

# Brazil Soybean Transportation

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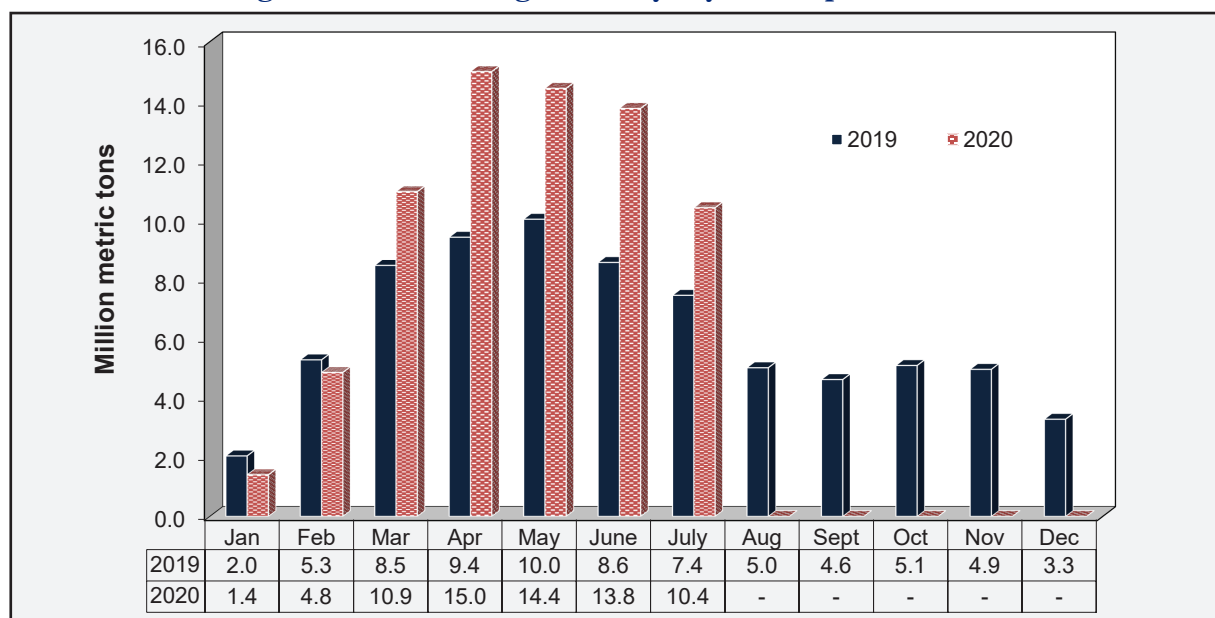
Second Quarter 2020 (October, November, December)  
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## Weak Real Augments Soybean Exports, Leading to Higher Domestic Prices for Farmers

In the second quarter 2020, both strong depreciation of the Brazilian real (R\$) and a surge in Chinese demand boosted Brazil's soybean exports. In the first 7 months of 2020, Brazil exported a record of nearly 70 million metric tons (mmt) of soybeans, valued at \$23.8 billion (fig. 1) ([Comex Stat](#), [Ministério da Economia](#)). From second quarter 2019 to second quarter 2020 (year to year), the Brazilian real depreciated 37 percent against the U.S. dollar, from R\$3.92 per U.S. dollar to R\$5.38 per U.S. dollar. Year to year, the cost of shipping a metric ton (mt) of soybeans 100 miles by truck, decreased by 20 percent—from \$6.94 per mt, in second quarter 2019, to \$5.52 per mt, in second quarter 2020 (table 8)—mostly due to the significant fall in the value of the Brazilian real against the U.S. dollar. Measured in real, the cost of shipping a metric ton of soybeans increased by 9 percent at the peak of the export season.

Typically, Brazilian soybean exports peak in April-May and decline through the end of the year (fig. 1). Year to year, on average, ocean rates from the southern Brazilian ports to Shanghai, China, decreased by nearly 9 percent, and from the southern ports to Hamburg, Germany, ocean rates decreased about 2 percent—except for a slight increase in rates from Paranaguá to Hamburg (tables 1, 1a, 2, 2a, and 9). Ocean rates from the northern ports to Shanghai declined by 7 percent, and, from the northern ports to Hamburg, declined by 18 percent — except for a 2 percent increase in rates from São Luís to Hamburg. Ocean rates decreased because of lower bunker fuel prices, lower global dry bulk trade due to the COVID-19 outbreak, and a global vessel fleet expansion ([Grain Transportation Report \(GTR\)](#)).

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



Note: Hyphens designate data were unavailable.

Source: Comex Stat, Ministério da Economia.



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In second quarter 2020, Brazilian soybean transportation costs to Shanghai, China—as a percentage of total landed costs—declined by 12-17 percent for the route from northern Mato Grosso to Santos and declined by 16 percent and 19 percent from Santarém and Barcarena, respectively. In Sorriso, Mato Grosso—the largest Brazilian soybean-producing State—second quarter 2020 transportation costs represented 23 percent of the total landed costs of shipping soybeans to Shanghai through Santos, compared with 34 percent in 2008 and 45 percent in 2006. Year to year, average Brazilian soybean export prices decreased by 3 percent, from \$349 per mt to \$337 per mt. Brazilian farmers have benefitted from the fall in value of the Brazilian real, against the U.S. dollar, because soybeans are priced in U.S. dollars but paid in real. Measured in U.S. dollars, soybean average farm gate prices were the same as last year—\$285.44/mt. However, the depreciation of the reais led to higher domestic prices. On average, in real, second quarter 2020 farm gate prices increased by nearly 37 percent, from R\$1,118.15/mt to R\$1,536.62 ([Brazil Central Bank](#) and [Companhia Nacional de Abastecimento \(CONAB\)](#)).

China imported 49 percent more soybeans in second quarter 2020 than in second quarter 2019. In the first 6 months of 2020, China bought 42.7 mmt, nearly 72 percent of Brazil's total soybean exports (59.4 mmt), valued at \$14.5 billion ([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, Barcarena, São Luís, and São Francisco do Sul ([Comex Stat](#), [Ministério da Economia](#)). These six ports accounted for nearly 83 percent of Brazil's total exports. Looking at the split from a north/south perspective, the southern ports of Santos, Rio Grande, Paranaguá, and São Francisco do Sul still dominate the soybean trade to China. These ports accounted for about 78 percent of Brazil's soybean exports to China. Meanwhile, the northeastern ports of São Luís, Vitória, Salvador, and Barcarena accounted for nearly 22 percent of exports to China. The Amazon River ports of Manaus and Santarém accounted for less than 1 percent of exports to China. At the peak of the export season, the ocean freight spread was \$1.25/mt for the route from the northeastern ports of Barcarena, \$28.33/mt from São Luís to Shanghai, and \$27.08/mt from Santos to Shanghai. The ocean freight spread is the cost difference between two vessel routes to the same destination. For more information, contact Delmy L. Salin at [delmy.salin@usda.gov](mailto:delmy.salin@usda.gov).



# Brazil Soybean Transportation

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

	2019 2nd qtr.	2020 2nd qtr.	% Change 2019-20	2019 2nd qtr.	2020 2nd 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	73.96	59.53	-19.5	24.86	19.03	-23.5
Ocean	30.92	27.08	-12.4	30.25	28.58	-5.5
Total transportation	104.88	86.61	-17.4	55.11	47.61	-13.6
Farm gate price <sup>3</sup>	271.70	287.53	5.8	294.72	297.17	0.8
Landed cost	376.58	374.13	-0.6	349.83	344.78	-1.4
Transport % of landed cost	27.8	23.1	-16.9	15.8	13.8	-12.4
	<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	26.49	21.82	-17.6	72.82	58.03	-20.3
Rail <sup>4</sup>	31.39	30.58	-2.6	-	-	-
Ocean	30.92	27.08	-12.4	31.42	28.83	-8.2
Total transportation	88.80	79.48	-10.5	104.24	86.86	-16.7
Farm gate price <sup>3</sup>	271.70	287.53	5.8	271.70	287.53	5.8
Landed cost	360.50	367.00	1.8	375.94	374.39	-0.4
Transport % of landed cost	24.6	21.7	-12.1	27.7	23.2	-16.3

<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.

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 2nd qtr.	2020 2nd qtr.	% Change 2019-20	2019 2nd qtr.	2020 2nd 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	47.34	38.23	-19.2	31.80	27.02	-15.0
Ocean	30.58	28.08	-8.2	30.58	28.33	-7.4
Total transportation	77.92	66.31	-14.9	62.38	55.35	-11.3
Farm gate price <sup>3</sup>	271.70	287.53	5.8	278.70	294.95	5.8
Landed cost	349.62	353.84	1.2	341.08	350.31	2.7
Transport % of landed cost	22.3	18.7	-15.9	18.3	15.8	-13.6
	<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	38.41	29.98	-22.0	45.66	33.27	-27.2
Barge <sup>4</sup>	-	-	-	18.30	14.36	-21.5
Ocean	30.58	28.33	-7.4	29.92	28.33	-5.3
Total transportation	68.99	58.31	-15.5	93.89	75.96	-19.1
Farm gate price <sup>3</sup>	285.28	286.59	0.5	271.70	287.53	5.8
Landed cost	354.27	344.90	-2.6	365.59	363.48	-0.6
Transport % of landed cost	19.5	16.9	-13.2	25.7	20.9	-18.6

<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 2nd qtr.	2020 2nd qtr.	% Change 2019-20	2019 2nd qtr.	2020 2nd 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	73.96	59.53	-19.5	24.86	19.03	-23.5
Ocean	21.50	20.50	-4.7	21.25	20.75	-2.4
Total transportation	95.46	80.03	-16.2	46.11	39.78	-13.7
Farm gate price <sup>3</sup>	271.70	287.53	5.8	294.72	297.17	0.8
Landed cost	367.16	367.55	0.1	340.83	336.95	-1.1
Transport % of landed cost	26.0	21.8	-16.3	13.5	11.8	-12.7
	<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	26.49	21.82	-17.6	72.82	58.03	-20.3
Rail <sup>4</sup>	31.39	30.58	-2.6	-	-	-
Ocean	21.50	20.50	-4.7	21.25	21.50	1.2
Total transportation	79.38	72.90	-8.2	94.07	79.53	-15.5
Farm gate price <sup>3</sup>	271.70	287.53	5.8	271.70	287.53	5.8
Landed cost	351.08	360.42	2.7	365.77	367.06	0.4
Transport % of landed cost	22.6	20.2	-10.5	25.7	21.7	-15.8

<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 2nd qtr.	2020 2nd qtr.	% Change 2019-20	2019 2nd qtr.	2020 2nd 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	47.34	38.23	-19.2	31.80	27.02	-15.0
Ocean	20.25	16.00	-21.0	17.10	17.50	2.3
Total transportation	67.59	54.23	-19.8	48.90	44.52	-9.0
Farm gate price <sup>3</sup>	271.70	287.53	5.8	278.70	294.95	5.8
Landed cost	339.29	341.76	0.7	327.60	339.48	3.6
Transport % of landed cost	19.9	15.9	-20.3	14.9	13.1	-12.1
	<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	38.41	29.98	-22.0	45.66	33.27	-27.2
Barge <sup>4</sup>	-	-	-	18.30	14.36	-21.5
Ocean	17.10	17.50	2.3	17.85	15.00	-16.0
Total transportation	55.51	47.48	-14.5	81.82	62.63	-23.5
Farm gate price <sup>3</sup>	285.28	286.59	0.5	271.70	287.53	5.8
Landed cost	340.79	334.07	-2.0	353.52	350.15	-1.0
Transport % of landed cost	16.3	14.2	-12.7	23.1	17.9	-22.7

<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.

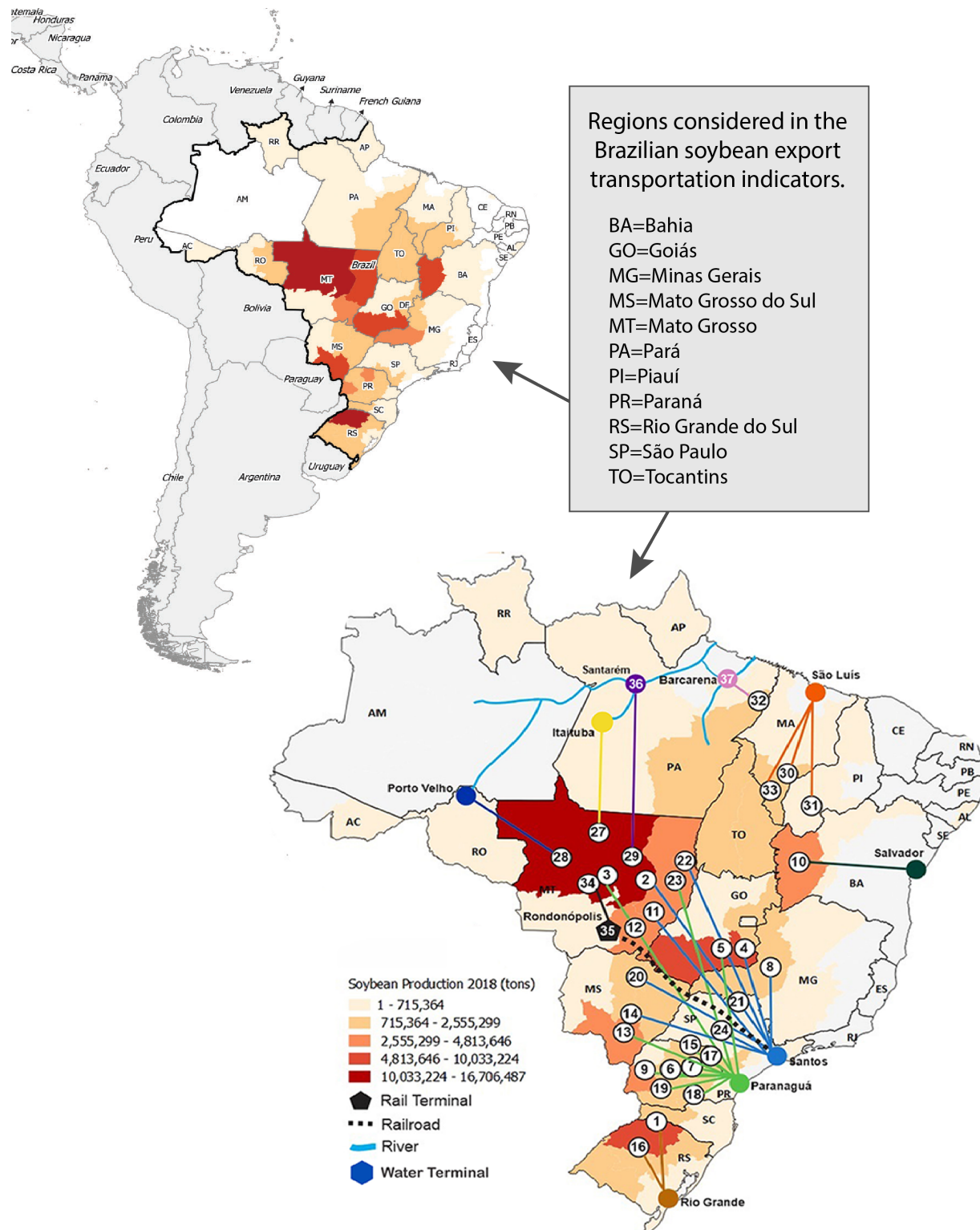




# Brazil Soybean Transportation

## 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.
	North MT <sup>1</sup> - Santos <sup>2</sup> by truck —US\$/mt—					North MT <sup>1</sup> - Paranaguá <sup>2</sup> —US\$/mt—				
Truck	68.33	59.53			63.93	67.48	58.03			62.76
Ocean	35.50	27.08			31.29	37.25	28.83			33.04
Total transportation	103.83	86.61			95.22	104.73	86.86			95.80
Farm gate price <sup>3</sup>	282.59	287.53			285.06	282.59	287.53			285.06
Landed cost	386.43	374.13			380.28	387.32	374.39			380.86
Transport % of landed cost	26.9	23.1			25.0	27.0	23.2			25.1
	North MT <sup>1</sup> - Santos <sup>2</sup> by rail —US\$/mt—					Northwest RS <sup>1</sup> - Rio Grande <sup>2</sup> —US\$/mt—				
Truck	24.79	21.82			23.30	22.92	19.03			20.97
Rail <sup>4</sup>	37.73	30.58			34.15	-	-			-
Ocean	35.50	27.08			31.29	37.00	28.58			32.79
Total transportation	98.02	79.48			88.75	59.92	47.61			53.76
Farm gate price <sup>3</sup>	282.59	287.53			285.06	300.04	297.17			298.61
Landed cost	380.61	367.00			373.81	359.97	344.78			352.37
Transport % of landed cost	25.8	21.7			23.7	16.6	13.8			15.2

<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.
	North MT <sup>1</sup> - Santos <sup>2</sup> by truck —US\$/mt—					North MT <sup>1</sup> - Paranaguá <sup>2</sup> —US\$/mt—				
Truck	68.33	59.53			63.93	67.48	58.03			62.76
Ocean	29.25	20.50			24.88	30.00	21.50			25.75
Total transportation	97.58	80.03			88.81	97.48	79.53			88.51
Farm gate price <sup>3</sup>	282.59	287.53			285.06	282.59	287.53			285.06
Landed cost	380.18	367.55			373.87	380.07	367.06			373.57
Transport % of landed cost	25.7	21.8			23.7	25.6	21.7			23.7
	North MT <sup>1</sup> - Santos <sup>2</sup> by rail —US\$/mt—					Northwest RS <sup>1</sup> - Rio Grande <sup>2</sup> —US\$/mt—				
Truck	24.79	21.82			23.30	22.92	19.03			20.97
Rail <sup>4</sup>	37.73	30.58			34.15	-	-			-
Ocean	29.25	20.50			24.88	29.50	20.75			25.13
Total transportation	91.77	72.90			82.33	52.42	39.78			46.10
Farm gate price <sup>3</sup>	282.59	287.53			285.06	300.04	297.17			298.61
Landed cost	374.36	360.42			367.39	352.47	336.95			344.71
Transport % of landed cost	24.5	20.2			22.4	14.9	11.8			13.3

<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 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.
	North MT <sup>1</sup> - Santarém <sup>2</sup> —US\$/mt—					South MA <sup>1</sup> - São Luís <sup>2</sup> —US\$/mt—				
Truck	44.10	38.23			41.17	28.86	27.02			27.94
Ocean	36.50	28.08			32.29	36.75	28.33			32.54
Total transportation	80.60	66.31			73.46	65.61	55.35			60.48
Farm gate price <sup>3</sup>	282.59	287.53			285.06	300.23	294.95			297.59
Landed cost	363.20	353.84			358.52	365.83	350.31			358.07
Transport % of landed cost	22.2	18.7			20.5	17.9	15.8			16.9
	Southwest PI <sup>1</sup> - São Luís <sup>2</sup> —US\$/mt—					North MT <sup>1</sup> - Barcarena <sup>2</sup> —US\$/mt—				
Truck	32.49	29.98			31.23	37.11	33.27			35.19
Barge <sup>4</sup>	-	-			-	16.42	14.36			15.39
Ocean	36.75	28.33			32.54	38.50	28.33			33.42
Total transportation	69.24	58.31			63.77	92.03	75.96			83.99
Farm gate price <sup>3</sup>	302.03	286.59			294.31	282.59	287.53			285.06
Landed cost	371.27	344.90			358.09	374.62	363.48			369.05
Transport % of landed cost	18.6	16.9			17.8	24.6	20.9			22.7

<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.
	North MT <sup>1</sup> - Santarém <sup>2</sup> —US\$/mt—					South MA <sup>1</sup> - São Luís <sup>2</sup> —US\$/mt—				
Truck	44.10	38.23			41.17	28.86	27.02			27.94
Ocean	25.00	16.00			20.50	22.25	17.50			19.88
Total transportation	69.10	54.23			61.67	51.11	44.52			47.81
Farm gate price <sup>3</sup>	282.59	287.53			285.06	300.23	294.95			297.59
Landed cost	351.70	341.76			346.73	351.33	339.48			345.41
Transport % of landed cost	19.6	15.9			17.8	14.5	13.1			13.8
	Southwest PI <sup>1</sup> - São Luís <sup>2</sup> —US\$/mt—					North MT <sup>1</sup> - Barcarena <sup>2</sup> --US\$/mt-				
Truck	32.49	29.98			31.23	37.11	33.27			35.19
Barge <sup>4</sup>	-	-			-	16.42	14.36			15.39
Ocean	22.25	17.50			19.88	24.00	15.00			19.50
Total transportation	54.74	47.48			51.11	77.53	62.63			70.08
Farm gate price <sup>3</sup>	302.03	286.59			294.31	282.59	287.53			285.06
Landed cost	356.77	334.07			345.42	360.12	350.15			355.14
Transport % of landed cost	15.3	14.2			14.8	21.5	17.9			19.7

<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			7.28
2	North MT (Sorriso)	Santos	1,190	3.0	5.74	5.00			5.37
3	North MT (Sorriso)	Paranaguá	1,262	2.9	5.35	4.60			4.97
4	South GO (Rio Verde)	Santos	587	4.8	5.54	5.07			5.30
5	South GO (Rio Verde)	Paranaguá	726	3.9	5.60	4.87			5.24
6	North Central PR (Londrina)	Paranaguá	268	3.2	8.00	6.90			7.45
7	Western Central PR (Mamborê)	Paranaguá	311	2.4	7.22	6.37			6.79
8	Triangle MG (Uberaba)	Santos	339	3.0	7.66	6.90			7.28
9	West PR (Assis Chateaubriand)	Paranaguá	377	2.3	6.71	5.75			6.23
10	West Extreme BA (São Desidério)	Salvador	535	6.6	5.97	5.62			5.80
11	Southeast MT (Primavera do Leste)	Santos	901	2.4	5.26	4.64			4.95
12	Southeast MT (Primavera do Leste)	Paranaguá	975	2.2	5.05	4.36			4.70
13	Southwest MS (Maracaju)	Paranaguá	612	3.5	5.99	5.21			5.60
14	Southwest MS (Maracaju)	Santos	652	3.2	5.82	5.10			5.46
15	West PR (Assis Chateaubriand)	Santos	550	1.6	5.94	5.11			5.53
16	East GO (Cristalina)	Santos	585	1.9	6.35	5.73			6.04
17	North PR (Cornélio Procopio)	Paranaguá	306	1.8	6.46	5.56			6.01
18	Eastern Central PR (Castro)	Paranaguá	130	2.0	10.54	8.84			9.69
19	South Central PR (Guarapuava)	Paranaguá	204	2.3	9.63	8.21			8.92
20	North Central MS (São Gabriel do Oeste)	Santos	720	2.4	5.06	4.38			4.72
21	Ribeirão Preto SP (Guairá)	Santos	314	0.0	6.40	5.50			5.95
22	Northeast MT (Canarana)	Santos	950	3.3	5.55	4.80			5.17
23	East MS (Chapadão do Sul)	Santos	607	0.0	5.08	4.48			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			4.98
25	Western Central RS (Tupanciretã)	Rio Grande	273	2.5	7.10	5.85			6.47
26	Southwest PR(Chopinzinho)	Paranaguá	291	1.7	7.57	6.65			7.11
27	North MT (Sorriso)	Itaituba	672	5.4	5.52	4.95			5.24
28	North MT (Sorriso)	Porto Velho	632	5.7	5.22	4.45			4.83
29	North MT (Sorriso)	Santarém	876	4.1	5.03	4.36			4.70
30	South MA (Balsas)	São Luís	482	2.1	5.99	5.61			5.80
31	Southwest PI (Bom Jesus)	São Luís	606	2.6	5.36	4.95			5.16
32	Southeast PA (Paragominas)	Barcarena	249	1.5	7.17	6.61			6.89
33	East TO (Campos Lindos)	São Luís	842	1.6	5.04	4.40			4.72
	<b>Weighted average</b>		<b>587</b>	<b>100.0</b>	<b>6.33</b>	<b>5.52</b>			<b>5.93</b>
34	North MT (Sorriso)	Rondonópolis (Rail terminal)	382		6.49	5.71			6.10
35	Rondonópolis MT (Rail terminal) <sup>6</sup>	Santos	1,019		3.70	3.00			3.35
36	Itaituba PA (Barge terminal) <sup>7</sup>	Santarém	224		4.73	4.23			4.48
37	Itaituba PA (Barge terminal) <sup>7</sup>	Barcarena	738		2.23	1.95			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				
Aug-16	7.33	-1.7	126.41				
Sep-16	6.35	-13.3	109.53				
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.

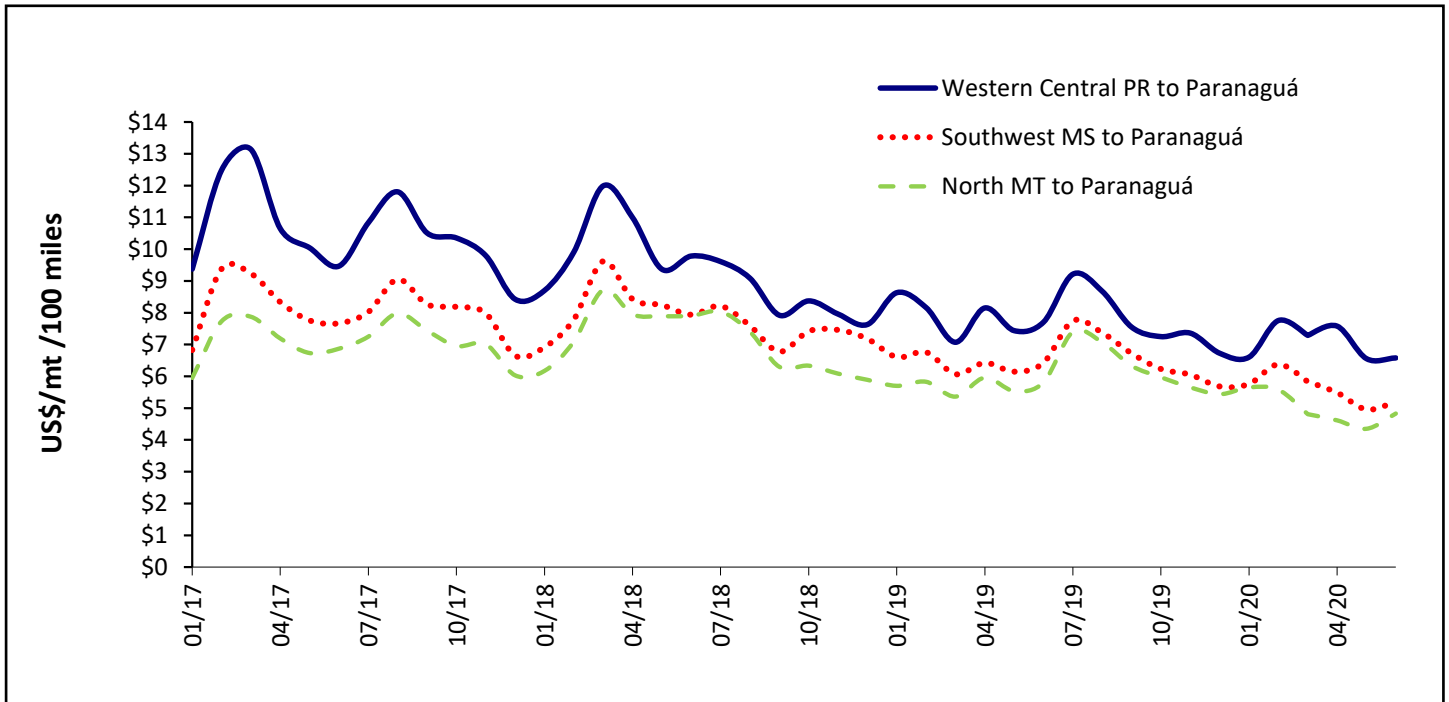
Source: University of São Paulo, Escola Superior de Agricultura “Luiz de Queiroz,” Brazil (ESALQ/ USP) and USDA, Agricultural Marketing Service.





# Brazil Soybean Transportation

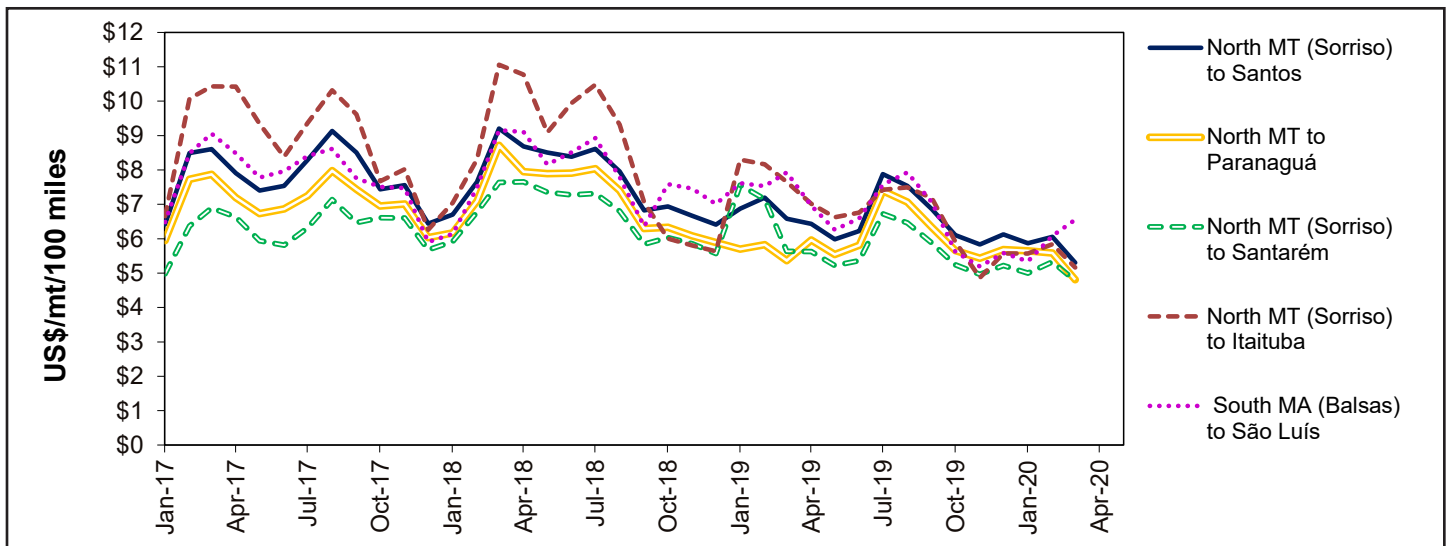
Figure 3. Truck rates for selected southern Brazilian soybean export transportation routes, 2017-20



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



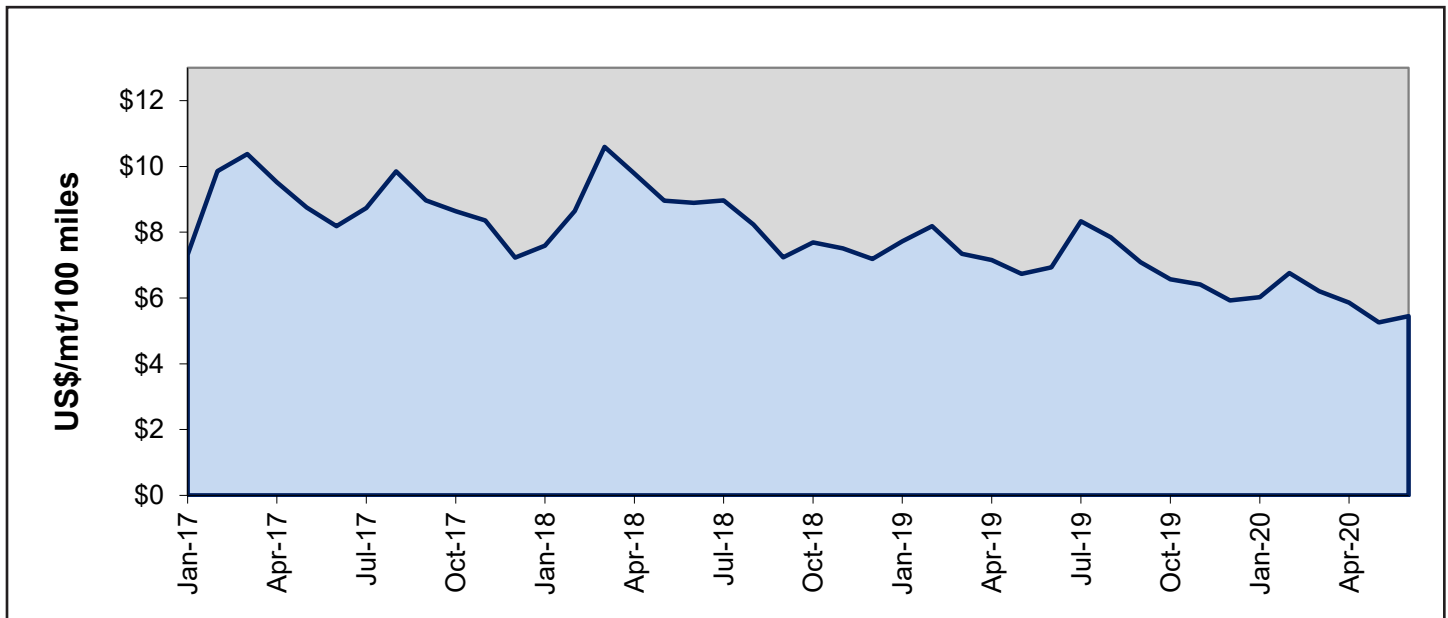
Note: mt = metric ton. MT= Mato Grosso and MA = Maranhão.

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		
Paranaguá	Germany (Hamburg)	30.00	21.50		
Rio Grande	Germany (Hamburg)	29.50	20.75		
Santarém	Germany (Hamburg)	25.00	16.00		
São Luís	Germany (Hamburg)	22.25	17.50		
Barcarena	Germany (Hamburg)	24.00	15.00		
Santos	China (Shanghai)	35.50	27.08		
Paranagua	China (Shanghai)	37.25	28.83		
Rio Grande	China (Shanghai)	37.00	28.58		
Santarém	China (Shanghai)	36.50	28.08		
São Luís	China (Shanghai)	36.75	28.33		
Barcarena	China (Shanghai)	38.50	28.33		

\*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

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## 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](#)
- [Figure 5. Brazilian soybean export truck transportation weighted average prices, 2017-20](#)
- [Table 1. Quarterly costs of transporting Brazilian soybeans from the southern ports to Shanghai, China](#)
- [Table 1a. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Shanghai, China](#)
- [Table 2. Quarterly costs of transporting Brazilian soybeans from the southern ports to Hamburg, Germany](#)
- [Table 2a. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Hamburg, Germany](#)
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- [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 \(US\\$/metric ton\)](#)

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## Related Websites:

- [Soybean Transportation Guide: Brazil 2019 \(PDF\)](#)
- Prior Articles: [Brazil Soybean Transportation](#)
- Related Articles: [Grain Transportation Report: May 28, 2019 \(PDF\)](#)

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