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The Downside Risks from Export Market Concentration: The Case of Canadian Canola

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Abstract
Canada's multi-billion-dollar canola industry faces headwinds from Chinese tariffs and uncertainty in Canada–US trade relations. We analyze the economic fallout of ongoing trade disputes and other current market and policy challenges facing Canadian canola, challenges which are also relevant for other export-reliant agricultural commodities facing trade retaliation.

1 Introduction

Canada's canola sector has been buffeted by a series of trade-related disruptions that pose significant challenges for the multibillion-dollar oilseed industry. In response to Canadian duties on Chinese electric vehicle exports, in 2024, China imposed a 100 percent tariff on imports of Canadian canola oil and meal and launched an antidumping investigation that eventually resulted in the application of provisional duties of 75.8 percent on imports of Canadian canola seed in August 2025. As China is the predominant export destination for Canadian canola, these prohibitively large duties threaten significant harm to the Canadian canola sector. Additionally, in early 2025, the United States threatened to impose 25 percent tariffs on Canadian exports (including canola products), though President Trump clarified within days that goods compliant with the United States–Mexico–Canada Agreement (USMCA) would not be subject to the new duties (Pratt 2025). Nonetheless, the uncertain status of ongoing Canada–US trade negotiations, the 10 percent uniform tariff enacted by the Trump administration on imports from all sources (including Canada), and proposed changes in US biofuel policy that would disadvantage imported feedstocks such as Canadian canola oil have placed the industry on an unsteady footing.

Given that China and the United States together account for nearly 90 percent of Canada's canola exports (based on data for 2024; USDA-FAS 2025), these disruptions in key export markets threaten dire consequences for the industry. The situation faced by Canadian canola also closely mirrors the situations faced by other export-reliant agricultural commodities subjected to trade retaliation by major trade partners, such as US soybeans, which were impacted by recent trade retaliation from China. The case of Canadian canola is thus emblematic of the downside risks from export market concentration and the challenges that such circumstances pose in the face of trade disputes and other policy shifts.

2 Background: Canada's Dependence on the Chinese Market

Canada exports about 90 percent of its canola production (AAFC 2023), and China has long been a major export market for Canadian canola. Canadian exports of canola to China expanded rapidly in the 2000s, with a brief interruption in 2009 due to emergency phytosanitary restrictions imposed by China over concerns about blackleg disease, a fungal disease affecting canola, in Canadian canola shipments (exports from Australia, another major canola exporter, were also subject to these restrictions). This rapid rise was propelled by China's efforts to bolster domestic food security and increases in household incomes

fueling middle-class demand for products such as canola oil. The high degree of export market concentration reflects both China's prodigious demand for canola oil and canola-based feedstocks and the integrated North American supply chain that ships canola seed to China and returns processed oil and meal to North America.

By 2012, China had become Canada's largest buyer of canola seed. Canada's position was further bolstered by China's halting of canola imports from Australia, the world's second largest canola producer, from 2011 to 2013 due to renewed concerns over blackleg disease in Australian exports. China's phytosanitary controls on canola imports have been periodically reintroduced since the outbreaks of over a decade ago, with Australian imports again being banned from 2020 to 2025 due to disease concerns.

A 2016 memorandum of understanding (MOU) formalized cooperation between Canada and China on policy barriers facing Canadian canola and other agricultural products. The agreement committed Beijing and Ottawa to collaborating in research on blackleg disease, limited seed exports to Chinese-approved processing facilities, and set dockage limits (maximum allowable amounts of material such as chaff and broken seeds present in canola shipments) at 2.5 percent (USDA-FAS 2017). By 2018, China imported roughly $3.4 billion worth of Canadian canola products (the combined value of seed, meal, and oil), representing 40 percent of Canada's total canola exports (USDA-FAS 2025). However, the industry's reliance on exports and, particularly, exports to a single large market, has left it vulnerable to shifts in global demand and exposed Canadian producers to China's outsize political and economic leverage.

China persisted as by far the largest buyer of Canadian canola until 2019, when Canada's arrest of Huawei executive Meng Wanzhou over a US extradition request ignited a trade dispute between the two countries. Despite the existing trade arrangement established by the MOU, China's government swiftly enacted trade restrictions to exert economic pressure on Canadian exporters. In March 2019, China invoked phytosanitary concerns to revoke the export licenses of Richardson and Viterra, the two largest shippers of Canadian canola and canola products. Canadian canola exports to China plunged, and in March 2020, Beijing unilaterally reduced allowable dockage rates to 1 percent (thereby imposing a stricter technical barrier on Canadian canola exports). The MOU lapsed following China's actions, and trade continued on the basis of temporary export permits until May 2022, when the suspended licenses of Richardson and Viterra were finally restored. China's trade actions during the dispute (in conjunction with the effects of African Swine Fever on the Chinese hog population and resulting decline in feed demand) caused exports to decline sharply, with China substituting a large part of its imports of canola seed and canola derivatives to alternative suppliers such as Russia and Ukraine.

3 The 2024–2025 Trade Shock: Chinese Retaliation and US Tariffs

The simmering tensions between Canada and China were rekindled in August 2024 following Canada's imposition of 100 percent *ad valorem* tariffs on Chinese electric vehicles and 25 percent duties on steel and aluminum, moves which followed similar restrictions enacted by the United States and the European Union. These actions provoked an immediate response from Beijing, which on September 9 launched antidumping and antidiscrimination investigations into Canadian canola seed—moves which were widely viewed as retaliatory (Sherman 2024). The formal trade response escalated on March 20, 2025, when China imposed 100 percent tariffs on Canadian canola oil and meal, affecting more than $2.6 billion in exports. In August 2025 China extended its restrictions to include antidumping duties of 75.8 percent on Canadian canola seed exports. These actions immediately caused Canada–China canola exports to collapse and depressed Canadian canola prices, with canola futures falling by 5.8 percent following the announcement of the new import restrictions (Cao et al. 2025). An adverse development for Canada–China canola seed exports coinciding with these actions was China's resumption of canola imports from

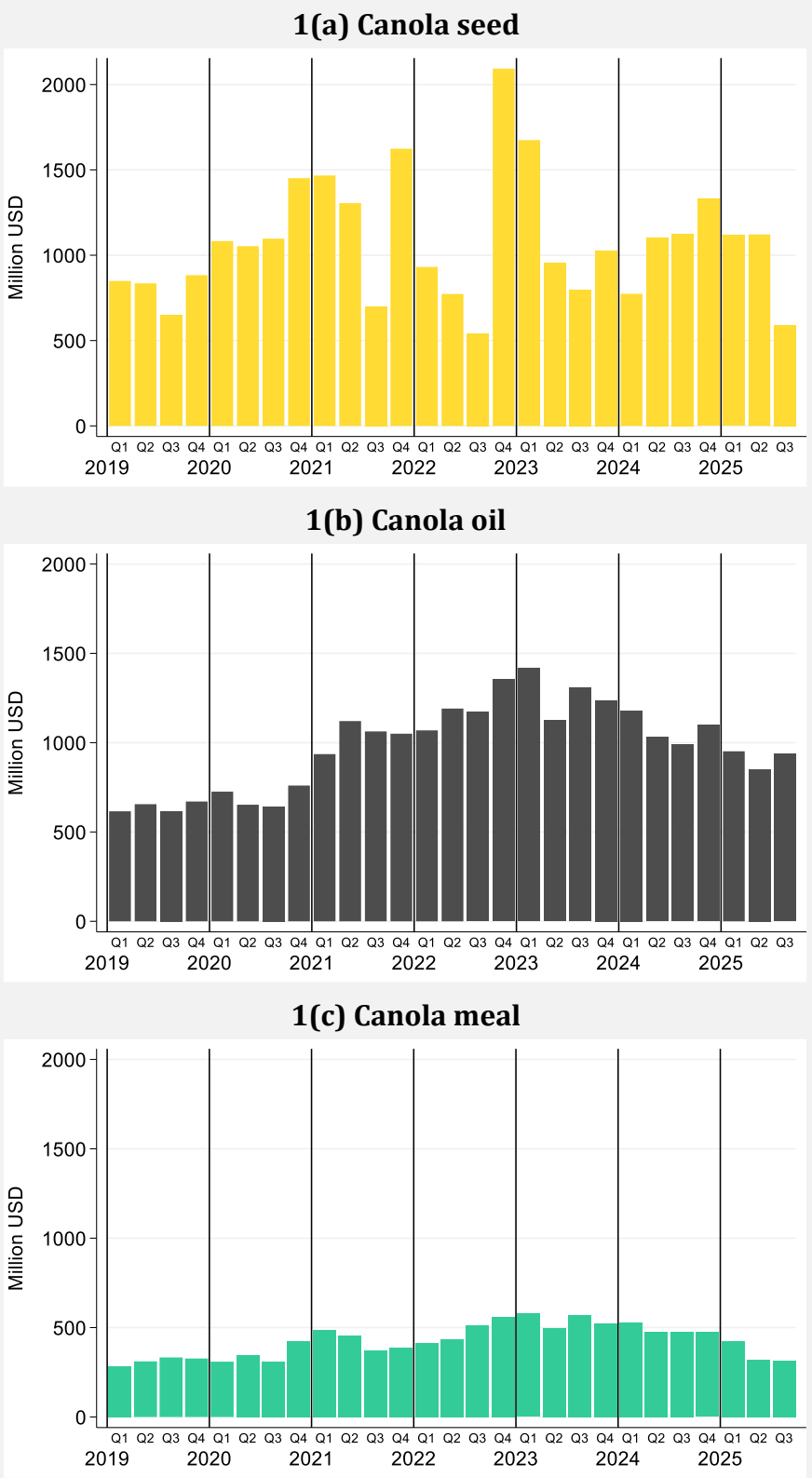

Figure 1. Value of Canadian canola exports by quarter and product

Notes: Panel (a) plots seed export values by destination (Harmonized System commodity code 1205), panel (b) charts canola oil (HS commodities 151411 and 151419) exports, and panel (c) displays canola meal exports (HS commodities 230641 and 230649).
Source: Data are sourced from UN Comtrade.

Australia in August 2025 for the first time since phytosanitary restrictions were imposed on Australian exports in 2020 (Thukral and Cao 2025). The trade dispute caused a noticeable downturn in Canadian exports of canola seed and products, a downturn which is clearly visible in Figure 1, which depicts the total value of Canada's quarterly canola exports from January 2019 to September 2025.

China's pattern of retaliatory trade restrictions reflects a deliberate retaliatory strategy using both phytosanitary and antidumping measures to target economically important, politically sensitive sectors. Such a strategy is in keeping with China's actions in recent trade disputes with other countries such as Australia and the United States in which high-profile agrifood exports were targeted for trade retaliation (Li et al. 2018; Ridley et al. 2022).

Considering the rocky trade relationship with China, the United States has served as the fallback market for the Canadian canola sector. In 2023, US imports of Canadian canola products tallied roughly $2.8 billion (USDA-FAS 2025), corresponding to $1.6 billion of canola oil, $950 million of canola meal, and $247 million of canola seed. However, the historically stable Canada–US trading relationship experienced a significant disruption when, on March 4, 2025, the Trump administration announced plans to impose 25 percent tariffs on Canadian exports due to concerns over fentanyl smuggling, tariffs which would apply to canola products among other goods.

The planned US tariffs sparked fears of a second blow to exporters on top of the one already being faced in the Chinese market. Less than a month after the initial announcement, however, President Trump stated that Canadian goods meeting USMCA's rules of origin—including Canadian-produced canola and canola derivatives—would be spared from the planned US tariffs pending negotiations between the two countries (Pratt 2025). Despite dodging the planned US fentanyl tariffs, Canadian exports were nonetheless subjected to the uniform 10 percent tariff imposed by the Trump administration on all imports regardless of source. These events, combined with the depreciation of the Canadian dollar spurred by the trade tensions between the two countries and the effects of persistently low agricultural commodity prices, have negatively impacted the industry. Additionally, the ongoing and ever-evolving status of trade negotiations between the two countries, as well as proposed changes to US biofuel regulations (discussed in more detail below), have combined to inject an unprecedented degree of uncertainty into Canada–US canola trade.

4 Potential Consequences of Import Restrictions for Canada's Canola Sector

4.1 Export Exposure by Product and Destination

Canada's export situation for canola and canola derivatives shows market concentration vulnerabilities that differ across segments of the value chain. Figure 2 depicts the allocation of Canadian canola production across domestic use and major export destinations by volume (in million metric tons; MMT), illustrating distinct points of exposure for canola seed, meal, and oil. The figure also highlights key events that have shaped Canada's export patterns in the markets for each product. As the figure makes clear, Canadian canola products face visible market concentration, with most production either absorbed domestically or directed toward a single dominant foreign market—China in the case of seed and the United States for meal and oil.

For canola seed, Canadian exports have remained highly concentrated toward China, exposing the industry to significant policy-driven disruptions. As shown in Figure 2a, total canola seed production expanded steadily through the mid-2010s, with exports to China rising in parallel until 2018. This pattern reversed abruptly in 2019 following China's suspension of export licenses for Richardson and Viterra,

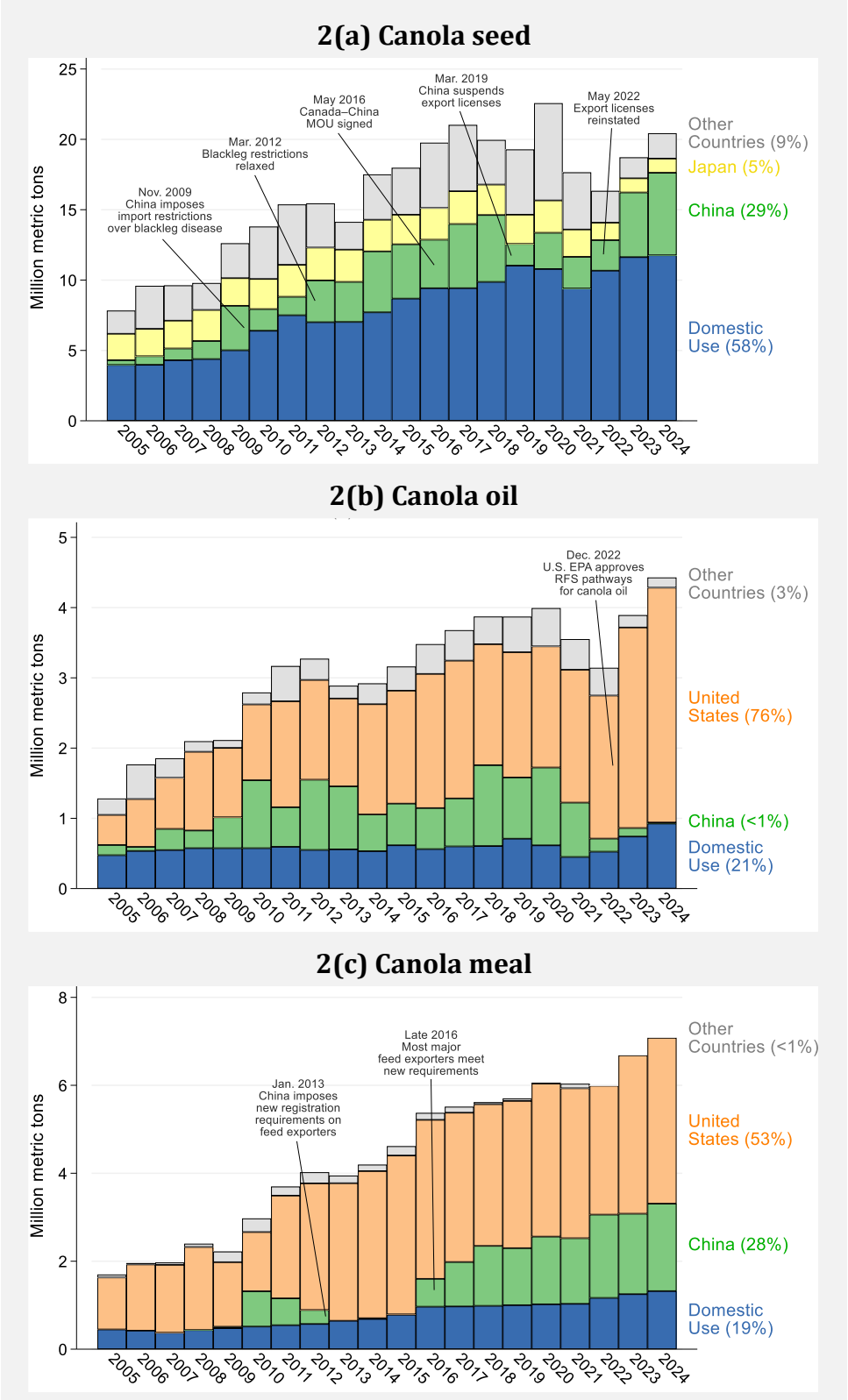

Figure 2. Exports by market and domestic use of Canadian canola by year

Notes: Percentages indicate shares relative to total use for the year 2024.
Source: Domestic use data are sourced from the USDA FAS Production, Supply and Distribution database and export data are sourced from UN Comtrade.

which effectively halted bilateral seed trade and is reflected in the sharp contraction in exports to China. Exports partially recovered after export licenses were reinstated in 2022, but the figure shows renewed declines beginning in 2024–2025 following the imposition of antidumping and antidiscrimination measures.

In 2024, domestic use accounted for approximately 58 percent of total canola seed production, while China remained the dominant export destination at 29 percent, illustrating its pronounced importance as a major foreign market for Canadian canola. Japan represents the only other consistently sizable destination, absorbing roughly 5 percent of production, while all other foreign markets combined account for a relatively small share. Together, these patterns underscore the limited scope for short-run adjustment in canola seed exports when access to the Chinese market is disrupted. This reflects both the scale of China's demand and structural constraints in alternative markets, including limited crushing capacity, inadequate processing infrastructure, and competition from substitute oilseeds such as soybeans.

For canola oil, the United States is by far the most prominent destination for Canadian exports. As shown in Figure 2b, US demand absorbed approximately 76 percent of total Canadian canola oil production in 2024, reflecting the rapid expansion of exports over the past decade. Domestic use represented roughly 21 percent of production, while all other export destinations combined accounted for only a small residual share. Although China was a significant market earlier in the depicted period, its importance has declined markedly since 2020, with imports falling to less than 1 percent of total production by 2024 as the United States has become the dominant export market for canola oil. Other destinations, including Mexico, South Korea, Chile, and Hong Kong, absorb relatively minor volumes and provide limited scope for diversification.

Comparable to canola seed, Canada's canola oil exports remain highly concentrated, and few suitable alternative markets exist to which exports can be readily reallocated in the short run. Structural barriers further constrain expansion into new destinations. In particular, and despite being a major global consumer of vegetable oils, the European Union remains largely inaccessible to Canadian canola oil due to restrictions on imports of food products produced with genetically modified organisms (GMOs), as well as consumer preferences that limit acceptance of GMO-derived products. These constraints reinforce the concentration patterns observed in Figure 2b and heighten exposure to policy and demand shifts in the US market.

Canadian canola meal exports exhibit even more intense concentration than seed and oil. As Figure 2c demonstrates, the United States has long served as the dominant destination, with imports rising steadily from relatively small volumes in the mid-2000s to account for approximately 53 percent of total Canadian canola meal production in 2024. This growth reflects the expansion of US livestock production and associated feed demand, combined with increases in Canada's domestic canola crushing capacity over the past decade. China has emerged as a secondary market, absorbing roughly 28 percent of total meal production in 2024, while domestic use accounts for the remaining 19 percent.

Notably, exports of canola meal to China continued to expand even during the 2019 Canada–China trade dispute, when restrictions were imposed on Canadian canola seed. This pattern is consistent with China targeting primary commodity exports to exert economic pressure on Canadian producers while maintaining access to processed canola products. Other destinations—including Vietnam, Mexico, and Ireland—absorb only small volumes of Canadian canola meal and provide little scope for diversification. As a result, adjustment options for the meal sector remain closely tied to demand conditions and policy developments in the US and Chinese markets.

We augment the information from Figure 2 by computing the Herfindahl–Hirschman index (HHI) of market concentration for Canadian exports of canola products over time, the values for which are shown in Figure 3. HHI is calculated as the sum of squared market shares (each export destination's share of the total annual value of Canadian exports, calculated individually by product). Higher values

correspond to a greater degree of export market concentration: for reference, the US Department of Justice (2024) defines markets to be moderately concentrated for values of HHI between 0.1 and 0.18 and markets with HHI exceeding 0.18 to be highly concentrated. The values of HHI depicted in Figure 3 thus reflect that Canadian exports of canola seed, oil, and meal are highly concentrated. These values for HHI closely align with the fact that Canada's top three export destinations for these products in 2024 accounted for 86 percent, 99 percent, and 99 percent of exports, respectively (based on data from UN Comtrade).

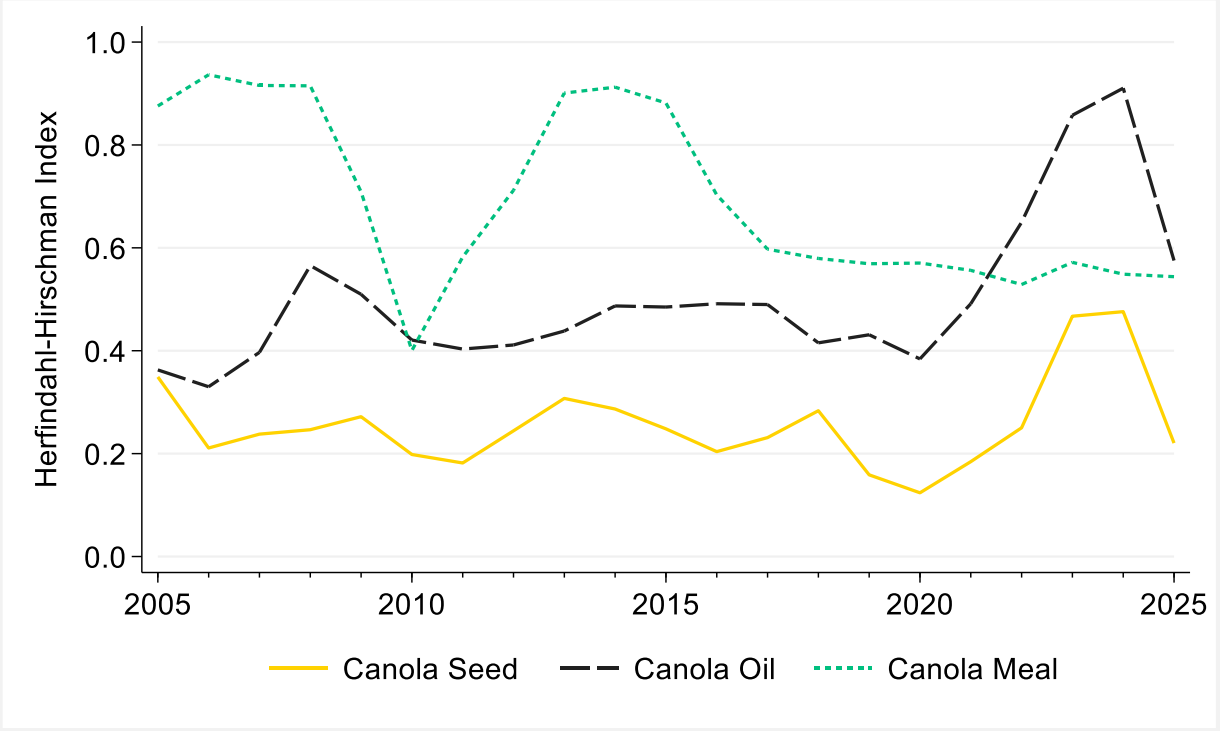

Figure 3. Herfindahl–Hirschman Index (HHI) of market concentration for Canadian canola exports

Note: HHI is computed as the sum of the squared market shares (share of the total value of Canadian exports by product), with higher values reflecting a higher degree of export market concentration.
Source: Data are sourced from UN Comtrade. Data for 2025 reflect exports between January and August.

Figure 3 also depicts significant variation in market concentration across products and over time. Consistent with the themes depicted by Figure 2, meal exports are the most concentrated of the three products, followed by oil. Periodic dips in market concentration across the three products (e.g., in 2010 and 2019) closely align with export disruptions related to Chinese import restrictions. Also evident from the figure is the dramatic rise in export market concentration for seed and oil visible from around 2020 onward. These increases correspond to the cessation of trade hostilities from the Canada–China trade dispute of 2019, the aftermath of which witnessed a significant rebound in Canada's canola seed exports to China. With China's reintroduction of trade restrictions on Canadian canola in 2025, Canadian exporters have been forced to seek out alternative foreign markets, which has translated into a significant decline in the industry's degree of export market concentration. The rise in concentration for Canadian canola oil relates to the significant increase in exports to the US market driven by rising consumer demand and expanded incentives in US biofuels policy for the use of feedstocks such as canola oil.

Taken together, the dynamics illustrated in Figures 2 and 3 underscore the highly concentrated nature of Canadian canola exports. By highlighting the reliance of the industry on only a small number of export destinations, these dynamics speak to the risks inherent in individual markets accounting for an outsize portion of exports. In the event of China or the United States implementing trade restrictions or enacting policy changes that curtail demand for imports, Canadian producers are left with little recourse in terms of alternative markets to which to sell their products. In large potential export markets with sizable consumer demand for vegetable oils, such as India, the lack of sufficient crushing infrastructure to process raw canola means that these markets cannot absorb displaced seed export volumes at a scale comparable to China.

This situation characterizes not only the circumstances of the Canadian canola sector but also other agrifood sectors for which specific foreign markets account for a major share of the industry's sales (e.g., the US soybean and sorghum sectors or the Australian barley and wine sectors, each of which rely heavily on the Chinese market). Like Canadian canola, these and other agricultural products have recently been subjected to trade retaliation as "innocent bystanders" within broader trade disputes.

4.2 Domestic Processing and Biofuel Policy

In the face of limited possibilities for export substitution, increased domestic processing has emerged as a logical insurance policy against headwinds in foreign markets, particularly where meal and oil can be absorbed by feed and biofuel markets, respectively. Canadian crushers processed approximately 11 MMT of canola in 2024–2025 (USDA-FAS 2025), and committed capacity is expected to reach 14.5 MMT by late 2025 upon completion of a new Cargill facility in Regina, Saskatchewan. This figure does not include the roughly C$2.35 billion in announced (but currently stalled) investments from Federated Co-operatives, Ceres Global Ag, and Viterra. When and if these projects are finished, they could add another 2–3 MMT of crushing capacity.

However, investment uncertainty continues to undermine domestic resilience. Federated Co-operatives postponed construction of its C$2 billion renewable diesel plant, citing regulatory and political uncertainty, potential shifts in low-carbon fuel standards, and escalating costs (USDA-FAS 2025). Ceres Global Ag canceled a planned C$350 million crush facility in Saskatchewan, and Viterra's proposed plant remains in limbo. These stalled projects are likely a result of processors' concerns over volatile policy signals in North American biofuel markets, existing bottlenecks in transportation and logistic infrastructure, and insufficient coordination between federal and provincial regulators.

It is worth noting further that even if all planned and delayed processing projects are completed, Canada's domestic crush capacity would remain well below its 18–20 MMT of annual canola seed production (USDA-FAS 2025). Consequently, Canadian canola growers and exporters will be forced to rely on foreign markets for sales for the foreseeable future even if expansions in domestic processing capacity come to fruition.

4.3 Oversupply, US Demand, and Logistic Constraints

The transition from exporting primary canola seed to value-added meal and oil has led to unintended oversupply. Several firms expanded domestic crush operations to feed canola-based biodiesel production, only to find themselves holding surplus inventories of canola oil due to delays and cancellations in downstream projects. With Canadian biodiesel production unable to scale quickly, crushers redirected large amounts of canola oil to US refiners given that the United States possesses well-developed, large-scale infrastructure for biofuel production. The US market absorbed around 3 MMT of Canadian canola oil in 2023, valued at $4.8 billion, an increase of 43 percent from 2022 (USDA-FAS 2025). This surge followed the US Environmental Protection Agency's approval of Renewable Fuel Standard pathways for canola oil in 2022, though this source of demand remains precarious. Interim

guidance for the Section 45Z Clean Fuel Production Credit, introduced as part of the Inflation Reduction Act, favored domestically controlled production using North American feedstocks. Under the current Section 45Z credit, eligible producers can receive up to $1 per gallon of low-carbon fuel between 2025 and 2027, incentives which were extended to 2029 under the 2025 One Big Beautiful Bill Act. This legislation also eliminated the indirect land use change penalty, which had previously disadvantaged crop-based oils such as canola. However, proposed amendments such as the "Made in America" rule and the Farmer First Fuel Incentives Act could exclude Canadian feedstocks from the 45Z program through 2034. Simultaneously, California's proposed cap on low-carbon fuel credits for canola and soybean oil could constrain future US demand for biodiesel feedstocks. If adopted, such measures would dramatically curtail Canada's access to its most valuable export market for canola oil.

Logistic constraints further limit the industry's flexibility. Canada's rail network and ports were designed for bulk seed exports and lack sufficient infrastructure to handle large volumes of processed oil. Additionally, storage and loading limitations at ports create chokepoints that restrict diversification beyond the US market.

Domestically, policy initiatives have remained fragmented. Canada's Clean Fuels Regulation (CFR), enacted in July 2023, mandates a gradual reduction in fuel carbon intensity. However, the regulation's future is uncertain in the face of potential swings in party control of Canada's federal government. British Columbia's "Made-in-Canada" rule, which requires renewable diesel content to be produced domestically as of April 2025, offers supportive signals but applies only within that province. Without a stable, coordinated policy framework, both at home and across borders, private investment in canola processing remains paralyzed. Canada's potential to scale value-added processing and reduce reliance on volatile export markets depends on predictable and harmonized regulatory signals.

5 Latest Developments and Policy Conclusions

Recent developments suggest a thawing in trade tensions that could affect the near-term outlook for canola exports. An announcement by Canadian officials on January 16, 2026, described renewed bilateral engagement and a preliminary agreement-in-principle that would lower China's tariffs on Canadian canola (with implementation reported as March 1, 2026, for key measures) and pause certain antidiscrimination tariffs on selected agrifood products such as canola meal, lobster, crab, and peas. If implemented, these steps could support a partial recovery in market access and reduce immediate pressure on exporters. However, they do not remove the central vulnerability faced by canola growers: Trade uncertainty and export dependence leave the sector highly exposed to policy-driven disruptions, and short-run adjustment, particularly for seed, remains constrained by limited substitution options and bottlenecks in domestic capacity and logistics. These factors underscore the continued importance of the resilience and adjustment priorities outlined above.

Canadian canola cannot rapidly diversify away from trade shocks in major export markets such as China and the United States. Moreover, scaling domestic canola processing to create a domestic buffer against declining exports faces significant challenges from logistical constraints and uncertainty surrounding demand-side biofuel policies in the United States and Canada. Domestic crushing capacity remains well below domestic production of raw canola seed, and exports of canola oil remain bottlenecked by transportation logistics. Other factors, such as negative EU attitudes toward GMO products and insufficient seed-crushing capacity in potential new export destinations, continue to stymie the development of substitute markets for Canadian canola seed. On the demand side, the US market remains the only scalable outlet for canola oil; however, uncertainty and proposed changes to federal and state low-carbon fuel programs have tempered investment in processing and cast a shadow over the future of canola oil exports for use as biodiesel.

Consequently, and as for other agricultural commodities faced with trade restrictions in major export markets, a resilient response cannot rely on generic efforts toward "diversification" alone. Effective policy to head off challenges in export markets by bolstering domestic demand must adopt a synchronized approach to fostering demand certainty, domestic capacity, and tradability. First, Canada's government would do well to provide stable market signals by publishing a multiyear CFR trajectory and aligning carbon-intensity accounting with US programs to preserve cross-border eligibility for Canadian biofuels in the US renewable energy supply chain. Second, industry and government should pair investments in crushing capacity with improvements in rail and port infrastructure such as incremental tankage, heated storage, berth slots, and rail racks at key ports, which would allow expanded processing capacity to translate into tradable volumes. Third, the industry should pursue targeted export market development in destinations where increased absorption is feasible and continue to engage on issues relating to phytosanitary and biotech regulation with partners such as the European Union. Finally, the deployment of time-limited risk-mitigation tools (e.g., export finance/insurance; accelerated approvals of new projects) would help stimulate private investment and support near-term adjustment to disruptions in foreign markets.

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