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2024 Overview Published February 2025

Overview of Brazilian Soybean Transportation in 2024

In 2024, Brazil exported 98.8 million metric tons (mmt) of soybeans, 3 percent less than 2023's total of 101.9 mmt (Comex Stat, Ministério do Desenvolvimento, Indústria, Comércio e Serviços (MDIC)). A drought that affected more than half of the country during the growing season lowered production and exports (CNN, USDA/FAS/IPAD, and Companhia Nacional de Abastecimento (CONAB)). From 2023 to 2024, Brazil's soybean transportation costs decreased, reflecting a significant drop in truck and barge rates (figures 1a, 1b, and 5).

Inland and ocean freight rates—year to year. From 2023 to 2024 (year to year), the cost in Brazil of shipping a metric ton (mt) of soybeans 100 miles by truck declined 22 percent, from \$9.50 per mt to \$7.38 per mt (table 8). Inland (truck, rail, and barge) Brazilian transportation costs typically decline in July at the end of the peak soybean export period, but this year's third-quarter decline was steeper than the typical post-peak dip. Brazilian transportation demand also declined because of a smaller soybean crop than last year and lower corn flows in July and August (SIFRECA personal communication). Still, in 2024, Brazil exported 98.8 million metric tons (mmt) of soybeans, valued at \$43 billion (fig. 1a), mostly to China. In 2024, especially in the second and third quarter, the drought in the "Arco Norte" resulted in poor navigation conditions, reduced barge loads, and lower shipment frequency (Hidrovias do Brasil and SIFRECA personal communication). As barge navigation capacity fell, shippers selected alternative modes, and barge rates declined significantly (table 7 and fig. 1b).

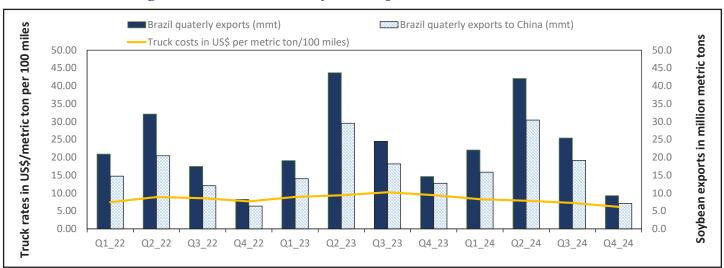


Figure 1a.Brazilian low soybean exports and truck rates in 2024

Source: Comex Stat, Ministério da Economia, University of São Paulo, Escola Superior de Agricultura "Luiz de Queiroz" (ESALQ/USP), Brazil, and USDA, Agricultural Marketing Service.

¹ In this report, the source of Brazil export data is the Comex Stat, Ministério do Desenvolvimento, Indústria, Comércio e Serviços (MDIC).

² Brazil's Arco Norte ports include Barcarena, São Luís / Itaqui, Itacoatiara/Manaus, and Santarém.



160 North MT by truck - Santos 140 120 North MT by rail - Santos \$U.S./mt 100 North MT by barge - Barcarena 80 Northwest RG - Rio Grande 60 40 South GO by rail - Santos 20 2019 2020 2021 2022 2023 2024

Figure 1b. Selected Brazilian soybean transportation cost to Shanghai, China

Note: mt = metric ton. MT= Mato Grosso, GO = Goiás, RS = Rio Grande do Sul. South GO by rail to Santos data from 2019-2021 not available.

Source: University of São Paulo, Escola Superior de Agricultura "Luiz de Queiroz" (ESALQ/USP), Brazil, and USDA, Agricultural Marketing Service.

Ocean and inland freight rates. Brazilian ocean freight rates fell in 2024 because of oversupply of vessels compared with low soybeans and corn export volumes (SIFRECA personal communication and <u>Grain Transportation Report</u> (<u>GTR</u>), <u>January 30, 2025</u>). On average, ocean rates from selected Brazilian export routes to Hamburg, Germany, and to Shanghai, China, fell 1-4 percent (tables 1a, 1b, 2a, 2b, and 9).³ For selected Brazilian export routes to China, total landed costs decreased as both farm prices and transportation costs declined except for the route of Northwest Rio Grande do Sul to Rio Grande (fig. 1b, tables 1a and 1b)

Farm gate prices and depreciation of Brazilian real. Year to year, Brazil's soybean exports declined from 101.9 mmt to 98.8 mmt. The average 2024 Brazilian soybean export price (\$434.58) was down nearly 17 percent from 2023's average (\$522.67). Year to year, the Brazilian real depreciated nearly 8 percent against the U.S. dollar—from R\$4.99 per U.S. dollar to R\$5.39 per U.S. dollar (Brazil Central Bank). Brazil's average farm gate prices for soybeans fell 17 percent. Measured in U.S. dollars, that decline was from \$444.09/mt to \$367.95/mt—and in reais, from R\$ 2,221.45/mt to R\$ 1,981.43/mt (CONAB). Farm prices measured in reais declined nearly 11 percent because Brazilian farmers continued to benefit from the real's relative weakness against the U.S. dollar. Soybeans are priced in U.S. dollars but paid in reais.

Brazilian port shares of soybean exports to China. In 2024, Brazil's soybean exports to China totaled 72.6 mmt—down nearly 3 percent from 2023's total of 74.5 mmt (fig. 1a). In 2024, total exports to China were valued at \$31.5 billion and accounted for 73 percent of Brazil's total soybean exports for the period (98.8 mmt). The next highest shares of Brazil's soybean exports (in declining order) went to Spain, Thailand, Turkey, Iran, and Mexico.

The Port of Santos was the largest Brazilian export gateway to China, followed by Paranaguá, São Luís, Rio Grande, São Francisco do Sul, and Barcarena. Together, these six ports accounted for 90 percent of Brazilian soybean exports to China. In 2024, nearly 70 percent of Brazil's soybean exports to China originated from the southern ports of Santos, Rio Grande, Paranaguá, and São Francisco do Sul; 22 percent, from the northeastern ports of São Luís, Vitória, and Salvador; and 8 percent from the ports of Barcarena and Manaus, along the Amazon River. For more information, contact Delmy L. Salin at delmy.salin@usda.gov.

³ Santarém did not export to China.



Table 1a. Costs of transporting Brazilian soybeans from the southern ports to Shanghai, China

	North	MT - Santos b	y truck	North	west RS - Rio G	Grande
	—us\$	/mt—	% Change	—us\$	/mt—	% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	103.31	83.99	-18.7	34.44	28.00	-18.7
Ocean	35.18	34.60	-1.6	35.93	35.05	-2.4
Total transportation	138.48	118.59	-14.4	70.37	63.05	-10.4
Farm gate price	415.95	367.34	-11.7	472.57	370.42	-21.6
Landed cost	554.44	485.93	-12.4	542.93	433.46	-20.2
Transport % of landed cost	25.1	24.4	-2.6	13.0	14.5	11.8
	North MT - Santos b		oy rail	Nort	th MT - Parana	aguá
	—us\$	/mt—	% Change	—us\$	/mt—	% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	36.92	28.78	-22.0	102.07	82.53	-19.1
Rail	54.79	46.32	-15.5	-	-	-
Ocean	35.18	34.60	-1.6	36.18	36.08	-0.3
Total transportation	126.88	109.70	-13.5	138.25	118.60	-14.2
Farm gate price	415.95	367.34	-11.7	415.95	367.34	-11.7
Landed cost	542.83	477.04	-12.1	554.20	485.94	-12.3
Transport % of landed cost	23.5	23.0	-1.9	25.0	24.4	-2.5

Producing regions: MT= Mato Grosso and RS = Rio Grande Do Sul.

Export ports = Santos, Rio Grande, and Paranaguá.

In Brazil, there are no published rail tariff rates. Rail rates can be up to 30 percent lower than truck rates, depending on the volumes hauled and the terms of contracts signed between the railroad company and shippers.

Note: mt = metric ton. A hyphen in an otherwise empty cell denotes that the data are not available.

The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).



Table 1b. Costs of transporting Brazilian soybeans from the northern and northeastern ports to Shanghai, China

	Nor	th MT - Santa	rém	Soi	uth MA - São L	uís
	—us\$	/mt—	% Change	—us\$	/mt—	% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	67.70	58.83	-13.1	43.61	35.90	-17.7
Ocean	39.33	37.70	-4.1	39.88	38.18	-4.3
Total transportation	107.02	96.53	-9.8	83.49	74.08	-11.3
Farm gate price	415.95	367.34	-11.7	445.89	364.29	-18.3
Landed cost	522.98	463.87	-11.3	529.38	438.37	-17.2
Transport % of landed cost	20.6	20.8	1.3	15.9	16.9	6.6
	Sout	:hwest PI - São	Luís	Nor	th MT - Barcar	ena
	—us\$	/mt—	% Change	—us\$	/mt—	% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	48.59	38.78	-20.2	56.13	44.16	-21.3
Barge	-	-	-	26.38	19.31	-26.8
Ocean	39.88	38.18	-4.3	40.06	38.41	-4.1
Total transportation	88.47	76.96	-13.0	122.57	101.88	-16.9
Farm gate price	444.76	373.35	-16.1	415.95	367.34	-11.7
Landed cost	533.22	450.31	-15.5	538.52	469.21	-12.9
Transport % of landed cost	16.7	17.1	2.5	22.9	21.7	-4.9

Producing regions: MT= Mato Grosso, PI = Piauí, and MA = Maranhão.

Export ports = Santarém, São Luís, and Barcarena.

In Brazil, there are no published barge rates. Barge rates can be up to 60 percent lower than truck rates, depending on the volumes hauled and the terms of contracts signed between the barge company and shippers. The distance is in nautical miles.

Note: mt = metric ton. A hyphen in an otherwise empty cell denotes that the data are not available.

The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).



Table 2a. Costs of transporting Brazilian soybeans from the southern ports to Hamburg, Germany

	North	MT - Santos by	y truck	North	west RS - Rio G	Grande
	—us\$	/mt—	% Change	—US\$	/mt—	% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	103.31	83.99	-18.7	34.44	28.00	-18.7
Ocean	33.21	32.48	-2.2	34.13	33.25	-2.6
Total transportation	136.52	116.47	-14.7	68.57	61.25	-10.7
Farm gate price	415.95	367.34	-11.7	472.57	370.42	-21.6
Landed cost	552.47	483.80	-12.4	541.13	431.66	-20.2
Transport % of landed cost	24.8 24.1 -2.9 12.7		14.2	11.5		
	North	n MT - Santos I	by rail	Nor	th MT - Parana	nguá
	—us\$	/mt—	% Change	—US\$	/mt—	% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	36.92	28.78	-22.0	102.07	82.53	-19.1
Rail ⁴	54.79	46.32	-15.5	-	-	-
Ocean	33.21	32.48	-2.2	32.45	32.20	-0.8
Total transportation	124.92	107.58	-13.9	134.52	114.73	-14.7
Farm gate price	415.95	367.34	-11.7	415.95	367.34	-11.7
Landed cost	540.87	474.91	-12.2	550.48	482.06	-12.4
Transport % of landed cost	22.0	22.7	3.2	23.6	23.8	1.0

Producing regions: MT= Mato Grosso and RS = Rio Grande Do Sul.

Export ports = Santos, Rio Grande, and Paranaguá.

In Brazil, there are no published rail tariff rates. Rail rates can be up to 30 percent lower than truck rates, depending on the volumes hauled and the terms of contracts signed between the railroad company and shippers.

Note: mt = metric ton. A hyphen in an otherwise empty cell denotes that the data are not available.

The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).



Table 2b. Costs of transporting Brazilian soybeans from the northern and northeastern ports to Hamburg, Germany

	Nor	th MT - Santa	rém	Soi	uth MA - São L	.uís
	—us\$	/mt—	% Change	—us\$	/mt—	% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	67.70	58.83	-13.1	43.61	35.90	-17.7
Ocean	31.38	30.13	-4.0	36.25	34.90	-3.7
Total transportation	99.07	88.96	-10.2	79.86	70.80	-11.3
Farm gate price	415.95	367.34	-11.7	445.89	364.29	-18.3
Landed cost	515.03	456.29	-11.4	525.75	435.09	-17.2
Transport % of landed cost	19.3	19.5	0.9	15.3	16.3	6.5
	Sout	hwest PI - São	Luís	Nor	th MT - Barcaı	rena
	—US\$	/mt—	% Change	—US\$	/mt—	% Change
	2023	2024	2023-24	2023	2024	2023-24
Truck	48.59	38.78	-20.2	56.13	44.16	-21.3
Barge	-	-	-	26.38	19.31	-26.8
Ocean	36.25	34.90	-3.7	30.85	29.58	-4.1
Total transportation	84.84	73.68	-13.2	113.35	93.04	-17.9
Farm gate price	444.76	373.35	-16.1	415.95	367.34	-11.7
Landed cost	529.60	447.04	-15.6	529.31	460.38	-13.0
Transport % of landed cost	16.1	16.5	2.4	21.5	20.2	-6.0

Producing regions: MT= Mato Grosso, PI = Piauí, and MA = Maranhão.

Export ports = Santarém, São Luís, and Barcarena

In Brazil, there are no published barge rates. Barge rates can be up to 60 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the barge company and shippers. The distance is in nautical miles.

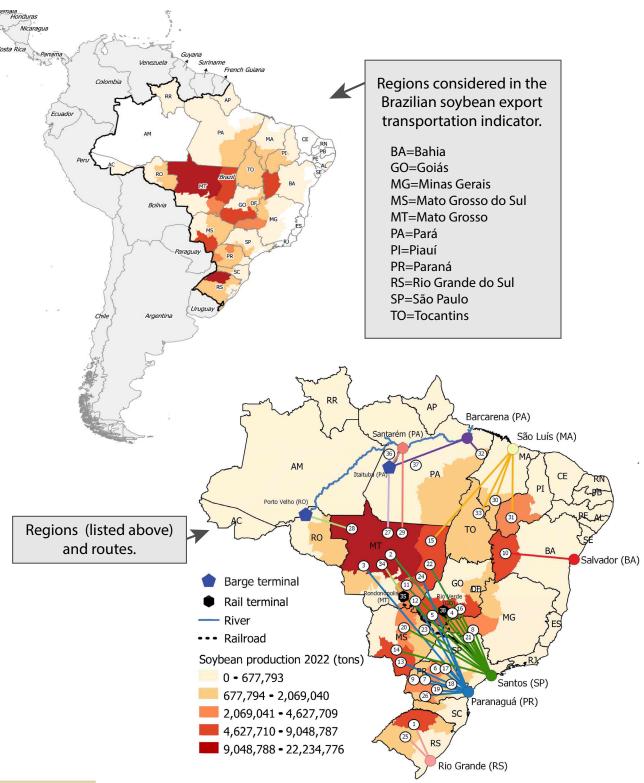
Note: mt = metric ton. A hyphen in an otherwise empty cell denotes that the data are not available.

The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).



Indicators

Figure 2. Routes⁴ and regions considered in the Brazilian soybean export transportation indicator⁵



⁴ Table defining routes by number is shown on page 12.

⁵ Regions comprised about 79 percent of Brazilian soybean production, 2021 (Brazilian Institute of Geography and Statistics—Produção Agricola Municipal).



Table 3. Quarterly costs of transporting Brazilian soybeans from the southern ports to Shanghai, China, 2024

			Γ - Santos -US\$/mt-	by truck				MT - Para -US\$/mt-	_	
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
Truck	91.79	91.10	82.31	70.75	83.99	89.66	90.18	80.92	69.35	82.53
Ocean	34.70	33.30	36.00	34.40	34.60	36.20	34.80	37.50	35.80	36.08
Total transportation	126.49	124.40	118.31	105.15	118.59	125.86	124.98	118.42	105.15	118.60
Farm gate price	349.39	366.79	366.60	386.58	367.34	349.39	366.79	366.60	386.58	367.34
Landed cost	475.88	491.19	484.91	491.73	485.93	475.25	491.76	485.02	491.72	485.94
Transport % of landed cost	26.6	25.3	24.4	21.4	24.4	26.5	25.4	24.4	21.4	24.4
		North MT - Santos by rail —US\$/mt—					st RS - Ri -US\$/mt	o Grande —		
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
Truck	32.64	29.89	28.22	24.37	28.78	32.07	29.10	26.79	24.03	28.00
Rail	53.29	48.56	43.01	40.42	46.32	-	-	-	-	-
Ocean	34.70	33.30	36.00	34.40	34.60	35.20	33.80	36.50	34.70	35.05
Total transportation	120.63	111.76	107.23	99.19	109.70	67.27	62.90	63.29	58.73	63.05
Farm gate price	349.39	366.79	366.60	386.58	367.34	383.05	381.34	358.95	358.32	370.42
Landed cost	470.02	478.54	473.83	485.77	477.04	450.32	444.25	422.24	417.05	433.46
Transport % of landed cost	25.7	23.4	22.6	20.4	23.0	14.9	14.2	15.0	14.1	14.5

Producing regions: RS = Rio Grande Do Sul and MT= Mato Grosso.

Export ports = Santos, Paranaguá, and Rio Grande.

The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

In Brazil, there are no published rail tariff rates. Rail rates can be up to 30 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the railroad company and shippers.

Note: qtr. = quarter. mt = metric ton. Avg. = average. A hyphen in an otherwise empty cell denotes that the data are not available.



Table 4. Quarterly costs of transporting Brazilian soybeans from the southern ports to Hamburg, Germany, 2024

			Γ - Santos -US\$/mt-	•				MT - Para -US\$/mt	_	82.53 32.20 114.73 367.34 482.06 23.8	
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	
Truck	91.79	91.10	82.31	70.75	83.99	89.66	90.18	80.92	69.35	82.53	
Ocean	32.60	31.30	33.80	32.20	32.48	32.20	31.00	33.50	32.10	32.20	
Total transportation	124.39	122.40	116.11	102.95	116.47	121.86	121.18	114.42	101.45	114.73	
Farm gate price	349.39	366.79	366.60	386.58	367.34	349.39	366.79	366.60	386.58	367.34	
Landed cost	473.78	489.19	482.71	489.53	483.80	471.25	487.96	481.02	488.02	482.06	
Transport % of landed cost	26.3	25.0	24.1	21.0	24.1	25.9	24.8	23.8	20.8	23.8	
			IT - Santo -US\$/mt-	•		Northwest RS - Rio Grande —US\$/mt—					
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	
Truck	32.64	29.89	28.22	24.37	28.78	32.07	29.10	26.79	24.03	28.00	
Rail	53.29	48.56	43.01	40.42	46.32	-	-	-	-	-	
Ocean	32.60	31.30	33.80	32.20	32.48	33.40	32.00	34.60	33.00	33.25	
Total transportation	118.53	109.76	105.03	96.99	107.58	65.47	61.10	61.39	57.03	61.25	
Farm gate price	349.39	366.79	366.60	386.58	367.34	383.05	381.34	358.95	358.32	370.42	
Landed cost	467.92	476.54	471.63	483.57	474.91	448.52	442.45	420.34	415.35	431.66	
Transport % of landed cost	25.3	19.4	19.4	20.1	21.0	14.6	13.8	14.6	13.7	14.2	

Producing regions: RS = Rio Grande do Sul and MT= Mato Grosso.

Export ports = Santos, Paranaguá, and Rio Grande.

The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

In, Brazil, there are no published rail tariff rates. Rail rates can be up to 30 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the railroad company and shippers.

Note: qtr. = quarter. mt = metric ton. Avg. = average. A hyphen in an otherwise empty cell denotes that the data are not available.



Table 5. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Shanghai, China, 2024

			MT - San -US\$/mt					n MA - Sã -US\$/mt·		
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
Truck	64.20	67.30	58.70	45.14	58.83	39.56	36.78	37.01	30.26	35.90
Ocean	38.00	36.50	39.00	37.30	37.70	38.30	37.10	39.50	37.80	38.18
Total transportation	102.20	103.80	97.70	82.44	96.53	77.86	73.88	76.51	68.06	74.08
Farm gate price	349.39	366.79	366.60	386.58	367.34	373.82	369.07	357.15	357.11	364.29
Landed cost	451.59	470.58	464.29	469.01	463.87	451.67	442.95	433.67	425.17	438.37
Transport % of landed cost	22.6	22.1	21.0	17.6	20.8	17.2	16.7	17.6	16.0	16.9
			vest PI - S -US\$/mt			North MT - Barcarena —US\$/mt—				
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
Truck	43.54	41.21	38.46	31.93	38.78	49.61	46.45	44.96	35.61	44.16
Barge	-	-	-	-	-	23.56	20.42	17.42	15.84	19.31
Ocean	38.30	37.10	39.50	37.80	38.18	38.50	37.40	39.75	38.00	38.41
Total transportation	81.84	78.31	77.96	69.73	76.96	111.68	104.27	102.12	89.45	101.88
Farm gate price	390.34	369.30	363.76	370.02	373.35	349.39	366.79	366.60	386.58	367.34
Landed cost	472.17	447.60	441.72	439.74	450.31	461.06	471.06	468.72	476.02	469.21
Transport % of landed cost	17.3	17.5	17.6	15.9	17.1	24.2	22.1	21.8	18.8	21.7

Producing regions: MT= Mato Grosso, PI = Piauí, and MA = Maranhão.

Export ports = Santarém, São Luís, and Barcarena.

The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

In Brazil, there are no published barge rates. Barge rates can be up to 60 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the barge company and shippers. The distance is in nautical miles.

Note: qtr. = quarter. mt = metric ton. Avg. = average. A hyphen in an otherwise empty cell denotes that the data are not available.



Table 6. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Hamburg, Germany, 2024

			MT - San -US\$/mt					n MA - Sã -US\$/mt-						
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.				
Truck	64.20	67.30	58.70	45.14	58.83	39.56	36.78	37.01	30.26	35.90				
Ocean	30.40	29.20	31.20	29.70	30.13	35.20	33.80	36.10	34.50	34.90				
Total transportation	94.60	96.50	89.90	74.84	88.96	74.76	70.58	73.11	64.76	70.80				
Farm gate price	349.39	366.79	366.60	386.58	367.34	373.82	369.07	357.15	357.11	364.29				
Landed cost	443.99	463.28	456.49	461.41	456.29	448.57	439.65	430.27	421.87	435.09				
Transport % of landed cost	ransport % of landed cost 21.3 20.8 19.7 16.2 19.5				19.5	16.7	16.1	17.0	15.4	2.26 35.90 3.50 34.90 3.76 70.80 7.11 364.29 1.87 435.09 5.4 16.3 10 qtr. Avg. 5.61 44.16 5.84 19.31 9.10 29.58				
			vest PI - S -US\$/mt					MT - Bard -US\$/mt-		35.90 34.90 70.80 364.29 435.09 16.3 Avg. 44.16 19.31 29.58 93.04 367.34				
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.				
Truck	43.54	41.21	38.46	31.93	38.78	49.61	46.45	44.96	35.61	44.16				
Barge	-	-	-	-	-	23.56	20.42	17.42	15.84	19.31				
Ocean	35.20	33.80	36.10	34.50	34.90	29.90	28.70	30.60	29.10	29.58				
Total transportation	78.74	75.01	74.56	66.43	73.68	103.08	95.57	92.97	80.55	93.04				
Farm gate price	390.34	369.30	363.76	370.02	373.35	349.39	366.79	366.60	386.58	367.34				
Landed cost	469.07	444.30	438.32	436.44	447.04	452.46	462.36	459.57	467.12	460.38				
Transport % of landed cost	16.8	16.9	17.0	15.2	16.5	22.8	20.7	20.2	17.2	20.2				

Producing regions: MT= Mato Grosso, PI = Piauí, and MA = Maranhão.

Export ports = Santarém, São Luís, and Barcarena.

The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

In Brazil, there are no published barge rates. Barge rates can be up to 60 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the barge company and shippers. The distance is in nautical miles.

Note: qtr. = quarter. mt = metric ton. Avg. = average. A hyphen in an otherwise empty cell denotes that the data are not available.



Table 7. Quarterly truck rates for selected Brazilian soybean export transportation routes, 2024

Route	Origin	Dootin ation	Distance	Share	Frei	ight price	(US\$/m	t/100 mil	es)
#	(reference city)	Destination	(miles)	(%)	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
1	Northwest RS⁵ (Cruz Alta)	Rio Grande	288	4.3	11.13	10.11	9.30	8.34	9.72
2	North MT (Sorriso)	Santos	1,190	3.5	7.71	7.66	6.92	5.95	7.06
3	North MT (Sorriso)	Paranaguá	1,262	3.3	7.10	7.15	6.41	5.50	6.54
4	South GO (Rio Verde)	Santos	587	6.2	7.58	7.21	6.67	5.71	6.79
5	South GO (Rio Verde)	Paranaguá	726	5.0	7.53	7.31	6.72	5.72	6.82
6	North Central PR (Londrina)	Paranaguá	268	2.5	10.88	10.01	9.37	7.96	9.56
7	Western Central PR (Mamborê)	Paranaguá	311	1.2	10.18	9.33	8.72	7.47	8.93
8	Triangle MG (Uberaba)	Santos	339	4.1	10.40	9.71	9.01	7.62	9.18
9	West PR (Assis Chateaubriand)	Paranaguá	377	1.5	9.12	8.51	7.82	6.74	8.05
10	West Extreme BA (São Desidério)	Salvador	535	6.4	8.40	7.88	7.04	6.07	7.35
11	Southeast MT (Primavera do Leste)	Santos	901	3.1	7.35	7.03	6.42	5.33	6.53
12	Southeast MT (Primavera do Leste)	Paranaguá	975	2.9	6.61	6.74	6.03	5.22	6.15
13	Southwest MS (Maracaju)	Paranaguá	612	2.3	7.85	7.60	6.83	5.78	7.01
14	Southwest MS (Maracaju)	Santos	652	2.2	8.23	8.01	7.23	6.22	7.42
15	Northeast MT (Canarana)	São Luís	1,177	2.4	6.62	6.59	6.04	5.08	6.08
16	East GO (Cristalina)	Santos	585	2.5	8.67	8.58	7.69	6.56	7.87
17	North PR (Cornélio Procópio)	Paranaguá	306	1.9	8.88	8.01	7.50	6.45	7.71
18	Eastern Central PR (Castro)	Paranaguá	130	2.0	14.98	12.79	12.09	10.37	12.56
19	South Central PR (Guarapuava)	Paranaguá	204	2.3	13.10	11.80	11.33	9.33	11.39
20	North Central MS (São Gabriel do Oeste)	Santos	720	2.8	7.47	7.02	6.36	5.44	6.57
21	Ribeirão Preto SP (Guairá)	Santos	314	0.6	8.70	7.91	7.35	6.30	7.56
22	Northeast MT (Canarana)	Santos	950	3.0	7.38	7.01	6.37	5.44	6.55
23	East MS (Chapadão do Sul)	Santos	607	1.6	7.03	6.79	6.25	5.35	6.35

The main city in the region is considered as a reference to establish the freight price.

Distance from the main city of the considered region to the mentioned ports.

Share of exports is measured as a percentage of total production.

Average monthly exchange rate from "Banco Central do Brasil" was used to convert Brazilian reais to the U.S. dollars.

RS=Rio Grande do Sul, MT=Mato Grosso, GO=Goiás, PR=Paraná, MG=Minas Gerais, BA=Bahia, MS=Mato Grosso do Sul, SP=São Paulo, PI=Piauí, MA=Maranhão, PA=Pará, and TO=Tocantins.

In Brazil, there are no published rail tariff rates. Rail rates can be up to 30 percent lower than truck rates, depending on the volumes hauled and the terms of contracts signed between the railroad company and shippers.

In Brazil, there are no published barge rates. Barge rates can be up to 60 percent lower than truck rates, depending on the volumes hauled and the terms of contracts signed between the barge company and shippers. The distance is in nautical miles.

Note: qtr. = quarter. mt = metric ton. Avg. = average.

For more details, on the definitions/calculations contact esalqlog@esalqlog.esalq.usp.br.



Route	Origin	Do ationation	Distance	Share	Frei	ight price	(US\$/m	t/100 mil	es)
#	(reference city)	Destination	(miles)	(%)	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
24	Northeast MT (Canarana)	Paranaguá	1,075	2.6	6.99	6.91	6.31	5.39	6.40
25	Western Central RS (Tupanciretã)	Rio Grande	273	1.0	9.96	8.90	8.62	7.85	8.83
26	Southwest PR(Chopinzinho)	Paranaguá	291	1.3	10.03	9.22	8.56	7.34	8.79
27	North MT (Sorriso)	Itaituba	672	6.3	7.39	6.92	6.69	5.30	6.57
28	North MT (Sorriso)	Porto Velho	632	6.7	7.02	6.61	6.17	5.26	6.27
29	North MT (Sorriso)	Santarém	876	4.8	7.33	7.68	6.70	5.15	6.72
30	South MA (Balsas)	São Luís	482	2.4	8.21	7.64	7.69	6.28	7.46
31	Southwest PI (Bom Jesus)	São Luís	606	3.2	7.19	6.80	6.35	5.27	6.40
32	Southeast PA (Paragominas)	Barcarena	249	2.1	8.90	7.98	7.33	6.76	7.74
33	East TO (Campos Lindos)	São Luís	842	2.2	6.72	6.51	5.95	5.11	6.07
	Weighted average		587	100.0	8.29	7.86	7.24	6.15	7.38
34	North MT (Sorriso)	Rondonópolis (Rail terminal)	382		8.55	7.83	7.39	6.38	7.53
35	Rondonópolis MT (Rail terminal)	Santos	1,019		5.23	4.77	4.22	3.97	4.55
36	Itaituba PA (Barge terminal)	Santarém	153		5.30	4.52	4.36	3.98	4.54
37	Itaituba PA (Barge terminal)	Barcarena	600		3.93	3.40	2.90	2.64	3.22
38	South GO (Rio Verde) (Rail terminal)	Santos	546		6.25	5.66	5.53	4.93	5.59

The main city in the region is considered as a reference to establish the freight price.

Distance from the main city of the considered region to the mentioned ports.

Share of exports is measured as a percentage of total production.

Average monthly exchange rate from "Banco Central do Brasil" was used to convert Brazilian reais to the U.S. dollars.

RS=Rio Grande do Sul, MT=Mato Grosso, GO=Goiás, PR=Paraná, MG=Minas Gerais, BA=Bahia, MS=Mato Grosso do Sul, SP=São Paulo, PI=Piauí, MA=Maranhão, PA=Pará, and TO=Tocantins.

In Brazil, there are no published rail tariff rates. Rail rates can be up to 30 percent lower than truck rates, depending on the volumes hauled and the terms of contracts signed between the railroad company and shippers.

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Note: qtr. = quarter. mt = metric ton. Avg. = average.

For more details, on the definitions/calculations contact esalqlog@esalqlog.esalq.usp.br.



Jun-21

Jul-21

Aug-21

Sep-21

Oct-21

Nov-21

Dec-21

5.87

5.09

5.09

5.31

4.49

4.28

4.54

2.0

-13.4

0.1

4.2

-15.5

-4.6

6.0

101.22

87.70

87.81

91.53

77.36

73.80

78.26

Brazil Soybean Transportation

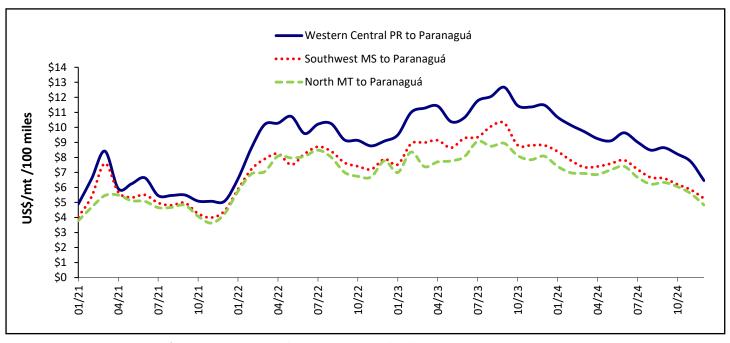
Table 8. Monthly Brazilian soybean export truck transportation cost index

20	Freight price	Index variation (%)	Index value	D.Co. eth	Freight price	Index variation (%)	Index value
Month	(US\$/mt/100 miles)	(Base: prior month)	(Base: Jan-05=100)	Month	(US\$/mt/100 miles)	(Base: prior month)	(Base: Jan-05=100
Jan-18	7.59	5.0	130.90	Jan-22	5.94	30.9	102.42
Feb-18	8.65	13.9	149.04	Feb-22	7.77	30.8	134.02
Mar-18	10.59	22.5	182.61	Mar-22	8.59	10.4	147.99
Apr-18	9.78	-7.7	168.59	Apr-22	8.83	2.9	152.27
May-18	8.96	-8.4	154.45	May-22	9.05	2.4	155.94
Jun-18	8.89	-0.8	153.24	Jun-22	8.83	-2.4	152.18
Jul-18	8.97	0.9	154.58	Jul-22	8.98	1.7	154.78
Aug-18	8.24	-8.1	142.00	Aug-22	8.79	-2.1	151.51
Sep-18	7.24	-12.1	124.78	Sep-22	7.93	-9.8	136.68
Oct-18	7.69	6.2	132.55	Oct-22	7.71	-2.7	132.98
Nov-18	7.51	-2.3	129.44	Nov-22	7.42	-3.9	127.84
Dec-18	7.19	-4.3	123.87	Dec-22	7.94	7.1	136.89
Jan-19	7.72	7.5	133.13	Jan-23	7.97	0.4	137.38
Feb-19	8.19	6.0	141.15	Feb-23	9.41	18.1	162.28
Mar-19	7.34	-10.3	126.61	Mar-23	9.39	-0.3	161.87
Apr-19	7.16	-2.6	123.35	Apr-23	9.57	1.9	164.91
May-19	6.73	-5.9	116.02	May-23	9.27	-3.1	159.82
Jun-19	6.94	3.1	119.56	Jun-23	9.38	1.1	161.64
Jul-19	8.33	20.1	143.60	Jul-23	10.09	7.6	173.97
Aug-19	7.85	-5.8	135.23	Aug-23	10.09	0.0	173.94
Sep-19	7.09	-9.7	122.17	Sep-23	10.50	4.1	181.01
Oct-19	6.57	-7.4	113.19	Oct-23	9.38	-10.7	161.66
Nov-19	6.41	-2.3	110.54	Nov-23	9.36	-0.2	161.31
Dec-19	5.93	-7.5	102.21	Dec-23	9.55	2.0	164.60
Jan-20	6.03	1.7	103.90	Jan-24	8.57	-10.3	147.66
Feb-20	6.76	12.2	116.52	Feb-24	8.31	-3.0	143.29
Mar-20	6.20	-8.2	106.95	Mar-24	8.00	-3.7	137.96
Apr-20	5.86	-5.5	101.09	Apr-24	7.70	-3.8	132.68
May-20	5.26	-10.4	90.58	May-24	7.83	1.7	134.89
Jun-20	5.45	3.7	93.95	Jun-24	8.05	2.9	138.74
Jul-20	5.44	-0.2	93.74	Jul-24	7.56	-6.1	130.31
Aug-20	5.41	-0.4	93.34	Aug-24	7.08	-6.4	122.03
Sep-20	5.58	3.0	96.14	Sep-24	7.09	0.1	122.21
Oct-20	4.97	-10.8	85.71	Oct-24	6.75	-4.7	116.41
Nov-20	4.58	-7.9	78.95	Nov-24	6.33	-6.3	109.10
Dec-20	4.32	-5.8	74.39	Dec-24	5.36	-15.4	92.32
Jan-21	4.26	-1.3	73.39				
Feb-21	5.60	31.5	96.50	Note: \	Weighted average is ca	lculated from product	tion-based
Mar-21	6.93	23.8	119.49		to weigh high-volume		
Apr-21	6.20	-10.5	106.96	routes	. The share associated	with each route is use	ed to define the
May-21	5.76	-7.2	99.22	weight	of a given route's freig	ght price in the compo	osition of the
	1						

monthly weighted export truck freight index.



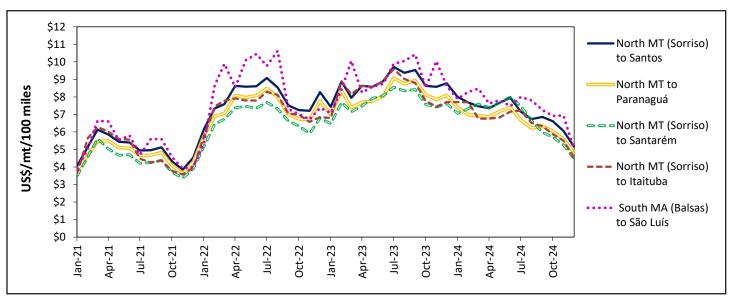
Figure 3. Truck rates for selected southern Brazilian soybean export transportation routes, 2021-24



Note: mt = metric ton. PR = Paraná, MT= Mato Grosso, and MS = Mato Grosso do Sul.

Source: University of São Paulo, Escola Superior de Agricultura "Luiz de Queiroz," Brazil (ESALQ/ USP) and USDA, Agricultural Marketing Service.

Figure 4. Truck rates for selected north, south, and northeastern Brazilian soybean export transportation routes, 2021-24



Note: mt = metric ton. MT= Mato Grosso and MA = Maranhão.



Figure 5. Brazilian soybean export truck transportation weighted average prices, 2021-24



Note: mt = metric ton.



Table 9. Quarterly ocean freight rates for shipping soybeans from selected Brazilian ports to Germany and China (US\$/metric ton)*

Port	Destination	1st qtr. 2019	2nd qtr. 2019	3rd qtr. 2019	4th qtr. 2019
Santos	Germany (Hamburg)	23.00	21.50	27.00	31.00
Paranaguá	Germany (Hamburg)	23.00	21.25	27.00	30.75
Rio Grande	Germany (Hamburg)	23.00	21.25	27.00	31.25
Santarém	Germany (Hamburg)	21.00	20.25	25.92	26.50
São Luís	Germany (Hamburg)	18.00	17.10	22.77	23.50
Barcarena	Germany (Hamburg)	19.00	17.85	23.52	24.25
Santos	China (Shanghai)	32.25	30.92	33.25	38.17
Paranagua	China (Shanghai)	33.75	31.42	34.75	39.50
Rio Grande	China (Shanghai)	31.58	30.25	34.25	39.67
Santarém	China (Shanghai)	32.25	30.58	38.25	39.17
São Luís	China (Shanghai)	31.00	30.58	38.25	39.42
Barcarena	China (Shanghai)	32.25	29.92	38.25	39.42
Port	Destination	1st qtr. 2020	2nd qtr. 2020	3rd qtr. 2020	4th qtr. 2020
Santos	Germany (Hamburg)	29.25	20.50	24.00	25.25
Paranaguá	Germany (Hamburg)	30.00	21.50	25.00	25.35
Rio Grande	Germany (Hamburg)	29.50	20.75	24.50	25.75
Santarém	Germany (Hamburg)	25.00	16.00	20.75	22.00
São Luís	Germany (Hamburg)	22.25	17.50	25.00	26.30
Barcarena	Germany (Hamburg)	24.00	15.00	20.50	21.75
Santos	China (Shanghai)	35.50	27.08	31.33	31.67
Paranagua	China (Shanghai)	37.25	28.83	33.08	33.42
Rio Grande	China (Shanghai)	37.00	28.58	32.83	33.17
Santarém	China (Shanghai)	36.50	28.08	34.83	35.21
São Luís	China (Shanghai)	36.75	28.33	35.33	35.67
Barcarena	China (Shanghai)	38.50	28.33	36.33	36.67
Port	Destination	1st qtr. 2021	2nd qtr. 2021	3rd qtr. 2021	4th qtr. 2021
Santos	Germany (Hamburg)	31.25	42.70	54.00	52.50
Paranaguá	Germany (Hamburg)	31.00	41.90	53.00	51.50
Rio Grande	Germany (Hamburg)	32.00	43.80	55.50	53.80
Santarém	Germany (Hamburg)	28.65	40.00	50.60	49.10
São Luís	Germany (Hamburg)	33.25	45.90	58.00	56.30
Barcarena	Germany (Hamburg)	28.10	38.90	49.20	47.80
Santos	China (Shanghai)	37.00	50.60	64.00	62.00
Paranagua	China (Shanghai)	38.75	52.40	66.00	64.00
Rio Grande	China (Shanghai)	37.25	51.00	64.75	62.75
Santarém	China (Shanghai)	40.54	55.60	67.50	65.60
São Luís	China (Shanghai)	41.00	56.60	68.00	66.00
Barcarena	China (Shanghai)	42.00	58.20	70.00	68.00



Port	Destination	1st qtr. 2022	2nd qtr. 2022	3rd qtr. 2022	4th qtr. 2022
Santos	Germany (Hamburg)	52.70	55.85	42.60	42.20
Paranaguá	Germany (Hamburg)	51.50	54.60	41.60	41.20
Rio Grande	Germany (Hamburg)	54.00	57.20	43.60	43.10
Santarém	Germany (Hamburg)	49.10	52.00	46.00	39.60
São Luís	Germany (Hamburg)	56.50	60.00	40.00	39.80
Barcarena	Germany (Hamburg)	48.00	50.80	39.70	39.20
Santos	China (Shanghai)	62.00	65.75	48.70	47.70
Paranagua	China (Shanghai)	64.00	67.75	49.00	48.60
Rio Grande	China (Shanghai)	62.75	66.50	49.00	48.40
Santarém	China (Shanghai)	66.00	69.90	56.00	54.80
São Luís	China (Shanghai)	66.20	70.00	56.00	55.00
Barcarena	China (Shanghai)	68.00	72.00	55.40	55.50
Port	Destination	1st qtr. 2023	2nd qtr. 2023	3rd qtr. 2023	4th qtr. 2023
Santos	Germany (Hamburg)	31.65	33.20	35.00	33.00
Paranaguá	Germany (Hamburg)	31.00	32.50	34.20	32.10
Rio Grande	Germany (Hamburg)	32.50	34.20	36.00	33.80
Santarém	Germany (Hamburg)	30.00	31.50	33.00	31.00
São Luís	Germany (Hamburg)	34.50	36.30	38.20	36.00
Barcarena	Germany (Hamburg)	29.40	31.00	32.50	30.50
Santos	China (Shanghai)	33.50	35.20	37.00	35.00
Paranagua	China (Shanghai)	35.00	36.70	37.50	35.50
Rio Grande	China (Shanghai)	34.00	35.70	38.50	35.50
Santarém	China (Shanghai)	37.50	39.40	41.40	39.00
São Luís	China (Shanghai)	38.00	40.00	42.00	39.50
Barcarena	China (Shanghai)	38.25	40.20	42.20	39.60
Port	Destination	1st qtr. 2024	2nd qtr. 2024	3rd qtr. 2024	4th qtr. 2024
Santos	Germany (Hamburg)	32.60	31.30	33.80	32.20
Paranaguá	Germany (Hamburg)	32.20	31.00	33.50	32.10
Rio Grande	Germany (Hamburg)	33.40	32.00	34.60	33.00
Santarém	Germany (Hamburg)	30.40	29.20	31.20	29.70
São Luís	Germany (Hamburg)	35.20	33.80	36.10	34.50
Barcarena	Germany (Hamburg)	29.90	28.70	30.60	29.10
Santos	China (Shanghai)	34.70	33.30	36.00	34.40
Paranaguá	China (Shanghai)	36.20	34.80	37.50	35.80
Rio Grande	China (Shanghai)	35.20	33.80	36.50	34.70
Santarém	China (Shanghai)	38.00	36.50	39.00	37.30
São Luís	China (Shanghai)	38.30	37.10	39.50	37.80
Barcarena	China (Shanghai)	38.50	37.40	39.75	38.00

Notes: The rates correspond to the average actual values negotiated between shippers and carriers and weighted according to the magnitude of the shipped volume. qtr. = quarter.



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Data Sets (XLS files):

- Figure 3. Truck rates for selected southern Brazilian soybean export transportation routes, 2021-24
- <u>Figure 4. Truck rates for selected north, south, and northeastern Brazilian soybean export</u> transportation routes, 2021-24
- Figure 5. Brazilian soybean export truck transportation weighted average prices, 2021-24
- <u>Table 1a. Quarterly costs of transporting Brazilian soybeans from the southern ports to Shanghai,</u> China
- <u>Table 1b. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Shanghai, China</u>
- <u>Table 2a. Quarterly costs of transporting Brazilian soybeans from the southern ports to Hamburg,</u>
 <u>Germany</u>
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- Table 8. Monthly Brazilian soybean export truck transportation cost index
- <u>Table 9. Quarterly ocean freight rates for shipping soybeans from selected Brazilian ports to Germany</u> and China (US\$/metric ton)

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- Soybean Transportation Guide
- Prior Articles: <u>Brazil Soybean Transportation</u>
- Related Articles: Grain Transportation Report: December 12, 2024 (PDF)

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