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Assessing the Potential Costs to Agricultural Exporters of Section 301 Annex 1 and 2 Fees

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On April 17, 2025, the Office of the United States Trade Representative (USTR) released a final action under Section 301 of the Trade Act of 1974, targeting China's dominance in the global shipbuilding and maritime logistics sectors, formalizing the fee schedules in Annexes 1-4. The determination, which supersedes a more comprehensive February 2025 USTR proposal, would impose port fees on Chinese-operated (Annex 1) and Chinese-built (Annex 2) vessels arriving at U.S. ports. This white paper focuses on Annex 1 and Annex 2 fee schedules, as these are most critical for U.S. agricultural exports. Using data on 2024 U.S. port calls and vessel characteristics, we calculated the total quantity of fees that would have counterfactually been collected in 2024 under this policy for container and dry bulk vessels. We find that, absent changes in shipping vessels and routes, the final policy could initially increase shipping costs by \$2.3 billion annually, rising to \$6.2 billion annually by 2028. For corn, wheat, and soybeans, the Annex 1 and 2 fees amount to approximately 5 to 7 cents per bushel. Annex 5, which proposes 100% tariffs on ship-to-shore cranes and other port infrastructure equipment of Chinese origin, remains in proposed status and is discussed, but not analyzed, in this report.

Section 301 Process Background

The Section 301 investigation into China's shipbuilding and maritime logistics practices was initiated in response to a petition from five U.S. labor unions in March 2024. The unions alleged that extensive Chinese state support for its shipbuilding industry had distorted global competition, undermined U.S. shipbuilding capacity, and posed risks to critical supply chains. After a year-long investigation, the Office of the United States Trade Representative (USTR) found China's practices to be "unreasonable and discriminatory," warranting a robust policy response.

In February 2025, USTR unveiled a sweeping proposal under Section 301 of the Trade Act of 1974, targeting China's dominance in the global shipbuilding and maritime logistics sectors. A prior ARPC white paper, ["What If USTR Had Applied Its February 2025 Port Fees Proposal? An Economic Analysis"](#)

[of U.S. Dry Bulk Agricultural Exports](#),” analyzed the February proposal’s potential consequences for U.S. agricultural exporters. That earlier white paper concluded that the initial policy, if implemented as proposed, would have imposed substantial additional costs on U.S. bulk commodity exports, threatening the competitiveness of American agriculture in global markets.

Following a period of robust public comment and industry feedback, much of it from the agricultural sector, USTR issued a final action on April 17, 2025. This final action diverges sharply from the February proposal, marking a different approach to balancing the objectives of countering Chinese industrial policy with the need to protect vital U.S. export industries. This white paper examines the final policy, its key differences from the original proposal, and what these changes mean for U.S. agricultural exporters.

The April 2025 Final USTR Action

The final action (henceforth, “the policy”) announced on April 17, 2025, reflects a substantial recalibration from the earlier February proposal, lowering port fee rates and narrowing the set of affected vessels. After the submission of nearly 600 public comments and extensive testimony from stakeholders, including agricultural exporters, USTR revised the policy to address many of the agricultural sector’s most pressing concerns. Notably, the April proposed determination introduces a phased-in fee structure based on vessel tonnage, narrows the scope of affected shipments, and incorporates several exemptions specifically designed to mitigate impacts on agricultural exports.

The policy comprises five components, as outlined in Annex 1 through Annex 5. Annex 1 affects vessels that are operated or owned by an entity of China. Annex 2 applies to vessels built in China but owned and operated by non-Chinese entities. Annex 3 imposes fees on foreign-built vessels carrying vehicles. Annex 4 imposes fees and restrictions on the operators of liquid natural gas (LNG) vessels that are not U.S.-built. Annex 5 imposes tariffs on imported critical port infrastructure. Given that Annex 3 primarily targets vehicle carriers and Annex 4 is focused on LNG exports, neither of which are major channels for U.S. agricultural exports, these components are less relevant for the agriculture focus of this paper. Accordingly, our empirical analysis focuses solely on Annex 1 and Annex 2, which we summarize in **Table 1**. Annex 1 and Annex 2 fee schedules are presented in **Figure 1**.

The April 2025 policy differs considerably from the February 2025 proposal. First, the flat per-port-call fees were replaced with a tonnage-based structure ranging from \$50 to \$140 per net ton, significantly lowering exposure for bulk shippers. For example, a large Chinese-operated Panamax dry bulk carrier (5,000 NT) would now face a one-time \$250,000 fee per U.S. rotation, compared to up to \$1.5 million under the original structure. Second, several targeted exemptions were added to address agricultural logistics concerns, including a waiver for empty vessels arriving to load U.S. bulk commodities, a short-haul exemption for routes under 2,000 nautical miles (especially relevant for Mexico and Canada), and a size threshold excluding vessels under 55,000 DWT or 80,000 DWT for dry bulk. Third, the implementation timeline was softened: instead of a 90-day rollout, the revised policy includes a 180-day grace period and a phased fee escalation through 2028. Fourth, the controversial requirement that 50% of all U.S. exports be carried on U.S.-flagged vessels by 2028 was dropped entirely in favor of a narrower LNG-specific target.

Table 1. USTR’s April 2025 Section 301 Final Action

Policy	Target	Key provisions
Annex 1	Chinese vessel operators and owners	<ul style="list-style-type: none"> Net-tonnage (NT) fee on any vessel operated by or owned by a Chinese entity. Phased-in fee schedule starting October 14, 2025 (see Figure 1) Fee is charged once per rotation (“string”) of U.S. ports—fee is assessed at the first U.S. port call; maximum 5 charges per vessel per calendar year.
Annex 2	Operators of Chinese-built vessels (non-Chinese operators)	<ul style="list-style-type: none"> Fee on Chinese-built ships, applied on the higher of net tonnage or per-container basis: <ul style="list-style-type: none"> Net-ton fee: \$18 → \$33/NT (2025–28) Container fee: \$120 → \$250 per container discharged. Charged once per rotation (“string”) of U.S. ports—fee is assessed at the first U.S. port call; maximum 5 charges per vessel per calendar year. Exemptions for empty, small, short-sea, specialized, and MSP/TSP ships plus certain U.S.-owned, U.S.-flagged vessels. Fee may be suspended for up to three years once the owner places a firm order for a U.S.-built vessel of equal or greater capacity; the suspension ends at delivery or after three years, whichever comes first.

Source. The table summarizes the USTR’s April 17, 2025, final actions on China’s shipbuilding dominance. The federal register notice of the determination is available at <https://www.federalregister.gov/d/2025-06927>.

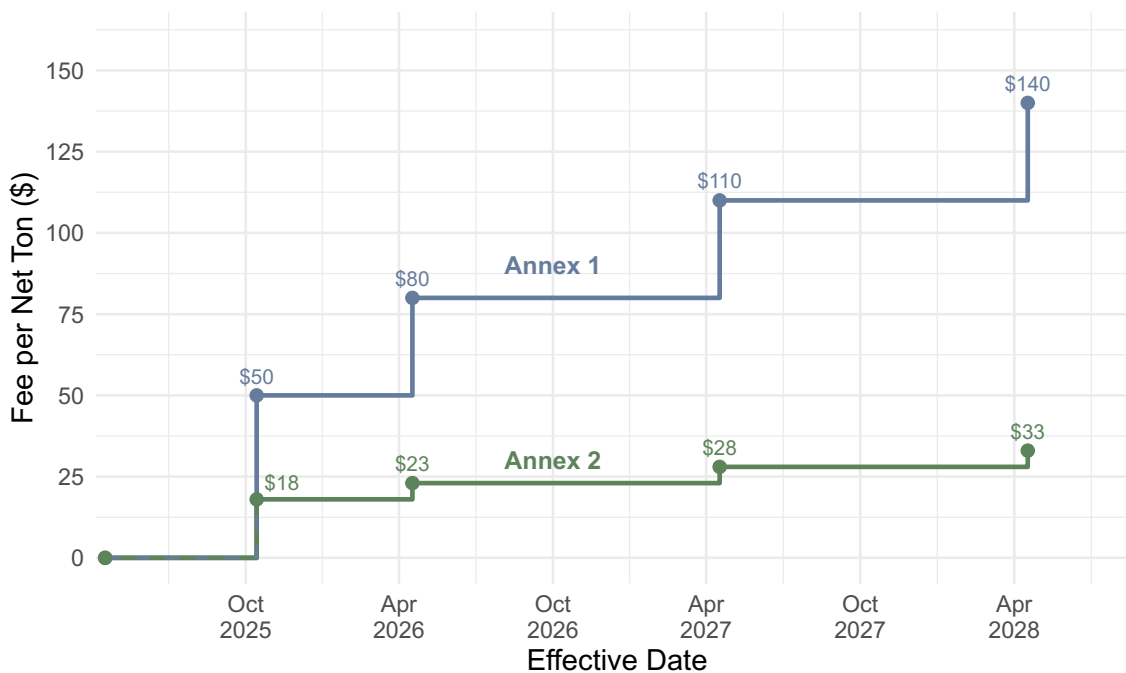


Figure 1. Annex 1 and Annex 2 Fee Schedules

Note. Summary of phase-in of Annex 1 and Annex 2 fee rates.

Source. The federal register notice of the determination is available at <https://www.federalregister.gov/d/2025-06927>.

Chinese Operators, Chinese-built Vessels, and 2024 U.S. Agricultural Exports

Under the USTR's final action announced in April 2025, vessels operated or owned by Chinese entities are subject to a port entry fee (capped at five payments per calendar year) regardless of where the vessel was built. Apart from the fee on Chinese vessel operators, vessels built in China are required to pay a service fee unless they meet specific criteria for exemption. To understand the extent of Chinese participation in U.S. exports, we examine both agricultural and non-agricultural exports using 2024 Customs and Border Patrol (CBP) and Port Import/Export Reporting Service (PIERS) data and decompose by vessel type (container and dry bulk) and by whether the vessels are operated or built by China.

Table 2 provides a breakdown of 2024 U.S. exports by vessel type and origin. For containerized agricultural exports, approximately 25% of the volume is moved on Chinese-operated or built vessels, while the remaining 75% is shipped on vessels neither operated nor built by Chinese entities. Compared to containerized non-agricultural exports, agricultural exports show a relatively higher reliance on Chinese-involved vessels. The reliance is even more pronounced in bulk agricultural exports, where about 46.4% of total agricultural export volume and 41.9% of total agricultural export value are shipped using Chinese-operated or Chinese-built vessels.

A key change in the USTR's final action is the introduction of a fee waiver, including an annual cap per vessel and exemptions for certain Chinese-built vessels. To assess the potential scale of fee relief, we analyze vessel-level exports using 2024 vessel entrance and export data. Due to data limitations, we do not directly match bill-of-lading-level export data with vessel entrance records. Instead, we aggregate export data by vessel and group them by vessel category. While this method does not capture exact port activity, it provides a reasonable estimate of potential fee savings.

In **Figures 2** and **3**, we consider the set of vessels that are observed exporting agricultural products at least once in 2024. Panels A and C of **Figure 2** show the share of these exporting vessels (for container and dry bulk vessels, respectively) that are affected by Annex 1 due to being operated by Chinese entities. For container vessels, 8.9% of vessels are subjected to the Annex 1 fee. For dry bulk vessels, 12.8% of vessels are subject to the Annex 1 fee. In Panels B and D of **Figure 2**, we show the share of initial port calls made by these agriculture-exporting vessels that are affected or are exempt due to the vessel meeting the maximum annual fee payments of five. The share of initial port calls subjected to Annex 1 is relatively small: 5.6% of initial port calls by container vessels and 9.5% of initial port calls by dry bulk vessels are subjected to the fee.

Annex 2 relates to vessels that are Chinese-built. Vessels that qualify for specific exemptions are exempt from the fee. Panels A and C of **Figure 3** show the share of agriculture-exporting vessels subjected to Annex 2 or eligible for one of the various exemptions. Across agriculture-exporting container and dry bulk vessels, respectively, 10.1% and 14.1% of vessels are subject to the Annex 2 fee. Note that vessels that are subject to the Annex 1 fee are exempt from paying Annex 2 fees. Panels B and D of **Figure 3** indicate that the share of initial port calls subject to Annex 2 is 5.0% for container vessels and 9.4% for dry bulk vessels.

Table 2. 2024 U.S. Exports by Vessel Type and China's Participation in Vessel Operation and Construction

Vessel Type	Operated By	Built By	Volume (Million metric tons)			Value (Billion \$)		
			Ag Exports	Non-Ag Exports	Total Exports	Ag Exports	Non-Ag Exports	Total Exports
Container	China	China	2.4 (7.0%)	3.2 (3.8%)	5.6 (4.7%)	6.3 (7.5%)	15.1 (2.6%)	21.4 (3.2%)
	China	Non-China	1.9 (5.4%)	5.2 (6.1%)	7.1 (5.9%)	4.9 (5.8%)	29.6 (5.1%)	34.5 (5.2%)
	Non-China	China	4.3 (12.6%)	7.9 (9.4%)	12.3 (10.3%)	10.2 (12.2%)	92.2 (16.0%)	102.4 (15.5%)
	Non-China	Non-China	25.7 (74.9%)	68.3 (80.7%)	94.0 (79.0%)	62.4 (74.5%)	439.4 (76.2%)	501.8 (76.0%)
	Total		34.3 (100%)	84.6 (100%)	118.9 (100%)	83.8 (100%)	576.4 (100%)	660.2 (100%)
Dry Bulk	China	China	10.7 (10.8%)	10.4 (7.9%)	21.1 (9.2%)	3.8 (8.6%)	4.0 (5.4%)	7.8 (6.6%)
	China	Non-China	3.0 (3.1%)	4.7 (3.5%)	7.7 (3.3%)	1.1 (2.5%)	8.6 (11.6%)	9.7 (8.2%)
	Non-China	China	32.3 (32.5%)	49.0 (37.3%)	81.3 (35.3%)	13.7 (30.8%)	21.3 (28.7%)	35.0 (29.5%)
	Non-China	Non-China	53.2 (53.7%)	67.2 (51.2%)	120.4 (52.2%)	25.7 (58.1%)	40.4 (54.4%)	66.1 (55.7%)
	Total		99.2 (100%)	131.2 (100%)	230.5 (100%)	44.3 (100%)	74.3 (100%)	118.6 (100%)

Note. Agricultural export data are aggregated using 6-digit HS codes, based on the [USDA GATS BICO-HS6 Export Product Group Commodity Aggregation Definitions](#). Non-agricultural exports are calculated by subtracting agricultural exports from the total exports. Percentages representing the share of each volume or value are indicated in parentheses.

Source. Authors' calculations using data from U.S. CBP Vessel Entrance provided by the Department of Transportation and PIERS Bill of Lading compiled by S&P Global.

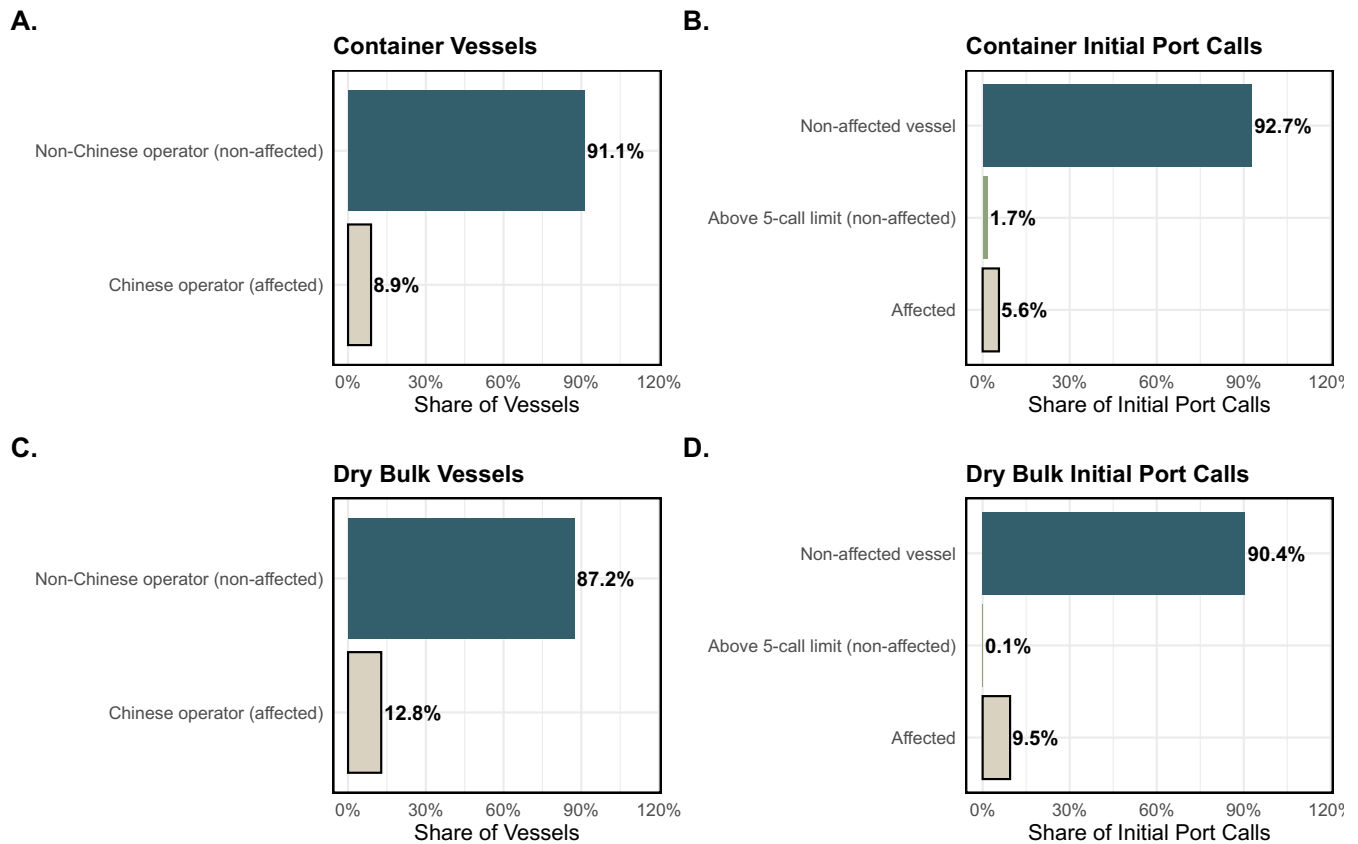


Figure 2. 2024 U.S. Agricultural Exporting Vessels by Annex 1 Classification

Note. Classification of 2024 agriculture-exporting vessels and initial port calls with respect to Annex 1. Panel A presents the share of container vessels affected by Annex 1, and Panel B shows the share of container vessel initial port calls affected. Panels C and D provide the corresponding information for dry bulk vessels.

Source: Authors' calculations using data from U.S. CBP Vessel Entrance provided by the Department of Transportation and PIERS Bill of Lading compiled by S&P Global.

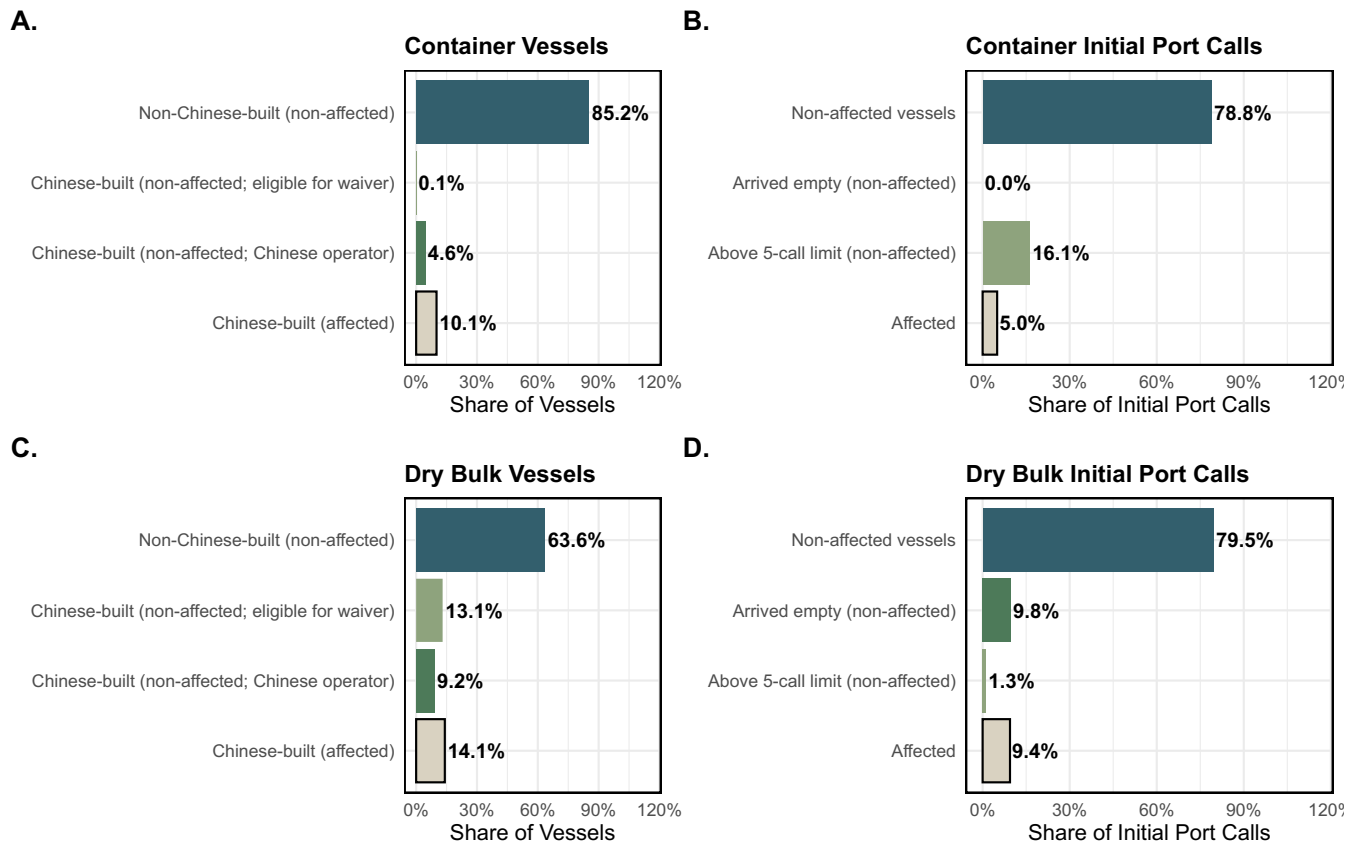


Figure 3. 2024 U.S. Agricultural Exporting Vessels by Annex 2 Classification

Note. Simulated costs of Annex 1 and Annex 2 fees based on 2024 data, applied across the fee schedule.

Source: Authors' calculations using data from U.S. CBP Vessel Entrance provided by the Department of Transportation and PIERS Bill of Lading compiled by S&P Global.

Assessing the Costs of Section 301 Port Fees

Using 2024 CBP and PIERS data, we simulate the costs the Annex 1 and Annex 2 policy provisions *would* have had in 2024, had they been in place. For this exercise, we assume that these port fees do not affect the distribution of vessels entering the US and hold the number of trips each vessel completes and vessel ownership fixed. We first use CBP data to calculate the relevant Annex 1 and Annex 2 fees each vessel would pay. We account for size and empty arrival waivers, but do not model waivers for entry after a foreign port call within 2,000 nautical miles or waivers available for operators purchasing U.S.-built vessels.

We combine vessel-specific 2024 fee costs with information on product and value carried available in the PIERS data. We calculate the total fees that hypothetically would have been collected in 2024 under the policy. **Figure 4** shows how total annual fees increase as Annex 1 and Annex 2 fees are phased in. These results are provided for both container and dry bulk vessels. Total annual fees across container and dry bulk vessels grow from \$2.3 billion to \$6.2 billion as the fee rate grows over time. In 2028, after the fees are fully phased in, annual fees are simulated to be \$4.1 billion for container vessels and \$2.1 billion for dry bulk vessels.

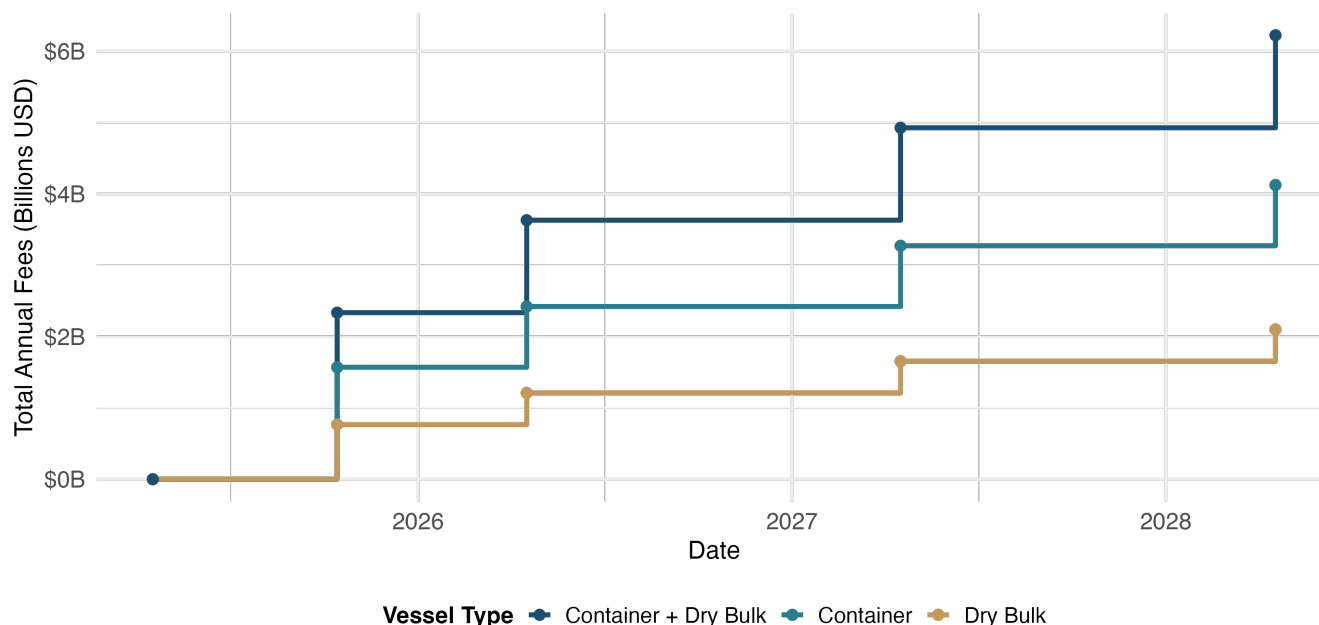


Figure 4. Total Annex 1 and Annex 2 Fee Costs Over Time

Note. Simulated costs of Annex 1 and Annex 2 fees based on 2024 data, applied across the fee schedule.

Source: Authors' calculations using data from U.S. CBP Vessel Entrance provided by the Department of Transportation and PIERS Bill of Lading compiled by S&P Global. Analysis based on the federal register notice of the determination available at <https://www.federalregister.gov/d/2025-06927>.

We also express the fees as a percentage of the total shipped value. To calculate this, we first sum all of the fees that would be paid across all vessels, then divide by the sum of value shipped on all vessels observed in the CBP data. For example, a vessel that shipped \$100 million in value and paid \$500,000 in port fees would have a fee per total value percentage of 0.5%. We calculate fleet-wide averages of this value for container and dry bulk vessels. These are reported in **Figures 5** (Annex 1) and **6** (Annex 2). For the initial fee rates of \$50/NT for Annex 1 and \$18/NT for Annex 2, we find a total fleet-wide (container and dry bulk) fee cost of \$2.3 billion, with \$2.0 billion paid through Annex 1 fees and \$0.3 billion paid through Annex 2 fees. These correspond to 0.09% fee per value and 0.01% fee per value for Annex 1 and 2 fees, respectively. For container vessels, total Annex 1 fees are \$1.3 billion, and total Annex 2 fees are \$280 million. For dry bulk vessels, total Annex 1 and Annex 2 fees are \$720 million and \$50 million, respectively. To better understand the impact fees may have on agricultural exports, we provide fee per value calculations that are weighted by agricultural export value. **Figure 5** shows these values for Annex 1 fees. Typical agricultural exports are shipped on vessels that would have paid an average of 0.23% fee per value shipped in 2024 under the October 2025 Annex 1 fee rates. These values are higher for corn (0.84%), soybeans (0.58%), and wheat (0.61%), which are typically bulk commodities. The higher fee per value rates paid by vessels exporting bulk agricultural commodities is primarily due to the fact that fees are paid on a per net ton basis, and dry bulk shipments are typically of lower value per net ton. **Figure 6** illustrates that the fee per value rates for Annex 2 remain relatively small, even when weighting for specific commodities.

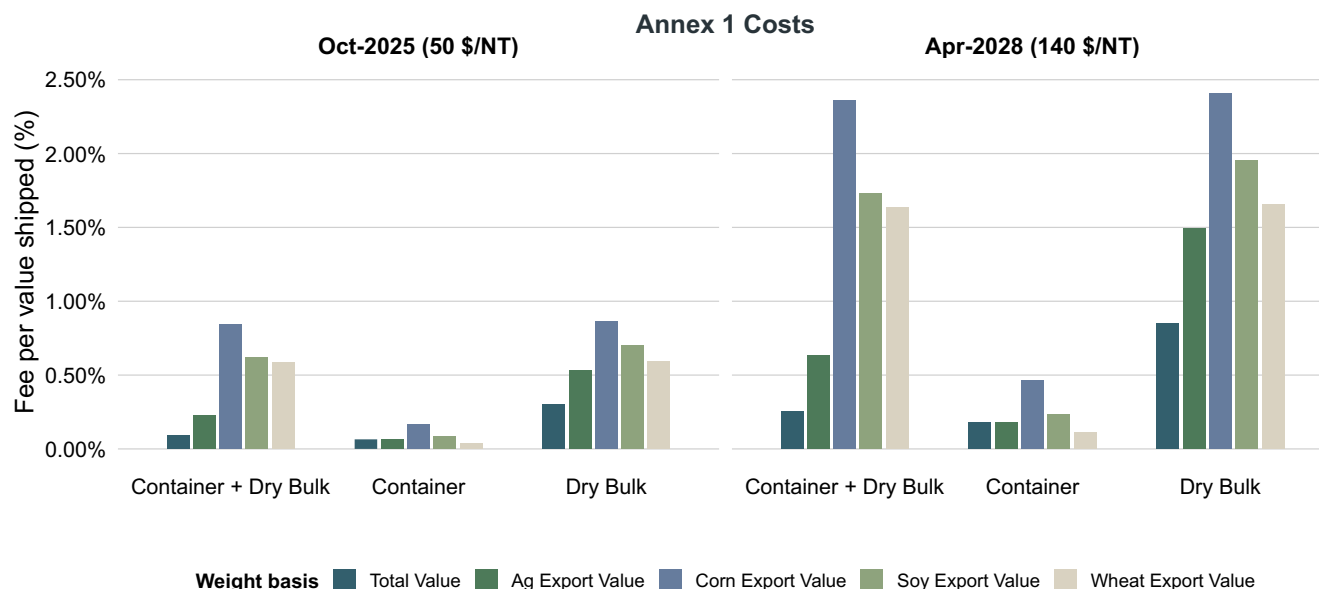


Figure 5. Annex 1 Fee Costs

Note. Simulated costs of Annex 1 fees based on 2024 data.

Source: Authors' calculations using data from U.S. CBP Vessel Entrance provided by the Department of Transportation and PIERS Bill of Lading compiled by S&P Global.

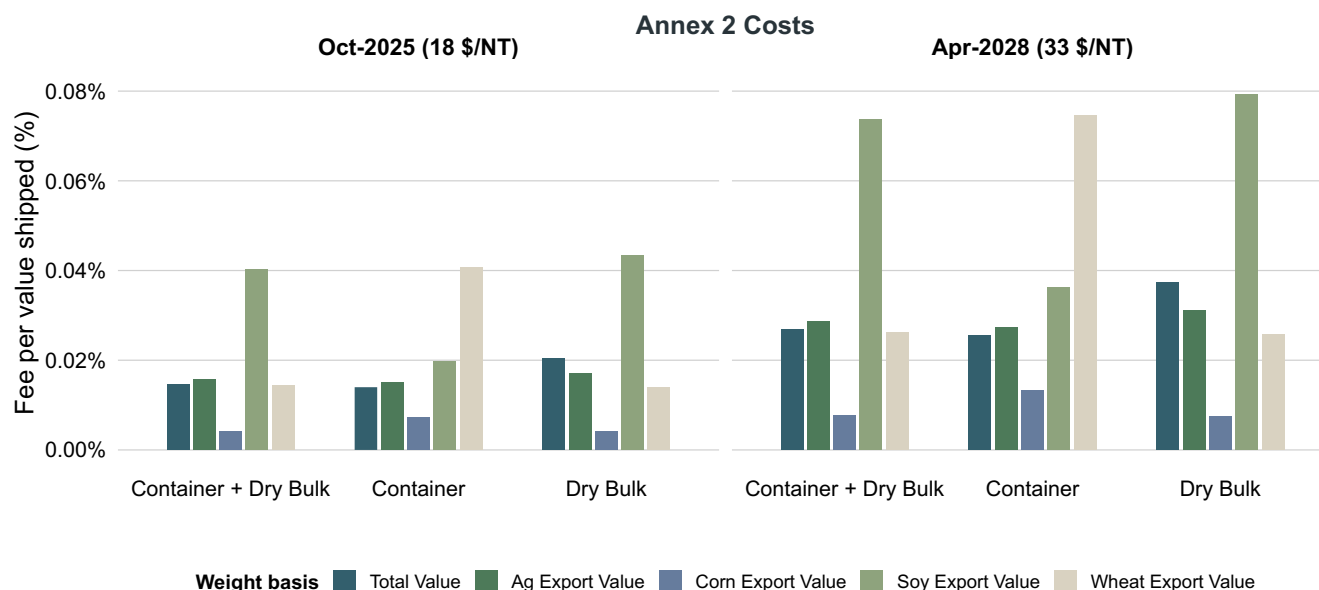


Figure 6. Annex 2 Fee Costs

Note. Simulated costs of Annex 2 fees based on 2024 data.

Source: Authors' calculations using data from U.S. CBP Vessel Entrance provided by the Department of Transportation and PIERS Bill of Lading compiled by S&P Global.

What do the findings presented in **Figures 5** and **6** imply about the ultimate incidence of these fees? Because differential prices within a single product category represent an arbitrage opportunity, we expect fee costs to affect all highly affected products, regardless of whether they were shipped on vessels paying the fee. However, across product types, we expect those that are heavily exposed to the fee to pass through more of these costs in the form of higher import or lower export prices. Another factor affecting fee incidence is the relative scarcity of space on importing versus exporting vessels. According to the Bureau of Transportation Statistics [webpage](#), space on eastbound Shanghai-Los Angeles routes is roughly ten times as costly as space on westbound Los Angeles-Shanghai routes. As a result, we would expect importers of products shipped on container vessels to bear the bulk of the costs associated with port fees. The opposite may be true for the dry bulk vessels typically used by agricultural exporters. Note that while Annex 2 contains a waiver for vessels arriving empty, Annex 1 does not. Any fees assessed to empty-arriving dry bulk vessels would likely be passed through to agricultural exporters and ultimately manifest in the form of decreased farmgate prices for affected commodities.

Annex 5: Tariffs on Ship-to-Shore Cranes and Cargo Handling Equipment

While our analysis centers on vessel service fees (Annex 1 and Annex 2), it is important to note that there is an Annex 5 which proposes tariffs targeting critical port infrastructure and supply chain equipment, an issue of concern for U.S. agriculture.

- 100% Tariff on Ship-to-Shore (STS) Cranes: Applies to cranes of Chinese origin, as well as those manufactured or assembled anywhere using Chinese components or by Chinese-linked

entities. The tariff is triggered even if only key parts (e.g., boom, trolley, spreader, cabin, legs, cable reel, power supply, bogie set, wheels, or IT equipment) are of Chinese origin.

- 20 to 100% Tariff on Cargo Handling Equipment: The same tariff is proposed for other cargo handling equipment of Chinese origin, including shipping containers, chassis, and chassis parts.
- Scope and Certification: Covers equipment manufactured, assembled, or installed by Chinese-linked entities, regardless of final assembly location. Importers must certify the origin and installation of all major components.
- Status: Annex 5 remains in proposed status; public comments were solicited, and a hearing was held on May 19, 2025.

These proposed tariffs are highly relevant for agricultural exporters because U.S. ports overwhelmingly rely on Chinese-manufactured cranes and equipment to move bulk and containerized agricultural goods efficiently. The lack of domestic alternatives means these tariffs could significantly increase port infrastructure costs, slow modernization, and ultimately raise export costs for U.S. agriculture, potentially reducing competitiveness in global markets.

Conclusions

In response to public comments on the February proposal, the final determination announced on April 17, 2025, adopts a more moderate approach, dramatically reducing simulated costs. The new policy introduces a phased fee structure, narrows the scope of affected shipments, and includes several exemptions that help reduce the potential burden on U.S. agricultural exports. Our findings show that most of the total estimated fee costs would arise from the Annex 1 fee, with bulk agricultural exports being the most exposed. While the port fees are likely to increase export costs to some extent, the overall impact under the final policy is significantly lower than it would have been under the initial proposal.

We find that the simulated costs of the April proposed determination are largely channeled through the Annex 1 fees. Although total costs are higher for container vessels, fees represent a larger fraction of the value shipped for dry bulk vessels. On a per value basis, vessels that export corn, soybeans, and wheat are particularly susceptible to Annex 1 fees, with simulated initial fees representing 0.6-0.8% of the shipped value, which corresponds to 5 to 7 cents per bushel across crops. This compares to 0.2% of the shipped value across all products. As Annex 1 fees increase from \$50/NT in October 2025 to \$140/NT in April 2028, these fee shares will rise considerably. The ultimate burden of Annex 1 fees will depend crucially on the degree to which non-Chinese-operated vessels are able to shift into the U.S. market and displace Chinese-operated vessels. Future work may consider how the U.S. maritime industry can adapt to these novel fees and how the incidence of these fees will be shared across the broader agricultural and non-agricultural economies.

Disclaimer

This report is intended to inform discussions on USTR's April 17, 2025, determination and its potential implications on the U.S. container and dry bulk agricultural exports. While it may be shared and referenced, it may not be reflective of recent changes to policy or economic conditions. The findings and conclusions presented are based on available data and economic modeling and do not reflect the views of any affiliated institutions or sponsoring organizations. The authors assume full responsibility for errors or omissions. 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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