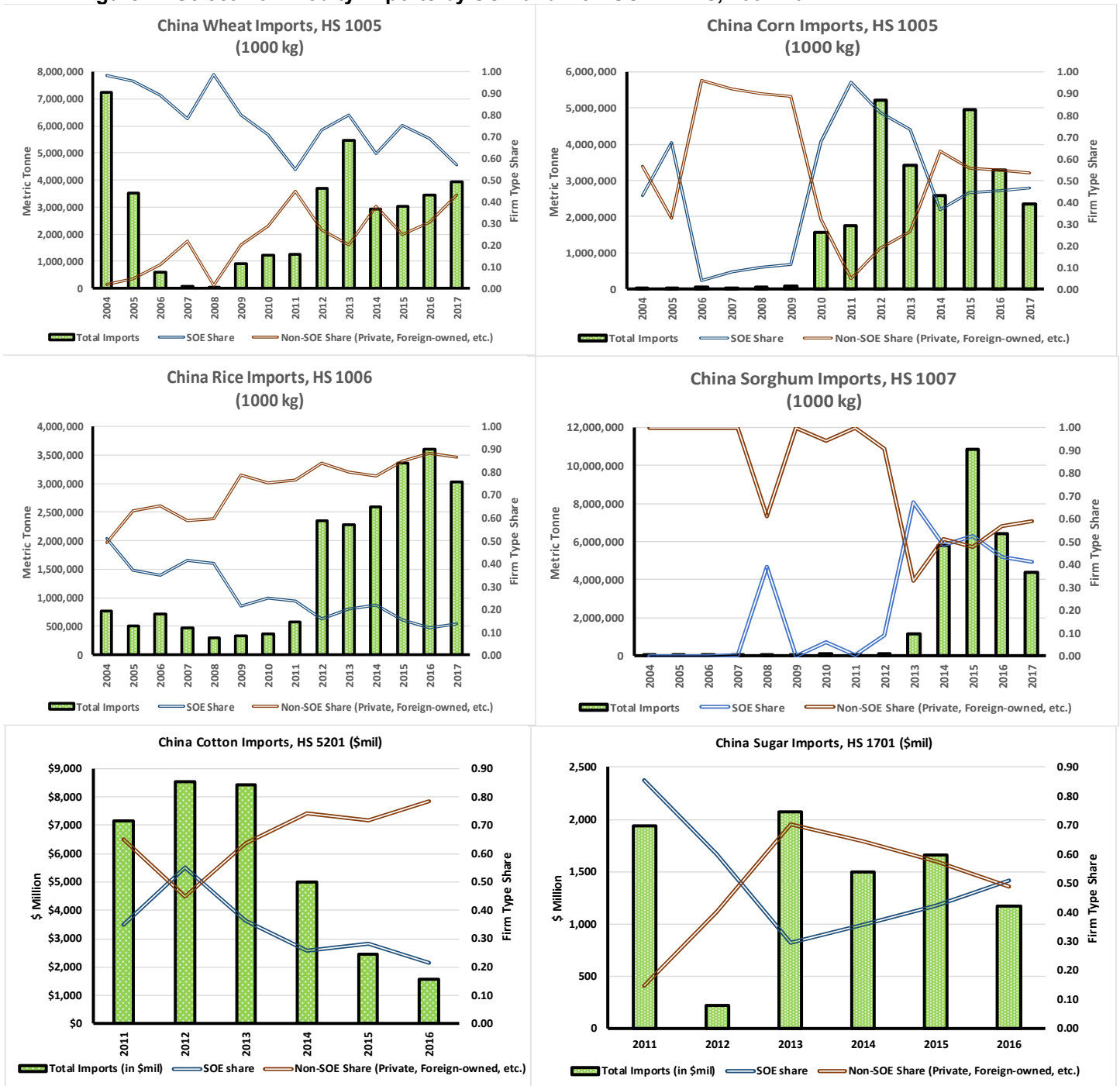
Finally, COFCO-Trading is rarely engaged in soybean imports according to our data. As shown previously (Figure 3), 80% of China's soybean imports are contracted by non-SOE firms. With the exception of cotton, the 124 firms sourcing soybeans from the U.S. is significantly larger compared to wheat (19), corn (15), rice (4), and sorghum (36). Although not show in Table 1, Brazil has emerged as a significant competitor with the U.S. in the Chinese soybean import market. In 2013, Brazil surpassed the U.S. becoming China's leading soybean supplier exporting \$19.1 billion compared to \$13.3 billion from the U.S. Interestingly, however, are differences in per-firm imports between the U.S. and Brazil. In 2013, when Brazil surpassed the U.S., China's per firm imports from Brazil (import value divided by the number of firms) averaged \$182 million compared to an average of \$119 million per firm from the U.S. In 2016, the corresponding numbers were \$152 million from Brazil on average compared to \$110 million per firm from the US. Thus, compared to the U.S., China's soybean imports from Brazil appear to be composed of larger imports by value spread over a fewer number of firms.

Figure 1. Agricultural Imports of China, State-Owned vs. Other Firm Types, 2004-2016



Notes: SOE denotes State-Owned Enterprises based on their declared firm identification number. Other includes all other firm types participating in agricultural imports including domestic private and foreign-invested firms.

Figure 2. Select Commodity Imports by SOE and Non-SOE Firms, 2004-2017



Notes: 2017 data only available through August for Wheat, Corn, Rice and Sorghum. Import values available for Cotton and Sugar through 2016.

Figure 3. Soybeans Imports by SOE and Non-SOE Firms, 2011-2016

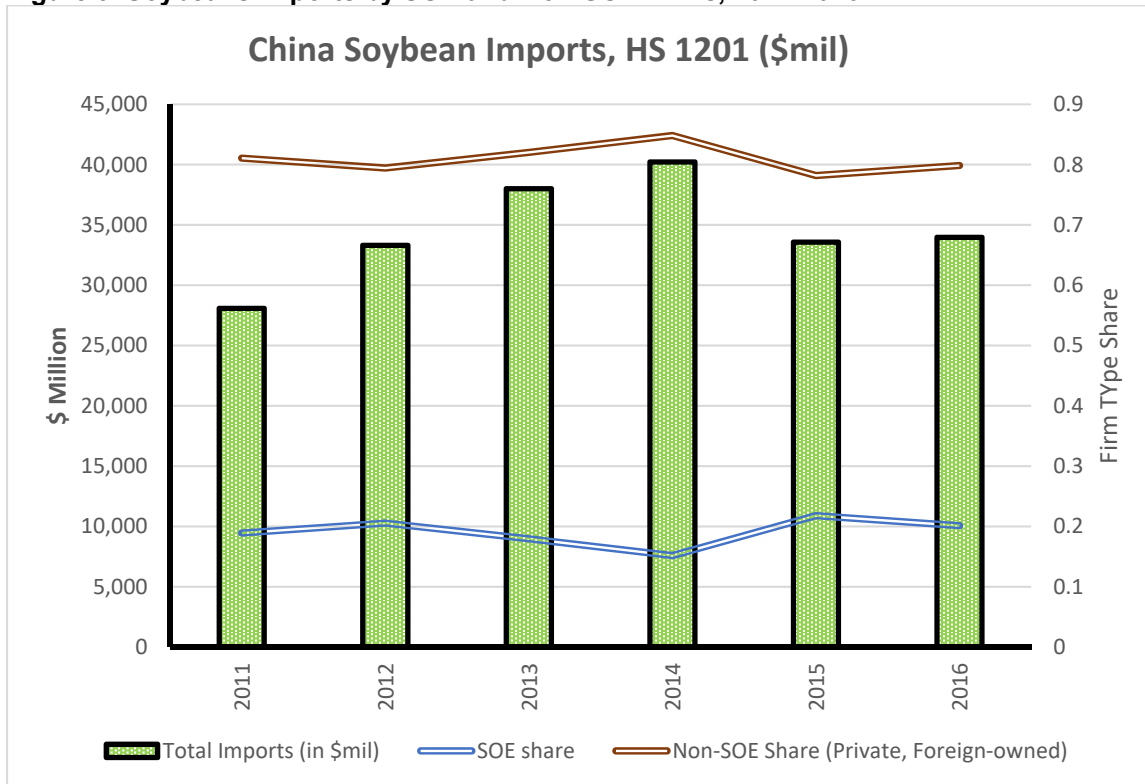


Table 1: China's Agricultural Imports by Firm Type

Commodity	HS4	China Imports (\$mil)		COFCO-Trading		Other SOE Share		Non-SOE Share		# Firms	SOE Firms (COFCO-Trading + Other SOE)		
		World	USA	World	USA	World	USA	World	USA		World	USA	
2014													
Wheat	1001	963	284	53.4%	61.0%	9.0%	1.8%	37.5%	37.3%	65	17	18	3
Corn	1005	729	293	7.8%	3.6%	29.2%	14.4%	63.1%	81.9%	135	60	26	12
Rice	1006	1,225	0	0.2%	0.0%	22.1%	0.0%	77.7%	100.0%	254	3	63	1
Sorghum	1007	1,629	1,509	4.4%	4.7%	45.0%	44.7%	50.6%	50.6%	117	87	34	24
Soybean	1201	40,214	16,266	0.0%	0.0%	15.2%	15.8%	84.8%	84.2%	185	140	30	23
Cotton	5201	4,982	1,258	0.0%	0.0%	25.9%	21.2%	74.1%	78.8%	609	316	103	53
2015													
Wheat	1001	863	170	72.6%	56.0%	4.2%	10.9%	23.2%	33.0%	50	18	19	5
Corn	1005	1,042	121	22.0%	38.3%	24.9%	0.1%	53.1%	61.6%	111	25	20	4
Rice	1006	1,247	0	0.0%	0.0%	15.7%	0.0%	84.3%	100.0%	228	0	57	0
Sorghum	1007	2,755	2,289	8.8%	9.5%	42.0%	41.2%	49.2%	49.3%	90	63	34	24
Soybean	1201	33,575	12,215	0.0%	0.0%	21.8%	21.8%	78.2%	78.2%	225	139	38	30
Cotton	5201	2,444	934	0.0%	0.0%	28.3%	21.4%	71.7%	78.6%	339	203	66	40
2016													
Wheat	1001	801	208	69.0%	44.0%	3.7%	3.8%	27.2%	52.2%	61	19	15	3
Corn	1005	638	56	21.2%	18.3%	22.8%	0.8%	56.0%	80.9%	126	15	17	3
Rice	1006	1,586	0	0.0%	0.0%	12.3%	0.0%	87.7%	100.0%	417	4	67	0
Sorghum	1007	1,428	1,261	5.9%	6.0%	38.3%	38.0%	55.8%	56.0%	75	36	27	13
Soybean	1201	33,970	13,759	0.0%	0.0%	20.1%	19.7%	79.9%	80.3%	228	124	39	27
Cotton	5201	1,564	508	0.0%	0.0%	21.6%	15.0%	78.4%	85.0%	267	159	44	25

Notes: "China Imports (\$ mil)" reports China's total agricultural imports in million dollars; "COFCO-Trading" reports COFCO-Trading's share of total agricultural imports (not that COFCO is the only authorized enterprises that could apply for state-quotas for grain imports); "SOE share" is the share of total agricultural imports shipped by Chinese state-owned enterprises excluding COFCO-Trading; "Other Firm Share" is one minus "COFCO-Trading" and "SOE share"; "# Firms" reports number of unique firms engaged in Chinese agricultural imports; "SOE Firms (COFCO-Trading + SOE)" reports the number of unique SOEs engaged in Chinese agricultural imports plus COFCO-Trading.