The Case of Canadian Canola and the Downside Risks from Export Market Concentration

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Abstract

Canada's multi-billion-dollar canola industry faces headwinds from ongoing Chinese anti-dumping duties and uncertainty in Canada-U.S. 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.

JEL Codes: F13; Q17 ; F10

Keywords: Trade retaliation; Canola; Canada; China; Biofuels policy

Tweet: Trade-related headwinds have dire implications for the export-reliant Canadian canola sector.

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Canada's canola sector has been buffeted by a series of trade-related disruptions which pose significant challenges for the multi-billion-dollar oilseed industry. In response to Canadian duties on Chinese electric vehicle exports, in 2024, China imposed a 100% tariff on imports of Canadian canola oil and meal and launched an anti-dumping investigation that eventually resulted in the application of provisional duties of 75.8% 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% tariffs on Canadian exports (including canola products), though within days President Trump clarified that United States-Mexico-Canada Agreement (USMCA)-compliant goods would not be subject to the new duties (Pratt, 2025). Nonetheless, the uncertain status of ongoing U.S.-Canada trade negotiations, the 10% uniform tariff enacted by the Trump administration on imports from all sources (including Canada), and proposed changes in U.S. biofuel policy that would disadvantage imported feedstocks such as Canadian canola, have placed the industry on an unsteady footing.

Given that China and the United States together account for nearly 90% of Canada's canola exports (based on data for 2024; 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 U.S. 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.

Background: Canada's Dependence on the Chinese Market

Canada exports about 90% of its canola production (AAFC 2023), and China has long been a major export market for Canadian canola. Canadian exports of canola and canola products 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 (Australian canola exports 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% (USDA 2017). By 2018, China imported roughly $3.4 billion worth of Canadian canola

products (the combined value of seed, meal, and oil), representing 40% of Canada's total canola exports (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 U.S. 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 licences 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% (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 licences 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 canola and canola derivatives imports to alternative suppliers such as Russia and Ukraine.

The 2024–25 Trade Shock

Chinese Retaliation and U.S. Tariffs

The simmering tensions between Canada and China were rekindled in August 2024 following Canada's imposition of 100% ad valorem tariffs on Chinese electric vehicles and 25% 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 9th launched anti-dumping and anti-discrimination investigations into Canadian canola seed—moves which were widely viewed as retaliatory (Sherman, 2024). The formal trade response escalated on March 20th, 2025, when China imposed 100% tariffs on Canadian canola oil and meal, affecting more than $2.6 billion in exports. In August 2025 China extended its restrictions to include anti-dumping duties of 75.8% 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% following the announcement of the new import restrictions (Cao et al, 2025). A discouraging development for Canada-China canola seed exports coinciding with these actions was China's resumption of canola imports from 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 has already 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 monthly canola exports from January 2019 to August 2025.

[Figure 1 here]

China's pattern of retaliatory trade restrictions reflects a deliberate retaliatory strategy using both phytosanitary and anti-dumping 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 agri-food 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, U.S. imports of Canadian canola

products tallied roughly $2.8 billion (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 U.S.-Canada trading relationship underwent a significant disruption when, on March 4th, 2025, the Trump administration announced plans to impose 25% tariffs on Canadian exports due to concerns over fentanyl smuggling, tariffs which would apply to canola products among other goods.

The planned U.S. 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 U.S. tariffs pending negotiations between the two countries (Pratt, 2025). Despite dodging the planned U.S. fentanyl tariffs, Canadian exports were nonetheless subjected to the uniform 10% 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 U.S. biofuel regulations (discussed in more detail below), have combined to inject an unprecedented degree of uncertainty into U.S.–Canada canola trade.

Potential Consequences of Import Restrictions for Canada's Canola Sector

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, thus creating distinct points of

exposure to risk. Figure 2 depicts Canadian canola exports to the top five destinations by product and illustrates how policy disruptions in China and the United States can have differential impacts for various canola products. The depicted export destinations in each subfigure reflect the three markets with the largest total export values over the 2010–25 period (data for 2025 reflects trade values through the month of August), with the next three largest export markets over this period aggregated into the "Next top 3" category.

[Figure 2 here]

For canola seed, Canadian exports have remained highly concentrated in China. Exports to China rose steadily through 2018 and fell sharply in 2019 due to China's suspension of the export licenses of Richardson and Viterra, which effectively halted canola seed trade between the two countries. Exports rebounded in 2021–2023 with the dispute's resolution but have dropped again in 2025 as a result of China's ongoing anti-dumping and anti-discrimination measures. Japan is the only sizable alternative export market for seed, with Canada–Japan exports averaging around $870 million per year since 2020. Other export destinations, such as Mexico ($470 million on average annually since 2020), the United Arab Emirates ($256 million), Pakistan ($201 million) and the United States ($195 million) absorb much smaller volumes of Canadian canola seed exports and thus provide only a limited buffer in the face of China's import restrictions. Key impediments to expanding canola seed exports to new foreign destinations include the lack of crushing capacity in most potential markets along with competition with exports of substitute products, as many countries lack the necessary infrastructure for processing canola at scale or rely on imports of other oilseeds (such as soybeans) and their derivatives.

For canola oil, the United States is by far the most prominent destination for Canadian exports, the value of which totaled $3.2 billion in 2024—nearly ten times the level of exports to the next largest destination. As with canola seed, China represents a large export market, with purchases of Canadian canola oil amounting to $376 million annually since 2020. Mexico ($164 million), South Korea ($112 million), Chile ($59 million), and Hong Kong ($9 million) account for relatively minor export shares. Comparable to canola seed, Canada's canola oil exports are highly concentrated, and few suitable substitutes exist to which exports can be reallocated. Here again, sizable barriers exist to expanding into new potential markets. For instance, even though the European Union (EU) is a major global consumer of canola oil, the bloc's restrictions on imports of food products produced with genetically modified organisms (GMOs) and European consumers' attitudes towards products containing GMOs have effectively shut out Canadian canola oil exports from the massive EU market.

Canadian canola meal exports exhibit even more intense concentration than seed and oil. The United States has long served as the dominant buyer of Canadian canola meal, surging from comparatively small import volumes at the start of the depicted period to around $1.5 billion by 2024. The rapid rise in U.S. demand for Canadian canola meal over 2015–2024 stemmed from growth in American livestock production and resulting demand for feed coupled with expansions in Canada's domestic canola crushing capacity. China has grown steadily as a secondary market, importing around $668 million of meal from Canada by 2024. Notably, meal imports continued to rise even during the 2019 dispute in which China imposed restrictions on imports of canola seed—an outcome reflective of China targeting primary commodity exports to inflict economic damage on Canadian producers while maintaining its demand for processed canola products.

Vietnam, Mexico, and Ireland are the next largest export markets for Canadian canola meal, though each absorbs only negligible export volumes annually.

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. The figure depicts significant variation 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, for instance, 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 onwards. 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 exports to China. With China's re-introduction of trade restrictions on Canadian canola in 2025, Canadian exporters have been forced to seek out alternative foreign markets, which has translated to a significant decline in the industry's degree of export market concentration.

[Figure 3 here]

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-based cooking 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 agri-food sectors for which specific foreign markets account for an outsize share of the industry's sales, for instance, the U.S. soybean and sorghum sectors or the Australian barley and wine sectors. Like Canadian canola, these and other agricultural products have recently been subjected to trade retaliation as "innocent bystanders" within broader trade disputes.

Domestic Processing and Biofuel Policy

In the face of limited possibilities for export substitution, increased domestic processing has emerged as a possible insurance policy against headwinds in foreign markets. Canadian crushers processed approximately 11 million metric tons (MMT) of canola in 2024–25 (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 (FAS,

2025). Ceres Global Ag cancelled a planned C$350 million crush facility in Saskatchewan, and Viterra's proposed plant remains in limbo. These stalled projects are likely a reflection of processors' concerns over volatile policy signals in North American biofuel markets, existing bottlenecks in transportation and logistical 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 (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.

Oversupply, U.S. Demand, and Logistical 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 U.S. refiners given that the United States possesses well-developed, large-scale infrastructure for biofuel production.

The U.S. market absorbed around 3 MMT of Canadian canola oil in 2023 valued at $4.8 billion, an increase of 43% from 2022 (FAS, 2025). This surge followed the U.S. Environmental Protection Agency's approval of Renewable Fuel Standard (RFS) 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 (OBBBA). This legislation also eliminated the indirect land use change (ILUC) 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 U.S. demand for biodiesel feedstocks. If adopted, such measures would dramatically curtail Canada's access to its most valuable export market for canola oil.

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.

Logistical 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 U.S. market.

Implications and Policy Conclusions

Canadian canola cannot rapidly diversify away from trade shocks in major exports 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 towards 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 U.S. 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 towards "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 multi-year Clean Fuels Regulation trajectory and aligning carbon-intensity accounting with U.S. programs to preserve cross-border eligibility for Canadian biofuels in the U.S. 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 (export finance/insurance; accelerated approvals of new projects) would help stimulate private investment and support near-term adjustment to disruptions in foreign markets.

For More Information

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Figures

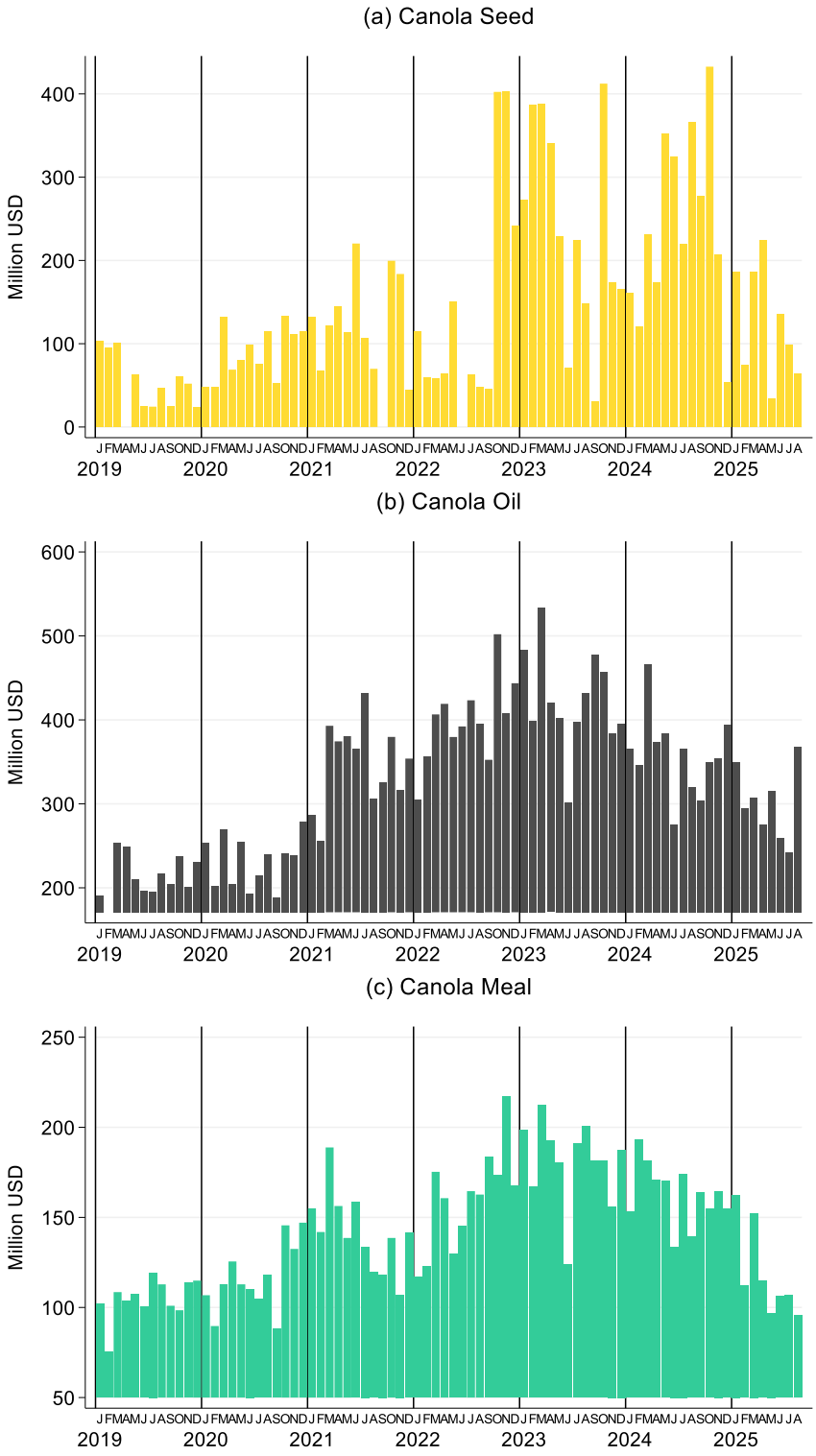

Figure 1. Value of Canadian canola exports by month and product. Panel (a) plots seed export values by destination (Harmonized System commodity code 1205), panel (b) charts canola oil (HS commodities 151411 and 151419) exports, and panel (c) displays canola meal exports (HS commodities 230641 and 230649). Data are sourced from UN Comtrade.

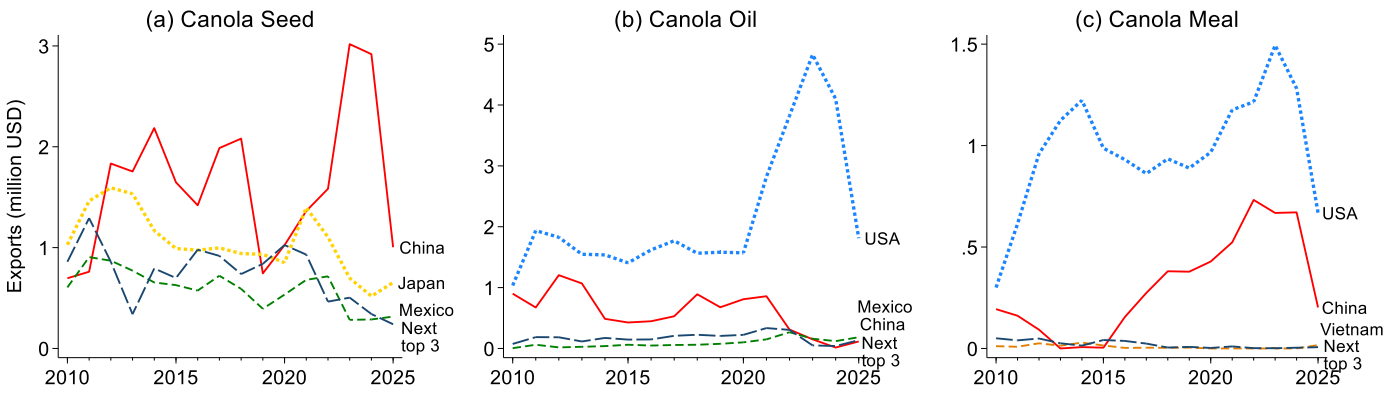

Figure 2. Annual Canadian canola exports to the top five export destinations as measured in 2025 for the years 2010–2025. Panel (a) plots seed export values by destination (Harmonized System commodity code 1205), panel (b) charts canola oil (HS commodities 151411 and 151419) exports, and panel (c) displays canola meal exports (HS commodities 230641 and 230649). Data are sourced from UN Comtrade. Data for 2025 reflect exports between January and August.

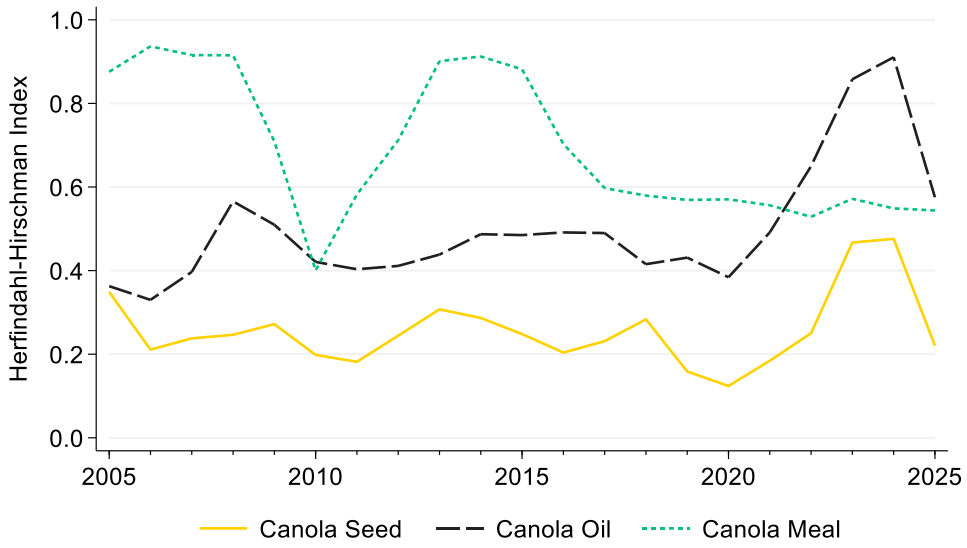

Figure 3. Herfindahl-Hirschman index (HHI) of market concentration for Canadian canola exports. HHI is computed as the sum of the squared market shares (share of the total value of Canadian exports by product), with higher values reflecting a higher degree of export market concentration. Data are sourced from UN Comtrade. Data for 2025 reflect exports between January and August.