



UKRAINE GRAIN TRANSPORTATION

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EXECUTIVE SUMMARY

Published annually since 2020, the Ukraine Grain Transportation report evaluates grain transportation costs as an indicator for the entire Black Sea region (i.e., Kazakhstan, Russia, and Ukraine), which is a strong player in the global wheat and corn markets. The report analyzes the main impacts on the total costs of exporting Ukrainian grain to major markets. The analysis is done partly because Ukraine's costs can also affect the competitiveness of U.S. grain exports. Despite logistical challenges posed by the war with Russia, Ukraine is the fourth-largest corn exporter, after the United States, Brazil, and Argentina. In the world wheat market, Ukraine is the sixth-largest exporter, after Russia, the European Union (EU), Canada, Australia, and the United States.

From 2023 to 2024, Ukrainian logistic costs to export wheat and corn to the global markets fell close to the pre-Russia-Ukraine war levels. Ukraine's corn and wheat transportation costs fell, with significant drops in rail, barge, and ocean freight rates that offset truck rate increases. Transportation costs declined as Ukraine's grain market adapted to current conditions. Also contributing to the drop in transportation costs, Ukraine regained access to its major marine ports on the Black Sea —Chornomorsk, Odesa, and Pivdennyi— and increased its shipments through these export ports.

From 2023 to 2024, Ukraine's share of corn, wheat, and soybeans exported via maritime routes rose from 80 percent to 92 percent. Of all the modes, maritime transport (through the Black Sea ports and Danube ports) was the most competitive, but the structure of maritime transport changed. The share of the Danube ports in the sea export of grains and oilseeds from Ukraine decreased to 13 percent in 2024 from 45 percent in 2023, while the share of Odesa ports increased to 85 percent in 2024 compared to 52 percent in 2023. The share of railways fell from 15 percent to 7 percent. Truck deliveries declined from 4 percent to 1 percent of overall exports.

Last year, the Agricultural Marketing Service (AMS) expanded the scope of its annual Ukraine Grain Transportation report by adding three sets of new routes—with each set originating in either Western, Eastern, or Central Ukraine. For all three sets of routes, grain passes through the Port of Izmail or the Port of Constanta to Egypt, Turkey, and Tunisia. The new routes replace the ones from Western, Eastern, and Central Ukraine to the Port of Mykolaiv, which has been closed to navigation since second quarter 2022, after the Russia-Ukraine war that started in February 2022.



OVERVIEW OF UKRAINIAN GRAIN TRANSPORTATION IN 2024¹

Between 2023 and 2024, Ukraine focused on securing the most cost-effective Black Sea routes from the deep ports of the Odesa region (Chornomorsk, Odesa, and Pivdennyi). Increased use of these routes led to a decrease in transportation costs and a significant increase in maritime grain exports from Ukraine, particularly corn, wheat, and oilseeds (tables [2a](#), [2b](#), [2c](#), [2d](#), and [fig. 1b](#)). These ports handle seagoing vessels of Handysize and above.² From 2023 to 2024, Ukrainian wheat exports rose nearly 23 percent—from 16.2 million metric tons (mmt) to 19.9 mmt. Over the same period, corn exports rose 11 percent (from 26 mmt to 28.8 mmt), and soybean exports fell 2 percent (from 3.42 mmt to 3.35 mmt) ([Ministry of Agrarian Policy and Food of Ukraine](#)).

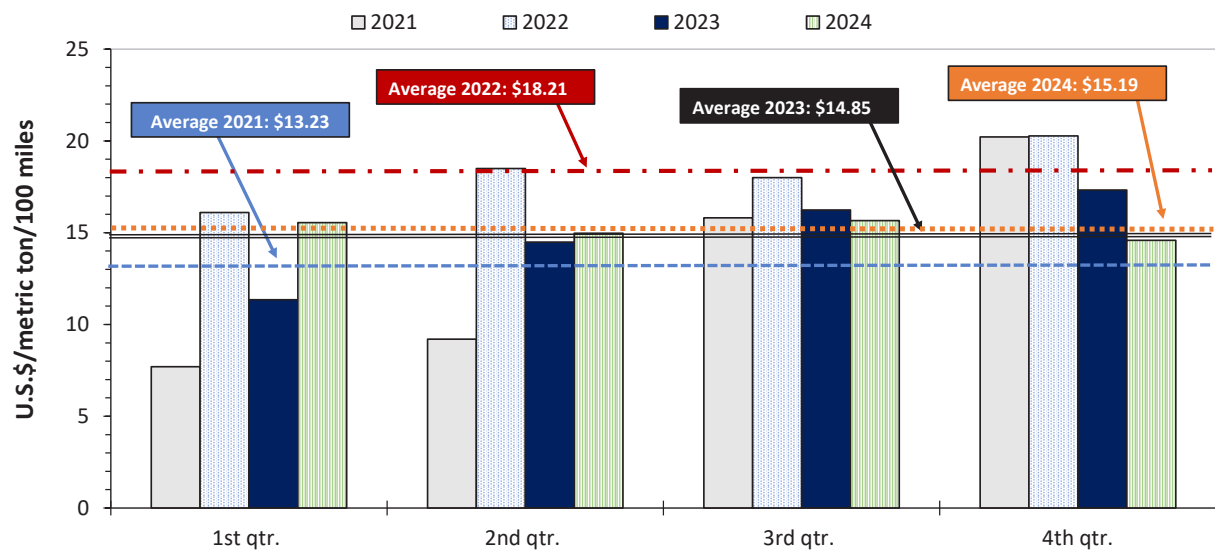
OCEAN AND INLAND FREIGHT RATES

From 2023 to 2024, Ukraine’s corn and wheat transportation costs fell mostly because of significant declines in rail and barge costs. In 2024, Ukraine regained access to its major marine ports on the Black Sea (Chornomorsk, Odesa, Pivdennyi) and increased its shipments through these export ports. This reversion of shipments to traditional sea routes deflected demand from the Danube ports, thereby lowering barge rates. By the end of 2024, barge operators charged nearly at-cost rates for their services, reducing margins to zero.³

Over the same period, ocean rates declined 2-48 percent, and by the end of 2024, they had reached levels not seen since prior to the war with Russia ([table 9](#)). Ocean rates declined significantly from Odesa to Egypt and Turkey. Rail transportation costs also decreased year to year. The cost of shipping a metric ton (mt) of grain 100 miles by rail decreased from \$5.82 per mt to \$4.38 per mt ([table 7](#)).

In contrast to the declines of other shipping costs, the cost of trucking a metric ton (mt) of grain 100 miles rose 2 percent year to year—from \$14.85 per mt to \$15.19 per mt ([fig. 1a](#)) ([Zernovoz](#)). Nonetheless, overall transportation costs showed declines as Ukraine’s grain market increasingly adapted to war conditions.

Figure 1a. Ukrainian wheat, corn, and soybeans export truck cost index, 2021-24



Note: qtr. = quarter.
Source: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, Zernovoz, Kyiv, Ukraine; and USDA, Agricultural Marketing Service.

1 Andrii Shkliar (andrii.shkliar@cfts.org.ua) and Andrey Isayev (andrey.isayev@cfts.org.ua)—at the Centre for Transport Strategies (CFTS)—gathered all of the Ukraine data in this report and ensured its accuracy.
2 Handysize vessels carry loads of up to 50,000 deadweight tons (dwt). Dwt is calculated as the sum of the weights of cargo, fuel, fresh water, ballast water, provisions, passengers, and crew.
3 This information was collected during the researchers’ interviews with subject matter experts at CFTS.



Farm gate and export prices, 2023-24. From 2023 to 2024, Ukrainian average wheat farm prices rose 26 percent, from \$140.28 per mt to \$176.89 per mt, which was still lower than 2021 (tables [1a](#), [2a](#), and [2b](#)). Over the same period, Ukrainian wheat free on-board (FOB) prices decreased 6 percent, from \$229.68 per mt to \$215.47 per mt ([table 1a](#)).⁴ Average corn farm prices increased nearly 17 percent, from \$135.73 per mt to \$158.42 per mt (tables [1a](#), [2c](#), and [2d](#)). Ukrainian corn FOB prices decreased 6 percent, from \$206.20 per mt to \$193.34 per mt.

Transport costs declined and farm gate prices increased, thereby raising landed costs for Ukrainian wheat and corn from Odesa to Alexandria, Egypt; to Ciwandan/Cigading, Indonesia; and to Shanghai, China.⁵ From 2023 to 2024, as a share of total landed costs, Ukraine's transportation costs for wheat dropped 13-37 percent, from Central Ukraine through the port of Odesa to Alexandria and Ciwandan/Cigading. For the same period, as a share of total landed costs, transport costs for corn declined 11-32 percent to Alexandria and Shanghai (tables [2c](#), [2d](#)).

Spread between U.S. Gulf and Ukrainian farm prices, 2023-24. The cumulative effect of the war was to reduce the price paid to Ukrainian farmers ([Wilson et al. 2022](#)). To capture the effect of this decline, USDA estimated the spread between Ukrainian farm-level prices and global prices. (In this case, U.S. Gulf FOB prices were used as a proxy for global prices.) From 2023 to 2024, the spread for wheat and corn—between Ukrainian farm-level prices and global prices—narrowed ([table 1a](#)). This narrowing spread indicates Ukrainian export logistic costs to ship wheat and corn to the global market fell from 2023 to 2024, but remained above pre-war levels.

Table 1a. Ukraine and U.S. Gulf wheat and corn prices, 2021-24

Wheat	2021	2022	2023	2024
	\$/mt			
Ukraine FW FOB	275.49	301.55	229.68	215.47
US Gulf FOB Hard Red Winter 11%	304.65	418.78	334.18	263.09
Ukraine farm prices	273.08	188.24	140.28	176.89
Ukraine farm price spread = US Gulf - Ukraine farm prices	31.57	230.54	193.90	86.20
Corn	2021	2022	2023	2024
	\$/mt			
Ukraine FOB Handy	267.46	270.72	206.20	193.34
US Gulf FOB	265.60	319.05	250.76	196.79
Ukraine farm prices	270.12	171.53	135.73	158.42
Ukraine farm level basis = US Gulf - Ukraine farm prices	-4.52	147.52	115.03	38.37

Free on board (FOB) prices show that the Ukrainian seller will pay for transporting the grain to the Ukrainian port and the cost of loading the grain onto the ship, including inland haulage, customs clearance, origin documentation charges, and demurrage. Once all the grain is on board, the buyer pays for all costs beyond that point.

Notes: In 2021, Ukrainian farmer's transportation costs were lower than global markets in 2022.

Sources: [Fastmarkets](#) and USDA, Agricultural Marketing Services.

⁴ Free on board (FOB) prices show the amount payable by the Ukrainian seller for transporting grain to the Ukrainian port, as well as the cost of loading the grain onto the ship, including inland haulage, customs clearance, origin documentation charges, and demurrage. After all the grain is on board, the buyer is responsible for all remaining costs.

⁵ Landed costs = total transportation costs + farm price.



EXPORT MODAL SHARES⁶

From 2023 to 2024, modal shares for Ukrainian grain and oilseed inland transportation reversed the trend from 2022 to 2023, returning to resemble their pre-war distributions.⁷ From 2023 to 2024, exports through Ukraine’s seaports by rail increased, while seaport exports by truck decreased. Trucking’s share of the seaport-export market decreased from 65 percent to 46 percent year to year, while rail’s share increased from 35 percent to 54 percent ([table 1b](#)) and barge’s share was zero for both years. (Before the war, all barge traffic had been via the Dnipro River and Southern Bug River, which have remained closed since the war began.) The rail shares almost reached pre-war levels because of a significant rise in railed shipments through the Odesa region’s deep-sea ports. The Ukrainian government secured a relatively safe sea corridor connecting the ports of Odesa with final destinations, reducing transportation costs and the significance of the alternative Danube River ports (Izmail, Reni, and Ust-Dunaisk) export gateway for Ukrainian grain exports.⁸ In 2024, like in 2023, the only possible direct railway route left to the Danube River was through Moldova and then, the Port of Reni. However, railway transit through Moldova was expensive and hardly predictable, forcing companies to focus on truck delivery to Danube ports ([Ukrainian Railways](#), [Ukrainian Sea Ports Authorities](#), and [CFTS](#)). The share of the Danube ports handling sea export of grains and oilseeds from Ukraine decreased from 45 percent in 2023 to 13 percent in 2024, while the share of Odesa ports increased from 52 percent in 2023 to 85 percent in 2024 ([Ministry of Agrarian Policy and Food of Ukraine](#) and [CFTS](#)).⁹

Table 1b. Tonnages and modal shares for Ukrainian grain and oilseeds exports, 2018-24

Year & Type of Movement	Rail		Barge via Dnipro River		Truck	
	1,000 Tons	Percent	1,000 Tons	Percent	1,000 Tons	Percent
2018	30 083	76%	3,700	9%	5,850	15%
2019	36,707	69%	5,650	11%	10,667	20%
2020	29,406	64%	4,030	9%	12,694	28%
2021	28,495	60%	4,300	9%	14,500	31%
2022	10,155	40%	-	0%	15,033	60%
2023	12,883	35%	-	0%	23,655	65%
2024	25,855	54%	-	-	21,750	46%

Notes: From January to February 2022, navigation on the Dnipro River was closed because of winter conditions. From March to December, in 2022, 2023, and 2024, navigation was also closed for security reasons related to the war with Russia. From 2018 to 2021, barged volumes included those for the Dnipro and Southern Bug Rivers. The barged volumes did not include shipments via the Danube River ports.

Sources: Ukrainian Railways, Ukrainian Sea Ports Authorities, and Centre for Transport Strategies.

⁶ Modal share describes that portion of the total tonnages of grain moved by each mode of transport—barge, rail, or truck. These shares, expressed as percentages, were determined by mode for particular types of grains and movements.

⁷ Grain refers to corn and wheat.

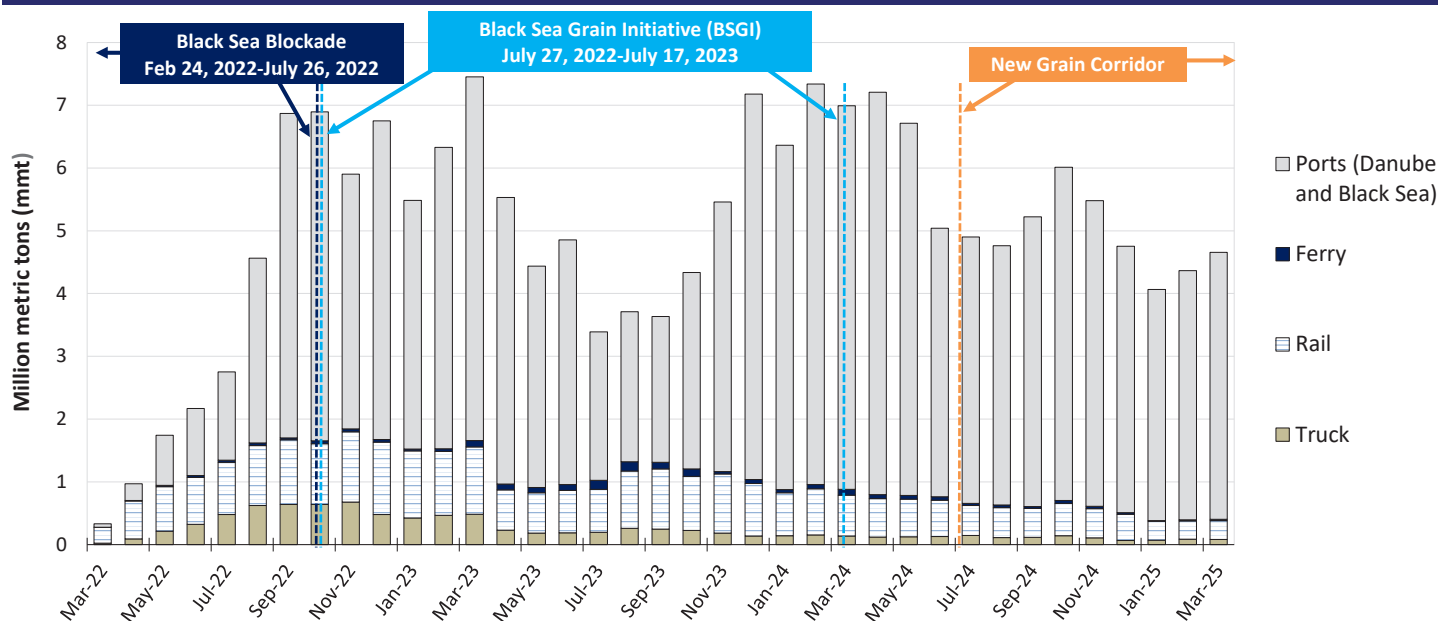
⁸ Grain is transported to the Izmail and Reni ports by rail and trucks. One part is exported by small “coaster vessels” directly to the destination ports. Another part is loaded on barges and transported to the Constanta port to be reloaded on seagoing vessels. Coaster vessels—suitable for navigation on the Lower Danube—carry loads up to 7,000 dwt ([Centre for Transport Strategies \(CFTS\)](#)).

⁹ Refers to wheat, corn, oat, barley, soybeans, rapeseed, sunflower seed, and oil-cake.

UKRAINE GRAIN TRANSPORTATION



Figure 1b. Ukraine agricultural exports by mode of Transport 2022-March 2025



Source: USDA/Foreign Agricultural Service using data from Ukraine Ministry of Agrarian Policy and Food's Public Dashboard of Exports Ministry of Agricultural Policy and Food of Ukraine.

Table 1c. Export of grain and oilseeds from Ukraine through western routes, 2021-24

Country	2021	2022	2023	2024
	1,000 Tons			
Hungary	70.9	1,558.2	1,737.7	284.1
Moldova	0	0	60	31.3
Poland	128.4	2,705.5	2,730.7	1,945.5
Romania	0	1,064.8	1,452.6	523.2
Slovakia	71.7	810.7	1022.0	961.2
Total	270.9	6,139.1	7,002.9	3,745.3

Notes: "Grain" refers to corn, wheat, and barley. "Oilseeds" refers to soybeans, rapeseed, and sunflower seeds. Years 2021 and 2022 are actual data, while 2023 and 2024 are estimated.

Sources: Ukrainian Railway, Ministry of Agrarian Policy and Food of Ukraine, Centre for Transport Strategies (CFTS).

From 2023 to 2024, Ukraine's share of corn, wheat, and soybeans exported via maritime routes increased from 80 percent to 92 percent, close to pre-Russia-Ukraine war levels. Over the same period, maritime routes for corn, wheat, and soybean exports through Black Sea ports and Danube ports were more competitive than export routes for either rail or trucking.

Of all modes (maritime, trucking and rail), rail's share decreased from 15 percent in 2023 to 7 percent in 2024 (total 3.7 mmt) ([fig. 1b](#) and [table 1c](#)). Also, over the same period, truck deliveries declined from 4 percent to 1 percent of overall exports (0.5 mmt) with the reopening of the Black Sea ports ([Ministry of Agrarian Policy and Food of Ukraine](#)). By rail and truck, the grain and oilseeds were exported through the western border of Ukraine and further to the EU or ports of Poland, Romania, and Lithuania.

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ANNUAL EXPORT ROUTE COST COMPARISONS

Table 2a. Average costs of transporting Ukrainian wheat from the Black Sea ports (using rail delivery to ports) to Egypt, Indonesia, and Turkey, 2023-24

	From Central Ukraine - Odesa					
	To Alexandria, Egypt			To Ciwandan/Cigading, Indonesia		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	6.91	6.37	-7.8	6.91	6.37	-7.8
Rail	20.92	15.59	-25.5	20.92	15.59	-25.5
Ocean	38.84	22.90	-41.0	54.67	52.49	-4.0
Total transportation	66.66	44.86	-32.7	82.50	74.46	-9.7
Farm price	140.28	176.89	26.1	140.28	176.89	26.1
Landed cost	206.95	221.75	7.2	222.78	251.35	12.8
Transport % of landed cost	32.3	20.5	-36.5	37.1	29.8	-19.5

	From Central Ukraine - Izmail					
	To Alexandria, Egypt			To Marmara Sea ports, Turkey		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	6.91	6.37	-7.8	6.91	6.37	-7.8
Rail	33.65	25.48	-24.3	33.65	25.48	-24.3
Ocean	50.53	27.28	-46.0	39.11	20.33	-48.0
Total transportation	91.08	59.12	-35.1	79.66	52.17	-34.5
Farm price	140.28	176.89	26.1	140.28	176.89	26.1
Landed cost	231.37	236.01	2.0	219.95	229.06	4.1
Transport % of landed cost	39.2	25.3	-35.5	36.0	23.0	-36.1

	From Central Ukraine - Constanta		
	To Alexandria, Egypt		
	—US\$/mt—		% Change
	2023	2024	2023-24
Truck	6.91	6.37	-7.8
Rail	33.65	25.48	-24.3
Barge Izmail-Constanta	28.17	11.29	-59.9
Ocean	15.18	15.46	1.9
Total transportation	83.90	58.60	-30.2
Farm price	140.28	176.89	26.1
Landed cost	224.18	235.49	5.0
Transport % of landed cost	37.4	25.1	-32.9

Notes: Central Ukraine producing regions are as follows = Cherkasy, Chernihiv, Kherson, Kirovohrad, Kyiv, Mykolaiv, Odesa, Poltava, and Sumy provinces. Export ports - The Port of Odesa was closed during the second quarter of 2022. The Port of Mykolaiv has remained closed to navigation since the second quarter of 2022. Rail rates include the cost of delivery to the railway station and the cost of renting a grain hopper. However, rail rates do not include the cost of moving and positioning rail cars at the elevator and port, railway station fees, security service from loading to discharging port, or freight-forwarding service. (Any or all of these items could exceed the rail tariff rate.) Rail rates are estimated by using specialized software “TM-Karta” in accordance with Ukrainian Railways (Ukrzaliznytsia) tariff regulation. Farm price = elevator price – handling costs – farm-to-elevator transportation. mt = metric ton; na = not available.

Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.

ANNUAL EXPORT ROUTE COST COMPARISONS

Table 2b. Average costs of transporting Ukrainian wheat from the Black Sea ports (using truck delivery to ports) to Egypt, Indonesia, and Turkey, 2023-24

	From Central Ukraine - Odesa					
	To Alexandria, Egypt			To Ciwandan/Cigading, Indonesia		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	51.85	52.33	0.9	51.85	52.33	0.9
Ocean	38.84	22.90	-41.0	54.67	52.49	-4.0
Total transportation	90.69	75.23	-17.0	106.52	104.83	-1.6
Farm price	140.28	176.89	26.1	140.28	176.89	26.1
Landed cost	230.97	252.12	9.2	246.81	281.72	14.1
Transport % of landed cost	39.2	30.1	-23.3	43.1	37.4	-13.3

	From Central Ukraine - Izmail					
	To Alexandria, Egypt			To Marmara Sea ports, Turkey		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	73.81	74.80	1.3	73.81	74.80	1.3
Ocean	50.53	27.28	-46.0	39.11	20.33	-48.0
Total transportation	124.34	102.07	-17.9	112.92	95.12	-15.8
Farm price	140.28	176.89	26.1	140.28	176.89	26.1
Landed cost	264.62	278.96	5.4	253.21	272.01	7.4
Transport % of landed cost	47.0	36.8	-21.8	44.6	35.2	-21.2

	From Central Ukraine - Constanta		
	To Alexandria, Egypt		
	—US\$/mt—		% Change
	2023	2024	2023-24
Truck	73.81	74.80	1.3
Barge Izmail-Constanta	28.17	11.29	-59.9
Ocean	15.18	15.46	1.9
Total transportation	117.16	101.55	-13.3
Farm price	140.28	176.89	26.1
Landed cost	257.44	278.44	8.2
Transport % of landed cost	45.5	36.7	-19.3

Notes: Central Ukraine producing regions are as follows = Cherkasy, Chernihiv, Kherson, Kirovohrad, Kyiv, Mykolaiv, Odesa, Poltava, and Sumy provinces. Export ports - The Port of Odesa was closed during the second quarter of 2022. The Port of Mykolaiv has remained closed to navigation since the second quarter of 2022. Rail rates include the cost of delivery to the railway station and the cost of renting a grain hopper. However, rail rates do not include the cost of moving and positioning rail cars at the elevator and port, railway station fees, security service from loading to discharging port, or freight-forwarding service. (Any or all of these items could exceed the rail tariff rate.) Rail rates are estimated by using specialized software "TM-Karta" in accordance with Ukrainian Railways (Ukrzaliznytsia) tariff regulation. Farm price = elevator price – handling costs – farm-to-elevator transportation. mt = metric ton; na = not available. Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.

ANNUAL EXPORT ROUTE COST COMPARISONS



Table 2c. Average costs of transporting Ukrainian corn from the Black Sea ports (using rail delivery to ports) to Egypt, China, Turkey, and Tunisia, 2023-24

	From Central Ukraine - Odesa					
	To Alexandria, Egypt			Southern ports, China		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	6.91	6.37	-7.8	6.91	6.37	-7.8
Rail	20.92	15.59	-25.5	20.92	15.59	-25.5
Ocean	40.19	23.74	-40.9	59.55	52.15	-12.4
Total transportation	68.02	45.70	-32.8	87.37	74.11	-15.2
Farm price	135.73	158.42	16.7	135.73	158.42	16.7
Landed cost	203.75	204.12	0.2	223.10	232.53	4.2
Transport % of landed cost	33.6	22.8	-32.0	39.4	32.3	-17.9

	From Central Ukraine - Izmail					
	To Alexandria, Egypt			To Marmara Sea ports, Turkey		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	6.91	6.37	-7.8	6.91	6.37	-7.8
Rail	33.65	25.48	-24.3	33.65	25.48	-24.3
Ocean	51.87	27.62	-46.8	40.98	21.66	-47.2
Total transportation	92.42	59.47	-35.7	81.54	53.51	-34.4
Farm price	135.73	158.42	16.7	135.73	158.42	16.7
Landed cost	228.15	217.88	-4.5	217.27	211.92	-2.5
Transport % of landed cost	40.4	27.7	-31.5	37.4	25.7	-31.3

	From Central Ukraine - Constanta		
	To Tunis, Tunisia		
	—US\$/mt—		% Change
	2023	2024	2023-24
Truck	6.91	6.37	-7.8
Rail	66.91	68.43	2.3
Barge Izmail-Constanta	28.17	11.29	-59.9
Ocean	15.18	15.46	1.9
Total transportation	117.16	101.55	-13.3
Farm price	140.28	176.89	26.1
Landed cost	257.44	278.44	8.2
Transport % of landed cost	45.5	36.7	-19.3

Notes: Central Ukraine producing regions are as follows = Cherkasy, Chernihiv, Kherson, Kirovohrad, Kyiv, Mykolaiv, Odesa, Poltava, and Sumy provinces. Export ports - The Port of Odesa was closed during the second quarter of 2022. The Port of Mykolaiv has remained closed to navigation since the second quarter of 2022. Rail rates include the cost of delivery to the railway station and the cost of renting a grain hopper. However, rail rates do not include the cost of moving and positioning rail cars at the elevator and port, railway station fees, security service from loading to discharging port, or freight-forwarding service. (Any or all of these items could exceed the rail tariff rate.) Rail rates are estimated by using specialized software “TM-Karta” in accordance with Ukrainian Railways (Ukrzaliznytsia) tariff regulation. Farm price = elevator price – handling costs – farm-to-elevator transportation.

mt = metric ton; na = not available.

Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.

ANNUAL EXPORT ROUTE COST COMPARISONS

Table 2d. Average costs of transporting Ukrainian corn from the Black Sea ports (using truck delivery to ports) to Egypt, China, Turkey, and Tunisia, 2023-24

	From Central Ukraine - Odesa					
	To Alexandria, Egypt			Southern ports, China		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	51.85	52.33	0.9	51.85	52.33	0.9
Ocean	40.19	23.74	-40.9	59.55	52.15	-12.4
Total transportation	92.04	76.07	-17.4	111.40	104.48	-6.2
Farm price	135.73	158.42	16.7	135.73	158.42	16.7
Landed cost	227.77	234.49	2.9	247.13	262.90	6.4
Transport % of landed cost	40.5	32.9	-18.9	45.2	40.1	-11.3

	From Central Ukraine - Izmail					
	To Alexandria, Egypt			To Marmara Sea ports, Turkey		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	73.81	74.80	1.3	73.81	74.80	1.3
Ocean	51.87	27.62	-46.8	40.98	21.66	-47.2
Total transportation	125.68	102.41	-18.5	114.80	96.46	-16.0
Farm price	135.73	158.42	16.7	135.73	158.42	16.7
Landed cost	261.41	260.83	-0.2	250.53	254.87	1.7
Transport % of landed cost	48.2	39.6	-17.9	46.0	38.2	-16.9

	From Central Ukraine - Constanta		
	To Tunis, Tunisia		
	—US\$/mt—		% Change
	2023	2024	2023-24
Truck	73.81	74.80	1.3
Barge Izmail-Constanta	28.17	11.29	-59.9
Ocean	23.30	23.03	-1.1
Total transportation	125.28	109.12	-12.9
Farm price	135.73	158.42	16.7
Landed cost	261.01	267.54	2.5
Transport % of landed cost	48.1	41.2	-14.4

Notes: Central Ukraine producing regions are as follows = Cherkasy, Chernihiv, Kherson, Kirovohrad, Kyiv, Mykolaiv, Odesa, Poltava, and Sumy provinces. Export ports - The Port of Odesa was closed during the second quarter of 2022. The Port of Mykolaiv has remained closed to navigation since the second quarter of 2022. Rail rates include the cost of delivery to the railway station and the cost of renting a grain hopper. However, rail rates do not include the cost of moving and positioning rail cars at the elevator and port, railway station fees, security service from loading to discharging port, or freight-forwarding service. (Any or all of these items could exceed the rail tariff rate.) Rail rates are estimated by using specialized software “TM-Karta” in accordance with Ukrainian Railways (Ukrzaliznytsia) tariff regulation. Farm price = elevator price – handling costs – farm-to-elevator transportation. mt = metric ton; na = not available.

Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.



Figure 2. Routes and wheat, corn, and soybean regions considered in the Ukrainian grain export transportation indicator

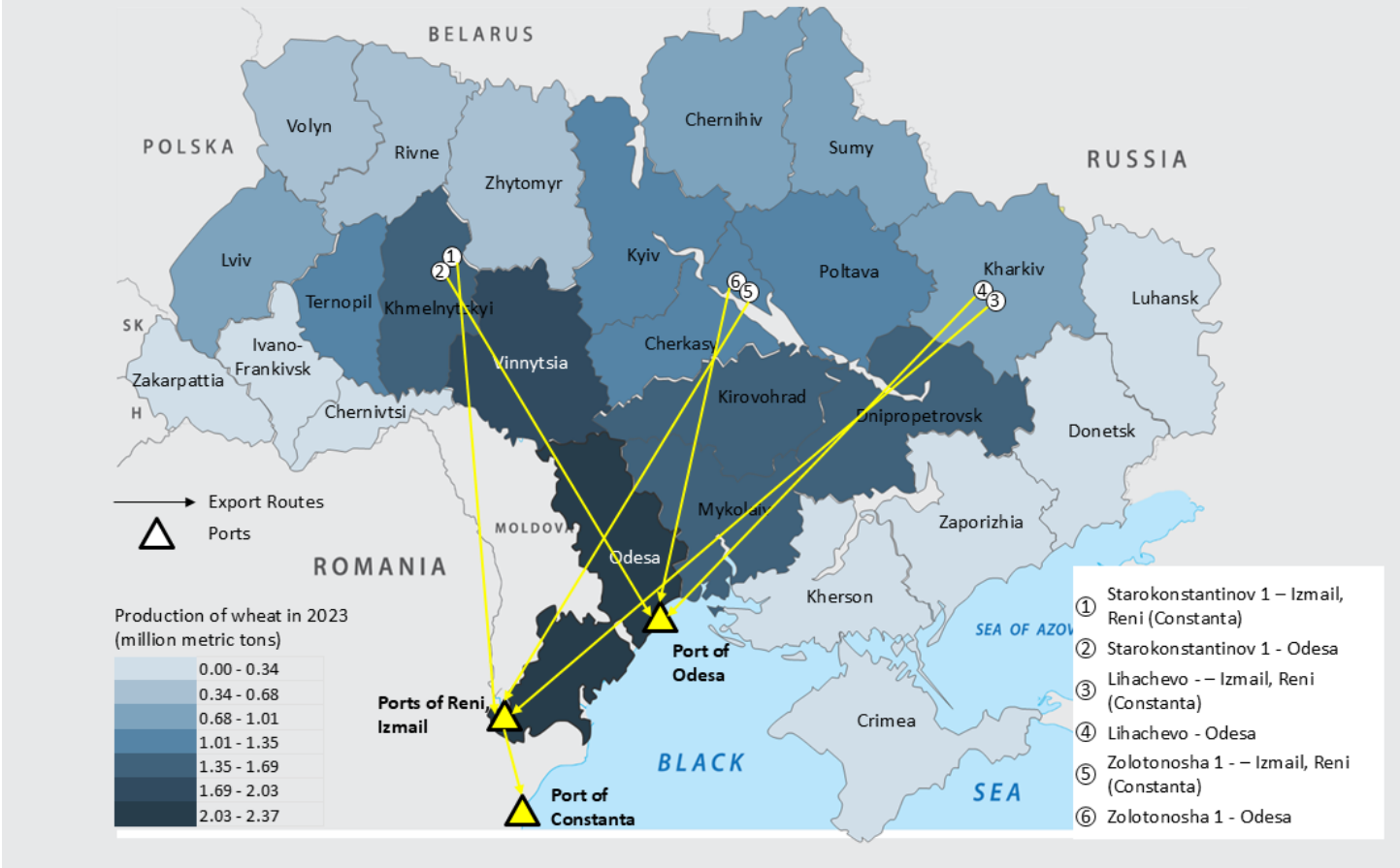


Notes: Table 7 on page 18 provides additional information for routes 1-6. Regions comprised roughly 100 percent of wheat, corn, and soybean production, 2023.

Source: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.



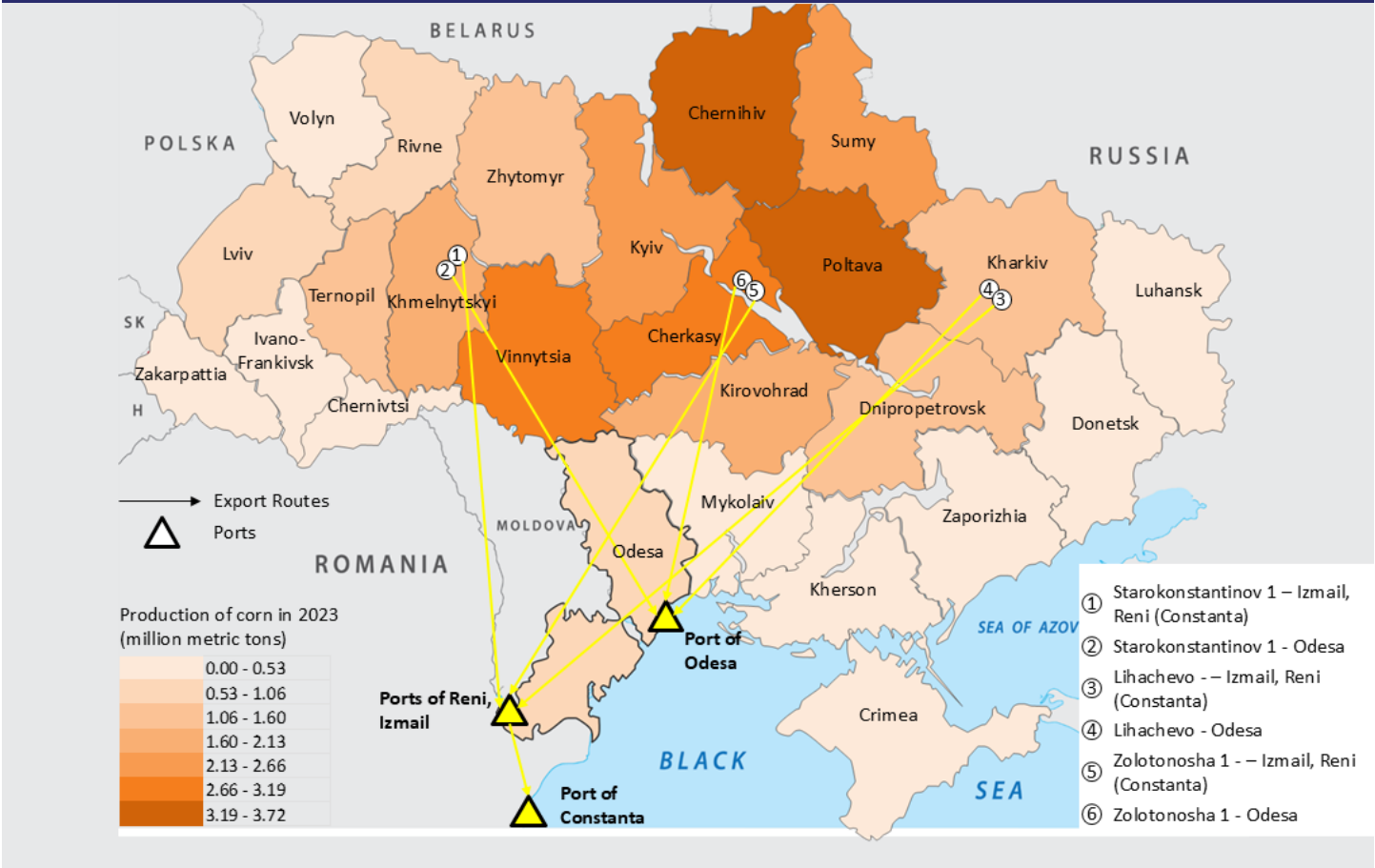
Figure 3. Routes and wheat regions considered in the Ukrainian grain export transportation indicator



Notes: Table 7 on page 18 provides additional information for routes 1-6. Regions comprised roughly 100 percent of wheat production, 2023.
Source: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.



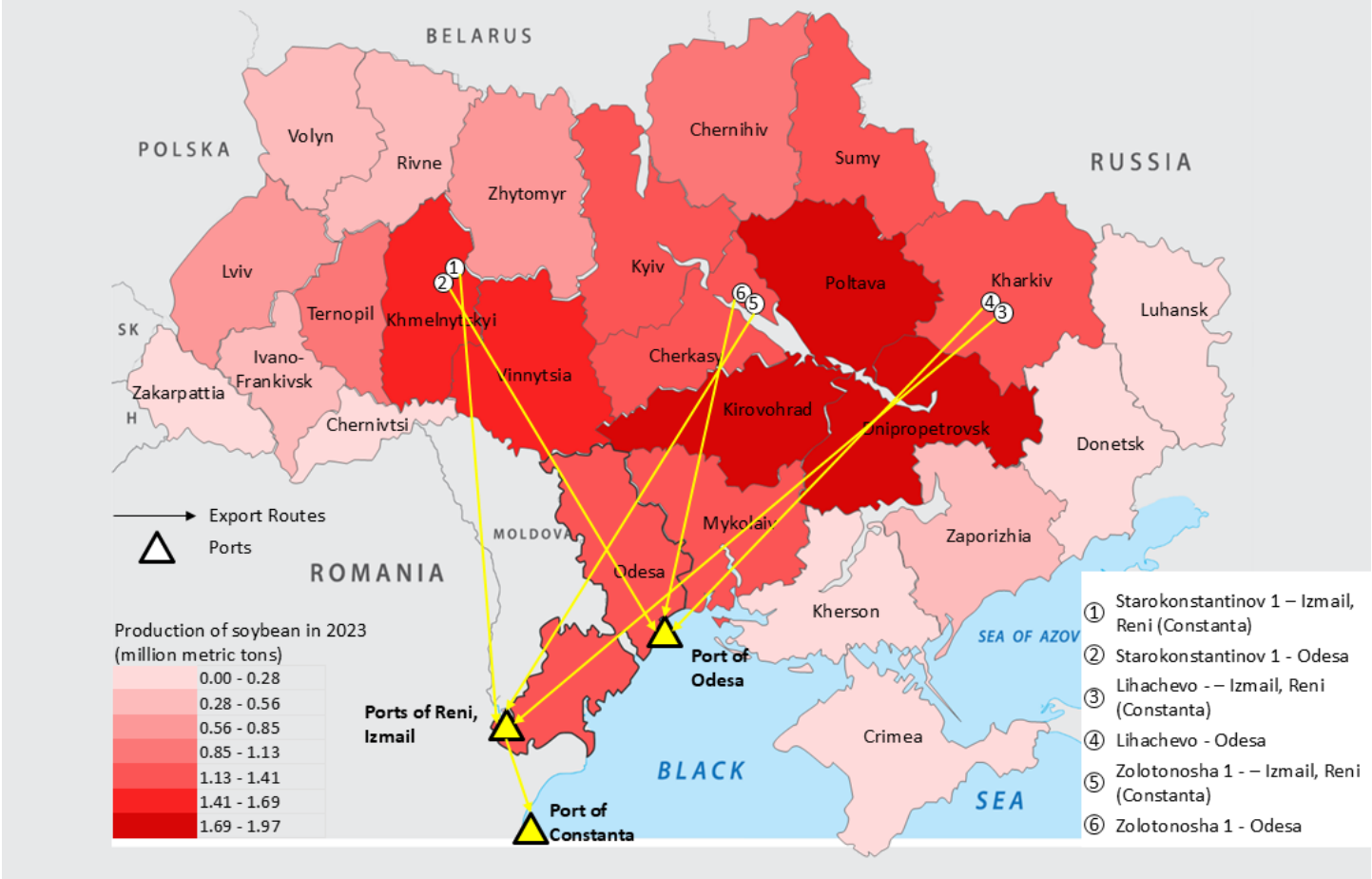
Figure 4. Routes and corn regions considered in the Ukrainian grain export transportation indicator



Notes: Table 7 on page 18 provides additional information for routes 1-6. Regions comprised roughly 100 percent of corn production, 2023.
Source: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.



Figure 5. Routes and soybean regions considered in the Ukrainian grain export transportation indicator



Notes: Table 7 on page 18 provides additional information for routes 1-6. Regions comprised roughly 100 percent of soybean production, 2023.
Source: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.

QUARTERLY EXPORT ROUTE COST COMPARISONS



Table 3. Quarterly costs of transporting Ukrainian wheat from the Black Sea ports (using rail delivery to ports) to Egypt, Indonesia, and Turkey, 2024

	From Central Ukraine - Odesa									
	To Alexandria, Egypt —US\$/mt—					To Ciwandan/Cigading, Indonesia —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	7.11	6.23	6.26	5.88	6.37	7.11	6.23	6.26	5.88	6.37
Rail	16.37	15.62	15.41	14.96	15.59	16.37	15.62	15.41	14.96	15.59
Ocean	30.93	22.60	19.43	18.63	22.90	64.60	55.80	48.60	40.97	52.49
Total transportation	54.41	44.45	41.11	39.48	44.86	88.08	77.65	70.28	61.81	74.46
Farm price	147.47	171.52	186.16	202.41	176.89	147.47	171.52	186.16	202.41	176.89
Landed cost	201.88	215.98	227.27	241.89	221.75	235.55	249.18	256.43	264.22	251.35
Transport % of landed cost	27.0	20.6	18.1	16.3	20.5	37.4	31.2	27.4	23.4	29.8

	From Central Ukraine - Izmail									
	To Alexandria, Egypt —US\$/mt—					To Marmara Sea ports, Turkey —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	7.11	6.23	6.26	5.88	6.37	7.11	6.23	6.26	5.88	6.37
Rail	26.75	25.52	25.21	24.43	25.48	26.75	25.52	25.21	24.43	25.48
Ocean	36.13	24.47	21.77	26.73	27.28	26.73	17.93	16.33	20.30	20.33
Total transportation	69.99	56.22	53.24	57.05	59.12	60.59	49.68	47.81	50.62	52.17
Farm price	147.47	171.52	186.16	202.41	176.89	147.47	171.52	186.16	202.41	176.89
Landed cost	217.46	227.74	239.40	259.46	236.01	208.06	221.20	233.97	253.03	229.06
Transport % of landed cost	32.2	24.7	22.2	22.0	25.3	29.1	22.5	20.4	20.0	23.0

	From Central Ukraine - Constanta				
	To Alexandria, Egypt —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	7.11	6.23	6.26	5.88	6.37
Rail	26.75	25.52	25.21	24.43	25.48
Barge Izmail-Constanta	13.67	10.50	11.00	10.00	11.29
Ocean	16.27	15.33	15.57	14.67	15.46
Total transportation	63.79	57.58	58.04	54.98	58.60
Farm price	147.47	171.52	186.16	202.41	176.89
Landed cost	211.26	229.10	244.20	257.39	235.49
Transport % of landed cost	30.2	25.1	23.8	21.4	25.1

Notes: Central Ukraine producing regions are as follows = Cherkasy, Chernihiv, Kherson, Kirovohrad, Kyiv, Mykolaiv, Odesa, Poltava, and Sumy provinces. Export ports - The Port of Odesa was closed during the second quarter of 2022. The Port of Mykolaiv has remained closed to navigation since the second quarter of 2022. Rail rates include the cost of delivery to the railway station and the cost of renting a grain hopper. However, rail rates do not include the cost of moving and positioning rail cars at the elevator and port, railway station fees, security service from loading to discharging port, or freight-forwarding service. (Any or all of these items could exceed the rail tariff rate.) Rail rates are estimated by using specialized software “TM-Karta” in accordance with Ukrainian Railways (Ukrzaliznytsia) tariff regulation. Farm price = elevator price – handling costs – farm-to-elevator transportation. qtr. = quarter; mt = metric ton; na = not available.

Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.

QUARTERLY EXPORT ROUTE COST COMPARISONS



Table 4. Quarterly costs of transporting Ukrainian wheat from the Black Sea ports (using truck delivery to ports) to Egypt, Indonesia, and Turkey, 2024

	From Central Ukraine - Odesa									
	To Alexandria, Egypt —US\$/mt—					To Ciwandan/Cigading, Indonesia —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	54.15	51.53	53.65	50.01	52.33	54.15	51.53	53.65	50.01	52.33
Ocean	30.93	22.60	19.43	18.63	22.90	64.60	55.80	48.60	40.97	52.49
Total transportation	85.08	74.13	73.08	68.64	75.23	118.75	107.33	102.25	90.98	104.83
Farm price	147.47	171.52	186.16	202.41	176.89	147.47	171.52	186.16	202.41	176.89
Landed cost	232.55	245.65	259.24	271.05	252.12	266.22	278.85	288.41	293.39	281.72
Transport % of landed cost	36.6	30.2	28.2	25.3	30.1	44.6	38.5	35.5	31.0	37.4

	From Central Ukraine - Izmail									
	To Alexandria, Egypt —US\$/mt—					To Marmara Sea ports, Turkey —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	77.14	73.66	76.81	71.57	74.80	77.14	73.66	76.81	71.57	74.80
Ocean	36.13	24.47	21.77	26.73	27.28	26.73	17.93	16.33	20.30	20.33
Total transportation	113.27	98.13	98.58	98.31	102.07	103.87	91.60	93.14	91.87	95.12
Farm price	147.47	171.52	186.16	202.41	176.89	147.47	171.52	186.16	202.41	176.89
Landed cost	260.74	269.65	284.74	300.72	278.96	251.34	263.12	279.30	294.28	272.01
Transport % of landed cost	43.4	36.4	34.6	32.7	36.8	41.3	34.8	33.3	31.2	35.2

	From Central Ukraine - Constanta				
	To Alexandria, Egypt —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	77.14	73.66	76.81	71.57	74.80
Barge Izmail-Constanta	13.67	10.50	11.00	10.00	11.29
Ocean	16.27	15.33	15.57	14.67	15.46
Total transportation	107.07	99.50	103.38	96.24	101.55
Farm price	147.47	171.52	186.16	202.41	176.89
Landed cost	254.54	271.02	289.54	298.65	278.44
Transport % of landed cost	42.1	36.7	35.7	32.2	36.7

Notes: Central Ukraine producing regions are as follows = Cherkasy, Chernihiv, Kherson, Kirovohrad, Kyiv, Mykolaiv, Odesa, Poltava, and Sumy provinces. Export ports: The Port of Odesa was closed during the second quarter of 2022. The Port of Mykolaiv has remained closed to navigation since the second quarter of 2022. Farm price = elevator price – handling costs – farm-to-elevator transportation. qtr. = quarter; mt = metric ton; na = not available.

Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.

QUARTERLY EXPORT ROUTE COST COMPARISONS



Table 5. Quarterly costs of transporting Ukrainian corn from the Black Sea ports (using rail delivery to ports) to Egypt, China, Turkey, and Tunisia, 2024

	From Central Ukraine - Odesa									
	To Alexandria, Egypt —US\$/mt—					To Southern ports, China —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	5.54	8.25	6.65	7.19	6.91	5.54	8.25	6.65	7.19	6.91
Rail	29.58	25.51	13.21	15.37	20.92	29.58	25.51	13.21	15.37	20.92
Ocean	34.20	35.47	48.70	42.40	40.19	54.90	55.80	61.33	66.17	59.55
Total transportation	69.32	69.22	68.56	64.96	68.02	90.02	89.55	81.19	88.73	87.37
Farm price	162.18	135.77	130.08	114.88	135.73	162.18	135.77	130.08	114.88	135.73
Landed cost	231.50	204.99	198.64	179.85	203.75	252.20	225.33	211.27	203.61	223.10
Transport % of landed cost	29.9	33.8	34.5	36.1	33.6	35.7	39.7	38.4	43.6	39.4

	From Central Ukraine - Izmail									
	To Alexandria, Egypt —US\$/mt—					To Marmara Sea ports, Turkey —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	5.54	8.25	6.65	7.19	6.91	5.54	8.25	6.65	7.19	6.91
Rail	47.64	41.25	21.01	24.69	33.65	47.64	41.25	21.01	24.69	33.65
Ocean	58.67	49.43	53.93	45.43	51.87	49.23	38.30	41.43	34.97	40.98
Total transportation	111.84	98.94	81.60	77.31	92.42	102.41	87.80	69.10	66.85	81.54
Farm price	162.18	135.77	130.08	114.88	135.73	162.18	135.77	130.08	114.88	135.73
Landed cost	274.03	234.71	211.67	192.20	228.15	264.59	223.57	199.17	181.73	217.27
Transport % of landed cost	40.8	42.2	38.5	40.2	40.4	38.7	39.3	34.7	36.8	37.4

	From Central Ukraine - Constanta				
	To Tunis, Tunisia —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	5.54	8.25	6.65	7.19	6.91
Rail	47.64	41.25	21.01	24.69	33.65
Barge Izmail-Constanta	27.17	21.67	35.83	28.00	28.17
Ocean	22.07	22.20	22.87	26.07	23.30
Total transportation	102.41	93.37	86.36	85.95	92.02
Farm price	162.18	135.77	130.08	114.88	135.73
Landed cost	264.59	229.14	216.44	200.83	227.75
Transport % of landed cost	38.7	40.7	39.9	42.8	40.5

Notes: Central Ukraine producing regions are as follows = Cherkasy, Chernihiv, Kherson, Kirovohrad, Kyiv, Mykolaiv, Odesa, Poltava, and Sumy provinces. Export ports: The Port of Odesa was closed during the second quarter of 2022. The Port of Mykolaiv has remained closed to navigation since the second quarter of 2022. Rail rates include the cost of delivery to the railway station and the cost of renting a grain hopper. However, rail rates do not include the cost of moving and positioning rail cars at the elevator and port, railway station fees, security service from loading to discharging port, or freight-forwarding service. (Any or all of these items could exceed the rail tariff rate.) Rail rates are estimated by using specialized software “TM-Karta” in accordance with Ukrainian Railways (Ukrzaliznytsia) tariff regulation. Farm price = elevator price – handling costs – farm-to-elevator transportation. qtr. = quarter; mt = metric ton; na = not available.

Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.



Table 6. Quarterly costs of transporting Ukrainian corn from the Black Sea ports (using truck delivery to ports) to Egypt, China, Turkey, and Tunisia, 2024

	From Central Ukraine - Odesa									
	To Alexandria, Egypt —US\$/mt—					To Southern ports, China —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	54.15	51.53	53.65	50.01	52.33	54.15	51.53	53.65	50.01	52.33
Ocean	31.80	23.57	20.35	19.23	23.74	61.87	54.67	50.17	41.90	52.15
Total transportation	85.95	75.09	74.00	69.24	76.07	116.02	106.19	103.82	91.91	104.48
Farm price	123.89	156.88	157.32	195.57	158.42	123.89	156.88	157.32	195.57	158.42
Landed cost	209.84	231.98	231.32	264.82	234.49	239.91	263.08	261.13	287.48	262.90
Transport % of landed cost	41.0	32.4	32.0	26.1	32.9	48.4	40.4	39.8	32.0	40.1

	From Central Ukraine - Izmail									
	To Alexandria, Egypt —US\$/mt—					To Marmara Sea ports, Turkey —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	77.14	73.66	76.81	71.57	74.80	77.14	73.66	76.81	71.57	74.80
Ocean	36.93	24.47	22.27	26.80	27.62	27.67	19.87	17.67	21.43	21.66
Total transportation	114.07	98.13	99.08	98.37	102.41	104.81	93.53	94.48	93.01	96.46
Farm price	123.89	156.88	157.32	195.57	158.42	123.89	156.88	157.32	195.57	158.42
Landed cost	237.96	255.01	256.39	293.95	260.83	228.70	250.41	251.79	288.58	254.87
Transport % of landed cost	47.9	38.5	38.6	33.5	39.6	45.8	37.4	37.5	32.2	38.2

	From Central Ukraine - Constanta				
	To Tunis, Tunisia —US\$/mt—				
	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024	Average 2024
Truck	77.14	73.66	76.81	71.57	74.80
Barge Izmail-Constanta	13.67	10.50	11.00	10.00	11.29
Ocean	24.97	23.13	22.47	21.57	23.03
Total transportation	115.77	107.30	110.28	103.14	109.12
Farm price	123.89	156.88	157.32	195.57	158.42
Landed cost	239.66	264.18	267.59	298.72	267.54
Transport % of landed cost	48.3	40.6	41.2	34.5	41.2

Notes: Central Ukraine producing regions are as follows = Cherkasy, Chernihiv, Kherson, Kirovohrad, Kyiv, Mykolaiv, Odesa, Poltava, and Sumy provinces. Export ports - The Port of Odesa was closed during the second quarter of 2022. The Port of Mykolaiv has remained closed to navigation since the second quarter of 2022. Farm price = elevator price – handling costs – farm-to-elevator transportation. qtr. = quarter; mt = metric ton; na = not available.

Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.



Table 7. Quarterly rail rates for selected Ukrainian grain and soybean export transportation routes, 2024

Route #	Origin (reference city)	Destination	Distance (miles)	Share (%)	Freight price (US\$/mt/100 miles)				
					1st qtr	2nd qtr	3rd qtr	4th qtr	Avg
1	Western Ukraine (Khmelnytskii, station Starokonstantinov 1)	Izmail	511	31.5	8.06	6.97	3.58	4.21	5.70
2	Western Ukraine (Khmelnytskii, station Starokonstantinov 1)	Odesa	339		8.72	7.52	3.89	4.53	6.17
3	Eastern Ukraine (Kharkiv, station Lihachevo)	Izmail	773	18.6	7.81	6.86	3.40	4.04	5.53
4	Eastern Ukraine (Kharkiv, station Lihachevo)	Odesa	521		7.99	7.07	3.53	4.16	5.69
5	Central Ukraine (Cherkasy, station Zolotonosha 1)	Izmail	593	49.9	8.04	6.96	3.54	4.17	5.68
6	Central Ukraine (Cherkasy, station Zolotonosha 1)	Odesa	341		8.67	7.48	3.87	4.51	6.13

Notes: Although each origin region comprises several cities, the major station at the center of each region is considered as a reference to establish the freight price. Western Ukraine producing regions are as follows = Chernivtsi, Ivano-Frankivsk, Khmelnytskii, Lviv, Rivne, Ternopil, Vinnytsia, Volyn, Zakarpattia, and Zhytomyr provinces. Eastern Ukraine producing regions are as follows = Dnipropetrovsk, Donetsk, Kharkiv, Luhansk, and Zaporizhia provinces. Central Ukraine producing regions are as follows = Cherkasy, Chernihiv, Kherson, Kirovohrad, Kyiv, Mykolaiv, Odesa, Poltava, and Sumy provinces. Share is measured as a percentage of total production and illustrates the production in the region. Rail rates include the cost of delivery to the railway station and the cost of renting a grain hopper. However, rail rates do not include the cost of moving and positioning rail cars at the elevator and port, railway station fees, security service from loading to discharging port, or freight-forwarding service. (Any or all of these items could exceed the rail tariff rate.) Rail rates are estimated by using specialized software “TM-Karta” in accordance with Ukrainian Railways (Ukrzaliznytsia) tariff regulation. Average monthly exchange rate from the National Bank of Ukraine was used to convert Ukrainian Hryvnia to U.S. dollars. qtr = quarter; mt = metric ton; Avg = average.

Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.



Table 8. Monthly Ukrainian grain and oilseeds export truck transportation cost index

Month	Freight price (US\$/mt/100 miles)	Index variation (%) (Base: prior month)	Index value (Base: Jan. 05 = 100)	Month	Freight price (US\$/mt/100 miles)	Index variation (%) (Base: prior month)	Index value (Base: Jan. 05 = 100)
Jan-19	18.65	0.0	100.00	Jan-22	14.96	-11.3	80.21
Feb-19	19.15	2.6	102.65	Feb-22	16.15	7.9	86.58
Mar-19	16.75	-12.5	89.81	Mar-22	17.17	6.3	92.06
Apr-19	14.92	-10.9	79.99	Apr-22	17.94	4.5	96.19
May-19	15.16	1.6	81.30	May-22	18.38	2.5	98.55
Jun-19	15.09	-0.5	80.93	Jun-22	19.15	4.2	102.68
Jul-19	15.53	2.9	83.28	Jul-22	16.93	-11.6	90.79
Aug-19	15.84	2.0	84.94	Aug-22	17.61	4.0	94.42
Sep-19	16.15	1.9	86.58	Sep-22	19.46	10.5	104.33
Oct-19	16.12	-0.2	86.45	Oct-22	19.81	1.8	106.22
Nov-19	18.47	14.5	99.01	Nov-22	20.16	1.8	108.11
Dec-19	17.80	-3.6	95.42	Dec-22	20.84	3.4	111.73
Jan-20	17.41	-2.2	93.36	Jan-23	12.11	-41.9	64.91
Feb-20	15.94	-8.5	85.45	Feb-23	11.86	-2.0	63.59
Mar-20	16.43	3.1	88.10	Mar-23	10.08	-15.0	54.05
Apr-20	13.58	-17.4	72.79	Apr-23	12.31	22.1	65.97
May-20	13.57	0.0	72.78	May-23	15.04	22.2	80.63
Jun-20	13.31	-1.9	71.39	Jun-23	16.13	7.3	86.50
Jul-20	10.74	-19.3	57.58	Jul-23	15.31	-5.1	82.10
Aug-20	7.63	-29.0	40.91	Aug-23	15.31	0.0	82.10
Sep-20	9.87	29.4	52.92	Sep-23	18.07	18.0	96.91
Oct-20	7.77	-21.3	41.66	Oct-23	17.52	-3.0	93.96
Nov-20	8.14	4.8	43.64	Nov-23	17.70	1.0	94.89
Dec-20	8.70	6.9	46.64	Dec-23	16.77	-5.2	89.91
Jan-21	6.22	-28.5	33.35	Jan-24	15.58	-7.1	83.53
Feb-21	6.99	12.4	37.48	Feb-24	15.54	-0.3	83.30
Mar-21	9.90	41.6	53.08	Mar-24	15.52	-0.1	83.20
Apr-21	8.70	-12.1	46.64	Apr-24	14.74	-5.0	79.00
May-21	7.41	-14.8	39.73	May-24	14.61	-0.9	78.31
Jun-21	11.47	54.8	61.50	Jun-24	15.56	6.6	83.44
Jul-21	13.84	20.7	74.22	Jul-24	15.37	-1.2	82.40
Aug-21	14.91	7.7	79.92	Aug-24	15.59	1.4	83.56
Sep-21	18.67	25.3	100.12	Sep-24	16.02	2.8	85.91
Oct-21	20.94	12.1	112.26	Oct-24	16.03	0.0	85.93
Nov-21	22.83	9.0	122.40	Nov-24	15.70	-2.1	84.15
Dec-21	16.87	-26.1	90.44	Dec-24	12.02	-23.4	64.46

Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, Zernovoz, Kyiv, Ukraine, and USDA, Agricultural Marketing Service.



Table 9. Quarterly ocean freight rates for shipping grain and soybeans from selected Ukrainian ports (US\$/metric ton)

Cargo	Port	Destination	Vessel size --metric ton--	1st qtr. 2019	2nd qtr. 2019	3rd qtr. 2019	4th qtr. 2019
Wheat	Mykolaiv	Alexandria, Egypt	25,000-30,000	--na--	--na--	16.33	15.83
Wheat	Mykolaiv	Ciwandan/Cigading, Indonesia	50,000-55,000	--na--	--na--	39.92	35.58
Wheat	Odessa	Alexandria, Egypt	25,000-30,000	--na--	--na--	14.58	14.08
Wheat	Odesa	Ciwandan/Cigading, Indonesia	50,000-55,000	--na--	--na--	38.17	33.83
Corn	Mykolaiv	Alexandria, Egypt	25,000-30,000	--na--	--na--	16.33	15.83
Corn	Mykolaiv	Southern ports, China	50,000-55,000	--na--	--na--	38.08	36.25
Corn	Odesa	Alexandria, Egypt	25,000-30,000	--na--	--na--	14.58	14.08
Corn	Odessa	Southern ports, China	60,000-70,000	--na--	--na--	35.33	33.50
Soybeans	Mykolaiv	Southern ports, China	60,000-70,000	--na--	--na--	37.08	35.25
Soybeans	Odesa	Southern ports, China	60,000-70,000	--na--	--na--	35.33	33.50
Cargo	Port	Destination	Vessel size --metric ton--	1st qtr. 2020	2nd qtr. 2020	3rd qtr. 2020	4th qtr. 2020
Wheat	Mykolaiv	Alexandria, Egypt	25,000-30,000	13.08	10.58	15.00	16.17
Wheat	Mykolaiv	Ciwandan/Cigading, Indonesia	50,000-55,000	32.42	25.25	34.75	33.58
Wheat	Odessa	Alexandria, Egypt	25,000-30,000	11.33	8.83	13.08	14.42
Wheat	Odesa	Ciwandan/Cigading, Indonesia	50,000-55,000	30.67	23.50	32.83	31.83
Corn	Mykolaiv	Alexandria, Egypt	25,000-30,000	13.08	10.58	15.00	16.17
Corn	Mykolaiv	Southern ports, China	50,000-55,000	31.92	27.58	34.25	34.25
Corn	Odesa	Alexandria, Egypt	25,000-30,000	11.33	8.83	13.08	14.42
Corn	Odessa	Southern ports, China	60,000-70,000	29.17	24.83	31.50	31.50
Soybeans	Mykolaiv	Southern ports, China	60,000-70,000	30.92	26.58	33.25	33.25
Soybeans	Odesa	Southern ports, China	60,000-70,000	29.17	24.83	31.50	31.50
Cargo	Port	Destination	Vessel size --metric ton--	1st qtr. 2021	2nd qtr. 2021	3rd qtr. 2021	4th qtr. 2021
Wheat	Mykolaiv	Alexandria, Egypt	25,000-30,000	21.67	24.17	35.00	33.67
Wheat	Mykolaiv	Ciwandan/Cigading, Indonesia	50,000-55,000	45.50	51.00	72.83	61.33
Wheat	Odessa	Alexandria, Egypt	25,000-30,000	19.50	21.50	31.50	31.00
Wheat	Odesa	Ciwandan/Cigading, Indonesia	50,000-55,000	43.33	48.33	69.33	58.67
Corn	Mykolaiv	Alexandria, Egypt	25,000-30,000	21.67	24.17	35.00	33.67
Corn	Mykolaiv	Southern ports, China	50,000-55,000	42.25	49.42	66.42	56.75
Corn	Odesa	Alexandria, Egypt	25,000-30,000	19.50	21.50	31.50	31.00
Corn	Odessa	Southern ports, China	60,000-70,000	39.50	46.67	63.67	54.00
Soybeans	Mykolaiv	Southern ports, China	60,000-70,000	41.25	48.42	65.42	55.75
Soybeans	Odesa	Southern ports, China	60,000-70,000	39.50	46.67	63.67	54.00

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QUARTERLY FREIGHT RATES



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Cargo	Port	Destination	Vessel size --metric ton--	1st qtr 2022	2nd qtr 2022	3rd qtr 2022	4th qtr 2022
Wheat	Mykolaiv	Alexandria, Egypt	25,000-30,000	36.98	--na--	--na--	--na--
Wheat	Mykolaiv	Ciwandan/Cigading, Indonesia	50,000-55,000	65.30	--na--	--na--	--na--
Wheat	Odessa	Alexandria, Egypt	25,000-30,000	34.09	--na--	58.93	68.93
Wheat	Odesa	Ciwandan/Cigading, Indonesia	50,000-55,000	62.41	--na--	91.27	101.27
Corn	Mykolaiv	Alexandria, Egypt	25,000-30,000	36.98	--na--	--na--	--na--
Corn	Mykolaiv	Southern ports, China	50,000-55,000	60.96	--na--	--na--	--na--
Corn	Odesa	Alexandria, Egypt	25,000-30,000	34.09	--na--	58.93	68.93
Corn	Odessa	Southern ports, China	60,000-70,000	57.78	--na--	85.99	95.99
Soybeans	Mykolaiv	Southern ports, China	60,000-70,000	59.81	--na--	--na--	--na--
Soybeans	Odesa	Southern ports, China	60,000-70,000	57.78	--na--	85.99	95.99
Cargo	Port	Destination	Vessel size --metric ton--	1st qtr 2023	2nd qtr 2023	3rd qtr 2023	4th qtr 2023
Wheat	Odesa	Alexandria, Egypt	25,000-30,000	32.70	33.83	47.25	41.57
Wheat	Odesa	Ciwandan/Cigading, Indonesia	50,000-55,000	51.93	49.50	52.75	64.50
Wheat	Izmail	Alexandria, Egypt	5,000-6,000	57.17	47.80	52.50	44.63
Wheat	Izmail	Marmara Sea ports, Turkey	5,000-6,000	45.90	36.43	40.00	34.10
Wheat	Constanta	Alexandria, Egypt	25,000-30,000	14.77	14.23	14.73	16.97
Corn	Odesa	Alexandria, Egypt	25,000-30,000	34.20	35.47	48.70	42.40
Corn	Odesa	Southern ports, China	60,000-70,000	54.90	55.80	61.33	66.17
Corn	Izmail	Alexandria, Egypt	5,000-6,000	58.67	49.43	53.93	45.43
Corn	Izmail	Marmara Sea ports, Turkey	3,000	49.23	38.30	41.43	34.97
Corn	Constanta	Tunis, Tunisia	25,000-30,000	22.07	22.20	22.87	26.07
Cargo	Port	Destination	Vessel size --metric ton--	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024
Wheat	Odesa	Alexandria, Egypt	25,000-30,000	30.93	22.60	19.43	18.63
Wheat	Odesa	Ciwandan/Cigading, Indonesia	50,000-55,000	64.60	55.80	48.60	40.97
Wheat	Izmail	Alexandria, Egypt	5,000-6,000	36.13	24.47	21.77	26.73
Wheat	Izmail	Marmara Sea ports, Turkey	5,000-6,000	26.73	17.93	16.33	20.30
Wheat	Constanta	Alexandria, Egypt	25,000-30,000	16.27	15.33	15.57	14.67
Corn	Odesa	Alexandria, Egypt	25,000-30,000	31.80	23.57	20.35	19.23
Corn	Odesa	Southern ports, China	60,000-70,000	61.87	54.67	50.17	41.90
Corn	Izmail	Alexandria, Egypt	5,000-6,000	36.93	24.47	22.27	26.80
Corn	Izmail	Marmara Sea ports, Turkey	3,000	27.67	19.87	17.67	21.43
Corn	Constanta	Tunis, Tunisia	25,000-30,000	24.97	23.13	22.47	21.57

Notes: China's main southern ports include Shanghai, Ningbo, Shenzhen, and Guangdong. na = not available. The Port of Odesa was closed during the second quarter of 2022. The freight average was calculated based on the first, third, and fourth quarters of 2022. The Port of Mykolaiv has remained closed to navigation since the second quarter of 2022.

Sources: Centre for Transport Strategies (CFTS) Kyiv, Ukraine, and USDA, Agricultural Marketing Service.



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