

Brazil Soybean Transportation

A quarterly publication of the Agricultural Marketing Service
www.ams.usda.gov/services/transportation-analysis



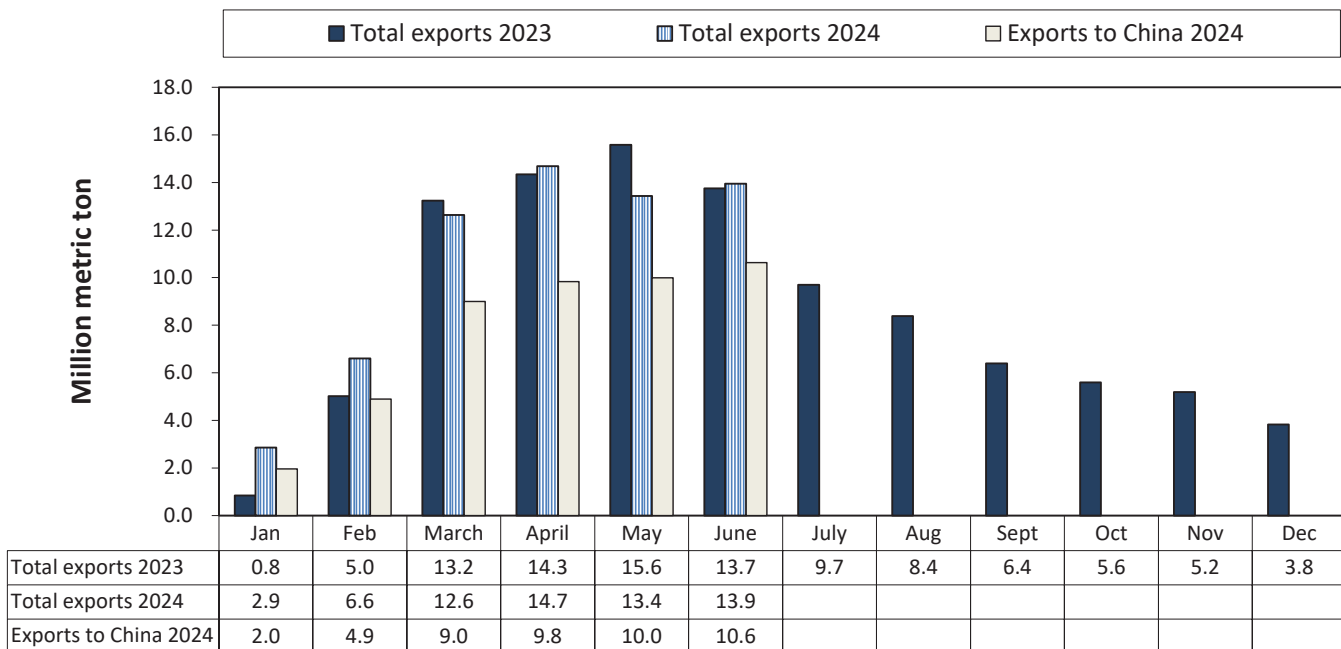
Second Quarter 2024 (April, May, June)
Published August 2024

Lower Soybean Prices, Exports, and Transportation Costs at the Peak of Export Season

From second quarter 2023 to second quarter 2024, Brazilian soybean exports declined from 43.7 million metric tons (mmt) to 42.1 mmt. In second quarter 2024, soybean producers chose to delay sales, hoping for better business opportunities in the second half of the year. The producers based their decision on Brazil's estimated reduction in soybean production for the 2023/24 marketing year, exchange rate volatility, and hopes for strong foreign demand, especially from China ([CEPEA, ESALQ-LOG](#)).¹

Despite the second-quarter downturn, due to lower exports in May, in the first half of 2024, Brazil still managed to export a record-high 64.1 mmt of soybeans, valued at \$27.9 billion (fig. 1a) ([Comex Stat, Ministério da Economia](#)). Typically, Brazilian soybean exports peak in April-May and decline through the end of the year (fig. 1a).

Figure 1a. Brazil average soybean exports, January 2023 to June 2024



Source: Comex Stat, Ministério do Desenvolvimento, Indústria, Comércio e Serviços.

1 In this report, the source of Brazil export data is the Comex Stat, Ministério da Economia.



Brazil Soybean Transportation

Inland and ocean freight rates —year to year. From second quarter 2023 to second quarter 2024 (year to year), the cost of shipping a metric ton (mt) of soybeans 100 miles by truck declined 16 percent—from \$9.41 per mt to \$7.86 per mt (table 8). Typically, soybean truck rates rise in the second quarter, as the flow of exports accelerates. However, in second quarter 2024, as exports declined, truck rates stayed unusually low in April and May (table 8).

A significant drop in barge rates made the route to Shanghai, China, from Sorriso, northern Mato Grosso (MT) via Barcarena, more competitive than shipping soybeans from Sorriso by truck or from Santos by rail. Total soybean transportation costs to Shanghai from Sorriso by truck were down 8 percent; from Santos by rail, down 11 percent; and from Sorriso by barge, via Barcarena, down 17 percent (tables 1a and 1b). On average, from Brazil's southern ports, ocean rates to Shanghai fell 5 percent and, to Hamburg, Germany, fell 5-6 percent (tables 1a, 1b, 2a, 2b, and 9). From Brazil's northern ports, ocean rates fell 7 percent to both Shanghai and Hamburg. Soybean transportation costs to Shanghai—as a share of total landed costs—fell 3-10 percent for the routes from northern MT to Santos and Barcarena.

Farm gate prices and depreciation of Brazilian real. From second quarter 2023 to second quarter 2024, average Brazilian soybean export prices fell about 17 percent, from \$520 per mt to \$432 per mt. Brazil's average farm gate prices for soybeans decreased 10 percent in U.S. dollars and fell 5 percent in reais. In U.S. dollars, soybean farm gate prices declined from \$413.76/mt to \$371.30/mt. In reais, the prices fell from R\$2,048.41/mt to R\$1,936.88/mt ([CONAB](#)). The Brazilian real (R\$) depreciated 5 percent against the U.S. dollar, from R\$4.95 per US\$ in second quarter 2023 to R\$5.22 in second quarter 2024 ([Brazil Central Bank](#)).

Brazilian port shares of soybean exports to China. In second quarter 2024, Brazil's soybean exports to China totaled 30.5 mmt—up 3 percent from second quarter 2023's total of 29.5 mmt (fig 1a). Cumulative exports to China, from January-June 2024, reached 46.3 mmt of soybeans, valued at \$20.2 billion and accounted for 72 percent of Brazil's total soybean exports for the period (64.1 mmt). In second quarter 2024, the highest share of Brazil's soybean exports went to China. The next highest shares (in declining order) went to Spain, Turkey, Thailand, and Mexico. The Port of Santos was the largest Brazilian export gateway to China, followed by Paranaguá, São Luís, Barcarena, São Francisco do Sul, and Rio Grande. Together, these six ports accounted for 91 percent of Brazilian soybean exports to China.

In the first half of 2024, 71 percent of Brazil's soybean exports to China originated from the southern ports of Santos, Rio Grande, Paranaguá, and São Francisco do Sul; 19 percent, from the northeastern ports of São Luís, Vitória, and Salvador; and 10 percent from the ports of Barcarena and Manaus, along the Amazon River.

Rio Grande do Sul flood did not deter Port of Rio Grande soybean exports. Between late April 2024 and early May 2024, flooding due to unprecedented rainfall damaged the soybean crop in Rio Grande do Sul, Brazil. Farms across all regions of the state were underwater for days and weeks, and preliminary estimates set soybean losses at 2.7 mmt ([FAS, Gain Report BR2024-0016](#)). Rail service to the Port of Rio Grande was disrupted, while road blockades forced trucks loaded with grain to travel an extra 400 kilometers (248.55 miles) through alternative routes to reach the port. ([wtaq.com](#)). By May 9, the port was operating normally ([Argus](#)).

However, the disruptions from flooding were not over. Just a few days after service to the Port of Rio Grande had been restored, flooding of the port channel at the “Laguna dos Patos” made navigating heavy draft ships difficult, even with tugboat assistance. On May 14, the Rio Grande port authority (Porto RS) set a draft of 12.8 meters (42 feet (ft)) for vessels at three grain terminals: Terminals Bianchini SA – Industry, Commerce, and



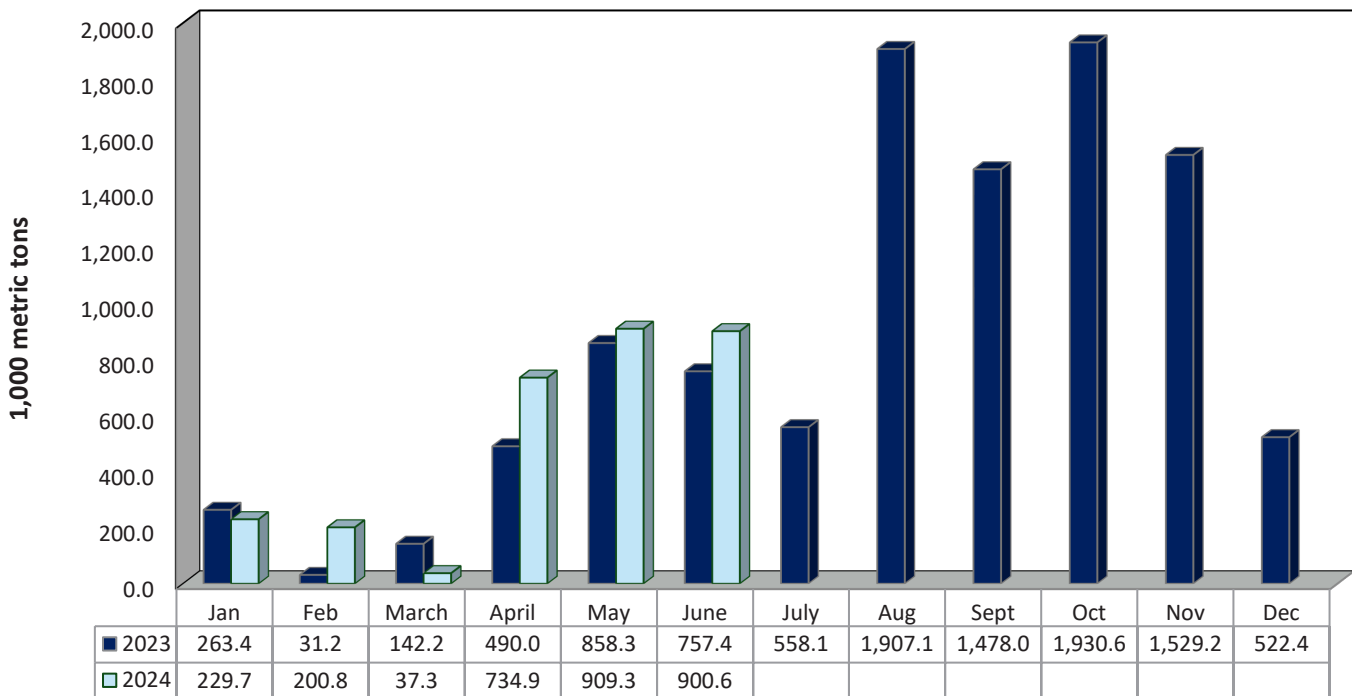
Brazil Soybean Transportation

Agriculture; Terminal Graneleiro SA; and Terminal Marítimo Luiz Fogliatto SA ([Porto RS](#), [Reuters](#)). The draft, prior to the flood, had been 14.2 meters (46.6 ft) ([Inchcape](#)). In mid-June, Portos RS lowered the provisional draft to 11.9 meters (39 ft) ([globorural](#)), because of excessive silting of the external channel. In late June, a provisional draft of 12.3 meters (40.4 ft) was established.

These draft modifications did not hinder soybean exports: the port exported 19 percent more soybeans in second quarter 2024 (2.5 mmt) than in second quarter 2023 (2.1 mmt) (fig. 1b). Handling 10.5 mmt of soybean exports in 2023, the Rio Grande port was the fourth-largest soybean exporting port in 2023—after Santos (first), Paranaguá (second), and São Luís (third).

For more information, contact Delmy L. Salin at delmy.salin@usda.gov.

Figure 1b. Port of Rio Grande average monthly soybean exports, January 2023 to June 2024



Source: Comex Stat, Ministério da Indústria, Comércio Exterior e Serviços (MDIC).



Brazil Soybean Transportation

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

	North MT - Santos by truck			Northwest RS - Rio Grande		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2nd qtr. 2023	2nd qtr. 2024	2023-24	2nd qtr. 2023	2nd qtr. 2024	2023-24
Truck	100.36	91.10	-9.2	33.70	29.10	-13.6
Ocean	35.20	33.30	-5.4	35.70	33.80	-5.3
Total transportation	135.56	124.40	-8.2	69.40	62.90	-9.4
Farm gate price	384.93	366.79	-4.7	437.80	381.34	-12.9
Landed cost	520.49	491.19	-5.6	507.20	444.25	-12.4
Transport % of landed cost	26.0	25.3	-2.8	13.7	14.2	3.5
	North MT - Santos by rail			North MT - Paranaguá		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2nd qtr. 2023	2nd qtr. 2024	2023-24	2nd qtr. 2023	2nd qtr. 2024	2023-24
Truck	35.89	29.89	-16.7	98.90	90.18	-8.8
Rail	54.47	48.56	-10.8	-	-	-
Ocean	35.20	33.30	-5.4	36.70	34.80	-5.2
Total transportation	125.56	111.76	-11.0	135.60	124.98	-7.8
Farm gate price	384.93	366.79	-4.7	384.93	366.79	-4.7
Landed cost	510.49	478.54	-6.3	520.53	491.76	-5.5
Transport % of landed cost	24.6	23.4	-5.1	26.1	25.4	-2.4

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

Export ports = Santos, Rio Grande, and Paranaguá.

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 the volumes hauled and the terms of contracts signed between the railroad company and shippers.

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

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



Brazil Soybean Transportation

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

	North MT - Santarém			South MA - São Luís		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2nd qtr. 2023	2nd qtr. 2024	2023-24	2nd qtr. 2023	2nd qtr. 2024	2023-24
Truck	68.56	67.30	-1.8	41.07	36.78	-10.4
Ocean	39.40	36.50	-7.4	40.00	37.10	-7.3
Total transportation	107.96	103.80	-3.9	81.07	73.88	-8.9
Farm gate price	384.93	366.79	-4.7	420.39	369.07	-12.2
Landed cost	492.89	470.58	-4.5	501.46	442.95	-11.7
Transport % of landed cost	21.9	22.1	0.7	16.2	16.7	3.2
	Southwest PI - São Luís			North MT - Barcarena		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2nd qtr. 2023	2nd qtr. 2024	2023-24	2nd qtr. 2023	2nd qtr. 2024	2023-24
Truck	46.41	41.21	-11.2	58.45	46.45	-20.5
Barge	-	-	-	27.47	20.42	-25.7
Ocean	40.00	37.10	-7.3	40.20	37.40	-7.0
Total transportation	86.41	78.31	-9.4	126.12	104.27	-17.3
Farm gate price	406.67	369.30	-9.2	384.93	366.79	-4.7
Landed cost	493.08	447.60	-9.2	511.05	471.06	-7.8
Transport % of landed cost	17.5	17.5	-0.2	24.7	22.1	-10.3

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 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. A hyphen in an otherwise empty cell denotes that the data are not available.

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



Brazil Soybean Transportation

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

	North MT - Santos by truck			Northwest RS - Rio Grande		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2nd qtr. 2023	2nd qtr. 2024	2023-24	2nd qtr. 2023	2nd qtr. 2024	2023-24
Truck	100.36	91.10	-9.2	33.70	29.10	-13.6
Ocean	33.20	31.30	-5.7	34.20	32.00	-6.4
Total transportation	133.56	122.40	-8.4	67.90	61.10	-10.0
Farm gate price	384.93	366.79	-4.7	437.80	381.34	-12.9
Landed cost	518.49	489.19	-5.7	505.70	442.45	-12.5
Transport % of landed cost	25.8	25.0	-2.9	13.4	13.8	2.9
	North MT - Santos by rail			North MT - Paranaguá		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2nd qtr. 2023	2nd qtr. 2024	2023-24	2nd qtr. 2023	2nd qtr. 2024	2023-24
Truck	35.89	29.89	-16.7	98.90	90.18	-8.8
Barge	54.47	48.56	-10.8	-	-	-
Ocean	33.20	31.30	-5.7	32.50	31.00	-4.6
Total transportation	123.56	109.76	-11.2	131.40	121.18	-7.8
Farm gate price	384.93	366.79	-4.7	384.93	366.79	-4.7
Landed cost	508.49	476.54	-6.3	516.33	487.96	-5.5
Transport % of landed cost	19.4	19.4	0.0	21.6	24.8	14.9

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

Export ports = Santos, Rio Grande, and Paranaguá.

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 the volumes hauled and the terms of contracts signed between the railroad company and shippers.

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

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



Brazil Soybean Transportation

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

	North MT - Santarém			South MA - São Luís		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2nd qtr. 2023	2nd qtr. 2024	2023-24	2nd qtr. 2023	2nd qtr. 2024	2023-24
Truck	68.56	67.30	-1.8	41.07	36.78	-10.4
Ocean	31.50	29.20	-7.3	36.30	33.80	-6.9
Total transportation	100.06	96.50	-3.6	77.37	70.58	-8.8
Farm gate price	384.93	366.79	-4.7	420.39	369.07	-12.2
Landed cost	484.99	463.28	-4.5	497.76	439.65	-11.7
Transport % of landed cost	20.6	20.8	1.0	15.5	16.1	3.3
	Southwest PI - São Luís			North MT - Barcarena		
	—US\$/mt—		% Change	—US\$/mt—		% Change
	2nd qtr. 2023	2nd qtr. 2024	2023-24	2nd qtr. 2023	2nd qtr. 2024	2023-24
Truck	46.41	41.21	-11.2	58.45	46.45	-20.5
Barge	-	-	-	27.47	20.42	-25.7
Ocean	36.30	33.80	-6.9	31.00	28.70	-7.4
Total transportation	82.71	75.01	-9.3	116.92	95.57	-18.3
Farm gate price	406.67	369.30	-9.2	384.93	366.79	-4.7
Landed cost	489.38	444.30	-9.2	501.85	462.36	-7.9
Transport % of landed cost	16.9	16.9	-0.1	23.3	20.7	-11.3

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. A hyphen in an otherwise empty cell denotes that the data are not available.

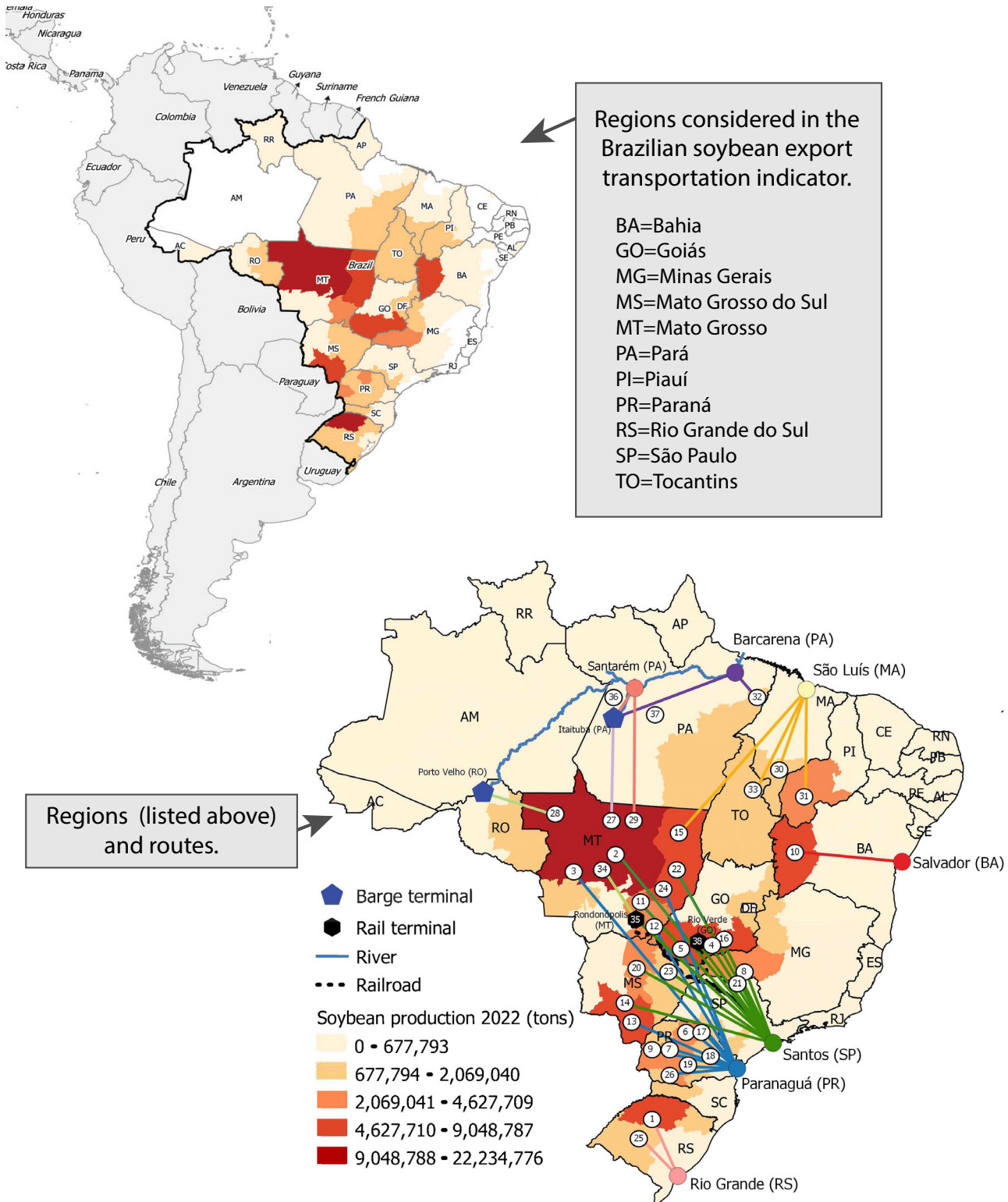
Source: University of São Paulo, Escola Superior de Agricultura "Luiz de Queiroz," Brazil (ESALQ/ USP) and USDA, Agricultural Marketing Service.



Brazil Soybean Transportation

Indicators

Figure 2. Routes and regions considered in the Brazilian soybean export transportation indicator



Notes: Table defining routes by number is shown on page 13. Regions comprised about 78 percent of Brazilian soybean production, 2022 (Brazilian Institute of Geography and Statistics—Produção Agrícola Municipal).

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



Brazil Soybean Transportation

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

	North MT - Santos by truck —US\$/mt—					North MT - Paranaguá —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			91.45	89.66	90.18			89.92
Ocean	34.70	33.30			34.00	36.20	34.80			35.50
Total transportation	126.49	124.40			125.45	125.86	124.98			125.42
Farm gate price	349.39	366.79			358.09	349.39	366.79			358.09
Landed cost	475.88	491.19			483.54	475.25	491.76			483.51
Transport % of landed cost	26.6	25.3			26.0	26.5	25.4			25.9
	North MT - Santos by rail —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			31.27	32.07	29.10			30.58
Rail	53.29	48.56			50.93	-	-			-
Ocean	34.70	33.30			34.00	35.20	33.80			34.50
Total transportation	120.63	111.76			116.19	67.27	62.90			65.08
Farm gate price	349.39	366.79			358.09	383.05	381.34			382.20
Landed cost	470.02	478.54			474.28	450.32	444.25			447.28
Transport % of landed cost	25.7	23.4			24.5	14.9	14.2			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.

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



Brazil Soybean Transportation

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

	North MT - Santos by truck —US\$/mt—					North MT - Paranaguá —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			91.45	89.66	90.18			89.92
Ocean	32.60	31.30			31.95	32.20	31.00			31.60
Total transportation	124.39	122.40			123.40	121.86	121.18			121.52
Farm gate price	349.39	366.79			358.09	349.39	366.79			358.09
Landed cost	473.78	489.19			481.49	471.25	487.96			479.61
Transport % of landed cost	26.3	25.0			25.6	25.9	24.8			25.3
	North MT - Santos by rail —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			31.27	32.07	29.10			30.58
Rail	53.29	48.56			50.93	-	-			-
Ocean	32.60	31.30			31.95	33.40	32.00			32.70
Total transportation	118.53	109.76			114.14	65.47	61.10			63.28
Farm gate price	349.39	366.79			358.09	383.05	381.34			382.20
Landed cost	467.92	476.54			472.23	448.52	442.45			445.48
Transport % of landed cost	25.3	19.4			22.4	14.6	13.8			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.

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



Brazil Soybean Transportation

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

	North MT ¹ - Santarém ² —US\$/mt—					South MA ¹ - São Luís ² —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			65.75	39.56	36.78			38.17
Ocean	38.00	36.50			37.25	38.30	37.10			37.70
Total transportation	102.20	103.80			103.00	77.86	73.88			75.87
Farm gate price	349.39	366.79			358.09	373.82	369.07			371.44
Landed cost	451.59	470.58			461.09	451.67	442.95			447.31
Transport % of landed cost	22.6	22.1			22.3	17.2	16.7			17.0
	Southwest PI ¹ - São Luís ² —US\$/mt—					North MT ¹ - Barcarena ² —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			42.37	49.61	46.45			48.03
Barge	-	-			-	23.56	20.42			21.99
Ocean	38.30	37.10			37.70	38.50	37.40			37.95
Total transportation	81.84	78.31			80.07	111.68	104.27			107.97
Farm gate price	390.34	369.30			379.82	349.39	366.79			358.09
Landed cost	472.17	447.60			459.89	461.06	471.06			466.06
Transport % of landed cost	17.3	17.5			17.4	24.2	22.1			23.2

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.

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



Brazil Soybean Transportation

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

	North MT - Santarém —US\$/mt—					South MA - São Luís —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			65.75	39.56	36.78			38.17
Ocean	30.40	29.20			29.80	35.20	33.80			34.50
Total transportation	94.60	96.50			95.55	74.76	70.58			72.67
Farm gate price	349.39	366.79			358.09	373.82	369.07			371.44
Landed cost	443.99	463.28			453.64	448.57	439.65			444.11
Transport % of landed cost	21.3	20.8			21.1	16.7	16.1			16.4
	Southwest PI - São Luís —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			42.37	49.61	46.45			48.03
Barge	-	-			-	23.56	20.42			21.99
Ocean	35.20	33.80			34.50	29.90	28.70			29.30
Total transportation	78.74	75.01			76.87	103.08	95.57			99.32
Farm gate price	390.34	369.30			379.82	349.39	366.79			358.09
Landed cost	469.07	444.30			456.69	452.46	462.36			457.41
Transport % of landed cost	16.8	16.9			16.8	22.8	20.7			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.

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



Brazil Soybean Transportation

Table 7. Quarterly truck rates for selected Brazilian 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	Northwest RS (Cruz Alta)	Rio Grande	288	4.3	11.13	10.11			10.62
2	North MT (Sorriso)	Santos	1,190	3.5	7.71	7.66			7.68
3	North MT (Sorriso)	Paranaguá	1,262	3.3	7.10	7.15			7.13
4	South GO (Rio Verde)	Santos	587	6.2	7.58	7.21			7.40
5	South GO (Rio Verde)	Paranaguá	726	5.0	7.53	7.31			7.42
6	North Central PR (Londrina)	Paranaguá	268	2.5	10.88	10.01			10.45
7	Western Central PR (Mamborê)	Paranaguá	311	1.2	10.18	9.33			9.76
8	Triangle MG (Uberaba)	Santos	339	4.1	10.40	9.71			10.05
9	West PR (Assis Chateaubriand)	Paranaguá	377	1.5	9.12	8.51			8.82
10	West Extreme BA (São Desidério)	Salvador	535	6.4	8.40	7.88			8.14
11	Southeast MT (Primavera do Leste)	Santos	901	3.1	7.35	7.03			7.19
12	Southeast MT (Primavera do Leste)	Paranaguá	975	2.9	6.61	6.74			6.67
13	Southwest MS (Maracaju)	Paranaguá	612	2.3	7.85	7.60			7.72
14	Southwest MS (Maracaju)	Santos	652	2.2	8.23	8.01			8.12
15	Northeast MT (Canarana)	São Luís	1,177	2.4	6.62	6.59			6.61
16	East GO (Cristalina)	Santos	585	2.5	8.67	8.58			8.63
17	North PR (Cornélio Procópio)	Paranaguá	306	1.9	8.88	8.01			8.45
18	Eastern Central PR (Castro)	Paranaguá	130	2.0	14.98	12.79			13.88
19	South Central PR (Guarapuava)	Paranaguá	204	2.3	13.10	11.80			12.45
20	North Central MS (São Gabriel do Oeste)	Santos	720	2.8	7.47	7.02			7.24
21	Ribeirão Preto SP (Guairá)	Santos	314	0.6	8.70	7.91			8.30
22	Northeast MT (Canarana)	Santos	950	3.0	7.38	7.01			7.20
23	East MS (Chapadão do Sul)	Santos	607	1.6	7.03	6.79			6.91

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=Piuí, 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.

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

-continued on page 14-



Brazil Soybean Transportation

Route #	Origin (reference city)	Destination	Distance (miles)	Share (%)	Freight price (US\$/mt/100 miles)				
					1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
24	Northeast MT (Canarana)	Paranaguá	1,075	2.6	6.99	6.91			6.95
25	Western Central RS (Tupanciretã)	Rio Grande	273	1.0	9.96	8.90			9.43
26	Southwest PR(Chopinzinho)	Paranaguá	291	1.3	10.03	9.22			9.63
27	North MT (Sorriso)	Itaituba	672	6.3	7.39	6.92			7.15
28	North MT (Sorriso)	Porto Velho	632	6.7	7.02	6.61			6.82
29	North MT (Sorriso)	Santarém	876	4.8	7.33	7.68			7.50
30	South MA (Balsas)	São Luís	482	2.4	8.21	7.64			7.93
31	Southwest PI (Bom Jesus)	São Luís	606	3.2	7.19	6.80			6.99
32	Southeast PA (Paragominas)	Barcarena	249	2.1	8.90	7.98			8.44
33	East TO (Campos Lindos)	São Luís	842	2.2	6.72	6.51			6.62
	Weighted average		587	100.0	8.29	7.86			8.08
34	North MT (Sorriso)	Rondonópolis (Rail terminal)	382		8.55	7.83			8.19
35	Rondonópolis MT (Rail terminal)	Santos	1,019		5.23	4.77			5.00
36	Itaituba PA (Barge terminal)	Santarém	153		5.30	4.52			4.91
37	Itaituba PA (Barge terminal)	Barcarena	600		3.93	3.40			3.67
38	South GO (Rio Verde)	Santos	546		6.25	5.66			5.96

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.

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



Brazil Soybean Transportation

Table 8. Monthly Brazilian soybean 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-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				
Aug-20	5.41	-0.4	93.34				
Sep-20	5.58	3.0	96.14				
Oct-20	4.97	-10.8	85.71				
Nov-20	4.58	-7.9	78.95				
Dec-20	4.32	-5.8	74.39				
Jan-21	4.26	-1.3	73.39				
Feb-21	5.60	31.5	96.50				
Mar-21	6.93	23.8	119.49				
Apr-21	6.20	-10.5	106.96				
May-21	5.76	-7.2	99.22				
Jun-21	5.87	2.0	101.22				
Jul-21	5.09	-13.4	87.70				
Aug-21	5.09	0.1	87.81				
Sep-21	5.31	4.2	91.53				
Oct-21	4.49	-15.5	77.36				
Nov-21	4.28	-4.6	73.80				
Dec-21	4.54	6.0	78.26				

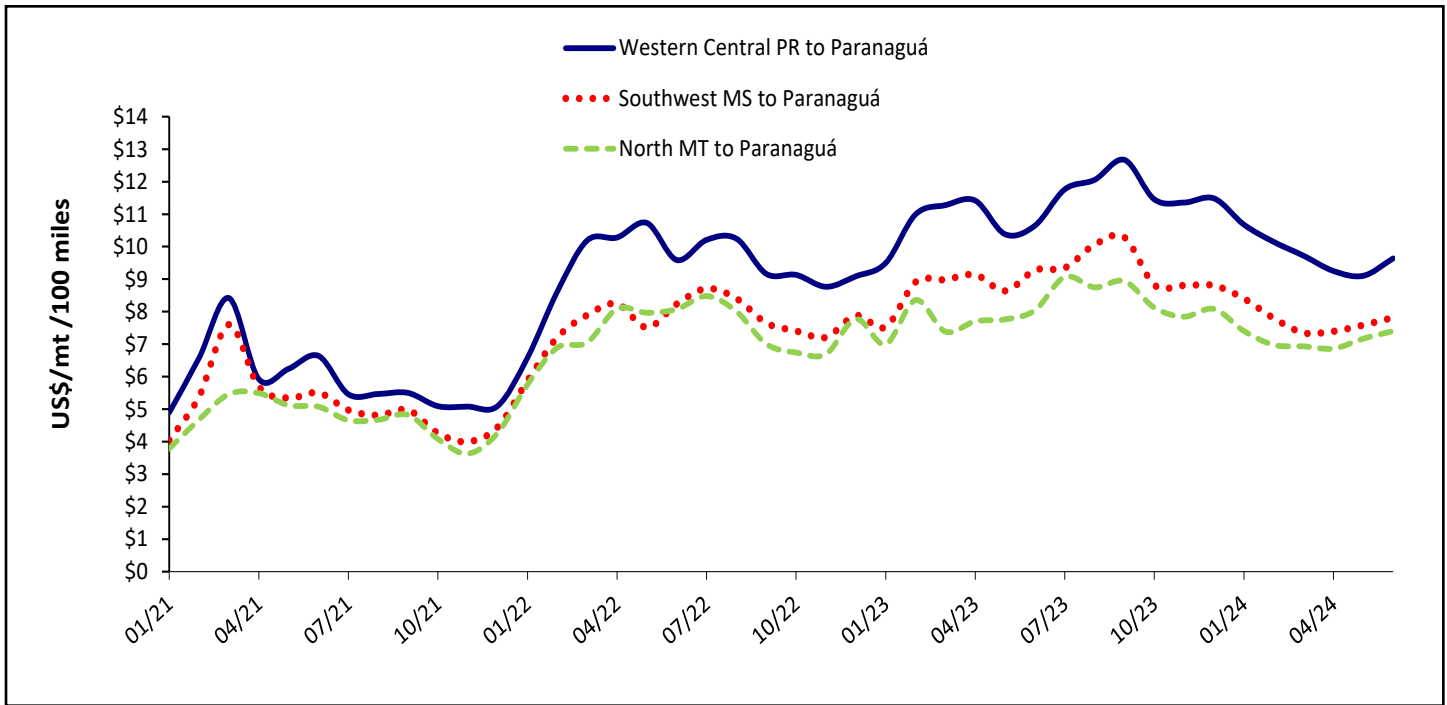
Note: Weighted average is calculated from production-based shares to weigh high-volume routes more heavily than low-volume routes. The share associated with each route is used to define the weight of a given route's freight price in the composition of the monthly weighted export truck freight index.

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



Brazil Soybean Transportation

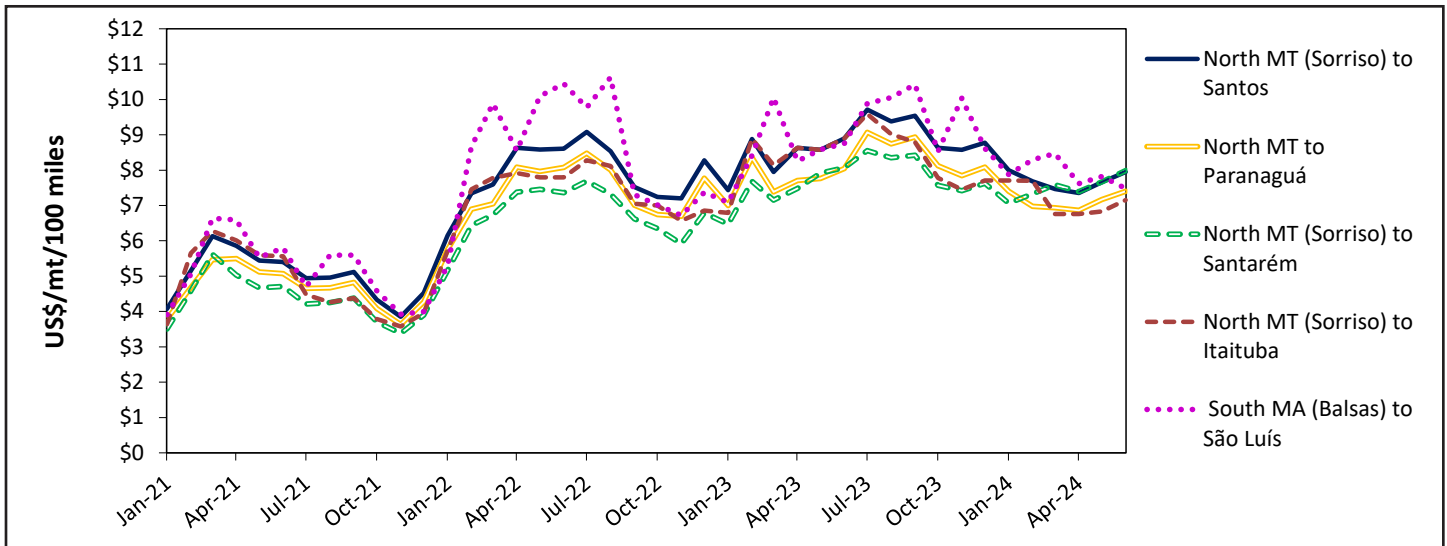
Figure 3. Truck rates for selected southern Brazilian soybean export transportation routes, 2021-24



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



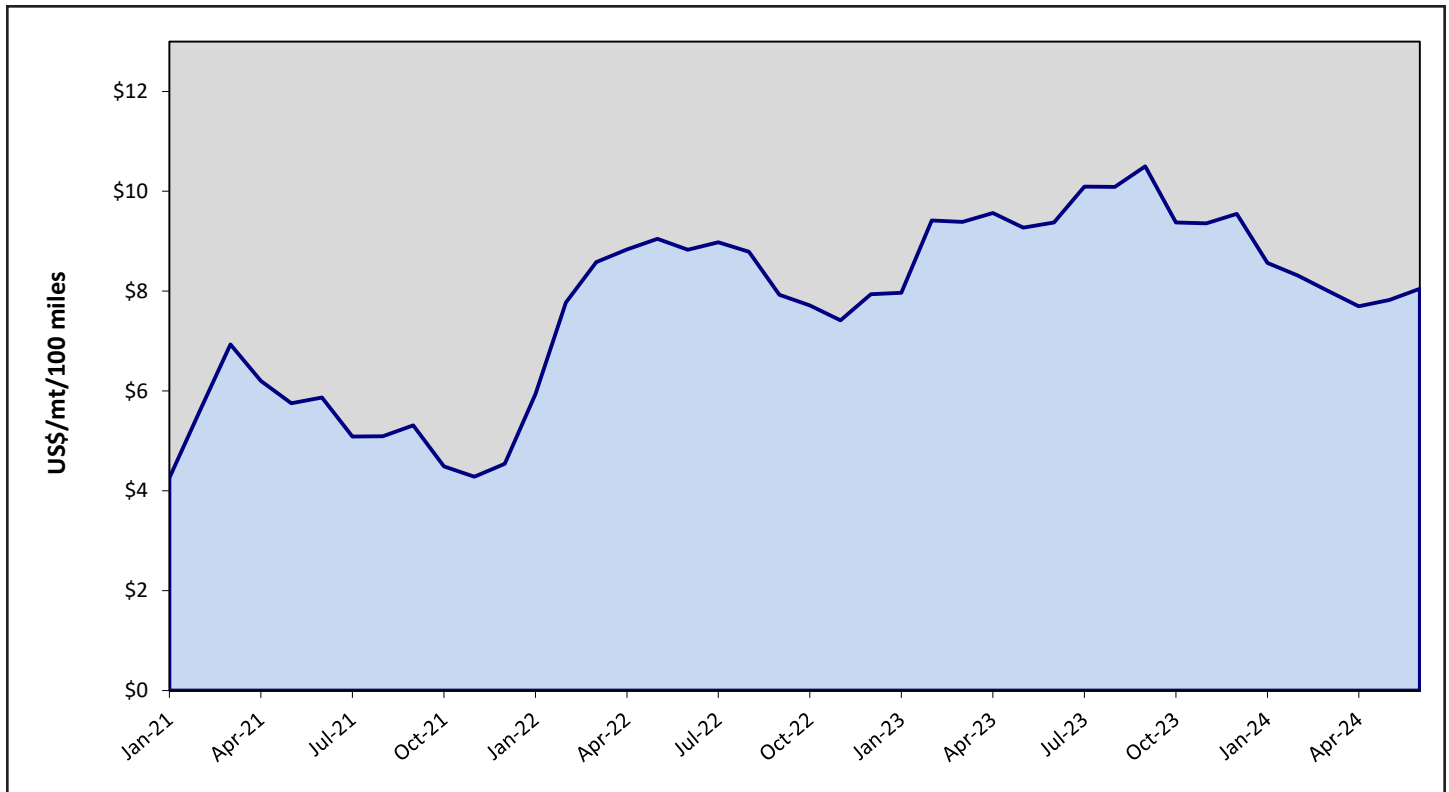
Note: mt = metric ton. MT= Mato Grosso and MA = Maranhão.

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



Brazil Soybean Transportation

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



Note: mt = metric ton.

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



Brazil Soybean Transportation

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
Paranaguá	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
Paranaguá	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
Paranaguá	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

-continued on page 19-



Brazil Soybean Transportation

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
Paranaguá	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
Paranaguá	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		
Paranaguá	Germany (Hamburg)	32.20	31.00		
Rio Grande	Germany (Hamburg)	33.40	32.00		
Santarém	Germany (Hamburg)	30.40	29.20		
São Luís	Germany (Hamburg)	35.20	33.80		
Barcarena	Germany (Hamburg)	29.90	28.70		
Santos	China (Shanghai)	34.70	33.30		
Paranaguá	China (Shanghai)	36.20	34.80		
Rio Grande	China (Shanghai)	35.20	33.80		
Santarém	China (Shanghai)	38.00	36.50		
São Luís	China (Shanghai)	38.30	37.10		
Barcarena	China (Shanghai)	38.50	37.40		

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.

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



Brazil Soybean Transportation

Contact Information:

Delmy L. Salin
Senior Economist, Project Manager
delmy.salin@usda.gov
202.720.0833

Jessica Ladd
Supervisory Visual Information Specialist
jessica.ladd@usda.gov
202.720.6494

Data Sets (XLS files):

- [Figure 3. Truck rates for selected southern Brazilian soybean export transportation routes, 2021-24](#)
- [Figure 4. Truck rates for selected north, south, and northeastern Brazilian soybean export transportation routes, 2021-24](#)
- [Figure 5. Brazilian soybean export truck transportation weighted average prices, 2021-24](#)
- [Table 1a. Quarterly costs of transporting Brazilian soybeans from the southern ports to Shanghai, China](#)
- [Table 1b. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Shanghai, China](#)
- [Table 2a. Quarterly costs of transporting Brazilian soybeans from the southern ports to Hamburg, Germany](#)
- [Table 2b. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Hamburg, Germany](#)
- [Table 3. Quarterly costs of transporting Brazilian soybeans from the southern ports to Shanghai, China, 2024](#)
- [Table 4. Quarterly costs of transporting Brazilian soybeans from the southern ports to Hamburg, Germany, 2024](#)
- [Table 5. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Shanghai, China, 2024](#)
- [Table 6. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Hamburg, Germany, 2024](#)
- [Table 7. Quarterly truck rates for selected Brazilian soybean export transportation routes, 2024](#)
- [Table 8. Monthly Brazilian soybean export truck transportation cost index](#)
- [Table 9. Quarterly ocean freight rates for shipping soybeans from selected Brazilian ports to Germany and China \(US\\$/metric ton\)](#)

Subscription Information: Send relevant information to GTRContactUs@usda.gov for an electronic copy.

Related Websites:

- [Soybean Transportation Guide: Brazil 2022](#)
- Prior Articles: [Brazil Soybean Transportation](#)
- Related Articles: [Grain Transportation Report: June 6, 2024 \(PDF\)](#)

Preferred Citation:

Salin, Delmy. Brazil Soybean Transportation. August 2024. U.S. Department of Agriculture, Agricultural Marketing Service. Web. <<http://dx.doi.org/10.9752/TS052.08-2024>>

Photo Credit: USDA

USDA is an equal opportunity provider, employer, and lender.