

# Brazil Soybean Transportation

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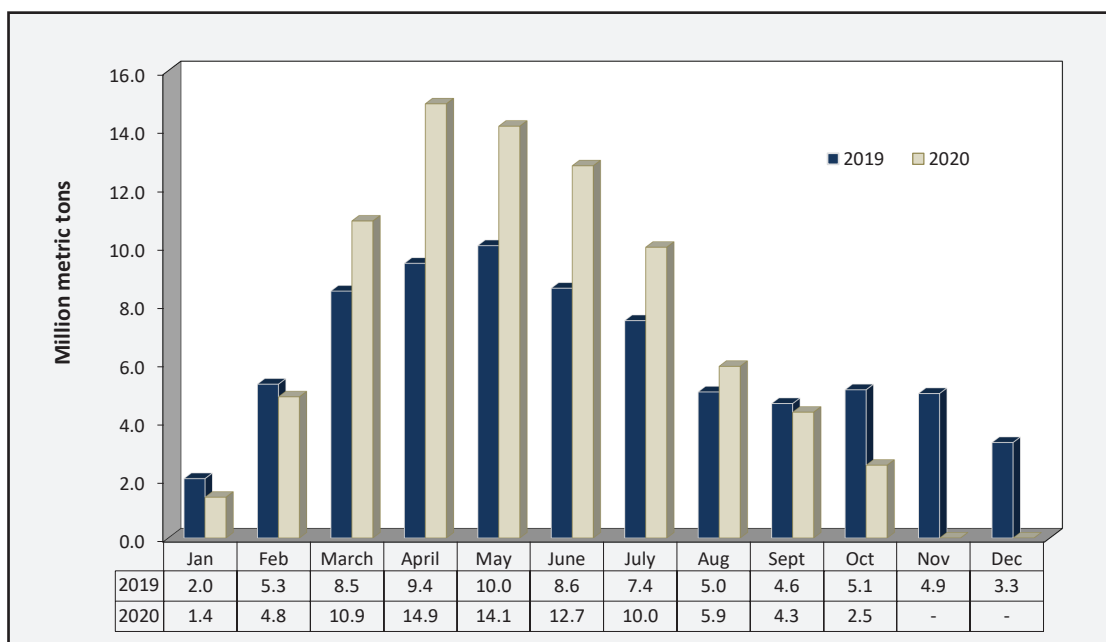
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## Record Brazilian Soybean Export Season, Weak Currency, and Lower Transportation Costs Lead to Higher Domestic Farm Prices

In the first 10 months of 2020, Brazil exported 81.4 million metric tons (mmt) of soybeans, valued at \$28 billion, nearly 10 percent more than last year’s total of 74.1 mmt (fig. 1) ([Comex Stat](#), [Ministério da Economia](#)). From third quarter 2019 to third quarter 2020 (year to year), the cost of shipping a metric ton (mt) of soybeans 100 miles by truck decreased from \$7.75 per mt to \$5.48 per mt (table 8). This 29 percent drop was mostly due to the Brazilian real’s (R\$) steep depreciation against the U.S. dollar—35 percent year to year, from R\$3.97 per U.S. dollar to R\$5.38 per U.S. dollar ([Brazil Central Bank](#)).

Measured in reais, the cost of shipping a metric ton of soybeans decreased by 4 percent year to year. Truck rates also declined because of the completion of the paving of BR 163 highway, connecting Sorriso, Mato Grosso, to the Port of Miritituba, Pará, on the Tapajos River, as the length of the trip shrank, along with the costs of fuel and truck maintenance. According to the [Companhia Nacional de Abastecimento \(CONAB\)](#), exporting grain via this route to the “Northern Arc” ports is no longer considered just an alternative to Brazil’s southern ports. Rather, the BR 163 route has become key to accommodating central Brazil’s ever-expanding grain production.

**Figure 1. Brazil average monthly soybean exports, 2019-20**



Note: Hyphens designate data were unavailable; total may not add exactly due to rounding.  
Source: Comex Stat, Ministério da Economia.



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Truck rates in reais from Sorriso to Rondonópolis (rail terminal) and to the northern river port of Miritituba (barge terminal) decreased 3-15 percent, respectively, year to year. From the third quarter 2019 to third quarter 2020, rail rates in reais from Rondonópolis to the southern port of Santos declined 12 percent. On average, ocean rates decreased, except for a nearly 10-percent increase in rates from São Luís to Hamburg because of higher Brazilian iron ore exports (tables 1, 1a, 2, 2a, and 9).

Year to year, Brazilian soybean transportation costs to Shanghai, China (as a percentage of total landed costs) declined by 33 percent for the route from northern Mato Grosso to Santos (table 1) and declined by 31 percent and 22 percent from Santarém and Barcarena, respectively (table 1a). In Sorriso, Mato Grosso—the largest Brazilian soybean-producing State—third quarter 2020 transportation costs represented 18-20 percent of the total landed costs of shipping soybeans to Shanghai through Santos (table 1), compared with 34 percent in 2008 and 45 percent in 2006 ([Soybean Transportation Guide: Brazil 2019](#)).

Year to year, average Brazilian soybean export prices increased by 1 percent from \$352 per mt to \$356 per mt ([Comex Stat, Ministério da Economia](#)). Brazilian farmers have benefitted from the real's depreciation against the U.S. dollar, because soybeans are priced in U.S. dollars but paid in reais. Measured in U.S. dollars, soybean average farm gate prices increased by 19 percent from \$295.72/mt to \$352.03/mt year to year. The depreciation of the real led to higher domestic prices. On average, in reais, third-quarter 2020 farm gate prices increased by 61 percent, from R\$1,175.07/mt to R\$1,894.75 ([CONAB](#)).

Brazilian soybean exports to China increased nearly 13 percent in third quarter of 2020 compared to the third quarter 2019. In the first 9 months of 2020, China bought 57.5 mmt of Brazilian soybeans, valued at \$19.8 billion, nearly equaling last year's total of 57.9 mmt ([Comex Stat, Ministério da Economia](#)). The next highest shares of Brazil's soybean exports (in declining order) went to the Netherlands, Spain, Thailand, and Turkey. Santos was the largest Brazilian soybean export port, followed by Paranaguá, Rio Grande, São Luís, Barcarena, and São Francisco do Sul ([Comex Stat, Ministério da Economia](#)). These six ports accounted for nearly 82 percent of Brazil's total exports.

The southern ports of Santos, Rio Grande, Paranaguá, and São Francisco do Sul still dominate the soybean trade to China, accounting for roughly 76 percent of Brazil's soybean exports to China. The northeastern ports of São Luís, Vitória, Salvador, and Barcarena accounted for nearly 24 percent of soybean exports to China. The Amazon River ports of Manaus and Santarém accounted for less than 1 percent of soybean exports to China ([Comex Stat, Ministério da Economia](#)). For more information, contact Delmy L. Salin at [delmy.salin@usda.gov](mailto:delmy.salin@usda.gov).



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

	2019 3rd qtr.	2020 3rd qtr.	% Change 2019-20	2019 3rd qtr.	2020 3rd qtr.	% Change 2019-20
	<b>North MT<sup>1</sup> - Santos<sup>2</sup> by truck —US\$/mt—</b>			<b>Northwest RS<sup>1</sup> - Rio Grande<sup>2</sup> —US\$/mt—</b>		
Truck	88.37	60.52	-31.5	26.82	18.84	-29.7
Ocean	33.25	31.33	-5.8	34.25	32.83	-4.1
Total transportation	121.62	91.85	-24.5	61.07	51.67	-15.4
Farm gate price <sup>3</sup>	286.87	367.89	28.2	304.20	367.58	20.8
Landed cost	408.48	459.74	12.5	365.27	419.26	14.8
Transport % of landed cost	29.8	20.0	-32.9	16.7	12.3	-26.3
	<b>North MT<sup>1</sup> - Santos<sup>2</sup> by rail —US\$/mt—</b>			<b>North MT<sup>1</sup> - Paranaguá<sup>2</sup> —US\$/mt—</b>		
Truck	30.03	21.47	-28.5	87.49	60.22	-31.2
Rail <sup>4</sup>	48.04	31.02	-35.4	-	-	-
Ocean	33.25	31.33	-5.8	34.75	32.83	-5.5
Total transportation	111.32	83.82	-24.7	122.24	93.05	-23.9
Farm gate price <sup>3</sup>	286.87	367.89	28.2	286.87	367.89	28.2
Landed cost	398.19	451.71	13.4	409.10	460.94	12.7
Transport % of landed cost	28.0	18.6	-33.6	29.9	20.2	-32.4

<sup>1</sup>Producing regions: RS = Rio Grande Do Sul and MT= Mato Grosso.

<sup>2</sup>Export port.

<sup>3</sup>The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

<sup>4</sup>In Brazil, there are no public/official 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.

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



# Brazil Soybean Transportation

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

	2019 3rd qtr.	2020 3rd qtr.	% Change 2019-20	2019 3rd qtr.	2020 3rd qtr.	% Change 2019-20
	<b>North MT<sup>1</sup> - Santarém<sup>2</sup> —US\$/mt—</b>			<b>South MA<sup>1</sup> - São Luís<sup>2</sup> —US\$/mt—</b>		
Truck	55.66	41.03	-26.3	36.22	27.62	-23.7
Ocean	38.25	34.83	-8.9	38.25	35.33	-7.6
Total transportation	93.91	75.86	-19.2	74.47	62.95	-15.5
Farm gate price <sup>3</sup>	286.87	367.89	28.2	300.20	359.63	19.8
Landed cost	380.78	443.75	16.5	374.67	422.58	12.8
Transport % of landed cost	24.7	17.1	-30.7	19.9	14.9	-25.0
	<b>Southwest PI<sup>1</sup> - São Luís<sup>2</sup> —US\$/mt—</b>			<b>North MT<sup>1</sup> - Barcarena<sup>2</sup> —US\$/mt—</b>		
Truck	41.42	31.84	-23.1	49.49	30.89	-37.6
Barge <sup>4</sup>	-	-	-	20.63	14.45	-30.0
Ocean	38.25	35.33	-7.6	38.25	36.33	-5.0
Total transportation	79.67	67.17	-15.7	87.74	81.67	-6.9
Farm gate price <sup>3</sup>	288.35	344.92	19.6	286.87	367.89	28.2
Landed cost	368.03	412.10	12.0	374.61	449.56	20.0
Transport % of landed cost	21.6	16.3	-24.7	23.4	18.2	-22.4

<sup>1</sup>Producing regions: MT= Mato Grosso, PI = Piauí, and MA = Maranhão.

<sup>2</sup>Export port.

<sup>3</sup>The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

<sup>4</sup>In Brazil, there are no public/official 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.

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



# Brazil Soybean Transportation

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

	2019 3rd qtr.	2020 3rd qtr.	% Change 2019-20	2019 3rd qtr.	2020 3rd qtr.	% Change 2019-20
	North MT <sup>1</sup> - Santos <sup>2</sup> by truck —US\$/mt—			Northwest RS <sup>1</sup> - Rio Grande <sup>2</sup> —US\$/mt—		
Truck	88.37	60.52	-31.5	26.82	18.84	-29.7
Ocean	27.00	24.00	-11.1	27.00	24.50	-9.3
Total transportation	115.37	84.52	-26.7	53.82	43.34	-19.5
Farm gate price <sup>3</sup>	286.87	367.89	28.2	304.20	367.58	20.8
Landed cost	402.23	452.41	12.5	358.02	410.93	14.8
Transport % of landed cost	28.7	18.7	-34.9	15.0	10.5	-29.8
	North MT <sup>1</sup> - Santos <sup>2</sup> by rail —US\$/mt—			North MT <sup>1</sup> - Paranaguá <sup>2</sup> —US\$/mt—		
Truck	30.03	21.47	-28.5	87.49	60.22	-31.2
Rail <sup>4</sup>	48.04	31.02	-35.4	-	-	-
Ocean	27.00	24.00	-11.1	27.00	25.00	-7.4
Total transportation	105.07	76.49	-27.2	114.49	85.22	-25.6
Farm gate price <sup>3</sup>	286.87	367.89	28.2	286.87	367.89	28.2
Landed cost	391.94	444.38	13.4	401.35	453.11	12.9
Transport % of landed cost	26.8	17.2	-35.8	28.5	18.8	-34.1

<sup>1</sup>Producing regions: RS = Rio Grande Do Sul and MT= Mato Grosso.

<sup>2</sup>Export port.

<sup>3</sup>The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

<sup>4</sup>In Brazil, there are no public/official 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.

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 northern and northeastern ports to Hamburg, Germany**

	2019 3rd qtr.	2020 3rd qtr.	% Change 2019-20	2019 3rd qtr.	2020 3rd qtr.	% Change 2019-20
	<b>North MT<sup>1</sup> - Santarém<sup>2</sup> —US\$/mt—</b>			<b>South MA<sup>1</sup> - São Luís<sup>2</sup> —US\$/mt—</b>		
Truck	55.66	41.03	-26.3	36.22	27.62	-23.7
Ocean	25.92	20.75	-19.9	22.77	25.00	9.8
Total transportation	81.58	61.78	-24.3	58.99	52.62	-10.8
Farm gate price <sup>3</sup>	286.87	367.89	28.2	300.20	359.63	19.8
Landed cost	368.45	429.67	16.6	359.19	412.25	14.8
Transport % of landed cost	22.1	14.4	-35.1	16.4	12.8	-22.3
	<b>Southwest PI<sup>1</sup> - São Luís<sup>2</sup> —US\$/mt—</b>			<b>North MT<sup>1</sup> - Barcarena<sup>2</sup> --US\$/mt--</b>		
Truck	41.42	31.84	-23.1	49.49	30.89	-37.6
Barge <sup>4</sup>	-	-	-	20.63	14.45	-30.0
Ocean	22.77	25.00	9.8	23.52	20.50	-12.8
Total transportation	64.19	56.84	-11.5	93.64	65.84	-29.7
Farm gate price <sup>3</sup>	288.35	344.92	19.6	286.87	367.89	28.2
Landed cost	352.55	401.77	14.0	380.51	433.73	14.0
Transport % of landed cost	18.2	14.1	-22.3	24.6	15.2	-38.3

<sup>1</sup>Producing regions: MT= Mato Grosso, PI = Piauí, and MA = Maranhão.

<sup>2</sup>Export port.

<sup>3</sup>The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

<sup>4</sup>In Brazil, there are no public/official 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.

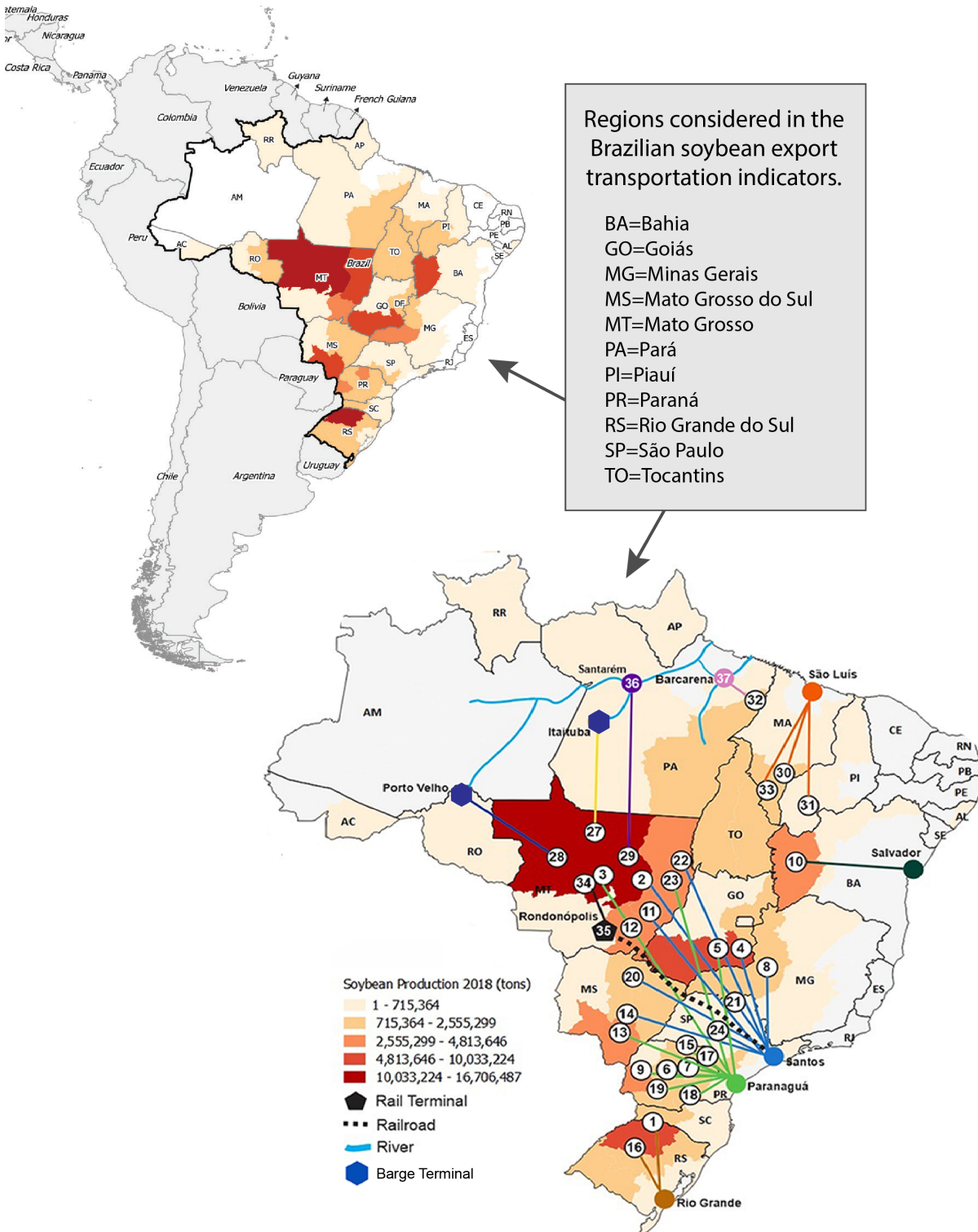
Source: University of São Paulo, Escola Superior de Agricultura "Luiz de Queiroz," Brazil (ESALQ/ USP) and USDA, Agricultural Marketing Service.



# Brazil Soybean Transportation

## Indicators

Figure 2. Routes<sup>1</sup> and regions considered in the Brazilian soybean export transportation indicator<sup>2</sup>



<sup>1</sup>Table defining routes by number is shown on page 12.

<sup>2</sup>Regions comprised about 81 percent of Brazilian soybean production, 2018 (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**

	—2020—									
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
	<b>North MT<sup>1</sup> - Santos<sup>2</sup> by truck</b> —US\$/mt—					<b>North MT<sup>1</sup> - Paranaguá<sup>2</sup></b> —US\$/mt—				
Truck	68.33	59.53	60.52		62.79	67.48	58.03	60.22		61.91
Ocean	35.50	27.08	31.33		31.30	37.25	28.83	32.83		32.97
Total transportation	103.83	86.61	91.85		94.10	104.73	86.86	93.05		94.88
Farm gate price <sup>3</sup>	282.59	287.53	367.89		312.67	282.59	287.53	367.89		312.67
Landed cost	386.43	374.13	459.74		406.77	387.32	374.39	460.94		407.55
Transport % of landed cost	26.9	23.1	20.0		23.3	27.0	23.2	20.2		23.5
	<b>North MT<sup>1</sup> - Santos<sup>2</sup> by rail</b> —US\$/mt—					<b>Northwest RS<sup>1</sup> - Rio Grande<sup>2</sup></b> —US\$/mt—				
Truck	24.79	21.82	21.47		22.69	22.92	19.03	18.84		20.26
Rail <sup>4</sup>	37.73	30.58	31.02		33.11	-	-	-		-
Ocean	35.50	27.08	31.33		31.30	37.00	28.58	32.83		32.80
Total transportation	98.02	79.48	83.82		87.10	59.92	47.61	51.67		53.07
Farm gate price <sup>3</sup>	282.59	287.53	367.89		312.67	300.04	297.17	367.58		321.60
Landed cost	380.61	367.00	451.71		399.77	359.97	344.78	419.26		374.67
Transport % of landed cost	25.8	21.7	18.6		22.0	16.6	13.8	12.3		14.3

<sup>1</sup>Producing regions: RS = Rio Grande do Sul and MT= Mato Grosso.

<sup>2</sup>Export port.

<sup>3</sup>The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

<sup>4</sup>In, Brazil, there are no public/official 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.

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**

	—2020—									
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
	<b>North MT<sup>1</sup> - Santos<sup>2</sup> by truck</b> —US\$/mt—					<b>North MT<sup>1</sup> - Paranaguá<sup>2</sup></b> —US\$/mt—				
Truck	68.33	59.53	60.52		62.79	67.48	58.03	60.22		61.91
Ocean	29.25	20.50	24.00		24.58	30.00	21.50	25.00		25.50
Total transportation	97.58	80.03	84.52		87.38	97.48	79.53	85.22		87.41
Farm gate price <sup>3</sup>	282.59	287.53	367.89		312.67	282.59	287.53	367.89		312.67
Landed cost	380.18	367.55	452.41		400.05	380.07	367.06	453.11		400.08
Transport % of landed cost	25.7	21.8	18.7		22.0	25.6	21.7	18.8		22.0
	<b>North MT<sup>1</sup> - Santos<sup>2</sup> by rail</b> —US\$/mt—					<b>Northwest RS<sup>1</sup> - Rio Grande<sup>2</sup></b> —US\$/mt—				
Truck	24.79	21.82	21.47		22.69	22.92	19.03	18.84		20.26
Rail <sup>4</sup>	37.73	30.58	31.02		33.11	-	-	-		-
Ocean	29.25	20.50	24.00		24.58	29.50	20.75	24.50		24.92
Total transportation	91.77	72.90	76.49		80.38	52.42	39.78	43.34		45.18
Farm gate price <sup>3</sup>	282.59	287.53	367.89		312.67	300.04	297.17	367.58		321.60
Landed cost	374.36	360.42	444.38		393.05	352.47	336.95	410.93		366.78
Transport % of landed cost	24.5	20.2	17.2		20.7	14.9	11.8	10.5		12.4

<sup>1</sup>Producing regions: RS = Rio Grande do Sul and MT= Mato Grosso.

<sup>2</sup>Export port.

<sup>3</sup>The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

<sup>4</sup>In, Brazil, there are no public/official 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.

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**

	—2020—									
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
	<b>North MT<sup>1</sup> - Santarém<sup>2</sup></b> —US\$/mt—					<b>South MA<sup>1</sup> - São Luís<sup>2</sup></b> —US\$/mt—				
Truck	44.10	38.23	41.03		41.12	28.86	27.02	27.62		27.83
Ocean	36.50	28.08	34.83		33.14	36.75	28.33	35.33		33.47
Total transportation	80.60	66.31	75.86		74.26	65.61	55.35	62.95		61.30
Farm gate price <sup>3</sup>	282.59	287.53	367.89		312.67	300.23	294.95	359.63		318.27
Landed cost	363.20	353.84	443.75		386.93	365.83	350.31	422.58		379.57
Transport % of landed cost	22.2	18.7	17.1		19.3	17.9	15.8	14.9		16.2
	<b>Southwest PI<sup>1</sup> - São Luís<sup>2</sup></b> —US\$/mt—					<b>North MT<sup>1</sup> - Barcarena<sup>2</sup></b> —US\$/mt—				
Truck	32.49	29.98	31.84		31.44	37.11	33.27	30.89		33.75
Barge <sup>4</sup>	-	-	-		-	16.42	14.36	14.45		15.08
Ocean	36.75	28.33	35.33		33.47	38.50	28.33	36.33		34.39
Total transportation	69.24	58.31	67.17		64.91	92.03	75.96	81.67		83.22
Farm gate price <sup>3</sup>	302.03	286.59	344.92		311.18	282.59	287.53	367.89		312.67
Landed cost	371.27	344.90	412.10		376.09	374.62	363.48	449.56		395.89
Transport % of landed cost	18.6	16.9	16.3		17.3	24.6	20.9	18.2		21.2

<sup>1</sup>Producing regions: MT= Mato Grosso, PI = Piauí, and MA = Maranhão.

<sup>2</sup>Export port.

<sup>3</sup>The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

<sup>4</sup>In Brazil, there are no public/official 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.

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**

	—2020—									
	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
	<b>North MT<sup>1</sup> - Santarém<sup>2</sup></b> —US\$/mt—					<b>South MA<sup>1</sup> - São Luís<sup>2</sup></b> —US\$/mt—				
Truck	44.10	38.23	41.03		41.12	28.86	27.02	27.62		27.83
Ocean	25.00	16.00	20.75		20.58	22.25	17.50	25.00		21.58
Total transportation	69.10	54.23	61.78		61.71	51.11	44.52	52.62		49.42
Farm gate price <sup>3</sup>	282.59	287.53	367.89		312.67	300.23	294.95	359.63		318.27
Landed cost	351.70	341.76	429.67		374.38	351.33	339.48	412.25		367.69
Transport % of landed cost	19.6	15.9	14.4		16.6	14.5	13.1	12.8		13.5
	<b>Southwest PI<sup>1</sup> - São Luís<sup>2</sup></b> —US\$/mt—					<b>North MT<sup>1</sup> - Barcarena<sup>2</sup></b> --US\$/mt-				
Truck	32.49	29.98	31.84		31.44	37.11	33.27	30.89		33.75
Barge <sup>4</sup>	-	-	-		-	16.42	14.36	14.45		15.08
Ocean	22.25	17.50	25.00		21.58	24.00	15.00	20.50		19.83
Total transportation	54.74	47.48	56.84		53.02	77.53	62.63	65.84		68.66
Farm gate price <sup>3</sup>	302.03	286.59	344.92		311.18	282.59	287.53	367.89		312.67
Landed cost	356.77	334.07	401.77		364.20	360.12	350.15	433.73		381.33
Transport % of landed cost	15.3	14.2	14.1		14.6	21.5	17.9	15.2		18.2

<sup>1</sup>Producing regions: MT= Mato Grosso, PI = Piauí, and MA = Maranhão.

<sup>2</sup>Export port.

<sup>3</sup>The source of the farm gate price is the Brazilian Government, Companhia Nacional de Abastecimento (CONAB).

<sup>4</sup>In Brazil, there are no public/official 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.

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, 2020

Route #	Origin <sup>1</sup> (reference city)	Destination	Distance (miles) <sup>2</sup>	Share (%) <sup>3</sup>	Freight price (US\$/mt/100 miles) <sup>4</sup>				
					1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
1	Northwest RS <sup>5</sup> (Cruz Alta)	Rio Grande	288	11.3	7.96	6.61	6.54		7.28
2	North MT (Sorriso)	Santos	1,190	3.0	5.74	5.00	5.09		5.37
3	North MT (Sorriso)	Paranaguá	1,262	2.9	5.35	4.60	4.77		4.97
4	South GO (Rio Verde)	Santos	587	4.8	5.54	5.07	4.78		5.30
5	South GO (Rio Verde)	Paranaguá	726	3.9	5.60	4.87	4.90		5.24
6	North Central PR (Londrina)	Paranaguá	268	3.2	8.00	6.90	6.70		7.45
7	Western Central PR (Mamborê)	Paranaguá	311	2.4	7.22	6.37	6.33		6.79
8	Triangle MG (Uberaba)	Santos	339	3.0	7.66	6.90	6.43		7.28
9	West PR (Assis Chateaubriand)	Paranaguá	377	2.3	6.71	5.75	5.71		6.23
10	West Extreme BA (São Desidério)	Salvador	535	6.6	5.97	5.62	5.69		5.80
11	Southeast MT (Primavera do Leste)	Santos	901	2.4	5.26	4.64	4.58		4.95
12	Southeast MT (Primavera do Leste)	Paranaguá	975	2.2	5.05	4.36	4.54		4.70
13	Southwest MS (Maracaju)	Paranaguá	612	3.5	5.99	5.21	5.11		5.60
14	Southwest MS (Maracaju)	Santos	652	3.2	5.82	5.10	5.04		5.46
15	West PR (Assis Chateaubriand)	Santos	550	1.6	5.94	5.11	5.07		5.53
16	East GO (Cristalina)	Santos	585	1.9	6.35	5.73	5.60		6.04
17	North PR (Cornélio Procópio)	Paranaguá	306	1.8	6.46	5.56	5.64		6.01
18	Eastern Central PR (Castro)	Paranaguá	130	2.0	10.54	8.84	8.49		9.69
19	South Central PR (Guarapuava)	Paranaguá	204	2.3	9.63	8.21	8.06		8.92
20	North Central MS (São Gabriel do Oeste)	Santos	720	2.4	5.06	4.38	4.43		4.72
21	Ribeirão Preto SP (Guairá)	Santos	314	0.0	6.40	5.50	5.23		5.95
22	Northeast MT (Canarana)	Santos	950	3.3	5.55	4.80	4.60		5.17
23	East MS (Chapadão do Sul)	Santos	607	0.0	5.08	4.48	4.45		4.78

<sup>1</sup>The main city in the region is considered as a reference to establish the freight price.

<sup>2</sup>Distance from the main city of the considered region to the mentioned ports.

<sup>3</sup>Share of exports in total production (percentage).

<sup>4</sup>Average monthly exchange rate from “Banco Central do Brasil” was used to convert Brazilian reais to the U.S. dollars.

<sup>5</sup>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.

<sup>6</sup>In Brazil, there are no public/official 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.

<sup>7</sup>In Brazil, there are no public/official 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](mailto: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 7. Quarterly truck rates for selected Brazilian soybean export transportation routes, 2020

Route #	Origin <sup>1</sup> (reference city)	Destination	Distance (miles) <sup>2</sup>	Share (%) <sup>3</sup>	Freight price (US\$/mt/100 miles) <sup>4</sup>				
					1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	Avg.
24	Northeast MT (Canarana)	Paranaguá	1,075	2.9	5.34	4.61	4.56		4.98
25	Western Central RS (Tupanciretã)	Rio Grande	273	2.5	7.10	5.85	5.97		6.47
26	Southwest PR(Chopinzinho)	Paranaguá	291	1.7	7.57	6.65	6.63		7.11
27	North MT (Sorriso)	Itaituba	672	5.4	5.52	4.95	4.60		5.24
28	North MT (Sorriso)	Porto Velho	632	5.7	5.22	4.45	4.54		4.83
29	North MT (Sorriso)	Santarém	876	4.1	5.03	4.36	4.68		4.70
30	South MA (Balsas)	São Luís	482	2.1	5.99	5.61	5.74		5.80
31	Southwest PI (Bom Jesus)	São Luís	606	2.6	5.36	4.95	5.26		5.16
32	Southeast PA (Paragominas)	Barcarena	249	1.5	7.17	6.61	5.90		6.89
33	East TO (Campos Lindos)	São Luís	842	1.6	5.04	4.40	4.69		4.72
	<b>Weighted average</b>		<b>587</b>	<b>100.0</b>	<b>6.33</b>	<b>5.52</b>	<b>5.48</b>		<b>5.93</b>
34	North MT (Sorriso)	Rondonópolis (Rail terminal)	382		6.49	5.71	5.62		6.10
35	Rondonópolis MT (Rail terminal) <sup>6</sup>	Santos	1,019		3.70	3.00	3.04		3.35
36	Itaituba PA (Barge terminal) <sup>7</sup>	Santarém	224		4.73	4.23	3.92		4.48
37	Itaituba PA (Barge terminal) <sup>7</sup>	Barcarena	738		2.23	1.95	1.96		2.09

<sup>1</sup>The main city in the region is considered as a reference to establish the freight price.

<sup>2</sup>Distance from the main city of the considered region to the mentioned ports.

<sup>3</sup>Share of exports in total production (percentage).

<sup>4</sup>Average monthly exchange rate from “Banco Central do Brasil” was used to convert Brazilian reais to the U.S. dollars.

<sup>5</sup>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.

<sup>6</sup>In Brazil, there are no public/official 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.

<sup>7</sup>In Brazil, there are no public/official 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](mailto: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-13	10.11	3.9	174.31	Jan-17	7.32	33.8	126.20
Feb-13	10.79	6.7	185.96	Feb-17	9.85	34.6	169.85
Mar-13	11.14	3.3	192.04	Mar-17	10.38	5.3	178.90
Apr-13	10.95	-1.7	188.71	Apr-17	9.52	-8.3	164.05
May-13	10.40	-5.0	179.31	May-17	8.75	-8.0	150.90
Jun-13	9.49	-8.8	163.61	Jun-17	8.18	-6.5	141.04
Jul-13	9.65	1.7	166.41	Jul-17	8.74	6.8	150.66
Aug-13	9.80	1.5	168.95	Aug-17	9.85	12.7	169.76
Sep-13	10.21	4.2	176.02	Sep-17	8.97	-9.0	154.55
Oct-13	10.17	-0.4	175.28	Oct-17	8.64	-3.6	148.93
Nov-13	9.29	-8.6	160.18	Nov-17	8.36	-3.2	144.11
Dec-13	8.91	-4.1	153.63	Dec-17	7.23	-13.5	124.63
Jan-14	8.86	-0.6	152.73	Jan-18	7.59	5.0	130.90
Feb-14	10.34	16.7	178.24	Feb-18	8.65	13.9	149.04
Mar-14	11.61	12.3	200.13	Mar-18	10.59	22.5	182.61
Apr-14	11.35	-2.2	195.65	Apr-18	9.78	-7.7	168.59
May-14	10.90	-4.0	187.89	May-18	8.96	-8.4	154.45
Jun-14	10.34	-5.1	178.24	Jun-18	8.89	-0.8	153.24
Jul-14	10.16	-1.7	175.21	Jul-18	8.97	0.9	154.58
Aug-14	10.10	-0.6	174.08	Aug-18	8.24	-8.1	142.00
Sep-14	9.66	-4.3	166.54	Sep-18	7.24	-12.1	124.78
Oct-14	8.77	-9.3	151.13	Oct-18	7.69	6.2	132.55
Nov-14	8.36	-4.6	144.16	Nov-18	7.51	-2.3	129.44
Dec-14	7.96	-4.9	137.15	Dec-18	7.19	-4.3	123.87
Jan-15	8.01	0.7	138.15	Jan-19	7.72	7.5	133.13
Feb-15	8.02	0.1	138.29	Feb-19	8.19	6.0	141.15
Mar-15	8.32	3.7	143.44	Mar-19	7.34	-10.3	126.61
Apr-15	9.00	8.2	155.13	Apr-19	7.16	-2.6	123.35
May-15	8.39	-6.8	144.58	May-19	6.73	-5.9	116.02
Jun-15	8.01	-4.5	138.12	Jun-19	6.94	3.1	119.56
Jul-15	7.56	-5.7	130.25	Jul-19	8.33	20.1	143.60
Aug-15	7.38	-2.4	127.15	Aug-19	7.85	-5.8	135.23
Sep-15	6.60	-10.5	113.78	Sep-19	7.09	-9.7	122.17
Oct-15	6.70	1.5	115.43	Oct-19	6.57	-7.4	113.19
Nov-15	7.08	5.8	122.08	Nov-19	6.41	-2.3	110.54
Dec-15	6.76	-4.5	116.56	Dec-19	5.93	-7.5	102.21
Jan-16	6.42	-5.1	110.63	Jan-20	6.03	1.7	103.90
Feb-16	6.73	4.8	115.98	Feb-20	6.76	12.2	116.52
Mar-16	7.79	15.8	134.33	Mar-20	6.20	-8.2	106.95
Apr-16	8.30	6.5	143.05	Apr-20	5.86	-5.5	101.09
May-16	7.28	-12.3	125.43	May-20	5.26	-10.4	90.58
Jun-16	7.16	-1.5	123.51	Jun-20	5.45	3.7	93.95
Jul-16	7.46	4.2	128.64	Jul-20	5.44	-0.2	93.74
Aug-16	7.33	-1.7	126.41	Aug-20	5.41	-0.4	93.34
Sep-16	6.35	-13.3	109.53	Sep-20	5.58	3.0	96.14
Oct-16	5.88	-7.5	101.35				
Nov-16	5.00	-14.9	86.21				
Dec-16	5.47	9.4	94.32				

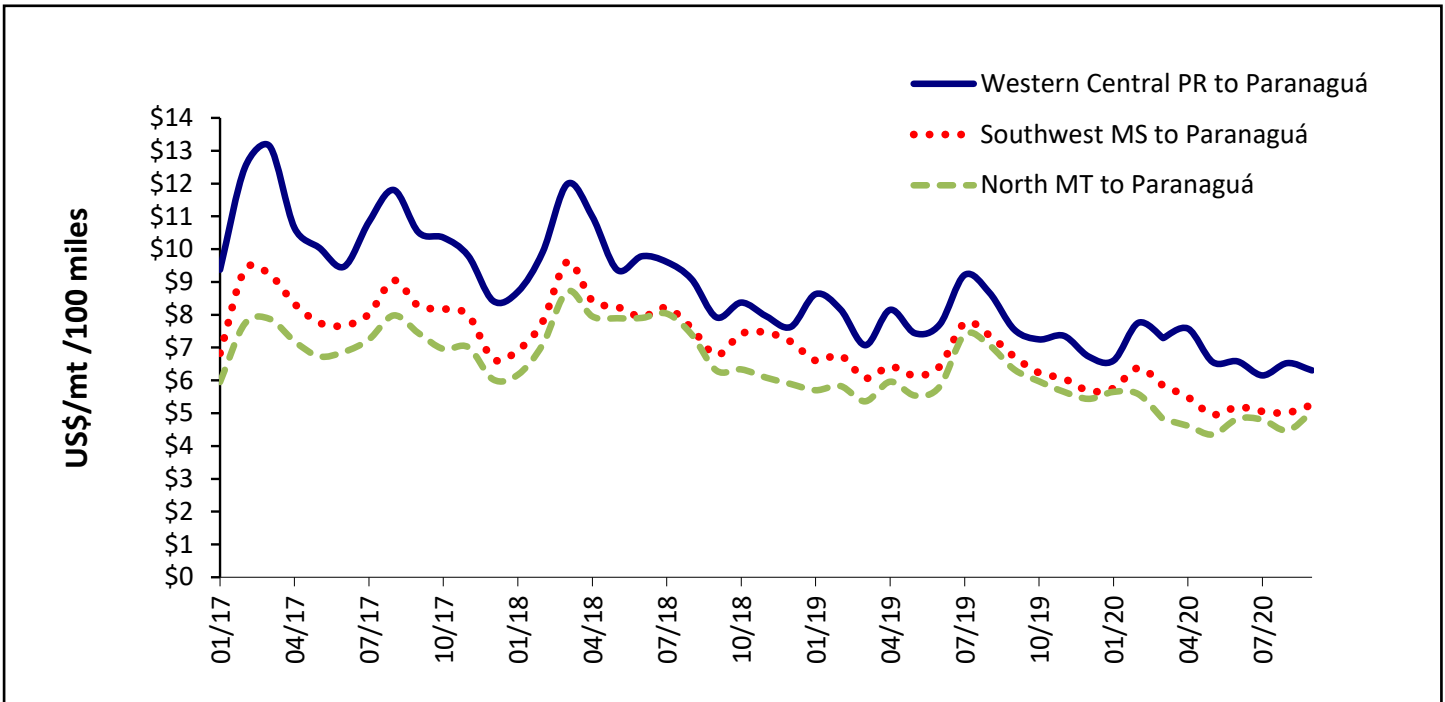
\*Weighted average.

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



# Brazil Soybean Transportation

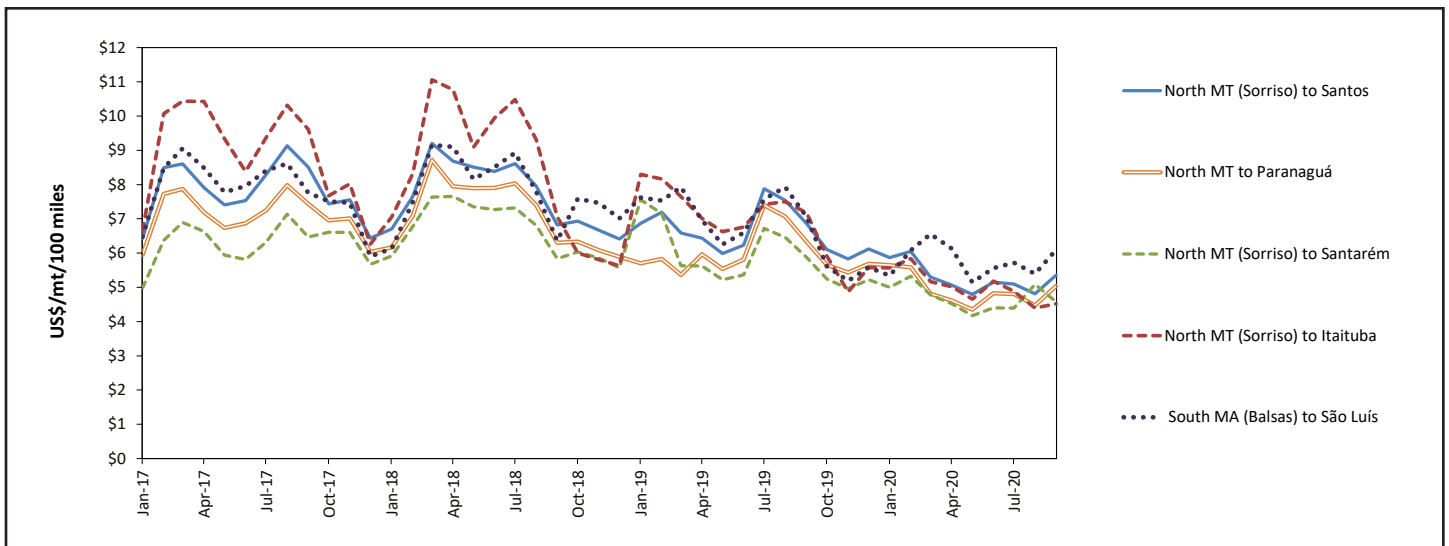
Figure 3. Truck rates for selected southern Brazilian soybean export transportation routes, 2017-20



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, 2017-20



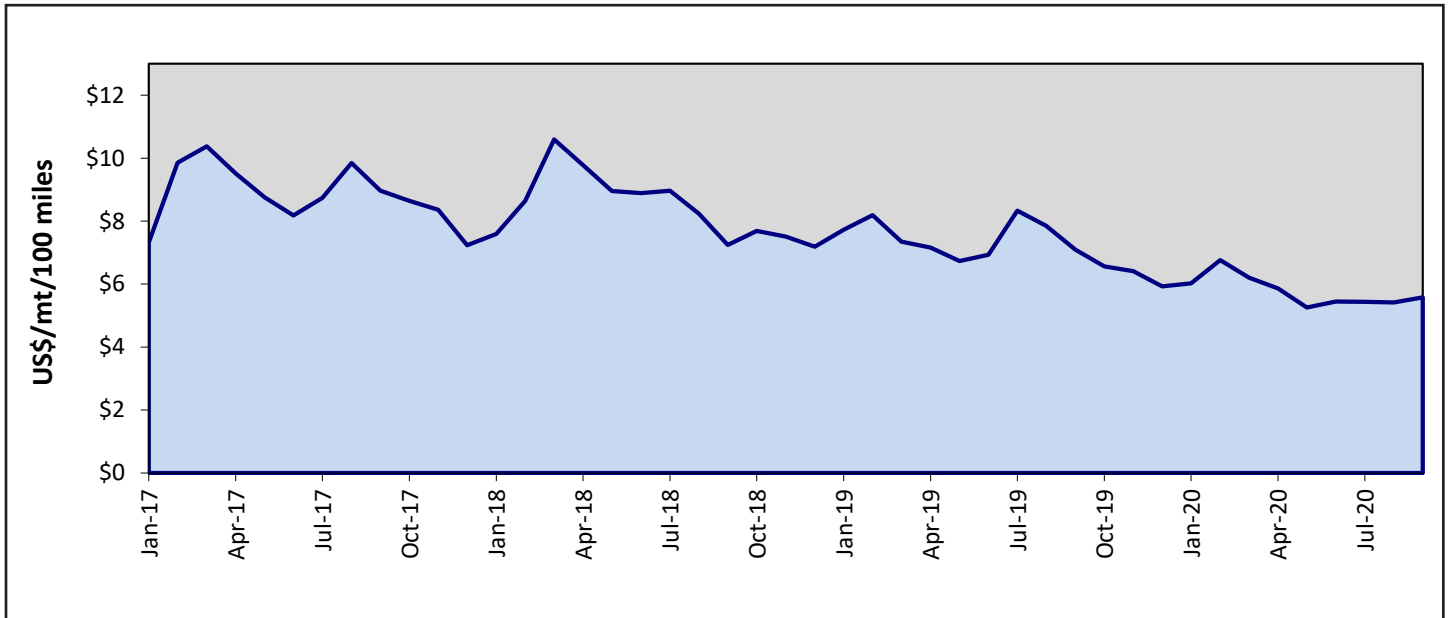
Note: mt = metric ton. MT= Mato Grosso and MA = Maranhão.

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, 2017-20



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. 2015	2nd qtr. 2015	3rd qtr. 2015	4th qtr. 2015
Santos	Germany (Hamburg)	22.00	21.00	19.00	17.00
Paranaguá	Germany (Hamburg)	22.00	21.00	19.00	17.00
Rio Grande	Germany (Hamburg)	22.00	21.00	19.00	17.00
Santarém	Germany (Hamburg)	20.00	14.50	13.50	20.00
São Luís	Germany (Hamburg)	20.00	18.25	16.38	20.50
Barcarena	Germany (Hamburg)	20.00	16.00	15.20	21.00
Santos	China (Shanghai)	29.50	22.50	23.25	20.00
Paranagua	China (Shanghai)	31.50	23.50	24.18	20.50
Rio Grande	China (Shanghai)	29.50	25.00	25.75	21.00
Santarém	China (Shanghai)	32.00	25.00	25.75	23.50
São Luís	China (Shanghai)	32.00	25.00	25.75	23.50
Barcarena	China (Shanghai)	32.00	25.00	25.75	23.50
Port	Destination	1st qtr. 2016	2nd qtr. 2016	3rd qtr. 2016	4th qtr. 2016
Santos	Germany (Hamburg)	16.00	17.00	16.50	23.00
Paranaguá	Germany (Hamburg)	16.00	17.00	16.50	24.00
Rio Grande	Germany (Hamburg)	16.00	17.00	16.50	23.00
Santarém	Germany (Hamburg)	11.03	14.13	15.00	19.80
São Luís	Germany (Hamburg)	8.25	11.00	11.80	15.80
Barcarena	Germany (Hamburg)	9.60	12.45	13.20	17.35
Santos	China (Shanghai)	17.50	16.50	12.50	20.00
Paranagua	China (Shanghai)	18.00	18.50	14.50	21.50
Rio Grande	China (Shanghai)	18.50	17.00	13.00	20.50
Santarém	China (Shanghai)	22.00	21.00	19.40	23.75
São Luís	China (Shanghai)	20.00	18.40	17.50	22.00
Barcarena	China (Shanghai)	22.50	21.50	20.00	23.75
Port	Destination	1st qtr. 2017	2nd qtr. 2017	3rd qtr. 2017	4th qtr. 2017
Santos	Germany (Hamburg)	21.00	24.00	26.00	27.00
Paranaguá	Germany (Hamburg)	22.00	25.00	27.00	28.00
Rio Grande	Germany (Hamburg)	22.00	25.00	27.00	28.00
Santarém	Germany (Hamburg)	21.00	23.60	25.00	26.00
São Luís	Germany (Hamburg)	17.60	20.00	21.20	22.00
Barcarena	Germany (Hamburg)	18.00	20.60	21.80	22.70
Santos	China (Shanghai)	18.50	29.00	30.00	30.00
Paranagua	China (Shanghai)	20.50	30.50	31.00	31.50
Rio Grande	China (Shanghai)	18.00	29.50	31.00	30.70
Santarém	China (Shanghai)	24.00	33.50	31.00	34.50
São Luís	China (Shanghai)	23.50	30.25	31.00	33.50
Barcarena	China (Shanghai)	24.00	33.50	31.00	34.50

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

Note: qtr. = quarter.

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

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# 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. 2018	2nd qtr. 2018	3rd qtr. 2018	4th qtr. 2018
Santos	Germany (Hamburg)	27.00	25.00	24.00	25.00
Paranaguá	Germany (Hamburg)	28.00	26.00	25.00	26.00
Rio Grande	Germany (Hamburg)	28.00	26.00	25.00	26.00
Santarém	Germany (Hamburg)	25.00	22.90	22.50	23.00
São Luís	Germany (Hamburg)	21.00	19.10	18.50	19.00
Barcarena	Germany (Hamburg)	23.00	20.90	20.20	20.00
Santos	China (Shanghai)	32.50	31.00	27.75	30.00
Paranagua	China (Shanghai)	32.00	32.00	28.75	31.00
Rio Grande	China (Shanghai)	33.00	31.50	28.25	31.50
Santarém	China (Shanghai)	38.50	35.50	31.25	34.00
São Luís	China (Shanghai)	37.00	34.80	30.75	33.00
Barcarena	China (Shanghai)	37.50	33.80	32.25	35.00
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	
Paranaguá	Germany (Hamburg)	30.00	21.50	25.00	
Rio Grande	Germany (Hamburg)	29.50	20.75	24.50	
Santarém	Germany (Hamburg)	25.00	16.00	20.75	
São Luís	Germany (Hamburg)	22.25	17.50	25.00	
Barcarena	Germany (Hamburg)	24.00	15.00	20.50	
Santos	China (Shanghai)	35.50	27.08	31.33	
Paranagua	China (Shanghai)	37.25	28.83	33.08	
Rio Grande	China (Shanghai)	37.00	28.58	32.83	
Santarém	China (Shanghai)	36.50	28.08	34.83	
São Luís	China (Shanghai)	36.75	28.33	35.33	
Barcarena	China (Shanghai)	38.50	28.33	36.33	

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

Note: 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](mailto:delmy.salin@usda.gov)  
202.720.0833

Jessica Ladd  
Visual Information Specialist  
[jessica.ladd@usda.gov](mailto:jessica.ladd@usda.gov)  
202.720.6494

## Data Sets (XLS files):

- [Figure 3. Truck rates for selected southern Brazilian soybean export transportation routes, 2017-20](#)
- [Figure 4. Truck rates for selected north, south, and northeastern Brazilian soybean export transportation routes, 2017-20](#)
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- [Soybean Transportation Guide: Brazil 2019 \(PDF\)](#)
- Prior Articles: [Brazil Soybean Transportation](#)
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