

# Brazil Soybean Transportation



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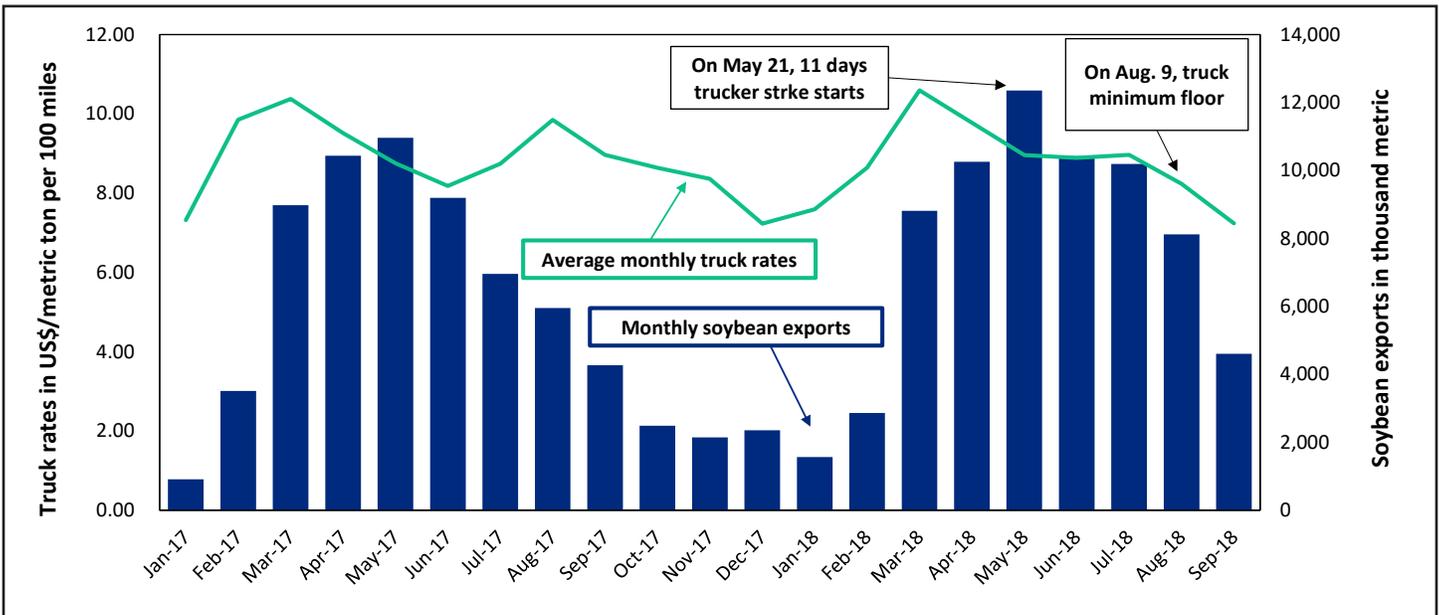
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### Record Brazilian Soybean Export Season Closes with Lower Transportation Costs and Higher Domestic Farm Prices

Higher Chinese demand for Brazilian soybeans, along with weaker currency, offset the impact of the new minimum rates, set by the National Land Transport Agency (ANTT) on August 6, 2018, for trucking freight across the country (figure 1 and 1a). The minimum rates include a charge on return trips, even if the truck is empty. Truckers are forbidden to negotiate contracts below the ANTT minimum. The legislation is being challenged in Brazil's Supreme Court. A final decision is expected after the presidential second-round vote is finalized, on October 28, 2018 ([USDA, Foreign Agricultural Service \(FAS\), Gain Report: BR1816](#)). The cost of shipping a metric ton (mt) of soybeans 100 miles by truck decreased 11 percent, from \$9.18 in the third quarter of 2017 to \$8.15 (table 8). Third quarter truck rates increased from July until the first week of August, then declined, due to

**Figure 1. Brazilian soybean export increases despite trucker strike and new minimum truck floors**



Source:ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS. Secretariat of Foreign Trade (SECEX), MDIC

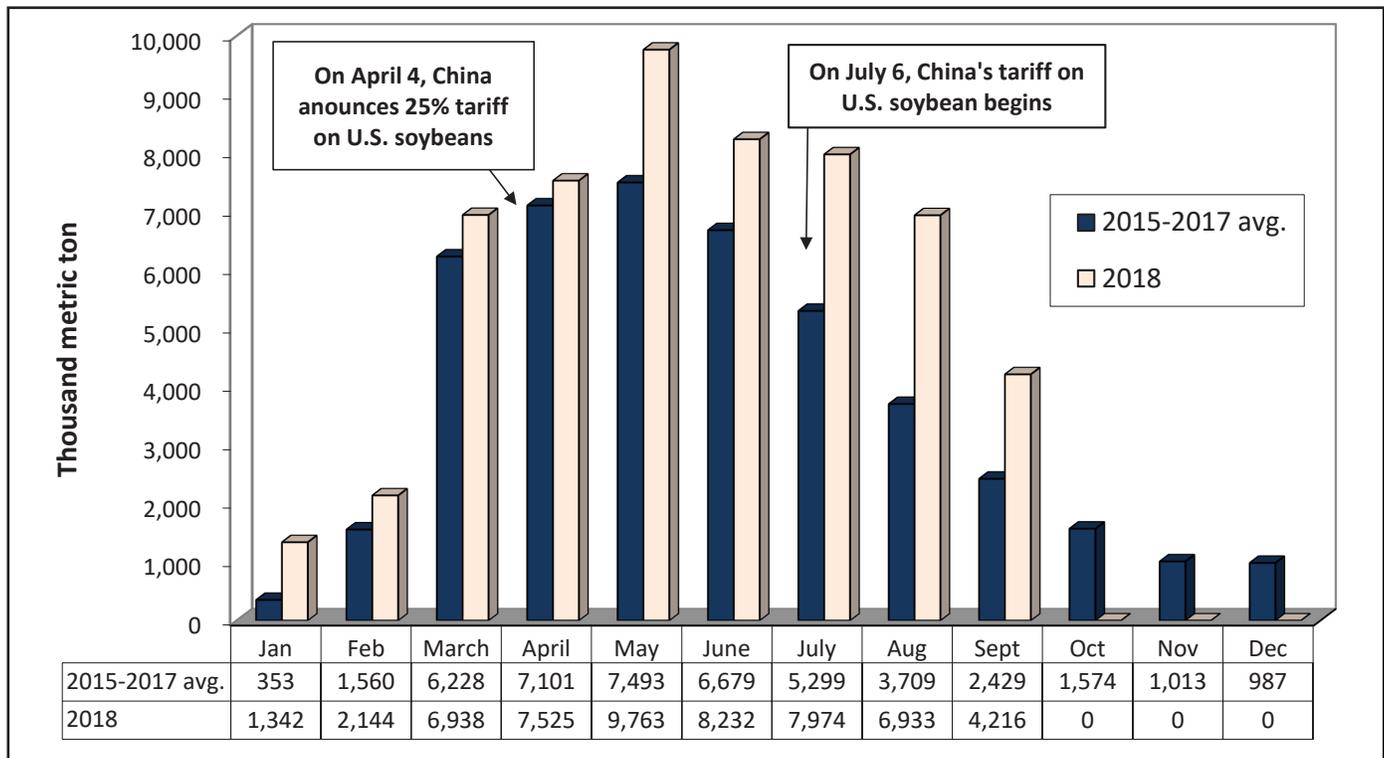


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the end of the corn harvest and soybean export season that lowered transportation demand (Sistema de Informações de Fretes [SIFRECA](#)) (figure 1 and table 8). Brazilian soybean exports usually peak in May and decline by the end of September (figures 1 and 1a). The Brazilian real (R\$) depreciated 39 percent against the dollar, from R\$3.16 to R\$3.95 per US\$1.00, in the third quarter of 2017. Farm prices were mixed when measured in U.S. dollars due to depreciation of the Reais. The average farm prices in the Brazilian real (R\$) increased 25 percent from R\$986.59/mt to R\$1,233.33/mt ([Brazil Central Bank](#) and Companhia Nacional de Abastecimento [CONAB](#)).

The volume of soybean exports, from January to September, increased to 69.2 million metric tons (mmt), 13 percent more than last year's total of 61.1 mmt (figure 1) ([Secretariat of Foreign Trade \(SECEX\)](#)). China is Brazil's major soybean buyer, accounting for about 80 percent of total exports, followed by Spain, Turkey, Iran, the Netherlands, and Thailand. In the first nine months of the year, China bought 55 mmt of Brazilian soybeans, valued at US\$ 21.9 billion ([SECEX](#)), up by 29 percent over the same period in 2017 (figure 1a). Exports to China escalated during the third quarter of 2018, reaching 19.1 mmt of soybeans (83 percent of total Brazilian 3rd quarter exports), 40 percent higher than the 13.6 mmt exported at the same time last year. According to the [Foreign Agricultural Service \(FAS\) Gain Report: BR1816](#), the increased Chinese demand for Brazilian soybeans is partly due to U.S.-China trade tensions, and the implementation of a 25 percent duty on U.S. soybeans that started on July 6, 2018. Lower Chinese demand for U.S. soybeans put downward pressure on U.S. prices (figure 1b). On October 23, 2018, U.S. Gulf FOB (Free on Board) prices were \$86 per mt lower than Paranaguá FOB (figure 1b) ([International Grains Council \(IGC\)](#)).<sup>1</sup> In September, U.S soybean exports were slower than usual

**Figure 1a. Brazil average monthly soybean exports to China**



Source: Secretaria de Comércio Exterior (SECEX), MDIC

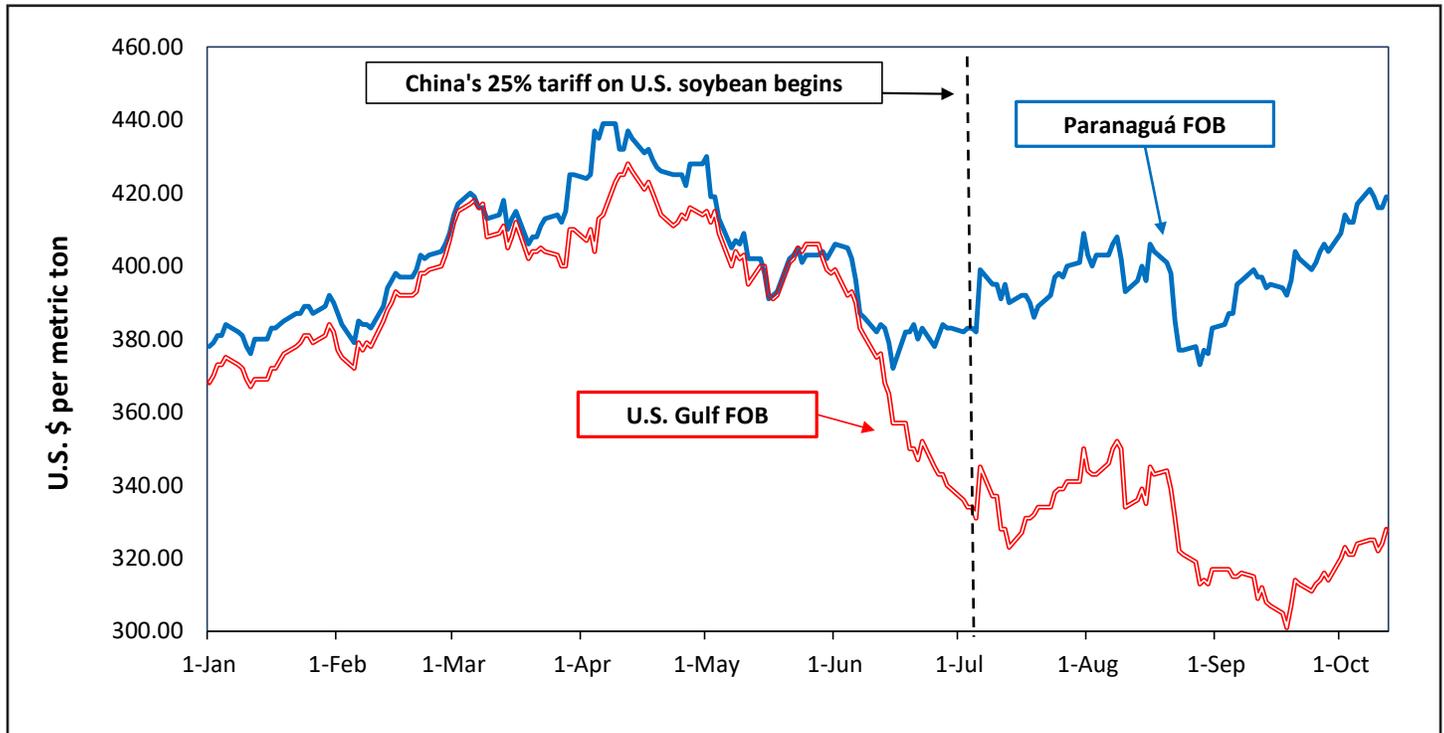
1 FOB Origin indicates that the sale is considered complete at the seller's shipping dock, and thus the buyer is responsible for freight costs/liability. For example, "Paranaguá FOB" shows that the Brazilian seller will pay for transporting the grain to the Port of Paranaguá and the cost of loading the grain onto the ship, including inland haulage, customs clearance, origin documentation charges, and demurrage. Once all the grain is on board, the buyer pays for all costs beyond that point.



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despite strength in exports to other markets such as the European Union (EU), Mexico, Egypt, Argentina, and several Asian countries ([Economic Research Service, Oil Crops Outlook, OCS-18j](#)).<sup>2</sup> On an annual basis the Brazilian soybean peak export season – March through July – complements the U.S. peak shipping season – October through December.

**Figure 1b. U.S. Gulf\* and Paranaguá soybean Free on Board (FOB) prices, January 1 to October 23, 2018**



\*The U.S. Gulf includes the East Gulf, the Mississippi River, and North and South Texas.  
Source: International Grains Council (IGC)

Average Brazilian soybean export prices increased nearly 7 percent to \$397 per mt, up from \$372 per mt at the same time last year ([SECEX](#)). The southern ports of Santos, Paranaguá, Rio Grande, and São Francisco do Sul accounted for 65 percent of total soybean exports and 74 percent of exports to China. The Northeastern ports of São Luís, Barcarena, and Salvador exported nearly 25 percent of total Brazilian soybeans and represented nearly the same proportion of exports to China. The Northern ports of Santarém and Manaus represented 7 percent of total Brazil exports and 1 percent of exports to China.

In Sorriso, North MT (the largest Brazilian soybean-producing State), transportation costs represented nearly 29 percent of the total landed costs of shipping soybeans to Shanghai through Santos and 23 percent through the port of Santarém (tables 1 and 1a). In the third quarter of 2018, shipping soybeans cost \$17.70 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). For more information, contact Delmy L. Salin at [delmy.salin@ams.usda.gov](mailto:delmy.salin@ams.usda.gov).

<sup>2</sup> U.S. soybeans harvest season starts in mid-September and ends in November.



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

	2017 3rd qtr	2018 3rd qtr	% Change	2017 3rd qtr	2018 3rd qtr	% Change
	<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	102.87	92.79	-9.8	30.00	27.79	-7.3
Ocean	30.00	27.75	-7.5	31.00	28.25	-8.9
Total transportation	132.87	120.54	-9.3	61.00	56.04	-8.1
Farm price <sup>3</sup>	288.62	301.39	4.4	317.17	326.13	2.8
Landed cost	421.49	421.93	0.1	378.16	382.17	1.1
Transport % of landed cost	31.5	28.6	-9.4	16.1	14.7	-9.1
	<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	-	32.31	-	95.36	91.43	-4.1
Rai <sup>4</sup> - Santos	-	42.77	-	-	-	-
Ocean	-	27.75	-	31.00	28.75	-7.3
Total transportation	-	102.84	-	126.36	120.18	-4.9
Farm price <sup>3</sup>	-	301.39	-	288.62	301.39	4.4
Landed cost	-	404.23	-	414.98	421.57	1.6
Transport % of landed cost	-	25.4	-	30.4	28.5	-6.4

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

<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**

	2017 3rd qtr	2018 3rd qtr	% Change	2017 3rd qtr	2018 3rd qtr	% Change
	<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	58.19	58.29	0.2	39.78	37.04	-6.9
Ocean	31.00	31.25	0.8	31.00	30.75	-0.8
Total transportation	89.19	89.54	0.4	70.78	67.79	-4.2
Farm price <sup>3</sup>	288.62	301.39	4.4	340.58	305.07	-10.4
Landed cost	377.81	390.93	3.5	411.37	372.86	-9.4
Transport % of landed cost	23.6	22.9	-3.0	17.2	18.2	5.7
	<b>Southwest PI<sup>1</sup> - São Luís<sup>2</sup></b> —US\$/mt—					
Truck	48.27	44.56	-7.7			
Ocean	31.00	30.75	-0.8			
Total transportation	79.27	75.31	-5.0			
Farm price <sup>3</sup>	306.34	290.62	-5.1			
Landed cost	385.61	365.93	-5.1			
Transport % of landed cost	20.6	20.6	0.1			

<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**

	2017 3rd qtr	2018 3rd qtr	% Change	2017 3rd qtr	2018 3rd qtr	% Change
	<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	102.87	92.79	-9.8	30.00	27.79	-7.3
Ocean	26.00	24.00	-7.7	27.00	25.00	-7.4
Total transportation	128.87	116.79	-9.4	57.00	52.79	-7.4
Farm price <sup>3</sup>	288.62	301.39	4.4	317.17	326.13	2.8
Landed cost	417.49	418.18	0.2	374.16	378.92	1.3
Transport % of landed cost	30.9	27.9	-9.5	15.2	13.9	-8.5
	<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	-	32.31	-	95.36	91.43	-4.1
Rail <sup>4</sup> - Santos	-	42.77	-	-	-	-
Ocean	-	24.00	-	27.00	25.00	-7.4
Total transportation	-	99.09	-	122.36	116.43	-4.8
Farm price <sup>3</sup>	-	301.39	-	288.62	301.39	4.4
Landed cost	-	400.48	-	410.98	417.82	1.7
Transport % of landed cost	-	24.7	-	29.8	27.9	-6.4

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

<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**

	2017 3rd qtr	2018 3rd qtr	% Change	2017 3rd qtr	2018 3rd qtr	% Change
	<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	58.19	58.29	0.2	39.78	37.04	-6.9
Ocean	25.00	22.50	-10.0	21.20	18.50	-12.7
Total transportation	83.19	80.79	-2.9	60.98	55.54	-8.9
Farm price <sup>3</sup>	288.62	301.39	4.4	340.58	305.07	-10.4
Landed cost	371.81	382.18	2.8	401.57	360.61	-10.2
Transport % of landed cost	22.4	21.1	-5.5	15.2	15.4	1.4
	<b>Southwest PI<sup>1</sup> - São Luís<sup>2</sup> —US\$/mt—</b>					
Truck	48.27	44.6	-7.7			
Ocean	21.20	18.5	-12.7			
Total transportation	69.47	63.1	-9.2			
Farm price <sup>3</sup>	306.34	290.6	-5.1			
Landed cost	375.81	353.7	-5.9			
Transport % of landed cost	18.5	17.8	-3.5			

<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)

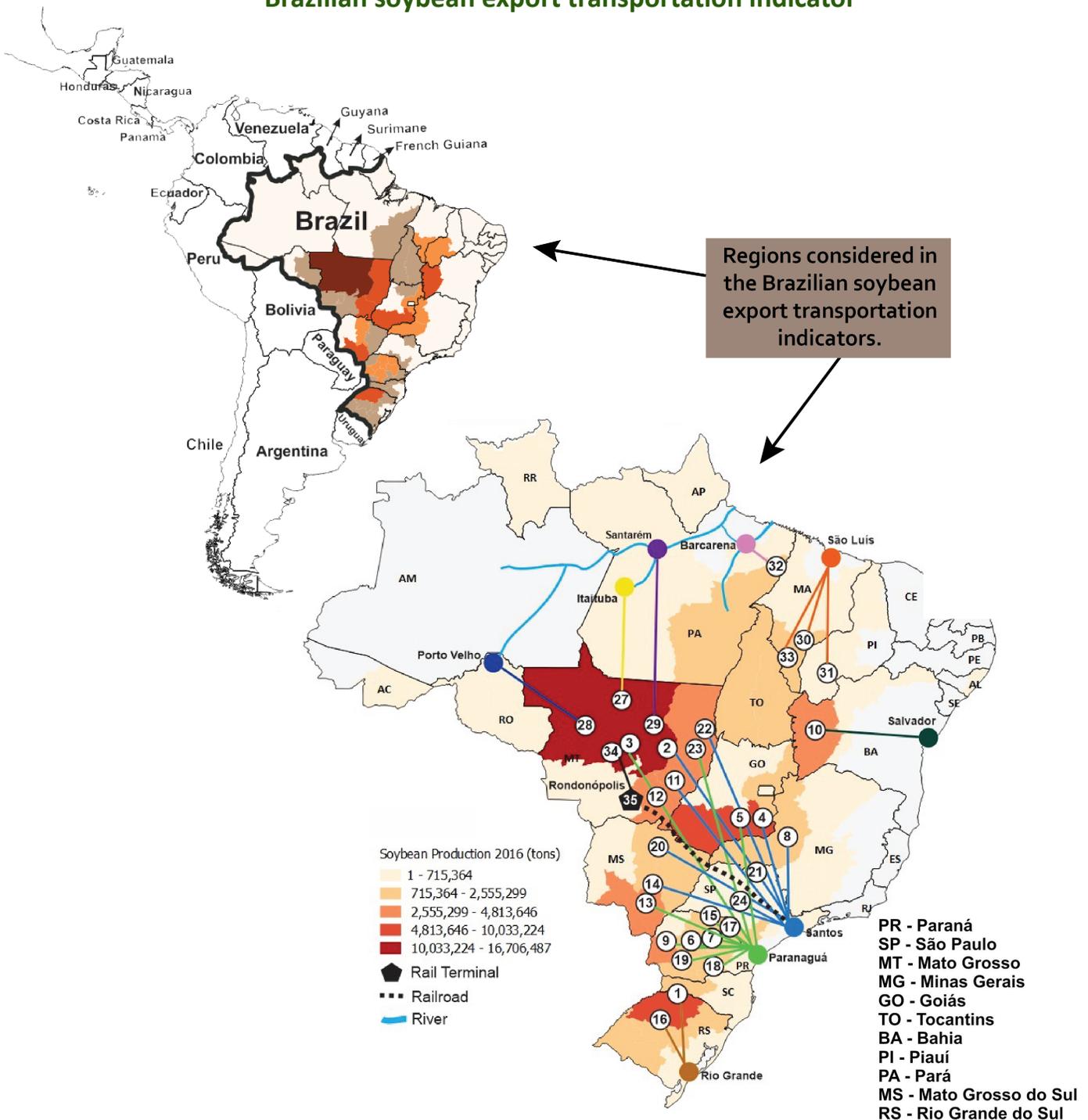
Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS



# 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 13

<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 3. 2018 Quarterly costs of transporting Brazilian soybeans from the southern ports to Shanghai, China**

	—2018—									
	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	93.44	101.44	92.79		95.89	92.46	99.91	91.43		94.60
Ocean	32.50	31.00	27.75		30.42	32.00	32.00	28.75		30.92
Total transportation	125.94	132.44	120.54		126.31	124.46	131.91	120.18		125.52
Farm price <sup>3</sup>	305.85	323.46	301.39		310.23	305.85	323.46	301.39		310.23
Landed cost	431.80	455.90	421.93		436.54	430.31	455.37	421.57		435.75
Transport % of landed cost	29.2	29.1	28.6		28.9	28.9	29.0	28.5		28.8
	<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	39.07	32.93	32.31		34.77	31.51	31.29	27.79		30.20
Rai <sup>4</sup> - Santos	46.94	43.89	42.77		44.53	-	-	-		-
Ocean	32.50	31.00	27.75		30.42	33.00	31.50	28.25		30.92
Total transportation	118.51	107.82	102.84		109.72	64.51	62.79	56.04		61.11
Farm price <sup>3</sup>	305.85	323.46	301.39		310.23	334.43	343.90	326.13		334.82
Landed cost	424.36	431.28	404.23		419.96	398.94	406.68	382.17		395.93
Transport % of landed cost	27.9	25.0	25.4		26.1	16.2	15.4	14.7		15.4

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

<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 4. 2018 Quarterly costs of transporting Brazilian soybeans from the southern ports to Hamburg, Germany**

	—2018—									
	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	93.44	101.44	92.79		95.89	92.46	99.91	91.43		94.60
Ocean	27.00	25.00	24.00		25.33	28.00	26.00	25.00		26.33
Total transportation	120.44	126.44	116.79		121.23	120.46	125.91	116.43		120.93
Farm price <sup>3</sup>	305.85	323.46	301.39		310.23	305.85	323.46	301.39		310.23
Landed cost	426.30	449.90	418.18		431.46	426.31	449.37	417.82		431.17
Transport % of landed cost	28.3	28.1	27.9		28.1	28.3	28.0	27.9		28.0
	<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	39.07	32.93	32.31		34.77	31.51	31.29	27.79		30.20
Rai <sup>4</sup> - Santos	46.94	43.89	42.77		44.53	-	-	-		-
Ocean	27.00	25.00	24.00		25.33	28.00	26.00	25.00		26.33
Total transportation	113.01	101.82	99.09		104.64	59.51	57.29	52.79		56.53
Farm price <sup>3</sup>	305.85	323.46	301.39		310.23	334.43	343.90	326.13		334.82
Landed cost	418.86	425.28	400.48		414.87	393.94	401.18	378.92		391.35
Transport % of landed cost	27.0	23.9	24.7		25.2	15.1	14.3	13.9		14.4

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

<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 5. 2018 Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Shanghai, China**

	—2018—									
	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	61.09	65.07	58.29		61.48	36.57	38.89	37.04		37.50
Ocean	38.50	35.50	31.25		35.08	37.00	34.80	30.75		34.18
Total transportation	99.59	100.57	89.54		96.57	73.57	73.69	67.79		71.68
Farm price <sup>3</sup>	305.85	323.46	301.39		310.23	357.97	342.78	305.07		335.27
Landed cost	405.44	424.03	390.93		406.80	431.54	416.47	372.86		406.96
Transport % of landed cost	24.6	23.7	22.9		23.7	17.0	17.7	18.2		17.6
	Southwest PI <sup>1</sup> - São Luís <sup>2</sup> —US\$/mt—									
Truck	44.28	50.61	44.56		46.48					
Ocean	37.00	34.80	30.75		34.18					
Total transportation	81.28	85.41	75.31		80.67					
Farm price <sup>3</sup>	321.69	320.70	290.62		311.00					
Landed cost	402.97	406.11	365.93		391.67					
Transport % of landed cost	20.2	21.0	20.6		20.6					

<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. 2018 Quarterly costs of transporting Brazilian soybeans from the northern and northeastern ports to Hamburg, Germany**

	—2018—									
	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	61.09	65.07	58.29		61.48	36.57	38.89	37.04		37.50
Ocean	25.00	22.90	22.50		23.47	21.00	19.10	18.50		19.53
Total transportation	86.09	87.97	80.79		84.95	57.57	57.99	55.54		57.03
Farm price <sup>3</sup>	305.85	323.46	301.39		310.23	357.97	342.78	305.07		335.27
Landed cost	391.94	411.43	382.18		395.18	415.54	400.77	360.61		392.31
Transport % of landed cost	22.0	21.4	21.1		21.5	13.9	14.5	15.4		14.6
	Southwest PI <sup>1</sup> - São Luís <sup>2</sup> —US\$/mt—									
Truck	44.28	50.61	44.56		46.48					
Ocean	21.00	19.10	18.50		19.53					
Total transportation	65.28	69.71	63.06		66.02					
Farm price <sup>3</sup>	321.69	320.70	290.62		311.00					
Landed cost	386.97	390.41	353.68		377.02					
Transport % of landed cost	16.9	17.9	17.8		17.5					

<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. Truck rates for selected Brazilian soybean export transportation routes, 2018**

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	13.0	10.94	10.86	9.65		
2	North MT (Sorriso)	Santos	1,190	3.1	7.85	8.52	7.80		
3	North MT (Sorriso)	Paranaguá	1,262	2.9	7.33	7.92	7.24		
4	South GO (Rio Verde)	Santos	587	5.5	7.70	8.08	7.01		
5	South GO (Rio Verde)	Paranaguá	726	4.5	7.73	8.25	7.25		
6	North Central PR (Londrina)	Paranaguá	268	3.0	11.06	11.03	9.54		
7	Western Central PR (Mamborê)	Paranaguá	311	2.8	10.20	10.05	8.87		
8	Triangle MG (Uberaba)	Santos	339	3.3	10.43	10.77	9.37		
9	West PR (Assis Chateaubriand)	Paranaguá	377	2.8	9.19	9.28	8.22		
10	West Extreme BA (São Desidério)	Salvador	535	4.2	8.17	8.78	7.78		
11	Southeast MT (Primavera do Leste)	Santos	901	2.7	7.21	7.51	6.84		
12	Southeast MT (Primavera do Leste)	Paranaguá	975	2.5	6.85	7.12	6.63		
13	Southwest MS (Maracaju)	Paranaguá	612	3.2	8.11	8.20	7.53		
14	Southwest MS (Maracaju)	Santos	652	3.0	7.98	8.40	7.40		
15	West PR (Assis Chateaubriand)	Santos	550	1.9	8.15	8.59	7.57		
16	East GO (Cristalina)	Santos	585	2.0	8.82	9.51	8.23		
17	North PR (Cornélio Procópio)	Paranaguá	306	1.9	8.98	8.76	7.55		
18	Eastern Central PR (Castro)	Paranaguá	130	2.3	15.03	13.65	11.25		
19	South Central PR (Guarapuava)	Paranaguá	204	2.6	13.26	13.21	11.12		
20	North Central MS (São Gabriel do Oeste)	Santos	720	2.1	6.97	7.40	6.51		
21	Ribeirão Preto SP (Guairá)	Santos	314	0.0	8.79	8.96	7.42		
22	Northeast MT (Canarana)	Santos	950	3.2	7.67	8.12	7.14		
23	East MS (Chapadão do Sul)	Santos	607	0.0	7.07	7.42	6.45		
24	Northeast MT (Canarana)	Paranaguá	1,075	2.8	7.32	7.82	6.96		

<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

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# Brazil Soybean Transportation

**Table 7. Truck rates for selected Brazilian soybean export transportation routes, 2018**

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	9.68	9.23	8.16		
26	Southwest PR(Chopinzinho)	Paranaguá	291	2.1	12.93	13.45	11.91		
27	North MT (Sorriso)	Itaituba	672	5.5	8.81	9.94	8.95		
28	North MT (Sorriso)	Porto Velho	632	5.8	7.23	7.36	6.64		
29	North MT (Sorriso)	Santarém	876	4.2	6.97	7.43	6.65		
30	South MA (Balsas)	São Luís	482	1.1	7.59	8.59	7.69		
31	Southwest PI (Bom Jesus)	São Luís	606	0.8	7.31	8.35	7.36		
32	Southeast PA (Paragominas)	Barcarena	249	1.4	10.17	9.58	8.60		
33	East TO (Campos Lindos)	São Luís	842	1.2	6.81	7.37	6.57		
34	North MT(Sorriso)	Rondonópolis (Rail terminal)	382		10.23	8.62	8.46		
35	Rondonópolis MT (Rail terminal) <sup>6</sup>	Santos	1,019		4.61	4.31	4.20		
	<b>Average</b>		<b>587</b>	<b>100.0</b>	<b>8.94</b>	<b>9.21</b>	<b>8.15</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-11	10.84	1.1	186.89	Jan-15	8.01	0.7	138.15
Feb-11	11.21	3.4	193.30	Feb-15	8.02	0.1	138.29
Mar-11	12.07	7.6	208.04	Mar-15	8.32	3.7	143.44
Apr-11	13.30	10.2	229.22	Apr-15	9.00	8.2	155.13
May-11	12.01	-9.7	207.04	May-15	8.39	-6.8	144.58
Jun-11	12.25	2.0	211.20	Jun-15	8.01	-4.5	138.12
Jul-11	12.72	3.9	219.34	Jul-15	7.56	-5.7	130.25
Aug-11	12.64	-0.7	217.84	Aug-15	7.38	-2.4	127.15
Sep-11	11.43	-9.6	196.95	Sep-15	6.60	-10.5	113.78
Oct-11	11.09	-3.0	191.10	Oct-15	6.70	1.5	115.43
Nov-11	10.70	-3.4	184.52	Nov-15	7.08	5.8	122.08
Dec-11	10.04	-6.2	173.00	Dec-15	6.76	-4.5	116.56
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				
Nov-14	8.36	-4.6	144.16				
Dec-14	7.96	-4.9	137.15				

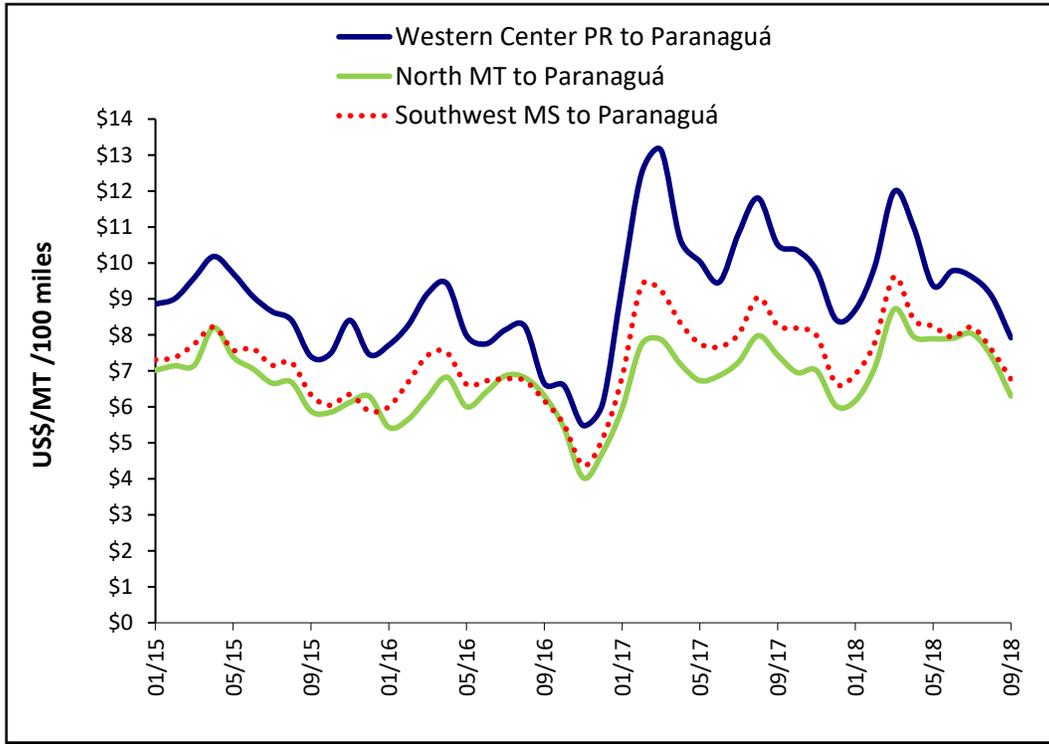
\*Weighted average and quoted in US\$ per metric ton

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



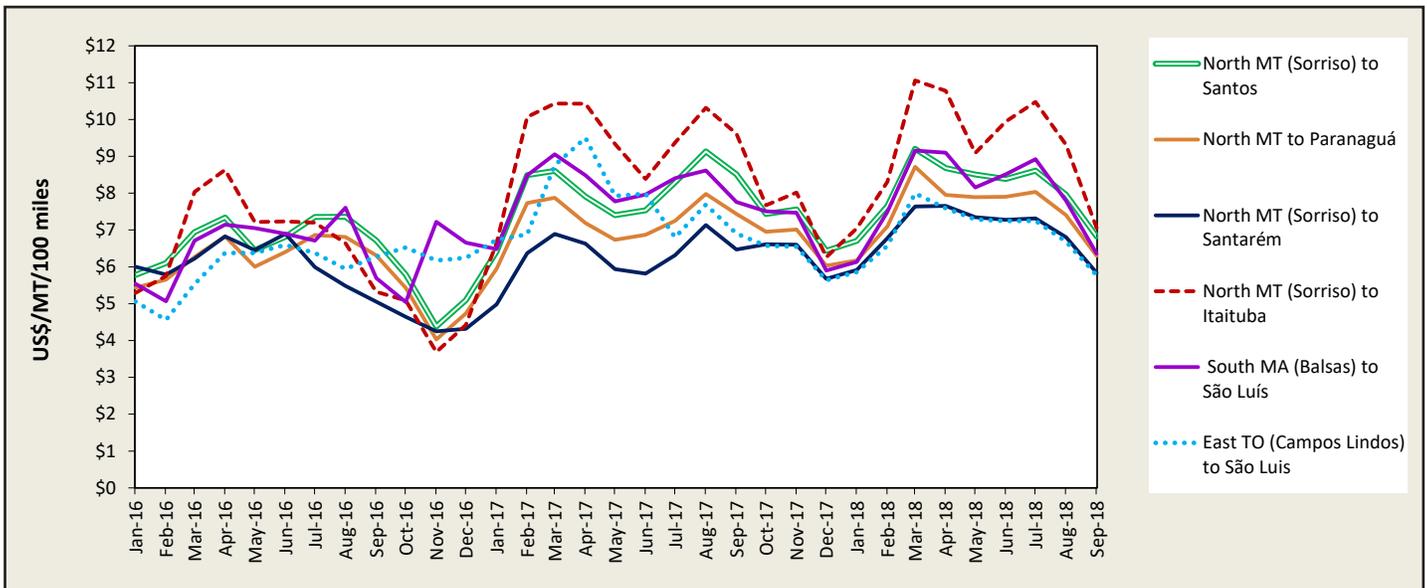
# Brazil Soybean Transportation

**Figure 3. Truck rates for selected southern Brazilian soybean export transportation route**



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**

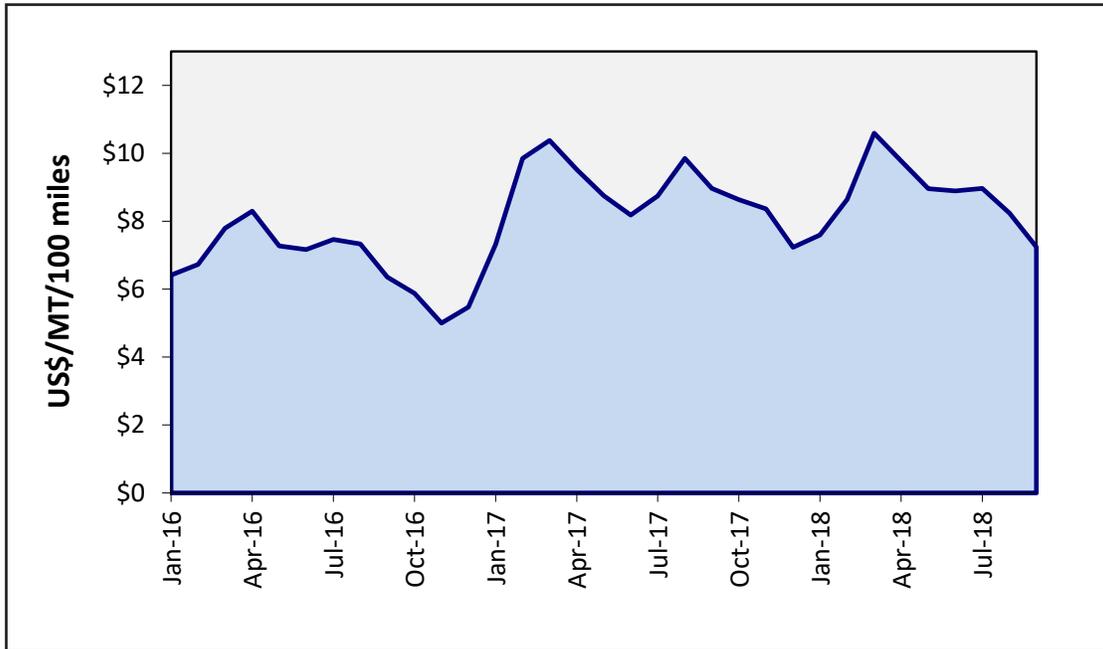


Source: ESALQ/USP (University of São Paulo, Brazil) and USDA/AMS



# Brazil Soybean Transportation

Figure 5. Brazilian soybean export truck transportation weighted average prices, 2016/18



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 2011	2nd qtr 2011	3rd qtr 2011	4th qtr 2011
Santos	Germany (Hamburg)	34.96	35.00	36.65	32.00
Paranagua	Germany (Hamburg)	33.86	36.00	37.29	32.63
Rio Grande	Germany (Hamburg)	35.43	36.00	37.81	35.22
Santos	China (Shanghai)	50.00	50.05	52.31	49.65
Paranagua	China (Shanghai)	56.25	57.62	59.61	55.80
Rio Grande	China (Shanghai)	50.50	50.60	53.02	50.26
Port	Destination	1st qtr 2012	2nd qtr 2012	3rd qtr 2012	4th qtr 2012
Santos	Germany (Hamburg)	32.00	35.00	32.00	28.00
Paranagua	Germany (Hamburg)	31.58	35.00	34.30	34.30
Rio Grande	Germany (Hamburg)	32.08	36.50	32.00	32.00
Santos	China (Shanghai)	46.62	51.35	50.42	50.42
Paranagua	China (Shanghai)	52.32	57.63	55.42	55.42
Rio Grande	China (Shanghai)	47.92	52.78	49.02	49.02
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

\*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)

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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 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
Port	Destination	1st qtr 2018	2nd qtr 2018	3rd qtr 2018	4th qtr 2018
Santos	Germany (Hamburg)	27.00	25.00	24.00	
Paranaguá	Germany (Hamburg)	28.00	26.00	25.00	
Rio Grande	Germany (Hamburg)	28.00	26.00	25.00	
Santarém	Germany (Hamburg)	25.00	22.90	22.50	
São Luís	Germany (Hamburg)	21.00	19.10	18.50	
Barcarena	Germany (Hamburg)	23.00	20.90	20.20	
Santos	China (Shanghai)	32.50	31.00	27.75	
Paranagua	China (Shanghai)	32.00	32.00	28.75	
Rio Grande	China (Shanghai)	33.00	31.50	28.25	
Santarém	China (Shanghai)	38.50	35.50	31.25	
São Luís	China (Shanghai)	37.00	34.80	30.75	
Barcarena	China (Shanghai)	37.50	33.80	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 1. Brazilian soybean export increases despite trucker strike and new minimum truck floors](#)
- [Figure 1a. Brazil average monthly soybean exports to China](#)
- [Figure 1b. U.S. Gulf and Paranagua soybean Free on Board \(FOB\) prices, January 1 to October 23, 2018](#)
- [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. 2018 Quarterly costs of transporting Brazilian soybeans from the southern ports to Shanghai, China](#)
- [Table 4. 2018 Quarterly costs of transporting Brazilian soybeans from the southern ports to Hamburg, Germany](#)
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- [Figure 4. Truck rates for selected north, south, and northeastern Brazilian soybean export transportation route](#)
- [Figure 5. Brazilian soybean export truck transportation weighted average prices, 2016/18](#)
- [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, September 6, 2018 \(PDF\)](#)
- Related Articles: [Grain Transportation Report, September 6, 2018 \(PDF\)](#)

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