# CHINA'S BAN ON CANADIAN CANOLA:

## *Reasons, Impacts, and Policy Perspectives*

by Shaoyan Sun
China Institute, University of Alberta
October 2020

UNIVERSITY OF ALBERTA
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# FOREWORD

The China Institute at the University of Alberta (CIUA) is pleased to publish Shaoyan Sun's Occasional Paper "China's ban on Canadian Canola: reasons, impacts, and policy perspectives." This paper provides a comprehensive and in-depth analysis of China's ban on Canadian canola, which was announced in March 2019 and which has remained unresolved. I believe that this paper is an important addition to the China Institute's focus on Canada-China trade and investment issues, as well as only the second publication on the subject of agriculture and agri-food in China. China is Canada's second-largest trade partner after the United States; however, the trade relations between the two countries have been severely challenged by political tensions triggered by the detention by Canada of Huawei CFO Meng Wanzhou and the arrest by China of Canadians Michael Kovrig and Michael Spavor in December, 2018. As the dominant agricultural product that Canada exports to China, the canola trade is a vital powerhouse for the Canadian economy and agriculture. The Canadian Canola Council statistics, however, show a significant drop of 70% in canola seed exports in 2019 from the volume in 2018.

Over the past one and half years, the canola trade dispute between Canada and China has shown no signs of easing but accumulating uncertainties due to the Covid-19 pandemic in 2020 and the deteriorating trade relations driven by a suspension of Canada-China free trade talks. In these circumstances, Shaoyan Sun's research elaborates on the trade situations between the two countries in detail, using canola as a representative case. Dr. Sun has determined that the decline in Canada's canola exports to China is not motivated by politics alone, and that the causes behind the canola ban need to be explored at deeper level.

China's desire to protect its domestic seed oil producers are a factor restraining canola imports, as well as a broad Chinese desire to maximize food self-sufficiency. But shifting and sometimes opaque Chinese trade policies complicate the need of Canadian exporters for stable export markets. The paper also provides insightful suggestions for Canadian policymakers and industry leaders with respect to China-Canada trade.

Dr. Shaoyan Sun has a strong background in agriculture and agri-food trade policy from based on her education and work experience. This is Dr. Sun's first sole-author Occasional Paper, although she has co-authored with the CIUA team other papers covering a wide range of topics on trade and investment, clean technology, and Canada-China relations.

In addition to the author we wish to thank Deputy Director Jia Wang for insightful comments, Tom Alton for his proofreading skills, and Genevieve Ongaro for her design and formatting contributions.

**Gordon Houlden**
Director
China Institute
University of Alberta

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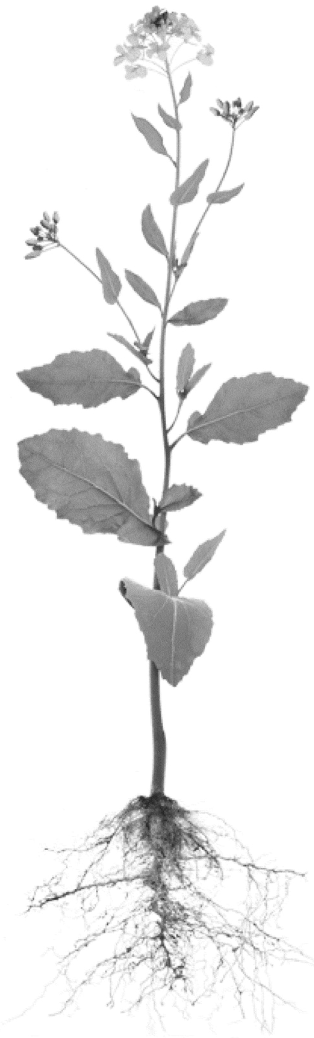


# EXECUTIVE SUMMARY

Three months after Huawei CFO, Meng Wanzhou, was arrested in Vancouver in December 2018, China decided to stop purchasing canola from two major Canadian canola exporters -- Richardson and Viterra. Most mainstream media sources identify the canola embargo as a political issue, whereby Beijing is trying to put pressure on Ottawa by targeting trade.

The actual reasons behind the canola dispute are, however, rather complex and closely related to several fundamental changes in China's economy and politics, including agricultural policy, domestic demand for imported rapeseeds, the development of China's own rapeseed industry, as well as China's political considerations in international relations. Other reasons, such as increasing concerns of GMO contained in Canadian canola from Chinese consumers and the African swine fever that have wiped out almost half of China's pig herd in 2019, also play a role in the dwindling interest in Canadian canola in the Chinese market.

China is Canada's biggest canola importer, purchasing 35% of Canada's canola seeds exports, 30% canola oil exports, and 45% canola meal exports in 2018. Similarly, Canada is the dominant rapeseed supplier for China, far ahead of other countries, such as Mongolia, Australia, and Russia. In 2018, 93.57% of rapeseeds, 98.12% of rapeseed meal, and 84.72% of rapeseed oil imported by China were from Canada. China faces a large rapeseed oil supply shortage due to strong domestic demand but limited domestic production of rapeseeds. We believe that the demand for imported rapeseed products will continue in order to fill the gap, which will remain for at least the next few years.

China's attitude to canola imports is highly correlated with the evolvement of its own agricultural policies in which national food security is deemed as a primary goal. Grain security is a key component of China's food security strategy. Different from the scheme of "absolute security" which stresses self-reliance as paramount in three staple grains (i.e., rice, wheat, and corn), a separate approach allowing for "moderate imports" is applied to oil seeds, such as soybeans and rapeseeds. The TSP (Temporary Storage Program), featuring a guaranteed minimum procurement price from the central government, was the primary policy for China's domestic rapeseed industry during the period of 2008-2015. China's rapeseed inventory soared during this period due to the accumulation of domestic rapeseeds under TSP.

The price gap between Chinese rapeseeds and Canadian canola seeds, as a result of TSP, is the primary reason for the soaring imports of canola seeds.

TSP was abolished in 2015. China then started to reduce rapeseed inventory accumulated during the TSP era. Given challenges such as the limited potential for expanding the growing area and rising input cost and declining profits of growing rapeseeds, China is unlikely to improve its rapeseed production significantly in a short period of time; thus, imported rapeseeds (including canola) will remain an irreplaceable source of rapeseeds for China in a possibly long period of time. China's current rapeseed policy appears ambiguous, but the abolishment of TSP signalled that the Chinese rapeseed market is gradually moving toward decentralization. As China's new Food Security White Paper of 2019 states, "moderate imports" are allowed for oilseeds in which China cannot fulfill the self-sufficiency goals with restraints such as limited land and increasing labour cost.

The Canada-China canola spat has not only affected the canola sectors in both countries, but it will also have a profound impact on the global grain market. Canola exports in the 2019-2020 crop year are expected to take a hard hit by the import ban on two major canola exporters. The unresolved trade tensions and the massive world supply of canola also pushed canola prices down as producers entered their fields for the fall harvest in 2019 after the ban was announced earlier that year. Canadian farmers are actually paying the price for the Canada-China canola dispute, some of whom have expressed their intentions to switch from canola to other crops in the 2020-2021 crop year. For China, the strong demand for rapeseed oil has driven China actively to actively seek substitutes for Canadian canola. However, it will not be easy to find a replacement for Canada to fill China's large demand gap in the short term.

Although it remains unclear when China will lift the canola ban, there is reason to believe China needs a high quantity of imported rapeseeds to fill the massive supply shortage, and Canadian canola appears to be an optimal solution to China's rapeseed dilemma. Closely monitoring the trends and developments in China's rapeseed sector and changes in China's rapeseed market can help Canadian producers and policymakers make better decisions in coping with the future demand fluctuations

for canola from China. Recent evidence of rising rapeseed oil futures prices in China suggests a strong trading interest of Canadian canola in the Chinese rapeseed market.

The COVID-19 pandemic has driven global food prices up in the past few months of 2020 and triggered global food security concern recently, adding new challenges to the Canada-China canola tensions that were already complex. However, canola has been performing surprisingly well since August 2020 as prices continued to rise in Canada and China. This suggests a strong demand for imported canola in China, where consumption of vegetable oil is bouncing back after a temporary dip due to the outbreak of COVID-19. The strong demand for rapeseed oil, rising rapeseed prices, and limited production capacity of China's alternative rapeseed exporters are important factors that may help paint a brighter future of Canada-China canola trade.

# 1 AN OVERVIEW OF CHINA'S EMBARGO ON CANADIAN CANOLA

## 1.1 The Canola Crisis Between Canada and China

In March 2019, China announced its intention to revoke the registration of two major Canadian canola exporters -- Richardson and Viterra, citing concerns over pests and diseases discovered in the canola shipments by the two companies. In the official statements from China's General Administration of Customs, claimed that diseases and pests were detected in the canola shipments from Richardson and Vitterra and that their registrations had already been cancelled.

Given that the canola ban occurred only three months after Huawei CFO Meng Wanzhou was arrested at the Vancouver International Airport by Canadian authorities, the Chinese action immediately sparked speculation from the media that China had halted canola imports from Canada as retaliation for the arrest of Meng. In this context, most mainstream Canadian media sources identified the canola embargo as a political issue, wherein Beijing was trying to put pressure on Ottawa by targeting trade. The actual reasons behind the canola ban are, however, rather complex. Political tension may play an important role, since China has a record of using trade barriers for political ends. For example, the country engaged in a Norwegian salmon ban due to a Chinese dissident's Nobel Peace Prize win in 2010. But with regards to the Canadian canola dispute, looking at the record dating back to 2009 and 2016, the PRC actions appear to be a combination of political, economic and social factors.

## 1.2 Reasons Behind the Canola Ban

The official reason China has provided for the canola embargo is concern regarding quality. According to an official statement issued by China's General Administration of Customs on March 7, 2019, several "hazardous organisms" were detected in canola shipments from Canada. The General Administration of Customs decided to cancel the import registration of the Winnipeg-based Richardson International Ltd. On March 26th, the permit of a second major Canadian canola exporter, Regina-based Viterra Inc., was revoked due to the same reason.

However, it is surely not a coincidence that the ban was imposed shortly after the Huawei feud. Since Meng was arrested in Canada in December 2018, the Canada-China bilateral relationship turned unprecedentedly frosty. China detained two Canadians, Michael Kovrig and Michael Spavor, after Meng's arrest and Canada subsequently issued a travel warning for Canadian travellers to China as a response. The political tension caused by the Huawei feud appears to be a widely accepted narrative of why China decided to stop purchasing canola from Canada. Canada-China relations have been challenged by the power struggle between U.S., Canada's biggest market, and China, Canada's most prominent alternative market, since President Donald Trump took office. In late 2017, Canada and China failed to launch free trade talks as previously anticipated. This was a sign of Canada's hesitation in constructing a free trade system with China, citing concerns on some social issues (e.g., human rights, gender, etc.) in China. One year later, Canada, with the U.S. and Mexico, signed the USMCA, which contained a provision which would further complicate any Canadian effort to conclude a free trade agreement with China.

The Huawei feud may have been a primary trigger for the trade tensions; however, it is not the only reason that Canadian canola shipments were halted in China. If we take a close look at the trade history between China and Canada, there have been long-standing arguments between the two countries on canola quality. In late 2009, China first restricted imports of Canadian canola, citing concerns over transmission of blackleg, a fungal disease, to Chinese rapeseed. Scientists from both countries worked together to eliminate the risk of the disease. Canadian and Chinese officials also worked diligently on finding a science-based approach to resolve the long-standing issue. Canada further agreed that canola exported to China would be delivered only to processing plants far from rapeseed-growing areas, which has virtually eliminated the risk of transmission. With these measures in place, China soon became the biggest buyers of Canadian canola seeds, with annual sales reaching up to four million tonnes.[1] In early 2016, China again raised concerns about Canadian canola for spreading blackleg, asking Canada to cut the dockage rate — the amount of extraneous material, such as stems and pods, in canola delivery — from 2.5 percent

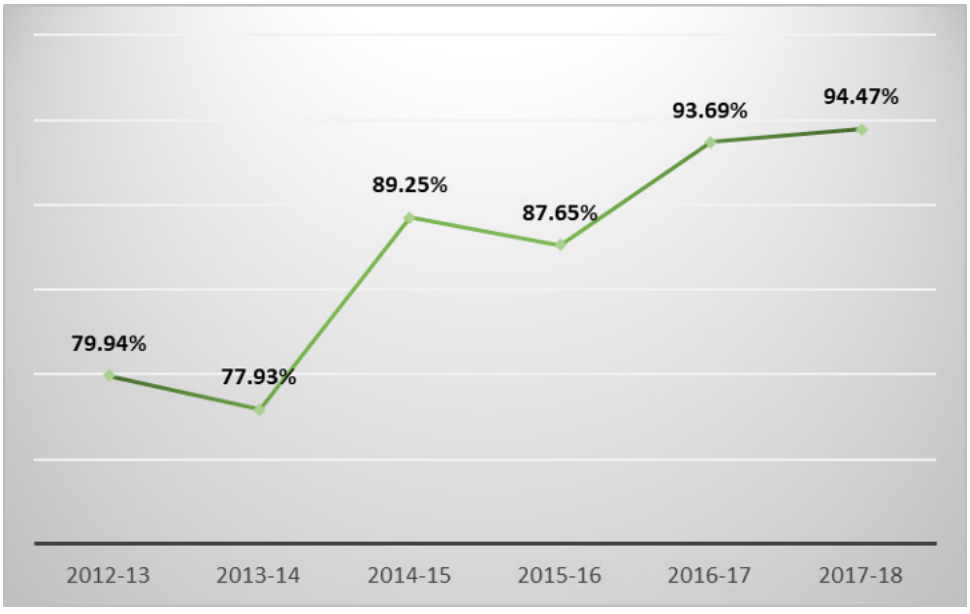
to 1 percent. With the efforts made by Trudeau government in negotiating with China, a temporary agreement was reached between the two countries and China agreed to continue to buy canola from Canada under the regulatory terms that were in effect before the 2016 dispute.

We can also attribute a sharp plunge on the demand side for canola seeds last year in China to the outbreak of African Swine Fever (ASF) in late 2018. Canola is a significant source of animal feed in China. ASF has been estimated to have wiped out almost 40 percent of China's pig population.[2] The number of pig herds and sows continued to decline in 2019.[3] Rabobank even predicted a 50 percent loss of pig herd due to deaths and culling by the end of 2019.[4,5] This resulted in a significant reduction in animal feed and severely influence the seed industry. Canola is a substantial source of pig feed in China. One-third of imported canola was processed for animal feed in China in 2018, most of which was used in pig feed.[6]

The changes in China's agricultural policies may also be an intrinsic factor prompting China to apply the canola ban. China periodically updates its agricultural policies in response to the changes in the domestic agricultural environment and international food prices. Facing challenges such as increasing food demand, a rural-urban income gap and rising concerns of domestic food insecurity, China shifted its agricultural policy from a system of taxing to subsidizing agriculture in the early 2000s. The Temporary Storage Program (TSP) was introduced to the rapeseed sector to subsidize Chinese rapeseed producers and foster the local rapeseed industry. TSP, however, had led to several unexpected outcomes due to the distorted rapeseed prices centrally set by the Chinese government. One prominent unexpected result is the soaring rapeseed oil reserves which soon turned out to be a burden for China due to little purchase interest as a result of the distortedly high prices and quality concerns from buyers.

China's intention to protect its rapeseed farmers and foster a domestic canola industry that was nearly wiped out by imported canola from Canada is another reason for the canola embargos. In early 2009, Chinese rapeseed oil processing enterprises, especially the medium-and small- sized firms, were struggling with the falling prices of rapeseed oil due to the outbreak of the global financial crisis in 2008. 208 out of 220 local rapeseed oil processing enterprises in China reportedly experienced heavy financial losses during that period.[7] Imported canola seeds with lower prices are more favourable for those struggling processing enterprises under such circumstances. The volume of canola imports from Canada hit a record high in 2009, reaching 3.286 million tonnes.[8] Due to the surge of canola imports, the Ministry of Commerce of the People's Republic of China (MOFCOM) issued an import alert notification in late April 2009, reminding processing enterprises of the risks of "excessive" imports.[9] A similar situation occurred in 2016; one year after TSP was abolished, the price plunge of local rapeseed deeply reduced farmers' incentive to grow the crop, and in turn, resulted in the shutting down of rapeseed oil processing enterprises. However, canola imports have remained high since 2013. The two crises in China's rapeseed sector imply a plausible linkage to 2009 and 2016 canola bans.

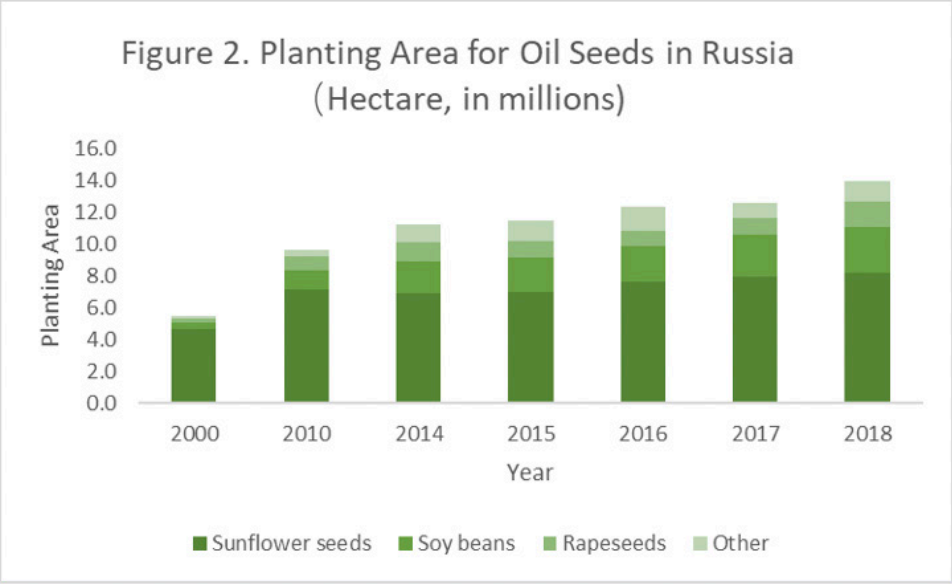
**Figure 1.** The Percentage of Rapeseed Imports that Originate from Canada




**Data source:** United States Department of Agriculture (USDA) and Canola Council of Canada (CCC)

As an essential part of its new food security strategy, China has attempted to diversify its food supplies since the 2008 global food price crisis. As the U.S.-China Economic and Security Review Commission (USCC) concluded, China appears to seek new suppliers for its food imports through the promotion of foreign farm investment and Belt and Road Initiative (BRI).[10] Although China also imported a small amount of rapeseed from Australia, Russia and Mongolia, the rapeseed sector had long been considered as highly reliant on Canadian canola. As Figure 1 shows, canola dominated China's rapeseed imports by accounting for more than 70% of China's total rapeseed imports since 2012. Diversification of rapeseed imports is an integral part of China's food supply diversification strategy. In recent years, China has started to import rapeseed from Russia and Mongolia, in addition to rapeseed meal from India. China's rapeseed trade with BRI partners such as Central Asian countries, Russia, and Mongolia may have significant potential in the future, especially after the Canada-China canola dispute. In Figure 2, showing the planting area of major oil crops (including oil rape) in Russia, there is a significant increase in the planting area for oil seeds between 2010 and 2018.

**Figure 2.** Planting Area for Oil Seeds in Russia




**Data source:** Feedtrade China[11]

Chinese consumers' concern over GMOs is not a critical factor for the ban, but can have a big impact on the demand for canola oil. China adopted a mandatory labelling approach for food containing GMOs, to protect consumers' right to know. When making food choices, Chinese consumers are generally reluctant to purchase products with a GMO label. A study by Huang and Peng (2015) shows that a large portion of the Chinese population has minimal knowledge about GM technology, and many of them believe GM food is unhealthy and not safe.[12] In China, GM-rapeseeds are forbidden to be included in the national reserve system. In contrast, domestic rapeseeds, and rapeseeds from Russia and Australia do not contain GMOs. Thus, Canadian canola products have no advantage in winning over Chinese consumers' trust in this respect.

# 2 CANOLA: A GREAT SUCCESS STORY OF CANADA

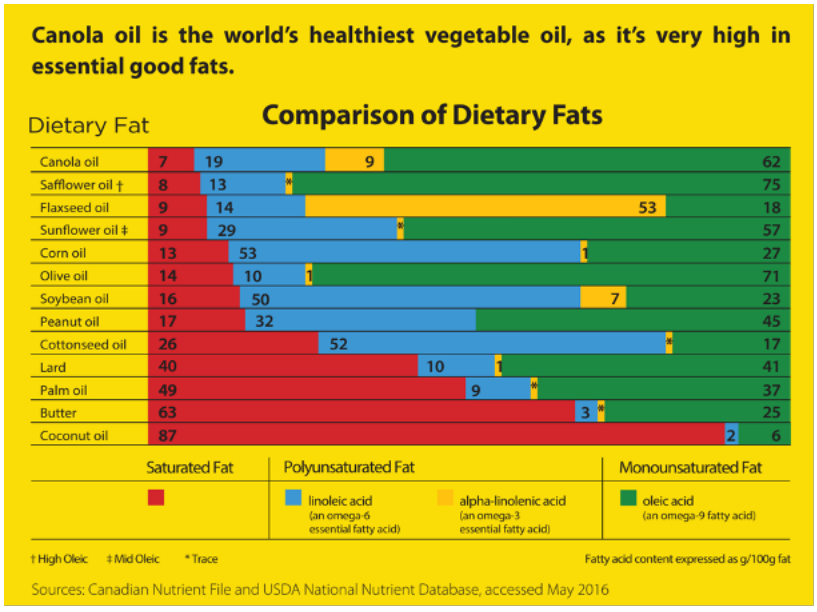
## 2.1 What is canola?

Canola is a tremendous success story in Western Canada. The term "canola," was trademarked by Canada's oilseed industry in 1978 to differentiate the product from rapeseed. Canola was bred from rapeseed, but they have different chemical compositions and nutritional profiles. To be called canola, the plant needs to meet internationally regulated standards which can be simplified as "double-low"--2% or less erucic acid in the oil and 30 micromoles per gram or less of the commonly measured glucosinolates in the meal.[13] "Double-low" (i.e. lower in erucic acid and glucosinolates) is the most significant feature that distinguishes canola from conventional rapeseed.

A canola seed is 44% oil, more than double the oil content of soybeans. The high oil content makes canola an excellent cooking oil. As shown in Figure 3, canola is one of the world's healthiest vegetable oil with 90% of the fats considered to be "good fats".[14] Its protein-rich meal is a great nutrient source for cattle, poultry, swine and fish. Studies have shown that cows' milk production can increase by one litre per day when fed with canola meals. In recent years, there is also a growing use of canola in biofuel production. Its low greenhouse gas emissions and exceptional cold-weather performance make canola an excellent feedstock of choice for biodiesel applications. Canola also provides an environmentally friendly alternative to products traditionally made with petroleum, such as plastics, tapes, and adhesives.

The Canadian Prairies, including the provinces of Alberta, Saskatchewan and Manitoba, produce almost all of Canada's canola. Thanks to the development of new varieties that can adapt to diverse climatic conditions, a considerable amount of the crop is now also grown in British Columbia, Ontario and Quebec. The primary type of canola grown in the Prairie provinces is spring canola, which is seeded in April or May. Winter canola, while not as widespread as spring canola, is planted in the fall in some areas in eastern Canada.

**Figure 3.** Comparison of Dietary Fats among Vegetable Oil

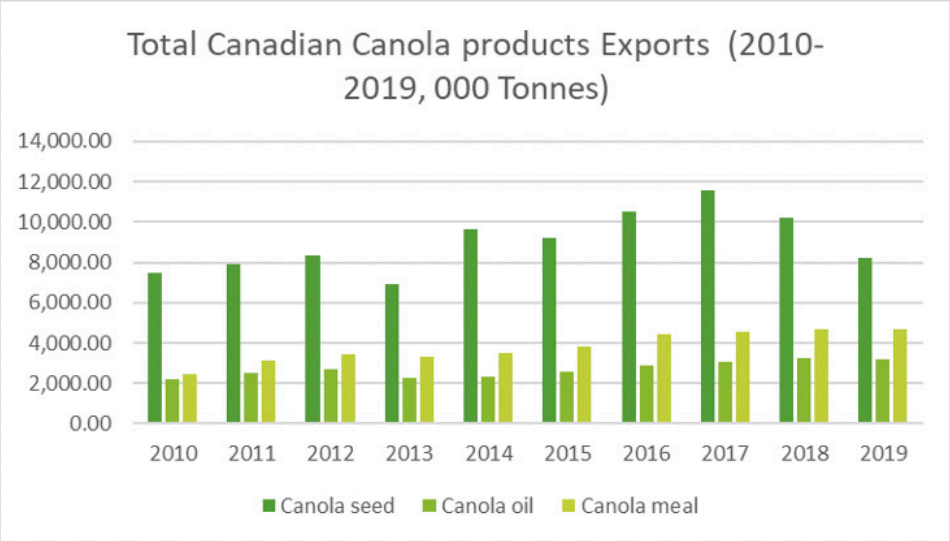



**Data source:** created by Canadian Canola Growers Association (CCGA)[15]

## 2.2 Canola Exports

Since the 1980s, Canada has exported canola to Japan, the United States and other global markets. Today, Canola has become a top selling commodity for Canada. The country exports 90% of all production of seed, oil and meal which amounted to nearly $11 billion in 2018.[16] Thanks to continued innovation and growing demand, Canadian production of canola has increased from 3.7 million tonnes in 1986 to 20.3 million tonnes in 2018.[17] Canadian canola is now sold to 50 markets, bringing billions of dollars into Canada. Figure 4 illustrates Canada's canola exports during the period from 2009 to 2019. Exports for canola seeds, oil and meal all climbed steadily during the past decade from 8 million tonnes in 2008 to 10 million tonnes in 2018.

**Figure 4.** Total Canadian Canola Products Exports




**Data source:** Canola Council of Canada

**Table 1.** Total Canadian Canola Seed Exports, By Country (1,000 Tonnes)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Bangladesh** | 187.1 | 152.3 | 147 | - | - | 98.6 | 112.3 | 62 | 27.6 | 202 |
| **China** | 1519.8 | 1333.7 | 2986.6 | 2870.2 | 4261.1 | 3773.5 | 3542.5 | 4511.1 | 4736.6 | 1542.8 |
| **EU-27** | 129 | 336.7 | 101.5 | 0 | 63.8 | 343.4 | 590.9 | 678.9 | 360 | 1311.1 |
| **Japan** | 2107.4 | 2327.9 | 2349.4 | 2227.9 | 2271.1 | 2053.1 | 2280.6 | 2385.1 | 2265 | 2074.1 |
| **Mexico** | 1485.3 | 1443.3 | 1542.7 | 1210.6 | 1404.9 | 1419.6 | 1477.7 | 1719.5 | 1248.6 | 1036.2 |
| **Pakistan** | 703.4 | 812.7 | 228.4 | - | 318.6 | 685.8 | 1346.4 | 790.5 | 479.2 | 772.3 |
| **U.A.E.** | 773 | 803.1 | 533.7 | 82.5 | 313.6 | 397.7 | 629.9 | 809.9 | 401.6 | 744.6 |
| **U.S.A.** | 551.3 | 668.3 | 413.5 | 540 | 953.4 | 434 | 511.2 | 575 | 597.8 | 490 |
| **Others** | 13.4 | 11.9 | 30.3 | 1 | 86.9 | 0.7 | 45.9 | 20.8 | 52.9 | 140.3 |
| **TOTAL** | 7469.7 | 7890 | 8333.1 | 6932.3 | 9673.5 | 9206.4 | 10543.8 | 11552.8 | 10196.3 | 8246 |

**Data source:** Canola Council of Canada

Table 1 shows that canola seed exports in 2016, 2017, and 2018 have been over 10 million tonnes. For example, in 2018, canola seed export amounted to 10.196 million tonnes, accounting for almost half of the total production of that year in Canada. China, Japan, and Mexico are the top 3 canola importers, purchasing 81% of the full canola export. As the largest canola importer, China imported 4.76 million tones of canola in 2018, which is 46.6% of the total Canadian canola export.

The level of canola oil exports went beyond 3 million tonnes in both 2017 and 2018. The canola oil exported in 2018 amounted to 3.23 million tonnes, accounting for 78% of Canada's total oil

**Table 2.** Total Canadian Canola Oil Exports, By Country (1,000 Tonnes)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Chile** | - | 22 | 37.7 | 40 | 92 | 46.1 | 31.1 | 107.6 | 110.5 | 121.9 |
| **China** | 962.9 | 563.9 | 1002.4 | 885.2 | 500.5 | 606.9 | 601.1 | 688.4 | 1158.4 | 871.5 |
| **Colombia** | 3.2 | 7.4 | 3.5 | 3.7 | 4.2 | 1.5 | 5.8 | 0.9 | 1.2 | 2.1 |
| **EU-28** | 28 | 182.7 | 30.7 | 10 | 6.7 | 17 | 37.4 | 11 | - | 0 |
| **Hong Kong** | 25.2 | 24.4 | 36.7 | 7.8 | 30.2 | 51.6 | 38.1 | 40.2 | 30.8 | 27.7 |
| **India** | 0.6 | 0.4 | 16.3 | 1.6 | 1.2 | 7.4 | 35.3 | 0.1 | - | 15 |
| **Japan** | 6.3 | 22.7 | 18.1 | 9.8 | 4.6 | 7.9 | 7.6 | 4.1 | 11.7 | 28.4 |
| **Malaysia** | 16.7 | 26 | 23.8 | 3 | 12.4 | 36.2 | 64 | 51.4 | 23.2 | 45.4 |
| **Mexico** | 5.1 | 54.4 | 13.6 | 19.4 | 36.1 | 62.5 | 47.1 | 69.3 | 66.5 | 90.5 |
| **S. Korea** | 37.6 | 65.6 | 55.7 | 30 | 75.9 | 106.3 | 113 | 136.7 | 119.1 | 153.4 |
| **Taiwan** | 12.1 | 11.6 | 14.5 | 17.6 | 9.2 | 11 | 16.6 | 10.6 | 7.5 | 11 |
| **U.S.A.** | 1058.2 | 1492.1 | 1396.8 | 1227.3 | 1551.6 | 1583.4 | 1900.7 | 1937.9 | 1696.1 | 1782.9 |
| **Others** | 19.5 | 14.4 | 13.2 | 5.8 | 15.7 | 5.8 | 6.9 | 6.6 | 8.2 | 9.9 |
| **TOTAL** | 2175.4 | 2487.4 | 2663 | 2261.1 | 2340.8 | 2543.9 | 2904.7 | 3069.7 | 3233.1 | 3159.9 |

**Data source:** Canola Council of Canada

**Table 3.** Total Canadian Canola Meal Exports, By Country (1,000 Tonnes)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|
| **China** | 824.6 | 586 | 303.2 | - | 20.5 | - | 645.2 | 1042.3 | 1394 | 1296.8 |
| **EU-27** | 40 | 61.1 | 72.2 | 48.8 | 0 | 46.3 | 20.6 | - | - | - |
| **Indonesia** | 7.5 | 0.4 | 1.3 | 1 | - | - | 0.8 | 0.2 | 0.5 | - |
| **Japan** | 6.2 | 0.7 | 7.6 | 13.8 | 11 | - | 0.1 | - | 2.5 | - |
| **Mexico** | 152.9 | 77.1 | 63.4 | 16.9 | 14.8 | 16.1 | 27.2 | 23.1 | 19.2 | 12.6 |
| **S. Korea** | 22.7 | - | - | - | - | 9.5 | - | 20 | - | - |
| **Taiwan** | 6.7 | 3.9 | 1.4 | 0.6 | - | - | - | - | - | - |
| **Thailand** | 18.5 | 22.4 | 42.3 | 32.8 | 20 | 88.5 | 77.8 | 52.3 | - | 23.2 |
| **U.S.A.** | 1346.5 | 2336.8 | 2879.3 | 3130.2 | 3364 | 3608.6 | 3642.5 | 3393.2 | 3223.3 | 3356.2 |
| **Vietnam** | 46.8 | 14.9 | 57 | 52.2 | 77 | 49.1 | 11.4 | 14.6 | 14.6 | 13.7 |
| **Others** | 0 | 9.7 | 16.4 | 0 | 0 | 1.5 | - | 6.7 | 9 | 4 |
| **TOTAL** | 2472.2 | 3112.9 | 3444.2 | 3296.3 | 3507.2 | 3819.5 | 4425.6 | 4552.5 | 4663.1 | 4706.5 |

**Data source:** Canola Council of Canada

crushed that year. As the two largest buyers of Canadian canola oil, the U.S. and China import 88% of Canada's total exports of canola oil. Due to rising soybeans stocks, the U.S. has purchased less canola from Canada in recent years. In contrast, canola exports to China continued to increase before the 2019 ban due to the concerns about declining canola stock in China.

Canola meal exports increased sharply since 2016 and reached 4.66 million tonnes in 2018, which was 88% of Canada's total canola meal production. The U.S. and China are the two most important importers of Canadian canola meal, purchasing 99% of the total exports from Canada. China imported 30% of the total exports, totalling 1.39 million tonnes.

China's high reliance on canola imports to meet the increasing domestic demand for rapeseed oil generates billions of dollars worth of profits for the Canadian economy. But this also generates China's concerns on food security which may in part manifest in trade restrictions on canola imports.

## 2.3 Why does canola matter to Canada and the world?

Canola plays a major role in Canada's agricultural industry. It supports 250,000 jobs and CA$11.2 billion in total wages for Canadian workers. Canadian-grown canola contributed $26.7 billion to the Canadian economy in 2017.[18] Canola is also one of the most profitable crops. With one-third of seeded acres, it generates one-quarter of all farming revenue in Canada. About 43,000 farmers, which is 15.8% of the total agricultural population, grow canola, mostly in the western provinces of Canada.

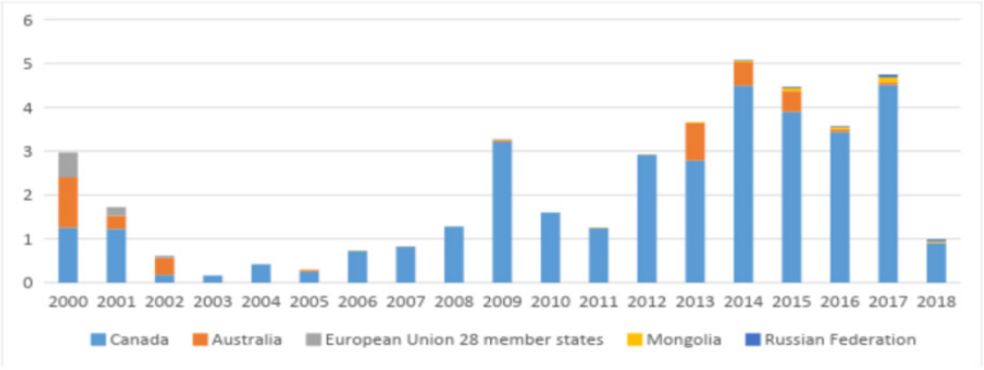
With stable production and a standard of high quality, canola has also been increasingly recognized as a reliable source of healthy edible oil, animal feed and biofuel feedstock. Canola and its products have been sold in more than 50 markets in the world and bring billions of dollars in export earnings to Canada

## 2.4 The history of canola trade between Canada and China

### 2.4.1 China is the biggest market for Canada's canola

Canola trade between Canada and China started in the 1990s after China opened up oilseed markets to the world in 1994. Thanks to the expanding demand for rapeseed in China, the EU's reduction of rapeseed exports to foster its biofuel industry, and declining canola production in Australia, Canada has over the years become China's largest rapeseed supplier. Before the canola spat in early 2019, China's canola imports increased every year. Seed imports had grown from 2.9 million tonnes in 2013 to 4.8 million tonnes in 2018. Oil imports grew by 68% in 2018, when compared to the previous year. Meal imports were restricted in 2013 when China implemented new registration requirements for Canadian processors exporting meal and resumed in late 2016. In 2018, China imported $4.4 billion worth of canola products (including seeds, oil and meal), accounting for 40% of Canada's total exports of $11 billion.[19] Before the canola ban was enacted in 2019, China contributed 35% of Canada's canola seeds exports, 30% canola oil exports, and 45% canola meal exports. As Figure 5 shows, since 2003, Canada is the dominant rapeseed supplier for China, far ahead of other countries, including Mongolia, Australia, and Russia. As Table 4 summarizes, in 2018, 93.57% of rapeseeds and 98.12% of rapeseed meal, and 84.72% of rapeseed oil in China are imported from Canada.

**Figure 5.** China's Top Rapeseed Suppliers




**Data source:** Created by Wang and Leblond, 2019 based on data from the Global Trade Tracker

**Table 4.** China's Import of Canadian Canola Products in 2018

| Products | Total Imports (Million Tonnes) | Imports from Canada | Ratio of Imports from Canada |
|---|---|---|---|
| Canola Seed | 4.75 | 4.45 | 93.68% |
| Canola Oil | 1.3 | 1.28 | 98.46% |
| Canola Meal | 1.3 | 1.1 | 84.62% |

**Data source:** The General Administration of Customs of People's Republic of China

### 2.4.2 A brief history of Canada-China Canola trade disputes

Canola exports to China have soared in the past two decades. Even so, we still observe several large fluctuations amidst the rising export tide. Most of the export lows can be attributed to trade tensions between Canada and China, which is usually caused by changes in China's canola trade policies. There are two significant export restrictions that China previously imposed on Canadian canola. In 2009, China restricted imports of Canadian canola, citing concerns about the spread of blackleg disease in China's domestic rapeseed fields. Officials and scientists from both countries worked together to eliminate the risk of the disease. Chinese authorities began relaxing these restrictions in 2012. In 2016, China again raised concerns about Canadian canola and blackleg, urging Canada to cut the dockage rate — the amount of extraneous material such as stems and pods that end up in shipments — from 2.5 percent to 1 percent. This dispute was settled during Chinese Premier Li Keqiang's diplomatic visit to Canada in September 2016, largely owing to the efforts of the Canadian government.

# 3 DOES CHINA NEED SO MUCH CANADIAN CANOLA?

China had previously decided to impose restrictions on canola exports to China in 2009 and 2016, citing the concerns over the blackleg disease. However, crop scientists in Canada showed scientific evidence that there was no significant risk of spreading the blackleg disease to Chinese canola fields. The canola trade was rebooted as China eventually loosened the restrictions due to a steadily increasing domestic demand for rapeseed oil. Nevertheless, the incidents have triggered a discussion in Canada --albeit without spotlights-- concerning the changes in the demand-end situation in China. Dave Hume, a crop scientist, concluded restrictions occurred in a time when China didn't need to import so much canola.[20] Agricultural economist Ellen Goddard from the University of Alberta stated that it is crucial to understand the overall direction of China's domestic policies - China may be trying to reduce its reliance on agricultural imports and boost its rapeseed production capacity.[21]

China has been growing rapeseed crops and using rapeseed as a source of vegetable oil for millennia. Rapeseed is still China's most important oil crop today and favoured by people from all over the country. There has been a rapid increase in productivity over the past two decades, however domestic production still clearly cannot meet the rising demand.

## 3.1 China's rapeseed production has improved, but still cannot meet soaring demand

### 3.1.1 Large oilseed supply shortage

The top four oil crops in China are soybean, palm, rapeseed and peanut. The oilseed production in China has advanced in the past ten years, thanks to advancements in agronomy and genetics. Table 5 shows that the oil crop production of four major crops (pea-

**Table 5.** The Development of Oil Crops in China (2009-2018)

| **Planting area (million hectares)** | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil crops: | 13.4 | 13.7 | 13.5 | 13.4 | 13.4 | 13.4 | 13.3 | 13.2 | 13.2 | 12.9 |
| Peanut | 4.3 | 4.4 | 4.3 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.6 | |
| Rapeseed | 7.2 | 7.3 | 7.2 | 7.2 | 7.2 | 7.2 | 7.0 | 6.6 | 6.7 | |
| Sesame | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | | |
| Sunflower | 1.0 | 1.0 | 0.9 | 0.9 | 0.9 | 0.9 | 1.0 | 1.2 | | |
| | | | | | | | | | | |
| **Production (MMT)** | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Oil crops: | 31.4 | 31.6 | 32.1 | 32.9 | 32.9 | 33.7 | 33.9 | 34.0 | 34.8 | 34.4 |
| Peanut | 14.6 | 15.1 | 15.3 | 15.8 | 16.1 | 15.9 | 16.0 | 16.4 | 17.1 | |
| Rapeseed | 13.5 | 12.8 | 13.1 | 13.4 | 13.5 | 13.9 | 13.9 | 13.1 | 13.3 | |
| Sesame | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 | |
| Sunflower | 2.0 | 2.3 | 2.3 | 2.3 | 2.4 | 2.5 | 2.7 | 3.0 | | |
| | | | | | | | | | | |
| **Output per unit area (kg/ha)** | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Oil crops: | 2310.17 | 2325.57 | 2386.67 | 2467.21 | 2508.1 | 2497.7 | 2520.2 | 2567.1 | | |
| Peanut | 3411.07 | 3460.48 | 3528.97 | 3588.5 | 3658.35 | 3638.87 | 3639.55 | 3678.03 | 3709.55 | |
| Rapeseed | 1887.77 | 1747.97 | 1826.67 | 1864.78 | 1879.95 | 1943.86 | 1972.42 | 1982.25 | 1995.21 | |
| Sesame | 1295.16 | 1293.04 | 1366.04 | 1439.45 | 1459.59 | 1442.93 | 1495.03 | 1529.27 | 1609.67 | |
| Sunflower | 2039.12 | 2335.29 | 2459.75 | 2614.12 | 2606.8 | 2626.7 | 2603.5 | 2592.9 | | |
| | | | | | | | | | | |
| **Woody oil production (MMT)** | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Camellia oleifer seed | 1.2 | 1.1 | 1.5 | 1.7 | 1.8 | 2.0 | 2.2 | 2.2 | 2.4 | |

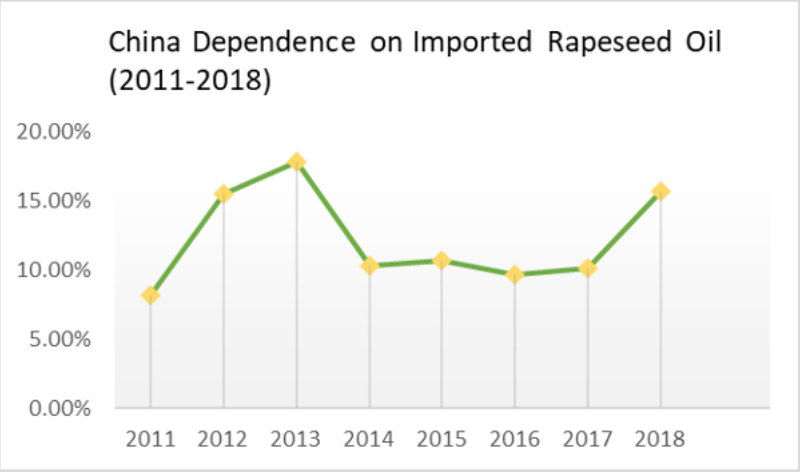
**Data source:** Created by Wang and Leblond (2019) based on data from the National Bureau of Statistics of People's Republic of China (NBS China)

nut, rapeseed, sesame and sunflower) in China increased from 31.4 MMT in 2009 to 34.4 MMT in 2018. However, the rising domestic demand for oilseeds significantly outstrips production capacity, leaving China with a significant supply shortage for oilseed. In 2017, the total consumption of vegetable oil was 35.65 million tonnes, in contrast to 11 million tonnes of total domestic production. China's vegetable oil supply shortage is estimated at 20 million tonnes per year. The gap was filled by soybean imports from the U.S., Brazil and Argentina, and canola imports from Canada, Russia and Mongolia. In 2018, China's total domestic demand for rapeseed oil was 8.27 million tonnes, 15.69% of which was imported from other countries, as shown in Figure 6.

China has a rigid food self-sufficiency strategy to ensure its national food security. In the big cereal staples—wheat, rice, and corn—China is nearly self-sufficient. However, the self-sufficiency rate of oilseed is only 30%. China's oilseed consumption is highly dependent on imports. Figure 7 also shows that in 2014, oilseeds and vegetable oil are the largest net imports (import-export) out of all food categories, followed by dairy products and meat products.

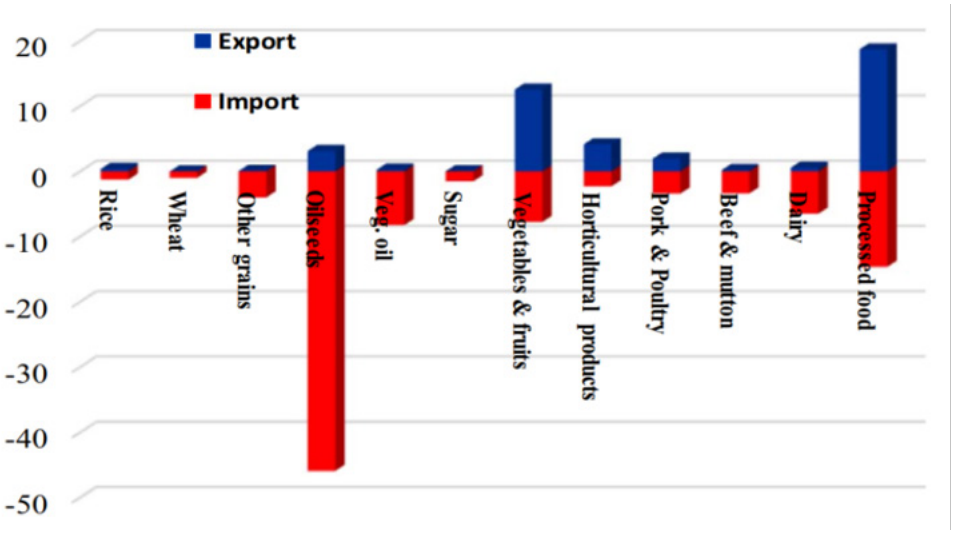
In contrast to the increasing oilseed production, the total planting area of main oil crops has declined over the past ten years, granting China another challenge in improving oilseed productivity. China's projected self-sufficiency rate for oilseeds in 2020 is only 40%, implying there will be a continual gap between domestic supply and demand in the future, and imports will continue to fill the gap.[22]

**Figure 6.** China Dependence on Imported Rapeseed Oil




**Data source:** Business Information[23]

**Figure 7.** China's Food Imports and Exports in 2014 (Billion US$)



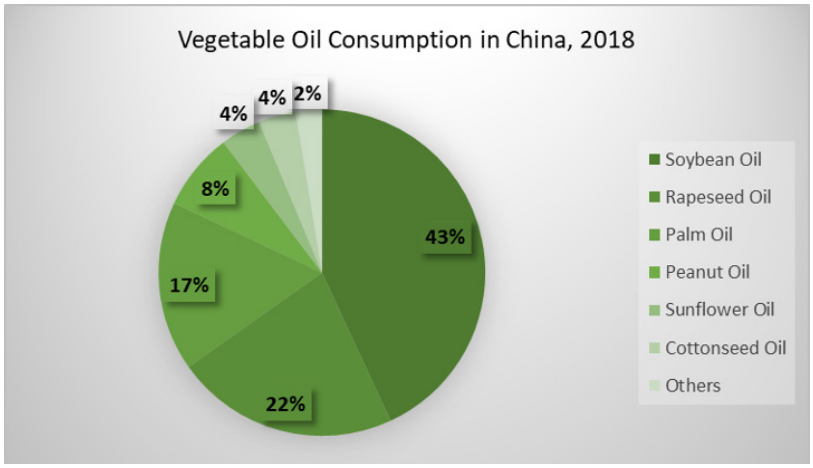

**Data source:** created by Huang & Yang (2017) based on data from UNCOMTRADE database[24]

### 3.1.2 Rapeseed use, production and import in China

"Oilseed rape is the most important oilseed crop in China," said Zhang Xuekun, the deputy director and professor at the Oil Crops Research Institute in Wuhan, China, at the first Canola Dialogue in Beijing in November 2017. As shown in Figure 8, rapeseed oil is the second largest edible vegetable oil in China, following soybean oil and palm oil. Rapeseed is the primary source of vegetable oil produced by China, accounting for 47% of the total domestic production. The crop is also the second-largest protein source of animal feed. Three varieties are widely grown in China: two domestic varieties-Brassica Rapa (Bok Choi type) and Brassica Juncea (leaf mustard type) -- and one domesticated variety originated in Europe—Brassica Napus (cabbage type).

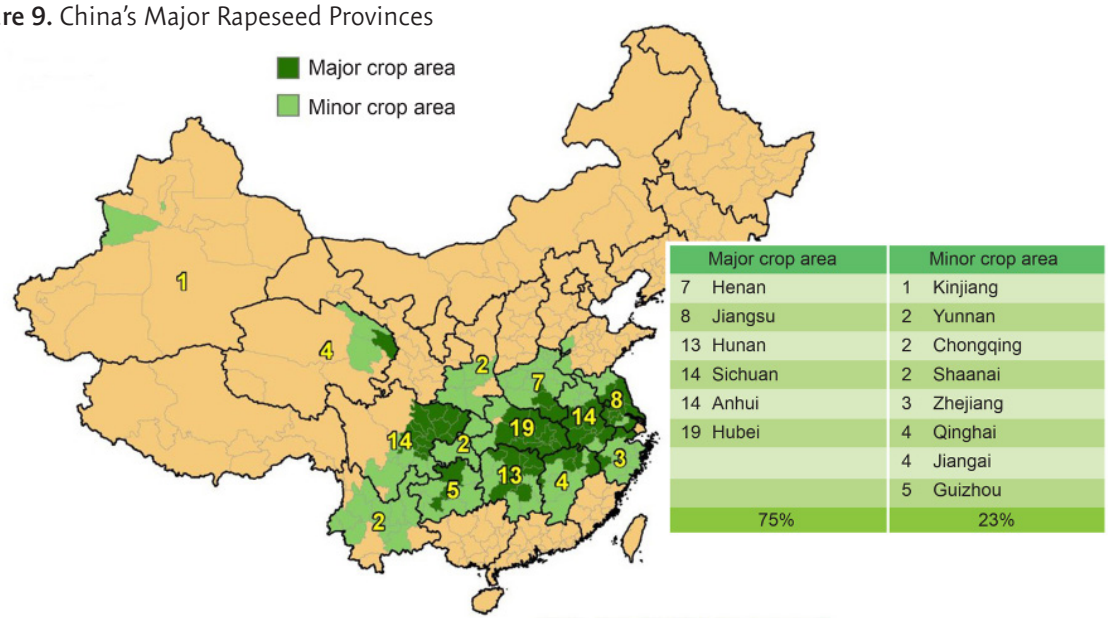
Oilseed (rape) is the most widely distributed oil crop in China. As Figure 9 shows, rapeseed crop is widely grown across the country, covering a large area in Northern China and along the Yangtze River Basin. Spring rape, seeded in the Spring and harvested in the Fall, is grown in the northwest, the northern and central China, including provinces of Qinghai, Xinjiang, Gansu, Inner Mongolia, and Henan. Winter rapeseed, seeded in the Fall and harvested in the Spring and Summer, is a variety mainly grown in provinces along the Yangtze River and in southwest China, including Jiangsu, Zhejiang, Anhui, Hubei, Jiangxi, Hunan, Chongqing, Sichuan, Yunnan and Guizhou. Winter rapeseed accounts for 90% of the total planting area.[25] Brassica Napus varieties now account for 83% of the acres, with Brassica Rapa at 10% and Brassica Juncea at 7%.

**Figure 8.** Vegetable Oil Consumption in China




**Data source:** USDA

**Figure 9.** China's Major Rapeseed Provinces




| Major crop area | | Minor crop area | |
|---|---|---|---|
| 7 | Henan | 1 | Kinjiang |
| 8 | Jiangsu | 2 | Yunnan |
| 13 | Hunan | 2 | Chongqing |
| 14 | Sichuan | 2 | Shaanai |
| 14 | Anhui | 3 | Zhejiang |
| 19 | Hubei | 4 | Qinghai |
| | | 4 | Jiangai |
| | | 5 | Guizhou |
| 75% | | 23% | |

**Data source:** created by Nambiappan et al. (2017) based on USDA data[26]

China's traditional oil rape varieties are mustard- and Bok choi-type rapeseed, which are considered as inferior to cabbage type rape in terms of the composition of fatty acid. Oil produced by these two varieties contains as high as 45% erucic acid, which is believed to be associated with heart disease. The meal after the oil is removed is toxic due to high-level glucosinolate contents and cannot be used as animal feed. Over the past ten years, China has dedicated to breeding "double-low" rapeseed for healthy rapeseed oil and safe animal feed.[27] As of 2010, up to 90% of oil rape grown in China is "double-low" which provides a crucial source of healthy vegetable oil for the Chinese population, as well as protein-rich animal feed for the livestock and fishing industries.

Although tremendous progress has been made in cultivating high-quality and high-yield domestic rapeseed, a significant quality gap still exists between Chinese rapeseed and Canadian canola. The Chinese National Oil Rape Technology System inspected commercial rapeseed from 22 pilot areas in 2008.[28] The results showed that the oil content of domestic rapeseed is 4-6% lower than canola. Moreover, the high price, thanks to the increasing production costs, is another disadvantage for Chinese rapeseeds to compete with imported canola seeds. Rapeseed planting remains labour-intensive in China. Increasing labour costs due to the accelerating urbanization of the rural population and labour shortage in China poses a major challenge in producing more rapeseed domestically.

The production growth of China's domestic rapeseed is in line with the development of the entire oilseed sector in China. Production remained stable before 2015 and then shows a significant drop in both planting area and yield after 2015, mainly due to the abolishment of the TSP. Because of the declining production due to limited arable land, increasing production costs, and unbalanced policies among different cereals, the domestic rapeseed production fell far behind the growing demand. Rapeseed imports from Canada, Australia and Russia, continued to increase to fill the gap.[29] Figure 10 shows that China's rapeseed imports have substantially increased since the late 1990s, reaching 5 million tonnes in 2017. China is now the world's largest rapeseed importer, accounting for 40%-50% of the world's total. Even so, China's rapeseed imports show large fluctuations, which are mainly a result of changes in China's agricultural policies, which further impacts the domestic rapeseed demand.

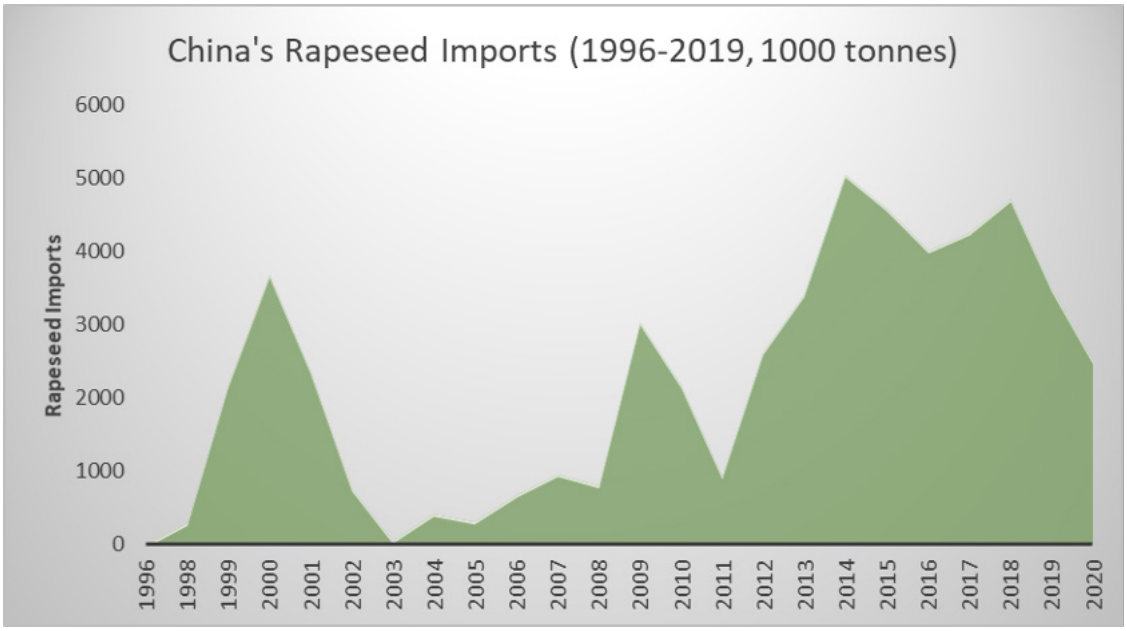
Before 1994, China was a net rapeseed exporter without allowing rapeseed imports from overseas markets. This situation changed in 1994 after China decided to open up its oilseed market to replace the planned oilseed production strategy. Rapeseed imports flourished due to the swelling domestic demand but limited domestic supply. Rapeseed exports totalled 11,700 tonnes in 1994, in contrast to 143,300 tonnes of rapeseed imports that year.[30]

Rapeseed imports continued to expand until 2000, reaching a peak volume of 3 million tonnes that year. After years of expansion, China's rapeseed imports declined during the period between 2002 and 2007 due to the high rapeseed stock accumulated in the late 1990s and early 2000s and the price gap between canola and Chinese rapeseed during that period. In essence, Chinese rapeseed was cheaper than imported canola at the time.

Struggling with low domestic rapeseed prices and the shock of the 2008-2009 financial crisis, China initiated the TSP for rapeseed to subsidize farmers. In 2008, the purchasing price for domestic rapeseed was set at 4,400 RMB/ton, 600 to 700 RMB higher than that of imported canola and continued to grow in the following years since then. TSP, which was created to protect the domestic rapeseed industry, actually led to expanding canola imports and bankruptcies of local rapeseed enterprises who used local rapeseeds as a major source. Due to the price advantage resulted from the subsidies from TSP, Canadian canola surged into China since 2008. China's canola imports reached a record high of 3.3 million tonnes in 2009, which is believed to be sole reason for the 2009 canola ban. China then adjusted its purchasing price to 3,700RMB/ton to reduce imports of rapeseeds. These measures led to a significant drop in canola imports in 2010 and 2011, down to 1.6 and 1.3 million tonnes, respectively.

TSP, which was abolished in 2015, helped China accumulate a massive volume of rapeseed. As shown in Table 6, through TSP, China had bought 24.2 MMT of rapeseed and had 5.2 MMT in stock at the end of 2015. Rapeseed oil stock, at the same time, was 6.18 MMT. The high rapeseed and rapeseed oil reserve put enormous pressure on the rapeseed sector. Inventory reduction appeared to be a pressing strategic imperative for China's grain security since 2015. The 2016 canola ban occurred under these circumstances and could be the primary reason for the temporary canola import drop in 2016, as shown in Figure 10.

**Figure 10.** China's Rapeseed Imports




**Data source:** IndexMundi

**Table 6.** China's Rapeseeds and Rapeseed Oil Storage between 2008 and 2015

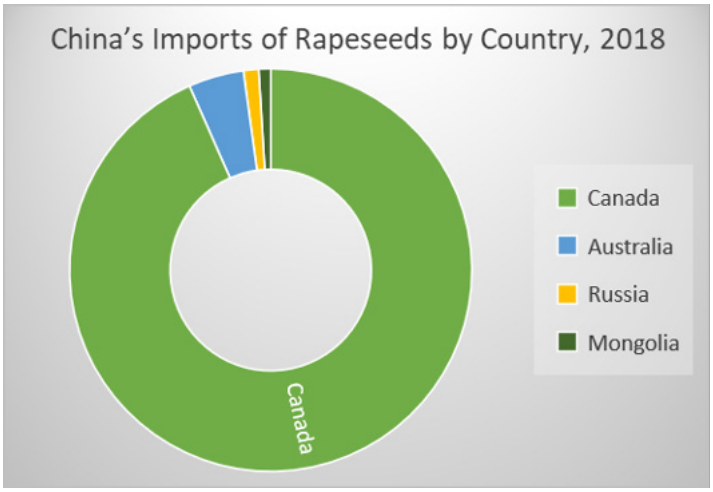
| Year | Purchase Price (RMB/Tonne) | Planned Purchase (MMT) | Actual Purchase (MMT) | Equivalent to Rapeseed Oil (MMT) | Actioned (MMT) | Targeted Sale (MMT) | Inventory (MMT) |
|---|---|---|---|---|---|---|---|
| **2008** | 4,400 | 1.5 | 1.5 | 0.5 | / | / | 0.5 |
| **2009** | 3,800 | 4.3 | 4 | 1.5 | / | / | 2 |
| **2010** | 3,900 | 2.3 | 2.5 | 0 | 1.4 | 0.6 | 0.8 |
| **2011** | 4,600 | 4 | 3 | 1.4 | / | / | 2.2 |
| **2012** | 5,000 | 4.2 | 3.3 | 1.5 | / | / | 3.7 |
| **2013** | 5,100 | 5 | 4.4 | 1.7 | / | / | 5.4 |
| **2014** | 5,100 | 5 | 5 | 1.1 | 0.2 | / | 6.3 |
| **2015** | / | / | 3.5 | / | 1.2 | / | 5.2 |
| **Total** | / | 26.3 | / | 8.45 | 2.8 | 0.6 | 5.2 |

**Data source:** Dong, 2016, The past and present of the national reserved vegetable oil[31]

Canada is now China's largest rapeseed supplier, delivering more than 90% of China's imported rapeseeds, as Figure 11 shown. Other major exporters are Australia, Russia, and Mongolia, with a changing share every year. However, benefiting from the 2019 ban on Canadian canola, the share from Russia and Mongolia may increase significantly over the next few years.

Scattered across rapeseed growing regions such as Hubei and Sichuan, 80% of Chinese crushers are small & medium-sized enterprises (SMEs) which mainly crush domestic rapeseed for oil. Larger crushers are located in non-rapeseed growing regions such as Fujian and Guangdong and use imported seeds for oil. Private SMEs, State-owned enterprises (SOEs) and Multi-national Enterprises (MNEs) are the major players in China's crushing industry. Besides these players, family-run oil crushing businesses, as known as oil press, or, youfang, also play an important role in niche markets where consumers demand high-quality rapeseed oil. Producing quality rapeseed oil on a small scale using traditional techniques, these family-run oil press have received increasing popularity, especially in rapeseed growing provinces. Like the soybean industry where foreign capital accounts for 85% of the market, China's rapeseed processing industry has

**Figure 11.** China's Imports of Rapeseeds by Country




**Data source:** The General Administration of Customs of People's Republic of China

also taken a hard hit since MNEs were allowed to commence oil crushing business in China. However, the hit is not as big as what the soybean sector has endured. SMEs are the most important crushers in China, holding the largest share (roughly half of the market), followed by SOEs and MNEs who are playing increasingly active roles, as many Chinese small & medium-sized crushers have entered bankruptcy in the changing market.[32]

One primary problem that Chinese rapeseed crushers have faced in the past is over-capacity. The economic stimulus policies introduced after the 2008-2009 financial crisis expanded crushing capacity in rapeseed growing provinces. The TSP further added new capacity of crushing imported rapeseeds to the non-rapeseed growing provinces along the southeast coast. With the abolishment of TSP, however, farmers are less motivated to grow rapeseed and the output is diminishing. Chinese small and medium-sized crushers have been struggling with the increasing cost of rapeseed purchases due to the slump in domestic rapeseed supply.

Through mergers and acquisitions, the state-owned China Oil and Food Import and Export Corporation (COFCO) is now a leading player in China's rapeseed industry. COFCO's subsidiary - COFCO Oils & Oilseeds, which focuses on processing, warehousing, distributing, and wholesaling of oil and oilseeds such as soybean, rapeseed, and palm oil, is a leader in the vegetable oil market. "Fortune (福临门)" is the main brand of vegetable oil produced by COFCO.

Flooding into China's vegetable oil market since the 1990s, foreign capital is now a key component of China's rapeseed sector. Especially after 2001, China gradually opened the oil and oilseed market and lifted many restrictions. In this context, foreign investors started to expand their business to China's grain and oilseeds market and have become a significant player since then. The major MNEs in China's oil and oilseed industry include Yihai Kerry, ADM, Cargill, Bunge, Louis Dreyfus, and Noble. These market giants play a significant role in import and export, oil processing, and product distribution. As foreign capital continued to increase shares in the market, Chinese policymakers rolled out regulations in 2007 to curb overseas access to the Chinese domestic rapeseed sector.[34] This policy offered opportunities for the private enterprises to grow and compete with SOEs and MNEs; however, the release of the negative list for foreign investment in 2017 that aimed at reopening the rapeseed market is likely to pose increased challenges for Chinese private crushers and processors.

## 3.2 Key policies to improve rapeseed production

Having lifted 22% of the world's population out of poverty with 7% of world's arable land and 6% of world's surface fresh water supply, China's agricultural sector has made remarkable achievements over the past three decades. China's agricultural productivity and food supply underwent fundamental changes since the late 1970s when China undertook institutional reforms in the agriculture sector. In the mid-1990s, China achieved self-sufficiency in major grains (including rice, wheat and corn) and even enjoyed grain surpluses (Zhang and Cheng, 2016). However, oilseed is an exception and still highly dependent on imports even today. Despite impressive accomplishments in food self-sufficiency, China is now facing new challenges to improve food security in a modern socio-economic environment where sustainable agriculture and improving farmers' income are key elements to China's agricultural advancement. With food security as the primary goal in agricultural and rural strategies, China continues to align its agricultural policies with evolving domestic and global economic environments.

### 3.2.1 Evolution of agricultural policy in China (since 1990s)

**Before President Xi**

In the mid-1990s, China's government adopted a food security strategy in response to a popular argument that China is a threat to global food security, as well as due to national security concerns. The primary goal of achieving food security for China is the 95% self-sufficiency rate in grains announced in the first white paper on food security - *The Grain Issue in China* - which set the foundation for China's overall agricultural and food policy. Over the next two decades, China has more or less achieved the target of maintaining a grain self-sufficiency rate of above 95%. However, imports of oilseeds for feed and edible oil have continued to increase. In 2017, China imported 9.6 million tonnes of soybeans, or 87% of the total demand of that year, and 4.7 million tonnes of rapeseeds, accounting for 78% of the annual consumption.

Since the early 2000s, China has started to adjust its agricultural policy to diversify food supplies, enhance food security, and achieve sustainable growth in agriculture. Concerns over food security and farmers' low-income levels have led Chinese policymakers to turn to a series of protective policies. For example, a set of agricultural subsidy programs were launched between 2004 and 2006. China also started price intervention programs for major grains. In 2008, the TSP was initiated for maize, soybeans, and rapeseeds. Meanwhile, China introduced the first-ever national mid-to-long-term food security plan (2008–2020), in which the government reiterated its commitment to achieving a 95% self-sufficiency rate in staple cereals such as rice, wheat and corn.[35]

**China's Agricultural Policy under Xi's administration**

China's grain imports continued to increase even after the release of the mid-to-long-term food security plan in 2008, reaching 106 million tonnes (including soybeans) in 2014, which makes China a net importer of general grains. Faced with this challenge, China redefined its national food security strategy in December 2013 and, for the first time, opted for 'domestic supply with moderate imports.' This recognized that imports would be a part of the overall national food security strategy. China still upholds the goal of 'basic self-sufficiency in grains' and 'absolute security' in staple cereals.[36] Since taking office in 2013, Chinese President Xi Jinping has repeatedly stated that China must rely on itself to achieve food security.[37] In addition to the National Food Security Strategy developed at the Central Economic Work Conference, other notable agricultural policies include the National Security Law in 2015 which labels food security as "essential" and the White Paper on Food Security in 2019 which highlights China's determination in improving food security and expanding global cooperation.

As President Xi further strengthened his leadership of the Chinese Communist Party (CCP), the agricultural policy under Xi's administration demonstrates two different trends. On the one hand, food security is repeatedly emphasized in public and key national policy documents, including the 2019 White Paper expounding on China's food security issues in a new era. On the other hand, moderate imports are allowed to optimize varieties and offset oilseed shortage. China also declared that it will continue to open up the food market and participate in global cooperation, especially its intention to enhance grain trade with countries involved with the Belt and Road Initiative (BRI) and establish a new international platform for grain cooperation with the BRI countries. The Development Research Center of the State Council (DRCSC) published a report elaborating on how to diversify China's food supply via the BRI (Ye, 2017). The report concluded that China must establish a diversified global supply system for agricultural products and strengthen the role of BRI countries in the system. It remains to be seen if the political goal of boosting trade with BRI grain-growers will prevail over economic calculations.

China's current food security strategy is summarized in the 2019 Food Security White Paper as self-sufficiency based on domestic grain production, guaranteed food production capacity, moderate imports, and technological support.[38]

### 3.2.2 Key rapeseed policies in China

The policy development for rapeseed in China is basically in line with the evolution of China's general agricultural policies, with an exception of its openness to imports. The main reason is that the oilseed sector in China is more import-reliant compared with staple cereals such as wheat, rice, and corn.

TSP, featuring a guaranteed minimum procurement price from the central government, is a primary policy for domestic rapeseeds during the period of 2008-2015. TSP was initiated to prevent the decline of oil rape planting, which happened in 2006 and 2007. Under TSP, rapeseeds produced in oil rape planting regions were purchased by the central government at a price that was higher than imported rapeseeds. The collected rapeseeds were stored in the form of processed rapeseed oil. TSP, to a certain extent, improved the income of oil rape farmers thanks to the higher price offered by the government. However, this non-market price intervention also led to the surge of cheaper imported canola, which in turn hurts farmers' and rapeseed processing enterprises' revenue. In 2015, TSP was abolished, and rapeseeds were purchased by the local governments instead of the central government. The change in policy led to a dramatic drop in domestic rapeseed production in the following years.

As the accumulation of domestic rapeseeds under TSP, the rapeseed inventory soared during that period. China had 6.32 million tonnes of rapeseed oil in reserve at the end of 2014. In the meanwhile, China launched its supply-side reform; the rapeseed policy started to transition to inventory cutting. Since 2015 China began to auction rapeseed oil from the national reserve at a price which is lower than the market price for the cheapest Class-Four.[39] As of June 1, 2016, the inventory in the national reserve dropped

to 3.88 million tonnes, down 36.25% compared with the end of 2015. By March 2017, nearly 6 million tonnes of rapeseed oil from the national reserve was sold through intensive auctions since 2015, leaving an inventory of less than half a million tonnes. With rapeseed oil from China's national reserve almost hitting bottom this year, and trade war with the U.S. making the soybean imports less reliable, analysts claimed the demand for rapeseed oil in China is likely to remain strong and the supply is likely to continue to tighten in the second half of 2020.

Another significant policy document for China's rapeseed sector is the National Bulk Oil Crop Production Development Plan (NBOCPDP) released in August 2016.[40] The Plan pointed out the need for ongoing rapeseed imports in the future due to the growing gap between increasing domestic rapeseed demand and limited supply. In the meantime, the Plan highlighted the potential to improve domestic rapeseed production, which can be realized by breeding new rapeseed varieties and conducting mechanized production. This plan set the production targets for the main oilseeds in China. As shown in Table 7, China's target for rapeseed in 2020 is 16.2 MMT, a slight increase of 1.4% from the 2014 level, but significantly lower than planned production expansion of other oilseeds.

**Table 7.** Production Target set in the NBOCPDP

| Indicators | 2014 | 2020 | Increased by 2020 compared to 2014 |
|---|---|---|---|
| Planting area （ million hectare） | | | |
| Rapeseed | 7.6 | 8.0 | 0.4 |
| Peanut | 4.6 | 4.8 | 0.2 |
| Soybean | 6.8 | 9.3 | 2.5 |
| Camellia oleifera | 3.6 | 4.7 | 1.0 |
| Total | 22.6 | 26.8 | 4.2 |
| Production（MMT)） | | | |
| Rapeseed | 14.8 | 16.2 | 1.4 |
| Peanut | 16.5 | 18.7 | 2.2 |
| Soybean | 12.2 | 18.9 | 6.8 |
| Camellia oleifera | 2.0 | 6.0 | 4.0 |
| Total | 45.4 | 59.8 | 14.4 |
| Output（kg/ha） | | | |
| Rapeseed | 1,950 | 2,025 | 75 |
| Peanut | 3,585 | 3,900 | 315 |
| Soybean | 1,785 | 2,025 | 240 |
| Camellia oleifera | 540 | 1,290 | 750 |
| Oil Content (%) | | | |
| Rapeseed | 41% | 43% | 2% |
| Peanut | 50% | 52% | 2% |
| Soybean | 19.50% | 21% | 1.50% |
| Camellia oleifera | 25% | 27% | 2% |

**Data source:** Created by Wang and Leblond (2019) based on data from NBOCPDP

### 3.2.3 Impact of agricultural policy on rapeseed industry and trade

The policies on rapeseed production and distribution have profound impacts on China's rapeseed sector, as well as China's trade policy for canola. As a result of these policies and TSP in particular, the rapeseed industry has undergone a structural change since 2008.

First, the price protection program created a prominent price gap between domestic rapeseeds and imported canola, which drove soaring canola imports during the policy period. The imports of canola continued to remain high during the period from 2008-2015, except for 2010 and 2011, when the purchase price of domestic rapeseeds was reduced to narrow the price gap and discourage canola imports. The import surge between 2008-2009 is also believed to be linked to the 2009 canola ban.

Second, China's rapeseed oil stocks set a record high, which put great pressure for China to consume the inventories. With the help of TSP, the central government accumulated a massive amount of rapeseed oil, but only a small proportion was sold by 2015. On the other hand, large processing enterprises in non-rape planting regions continued to import lower-priced canola seeds for oil production. The contradiction may be one of the factors that led to the 2016 canola spat.

Third, domestic rapeseed processing enterprises, especially small- and medium-sized enterprises, were almost wiped out due to the high purchase price of domestic rapeseeds and low

selling price of rapeseed oil. In China, only several large processors were licenced to import canola seeds. Imported canola seeds are only allowed to enter and be processed in some coastal provinces where oil rape is not cultivated on a massive scale.[41] A great number of local processing enterprises have struggled with financial loss, and many of them have shut down or even gone bankrupt.[42]

## 3.3 Can China improve its rapeseed production?

### 3.3.1 Challenges

It is challenging for China to enhance its rapeseed production in the near future, given that the staple cereals (wheat, rice, and corn) remain China's priority as outlined in the national food security strategy, which is the fundamental agricultural policy in China. The specific challenges to accelerate rapeseed production in China are summarized as follows.

First, the limited potential for expanding the growing area is the primary factor that impedes rapeseed production. China's per capita arable land area and water resources are only 40% and 28% of the world average, respectively. With limited land and water resources, it is challenging to maintain the supply of staple grains (i.e., wheat, rice, and corn), which is the top priority for China's goal of food security, and increase the production of edible oils at the same time.

Second, increasing input costs and declining profits discouraged farmers from growing rapeseed. In recent years, rising agricultural input costs, such as the prices for fertilizer and pesticide, increased significantly. Urbanization accelerated the migration of rural labour to cities and reduced the number of labourers in the rural areas which helped push up labour costs. For example, the cost of producing rapeseed in Jiangsu Province increased at an average annualized rate of 10.2%, from 4,149 yuan/hm2 to 13,743 yuan/hm2 during the period from 2005 to 2017.[43] The price of rapeseeds in the post-TSP era dropped significantly, making it unprofitable to grow.

Third, the low per-unit yield remains a prominent issue for China's rapeseed farming. Rapeseed yield in Hunan and Jiangxi—two major rapeseeds growing provinces-- is only around 1,500kg/hm$^2$. The most important reason is that rapeseed production in China remains labour-intensive and less mechanized. Compared to Canada and Australia, which have achieved full mechanization in rapeseed production, labour costs in China are much higher, accounting for about 50% of the total production costs.

Fourth, although "double-low" rapeseed is considered to be a technological breakthrough, current varieties in the market have a long growing period but produce a low yield. The average yield per hectare since 2004 is about 1,800 kg. The breeding of new high-quality varieties in China is relatively slow. The high-yielding varieties that are suitable for mechanized harvesting are still in the research and experimental stage.

Fifth, Chinese rapeseeds have lost market share in competition with imported rapeseeds, especially canola, which has a lower price and high quality. This is despite the fact that China used non-tariff barriers, such as import bans, to curb canola imports. In the past decade, China's rapeseed imports soared to over 4 million tonnes and the country has become the largest rapeseed importer in the world. Particularly in non-rapeseed growing regions, high-quality canola seeds with lower prices are favoured by local crushers.

Sixth, the struggling rapeseed processing industry in rape planting provinces suffers from excess capacity and low efficiency. As farmers were less motivated to grow oil rape after TSP was abolished, the production of domestic rapeseeds saw a sharp drop after 2015. Many medium and large rapeseed processing enterprises in major rape planting provinces were forced to shut down due to the unstable supply of domestic rapeseed. Small family-run processing factories with less sophisticated technology are dominant in those areas. This is a major obstacle for the local rapeseed processing industry to advance and achieve brand effectiveness and commercial success.
Lastly, the lack of policies that regulate rapeseed production, processing, storage, and distribution are also a big challenge for the industry. Since TSP was cancelled in 2015, provincial governments are in charge of rapeseed policies and most choose to focus primarily on staple cereals (wheat, rice and corn). This policy imbalance is an important reason for marginalization of the rapeseed industry in China.

### 3.3.2 Opportunities

Although China may still rely on rapeseed imports at least for the next few years, rapeseed is always an essential part of China's food security strategy. China has never stopped creating opportunities to improve rapeseed production through breeding and technology innovation. The cancellation of TSP has had a short-term impact on Chinese growers and crushers; however, it also brings opportunities for the whole rapeseed sector to achieve industrial upgrading through competition in a free market. Breeding innovation and technology innovation (e.g., mechanization and standardization of the entire production process) provide two most important avenues for Chinese scientists to improve production.

Mechanization of the entire production process (sowing, seeding and harvesting) is considered a primary means to improve rapeseeds production, which is still labour-intensive in China. The Ministry of Agriculture's incorporated rapeseeds into its national plan for improving grain production in 2012, deeming technology innovation an essential part of rapeseed production. China has now created mechanization technologies specifically for rapeseeds grown in rice planting areas in Asia. In 2017,

the mechanization level of rapeseed production has reached around 50%, but is still lower than Canada.[44]

Breeding new varieties is key to China's rapeseed sector, given the quality gap between Chinese rapeseeds and imported canola. The current breeding innovation efforts focus on cultivating "double-low" varieties, higher oil content, higher yield, and fast-growing varieties. In rapeseed growing areas, such as Sichuan, Hunan, and Xinjiang, new varieties can yield up to 50% oil upon extraction, in contrast to 30-40% oil content from conventional varieties.

As Chinese consumers' preferences for domestic high-quality rapeseed oil are rising, some family-run rapeseed crushers, as known as oil studios or "Youfang", are discovering new business opportunities by taking advantage of traditional crushing techniques. When many local private crushers are experiencing financial losses and shutdowns, these oil mills survive by advertising their product as old-fashioned aroma-type oil. In the meantime, China's fast-growing e-commerce provides a channel to distribute these products throughout China. The aroma-type rapeseed oil is reportedly sold at a premium, usually 30% higher than the prices of regular rapeseed oil.

Recently, new business models are being explored and experimented in China's rapeseed sector. Establishing a value chain along the life cycle of the rape crop is a prominent example. In some areas, local governments are encouraging farmers to take advantage of the "multiuse" potential of rape plants, including the use of the leaves as edible vegetables, blossom as a tourism attraction and flowers for honey, animal feed and fertilizer. This "one crop, multiple use" model provides a good example of China's fresh attempt to establish a value-added full-chain rapeseeds industry in China.

# 4 AN ANALYSIS OF IMPACTS OF THE CANOLA BAN

The Canada-China canola spat has not only affected the canola sectors in both countries, but it will also have a profound impact on the global grain market. It will ripple through to non-grain markets like meat and biofuel that have close ties to canola. The current canola ban has changed Canadian farmers' seeding decisions for the crop year of 2019-2020, especially those in the Prairie provinces. The shift will complicate the picture for Canadian farm operation as we move into the next crop season. The profitability outlook of canola may not be very positive in the next few years if the dispute remains unsolved.

## 4.1 The Impacts on Canada

First of all, China's rejection of canola harms Canadian farmers' willingness to produce more canola in the crop year of 2019-2020. Statistics Canada said in a production report released in December 2019, Canola production decreased 8.3% nationally to 18.6 million tonnes in 2019—its lowest level since 2015.[45] Reduced harvest area, which fell 8.8% year over year to 20.8 million acres, is the primary reason for lower production. Saskatchewan, Canada's largest canola-producing province, led the decrease with farmers reporting a 7.3% drop in output to 10.1 million tonnes. This decrease was attributable to lower harvested area, which declined 7.1% to 11.4 million acres. Farmers in Alberta reported that harvested areas fell 12.9% to 5.8 million acres, bringing total production down 9.4% to 5.3 million tonnes. The harvested area in Manitoba declined by 5.0% to 3.2 million acres in 2019. As a result, canola production in the province was down 7.9% to 3.1 million tonnes in 2019.

According to the CGC's Grain Statistics Weekly report, canola delivered to primary elevators and processors were slightly less than 15 million tonnes through the first 43 weeks of the 2018-19 crop year.[46] That's about 920,000 tonnes or six percent less than the same time a year ago, but almost on par with the 2016-17 crop year.

Canola exports in the 2019-2020 crop year are expected to take a hard hit by the import ban on two major canola exporters. Agriculture and Agri-food Canada (AAFC)'s November supply and demand update forecasts 2019-20 canola exports to other countries at nine million tonnes, almost the same as 2018-19 and down about 1.7 million from two years ago.[47] While data from the Canadian Grain Commission shows, as of November 24, 2019, Canada's canola exports in the 2019-2020 season already fell about 9.5% from a year earlier.[48]

The unresolved trade tensions with China and the massive world supply of canola have pushed prices for the valuable crop down as producers head into their fields for the fall harvest in 2019. Agriculture Canada forecasted an average price range of $455 to $485 per tonne, compared to $497 in the crop year just ended and $539 two years ago.[49] Figure 12 illustrates a weakening trend of International Exchange Futures (ICE) canola prices in the first half of 2020. Chinese ban, along with other shocks such as weather and US-China trade war, adds mounting uncertainties to the future prices of canola. Starting in July 2020, canola future prices climbed and hit the highest level since October 2018, partly because of limited Canadian supply expectation and strong demand recovery from the COVID-19 in China.[50]

Canadian farmers are paying the price for the trade dispute between China and Canada. Canola growers expressed their concerns on the increasing inventory, declining demand, and falling prices caused by the ban at the 2020 Farmtech Annual Conference in Edmonton. Considerable uncertainty has forced some growers to reduce or even give up growing canola for the year.

## 4.2 The Impacts on China

In the short term, there might not be a significant change in the canola supply in China. China still has plentiful rapeseed reserve in the coastal provinces, although the inventory appears to decline year over year. To fill the demand gap caused by the canola ban, China has been actively seeking canola imports from other countries such as Russia, UAE, and Ukraine. China imported 1.71 million tonnes of canola seeds between January to May 2019, a decline of 4% from the same period of 2018.[51] Canadian canola amounted to 1.16 million tones, accounted for 68% of the total

**Figure 12.** Canola Futures Prices Since 2018


**Data source:** International Exchange INC (ICE)

rapeseed imports, down 29.6% year on year. In contrast, rapeseeds imports from Russia increased to 0.11 million, 32.48% higher than the same period last year. In the meantime, 0.48 million of rapeseed oil, a year-on-year increase of 8.44%, was exported to China during the period from January to May 2019. Top sellers include Canada (70.49%), UAE (8.82%) and Ukraine (6.6%). Canadian share of exported rapeseed oil decreased by 17.86% from the same period last year, in contrast, exports from other countries such as UAE, Russia and Ukraine have risen notably.

However, in the long run, the supply gap may persist or even widen in Chinese rapeseed market, if imports and inventory continue to decline. The data shows that from May to September 2019, rapeseed imports declined 65% year on year while rapeseed oil imports increased 24% year on year. The total supply of domestic rapeseed oil in China in 2019 was 1.33 million tonnes (based on an estimated 42% of oil yield from seeds), which represents a deep plunge of 35% from last year. As of August 9, 2019, there were 0.35 million tonnes of rapeseeds stocked in several Chinese coastal cities, a drop of 45% year on year.[52] The current level marked a record low of rapeseeds stock over the past few years. The rapeseed oil stock in Fujian, Guangxi and Guangdong was only 0.42 million tonnes, or 35.1% lower from the same time last year. These numbers suggest a widening rapeseed supply gap in China since the canola ban was imposed. Even though China is diversifying its rapeseed suppliers and increasing rapeseed oil import levels to close the expanding gap, it would not be easy to find a substitute for Canada that can fill China's demand gap in a short term. As per USDA Foreign Agricultural Service (FAS) forecast, the 2019/2020 rapeseeds production in Russia is 2.27 MMT, which is less than half of China's canola seeds imports in 2018, or 4.75 MMT.

As the tensions with Canada on canola trade remains unsolved and demand for vegetable oil is recovering from the damage due to the COVID-19 pandemic, China's canola oil prices have been pushed up since July. As of September 3rd 2020, China's canola oil futures prices rose to its highest in nearly seven years. The global food security warning and expected rising prices and inflation further accelerate the price changes. A Chinese importer of canola oil described Canadian canola oil in China now as "gold oil", due to the soaring prices driven by concerns disrupted supply.[53]

# 5 FUTURE TRENDS FOR CHINA'S RAPESEED SECTOR & POLICY IMPLICATIONS FOR CANADA

## 5.1 The Future Development Trends of China's Rapeseed Sector

There are strong signals that China is changing its agricultural trade direction and emphasizing more trade diversity – especially in developing trade relations with BRI countries. This represents a move away from unfettered market forces, where importers have free rein to make purchases without consideration of central strategic or political considerations. Food security, centred around grain self-sufficiency which was declared to have been achieved in the mid-1990s, is still the number one national strategy for China's agricultural sector. It is worth noting that China has modified the agricultural policy goals in food security in the past decades and allows moderate imports, given the widening gap between domestic demand and supply in some food categories such as oilseeds and meat products. Although it remains unclear when China will lift the canola ban, there is reason to believe China needs canola imports to fill the supply shortage. Closely monitoring the trends and developments in China's canola sector can help Canadian producers and policymakers better understand the Canada-China canola relations and assists the canola sector in its future planning and managing China's demand fluctuations.

First, the gap between the domestic demand and supply for rapeseed oil will remain large. China produced 12.9 MMTs of rapeseeds in 2018, which is roughly the equivalent of 4-5 MMTs of rapeseed oil. China imported nearly 4.8 MMTs of rapeseeds in that year, which could produce an additional 2.4 MMTs of oil. As China's total consumption of rapeseed oil in 2018 is 8.3 MMTs, the supply gap in 2018 is estimated to be 0.9-1.9 MMTs.[54] Data shows that China's canola oil imports is 1.3 MMTs for 2018, which falls right in our estimated range. There is no significant increase in rapeseed production seen in the 2019/2020 season. USDA forecasts the Chinese rapeseed production may reach 13.1 MMTs, up only 1.6% from last year. If the 2020 consumption level in China did not drop dramatically, the rapeseed oil shortage would be similar to 2019.

Second, China's rapeseed policy appears to have entered a new phase. It is still too early to identify the direction where it may go. However, there are signs indicating that the Chinese authorities are decentralizing the policy-making process for rapeseed after TSP led to price distortion and hurt the growth of the rapeseed industry in China, leaving more authority for the provincial governments. China's rapeseed policy has gone through two stages in the past decade. Between 2008-2015, TSP was the primary policy developed to subsidize farmers and to protect the processing industry. However, the unexpected consequences of TSP, for example, the flood of imported canola it caused, forced Chinese policymakers to shift directions. After TSP was abolished in 2015, China began the stage of inventory reduction. The main goal is to reduce the high stock of rapeseed oil in the national reserves. Subsequently, rapeseed oil stock decreased from 5.2 MMTs in 2015 to just 0.5 MMTs in 2018. China's rapeseed sector is now facing a significant challenge to deal with its continuing rapeseed undersupply and intensifying trade tension with Canada, China's largest canola supplier.

Third, China's rapeseed sector is now experiencing fundamental reforms and transiting to a more market-oriented model. The abolishment of TSP opens the rapeseed purchase market to all Chinese processing enterprises. This provides opportunities for the rapeseed processing industry to eliminate overcapacity and optimize the business structure. Also, given that the provincial governments now are responsible for policymaking, some rapeseed provinces, such as Hubei and Jiangxi, have started to explore new models, which combining rape farming and oil crushing with tourism and apiculture as a whole value chain to advance the rapeseed industry. These new models are called "from field to the tongue" in some provinces.[55]

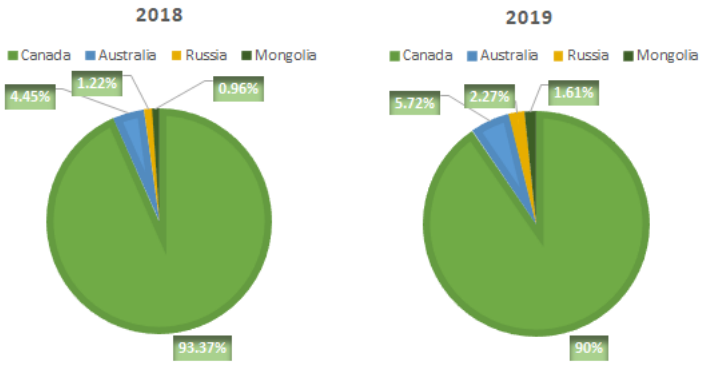
Fourth, high-quality, locally produced Chinese rapeseed oil has been expanding its market in China in recent years. This type of rapeseed oil, known as aroma-type or N0. 95 oil, targets the high-end market and gains a market share of 30%.[56] The aroma-type rapeseed oil products differentiate themselves from canola oil by labelling themselves as "aroma-type" and "Non-GMO." Not only

advertised and sold by conventional retailers but also through e-commerce platforms such as Taobao.com and Jingdong.com, this domestically produced rapeseed oil is favoured by an increasing number of Chinese consumers.

Fifth, diversification of trading partners will continue to be an essential part of China's food security strategy in the long term. The data from the General Administration of Customs (Figure 13) shows a notable change in configuration of rapeseed exports to China from 2018 to 2019. China's rapeseed imports from Canada in 2019, though still the primary source, declined from 95% to 90%, while imports from other countries (i.e., Russia, Mongolia, and Australia) increased as compared to year 2018.

Lastly, the Chinese vegetable oil market is becoming more diverse and competitive with more premium varieties. High-quality vegetable oil (e.g., camellia oil, olive oil, and walnut oil), which serves Chinese consumers in the high-end market, has gained increasing market shares in recent years. As some major market players such as Jinlongyu, Fulinmen, and Luhua, all expanded their business to the premium oil market, the high-end market reportedly increases at a rate of 80% every year in China.[57] The intense competition with other varieties in the Chinese vegetable oil market may make it more difficult for canola oil to excel.

**Figure 13.** China's Rapeseed Import by Country in 2018 vs. 2019




**Data source:** The General Administration of Customs of People's Republic of China

## 5.2 Policy Implications for Canada

The canola ban and uncertain prospects certainly cast a shadow on Canada's canola sector that relies heavily on the Chinese market. Since last April, Canadian canola stakeholders have been struggling with falling demand, rising inventories and lower prices. After the ban was announced, Ottawa attempted to resolve the issue through high-level trade talks and negotiations, but Beijing has shown little interest in face-to-face consultations. China has a reputation of playing hardball in bilateral trade, especially when there is political tension with its trade partners, such as the ban on Norwegian salmon in 2010 and restrictions on Philippine bananas in 2012. Canada may also need to prepare for a long and difficult negotiation process with China in easing tensions over canola exports.

To lessen the impact of the canola ban on farmers, the Canadian government has provided financial aid to canola growers amidst the trade dispute. After China halted the canola trade, Canadian canola growers were struggling to find alternative buyers for their canola. This will likely lead to further reactions by the Canadian canola sector, such as reduced planting areas and hence the decline in total canola harvest, which may further impact the global canola supply. Canadian canola farmers harvested 8.3% less canola than 2018, due to lower harvested area, which fell 8.8% from 2018.[58] Agriculture and Agri-food Canada (AAFC) is forecasting the total canola production in 2020 at 18.50 million tonnes, the lowest since 2016.[59] The outlook of global rapeseed production in 2020 also appears to be pessimistic, with a 6% cut from the previous year.[60] In the context of the global reduction in rapeseed production, China also faces increasing imbalance between supply and demand.

To deal with fewer orders from China that will last for an unknown period, some canola growers have treated it as a new normal and put more effort into reducing input costs and making farm operations more efficient. Canola crushing for the first four months into the 2019/20 marketing year (August to November), has increased by 8.5% from the last marketing year. Additionally, the amount of canola oil and meal produced rose 8.4% and 8.8%, respectively, from year to year, as growers made more canola available at a cheaper-than-usual price.[61] This may create an opportunity to add crushing capacity in Canada and potentially expand sales of value-added canola products overseas including to China. The current ban imposed by China mainly applies to canola seeds.

At the time when the ban was announced, concerns arose that the export restrictions on canola may also spread to other agricultural goods sold to China. In June 2019, China decided to suspend pork and beef exports from Canada, citing concerns over falsified certificates on feed additive. The ban was later lifted due to, at least partly, meat shortages in China caused by African swine fever. China also imported more canola oil and meal in 2019. There are no significant changes in imports of canola oil and meals and other grains such as wheat and barley.

Political factors cannot be overlooked in developing economic relations with China, which often responds forcefully and retaliates to criticism over issues such as human rights, environment and security. Even before the Huawei feud, Canada-China relations appeared to be strained by the halt of the Canada-China free trade talks in late 2017 and the ratification of the USMCA in late 2018 which essentially precludes Canada from entering a free trade agreement with China without the agreement of its USMCA partners. The arrest of Huawei CFO Meng Wanzhou escalated diplomatic tensions between the two countries dramatically and is widely considered a key trigger of the canola ban.

Understanding the shifting landscape of China's rapeseed sector is crucial for Canada to anticipate the future trend for canola trade with China, as well as developing agricultural policies for the interest of Canadian farmers. Food security is China's paramount concern in agricultural policy and a long-term mission for the Chinese authorities. China's food security strategy has evolved with the changing supply-demand relations in the domestic and international grain markets. Increasing grain stocks on the one hand, and soaring grain imports on the other, imply a structural surplus with China's grain production. The supply-side reform has been boosted to solve this issue in the agricultural sector. China's rapeseed sector now is undergoing a structural reform with new policies rolled out to liberalize China's rapeseed production and distribution.

China's demand for rapeseed is the fundamental factor that directly influences its trade policy and relations with rapeseed exporters like Canada. There are at least three reasons to believe that there is still room to improve the canola relations between China and Canada. On the demand side, a significant drop is very unlikely, given the importance of canola in Chinese diet and the uncertainties of soybean trade between China and the U.S. On the other hand, the declining domestic supply after the cancellation of TSP is a limiting factor for China to improve production within a short time period. Thirdly, Canada still exports the most rapeseed in the world and will not be superseded by other rapeseed exporting countries in the short term. This provides ongoing opportunities for canola producers in the Chinese market for the foreseeable future.

On the other hand, Canada should be fully aware of the uncertainties, within China but also more broadly, that may impact canola trade between the two countries. COVID-19 first broke out in China in December 2019 and soon spread to the rest of the world, creating uncertainty and an economic slowdown. The pandemic is very likely to weaken the global demand for canola with economies slowing, and even retracting, in Canada's major canola export destinations such as the U.S., EU and Japan. The U.S.-China trade tensions pose more risks to Canada's canola exports to China after the "Phase One" agreement was reached in late 2019. As per the agreement, China will purchase US$32 billion in farm goods over the next two years. These clauses will certainly affect Canadian agricultural sector and producers, but the real impacts still remain veiled due to the continuously worsening diplomatic relations in 2020 between China and the U.S. that may dampen soybean trade. Data shows that China imported twice as many U.S. soybeans in the first quarter of 2020,[62] however, anecdotal evidence suggested that China has asked state-owned firms to halt purchase of soybeans from U.S.[63]

Stable and healthy trade relations between Canada and China is not only beneficial to Canada but also crucial for China to close the supply gap, which is unlikely to achieve by its national self-sufficiency strategy in the short term. It is important for Canadian policymakers and stakeholders to recognize this situation. Given the current tensions, trade talks and negotiations could still be an effective means to express Canada's willingness to settle the disputes and resume business with China. Canada and China can still find common grounds on canola trade unless China finds a viable alternative to Canadian product. Given the current capacity of the world's major rapeseed producers, this is believed highly unlikely to occur in the short term. On the other hand, strategic market diversification also represents a crucial means for Canada to tackle the issue, especially given the mounting uncertainties surrounding a dominant buyer like China. Alternative markets, such as India and Singapore, may help Canada cope with shocks on the demand side.

For Canadian canola exporters (including seed, oil and meal) who are in the eye of the storm, China is still the largest canola seeds, and the second-largest canola oil and meal buyer. A comprehensive understanding of China's rapeseed policy will be helpful for Canadian exporters in gaining or improving access to the Chinese market. The Chinese rapeseed sector may be further decentralized and liberalized with the ongoing supply-side reform. This suggests more opportunities for Canadian exporters, but as well as an intensifying rivalry with Chinese companies, especially competition from private enterprises. In this sense, identifying advantages and generating brand awareness for "Canadian canola" in the Chinese market is essential. The growing Chinese middle class, which has already reached a third of the population by some accounts, provides Canadian exporters a massive and sustainable market for high quality and healthy food products. Developing partnerships with Chinese SOEs, especially those located in China's non-rapeseed growing regions where most Chinese crushers and processors are

located, may provide a practical avenue for Canadian exporters to access the market. Chinese SOEs such as COFCO are capable of influencing the oilseed policymaking process and are more open-minded to imported rapeseeds. It is also imperative to find new markets for Canadian canola in the future. The EU biofuel industry could be a potential market, as the harvest of rapeseed continued to decline over the past decade.[64]

Canadian canola growers have undoubtedly taken the hardest hit in the latest trade dispute with China. In addition to the financial assistance from the government, farm diversification may be a remedy for producers struggling with falling income from growing canola. For farmers who specialize in growing canola, cutting inputs cost and improving efficiency are more important than ever to deal with the current crisis. Canadian canola farmers need to work closely with the government and stay tuned on the evolving market conditions to help mitigate the impacts of demand and prices fluctuation in the future.

The COVID-19 pandemic has driven global food prices up in the past few months of 2020, adding new challenges, or possibly opportunities, to the Canada-China canola tensions that has remained unsolved since early 2019. As food prices continued to rise, grains and oilseeds (including canola) were traded at higher prices in the third quarter of 2020. ICE Canola future prices hit the highest level since October 2018, injecting some positive sentiment to Canada's canola sector. Rapeseed oil future prices in China also climbed up to its seven-year high. Demand from China for canola imports reportedly remains strong even amid the canola dispute and the COVID-19 pandemic. Anecdotal evidence shows that a great deal of canola moved into Chinese markets through other countries during the period of canola embargo.[65] The lifting of the pork ban, heavily due to the outbreak of swine flue, at least shows that China still has appetite for Canadian products, if the demand is strong enough. The economic and consumption recovery in Chinas' post-COVID-19 era might yet provide an opportunity for both countries to work together to solve the canola dispute to their mutual advantage.

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