

A general review of China ' s fruit import status

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A General Review of China's Fruit Import Status

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Abstract

This study provides a general review of China's fruit import status based on literature review, governmental reports, and trade data from China customs department, and international organizations. The study first reviewed the general trend of China's fruit import, discussing the imported product compositions and origins, factors affecting the imports, and related administrative procedures. Secondly, the study focuses on China's fruit imports from ASEAN countries, one of the largest trade partners of China, analyzing the characteristics of fruit trade between the two economies. This section also covers a discussion of the trade impact of Belt Road Initiative. The last part of the study offers policy implications and suggestions.

Keywords: Fruit trade, China-ASEAN FTA, Belt Road Initiative

JEL classification: F13, Q17

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Overview

This report is a desktop study of China's fruit imports based on literature, governmental reports, and news reports. The report has three sections. The first section studies the general information about China's fruit imports from the perspective of potential markets, products, import procedures, and ports' information. The second section focuses on the largest fruit trade partners in China, providing a review of fruit imports by the Association of Southeast Asian Nations (ASEAN). This section analyzes fruit imports from both the importers' and exporters' perspective, and paying special attention to the impact of China's trade policy on such imports. The last section is a summary of the report with relevant policy implications and suggestions.

China's fruit imports

As one of the largest economies in the world, China has been the top importer of many commodities in international trade including fruit. According to the FAOSTAT records, China has been a top ten fruit importing country (taking about 60% of world total fruit imports) during the past five years. Due to rapid economic growth, the population's increasing income and awareness of food safety and a healthy lifestyle, fruit import by China have been steadily growing since 2001 after China joined the World Trade Organization (WTO). Figure 1 plots the fruit import value using China's Customs Dept. data (organized by Zhiyan Consulting). From 2000 to 2015, fruit import

have been growing at a rate of 20% per year. The import of both tropical fruit and temperate fruit types has been increasing (Joseph 2016).

The steady increase of China's fruit imports has followed a series of trade related activities. China joined the WTO in 2001; the China ASEAN agreement on comprehensive economic cooperation was started in 2002 with the Early Harvest Program (EHP)¹; The EHP implemented a zero-tariff regime for all fruit products in 2004; the China-ASEAN free trade agreement (CAFTA) was signed in January 2010; China promoted the Belt Road Initiative (BRI) in 2013. Literature has studied the impact of these developments as they refer to China's fruit imports, and this will be discussed into more detail in the next section, as most policies are ASEAN related.

1.1 Product composition and import origin

According to China's agricultural market report using data from the Chinese General Administration, the top 5 imported fruits with a steadily increasing trend in the market were banana, cherry, dragon fruit, grape, and durian in 2015. These five fruits

¹ The "Early Harvest Program" is a free trade arrangement under the framework of CAFTA that is designed to accelerate the implementation of the China-ASEAN Economic Cooperation Framework Agreement. By reducing the tariffs on some products, agricultural products in particular, and including livestock, meat, fish, dairy products, living plants, vegetables, fruit, and nuts, the ASEAN countries can achieve early access to China's huge domestic market prior to establishment of the FTA." – Chinese Embassy in the Philippines.

comprised 55.6% of China's total fruit imports for that year. Particularly, banana counted for 13.2%, cherry 11.4%, dragon fruit 11.3%, grape 10%, and durian 9.7% respectively.

Since 2012, these five fruits have played a significant role in China's fruit imports. Particularly the share by banana and cherry have increased rapidly from 9.7% to 8.2% and 13.2% to 11.4% respectively to 2015. Cherry's import value grew the largest from 0.31 billion USD to 0.67 billion USD at an average annual growth rate of 29.9%. Banana's import value increased from 0.37 billion USD to 0.77 billion USD, an annual growth rate at 28.3%. Similarly, dragon fruit, grape, and durian achieved an annual growth rate for the imported value of 26.6%, 15.2%, and 12.4% respectively. The change in import value is shown in Figure 2.

Most of China's fruit imports are from other Asian countries, comprising 70%, mostly tropical fruit (Vietnam, the Philippines, and Thailand are the three major exporting countries). South America comprises about 20.5% (mainly from Chile, Peru, and Brazil), and North America 4.5% (mostly from the United States) on average in the past five years from 2012 (Wu and Zhao 2015) (Figure 3). Table 1 shows the specific change of import origin of the top five imported fruit types from 2012 to 2015. Import of banana from the ASEAN countries has decreased from 90.5% to 71.2% (although

still in the top position). The market share has been taken away by Ecuador that once obtained market access to China, the share of Ecuador's banana in China's total banana imports increased from 8.5% to 28.5%. Cherry from Chile has increased from 76.8% to 79.1% market share, and the United States' cherry share in China dropped from 23.1% to 14.5%. Chile and Peru are two grape exporting countries taking a large share in the Chinese market. The market share has increased from 25.3% and 8.5% to 39.1% and 36% respectively. In addition, in 2012 and 2015, all of China's dragon fruit and durian imports were from ASEAN countries, mainly Vietnam and Thailand.

Throughout the year, prices for the top five imported fruit types changed, with a generally increasing trend. The price for cherry increased the most from 0.76 USD/kg in 2001 to 7.34 USD/kg in 2015, 8.6 times, a yearly average increase of 17.6%. Compared to the cherry price, grape, durian, banana, and dragon fruit all showed a smaller increase, as indicated in Figure 4.

1.2 Factors affecting fruit imports

Due to the rapid economic growth, the Chinese people have enjoyed a higher income. They are more aware of eating healthier food and a healthy life style. Consuming fresh fruit is one of the ways to enjoy a healthier diet being promoted by the Chinese dietary guidelines designed by the Ministry of Health. Chinese people have

been under-consuming fruit according to these guidelines (Lei and Shimokawa 2017).

For a healthier dietary habit, people are consuming more fruit varieties and volume from different sources, especially the younger generation (Joseph 2016). After a series of food safety scandals (cooking oil, milk powder, fast food, etc.) in China, consumers prefer to buy imported food, including fruit, more for food safety concerns (Ministry of Agriculture of China 2016). 65% of China's national fruit consumption growth depends on the generation under 35 years old. They are more aware of various brands and the country of origin and consider that imported produce is premium quality (Joseph 2016). To reflect the increasing concern regarding health and food safety, China's fruit imports structure has gradually changed from low price fruit to premium fruit with higher prices. In addition, appreciation of the Chinese Yuan since 2014 makes imported fruit appear "cheaper" than before (Wu and Zhao 2015).

There is a general global trend to consume more fresh fruit than processed fruit. According to the United States Department of Agricultural information, the main fruit consuming countries such as Turkey, China, Russia, and the European Union have maintained the consumption of fresh fruit in the total of fruit consumption above 70% from 2010 to 2015. In particular Turkey and China's fresh fruit consumption rates have achieved over 90%. As the most developed economy, the fresh fruit consumption rate of

the United States has also increased from 3.3% to 45.7%. Detailed trends are shown in Figure 5, as the fresh fruit consumption share changes in the selected major fruit consumption countries from 2010 to 2015.

The cold chain transportation system has assured the increasing consumption of fresh fruit. While affecting consumption patterns, technological innovation has created new comparative advantages in the international fruit trade. Geographical proximity is no longer the dominant constraint for the fruit trade, particularly for fresh fruit. Fruit exporting countries with advanced cold chain transportation logistics can expect more trading opportunities. Regarding China's fruits imports and its largest neighboring trade partners – ASEAN countries. Technological advancements may be a challenge for small- and medium-sized enterprises, although they do have the significant advantage of geographical location. Thanks to the cold chain transportation system, recently China's banana imports have switched increasingly to Ecuador, a distant country in South America from the neighboring Philippines. Chile's cherry "flew" to China in 2016, and accounting for 80% of China's total cherry imports. Chile has surpassed the ASEAN countries to become the largest fruit exporting country to China by value in 2016 at more than 1.2 billion USD.

The development of e-commerce for fruit distribution makes imported fruit more available to the consumers (Wu and Zhao 2015). The main fruit retailers in China are now online. The fresh food e-commerce sales value is expected to reach 14 billion USD in 2017, with a penetration rate of 7% (Joseph 2016). The advantage of trading fresh food online is because it provides a direct and prompt service that saves transportation and storage time. Online fresh food sales have been increasing by more than 50% every year according to the Chinese Ministry of Commerce. The leading e-commerce company, Alibaba, has entered the online fresh produce business. Together with national fruit exporters' organizations they have signed a Memorandum of Understanding with New Zealand's Trade and Enterprises Board for kiwi fruit and other local fruit types, and have promoted Chilean blueberries and cherries in China in 2015 and 2016 (Joseph 2016). The e-commerce market for fresh fruit is also a competitive distribution channel. For example, JD.com, the second largest e-commerce company in China, has a well-developed logistical distribution channel, and in January 2016's Chinese New Year, sales of imported fresh food by JD.com rose by more than 300%.

Last but not least, China's more open trading policy is also having a positive impact on fruit imports. In addition to the series of FTA, China has signed with ASEAN, combined with lowering tariffs to zero and other benefits since 2002, China has also

opened its fruit market to many other countries around the world. In the Appendix, there is a list of fruit types and the origin country/region that are now permitted to enter China, the data was obtained from website of the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ). This particular office is the authority in charge of imports to China. They are updating the list of commodities that have obtained import permission every month. From the Appendix table, we can see that China is now importing more varieties of fruit from various countries around the world. The Government is endeavored to provide a greater variety and source of fruit for the Chinese consumers. The ongoing BRI is another important policy initiative, showing that China is devoted to a more open collaboration with other countries for mutual benefit, including the fruit trade. In general, the import demand for tropical fruit from the ASEAN countries and middle Asia, and temperate fruits from Europe will keep growing.

1.3 Import procedures and important ports

In order to export fruit to China, exporters require to comply with the following official requirements: first, check that the fruit is permitted to enter China. If so, through which ports. Then exporters should obtain the inspection certificate for that particular

commodity from the AQSIQ. The business procedure follows for contract signing, applying for import clearance at the Customs Dept., and finally Customs clearance.

Guangxi used to be the major channel for fruit imports to China, due to its geographical location neighboring Vietnam, and the railway and new road construction will access Vietnam directly. The fruit traded through Guangxi comes mainly from the ASEAN countries. There was three major ports in Guangxi, Pingxiang Puzhai, Fangchenggang, and Guilin. Imported fruit through Guangxi has increased from 510,000 tons in 2012 to over 1 million tons in 2015. In the first half year of 2016, the fruit from ASEAN countries, such as banana, mangosteen, watermelon, and durian totaled about 649,300 tons entering China through these three ports. To share the logistical pressure of the three ports, AQSIQ authorized three more ports to open for imports in Guangxi in April 2016. The three new ports are Longbang, Dongxing, and Qinzhu. These six ports in Guangxi cover land, sea, and air transportation with efficient distribution by better logistical and transportation arrangements for the fruit trade with the ASEAN countries (Chinanews 2016).

Another major access point for the ASEAN countries to China, Shenzhen, also has a large share of the fruit imports from the ASEAN countries to China. Wenjindu, a land port in Shenzhen, handles mainly the fruit trade (Shenzhen Customs, 2017). Because of

the increasing imports of premium fruits to China from other countries, such as the United States, Chile, and New Zealand, Shenzhen exceeded Guangxi in 2016, and handled 1.03 million tons of fruit imports, with a value of 15.2 billion CNY. This is the highest for China in both volume and value terms (Shenzhen Customs, 2017).

Commodities imported to China through Shenzhen include cherry, grape, and citrus fruit. Many fruit types are being imported to China for first time, such as cherry through Shekou Port.

China's largest fruit trading partner – ASEAN countries

With a series of trade agreements between China and ASEAN from 2000 to 2014, the fruit trade between these two regions has increase from 0.56 billion USD to 2.72 billion USD. Since 2002, more than 90% of China's tropical fruit imports came from ASEAN countries.

2.1 General analysis

Figure 6 shows the share of China's fruit imports from ASEAN countries, and the total fruit imports from 2001 to 2014. The timeline covers all the important policy changes China implemented mentioned in the last section of the report. From the data we see a clearly increasing trend of fruit imports by China, and the increased share by the ASEAN countries. The increasing rate of the share by the ASEAN countries seems

more stable than the total value. This is due to strong governmental support from both sides. After 2002, 2004, 2010 and 2013, when the policies were implemented, there was always a slightly bigger increase of fruit imported from ASEAN countries in the following year. The policies and agreements negotiated by these two economic regions have guaranteed stable growth of China's fruit imports from the ASEAN countries in the period of this being reviewed.

To further analyze China's tropical fruit imports from the ASEAN countries, six major countries with more data availability were selected; the Philippines, Malaysia, Thailand, Singapore, Indonesia, and Vietnam. These six countries in total account for more than 90% of China's and ASEAN's total tropical fruit trade value. Other countries, such as Laos, Myanmar, Cambodia, and Brunei have either too much missing data or a lower tropical fruit trade with China and are not discussed here (Zhuang and Zheng 2016). Zhuang and Zheng (2016) combined the HS 6 digit and 4 digit trade data from the UN Comtrade website, and conducted a series of analyses of the tropical fruit trade between China and the ASEAN countries. Based on their analyses, this report mainly focuses on China's import activity.

Firstly, observe the importance of the ASEAN countries for China's tropical fruit imports, Figure 7 shows China's total tropical fruit import share that the selected

ASEAN countries handled from 2002 to 2014. In 2000, only 58.25% of China's tropical fruit imports were from the ASEAN countries. After the China ASEAN agreement on comprehensive economic cooperation in 2002 (start of the EHP), this share increased rapidly and reached a peak in 2004 (zero-tariff fully implemented) of 96.21%. Until 2014 the share has fluctuated, but on average has achieved over 90% of China's total tropical fruit imports. Therefore, the EHP has indeed provided a market access advantage for the ASEAN countries, and made the ASEAN countries the most important import resource of tropical fruit for China, with Thailand and Vietnam taking the most advantage of these policies negotiated between China and ASEAN. China imported most tropical fruit from Thailand in 2004 at 58.88%. After that the share Thailand is taking has remained at about 40%. Vietnam's tropical fruit market share in China has been growing steadily since 2004, but a little bit up and down in certain years, and achieving about 20% on average. Indonesia's share has also increased while the share by the Philippines and Malaysia has decreased steadily.

On the other hand, how important is the Chinese market for the ASEAN countries' tropical fruit exports? Figure 8 describes the share that China took as the total tropical fruit export by the selected ASEAN countries respectively from 2002 to 2014. As for the ASEAN six countries' tropical fruit exports, the share has increased from 14.14% in

2004 to 27.45% in 2014. Among the six countries, the Chinese market has always been important for Vietnam, with its share at 30% on average, no matter the change of time or policies. The Philippines took the good opportunity to export to China, with the most rapid growth rate from 14.06% in 2004 to 33.76% in 2014. The exports share China took has also increased for Thailand and Indonesia, by 8.15% and 4.77% from 2004 to 2014 respectively. Hence, after application of the EHP, the export of tropical fruit to China has been taking a greater share by these countries. Malaysia's tropical fruit export to China experienced a big increase to 6.70%, followed by a drop to 2.05%. The Malaysian Government is committed to boost the country's tropical fruit exports to China since the BRI summit forum held in Beijing in May 2017. The Malaysian Government presented 43 fresh durian to the Chinese governmental representatives as a gift, representing the 43 years of diplomatic relations between the two countries, and promoting the country's determination to break the monopoly export of Thai durian to China, and the expectation of a growing market share in the future (Li and Liu 2017).

2.2 Features of the trade

Given the importance of the tropical fruit trade between China and the ASEAN countries, more analyses on the current trading characteristics have been conducted by Zhuang and Zheng (2016), Zhan, Xu, and Li (2016), and Zhang et al. (2016). The

tropical fruit trade between the two regions is considered as inter-industry according to the Grubel-Lloyd index calculation. The fruit products traded between the two regions are complementary to each other. China imports tropical fruit that is either not produced domestically or the domestic supply is limited, and with a different quality and variety; ASEAN imports China's temperate fruit such as apple, pear, and citrus, which are not grown in the tropical or semi-tropical regions where ASEAN countries are located.

In addition, the Trade Intensity Index is calculated to study whether CAFTA leads to trade expansion between/within member states, or trade diversion out to non-member states. Zhuang and Zheng (2016) calculated the index from 2000 to 2014, and found that the EHP under the CAFTA framework has promoted expansion of the tropical fruit trade, i.e. an increasing trade volume between the ASEAN countries and China in the short-term. Particularly, the trade expansion between China and Vietnam achieved the highest level. However as time goes by, in the long run the trade expansion effect reduced. The paper also calculated the index between China and non-CAFTA member states, such as Japan and the United States, during the same period to analyze the trade diversion effect. They found that in the long-run there has been an increasing volume of trade between China and the non-member countries in the short-term. This result was

supported by the actual trading records. China has been importing tropical fruit from more sources in increasing varieties (Zhan, Xu, and Li 2016; Zhang et al. 2016).

2.3 Policy impact of BRI

The Chinese BRI negotiated in 2013, is considered a great opportunity for the agricultural sector to explore more business opportunities and collaboration with countries included in the BRI, and should have a significant impact on the future development of the sector. The specific development strategy the BRI offers the agricultural sector promotes the agricultural trade, removes the trade barriers, and achieves a multi-dimensional development of the agricultural sector (Li 2016; Tan et al. 2016).

Specifically, the BRI continues to foster the fruit trade between China and the ASEAN countries combined with CAFTA. Meanwhile, it offers new opportunities for future trade development between the two regions. With the BRI, the Asian Infrastructure Investment Bank proposed development of improved transportation infrastructure to connect China with the ASEAN countries covering Thailand, Vietnam, Myanmar, and Indonesia, where there have been land transportation difficulties for the trade. The transportation infrastructure development covers the construction of roads

and railways from China to these neighboring countries. Better transportation will benefit the fruit trade.

The BRI enhances the establishment and expansion of e-commerce and its increasing application to the cross-border business (including fruit) between China and the neighboring countries, including the ASEAN countries. The information and communication technology in Vietnam, Thailand, the Philippines, and the other ASEAN countries have a limited capacity that has hindered the fruit and agricultural trade in particular, given the fact that most farmers and dealers in these developing countries are small- and medium-sized enterprises (SMEs). Through the BRI, the Chinese Government is committed to foster e-commerce facilities, including e-payment, Internet ordering, off-Internet logistics, and a series related steps.

The BRI creates more opportunities and provides a greater platform for China and the ASEAN countries to achieve more effective and efficient communications. Specifically, under the BRI framework, China and the ASEAN countries can seek further collaboration opportunities, discuss trade policies, collect feedback, and monitor future policy implementation more effectively. This is beneficial for a sustainable fruit trade between the two regions in the long run.

Summary

This reports reviews the literature and related news regarding China's fruit imports, with the focus on China's fruit from one of its major trade partners, the ASEAN countries. When reviewing the information, some problems with China's current fruit imports were identified along with potential policy suggestions.

Despite the increasing access to the Chinese market, whereby a greater variety of fruit types from different sources have been allowed to enter China, it is still difficult for fruit to be exported to China. For example, banana and watermelon from Laos have passed the quality inspection certification and obtained permission to enter China since AQSIQ. However, the actual import volume from Laos is limited due to Customs clearance inefficiency and other communication barriers. In spite of lowering the tariff rate and removing trade barriers, other domestic regulations still hinder fruit exports to China. For example, it is difficult for fruit traders in Vietnam to obtain the appropriate visa to visit China for business purposes.

To really facilitate China's fruit imports, improved Customs procedures, strengthened port inspection and quality control, and the establishment of common standards for the sanitary and phytosanitary measures are required (Zhan, Xu, and Li 2016; Zhang et al. 2016). With continuous effort and potential friction caused by various non-tariff measures and technical barriers can surely be reduced.

References

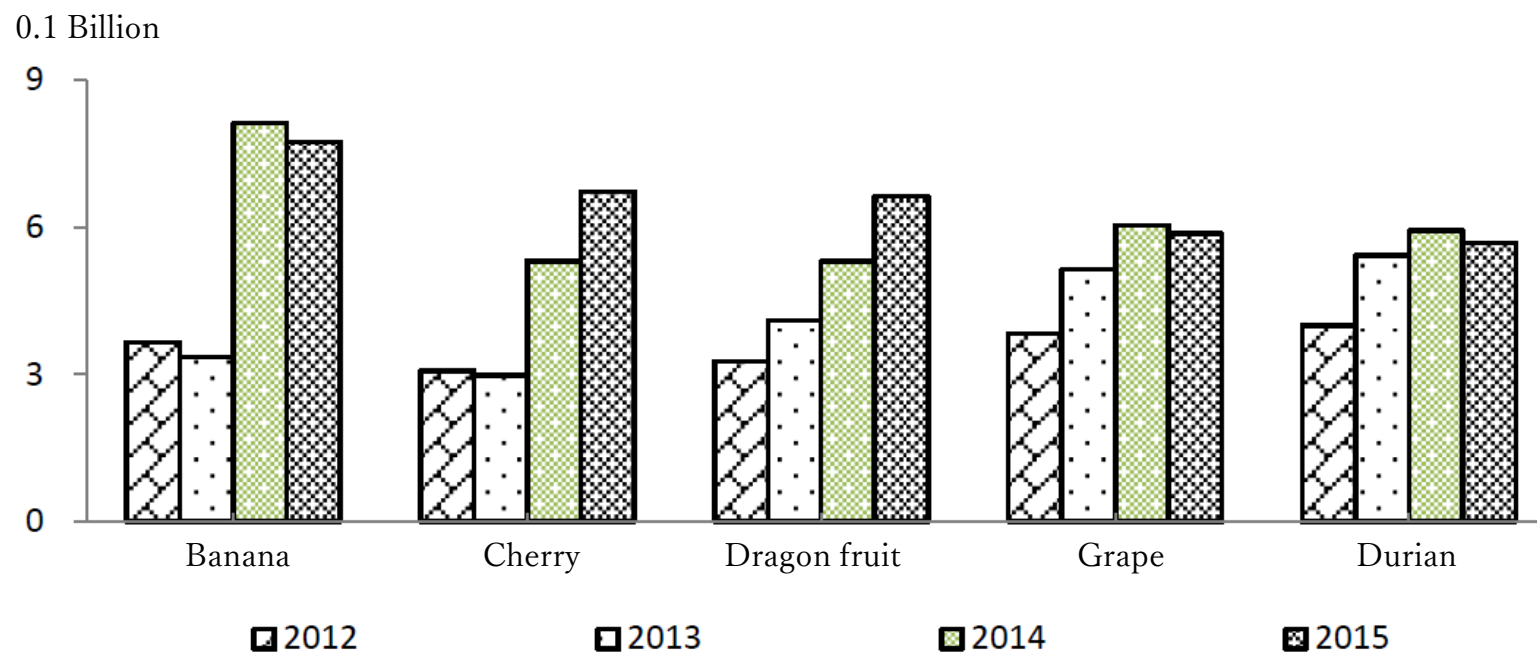
- Chinanews. “广西进境水果指定口岸增至 6 个成东盟水果输华最大通道”. (2016)
Available at: <http://www.chinanews.com/life/2016/07-01/7924912.shtml>
- Manuel Joseph 2016 “Chinese imports still growing, with healthier and tastier fruit”
Eurofresh. 2016. Available at:
<https://www.eurofresh-distribution.com/news/chinese-imports-still-growing-healthier-and-tastier-fruit>
- Lei, Lei, and Satoru Shimokawa. "Promoting dietary guidelines and environmental sustainability in China." *China Economic Review* (2017).
- Min Li and Yang Liu. “中国—东盟水果贸易，从一颗榴莲说起” 2017 Available at:
http://www.sohu.com/a/206690974_402008
- 李义伦 Yilun Li. "基于“一带一路”农产品国际贸易未来发展趋势研究." *经济研究导刊*No. 299.18 (2016):154-155.
- Ministry of Agriculture of China. “China Agricultural Trade Development Report 2016.” Beijing (2016 中国农产品贸易发展报告 农业部农产品贸易办公室, 农业部农业贸易促进中心 编)
- Shenzhen Customs. “深圳受零关税利好影响进口水果大增”. (2017) Available at:
http://www2.customs.gov.cn/tabid/1686/ctl/InfoDetail/InfoID/218461/mid/8194/Default.aspx?ContainerSrc=%5BG%5DContainers%2F_default%2FNo+Container
- 谭晶荣 Jingrong Tan, 王丝丝 Sisi Wang, and 陈生杰 Shengjie Chen. ““一带一路”背景下中国与中亚五国主要农产品贸易潜力研究." *商业经济与管理* 1(2016):90-96.
- 武婕 Ji Wu, and 赵俊晔 Junye Zhao. "当前中国水果市场分析及展望." *农业展望* 10 (2015):18-21.
- 詹柴 Chai Zhan, 徐志豪 Zhihao Xu, and 李佳丹 Jiadan Li. ““一带一路”背景下中国—东盟水果贸易结构与发展机遇分析." *台湾农业探索* 6(2016):28-33.
- 张艳玲等 Yanling Zhang et al. "中国-东盟自由贸易区建立对我国热带水果产业影响研究." *中国热带农业* 5(2016):5-8.
- 庄丽娟 Lijuan Zhuang, and 郑旭芸 Xuyuan Zheng. "中国-东盟热带水果贸易强度及潜力分析." *华南农业大学学报(社会科学版)* 15.1(2016):82-91.
- 周艳 Yan Zhou. "我国水果进出口贸易分析." *农村经济与科技* 10(2015):100-101.
- Zhiyan Consulting data available from:
<http://www.chyxx.com/industry/201707/540995.html>

Figure 1



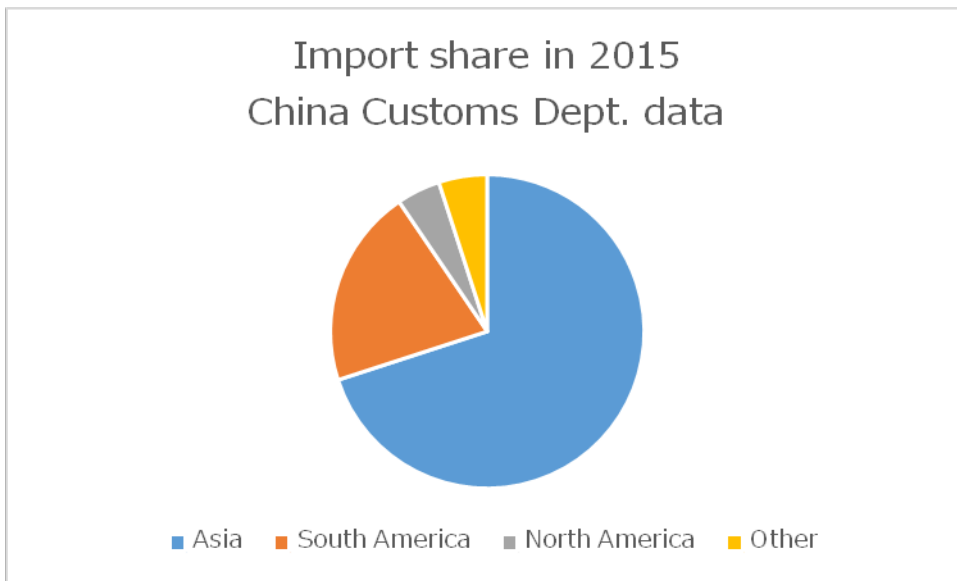
Source: China Custom Dept. data organized by Zhiyan Consulting

Figure 2



Source: Ministry of Agriculture of China, 2016

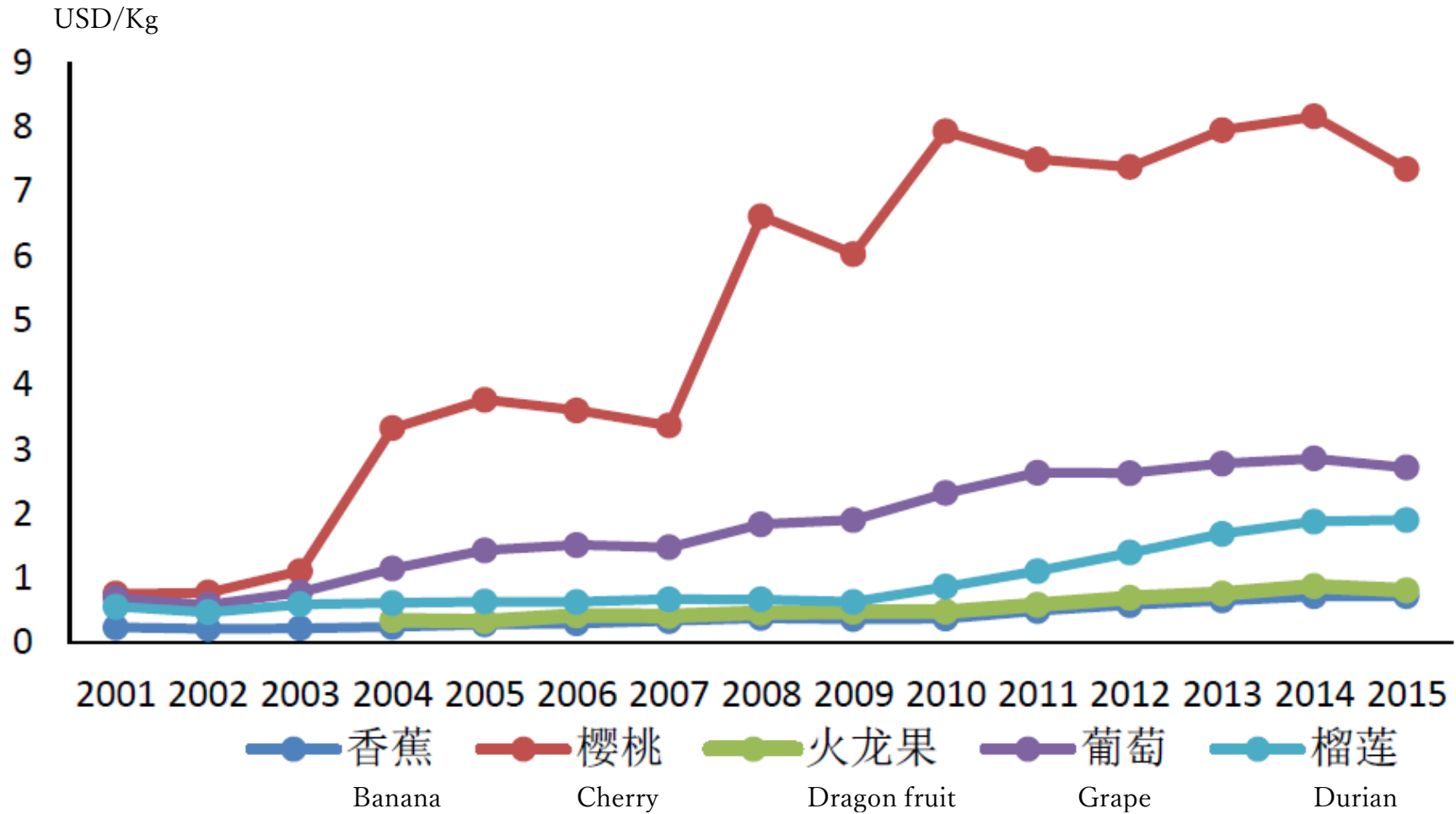
Figure 3



Source: Wu 2015

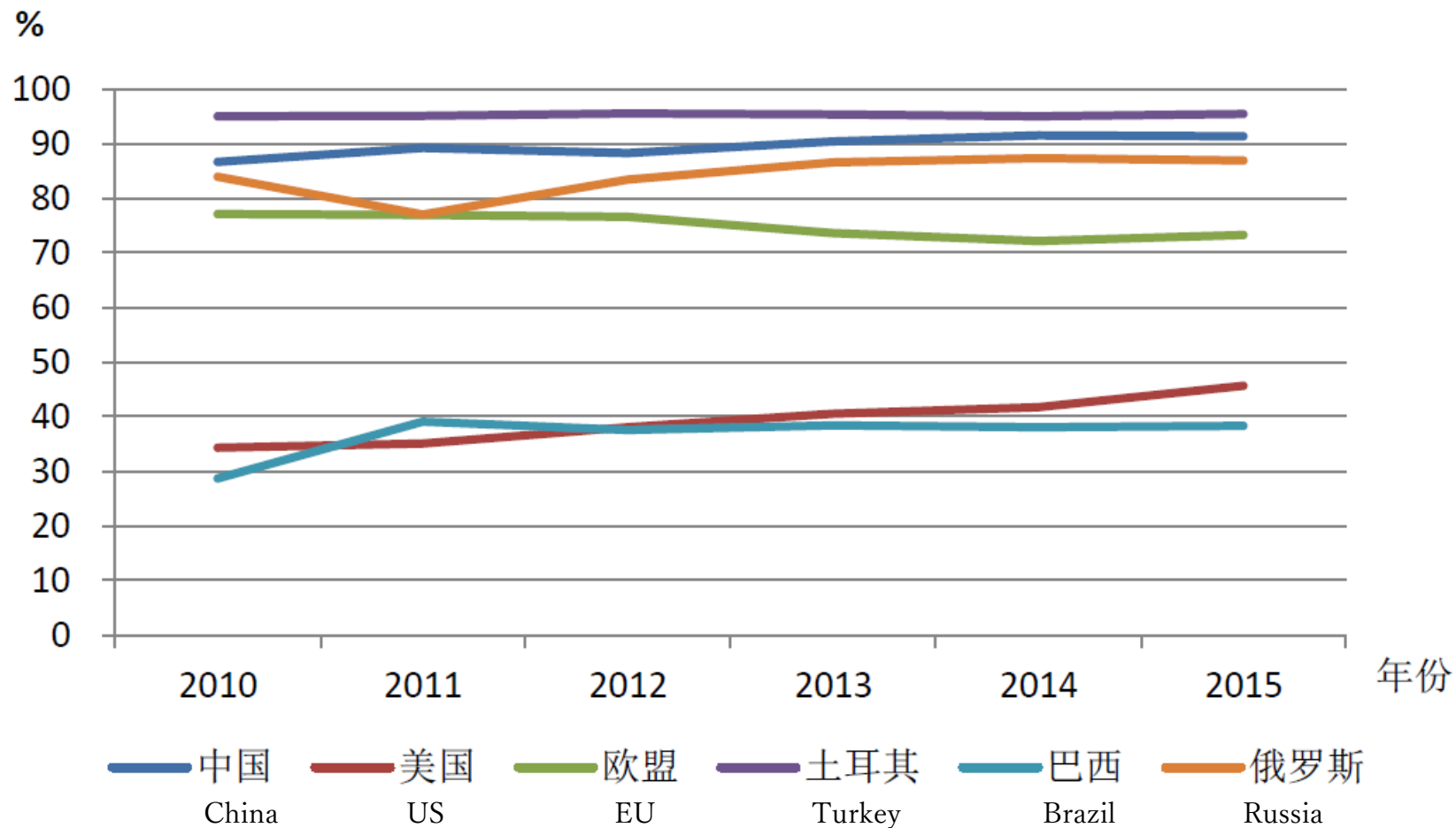
Table 1: Import destination share in 2011 and 2015 (China's top 5 imported fruit types)				
	2012		2015	
Product	From	Share %	From	Share %
Banana	ASEAN	90.5	ASEAN	71.2
	Ecuador	8.5	Ecuador	28.5
	Costa Rica	0.8	Costa Rica	0.3
Cherry	Chile	76.8	Chile	79.1
	US	23.1	US	14.5
	New Zealand	0.1	Canada	3.7
Dragon fruit	ASEAN	99.98	ASEAN	99.9
	China Taiwan	0.02	China Taiwan	0.1
Grape	Chile	25.3	Chile	39.1
	US	10.7	Peru	36.0
	Peru	8.5	US	10.2
Durian	Thailand	100	Thailand	100
Source: Ministry of Agriculture of China 2016				

Figure 4



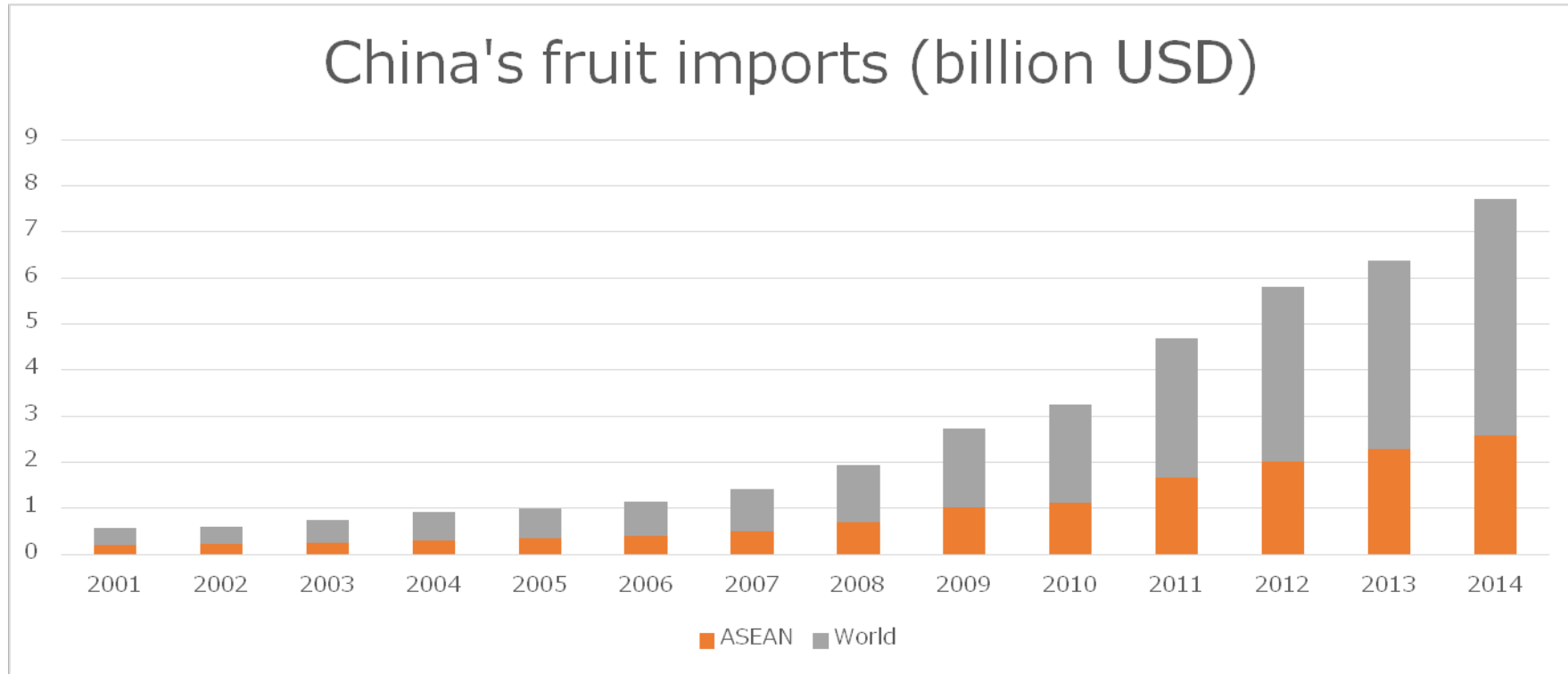
Source: Ministry of Agriculture of China 2016

Figure5



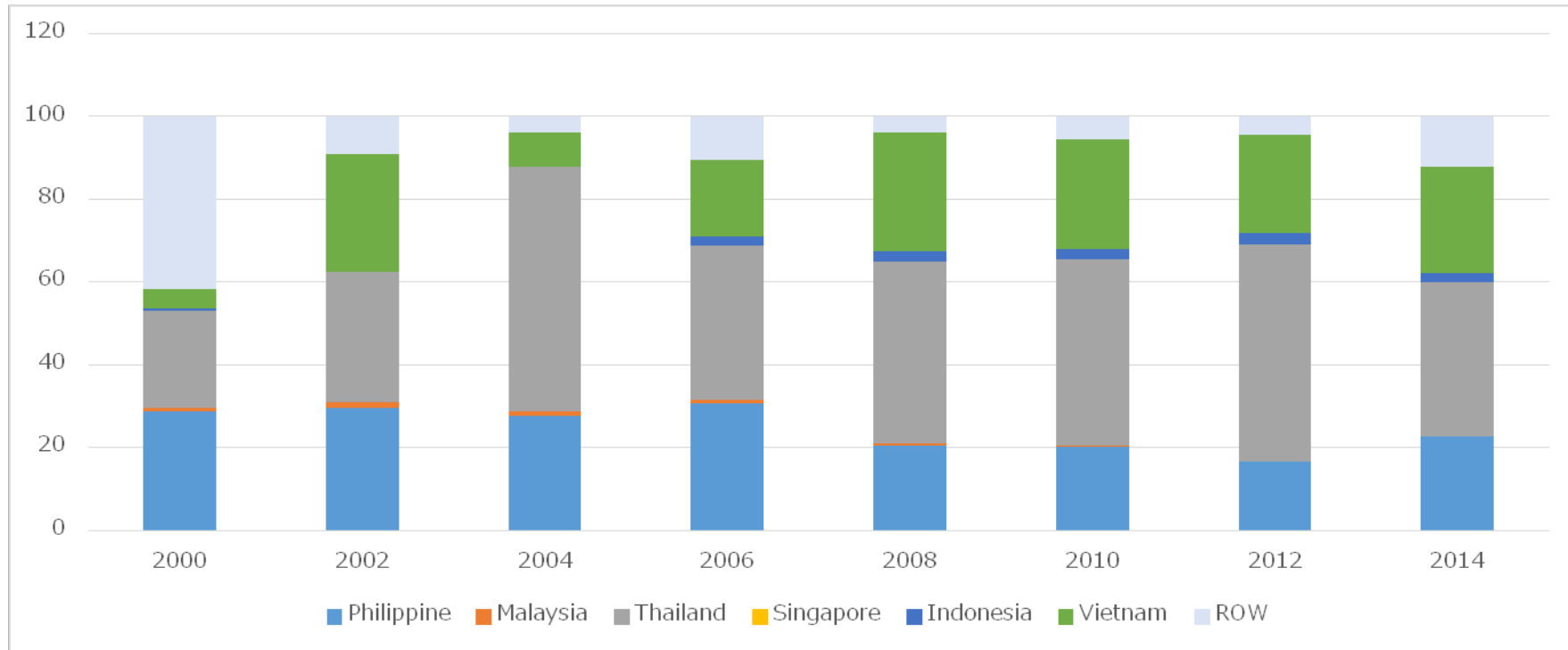
Source: Ministry of Agriculture of China 2016

Figure 6



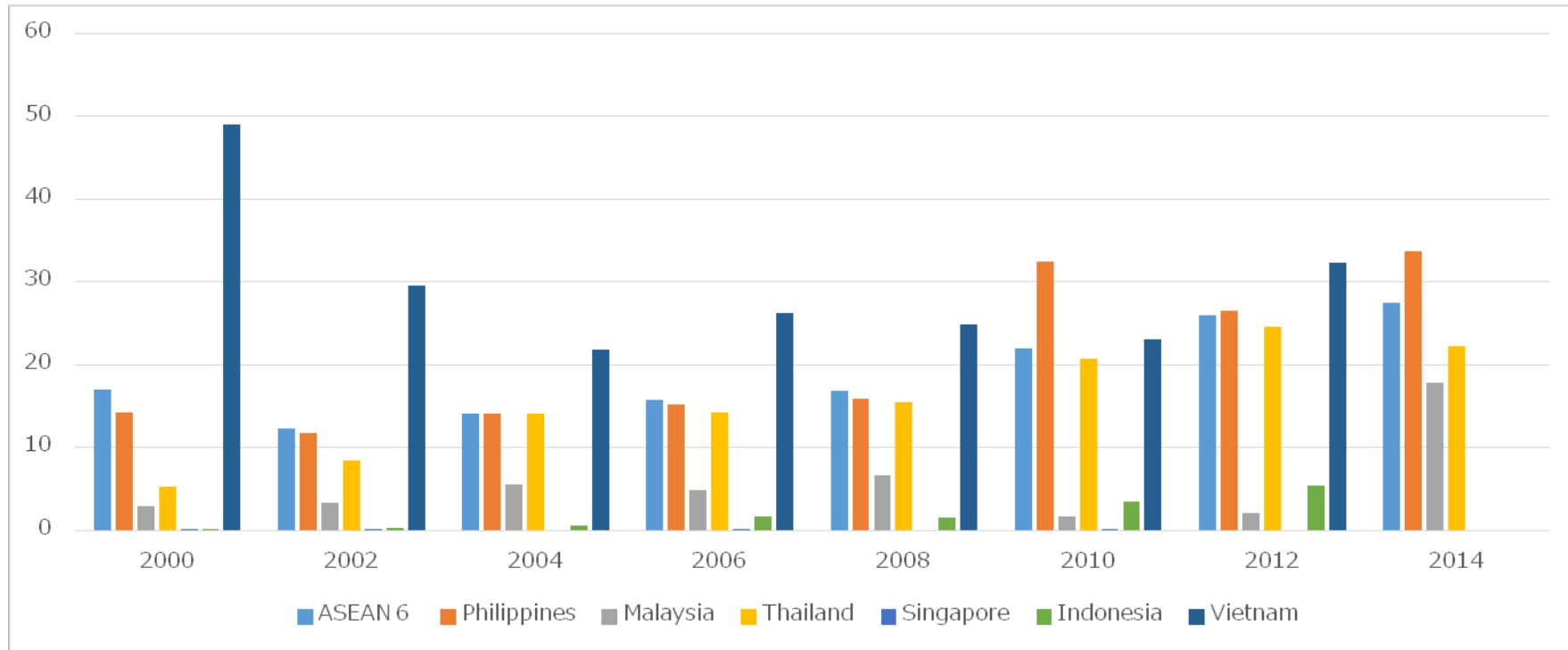
Data from UN Comtrade

Figure 7



Data from Zhuang and Zheng, 2016

Figure 8



Data from Zhuang and Zheng 2016

Appendix

获得我国检验检疫准入的新鲜水果种类及输出国家/地区名录 (2018 年 01 月 29 日更新)

Fruits and origin country/region that have obtained inspection certification and permission to enter China (updated Jan/29/2018)

输出国家/地区 Exporting country/region	水果种类 Fruit
泰国 Thailand	罗望子 (<i>Tamarindus indica</i> ; Tamarind)、番荔枝 (<i>Annona squamosa</i> ; Sugarapple)、番木瓜 (<i>Carica papaya</i> ; Papaya)、杨桃 (<i>Averrhoa carambola</i> ; Carambola)、番石榴 (<i>Psidium guajava</i> ; Guava)、红毛丹 (<i>Nephelium lappaceum</i> ; Rambutan)、莲雾 (<i>Syzygium samarangense</i> ; Rose apple)、菠萝蜜 (<i>Artocarpus heterophyllus</i> ; Jackfruit)、椰色果 (<i>Lansium parasiticum</i> ; Long kong)、菠萝 (<i>Ananas comosus</i> ; Pineapple)、人心果 (<i>Manilkara zapota</i> ; Sapodilla)、香蕉 (<i>Musa</i> sp. ; Banana)、西番莲 (<i>Passiflora caerulea</i> ; Passion fruit)、椰子 (<i>Cocos nucifera</i> ; Coconut)、龙眼 (<i>Dimocarpus longan</i> ; Longan)、榴莲 (<i>Durio zibethinus</i> ; Durian)、芒果 (<i>Mangifera indica</i> ; Mango)、荔枝 (<i>Litchi chinensis</i> ; Litchi)、山竹 (<i>Garcinia mangostana</i> ; Mangosteen)、柑橘[桔 (<i>Citrus reticulata</i> ; Mandarin orange)、橙 (<i>Citrus sinensis</i> ; Orange)、柚 (<i>Citrus maxima</i> ; Pomelo)]
马来西亚 Malaysia	龙眼 (<i>Dimocarpus longan</i> ; longan)、山竹 (<i>Garcinia mangostana</i> ;

	<p>Mangosteen) 荔枝 (<i>Litchi chinensis</i> ; Litchi) 椰子 (<i>Cocos nucifera</i> ; Coconut) 西瓜 (<i>Citrullus lanatus</i> ; Watermelon) 木瓜 (<i>Chaenomeles sinensis</i> ; Pawpaw) 红毛丹 (<i>Nephelium lappaceum</i> ; Rambutan) 菠萝 (<i>Ananas comosus</i> ; Pineapple)</p>
<p>印度尼西亚 Indonesia</p>	<p>香蕉 (<i>Musa <u>nana</u></i> ; <u>Banana</u>) 龙眼 (<i>Dimocarpus longan</i> ; longan) 山竹 (<i>Garcinia mangostana</i> ; Mangosteen) 蛇皮果 (<i>Salacca zalacca</i> ; Salacca)</p>
<p>菲律宾 Philippines</p>	<p>菠萝 (<i>Ananas comosus</i> ; Pineapple) 香蕉 (<i>Musa <u>sp.</u></i> ; <u>Banana</u>) 芒果 (<i>Mangifera indica</i> ; Mango) 番木瓜 (<i>Carica papaya</i> ; Papaya)</p>
<p>越南 Vietnam</p>	<p>芒果 (<i>Mangifera indica</i> ; Mango) 龙眼 (<i>Dimocarpus longan</i> ; longan) 香蕉 (<i>Musa <u>sp.</u></i> ; <u>Banana</u>) 荔枝 (<i>Litchi chinensis</i> ; Litchi) 西瓜 (<i>Citrullus lanatus</i> ; Watermelon) 红毛丹 (<i>Nephelium lappaceum</i> ; Rambutan) 菠萝蜜 (<i>Artocarpus heterophyllus</i> ; Jackfruit) 火龙果 (<i>Hylocereus undulatus</i> ; Pitaya)</p>
<p>缅甸 Myanmar</p>	<p>龙眼 (<i>Dimocarpus longan</i> ; Longan) 山竹 (<i>Garcinia mangostana</i> ; Mangosteen) 红毛丹 (<i>Nephelium lappaceum</i> ; Rambutan) 荔枝 (<i>Litchi chinensis</i> ; Litchi) 芒果 (<i>Mangifera indica</i> ; Mango) 西瓜 (<i>Citrullus lanatus</i> ; Watermelon) 甜瓜 (<i>Cucumis melo</i> ; Melon) 毛叶枣 (<i>Zizyphus mauritiana</i> ; Indian jujube) (后四种水果限定从云南瑞丽、打洛口岸入境)</p>

老挝 Laos	西瓜* (<i>Citrullus lanatus</i> ; Watermelon)、香蕉* (<i>Musa <u>supientum</u></i> ; <u>Banana</u>)
尼泊尔 Nepal	柑橘*[橙 (<i>Citrus sinensis</i> ; Orange)、桔 (<i>Citrus reticulata</i> ; Mandarin)、 柠檬 (<i>Citrus limon</i> ; Lemon)]
印度 India	芒果 (<i>Mangifera indica</i> ; Mango)、葡萄 (<i>Vitis vinifera</i> ; Grape)
巴基斯坦 Pakistan	芒果 (<i>Mangifera indica</i> ; Mango)、柑橘类[桔 (<i>Citrus reticulata</i> ; Mandarin)、 橙 (<i>Citrus sinensis</i> ; Orange)]
斯里兰卡 Sri Lanka	香蕉* (<i>Musa <u>supientum</u></i> ; <u>Banana</u>)
土耳其 Turkey	樱桃 (<i>Prunus avium</i> ; Cherry)
以色列 Israel	柑橘[橙 (<i>Citrus sinensis</i> ; Orange)、柚 (<i>Citrus maxima</i> ; Pomelo (= <i>Citrus grandis</i> , 议定书异名))、桔子 (<i>Citrus reticulata</i> ; Mandarin)、柠檬 (<i>Citrus limon</i> ; Lemon)、葡萄柚 (<i>Citrus paradisi</i> ; Grapefruit (= <i>Citrus paradise</i> , 议定书异名))] (均为试进口)
塔吉克斯坦 Turkmenistan	樱桃 (<i>Prunus avium</i> ; Cherry)
吉尔吉斯斯坦 Kyrgyzstan	樱桃 (<i>Prunus avium</i> ; Cherry)
乌兹别克斯坦	樱桃* (<i>Prunus avium</i> ; Cherry)

Uzbekistan	
日本 Japan	苹果 (<i>Malus domestica</i> ; Apple) 梨 (<i>Pyrus pyrifolia</i> ; Pear)
朝鲜 North korea	蓝靛果 (<i>Lonicera caerulea</i> L. var. <i>edulis</i> Turcz. ex Herd. ; Sweetberry honeysuckle) 越橘 (<i>Vaccinium</i> sp. ; Lingonberry) (仅限加工使用)
韩国 South korea	葡萄 (<i>Vitis vinifera</i> ; Grape)
中国台湾 China Taiwan	菠萝(<i>Ananas comosus</i> ; Pineapple) 香蕉(<i>Musa</i> <u>sp.</u> ; <u>Banana</u>) 椰子(<i>Cocos nucifera</i> ; Coconut) 番荔枝(<i>Annona squamosa</i> ; Sugar apple , Sweet sop ; <i>Annona cherimola</i> × <i>Annonasquamosa</i> ; Atemoya) 木瓜 (<i>Chaenomeles sinensis</i> ; Pawpaw) 番木瓜 (<i>Carica papaya</i> ; Papaya) 杨桃 (<i>Averrhoa carambola</i> ; Fruit of Carambola) 芒果 (<i>Mangifera indica</i> ; Mango) 番石榴 (<i>Psidium guajava</i> ; Guava) 莲雾 (<i>Syzygium samarangense</i> ; Rose <u>apple</u>) 槟榔 (<i>Areca catechu</i> ; Betel nut) 李 (<i>Prunus salicina</i> ; Plum) 枇杷(<i>Eriobotrya japonica</i> ; Loguat) 柿子(<i>Diospyros kaki</i> ; Persimmon) 桃(<i>Prunus persica</i> ; Peach) 毛叶枣(<i>Zizyphus mauritiana</i> ; Indian jujube) 梅(<i>Prunus mume</i> ; Japanese apricot ,Mei) 火龙果(<i>Hylocereus undulatus</i> , <i>Hylocereus polyrhizus</i> , <i>Hylocereus costaricensis</i> ; Pitaya) 哈密瓜 (<i>Cucunmis melo</i> ; Melon , Cantaloupe) 梨 (<i>Pyrus pyrifolia</i> ; Pear) 葡

	<p>萄(<i>Vitis vinifera</i>, <i>Vitis labrusca</i> 及其杂交种 ,主要是巨峰葡萄 <i>Vitis vinifera</i> × <i>Vitis labrusca</i> na Bailey cv. Kyoho ;Grape), 柑橘[(桔(<i>Citrus reticulata</i>; Mandarin) 及其杂交种、柚 (<i>Citrus maxima</i> ; Pomelo), 葡萄柚 (<i>Citrus paradisi</i>; Grapefruit), 柠檬(<i>Citrus limon</i> ; Lemon), 橙(<i>Citrus sinensis</i> ; Orange)]</p>
<p>美国 USA</p>	<p>李(<i>Prunus salicina</i>, <i>Prunus domestica</i>; Plum. 加利福尼亚州), 樱桃(<i>Prunus avium</i>; Cherry. 华盛顿州、俄勒冈州、加利福尼亚州、爱达荷州), 葡萄(<i>Vitis vinifera</i> ; Grape. 加利福尼亚州), 苹果 (<i>Malus domestica</i> ; Apple), 柑橘类 (<i>Citrus</i> spp. ; 加利福尼亚州、佛罗里达州、亚利桑那州、德克萨斯州), 梨 (<i>Pyrus communis</i> ; Pear. 加利福尼亚州、华盛顿州、俄勒冈州), 草莓 (<i>Fragaria ananassa</i> ; Strawberry. 加利福尼亚州)</p>
<p>加拿大 Canada</p>	<p>樱桃(<i>Prunus avium</i>; Cherry. 不列颠哥伦比亚省) 蓝莓(<i>Vaccinium</i> spp. ; Blueberry ; 不列颠哥伦比亚省)</p>
<p>墨西哥 Mexcio</p>	<p>鳄梨(<i>Persea americana</i> Var. Hass ;Avocado) 葡萄(<i>Vitis vinifera</i>; Grape), 黑莓(<i>Rubus ulmifo-lius</i>; Blackberry) 和树莓(<i>Rubus idaeus</i>; Raspberry), 蓝莓 (<i>Vaccinium</i> spp. ; Blueberry)</p>
<p>巴拿马 Panama</p>	<p>香蕉 (<i>Musa</i> sp. ; Banana)</p>

厄瓜多尔 Ecuador	香蕉 (<i>Musa sp.</i> ; Banana)、芒果 (<i>Mangifera indica</i> ; Mango)
哥伦比亚 Colombia	香蕉 (<i>Musa sp.</i> ; Banana)
哥斯达黎加 Cost rica	香蕉 (<i>Musa AAA</i> ; Banana)、菠萝 (<i>Ananas comosus</i> ; Pineapple)
乌拉圭 Uruguay	柑橘类 (<i>Citrus spp.</i> , 柠檬除外)、蓝莓 (<i>Vaccinium spp.</i> ; Blueberry)
阿根廷 Argentina	柑橘[橙 (<i>Citrus sinensis</i> ; Orange)、葡萄柚 (<i>Citrus paradisi</i> ; Grapefruit)、桔 (<i>Citrus reticulata</i> ; Mandarin)及其杂交种]、苹果 (<i>Malus domestica</i> ; Apple)、梨 (<i>Pyrus communis</i> ; Pear)、葡萄* (<i>Vitis vinifera</i> ; Grape)、蓝莓* (<i>Vaccinium spp.</i> ; Blueberry)
智利 Chile	猕猴桃 (<i>Actinidia chinensis</i> , <i>Actinidia deliciosa</i> ; Kiwi fruit)、苹果 (<i>Malus domestica</i> ; Apple)、葡萄 (<i>Vitis vinifera</i> ; Grape)、李 (<i>Prunus salicina</i> , <i>Prunus domoestica</i> ; Plum)、樱桃 (<i>Prunus avium</i> ; Cherry)、蓝莓 (<i>Vaccinium spp.</i> ; Blueberry)、鳄梨 (<i>Persea americana</i> ; Avocado)、油桃 (<i>Prunus persica</i> var. <i>nectarine</i> ; Nectarine)
秘鲁 Peru	葡萄 (<i>Vitis vinifera</i> ; Grape)、芒果 (<i>Mangifera indica</i> ; Mango)、柑橘[葡萄柚 (<i>Citrus paradisi</i> ; Grapefruit (= <i>Citrus × paradisi</i> , 议定书异名))、桔 (<i>Citrus reticulata</i> ; Mandarin (= <i>Citrus reticulate</i> , 议定书异名))及其

	<p>杂交种 橙 (<i>Citrus sinensis</i>) 莱檬 (<i>Citrus aurantifolia</i>) 和塔西提莱檬 (<i>Citrus latifolia</i>)]、鳄梨 (<i>Persea americana</i>; Avocado)、蓝莓 (<i>Vaccinium</i> spp.; Blueberry)</p>
<p>法国 France</p>	<p>苹果 (<i>Malus domestica</i>; Apple)、猕猴桃 (<i>Actinidia chinensis, Actinidia deliciosa</i>; Kiwi fruit)</p>
<p>西班牙 Spain</p>	<p>柑橘[桔 (<i>Citrus reticulata</i>; Mandarin)、橙 (<i>Citrus sinensis</i>; Orange)、葡萄柚 (<i>Citrus paradisi</i>; Grapefruit)、柠檬 (<i>Citrus limon</i>; Lemon)]、桃 (<i>Prunus persica</i>; Peach)、李 (<i>Prunus salicina, Prunus domestica</i>; Plum)</p>
<p>意大利 Italy</p>	<p>猕猴桃 (<i>Actinidia chinensis, Actinidia deliciosa</i>; Kiwi fruit); 柑橘[橙 (<i>Citrus sinensis</i> cv. <i>Tarocco</i>, cv. <i>Sanguinello</i>, cv. <i>Moro</i>); Orange)、柠檬 (<i>Citrus limon</i> cv. <i>Femminello comune</i>; Lemon)]</p>
<p>塞浦路斯 Cyprus</p>	<p>柑橘[橙 (<i>Citrus sinensis</i>; Orange)、柠檬 (<i>Citrus limon</i>; Lemon)、葡萄柚 (<i>Citrus paradisi</i>; Grapefruit)、桔橙 (<i>Citrus sinensis</i> × <i>Citrus reticulata</i>; Mandora)]</p>
<p>比利时 Belgium</p>	<p>梨 (<i>Pyrus communis</i>; Pear)</p>
<p>希腊 Greece</p>	<p>猕猴桃 (<i>Actinidia chinensis, Actinidia deliciosa</i>; Kiwi fruit)</p>

荷兰 Holland	梨 (<i>Pyrus communis</i> ; Pear)
波兰 Poland	苹果 (<i>Malus domestica</i> ; Apple)
南非 South Africa	柑橘[桔 (<i>Citrus reticulata</i> ; Mandarin) 橙 (<i>Citrus sinensis</i> ; Orange) 、 葡萄柚 (<i>Citrus paradisi</i> ; Grapefruit) 柠檬 (<i>Citrus limon</i> ; Lemon)]、 葡萄 (<i>Vitis vinifera</i> ; Grape) 苹果 (<i>Malus domestica</i> ; Apple)
埃及 Egypt	柑橘类 (<i>Citrus</i> spp.) ; 葡萄 (<i>Vitis vinifera</i> ; Grape)
摩洛哥 Morocco	柑橘[橙 (<i>Citrus sinensis</i> ; Orange) 桔 (<i>Citrus reticulata</i> ; Mandarin) 、 克里曼丁桔(<i>Citrus clementina</i> ; Clementine)、葡萄柚 (<i>Citrus paradisi</i> ; Grapefruit)]☒
澳大利亚 Australia	柑橘[橙 (<i>Citrus sinensis</i> ; Orange) 桔 (<i>Citrus reticulata</i> ; Mandarin) 、 柠檬 (<i>Citrus limon</i> ; Lemon) 葡萄柚 (<i>Citrus paradisi</i> ; Grapefruit) 酸橙 (<i>Citrus aurantifolia</i> , <i>Citrus latifolia</i> , <i>Citrus limonia</i> ; Lime) 橘柚(<i>Citrus</i> <i>tangelo</i>) 甜葡萄柚(<i>Citrus grandis</i> × <i>Citrus paradisi</i>)]、芒果(<i>Mangifera</i> <i>indica</i> ; Mango) 苹果(<i>Malus domestica</i> ; Apple ,塔斯马尼亚州) 葡萄(<i>Vitis</i> <i>vinifera</i> ; Grape) 樱桃(<i>Prunus avium</i> ; Cherry) 核果[油桃(<i>Prunus persica</i> <i>var. nectarine</i> ; Nectarine) 桃 (<i>Prunus persica</i> ; Peach) 李 (<i>Prunus</i>

	<i>domestica</i> , <i>Prunus salicina</i> ; Plum) 杏 (<i>Prunus armeniaca</i> ; Apricot)]
新西兰 New Zealand	柑橘[桔 (<i>Citrus reticulata</i> , <i>Citrus deliciosa</i> , <i>Citrus unshiu</i> ; Mandarin) 橙(<i>Citrus sinensis</i> ; Orange) 柠檬(<i>Citrus limon</i> , <i>Citrus meyeri</i> ; Lemon)], 苹果(<i>Malus domestica</i> ; Apple) 樱桃(<i>Prunus avium</i> ; Cherry) 葡萄(<i>Vitis vinifera</i> ; Grape) 猕猴桃(<i>Actinidia chinensis</i> , <i>Actinidia deliciosa</i> , <i>Actinidia deliciosa</i> × <i>Actinidia chinensis</i> ; Kiwi fruit) 李 (<i>Prunus salicina</i> , <i>Prunus domestica</i> ; Plum) 梨(<i>Pyrus pyrifolia</i> , <i>Pyrus communis</i> ; Pear) 梅(<i>Prunus mume</i> ; Japanese apricot , Mei) 柿子 (<i>Diospyros kaki</i> ; Persimmon) 鳄 梨 (<i>Persea americana</i> ; Avocado)

备注：(1) 水果名称按照中文名、拉丁学名和英文名顺序表示，拉丁学名为斜体。

(2) * 已签订议定书，但未完成准入程序，目前暂不能进口。

(3) 本次更新了新西兰鳄梨一种水果品种。