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Shifting Trade Policies and the Outlook for U.S. Walnut Exports

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April 20, 2025

CAPTS Report 2025-02

Recommended citation format: Steinbach, Sandro, and Yasin Yildirim, "Shifting Trade Policies and the Outlook for U.S. Walnut Exports," CAPTS Report 2025-02, Center for Agricultural Policy and Trade Studies, North Dakota State University, April 20, 2025.

The U.S. walnut industry is experiencing growing economic uncertainty due to shifting trade policies and the threat of retaliatory tariffs. This report analyzes the potential trade risks under seven different policy scenarios, drawing on historical trade data and trade elasticity estimates. The findings indicate that while isolated actions, such as China's 125% tariff, may have limited effects, broader retaliation from multiple trading partners could significantly disrupt export demand, with losses reaching up to $160 million.

The U.S. introduced reciprocal tariffs on all countries, with rates varying based on the size of the U.S. trade deficit. These measures were delayed by 90 days, during which a temporary 10% universal tariff was applied. However, escalation with China continued, culminating in China implementing effective tariffs of 125% on U.S. goods as of April 20. While tariff negotiations are ongoing with multiple countries, including China, industries heavily dependent on international markets continue to face uncertainty in 2025.

The walnut industry is among those facing heightened uncertainty. With more than 70% of domestic walnut production exported annually, the sector is particularly exposed to global trade disruptions (United States Department of Agriculture, 2024). Between 2020 and 2023, the U.S., primarily California, accounted for approximately 48% of the global market for shelled walnuts, making it the world's largest supplier. During the same period, the U.S. was also the leading exporter of in-shell walnuts, supplying around 33% of global trade (U.S. Census Bureau Trade, 2025). The European Union (EU), particularly Germany, Spain, and the Netherlands, has historically been the top export destination, receiving about 37% of U.S. walnut shipments. Other major markets include Japan (10%), Turkey (8%), South Korea (8%), the United Arab Emirates (7%), Canada (6%), and Mexico (5%) (California Department of Food and Agriculture, 2023).

Building on insights from past trade disputes, most notably the 2018 trade war, during which U.S. agricultural exports were targeted with retaliatory tariffs, this report examines the potential economic risks under seven distinct trade policy scenarios. These scenarios capture a spectrum of possible outcomes, ranging from targeted country-specific retaliation to more expansive trade restrictions affecting several major export markets.

In line with the most recent tariff developments, including the delayed implementation of U.S. reciprocal tariffs and the interim application of a universal 10% import tariff, this report outlines seven potential trade retaliation scenarios that may affect U.S. walnut exports. These scenarios, summarized in **Table 1**, reflect a combination of historical retaliation patterns and current trade tensions. Notably, China, in response to the latest U.S. tariff hikes reaching 145%, has imposed a retaliatory tariff of 125% on U.S. walnuts. This marks the most severe case among recent tariff escalations.

EU, Japan, Turkey, Mexico, and Canada are among the top U.S. walnut export markets that may respond with retaliatory tariffs. Each is assumed to respond with additional import tariffs ranging from 10% to 25%, depending on the current trade dynamics. Scenario 7 models a broad-based retaliation in which all major markets impose a uniform 10% tariff. These scenarios aim to capture the possible range of outcomes facing the walnut industry amid escalating trade tensions, underscoring the sector's vulnerability to global policy shifts.

Table 1. Summary of 2025 Trade Policy Scenarios.

Scenarios	Retaliating Country	Retaliatory Tariffs
Scenario 1	China	Extra 125% import tariff increase on U.S. walnuts.
Scenario 2	EU	Extra 10% import tariff increase on U.S. walnuts.
Scenario 3	Japan	Extra 10% import tariff increase on U.S. walnuts.
Scenario 4	Turkey	Extra 10% import tariff increase on U.S. walnuts.
Scenario 5	Mexico	Extra 25% import tariff increase on U.S. walnuts.
Scenario 6	Canada	Extra 25% import tariff increase on U.S. walnuts.
Scenario 7	All	Extra 10% import tariff increase on U.S. walnuts.

Note. The table summarizes the seven potential trade policy scenarios. Based on historical actions from the Chinese and foreign governments, we assume tit-for-tat retaliations on U.S. almond exports.

Potential Risks to the Walnut Industry

Table 2 presents the potential trade risk for U.S. walnut producers from retaliatory tariffs targeting U.S. agriculture. It provides estimates across seven possible scenarios for walnut exports, categorized under the BICO-HS6 classification.[1] We estimate seven scenarios. In addition to the retaliatory tariff assumptions for each country, we use three different factors for the estimations:

[1] These classifications represent commodity groups rather than individual products. For instance, walnut encompass HS code 080231 (Walnuts with shell) and HS code 080232 (Shelled walnuts). Definitions for product groups can be found here: https://apps.fas.usda.gov/gats/ProductGroup.aspx?GROUP=BICO-HS6.

- Baseline projection for 2025: We first project 2025 walnut export values using a first-order autoregressive model with a stochastic component to account for expected volatility. We utilize data covering the period from 1995 to 2022. From 2005 to 2022, we sourced information from the California Agricultural Exports Report published by the CDFA. From 1995 to 2005, we obtained data from the Agricultural Issues Center of the University of California, Davis.
- Tariff elasticities: We use product-level tariff elasticity from Grant et al. (2021). To reflect potential outcomes within a reasonable range, we incorporate the estimated standard errors from the source, establishing lower and upper bounds with a 90% confidence interval.[2] Using the estimated coefficient and data on tariff increases for U.S. walnut exports, we first estimate the trade elasticity for each percentage increase in tariffs during the 2018 trade war. Since tariffs are imposed at a more granular level (HS-10), we aggregate the total tariff increase for walnuts under the relevant HS-BICO 6 groups, where the coefficients were estimated. We then calculate the trade elasticity for each percentage tariff increase by averaging these increases.[3]
- Import share: Lastly, we account for each retaliating country's import share for U.S. walnuts using the CDAF agricultural export statistics reports from 2020 to 2023.

The analysis shows that potential retaliatory tariffs on U.S. walnuts could result in measurable export losses, even under modest policy changes. Among individual partners, Scenario 2 (EU retaliation) presents the highest projected loss, with declines ranging from $13 million to $59 million—up to 4% of total exports. This reflects the EU's position as a leading market for U.S. walnuts. Similarly, Scenarios 5 and 6, retaliation by Mexico and Canada, present moderate but nontrivial risks, with upper-bound losses nearing $20 and $24 million, respectively.

While Scenario 1 (China) reflects a significant tariff hike of 125%, its estimated impact on U.S. walnut exports remains comparatively smaller, with a point estimate of $14.32 million. This relatively muted effect may be due to China's more limited share in recent years compared to the EU. Additionally, while the U.S. is the largest exporter of walnuts, China is the world's largest producer, which makes it less dependent on U.S. walnuts.

The most disruptive outcome appears in Scenario 7, which models simultaneous retaliation by all major trading partners. Under this broad-based response, potential export losses could reach as high as $160 million, or nearly 11% of total U.S. walnut exports. These findings highlight the walnut industry's vulnerability to concentrated market exposure and underscore the need for risk mitigation strategies, such as market diversification, investment in domestic value-added processing, and active trade diplomacy, to maintain global competitiveness amid ongoing policy uncertainty.

[2] $CI = \bar{x} \pm \left(1.645 \times \frac{s}{\sqrt{n}}\right)$

[3] We weigh these retaliatory tariff increases by the import share of retaliating countries for two types of almonds recorded under the BICO-HS6 classification using historical bilateral trade data from the BACI (2024) dataset.

Table 2. Potential Export Losses for the U.S. Walnut Industry

	Baseline Projections	$1,496 mil.		
		Lower Bound	Point Estimate	Upper Bound
Scenario 1	mil. $	-4.79	-14.32	-21.49
	%	-0.32%	-0.96%	-1.44%
Scenario 2	mil. $	-13.18	-39.43	-59.14
	%	-0.88%	-2.64%	-3.95%
Scenario 3	mil. $	-3.56	-10.66	-15.98
	%	-0.24%	-0.71%	-1.07%
Scenario 4	mil. $	-2.85	-8.53	-12.79
	%	-0.19%	-0.57%	-0.85%
Scenario 5	mil. $	-4.45	-13.32	-19.98
	%	-0.30%	-0.89%	-1.34%
Scenario 6	mil. $	-5.34	-15.98	-23.98
	%	-0.36%	-1.07%	-1.60%
Scenario 7	mil. $	-35.62	-106.56	-159.85
	%	-2.38%	-7.12%	-10.69%

Note. Predictions for 2025, representing the US walnut exports losses to global markets. Upper and lower bounds for each scenario are established using a 90% confidence interval.

Disclaimer

This report is intended to inform discussions on trade policy and its potential impact on the U.S.'s walnut industry. While it may be shared and referenced, the authors assume full responsibility for errors or omissions. The findings and conclusions presented are based on available data and economic modeling and do not necessarily reflect the views of any institution or organization. Readers are encouraged to use this analysis as a reference while considering additional sources and expert insights for policy and business decisions.

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