

# Brazil Soybean Transportation



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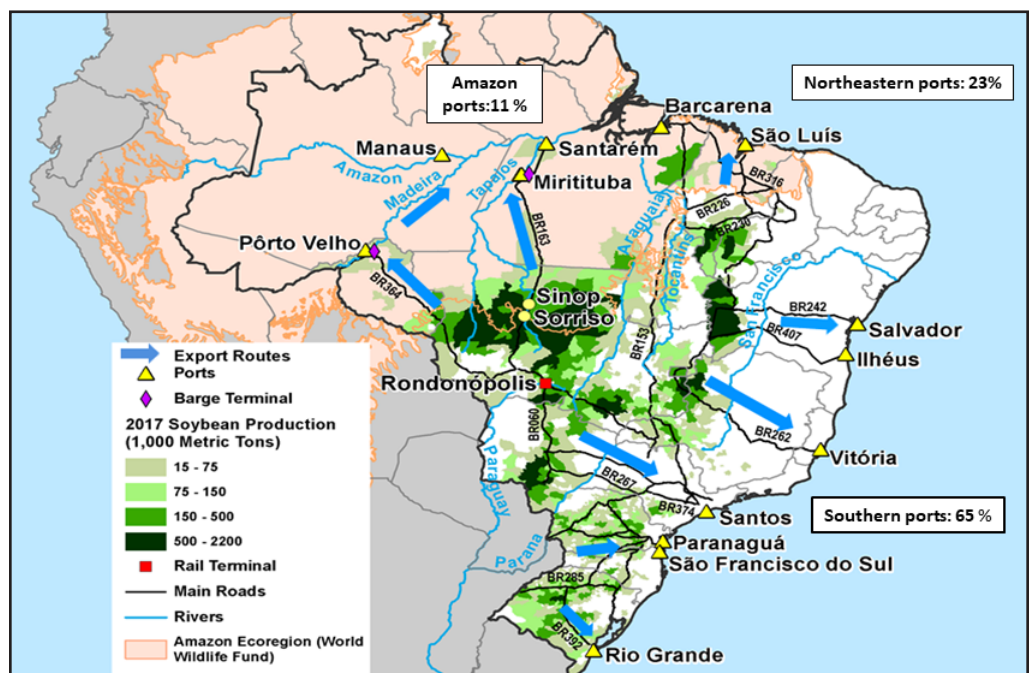
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## Transportation Costs Decrease, Soybean Exports Strong, and Currency Weakened

The cost of shipping a metric ton (mt) of soybeans, 100 miles by truck, decreased by about 13 percent from \$8.94 per mt in the first quarter of 2018, to \$7.75 per mt in 2019's first quarter (table 8). Ocean freight rates declined because of lower Chinese iron ore imports and the collapse of a mine-waste dam in southeastern Brazil that disrupted Brazilian iron supply ([Wall Street Journal](#) and [Grain Transportation Report](#)). On average, ocean rates fell about 16 percent for the Brazil-Hamburg, Germany route, as well as for the North and Northeastern route to Shanghai, China. Ocean rates to Shanghai, China, from the southern Brazilian ports of Santos and Rio Grande, declined 0.8-4.3 percent from the first quarter of 2018 (tables 1, 1a, and 9). In Sorriso, North MT (the largest Brazilian soybean-producing state), transportation costs represented 29 percent of the total landed costs of shipping soybeans to Shanghai through Santos, and 25 percent

**Figure 1. Southern ports exported 65 percent of Brazilian soybeans, January-April 2019**

Data Sources: IBGE – Produção Agrícola Municipal, ESRI, Lloyd's Ports, and World Wildlife Fund.  
 Map Produced by USDA/FAS/OGA/IPAD





# Brazil Soybean Transportation

through the port of Santarém (tables 1 and 1a). In the first quarter of 2019, shipping soybeans cost \$20.06 per mt more by truck than rail, from Sorriso, North MT to Shanghai, China, through the Port of Santos (table 1). Sorriso is located 1,190 miles from the Port of Santos by truck, and 1,401 miles by rail (table 7).

During the first quarter of 2019, Brazil exported record soybean volumes, mostly to China, through the Ports of Santos, Paranaguá, São Luis, Barcarena, Rio Grande, Vitoria, Santarem and São Francisco do Sul (figure 1). Total soybean exports increased nearly 23 percent to 16.3 million metric tons (mmt) compared with 13.3 mmt exported in the first quarter of 2018 ([Secretariat of Foreign Trade \(SECEX\), MDIC](#)).

The Brazilian real (R\$) depreciated 16 percent against the U.S. dollar, to R\$3.77 per US\$1.00 from R\$3.24 in 2018's first quarter. This is a 2 percent decrease from the 2018 average of R\$3.69 per US\$1.00. Average soybean export prices decreased to \$368 per mt from \$394 at the same time last year. The weakening of the Brazilian real against the U.S. dollar partially offset the nearly 10 percent fall in farm gate prices, when measured in U.S. dollars ([CONAB](#)). Soybeans are priced in U.S. dollars but paid in Reais. Farm prices measured in Reais increased, on average, nearly 5 percent.

China is Brazil's major soybean buyer, accounting for 75 percent of total exports, followed by Spain, Iran, the Netherlands, and Turkey. From January to April, China bought 19.7 million mt of Brazilian soybeans, valued at US\$7.1 billion ([SECEX, MDIC](#)). The southern ports of Santos, Paranaguá, Rio Grande, and São Francisco do Sul accounted for nearly 65 percent of total soybean exports and 74 percent of exports to China (figure 1). The Northeastern ports of São Luís, Vitoria, Barcarena, and Salvador accounted for 23 percent of total Brazilian soybeans exports and about the same proportion of soybean exports to China. The Northern ports of Santarém and Manaus represented 11 percent of total Brazilian soybean exports and nearly 3 percent of exports to China. 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**

	2018 1st qtr	2019 1st qtr	% Change 2018-2019	2018 1st qtr	2019 1st qtr	% Change 2018-2019
	<b>North MT<sup>1</sup> - Santos<sup>2</sup> —US\$/mt—</b>			<b>Northwest RS<sup>1</sup> - Rio Grande<sup>2</sup> —US\$/mt—</b>		
Truck	93.44	81.92	-12.3	31.51	26.05	-17.3
Ocean	32.50	32.25	-0.8	33.00	31.58	-4.3
Total transportation	125.94	114.17	-9.4	64.51	57.63	-10.7
Farm gate price <sup>3</sup>	305.85	275.38	-10.0	334.43	308.52	-7.7
Landed cost	431.80	389.54	-9.8	398.94	366.15	-8.2
Transport % of landed cost	29.2	29.3	0.5	16.2	15.7	-2.7
	<b>North MT<sup>1</sup> - Santos<sup>2</sup> BY RAIL —US\$/mt—</b>			<b>South GO<sup>1</sup> - Santos<sup>2</sup> —US\$/mt—</b>		
Truck	39.07	29.89	-23.5	92.46	71.05	-23.2
Rail <sup>4</sup> - Santos	46.94	41.21	-12.2	-	-	-
Ocean	32.50	32.25	-0.8	32.00	33.75	5.5
Total transportation	118.51	103.36	-12.8	124.46	104.80	-15.8
Farm gate price <sup>3</sup>	305.85	275.38	-10.0	305.85	275.38	-10.0
Landed cost	424.36	378.73	-10.8	430.31	380.18	-11.7
Transport % of landed cost	27.9	27.3	-2.3	28.9	27.6	-4.7

<sup>1</sup>Producing regions: RS = Rio Grande Do Sul, MT= Mato Grosso, GO = Goiás

<sup>2</sup>Export ports

<sup>3</sup>Source: Companhia Nacional de Abastecimento (CONAB) [www.conab.gov.br](http://www.conab.gov.br)

<sup>4</sup>Note: In Brazil there are no public/official rail tariff rates. Rail rates can be approximately 30 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the railroad company and shippers (Source: ESALQ-LOG, 2018).

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS.



# Brazil Soybean Transportation

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

	2018 1st qtr	2019 1st qtr	% Change 2018-2019	2018 1st qtr	2019 1st qtr	% Change 2018-2019
	<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	61.09	59.40	-2.8	36.57	37.04	1.3
Ocean	38.50	32.25	-16.2	37.00	31.00	-16.2
Total transportation	99.59	91.65	-8.0	73.57	68.04	-7.5
Farm gate price <sup>3</sup>	305.85	275.38	-10.0	357.97	298.43	-16.6
Landed cost	405.44	367.03	-9.5	431.54	366.47	-15.1
Transport % of landed cost	24.6	25.0	1.7	17.0	18.6	8.9
	<b>Southwest PI<sup>1</sup> - São Luís<sup>2</sup> —US\$/mt—</b>					
Truck	44.28	45.24	2.2			
Ocean	37.00	31.00	-16.2			
Total transportation	81.28	76.24	-6.2			
Farm gate price <sup>3</sup>	321.69	292.96	-8.9			
Landed cost	402.97	369.20	-8.4			
Transport % of landed cost	20.2	20.7	2.4			

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

<sup>2</sup>Export ports

<sup>3</sup>Source: Companhia Nacional de Abastecimento (CONAB) [www.conab.gov.br](http://www.conab.gov.br)

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

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

	2018 1st qtr	2019 1st qtr	% Change 2018-2019	2018 1st qtr	2019 1st qtr	% Change 2018-2019
	<b>North MT<sup>1</sup> - Santos<sup>2</sup> —US\$/mt—</b>			<b>Northwest RS<sup>1</sup> - Rio Grande<sup>2</sup> —US\$/mt—</b>		
Truck	93.44	81.92	-12.3	31.51	26.05	-17.3
Ocean	27.00	23.00	-14.8	28.00	23.00	-17.9
Total transportation	120.44	104.92	-12.9	59.51	49.05	-17.6
Farm gate price <sup>3</sup>	305.85	275.38	-10.0	334.43	308.52	-7.7
Landed cost	426.30	380.29	-10.8	393.94	357.57	-9.2
Transport % of landed cost	28.3	27.6	-2.4	15.1	13.7	-9.2
	<b>North MT<sup>1</sup> - Santos<sup>2</sup> BY RAIL —US\$/mt—</b>			<b>South GO<sup>1</sup> - Santos<sup>2</sup> —US\$/mt—</b>		
Truck	39.07	29.89	-23.5	92.46	71.05	-23.2
Rail <sup>4</sup> - Santos	46.94	41.21	-12.2	-	-	-
Ocean	27.00	23.00	-14.8	28.00	23.00	-17.9
Total transportation	113.01	94.11	-16.7	120.46	94.05	-21.9
Farm gate price <sup>3</sup>	305.85	275.38	-10.0	305.85	275.38	-10.0
Landed cost	418.86	369.48	-11.8	426.31	369.43	-13.3
Transport % of landed cost	27.0	25.5	-5.6	28.3	25.5	-9.9

<sup>1</sup>Producing regions: RS = Rio Grande Do Sul, MT= Mato Grosso, GO = Goiás

<sup>2</sup>Export ports

<sup>3</sup>Source: Companhia Nacional de Abastecimento (CONAB) [www.conab.gov.br](http://www.conab.gov.br)

<sup>4</sup>Note: In Brazil there are no public/official rail tariff rates. Rail rates can be approximately 30 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the railroad company and shippers (Source: ESALQ-LOG, 2018).

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

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

	2018 1st qtr	2019 1st qtr	% Change 2018-2019	2018 1st qtr	2019 1st qtr	% Change 2018-2019
	<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	61.09	59.40	-2.8	36.57	37.04	1.3
Ocean	25.00	21.00	-16.0	21.00	18.00	-14.3
Total transportation	86.09	80.40	-6.6	57.57	55.04	-4.4
Farm gate price <sup>3</sup>	305.85	275.38	-10.0	357.97	298.43	-16.6
Landed cost	391.94	355.78	-9.2	415.54	353.47	-14.9
Transport % of landed cost	22.0	22.6	2.9	13.9	15.6	12.4
	<b>Southwest PI<sup>1</sup> - São Luís<sup>2</sup> —US\$/mt—</b>					
Truck	44.28	45.24	2.2			
Ocean	21.00	18.00	-14.3			
Total transportation	65.28	63.24	-3.1			
Farm gate price <sup>3</sup>	321.69	292.96	-8.9			
Landed cost	386.97	356.20	-8.0			
Transport % of landed cost	16.9	17.8	5.2			

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

<sup>2</sup>Export ports

<sup>3</sup>Source: Companhia Nacional de Abastecimento (CONAB) [www.conab.gov.br](http://www.conab.gov.br)

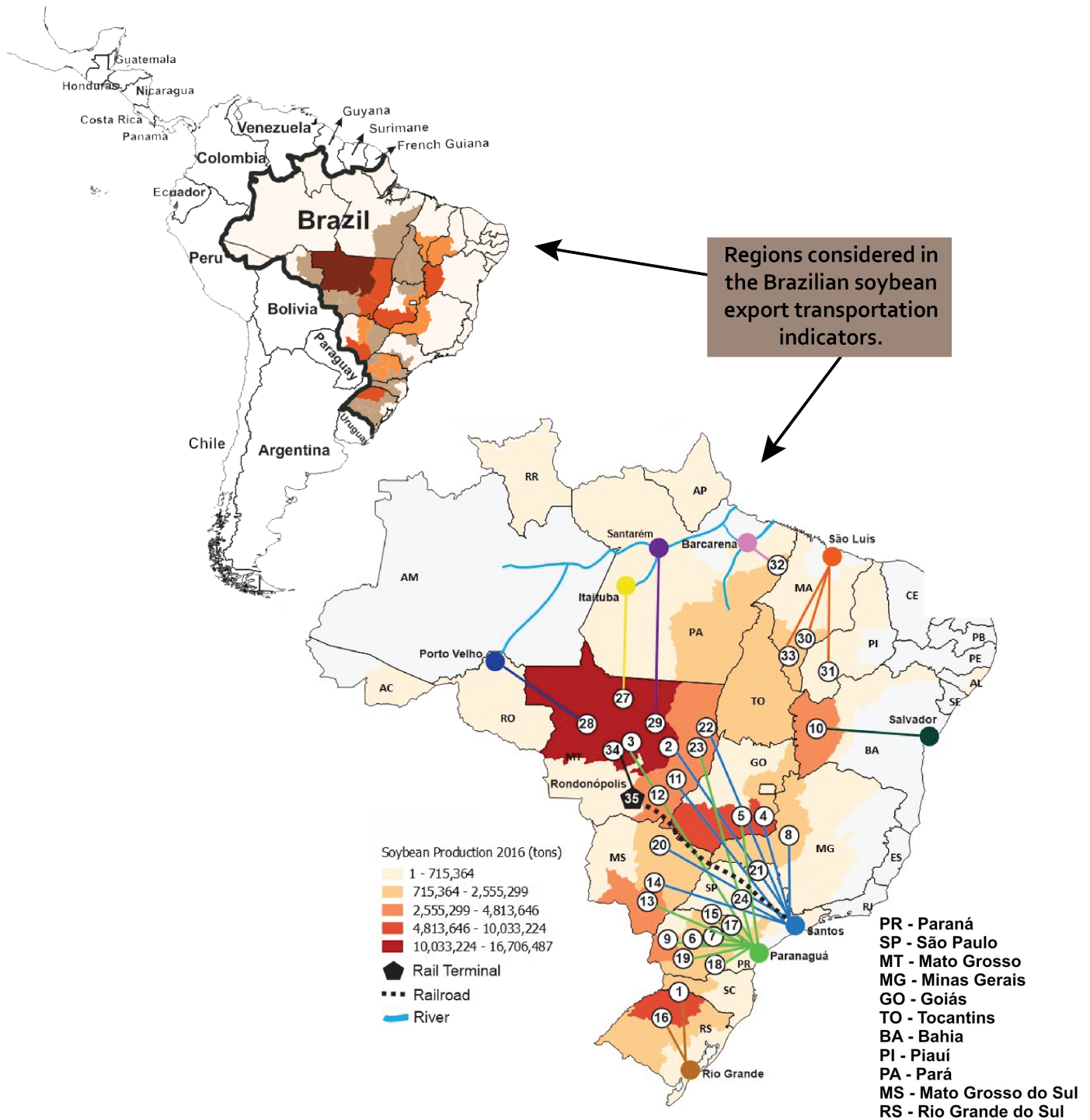
Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

## 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 80 percent of Brazilian soybean production, 2017

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

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

	—2019—									
	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></b> <b>BY TRUCK</b> —US\$/mt—					<b>North MT<sup>1</sup> - Paranaguá<sup>2</sup></b> —US\$/mt—				
Truck	81.92				81.92	71.05				71.05
Ocean	32.25				32.25	33.75				33.75
Total transportation	114.17				114.17	104.80				104.80
Farm gate price <sup>3</sup>	275.38				275.38	275.38				275.38
Landed cost	389.54				389.54	380.18				380.18
Transport % of landed cost	29.3				29.3	27.6				27.6
	<b>North MT<sup>1</sup> - Santos<sup>2</sup></b> <b>BY RAIL</b> —US\$/mt—					<b>Northwest RS<sup>1</sup> - Rio Grande<sup>2</sup></b> —US\$/mt—				
Truck	29.89				29.89	26.05				26.05
Rail <sup>4</sup> - Santos	41.21				41.21	-				-
Ocean	32.25				32.25	31.58				31.58
Total transportation	103.36				103.36	57.63				57.63
Farm gate price <sup>3</sup>	275.38				275.38	308.52				308.52
Landed cost	378.73				378.73	366.2				366.15
Transport % of landed cost	27.3				27.3	15.7				15.7

<sup>1</sup>Producing regions: RS = Rio Grande Do Sul, MT= Mato Grosso, GO = Goiás, PR = Paraná

<sup>2</sup>Export ports

<sup>3</sup>Source: Companhia Nacional de Abastecimento (CONAB) [www.conab.gov.br](http://www.conab.gov.br); na: not available

<sup>4</sup>Note: In Brazil there are no public/official rail tariff rates. Rail rates can be approximately 30 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the railroad company and shippers (Source: ESALQ-LOG, 2018)

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS





# Brazil Soybean Transportation

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

	—2019—									
	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></b> <b>BY TRUCK</b> <b>—US\$/mt—</b>					<b>North MT<sup>1</sup> - Paranaguá<sup>2</sup></b> <b>—US\$/mt—</b>				
Truck	81.92				81.92	71.05				71.05
Ocean	23.00				23.00	23.00				23.00
Total transportation	104.92				104.92	94.05				94.05
Farm gate price <sup>3</sup>	275.38				275.38	275.38				275.38
Landed cost	380.29				380.29	369.43				369.43
Transport % of landed cost	27.6				27.59	25.5				25.5
	<b>North MT<sup>1</sup> - Santos<sup>2</sup></b> <b>BY RAIL</b> <b>—US\$/mt—</b>					<b>Northwest RS<sup>1</sup> - Rio Grande<sup>2</sup></b> <b>—US\$/mt—</b>				
Truck	29.89				29.89	26.05				26.05
Rail <sup>4</sup> - Santos	41.21				41.21	-				-
Ocean	23.00				23.00	23.00				23.00
Total transportation	94.11				94.11	49.05				49.05
Farm gate price <sup>3</sup>	275.38				275.38	308.52				308.52
Landed cost	369.48				369.48	357.57				357.57
Transport % of landed cost	25.5				25.47	13.7				13.7

<sup>1</sup>Producing regions: RS = Rio Grande Do Sul, MT= Mato Grosso, GO = Goiás, PR = Paraná

<sup>2</sup>Export ports

<sup>3</sup>Source: Companhia Nacional de Abastecimento (CONAB) [www.conab.gov.br](http://www.conab.gov.br)

<sup>4</sup>Note: In Brazil there are no public/official rail tariff rates. Rail rates can be approximately 30 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the railroad company and shippers (Source: ESALQ-LOG, 2018)

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS

<sup>1</sup>Table defining routes by number is shown on page 14

<sup>2</sup>Regions comprised about 80 percent of Brazilian soybean production, 2016

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

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

	—2019—									
	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	59.40				59.40	37.04				37.04
Ocean	32.25				32.25	31.00				31.00
Total transportation	91.65				91.65	68.04				68.04
Farm gate price <sup>3</sup>	275.38				275.38	298.43				298.43
Landed cost	367.03				367.03	366.47				366.47
Transport % of landed cost	25.0				25.0	18.6				18.6
	Southwest PI <sup>1</sup> - São Luís <sup>2</sup> —US\$/mt—									
Truck	45.24				45.24					
Ocean	31.00				31.00					
Total transportation	76.24				76.24					
Farm gate price <sup>3</sup>	292.96				292.96					
Landed cost	369.20				369.20					
Transport % of landed cost	20.7				20.7					

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

<sup>2</sup>Export ports

<sup>3</sup>Source: Companhia Nacional de Abastecimento (CONAB) [www.conab.gov.br](http://www.conab.gov.br)

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

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

	—2019—									
	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	59.40				59.40	37.04				37.04
Ocean	21.00				21.00	18.00				18.00
Total transportation	80.40				80.40	55.04				55.04
Farm gate price <sup>3</sup>	275.38				275.38	298.43				298.43
Landed cost	355.78				355.78	353.47				353.47
Transport % of landed cost	22.6				22.6	15.6				15.6
	Southwest PI <sup>1</sup> - São Luís <sup>2</sup> —US\$/mt—									
Truck	45.24				45.24					
Ocean	18.00				18.00					
Total transportation	63.24				63.24					
Farm gate price <sup>3</sup>	292.96				292.96					
Landed cost	356.20				356.20					
Transport % of landed cost	17.8				17.8					

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

<sup>2</sup>Export ports

<sup>3</sup>Source: Companhia Nacional de Abastecimento (CONAB) [www.conab.gov.br](http://www.conab.gov.br); na: not available

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

**Table 7. Quarterly truck rates for selected Brazilian soybean export transportation routes, 2019**

Route #	Origin <sup>1</sup> (reference city)	Destination	Distance (miles) <sup>2</sup>	Share (%) <sup>3</sup>	Freight Price (US\$)				
					1st qtr	2nd qtr	3rd qtr	4th qtr	Avg
					— (per 100 miles) <sup>4</sup> —				
1	Northwest RS <sup>5</sup> (Cruz Alta)	Rio Grande	288	12.0	9.05				9.05
2	North MT (Sorriso)	Santos	1,190	3.0	6.88				6.88
3	North MT (Sorriso)	Paranaguá	1,262	2.8	5.63				5.63
4	South GO (Rio Verde)	Santos	587	5.1	7.29				7.29
5	South GO (Rio Verde)	Paranaguá	726	4.1	6.15				6.15
6	North Central PR (Londrina)	Paranaguá	268	3.3	8.86				8.86
7	Western Central PR (Mamborê)	Paranaguá	311	2.6	7.96				7.96
8	Triangle MG (Uberaba)	Santos	339	3.1	10.13				10.13
9	West PR (Assis Chateaubriand)	Paranaguá	377	2.5	7.45				7.45
10	West Extreme BA (São Desidério)	Salvador	535	5.6	7.03				7.03
11	Southeast MT (Primavera do Leste)	Santos	901	2.5	6.23				6.23
12	Southeast MT (Primavera do Leste)	Paranaguá	975	2.3	5.21				5.21
13	Southwest MS (Maracaju)	Paranaguá	612	3.3	6.48				6.48
14	Southwest MS (Maracaju)	Santos	652	3.1	7.67				7.67
15	West PR (Assis Chateaubriand)	Santos	550	1.7	7.76				7.76
16	East GO (Cristalina)	Santos	585	1.9	8.18				8.18
17	North PR (Cornélio Procópio)	Paranaguá	306	1.8	7.16				7.16
18	Eastern Central PR (Castro)	Paranaguá	130	2.1	12.15				12.15
19	South Central PR (Guarapuava)	Paranaguá	204	2.3	11.22				11.22
20	North Central MS (São Gabriel do Oeste)	Santos	720	2.3	6.79				6.79
21	Ribeirão Preto SP (Guairá)	Santos	314	0.0	8.57				8.57
22	Northeast MT (Canarana)	Santos	950	3.4	7.04				7.04
23	East MS (Chapadão do Sul)	Santos	607	0.0	6.71				6.71
24	Northeast MT (Canarana)	Paranaguá	1,075	3.0	6.04				6.04

<sup>1</sup>Although each origin region comprises several cities, the main city is considered as a reference to establish the freight price; na = not available

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

<sup>3</sup>Share is measured as a percentage of total production.

<sup>4</sup>US\$ per metric ton (average monthly exchange rate from “Banco Central do Brasil” was used to convert Brazilian reais to the U.S. dollar)

<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, TO=Tocantins

<sup>6</sup>Note: In Brazil there are no public/official rail tariff rates. Rail rates can be approximately 30 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the railroad company and shippers (Source: ESALQ-LOG, 2018).

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

**Table 7. Quarterly truck rates for selected Brazilian soybean export transportation routes, 2019**

Route #	Origin <sup>1</sup> (reference city)	Destination	Distance (miles) <sup>2</sup>	Share (%) <sup>3</sup>	Freight Price (US\$)				
					1st qtr	2nd qtr	3rd qtr	4th qtr	Avg
					— (per 100 miles) <sup>4</sup> —				
25	Western Central RS (Tupanciretã)	Rio Grande	273	2.7	9.40				9.40
26	Southwest PR(Chopinzinho)	Paranaguá	291	1.8	11.75				11.75
27	North MT (Sorriso)	Itaituba	672	5.3	8.04				8.04
28	North MT (Sorriso)	Porto Velho	632	5.7	6.29				6.29
29	North MT (Sorriso)	Santarém	876	4.1	6.78				6.78
30	South MA (Balsas)	São Luís	482	1.9	7.69				7.69
31	Southwest PI (Bom Jesus)	São Luís	606	2.2	7.47				7.47
32	Southeast PA (Paragominas)	Barcarena	249	1.5	10.05				10.05
33	East TO (Campos Lindos)	São Luís	842	1.1	6.43				6.43
34	North MT(Sorriso)	Rondonópolis (Rail terminal)	382		7.83				7.83
35	Rondonópolis MT (Rail terminal) <sup>6</sup>	Santos	1,019		4.04				4.04
	<b>Average</b>		<b>587</b>	<b>100.0</b>	<b>7.75</b>				

<sup>1</sup>Although each origin region comprises several cities, the main city is considered as a reference to establish the freight price; na = not available

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

<sup>3</sup>Share is measured as a percentage of total production.

<sup>4</sup>US\$ per metric ton (average monthly exchange rate from “Banco Central do Brasil” was used to convert Brazilian reais to the U.S. dollar)

<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, TO=Tocantins

<sup>6</sup>Note: In Brazil there are no public/official rail tariff rates. Rail rates can be approximately 30 percent lower than truck rates, depending on volumes hauled and the terms of contracts signed between the railroad company and shippers (Source: ESALQ-LOG, 2018).

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

**Table 8. Monthly Brazilian soybean export truck transportation cost index**

Month	Freight price* (per 100 miles)	Index variation (%) (Base: prior month)	Index value (Base: Jan. 05 = 100)	Month	Freight price* (per 100 miles)	Index variation (%) (Base: prior month)	Index value (Base: Jan. 05 = 100)
Jan-12	10.20	1.7	175.90	Jan-16	6.42	-5.1	110.63
Feb-12	10.76	5.4	185.45	Feb-16	6.73	4.8	115.98
Mar-12	10.55	-2.0	181.82	Mar-16	7.79	15.8	134.33
Apr-12	10.45	-1.0	180.06	Apr-16	8.30	6.5	143.05
May-12	9.64	-7.7	166.20	May-16	7.28	-12.3	125.43
Jun-12	9.37	-2.9	161.44	Jun-16	7.16	-1.5	123.51
Jul-12	9.76	4.2	168.16	Jul-16	7.46	4.2	128.64
Aug-12	10.17	4.3	175.33	Aug-16	7.33	-1.7	126.41
Sep-12	10.30	1.3	177.54	Sep-16	6.35	-13.3	109.53
Oct-12	10.13	-1.6	174.66	Oct-16	5.88	-7.5	101.35
Nov-12	9.84	-2.8	169.69	Nov-16	5.00	-14.9	86.21
Dec-12	9.73	-1.1	167.74	Dec-16	5.47	9.4	94.32
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				
May-15	8.39	-6.8	144.58				
Jun-15	8.01	-4.5	138.12				
Jul-15	7.56	-5.7	130.25				
Aug-15	7.38	-2.4	127.15				
Sep-15	6.60	-10.5	113.78				
Oct-15	6.70	1.5	115.43				
Nov-15	7.08	5.8	122.08				
Dec-15	6.76	-4.5	116.56				

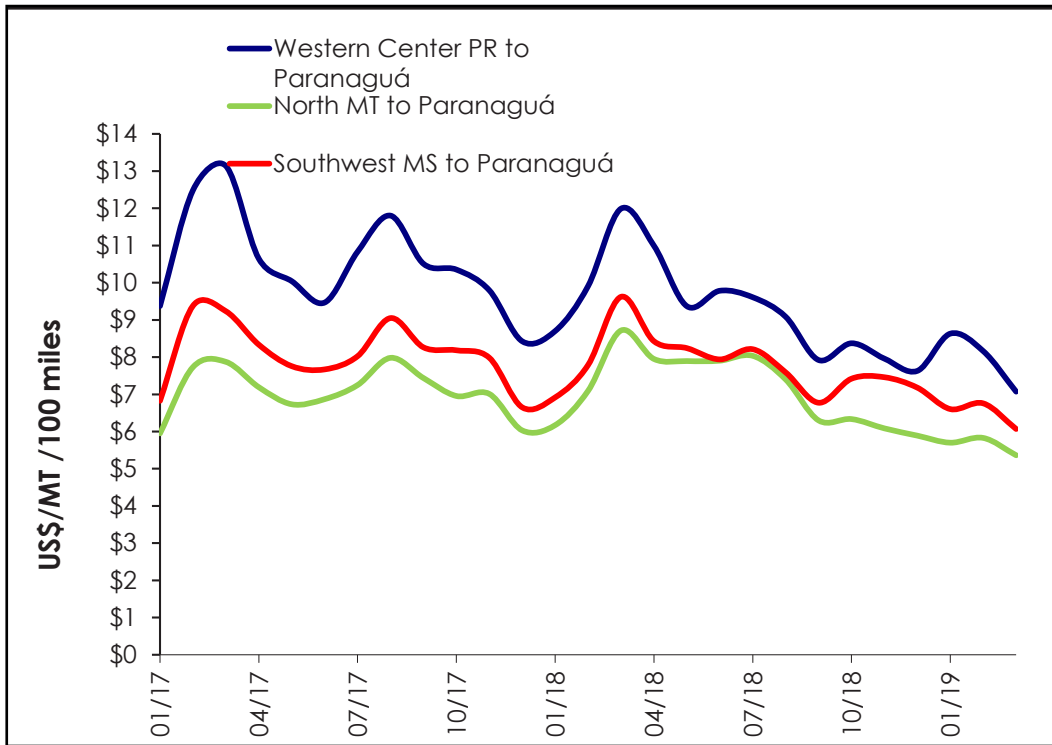
\*Weighted average and quoted in US\$ per metric ton

Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



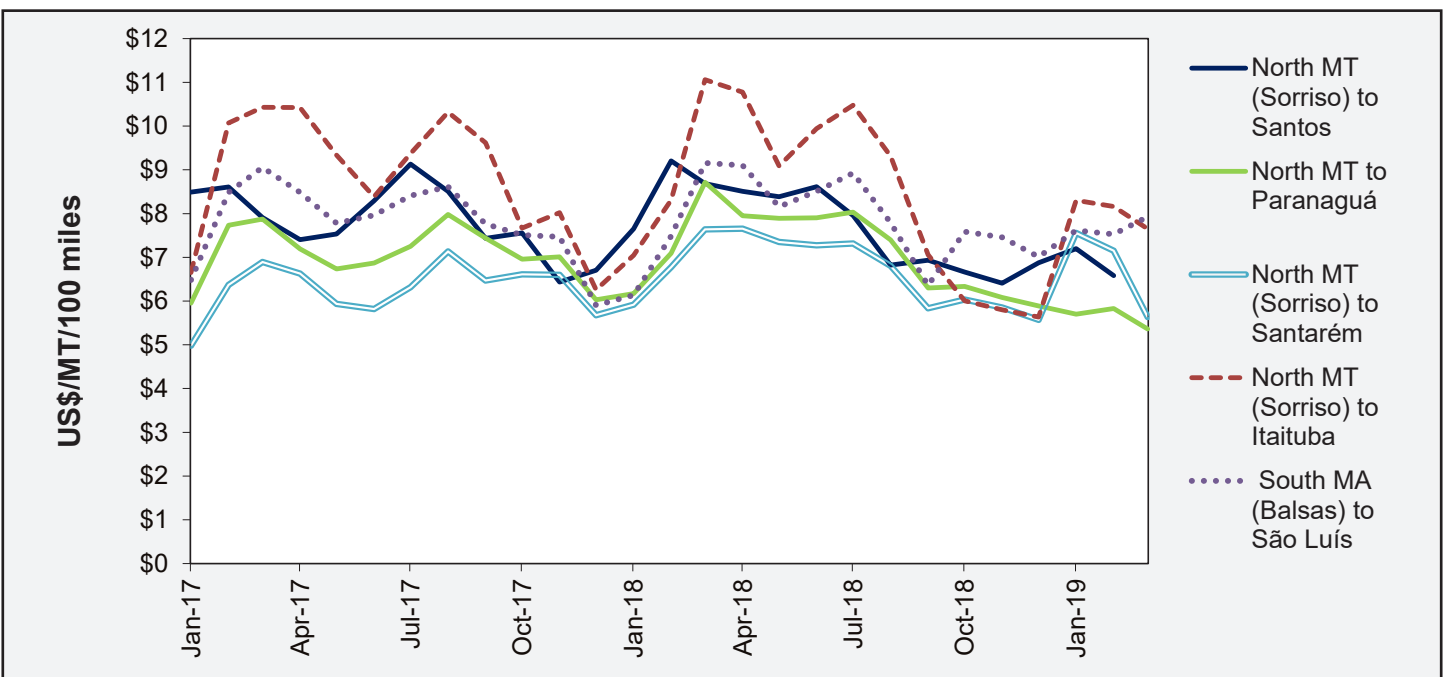
# Brazil Soybean Transportation

**Figure 3. Truck rates for selected southern Brazilian soybean export transportation route, 2017-2019**



Source: ESALQ/USP (University of São Paulo, Brazil) and USDA/AMS

**Figure 4. Truck rates for selected north, south, and northeastern Brazilian soybean export transportation route, 2017-2019**

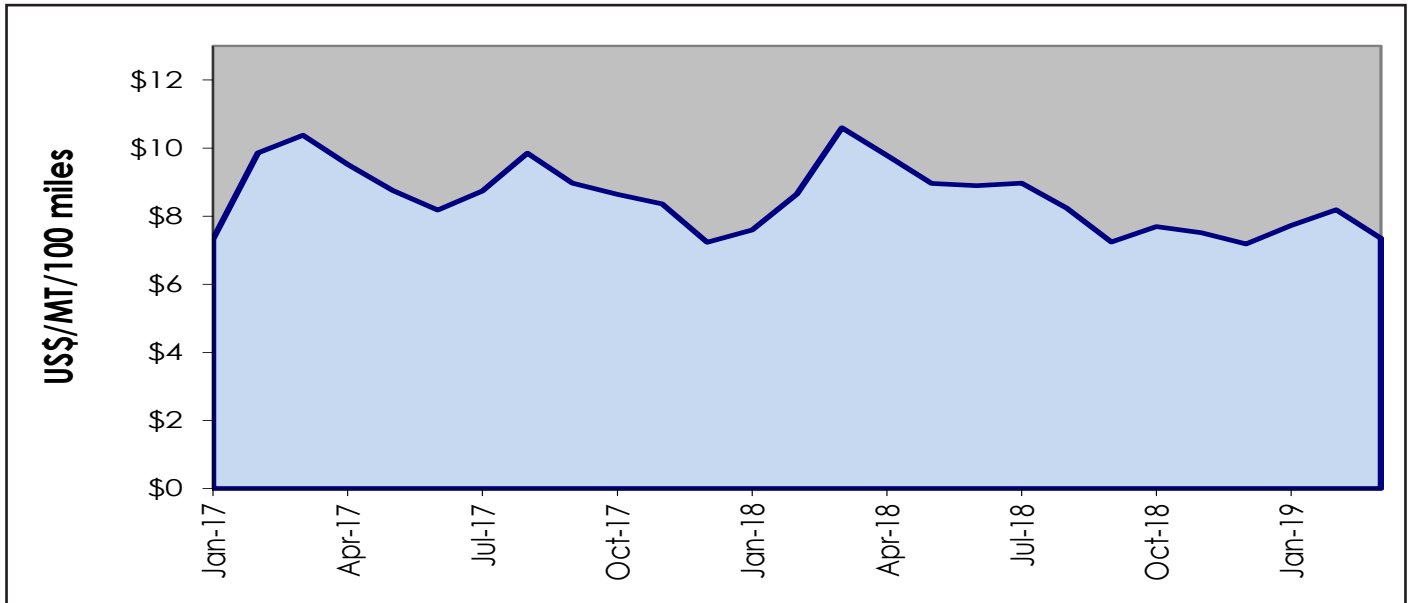


Source: ESALQ/USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

Figure 5. Brazilian soybean export truck transportation weighted average prices, 2017-2019



Source: ESALQ/USP (University of São Paulo, Brazil) and USDA/AMS





# 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 2013	2nd qtr 2013	3rd qtr 2013	4th qtr 2013
Santos	Germany (Hamburg)	30.00	29.00	29.00	30.00
Paranagua	Germany (Hamburg)	30.00	29.00	29.00	30.00
Rio Grande	Germany (Hamburg)	30.00	29.00	29.00	30.00
Santos	China (Shanghai)	52.34	34.50	34.50	42.50
Paranagua	China (Shanghai)	56.03	36.75	36.75	46.00
Rio Grande	China (Shanghai)	51.34	35.25	35.25	44.25
Port	Destination	1st qtr 2014	2nd qtr 2014	3rd qtr 2014	4th qtr 2014
Santos	Germany (Hamburg)	31.00	30.00	26.00	24.00
Paranagua	Germany (Hamburg)	31.00	30.00	28.00	26.00
Rio Grande	Germany (Hamburg)	31.00	30.00	24.50	22.50
Santos	China (Shanghai)	44.83	38.07	34.00	30.50
Paranagua	China (Shanghai)	47.22	41.13	36.00	32.50
Rio Grande	China (Shanghai)	44.83	38.75	32.50	30.50
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

\*Correspond to the average actual values negotiated between shippers and carriers and weighted according to the magnitude of the shipped volume

Source: Sistema de Informações de Fretes, SIFRECA, ESALQ/USP (University of São Paulo, Brazil)

-continued on page 18-



# 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 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
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			
Paranaguá	Germany (Hamburg)	23.00			
Rio Grande	Germany (Hamburg)	23.00			
Santarém	Germany (Hamburg)	21.00			
São Luís	Germany (Hamburg)	18.00			
Barcarena	Germany (Hamburg)	19.00			
Santos	China (Shanghai)	32.25			
Paranagua	China (Shanghai)	33.75			
Rio Grande	China (Shanghai)	31.58			
Santarém	China (Shanghai)	32.25			
São Luís	China (Shanghai)	31.00			
Barcarena	China (Shanghai)	32.25			

\*Correspond to the average actual values negotiated between shippers and carriers and weighted according to the magnitude of the shipped volume

Source: Sistema de Informações de Fretes, SIFRECA, ESALQ/USP (University of São Paulo, Brazil)



# Brazil Soybean Transportation

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## Data Sets (XLS files):

- [Figure 3. Truck rates for selected southern Brazilian soybean export transportation route, 2017-2019](#)
- [Figure 4. Truck rates for selected north, south, and northeastern Brazilian soybean export transportation route, 2017-2019](#)
- [Figure 5. Brazilian soybean export truck transportation weighted average prices, 2017-2019](#)
- [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](#)
- [Table 3. Quarterly costs of transporting Brazilian soybeans from the southern ports to Shanghai, China](#)
- [Table 4. Quarterly costs of transporting Brazilian soybeans from the southern ports to Hamburg, Germany](#)
- [Table 5. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Shanghai, China](#)
- [Table 6. Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Hamburg, Germany](#)
- [Table 7. Quarterly truck rates for selected Brazilian soybean export transportation routes, 2019](#)
- [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 2017 \(PDF\)](#)
- Prior Articles: [Brazil Soybean Transportation](#)
- Related Articles: [Grain Transportation Report, March 21, 2019 \(PDF\)](#)

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