

Soybean Transportation Guide: Brazil 2011







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Soybean Transportation Guide: Brazil

Introduction

Brazil is the second largest soybean exporter after the United States and one of the most important U.S. competitors in the world oilseeds market. Brazil's competitiveness in the world market depends largely on its transportation infrastructure and cost. The Soybean Transportation Guide is a visual snapshot of Brazilian soybean transportation in 2011. It provides data on the cost of shipping soybeans via highways and ships to Shanghai, China, and Hamburg, Germany, and gives information about soybean production, exports, railways, ports, and infrastructural developments.

Brazilian soybean transportation costs to Hamburg and Shanghai as a percentage of total landed costs decreased 5–21 percent in Mato Grosso (MT), Paraná (PR), Rio Grande do Sul (RS) and South Goiás (GO) from a year earlier because ocean rates dropped and farm prices rose. Farm prices measured in US\$ rose on average almost 24 percent (18 percent when measured in the Brazilian real, R\$). In Sorriso, North MT (the largest Brazilian soybean-producing State, in the Midwest region) transportation costs represented 31 percent of the 2011 total landed costs of shipping soybeans to Shanghai through Santos, compared to 45 percent in 2006.

The cost of shipping a metric ton (mt) of soybeans 100 miles by truck increased 9 percent last year, from \$10.74 in 2010 to \$11.71 in 2011. A record crop, limited port capacity, and lack of alternative transportation modes and routes to export ports, boosted Brazilian truck rates to the highest level since 2005. Truck rates began high at the beginning of the year and continued increasing throughout the 2nd quarter, reaching a peak of \$12.52/mt/100 miles, surpassing the record quarter high of \$11.18/mt/100 miles set in the 3rd quarter 2010. Rates began to drop in the 3rd quarter and continued to decline until the end of the year. The peak of Brazilian soybean exports usually occurs in May; by the end of June, almost two-thirds of the year's soybeans are exported.

In 2011, ocean rates from Santos to Shanghai increased slightly in the 3rd quarter but still remained nearly 10 percent below 2010 rates, averaging \$50.50 per mt. Ocean rates from Santos to Hamburg averaged \$34.65 per mt, 3 percent higher than last year. Rates steadily increased throughout the 2nd quarter, hit a peak of \$36.65 per mt in the 3rd quarter, and declined in the 4th quarter, ranging from \$32–\$37 per mt.

China is Brazil's major soybean buyer, accounting for 67 percent of total exports. China bought 22.1 million mt of Brazilian soybeans in 2011, valued at nearly US\$11 billion. China usually buys soybeans shipped from the southern ports of Santos, Paranaguá, and Rio Grande through the Cape of Good Hope in South Africa to Shanghai because it is cheaper than from the remote ports of the Amazon River and the Northeast.

Since 2007, the Brazilian government has instituted the Growth Acceleration Program (PAC 1 and 2) and the National Plan of Logistics and Transportation (PNLT) 2008–2023 to improve infrastructure and aid Brazil's competitiveness in the world market. By 2014, about US\$ 60 billion are expected to be allocated to the logistic sector. Consequently, in late 2012 or early 2013, BR-163 (Part of PAC 1), a major highway connecting Brazil's Midwest to the Amazon River, will be completed. BR-163 will significantly reduce transportation costs to the Amazon River ports, on the Brazil—Europe route. It will shift soybeans exports to Europe from the southern ports to the north. However, it is less likely that the Brazil–China route would be significantly affected because it would require a major cost reduction of inland transportation to offset the increase in ocean rates, about 7–8 additional days at sea, through the Cape of Good Hope¹ in South Africa to China. About half of Brazil exports to China are originated in the Midwest, especially from Mato Grosso (MT) and Mato Grosso do Sul (MS).

¹ The distance from Manaus–Cape of Good Hope to Shanghai is 12, 880 nautical miles, taking 53.7 days at sea; and from Santos is 11,056 nautical miles, 46.1 days at sea, www.sea-distances.com. The distance from Manaus–Panama Canal–Shanghai is shorter, 11,592 nautical miles, 48.3 days at sea, but the toll charges discourage Brazilian's exports through this route.

Another example of Brazil's repositioning to improve competitiveness in the world agricultural market is a new rail regulation introduced on July 14, 2011. The new law states that the Brazilian railroads are required to sell to other railroads the rights to use idle capacity if they are not using the rail tracks at full capacity. According to the Agência Nacional de Transportes Terrestres (ANTT), all new rail tracks will use a broad gauge of 63 inches, which provides better stability to trains. This is a major step to increase railway use within the next 15 years. This law might have a significant impact on the Brazilian grain and soybean exports route to China by facilitating access to the southern ports of Santos, Paranaguá, and Rio Grande. These 3 ports accounted for nearly 76 percent of total Brazilian soybean exports to China in 2011. In the United States, railroads have no obligation to allow other railroads access to the tracks and facilities they own. Instead, access is negotiated with competing railroads at a mutually agreed-upon price.

Brazil general cargo modal share is proportionally similar to the United States. Cargo is predominantly shipped by truck, followed by rail and barge. Overall, Brazil's transportation infrastructure during 2011 improved. However, transportation costs in the Midwest, especially in MT, are still higher than Iowa (IA) and the southern Brazilian state of Rio Grande do Sul. Rio Grande do Sul (RS) exporters have similar or lower transportation cost than the United States' routes to China from Iowa through the U.S. Gulf to Shanghai and from South and North Dakota through the Pacific Northwest to Shanghai.

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Population:	205,716,890 (July 2012 est.) 190 732 694 (2010 Census, Instituto Brasileiro de Geografia e Estatística, (IBGE))
Gross Domestic Product per Capita, 2011:	US\$12,696.10 (Banco Central do Brasil)
Inflation, 2011:	6.5 percent (Banco Central do Brasil)
Area:	8,514,877 sq km
Languages:	Portuguese (official), Spanish, English, French



Routes¹ and regions considered in the Brazilian soybean export transportation indicators²

¹Table defining routes by number is shown on page 16 ²Regions comprised about 82 percent of Brazilian soybean production, 2010 Source: USDA/AMS & ESALQ - University of São Paulo (USP), Brazil In 2011, Brazilian soybean transportation costs to Shanghai, China, as a percentage of total landed costs decreased 11–21 percent compared with 2010 due to lower ocean rates and higher farm prices. In Sorriso, North MT (the largest Brazilian soybean-producing state) transportation costs represented 31 percent of the total landed costs of shipping soybeans to Shanghai through Santos compared with 45 percent in 2006.

Cost of transporting soybeans from Brazil to Shanghai, China															
	2006	2007	2008	2009	2010	2011	Percent	2006	2007	2008	2009	2010	2011	Percent	
			US\$	\$/mt			change 10-11		US\$/mt						
			Nort	h MT¹ - Sa	antos²			Northwest RS ¹ - Rio Grande ²							
Truck	79.46	97.67	115.74	97.00	116.78	123.31	5.6	16.16	21.82	22.29	24.50	28.18	38.94	38.2	
Ocean	57.31	82.83	70.38	58.78	55.84	50.50	-9.6	55.81	81.56	72.08	59.42	58.21	51.10	-12.2	
Total transportation	136.77	180.51	186.12	155.78	172.62	173.81	0.7	71.97	103.37	94.37	83.92	86.39	90.03	4.2	
Farm price 3	164.88	233.82	358.99	324.34	318.15	392.10	23.2	210.34	267.06	394.66	359.51	344.90	415.87	20.6	
Landed cost	301.65	414.33	545.11	480.12	490.77	565.91	15.3	282.31	370.43	489.03	443.43	431.29	505.90	17.3	
Transport % of landed cost	45.4	43.9	34.1	32.6	38.6	30.6	-20.7	25.2	28.1	19.4	19.0	20.1	17.8	-11.6	
		N	lorth Cen	tral PR ¹ -	Paranagi	Ja²				Sout	h GO¹ - S	antos²			
Truck	21.31	32.36	33.60	27.37	34.51	39.54	14.6	43.56	50.47	55.33	50.83	64.71	63.92	-1.2	
Ocean	56.31	80.81	71.66	59.00	58.92	57.32	-2.7	57.31	82.83	70.38	58.78	55.84	50.50	-9.6	
Total transportation	77.62	113.18	105.26	86.37	93.43	96.86	3.7	100.87	133.30	125.71	109.62	120.56	114.42	-5.1	
Farm price 3	213.81	281.14	399.31	372.46	350.44	431.66	23.2	189.63	268.65	373.13	338.31	324.27	412.89	27.3	
Landed cost	291.43	394.32	504.56	458.83	443.87	528.52	19.1	290.50	401.95	498.84	447.93	444.82	527.31	18.5	
Transport % of landed cost	26.5	28.9	21.0	18.9	21.2	18.4	-13.5	34.6	33.5	25.4	24.6	27.4	21.7	-20.7	

¹Producing regions: RS = Rio Grande do Sul, MT= Mato Grosso, GO = Goiás, PR = Paraná ²Export ports

³Source: Companhia Nacional de Abastecimento (CONAB) www.conab.gov.br

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

2011 Summary

In 2011, Brazilian soybean transportation costs from South Goiás (GO), Mato Grosso (MT), Paraná (PR) and Rio Grande do Sul (RS) to Hamburg, Germany, as a percentage of total landed costs decreased 5–18 percent from a year earlier. There were significant truck rate increases in the route from Londrina, Northwest Rio Grande do Sul (RS) to Rio Grande and Cruz Alta, North Central Paraná (PR) to Paranaguá. Rates increased in North PR because the overlapping soybean and sugar harvest that occurs from May–November increases truck demand. In the past years, rail and truck used to compete for soybeans cargo in RS. This year, however, there was a shortage of rail services, which increased truck demand.

Cost of transporting soybeans from Brazil to Hamburg, Germany														
	2006	2007	2008	2009	2010	2011	Percent	2006	2007	2008	2009	2010	2011	Percent
			US\$	5/mt			change 10-11			change 10-11				
			Nort	h MT¹ - Sa	antos²					Northwe	st RS¹ - R	io Grande	€ ²	
Truck	79.46	97.67	115.74	97.00	116.78	123.31	5.6	16.16	21.82	22.29	24.50	28.18	37.54	33.2
Ocean	46.76	73.01	52.36	32.48	33.63	34.65	3.0	45.03	71.73	54.30	33.79	36.03	36.12	0.2
Total transportation	126.22	170.68	168.10	129.48	150.40	157.96	5.0	61.18	93.55	76.60	58.30	64.21	73.65	14.7
Farm price 3	164.88	233.82	358.99	324.34	318.15	392.10	23.2	210.34	267.06	394.66	359.51	344.90	415.87	20.6
Landed cost	291.11	404.50	527.09	453.82	468.55	550.06	17.4	271.53	360.61	471.26	417.80	409.11	489.52	19.7
Transport % of landed cost	43.4	42.5	31.6	28.7	32.6	28.7	-11.8	22.3	26.1	16.1	14.0	15.8	15.0	-4.9
		N	lorth Cen	tral PR ¹ -	Paranagi	Ja²		South GO ¹ - Santos ²						
Truck	21.31	32.36	33.60	27.37	34.51	39.54	14.6	43.56	50.47	80.61	50.83	64.71	63.92	-1.2
Ocean	45.76	71.05	53.81	33.34	35.08	34.95	-0.4	46.76	73.01	52.36	32.48	33.63	34.65	3.0
Total transportation	67.07	103.42	87.41	60.71	69.59	74.48	7.0	90.32	123.48	132.97	83.32	98.34	98.57	0.2
Farm price 3	213.81	281.14	399.30	372.46	350.44	431.66	23.2	189.63	268.65	358.99	338.31	324.27	412.89	27.3
Landed cost	280.88	384.56	486.71	433.17	420.03	506.15	20.5	279.96	392.12	491.97	421.63	422.61	511.46	21.0
Transport % of landed cost	23.8	27.0	17.9	14.1	16.8	14.7	-12.1	32.2	31.8	26.9	19.8	23.6	19.3	-18.2

¹Producing regions: RS = Rio Grande do Sul, MT= Mato Grosso, GO = Goiás, PR = Paraná ²Export ports

³Source: Companhia Nacional de Abastecimento (CONAB) www.conab.gov.br

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

In 2011, it cost \$76.75 more per metric ton to ship soybeans from Sorriso, North Mato Grosso (MT) to Shanghai, China, than from Davenport, IA. Sorriso is located 1,190 miles from the port of Santos. Davenport is about 900, 908, and 1,343 miles from the Port of New Orleans by truck, rail, and barge, respectively.





In 2011, the cost of shipping a metric ton of soybeans from Cruz Alta, Northwest Rio Grande do Sul (RS), to Shanghai, China, cost \$7.03 less than from Davenport, IA. The distance from Cruz Alta to the port of Rio Grande is 288 miles.

Transportation cost differences between Rio Grande do Sul (RS) and Iowa (IA) to Shanghai, China



2011 Summary

During 2011, Sorriso, North MT, soybean shippers to Shanghai paid \$76-\$82 per metric ton more than U.S. exporters through the U.S. Gulf and PNW routes; and almost \$84 more than the transportation cost paid by Cruz Alta, RS, shippers.

Transportation cost differences between selected Brazil-United States Routes to Shanghai, China, 2011



Source: USDA/AMS

In 2011, truck rates (valued in reais) from Sorriso, North Mato Grosso (MT), to Santos and Paranaguá increased slightly. Truck rates from Cruz Alta, Rio Grande do Sul (RS) to Rio Grande increased significantly.

Truck rates for selected Brazilian soybean export routes, 2005-2011														
Route	Origin ¹	Destination	Distance	2005	2006	2007	2008	2009	2010	2011	Percent			
#	(reference city)	Destination	(miles) ²	Reais/metric ton							10-11			
1	Northwest RS ³ (Cruz Alta)	Rio Grande	288	31.25	35.09	42.83	39.75	48.32	49.58	62.44	25.9			
2	North MT (Sorriso)	Santos	1190	191.83	172.90	190.37	206.25	191.73	205.40	206.03	0.3			
3	North MT (Sorriso)	Paranaguá	1262	188.40	169.84	171.59	196.05	180.30	195.09	197.09	1.0			
4	South GO (Rio Verde)	Santos	587	90.56	94.74	98.45	99.16	100.36	113.85	106.57	-6.4			
6	North Central PR (Londrina)	Paranaguá	268	52.26	46.35	62.89	60.78	54.50	60.70	66.07	8.9			
11	Southeast MT (Primavera do Leste)	Santos	901	143.14	125.29	135.70	144.86	147.22	164.18	159.93	-2.6			

¹Although each origin region comprises several cities, the main city is considered as a reference to establish the freight price.

²Distance from the main city of the considered region to the mentioned ports.

³RS = Rio Grande do Sul, MT= Mato Grosso, GO = Goiás, PR = Paraná, MG = Minas Gerais, BA = Bahia, MS = Mato Grosso do Sul, SP = São Paulo Source: ESALQ/USP (University of São Paulo, Brazil) and USDA/AMS In 2011, selected Brazilian export truck routes saw proportionally higher increases in transportation costs in U.S. dollars due to the appreciation of the Brazilian Real (R\$) against the U.S. dollar. In 2011, the Brazilian Real (R\$) appreciated 4.8 percent against the US\$ compared with 2010.

	Truck rates for selected Brazilian soybean export routes, 2005-2011														
Route	Origin ¹	Destingtion	Distance	2005	2006	2007	2008	2009	2010	2011	Percent				
#	(reference city)	Destination	US\$/metric ton							Change 10-11					
1	Northwest RS ³ (Cruz Alta)	Rio Grande	288	12.84	16.16	21.82	22.29	24.50	28.18	37.54	33.2				
2	North MT (Sorriso)	Santos	1190	79.10	79.46	97.67	115.74	97.00	116.78	123.31	5.6				
3	North MT (Sorriso)	Paranaguá	1262	77.64	78.05	88.05	109.90	91.36	110.94	117.90	6.3				
4	South GO (Rio Verde)	Santos	587	37.59	43.56	50.47	55.33	50.83	64.71	63.92	-1.2				
6	North Central PR (Londrina)	Paranaguá	268	21.52	21.31	32.36	33.60	27.37	34.51	39.54	14.6				
11	Southeast MT (Primavera do Leste)	Santos	901	58.95	57.56	69.58	80.61	74.39	93.41	95.82	2.6				

¹Although each origin region comprises several cities, the main city is considered as a reference to establish the freight price.

²Distance from the main city of the considered region to the mentioned ports.

³RS = Rio Grande do Sul, MT= Mato Grosso, GO = Goiás, PR = Paraná, MG = Minas Gerais, BA = Bahia, MS = Mato Grosso do Sul,

SP = São Paulo

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

The Brazilian soybean export transportation cost index increased 9 percent in 2011. The cost of shipping a metric ton of soybeans 100 miles by truck increased from \$10.74 in 2010 to \$11.71 in 2011. A record crop, limited port capacity, and lack of alternative transportation modes and routes to export ports, boosted up the 2011 Brazilian truck rates to the highest level since 2005.

Brazilian soybean export truck cost index Average 2010: \$10.74 Average 2011: \$11.71



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

2011 Summary

Brazil is the second largest soybean export country after the United States. In 2011, Santos was the largest Brazilian soybean export port followed by Paranaguá and Rio Grande. These 3 ports accounted for 66 percent of total exports.



Brazil soybean exports by port

In 2011, ocean rates from the Port of Santos to Shanghai, China, slightly increased in the 3rd quarter but still remained nearly 10 percent below 2010 rates, averaging \$50.50 per mt. Ocean rates to Hamburg steadily increased throughout the 2nd quarter, hit a peak of \$36.65 per mt in the 3rd quarter and declined in the 4th quarter, ranging from \$32-\$37 per mt.



Brazilian soybean ocean freight from Santos to Shanghai and Hamburg, 2011

Sources: Secretaria de Comércio Exterior (SECEX), MDIC, and Companhia Nacional de Abastecimento (CONAB)

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

The cost to ship 1 mt of soybeans from Brazil to Hamburg by ocean-going vessel slightly increased on average from \$34.91 per mt to \$35.24 per mt.





In 2011, the cost to ship 1 mt of soybeans from Brazil to Shanghai by ocean vessel fell on average 8 percent from \$57.66 per mt to \$52.97 per mt.



Ocean rates from Brazil to Shanghai, China, declined in 2011

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

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

2011 Summary

Farm prices in the Brazilian Real (R\$) increased on average almost 18 percent, from nearly 15 percent in Rio Grande do Sul (RS) to 21 percent in Goiás (GO) in 2011. However, when farm prices are measured in US\$, they increased proportionally more, nearly 24 percent, from a year earlier, due to the appreciation of the real against the U.S. dollar.



Selected Brazilian farm prices

RS = Rio Grande do Sul, MT = Mato Grosso, GO = Goiás, PR = Paraná Source: Companhia Nacional de Abastecimento (CONAB)



Selected Brazilian farm prices

RS = Rio Grande do Sul, MT = Mato Grosso, GO = Goiás, PR = Paraná Source: Companhia Nacional de Abastecimento (CONAB) In 2011, the Brazilian Real (R\$) appreciated 4.8 percent against the US\$ compared with 2010, from R\$1.7595 per US\$ to R\$1.6751.





More than 60 percent of and U.S. and Brazilian cargo is moved by truck.



U.S-Brazil modal share for general cargo

*Ocean, air, pipeline, multiplemodes, etc.

Source: U.S. Department of Transportation (DOT), 2009 latest data available; Confederação Nacional do Transporte (CNT) and Agência Nacional de Transportes Terrestres (ANTT), 2007 latest data available.

Source: Banco Central do Brasil

Transportation Infrastructural Developments

The Brazilian government plans to change the current cargo transportation matrix by developing an integrated intermodal system. The intention is that within 15 to 20 years, railways' participation will increase from 25 to 35 percent; waterways from 13 to 29 percent; and truck shipments will be reduced by 28 percent, from 58 to 30 percent. To modify the transportation matrix, in January 2007 the Brazilian government created the Growth Acceleration Plan (PAC) to promote sustainable social and economic development by generating employment and income, and reducing regional inequalities. During the same year, the PAC was integrated into the National Plan of Logistic and Transportation (PNLT). The PNLT is executed through the Ministry of Transportation and Defense, which is allocating funds in 3 phases from 2008 to 2023.



Brazil modal share for general cargo, 2005-2025

Source: Brazil Ministry of Transportation, National Plan of Logistic & Transportation (PNLT)

National Logistics and Transportation Program (PNLT), timeframe 2008 — after 2015, billions												
Phases	Total (k	pillions)	% share									
r nases	R\$	US\$										
I: 2008-2011	109.2	54.7	37.55									
II: 2012-2015	84.3	42.2	28.99									
III: 2015-2023	97.3	48.7	33.46									
Total	290.8	145.6	100									

*Average 2009 exchange rate: 1 US\$ = R\$ 1.9977 Source: Brazilian Ministry of Transportation Of the US\$ 145.6 billion to be allocated to the logistic sector, about 51 percent of the funds will be allocated to the railway system, totaling about US\$75.2 billion.



National Logistics and Transportation Program (PNLT), allocations by mode, 2008-2023

Average 2009 exchange rate: 1 US\$ = R\$ 1.9977 Source: Brazil Ministry of Transportation

Two-thirds of the funds will be allocated in the Center-South, East, and South regions.



PNLT allocation by logistic vectors

Source: Brazil Ministry of Transportation

Transportation Infrastructural Developments

US\$7.8 billion are assigned to improve the inland waterways: 61 percent of the funds will be allocated to improve the inland waterways in the Amazon and Center North regions; 62 percent of the port funds will be allocated to improve the ports in the East and Center South; and 34 percent of highway funds will be allocated to improve the highway system of the Amazon and South regions.

PNLT — Transportation mode investments by logistic vectors, and % of total														
Mode	Amazon	Center- North	Center- South East		Center Northeast	Upper Northeast	South	Total						
Air	5.27	6.56	28.20	20.81	2.76	25.04	11.35	100						
Railways	6.82	6.24	37.42	24.18	5.89	4.54	14.92	100						
Inland waterways	31.34	29.67	12.98	9.57	1.73	1.02	13.69	100						
Ports	2.61	8.69	20.84	41.50	4.03	5.33	17.00	100						
Highways	16.50	9.11	15.47	14.55	12.01	14.40	17.96	100						
Other	-	49.30	24.33	7.18	0.45	16.50	2.50	100						
% of Brazil	9.9	9.2	11.3	9.6	20.4	22.7	16.9	100						

*Average 2009 exchange rate: 1 US\$ = R\$ 1.9977

Source: Brazilian Ministry of Transportation

	Quarterly costs of transporting soybeans from Brazil to Shanghai, China													
			2011					2011						
	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg				
		Nort	h MT ¹ - San US\$/mt	itos ²			North	MT ¹ - Paran US\$/mt	agua²					
Truck	124.57	125.83	127.77	115.05	123.31	118.04	118.85	122.72	112.01	117.90				
Ocean	50.00	50.05	52.31	49.65	50.50	56.25	57.62	59.61	55.80	57.32				
Total transportation	174.57	175.88	180.08	164.70	173.81	174.29	176.47	182.33	167.81	175.22				
Farm price ³	406.96	386.58	416.62	358.24	392.10	406.96	386.58	416.62	358.24	392.10				
Landed cost	581.53	562.46	596.70	522.94	565.91	581.24	563.04	598.95	526.06	567.32				
Transport % of landed cost	30.0	31.3	30.2	31.5	30.6	30.0	31.3	30.4	31.9	30.9				
		Southe	ast MT ¹ - S US\$/mt	antos²		North Central PR1 - Paranagua ² US\$/mt								
Truck	107.73	97.14	95.74	82.67	95.82	36.82	41.39	42.36	37.58	39.54				
Ocean	50.00	50.05	52.31	49.65	50.50	56.25	57.62	59.61	55.80	57.32				
Total transportation	157.73	147.19	148.05	132.32	146.32	93.07	99.01	101.97	93.38	96.86				
Farm price ³	406.96	386.58	416.62	358.24	392.10	459.96	435.53	440.47	390.69	431.66				
Landed cost	564.69	533.77	564.67	490.56	538.42	553.03	534.54	542.44	484.07	528.52				
Transport % of landed cost	27.9	27.6	26.2	27.0	27.2	16.8	18.5	18.8	19.3	18.4				
		Sout	h GO ¹ - Sar US\$/mt	ntos²			Northwe	st RS ¹ - Rio US\$/mt	Grande ²					
Truck	61.63	71.02	66.08	56.93	63.92	31.36	44.95	41.86	37.58	38.94				
Ocean	50.00	50.05	52.31	49.65	50.50	50.50	50.60	53.02	50.26	51.10				
Total transportation	111.63	121.07	118.39	106.58	114.42	81.86	95.55	94.88	87.84	90.03				
Farm price ³	441.07	413.15	417.65	379.70	412.89	431.68	425.42	428.53	377.84	415.87				
Landed cost	552.70	534.22	536.04	486.29	527.31	513.54	520.97	523.40	465.68	505.90				
Transport % of landed cost	20.2	22.7	22.1	21.9	21.7	15.9	18.3	18.1	18.9	17.8				

¹Producing regions: RS = Rio Grande do Sul, MT = Mato Grosso, GO = Goiás, PR = Paraná ²Export ports

³Source: Companhia Nacional de Abastecimento (CONAB) www.conab.gov.br

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

Quarterly costs of transporting soybeans from Brazil to Hamburg, Germany													
			2011					2011					
	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg			
		Nort	h MT ¹ - San US\$/mt	itos ²			North	MT ¹ - Paran US\$/mt	lagua²				
Truck	124.57	125.83	127.77	115.05	123.31	118.04	118.85	122.72	112.01	117.90			
Ocean	34.96	35.00	36.65	32.00	34.65	33.86	36.00	37.29	32.63	34.95			
Total transportation	159.53	160.83	164.42	147.05	157.96	151.90	154.85	160.01	144.64	152.85			
Farm price 3	406.96	386.58	416.62	358.24	392.10	406.96	386.58	416.62	358.24	392.10			
Landed cost	566.49	547.41	581.04	505.29	550.06	558.85	541.42	576.63	502.89	544.95			
Transport % of landed cost	28.2	29.4	28.3	29.1	28.7	27.2	28.6	27.7	28.8	28.1			
		South	east MT¹ - S US\$/mt	antos²		North Central PR ¹ - Paranagua ² US\$/mt							
Truck	107.73	97.14	95.74	82.67	95.82	36.82	41.39	42.36	37.58	39.54			
Ocean	34.96	35.00	36.65	32.00	34.65	33.86	36.00	37.29	32.63	34.95			
Total transportation	142.69	132.14	132.39	114.67	130.47	70.68	77.39	79.65	70.21	74.48			
Farm price ³	406.96	386.58	416.62	358.24	392.10	459.96	435.53	440.47	390.69	431.66			
Landed cost	549.65	518.72	549.01	472.91	522.57	530.64	512.92	520.12	460.90	506.15			
Transport % of landed cost	26.0	25.5	24.1	24.2	24.9	13.3	15.1	15.3	15.2	14.7			
		Sout	th GO ¹ - Sar US\$/mt	ntos²			Northwe	st RS ¹ - Rio US\$/mt	Grande ²				
Truck	61.63	71.02	66.08	56.93	63.92	31.36	44.95	41.86	31.98	37.54			
Ocean	34.96	35.00	36.65	32.00	34.65	35.43	36.00	37.81	35.22	36.12			
Total transportation	96.59	106.02	102.73	88.93	98.57	66.79	80.95	79.67	67.20	73.65			
Farm price 3	441.07	413.15	417.65	379.70	412.89	431.68	425.42	428.53	377.84	415.87			
Landed cost	537.66	519.17	520.38	468.64	511.46	498.47	506.37	508.19	445.03	489.52			
Transport % of landed cost	18.0	20.4	19.7	19.0	19.3	13.4	16.0	15.7	15.1	15.0			

¹Producing regions: RS = Rio Grande do Sul, MT = Mato Grosso, GO = Goiás, PR = Paraná ²Export ports

³Source: Companhia Nacional de Abastecimento (CONAB) www.conab.gov.br Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS

Truck rates for selected Brazilian soybean export transportation routes, 2011													
Route	Origin ¹		Distanco	Sharo	Quarte	rly Freig	ght Pric	e (US\$)	Δνα				
#	(reference city)	Destination	(miles) ²	(%) ³	1st	2nd	3rd	4th	2011				
1	Northweat DC5 (Cruz Alta)	Dia Cranda	200	2.22	10.90	(per 10		11.10	12.02				
	North MT (Queries)	Rio Grande	200	3.23	10.09	10.01	14.55	0.07	13.03				
2	North MT (Sorriso)	Santos	1190	11.14	10.47	10.57	10.74	9.67	10.36				
3	North MT (Sorriso)	Paranaguá	1262	10.50	9.35	9.42	9.72	8.88	9.34				
4	South GO (Rio Verde)	Santos	587	5.62	10.50	12.10	11.26	9.70	10.89				
5	South GO (Rio Verde)	Paranaguá	726	4.54	8.54	9.68	8.99	7.45	8.66				
6	North Central PR (Londrina)	Paranaguá	268	4.00	13.74	15.45	15.81	14.02	14.75				
7	Western Central PR (Mamborê)	Paranaguá	311	3.66	12.24	13.28	12.61	10.93	12.26				
8	Triangle MG (Uberaba)	Santos	339	3.31	16.63	18.37	17.50	15.27	16.94				
9	West PR (Assis Chateaubriand)	Paranaguá	377	5.09	13.22	13.42	12.24	10.05	12.23				
10	West Extreme BA (São Desidério)	Salvador	535	4.80	9.09	10.36	12.13	10.95	10.63				
11	Southeast MT (Primavera do Leste)	Santos	901	3.20	11.96	10.78	10.63	9.18	10.64				
12	Southeast MT (Primavera do Leste)	Paranaguá	975	2.96	9.76	9.26	9.97	9.39	9.59				
13	Southwest MS (Maracaju)	Paranaguá	612	3.58	10.93	10.81	10.57	9.91	10.55				
14	Southwest MS (Maracaju)	Santos	652	3.37	11.49	11.41	10.85	10.26	11.00				
15	West PR (Assis Chateaubriand)	Santos	550	0.00	13.89	14.14	13.62	11.47	13.28				
16	East GO (Cristalina)	Santos	585	1.53	11.40	12.70	11.57	10.34	11.50				
17	North PR (Cornélio Procópio)	Paranaguá	306	1.86	10.91	13.74	12.07	10.05	11.69				
18	Eastern Central PR (Castro)	Paranaguá	130	2.60	19.78	21.67	21.51	18.73	20.42				
19	South Central PR (Guarapuava)	Paranaguá	204	2.38	17.94	19.16	18.61	15.32	17.76				
20	North Center MS (São Gabriel do Oeste)	Santos	720	1.05	10.01	10.61	9.62	8.90	9.78				
21	Ribeirão Preto SP (Guairá)	Santos	314	0.80	14.04	13.81	13.59	12.26	13.43				
22	Northeast MT (Canarana)	Santos	950	1.79	12.63	12.07	12.30	11.09	12.02				
23	East MS (Chapadão do Sul)	Santos	607	0.98	10.69	11.31	10.57	9.86	10.61				
24	Northeast MT (Canarana)	Paranaguá	1075	1.58	11.30	10.54	10.97	10.04	10.71				
25	Western Central RS (Tupanciretã)	Rio Grande	273	2.60	13.21	17.40	16.32	13.02	14.99				
26	Southwest PR (Chopinzinho)	Paranaguá	291	2.22	14.97	16.14	15.67	13.74	15.13				
	Average		578	100.0	11.46	12.52	12.26	10.61	11.71				

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

²Distance from the main city of the considered region to the mentioned ports

³Share is measured as a percentage of total production

⁴US\$ per metric ton (average monthly exchange rate from "Banco Central do Brasil" was used to convert Brazilian reais to the U.S. dollar) ⁵RS = Rio Grande do Sul, MT= Mato Grosso, GO = Goiás, PR = Paraná, MG = Minas Gerais, BA = Bahia, MS = Mato Grosso do Sul, SP = São Paulo

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

Truck rates for selected Brazilian soybean export transportation routes, 2005-2011

				Quality Freight Price						\$\$)		Percent
Route #	Origin ¹ (reference city)	Destination	Distance (miles) ²	Share	2005	2006	2007	2008	2009	2010	2011	Change
"	(reference eng)		(111100)	(70)			(per	[.] 100 mi	les)4			2005-11
1	Northwest RS⁵ (Cruz Alta)	Rio Grande	288	10.81	4.46	5.61	7.58	7.74	8.51	9.78	13.03	33.2
2	North MT (Sorriso)	Santos	1190	13.02	6.65	6.68	8.21	9.73	8.15	9.81	10.36	5.6
3	North MT (Sorriso)	Paranaguá	1262	12.27	6.15	6.18	6.98	8.71	7.24	8.79	9.34	6.3
4	South GO (Rio Verde)	Santos	587	6.26	6.40	7.42	8.60	9.43	8.66	11.02	10.89	-1.2
5	South GO (Rio Verde)	Paranaguá	726	5.06	5.11	5.78	6.73	7.65	7.00	8.90	8.66	-2.7
6	North Central PR (Londrina)	Paranaguá	268	4.08	8.03	7.95	12.08	12.54	10.21	12.88	14.75	14.6
7	Western Central PR (Mamborê)	Paranaguá	311	3.63	5.72	6.68	8.62	9.38	9.33	10.36	12.26	18.4
8	Triangle MG (Uberaba)	Santos	339	3.18	9.48	10.30	12.20	13.87	13.18	16.08	16.94	5.4
9	West PR (Assis Chateaubriand)	Paranaguá	377	6.21	5.82	6.76	7.55	8.07	8.27	11.00	12.23	11.2
10	West Extreme BA (São Desidério)	llhéus	544	5.69	7.28	8.08	9.78	11.52	9.75	10.27	10.63	3.5
11	Southeast MT (Primavera do Leste)	Santos	901	2.89	6.54	6.39	7.72	8.95	8.26	10.37	10.64	2.6
12	Southeast MT (Primavera do Leste)	Paranaguá	975	2.67	6.06	5.95	7.16	8.02	7.32	8.99	9.59	6.7
13	Southwest MS (Maracaju)	Paranaguá	612	3.34	5.83	8.16	8.05	7.94	7.91	10.77	10.55	-2.0
14	Southwest MS (Maracaju)	Santos	652	3.14	6.01	8.00	7.72	8.11	8.26	10.93	11.00	0.6
15	West PR (Assis Chateaubriand)	Santos	550	0.00	5.84	7.20	8.32	9.87	11.02	12.52	13.28	6.1
16	Western Center RS (Tupanciretã)	Rio Grande	273	1.17	na	na	na	10.36	8.86	11.22	11.50	2.5
17	Southwest PR (Chopinzinho)	Paranaguá	291	1.87	na	na	na	9.21	9.39	10.54	11.69	10.9
18	Eastern Central PR (Castro)	Paranaguá	130	2.47	10.12	9.55	16.24	13.42	12.59	19.91	20.42	2.6
19	South Central PR (Guarapuava)	Paranaguá	204	2.23	8.33	9.56	10.98	13.66	11.27	16.30	17.76	8.9
20	North Center MS (São Gabriel do Oeste)	Santos	720	1.83	5.47	6.21	7.02	7.58	7.63	9.67	9.78	1.2
21	Ribeirão Preto SP (Guairá)	Santos	314	0.00	7.55	8.91	10.82	12.54	11.09	13.44	13.43	-0.1
22	Northeast MT (Canarana)	Santos	950	2.12	7.35	7.87	8.90	10.69	8.99	11.34	12.02	6.0
23	Assis SP (Palmital)	Santos	285	0.00	na	na	na	8.73	8.16	10.65	10.61	-0.4
24	Northeast MT (Canarana)	Paranaguá	1075	1.87	na	na	na	9.08	7.49	10.48	10.71	2.2
25	Western Central RS (Tupanciretã)	Rio Grande	273	2.25	na	na	na	11.23	8.38	9.06	14.99	65.5
26	Southwest PR (Chopinzinho)	Paranaguá	291	1.98	na	na	na	12.38	10.51	13.37	15.13	13.1
	Average		626	100.0	na	na	na	9.75	8.74	10.74	11.71	9.1

¹Although each origin region comprises several cities, the main city is considered as a reference to establish the freight price; na = not available ²Distance from the main city of the considered region to the mentioned ports

³Share is measured as a percentage of total production

⁴US\$ per metric ton (average monthly exchange rate from "Banco Central do Brasil" was used to convert Brazilian reais to the U.S. dollar) ⁵RS = Rio Grande do Sul, MT= Mato Grosso, GO = Goiás, PR = Paraná, MG = Minas Gerais, BA = Bahia, MS = Mato Grosso do Sul,

SP = São Paulo

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

Truck rates for selected Brazilian soybean export transportation routes



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



Brazilian soybean export truck transportation weighted average prices, 2009/11

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

wonting 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-05	5.80	40.8	100.00	Jan-09	6.91	1.7	119.11
Feb-05	5.85	0.9	100.90	Feb-09	7.28	5.4	125.52
Mar-05	5.97	2.0	102.92	Mar-09	7.65	5.1	131.89
Apr-05	6.51	9.0	112.14	Apr-09	8.44	10.3	145.42
May-05	6.80	4.5	117.22	May-09	9.56	13.3	164.72
Jun-05	6.74	-0.9	116.22	Jun-09	9.74	2.0	167.97
Jul-05	6.77	0.5	116.76	Jul-09	9.28	21.3	159.94
Aug-05	6.75	-0.3	116.41	Aug-09	9.29	0.1	160.16
Sep-05	6.92	2.5	119.27	Sep-09	9.14	-1.6	157.62
Oct-05	6.98	0.9	120.28	Oct-09	9.32	1.9	160.66
Nov-05	7.09	1.6	122.15	Nov-09	9.22	-1.1	158.93
Dec-05	6.78	-4.3	116.95	Dec-09	9.02	-2.2	155.48
Jan-06	6.91	1.9	119.18	Jan-10	9.17	1.7	158.10
Feb-06	7.33	6.0	126.36	Feb-10	9.99	8.9	172.16
Mar-06	7.48	2.1	129.02	Mar-10	10.77	7.8	185.67
Apr-06	6.99	-6.6	120.57	Apr-10	10.91	1.3	188.10
May-06	6.88	-1.7	118.56	May-10	10.80	-1.1	186.10
Jun-06	6.62	-3.8	114.05	Jun-10	10.61	-1.7	182.95
Jul-06	7.10	7.3	122.41	Jul-10	10.86	2.3	187.14
Aug-06	7.41	4.4	127.79	Aug-10	11.21	3.3	193.23
Sep-06	7.37	-0.6	127.02	Sep-10	11.46	2.2	197.57
Oct-06	7.48	1.5	128.88	Oct-10	11.51	0.4	198.41
Nov-06	7.19	-3.8	123.92	Nov-10	10.86	-5.6	187.20
Dec-06	6.81	-5.3	117.32	Dec-10	10.72	-1.3	184.79
Jan-07	6.88	1.1	118.60	Jan-10	9.17	1.7	158.10
Feb-07	7.55	9.7	130.15	Feb-10	9.99	8.9	172.16
Mar-07	8.47	12.2	146.00	Mar-10	10.77	7.8	185.67
Apr-07	8.40	-0.9	144.76	Apr-10	10.91	1.3	188.10
May-07	8.12	-3.3	140.05	May-10	10.80	-1.1	186.10
Jun-07	8.24	1.4	141.99	Jun-10	10.61	15.7	182.95
Jul-07	9.00	9.3	155.20	Jul-10	10.86	2.3	187.14
Aug-07	8.63	-4.2	148.75	Aug-10	11.21	3.3	193.23
Sep-07	9.23	6.9	159.05	Sep-10	11.46	2.2	197.57
Oct-07	9.72	5.4	167.61	Oct-10	11.51	0.4	198.41
Nov-07	9.56	-1.6	164.86	Nov-10	10.86	-5.6	187.20
Dec-07	9.32	-2.5	160.71	Dec-10	10.72	-1.3	184.79
Jan-08	9.40	0.9	162.12	Jan-11	10.84	1.1	186.89
Feb-08	9.63	2.4	166.02	Feb-11	11.21	3.4	193.30
Mar-08	10.59	9.9	182.46	Mar-11	12.07	7.6	208.04
Apr-08	10.81	2.1	186.35	Apr-11	13.30	10.2	229.22
May-08	10.69	-1.1	184.32	May-11	12.01	-9.7	207.04
Jun-08	11.00	2.9	189.67	Jun-11	12.25	2.0	211.20
Jul-08	12.05	9.5	207.73	Jul-11	12.72	3.9	219.34
Aug-08	11.14	-7.6	192.00	Aug-11	12.64	-0.7	217.84
Sep-08	10.27	-7.8	177.00	Sep-11	11.43	-9.6	196.95
Oct-08	7.44	-27.5	128.24	Oct-11	11.09	-3.0	191.10
Nov-08	7.20	-3.2	124.13	Nov-11	10.70	-3.4	184.52
Dec-08	6.79	-5.7	117.11	Dec-11	10.04	-6.2	173.00

*Weighted average and quoted in US\$ per metric ton Source: ESALQ/USP (University of São Paulo, Brazil) and USDA/AMS

Quarterly ocean freight rates for shipping soybeans from selected Brazilian ports to Shanghai, China (US\$/metric ton)*							
	Ports						
	Santos	Paranaguá	Rio Grande				
2006							
1st qtr	50.13	49.13	48.63				
2nd qtr	44.80	43.80	43.30				
3rd qtr	60.98	59.98	59.48				
4th qtr	73.32	72.32	71.82				
2006 Average	57.31	56.31	55.81				
2007							
1st qtr	73.32	72.32	71.82				
2nd qtr	111.20	110.20	109.70				
3rd qtr	72.00	65.50	70.50				
4th qtr	74.81	75.22	74.20				
2007 Average	82.83	80.81	81.56				
2008							
1st qtr	64.81	66.53	67.01				
2nd qtr	80.27	80.79	81.27				
3rd qtr	72.43	74.03	74.23				
4th qtr	64.00	65.30	65.80				
2008 Average	70.38	71.66	72.08				
2009							
1st qtr	64.50	65.70	66.87				
2nd qtr	66.00	67.30	67.80				
3rd qtr	49.00	48.78	49.50				
4th qtr	55.63	54.23	53.50				
2009 Average	58.78	59.00	59.42				
2010		_					
1st qtr	52.33	52.50	53.00				
2nd qtr	55.08	58.58	58.75				
3rd qtr	58.17	63.10	63.27				
4th qtr	57.79	61.50	57.83				
2010 Average	55.84	58.92	58.21				
2011							
1st qtr	50.00	56.25	50.50				
2nd qtr	50.05	57.62	50.60				
3rd qtr	52.31	59.61	53.02				
4th qtr	49.65	55.80	50.26				
2011 Average	50.50	57.32	51.10				

*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)

Quarterly ocean freight rates for shipping soybeans from selected Brazilian ports to Hamburg, Germany (US\$/metric ton)*								
	Ports							
	Santos	Paranaguá	Rio Grande					
2006								
1st qtr	39.51	38.51	37.06					
2nd qtr	36.91	35.91	35.41					
3rd qtr	50.24	49.24	48.74					
4th qtr	60.40	59.40	58.90					
2006 Average	46.76	45.76	45.03					
2007								
1st qtr	60.40	59.40	58.90					
2nd qtr	91.61	90.61	90.11					
3rd qtr	59.35	53.12	57.85					
4th qtr	80.67	81.08	80.06					
2007 Average	73.01	71.05	71.73					
2008								
1st qtr	57.38	58.90	59.36					
2nd qtr	71.08	72.68	73.18					
3rd qtr	48.80	50.20	50.70					
4th qtr	32.18	33.48	33.98					
2008 Average	52.36	53.81	54.30					
2009								
1st qtr	34.10	35.50	35.80					
2nd qtr	34.75	35.79	36.20					
3rd qtr	30.00	31.55	32.00					
4th qtr	31.08	30.53	31.17					
2009 Average	32.48	33.34	33.79					
2010								
1st qtr	32.25	31.83	33.50					
2nd qtr	36.17	38.08	39.00					
3rd qtr	34.42	36.92	37.08					
4th qtr	31.67	33.50	34.54					
2010 Average	33.63	35.08	36.03					
2011	2011							
1st qtr	34.96	33.86	35.43					
2nd qtr	35.00	36.00	36.00					
3rd qtr	36.65	37.29	37.81					
4th qtr	32.00	32.63	35.22					
2011 Average	34.65	34.95	36.12					

*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)

Soybean Production



AC

Ľ	RR AP
	PA MA CE RN PI PB PE
1	MT BA SE
ő nge	DF GO MG SP ES
0.0	PR
-3.4	1 mmt
9.6	sc
0.0	RS W
11.5	
al: 8.7	

			(
Region/State	Production*: 2010-2011 (1,000 mt)	Production*: 2011-2012** (1,000 mt)	% Change
North			
Amazonas (AM)	0.0	0.0	0.0
Pará (PA)	314.4	303.6	-3.4
Rondônia (RO)	425.3	466.2	9.6
Roraima (RR)	10.4	10.4	0.0
Tocantins (TO)	1,227.1	1,368.5	11.5
	Total: 1,977.2	Total: 2,148.7	Total: 8.7
Northeast			
Bahia (BA)	3,507.5	3,338.4	-4.8
Maranhão (MA)	1,599.7	1,774.4	10.9
Piauí (PI)	1,144.3	1,363.4	19.1
	Total: 6,251.5	Total: 6,476.2	Total: 3.6
Midwest			
Distrito Federal (DF)	175.70	176.00	0.2
Goiás (GO)	8,181.6	8,463.0	3.4
Mato Grosso (MT)	20,412.20	21,681.20	6.2
Mato Grosso do Sul (MS)	5,169.4	4,629.5	-10.4
	Total: 33,938.9	Total: 34,949.7	Total: 3.0
Southeast			
Minas Gerais (MG)	2,913.6	2,998.3	2.9
São Paulo (SP)	1,708.5	1,676.0	-1.9
	Total: 4,622.1	Total: 4,674.3	Total: 1.1
South			
Paraná (PR)	15,424.1	10,799.1	-30.0
Rio Grande do Sul (RS)	11,621.3	6,526.6	-43.8
Santa Catarina (SC)	1,489.2	1,107.7	-25.6
	Total: 28,534.6	Total: 18,433.4	Total: -35.4
Total Production:	75,324.3	66,682.3	-11.5

*Data based on calendar year, January-December **Forecast, May 2012 Source: Companhia Nacional de Abastecimento (CONAB)

Soybean Production

Brazil soybean supply and distribution (1,000 metric tons)									
Year*	Area Harvested	Beginning Stocks	Production	Imports	Total Supply	Exports	Crush	Domestic Consumption	Ending Stocks
1999/00	13,600	403	34,700	794	35,897	11,779	21,578	23,502	616
2000/01	13,934	616	39,500	854	40,970	15,521	22,773	24,792	657
2001/02	16,350	657	43,500	1,100	45,257	16,074	25,843	28,202	981
2002/03	18,448	981	52,000	1,124	54,105	19,987	27,796	30,320	3,798
2003/04	21,520	3,798	51,000	364	55,162	19,257	28,914	31,807	4,098
2004/05	22,917	4,098	53,000	352	57,450	22,799	29,730	32,515	2,136
2005/06	22,229	2,136	57,000	40	59,176	24,770	28,754	31,654	2,752
2006/07	20,700	2,752	59,000	108	61,860	23,805	31,511	34,361	3,694
2007/08	21,300	3,694	61,000	83	64,777	24,515	31,895	34,695	5,567
2008/09	21,700	5,567	57,800	124	63,491	28,041	30,778	33,543	1,907
2009/10	23,500	1,907	69,000	150	71,057	29,188	35,700	38,600	3,269
2010/11	24,200	3,269	75,500	40	78,809	33,789	36,733	39,733	5,287
2011/12	25,000	5,287	65,000	31	70,318	30,915	34,900	38,000	1,403
2012/13**	26,500	1,403	78,000	40	79,443	36,200	37,700	40,900	2,343

*Data based on Brazil's local February/January Marketing Year (MY) Where February 2006 - January 2007 is the 2005/06 MY **Forecast: May 2012

Source: USDA/Foreign Agricultural Service/Circular Series

Exports



Top 15 Brazilian soybean exporting states

State	2006	2007	2008	2009	2010	2011	Rank
			metri	c ton			
Mato Grosso	9,920,608	6,822,133	8,661,077	10,647,895	8,654,767	9,673,542	1
Paraná	2,889,768	3,728,751	4,812,766	4,630,137	6,280,750	6,982,940	2
Rio Grande Do Sul	3,278,282	5,500,862	3,515,963	4,853,788	4,683,882	5,866,515	3
Goiás	2,800,223	2,210,734	2,311,906	2,308,436	2,203,874	2,337,625	4
Bahia	448,709	708,878	951,041	1,541,566	1,632,045	1,935,990	5
Mato Grosso Do Sul	1,182,094	1,065,858	1,006,346	781,845	1,367,517	1,418,677	6
Maranhão	1,021,543	841,943	920,902	919,650	1,040,758	1,241,827	7
São Paulo	939,176	630,890	761,654	640,622	773,097	984,549	8
Tocantins	633,957	434,542	551,885	557,841	677,124	712,899	9
Minas Gerais	1,178,234	379,801	371,266	780,860	678,217	623,111	10
Santa Catarina	203,916	1,049,896	422,420	254,171	375,407	433,285	12
Rondônia	250,121	229,108	312,362	314,402	357,057	286,610	11
Pará	81,853	67,485	129,639	124,506	167,840	239,704	14
Piauí	24,429	9,132	131,343	150,298	119,043	185,846	13
Distrito Federal	57,872	30,113	38,841	47,382	33,283	73,186	15
Others	38,832	30,324	12,930	8,292	20,563	5,073	
Total	24,949,617	23,740,450	24,912,341	28,561,691	29,065,224	33,001,379	

Sources: Secretaria de Comércio Exterior (SECEX)





Sources: Secretaria de Comércio Exterior (SECEX) and Companhia Nacional de Abastecimento (CONAB)



Brazil soybean average monthly exports

Sources: Secretaria de Comércio Exterior (SECEX) and Companhia Nacional de Abastecimento (CONAB)

Main export routes for soybeans



*Companhia Nacional de Abastecimento (CONAB) **World Wildlife Fund (WWF) Source: USDA/Agricultural Marketing Service & Foreign Agricultural Service



World export routes for Brazilian soybeans

Source: State of Mato Grosso, Department of Tourism and Commerce, Caceres



Brazil soybeans: top 4 export destinations

Source: Secretaria de Comércio Exterior (SECEX)

Brazil is the second largest soybean exporter country after the United States.



Top 5 world soybean exporting countries

*Forecast: May 10, 2012 Source: USDA/FAS

Exports to China

China is Brazil's largest soybean buyer, accounting for 67 percent of total soybean exports in 2011. Brazil soybean exports to China usually peak in May and are almost finished by the end of September.



Brazil soybean average monthly exports to China

Source: Secretaria de Comércio Exterior (SECEX)

China's share of Brazilian soybean exports increased from 43 percent in 2006 to 67 percent in 2011. Mato Grosso (MT), Brazil's largest soybean-producer-exporter State, sold nearly 65 percent of its 2011 soybeans to China.

Top 15 Mato Grosso (MT) soybean export destinations								
State	2006	2007	2008	2009	2010	2011	%	Rank
State			metri	c ton			share	INAIIK
China	3,317,110	2,399,838	3,145,658	5,495,322	5,421,825	6,241,745	64.5	1
Spain	781,710	754,563	1,290,682	934,334	613,363	748,051	7.7	2
Thailand	429,355	133,892	482,039	293,137	326,364	522,515	5.4	3
Netherlands	1,738,796	1,311,940	1,320,667	958,421	578,894	517,331	5.3	4
United Kingdom	324,626	334,105	363,256	472,638	324,352	448,817	4.6	5
Norway	353,280	120,479	298,561	283,606	290,044	330,812	3.4	6
Russian Federation	0	115,127	61,490	0	218,182	180,332	1.9	7
Saudi Arabia	0	0	4,000	101,069	23,730	140,094	1.4	8
Vietnam	0	0	0	0	0	120,563	1.2	9
Turkey	49,750	15,671	37,024	0	2,320	74,218	0.8	10
Japan	110,137	42,802	83,807	157,498	123,432	70,587	0.7	12
Taiwan	125,286	0	24,253	70,524	11,179	51,800	0.5	11
Israel	5,000	31,028	7,500	34,666	11,556	34,507	0.4	14
South Korea	471,991	122,434	98,925	82,845	23,413	31,456	0.3	13
Belgium	170,150	192,062	99,578	136,134	24,500	29,081	0.3	15
Others	2,043,417	1,248,192	1,343,637	1,627,701	661,613	131,633	1.4	
Mato Grosso total	2,263,291,964	6,822,133	8,661,077	10,647,895	8,654,767	9,673,542	100.0	
MT % share of Brazil exports to China	30.8	23.8	26.6	34.5	28.4	28.2		
Brazil exports to China	10,769,170	10,071,893	11,823,583	15,939,970	19,064,473	22,104,689		
Brazil total exports	24,949,617	23,740,450	24,912,341	28,561,691	29,065,224	33,001,379		
China % share of Brazil total exports	43.2	42.4	47.5	55.8	65.6	67.0		

Source: Secretaria de Comércio Exterior (SECEX)

Exports to China

China prefers to buy soybeans from the southern ports of Santos, Paranaguá, and Rio Grande via Cape of Good Hope in South Africa to Shanghai because it is cheaper than from the remote ports of the Amazon River and the Northeast. For example, by buying soybeans from Santos, China saves 7–8 days in shipping costs compared to Manaus; and 2–3 days compared to Itaquí. In 2011, these 3 southern ports accounted for 75 percent of Brazil's soybean exports to China and 50 percent of Brazil's total exports.

	Total Brazil soybean exports by port to China, 2010-11							
Ports		2010	2011	% share o to C	of exports hina	% share of Brazil total exports		
		metric ton		2010	2011	2010	2011	
Sar	ntos	6,660,349	7,427,499	34.9	33.6	22.9	22.5	
Par	anaguá	3,866,327	4,700,085	20.3	21.3	13.3	14.2	
Rio	Grande	3,785,771	4,552,649	19.9	20.6	13.0	13.8	
	Subtotal	14,312,447	16,680,233	75.1	75.5	49.2	50.5	
	Others	4,752,026	5,424,456	24.9	24.5	16.3	16.4	
Total exports to China		19,064,473	22,104,689	100.0	100.0	65.6	67.0	
Brazil total exports 29,064,981 33,001,321			33,001,321					

Source: Secretaria de Comércio Exterior (SECEX)

Distance from selected Brazilian ports to Shanghai, China, and Hamburg, Germany							
Brazilian port	Route through	Destination	Nautical miles	Days at sea			
Manaus	Good Hope Panama Canal	Shanghai, China Shanghai, China Hamburg, Germany	12,880 11,592 5,283	53.7 48.3 22			
Santos	Good Hope Panama Canal	Shanghai, China Hamburg, Germany	11,056 5,683	46.1 23.7			
Itaquí	Good Hope Panama Canal	Shanghai, China Shanghai, China Hamburg, Germany	11,709 11.087 4,361	48.8 46.1 18.2			
Vitoria	Good Hope Panama Canal	Shanghai, China Shanghai, China Hamburg, Germany	10,857 12,587 5,227	45.2 52.4 21.8			
Salvador	Good Hope Panama Canal	Shanghai, China Shanghai, China Hamburg, Germany	10,997 12,170 4,811	45.88 50.7 20			
Paranaguá	Good Hope Panama Canal	Shanghai, China Shanghai, China Hamburg, Germany	11,111 13,165 5,805	46.3 54.9 24.2			
Rro Grande	Good Hope Panama Canal Cape Horn	Shanghai, China Shanghai, China Shanghai, China Hamburg, Germany	11,129 13,564 11,397 6,204	46.4 56.5 47.5 25.9			

Source: http://sea-distances.com

In 2011, China was the major destination of Brazilian soybeans through the port of Santos, Brazil's largest soybean exporting port.



Port of Santos soybean exports by country, 2011

Source: Secretaria de Comércio Exterior (SECEX)

The peak of Brazilian soybean shipments to China from Santos and Paranaguá usually occurs during April–May, except for Rio Grande Sul, which occurs in July.



Port of Santos soybean average monthly exports to China

Source: Secretaria de Comércio Exterior (SECEX)

Exports to China





Source: Secretaria de Comércio Exterior (SECEX)



Port of Rio Grande soybean average monthly exports to China

Source: Secretaria de Comércio Exterior (SECEX)

Brazilian ports

There are 40 water and sea ports and 42 private terminals. The Port of Santos Channel is 426.4 ft wide and 42.64 ft deep. The Port of Paranaguá's entrance strip is 656 ft wide and 39.36 ft deep. It has 3 access channels. Galheta, the major access channel, extends 17.7 miles and has a width ranging from 492 to 656 ft, and a depth of 39.36 ft. The Port of Vitória's entry strip is 820 ft wide and 62.32 ft deep. Its access channel extends 4.34 miles, and is 393.6 ft wide and 36.08 ft deep. The port of Santarém access channel is 5,905 ft wide and 49.2 ft deep. The port of Manaus access channel is 1,640 ft wide and 114.8 ft deep. Both ports have the capacity to handle Panamax vessels that require a draft of up to 39.5 ft.



Sources: Companhia Nacional de Abastecimento (CONAB) Ministério dos Transportes, Brazil



Major rivers of the Amazonian Basin

Source: National Agency for Waterway Transportation (ANTAQ)

Brazil has 39,060 miles of river-lake surface water and 27,280 miles of navigable rivers but only 8,060 miles commercially navigated.

Brazil waterway system					
Extension	Miles				
River-lake surface water	39,060				
National river network	27,280				
Naturally navigable waterways	17,980 (100%)				
Commercial navigations	8,060 (45%)				
Vessel owned	1,148				

Source: Confederação Nacional do Transporte (CNT)

National Agency for Waterway Transporation (ANTAQ)

Brazilian river system



Source: National Agency for Waterway Transportation (ANTAQ)

Brazilian river system

The Port of Manaus access channel is 1,640 ft wide and 114.8 ft deep. Porto Velho's access channel depth varies from 8.2 to 57.4 ft. The Port of Santarém's access channel is 5,904 ft wide and 49.2 ft deep.



Sources: Ministério dos Transportes, Brazil Companhia Nacional de Abastecimento (CONAB)

Brazilian river basins

Brazil's river system comprises eight basins: Amazônica, Nordeste, Tocantins Araguaia, São Franciso, Bacia do Leste, Bacia do Prata, Paraguay, and Sul. The Amazônica and Paraguay Basin account for 72 percent of the total area of the Brazilian basins. The Paraguay Basin serves Argentina, Brazil, Bolivia, Paraguay, and Uruguay. Its navigable extension is comparable with the Mississippi River in the United States and the Rhine River in Europe.



Source: Ministério dos Transportes, Brazil



Brazilian multimodal transportation system

Source: Agência Nacional de Transportes Aquavárious



Major Brazilian highways

Source: Confederação Nacional do Transporte

Transportation Modes

The Brazilian highway system extends 980,285 miles (92,747 kilometers) with only 13 percent paved. The United States public roads system consists of 4,064,177 miles (6,532,576 kilometers).

Brazil highway system extension in miles, 2011							
	Paved roads	Unpaved roads	Total				
Federal	39,081	8,346	47,428				
Federal/State	10,735	3,442	14,176				
State	66,060	70,340	136,399				
County	16,633	765,649	782,282				
Total	131,898	847,777	980,285				
% share	13	87	100				

Source: Confederação Nacional do Transporte

	U.S. highway system extension, 2008									
	2008									
Pub	Public roads, route miles ¹ 4,064,177									
	Nationa	l Highway System (NHS):	164,096							
		Interstates	47,013							
		117,083								
	Other	3,895,246								

¹Any road under the jurisdiction of and maintained by a public authority and open to public travel Sources: Public Roads: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics (Washington, DC: annual issues).



Brazilian highways condition classification

Source: Confederação Nacional do Transporte



Brazilian public highways

Source: Confederação Nacional do Transporte



Brazilian private highway conditions

Source: Confederação Nacional do Transporte

Transportation Modes

Brazilian highways

The 2011 Confederação Nacional do Transporte (CNT) survey of the overall highway condition in Brazil shows that 42.6 percent of the roads ranged between good to excellent in 2011 compared to 31 percent in 2009. Still, 57.4 percent ranged from acceptable to inadequate. The survey also shows that more than half of the paved roads were in good to excellent and 48 percent ranged from acceptable to very bad condition; 28 percent of traffic road signs had problems; and 88.3 percent of the paved roads are two lane. The survey sample of paved roads increased 3.6 percent from 55,522 miles in 2009 to 57,504 miles in 2011.

Brazilian highway conditions



Source: Confederação National do Transporte



Brazilian paved highway conditions 2009-2011

Source: Confederação National do Transporte

Transportation Modes



Brazilian road sign conditions 2009-2011

Source: Confederação National do Transporte

The CNT estimates that due to the poor conditions of the paved roads, the operational cost of cargo trucks is 28 percent higher compared with a paved road under optimal conditions. This cost is higher in the North, Northeast, and Center-West regions. For example, if the cost of shipping a metric ton of soybeans from Sorriso, North MT, to Santos is \$100 per mt and the Brazil average increased operational cost is 28 percent, then the optimal cost should be \$72 per mt.

50 40.6 40 Additional cost (%) Brazil average = 28% 33.1 31.7 30 21.8 19.3 20 10 0 South Southeast Midwest Northeast North **Brazil regions**

Cost increases due to road pavement conditions, 2009

Source: Confederação National do Transporte

Brazilian railway expansion: ongoing projects

The Brazilian railroad system consists of 12 railroads with an extension of 26,596 miles, mostly concentrated in the South, Southeast, and Northeast.



Source: National Agency of Inland Transportation (ANTT)



Brazilian rail system: gauge sizes

The gauge system (distance between two rails) varies by region, creating difficulties in integrating the system like the North American region which uses a standard gauge. There are three types of gauge: metric (39"), broad (63") and mixed (39"-63"). The metric gauge accounts for 86 percent of the total Brazilian rail miles, and predominates in the Southern region. The broad gauge accounts for 12 percent of total railroads and prevails in the Southeast region, leaving about 2 percent mixed.



	United States: soybean supply and distribution (1,000 metric tons)												
Year*	Area Harvested	Beginning Stocks	Production	Imports	Total Supply	Exports	Crush	Domestic Consumption	Ending Stocks				
1999/00	29,318	9,484	72,224	114	81,822	26,537	42,927	47,388	7,897				
2000/01	29,303	7,897	75,055	97	83,049	27,103	44,625	49,203	6,743				
2001/02	29,532	6,743	78,672	63	85,478	28,948	46,259	50,867	5,663				
2002/03	29,339	5,663	75,010	127	80,800	28,423	43,948	47,524	4,853				
2003/04	29,330	4,853	66,783	151	71,787	24,128	41,632	44,600	3,059				
2004/05	29,930	3,059	85,019	152	88,230	29,860	46,160	51,410	6,960				
2005/06	28,834	6,960	83,507	92	90,559	25,579	47,324	52,751	12,229				
2006/07	30,190	12,229	87,001	246	99,476	30,386	49,198	53,473	15,617				
2007/08	25,959	15,617	72,859	269	88,745	31,538	49,081	51,627	5,580				
2008/09	30,222	5,580	80,749	361	86,690	34,817	45,230	48,112	3,761				
2009/10	30,907	3,761	91,417	397	95,575	40,798	47,673	50,671	4,106				
2010/11	31,003	4,106	90,605	393	95,104	40,859	44,851	48,394	5,851				
2011/12	29,800	5,851	83,172	408	89,431	35,788	44,769	47,922	5,721				
2012/13**	29,530	5,721	87,226	408	93,355	40,959	45,041	48,456	3,940				

*Data based on local Marketing Year (MY). Soybeans are on a September/August MY **Forecast: May 10, 2012

Source: USDA/Foreign Agricultural Service/Circular Series

Soybean production: world supply and distribution (1,000 metric tons)												
Country*	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13**						
United States	72,859	80,749	91,417	90,605	83,172	87,226						
Brazil	61,000	57,800	69,000	75,500	65,000	78,000						
Argentina	46,200	32,000	54,500	49,000	42,500	55,000						
China	13,400	15,540	14,980	15,100	13,500	13,100						
India	9,470	9,100	9,700	9,800	11,000	11,400						
Paraguay	5,969	3,647	7,377	8,373	4,000	7,800						
Canada	2,696	3,336	3,507	4,345	4,246	4,300						
Other	7,961	9,464	10,605	11,968	13,451	14,595						
Total	219,555	211,636	261,086	264,691	236,869	271,421						

*Most countries are on an October/September Marketing Year (MY). The United States, and Mexico are on a

September/August MY. Canada is on an August/July MY. Paraguay is on a March/February MY.

**Forecast: May 10, 2012

Source: USDA/ Foreign Agricultural Service/Circular Series

Soybean imports: world supply and distribution (1,000 metric tons)												
Country*	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13**						
China	37,816	41,098	50,338	52,339	56,000	61,000						
EU-27	15,127	13,213	12,674	12,482	11,000	11,000						
Mexico	3,614	3,327	3,523	3,498	3,400	3,500						
Japan	4,014	3,396	3,401	2,917	2,700	2,800						
Taiwan	2,148	2,216	2,469	2,454	2,250	2,450						
Indonesia	1,147	1,393	1,620	1,898	1,980	2,100						
Thailand	1,753	1,510	1,660	2,139	1,975	2,000						
Egypt	1,061	1,575	1,638	1,644	1,600	1,675						
Vietnam	120	184	231	924	1,050	1,380						
Turkey	1,339	1,076	1,648	1,351	1,100	1,200						
Other	10,197	8,403	7,632	7,201	6,365	6,710						
Total	78,336	77,391	86,834	88,847	89,420	95,815						

*Most countries are on an October/September Marketing Year (MY). The United States, Mexico, and Thailand are on a September/August MY. Canada is on an August/July MY. Paraguay is on a March/February MY and Turkey is on an March/February MY.

**Forecast: May 10, 2012

Source: USDA/ Foreign Agricultural Service/Circular Series

Soybean exports: world supply and distribution (1,000 metric tons)												
Country*	2007/08*	2008/09	2009/10	2010/11	2011/12	2012/13**						
United States	31,538	34,817	40,798	40,859	35,788	40,959						
Brazil	25,364	29,987	28,578	29,951	35,700	34,200						
Argentina	13,839	5,590	13,088	9,205	8,450	10,100						
Paraguay	4,239	2,283	5,655	6,700	3,100	5,100						
Canada	1,753	2,017	2,247	2,906	2,700	2,700						
Other	1,696	2,200	2,497	3,019	3,274	4,197						
Total	78,429	76,894	92,863	92,640	89,012	97,256						

*Most countries are on an October/September Marketing Year (MY). The United States, and Mexico are on a September/August MY. Canada is on an August/July MY. Paraguay is on a March/February MY.

**Forecast: May 10, 2012

Source: USDA/ Foreign Agricultural Service/Circular Series

Soybean crush: world supply and distribution (1,000 metric tons)												
Country*	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13**						
China	39,518	41,035	48,830	55,000	59,100	63,400						
United States	49,081	45,230	47,673	44,851	44,769	45,041						
Argentina	34,607	31,243	34,127	37,613	37,500	39,800						
Brazil	32,117	31,868	33,700	35,933	36,000	36,800						
EU-27	14,870	12,860	12,510	12,265	11,300	11,080						
India	8,400	7,200	7,500	9,400	9,600	9,900						
Mexico	3,650	3,465	3,600	3,625	3,550	3,665						
Russia	1,051	1,497	1,950	2,170	2,400	2,560						
Paraguay	1,390	1,500	1,500	1,450	1,250	2,500						
Bolivia	1,160	1,435	1,520	1,985	2,070	2,180						
Taiwan	1,965	1,917	2,150	2,150	2,010	2,160						
Japan	2,919	2,497	2,535	2,149	1,900	1,900						
Thailand	1,514	1,390	1,520	1,820	1,775	1,800						
Egypt	1,129	1,545	1,635	1,644	1,600	1,665						
Canada	1,383	1,286	1,292	1,448	1,400	1,500						
Other	7,463	7,239	7,477	7,670	7,881	8,269						
Total	202,217	193,207	209,519	221,173	224,105	234,220						

*Most countries are on an October/September Marketing Year (MY). The United States, Mexico, and Thailand are on a September/August MY. Canada is on an August/July MY. Paraguay is on a March/February MY and Turkey is on an

March/February MY.

**Forecast: May 10, 2012

Source: USDA/ Foreign Agricultural Service/Circular Series

Country*	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13**
Argentina	21,760	16,588	22,277	22,872	17,822	21,282
Brazil	19,102	12,291	16,287	22,940	13,175	17,015
China	2,752	7,555	13,259	14,558	13,758	13,140
United States	5,580	3,761	4,106	5,851	5,721	3,940
EU-27	707	451	543	555	329	319
Other	2,218	2,708	4,069	3,322	2,431	2,376
Total	52,119	43,354	60,541	70,098	53,236	58,072

*Most countries are on an October/September Marketing Year (MY). The United States is on a September/August MY.

Canada is on an August/July MY. Paraguay is on a March/February MY and Turkey is on an March/February MY.

**Forecast: May 10, 2012

Source: USDA/ Foreign Agricultural Service/Circular Series

Quarterly costs of transporting U.S. soybeans to Hamburg, Germany, and Shanghai, China													
			2011					2011					
	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg			
				To Hamb	ourg, Germ	nany (via U.S. Gulf)							
		Mir	nneapolis, I US\$/mt	Minnesota		Davenport, Iowa US\$/mt							
Truck	11.34	11.34	12.62	10.22	11.38	11.34	11.34	12.62	10.22	11.38			
Rail**	34.67	-	-	-	10.86	26.44	-	-	-	23.84			
Barge ¹	21.38	37.26	33.78	35.28	31.93	21.38	27.27	26.39	28.91	25.99			
Ocean ²	23.13	21.52	23.94	25.08	23.42	23.13	21.52	23.94	25.08	23.42			
Total transportation ²	90.52	70.12	70.34	70.58	75.39	82.29	60.13	62.95	64.21	67.40			
Farm price ³	438.47	465.42	461.75	418.88	446.13	449.50	481.34	478.89	425.00	458.68			
Landed cost	528.99	535.54	532.09	489.46	521.52	531.79	541.47	541.84	489.21	526.08			
Transport % of landed cost	17.1	13.1	13.2	14.4	14.5	15.5	11.1	11.6	13.1	12.8			
	To Shanghai, China (via U.S. Gulf)												
		Mir	nneapolis, I US\$/mt	Minnesota		Davenport, Iowa US\$/mt							
Truck	11.34	11.34	12.62	10.22	11.38	11.34	11.34	12.62	10.22	11.38			
Rail**	34.67	-	-	-	34.74	26.44	-	-	-	10.86			
Barge ¹	21.38	37.26	33.78	35.28	31.93	21.38	27.27	26.39	28.91	25.99			
Ocean ²	53.79	51.58	51.62	55.33	53.08	53.79	51.58	51.62	55.33	53.08			
Total transportation ²	121.18	100.18	98.02	100.83	105.05	112.95	90.19	90.63	94.46	97.06			
Farm price ³	438.47	465.42	461.75	418.88	446.13	449.50	481.34	478.89	425.00	458.68			
Landed cost	559.65	565.60	559.77	519.71	551.18	562.45	571.53	569.52	519.46	555.74			
Transport % of landed cost	21.7	17.7	17.5	19.4	19.1	20.1	15.8	15.9	18.2	17.5			
				To SI	nanghai, C	hina (via F	PNW)						
			Fargo, ND US\$/mt				Si	oux Falls, S US\$/mt	D				
Truck	11.34	11.34	12.62	10.22	11.38	11.34	11.34	12.62	10.22	11.38			
Rail**	44.84	52.16	52.51	54.05	34.74	49.69	53.90	54.29	55.77	34.74			
Ocean ²	30.92	28.88	29.43	29.79	29.76	30.92	28.88	29.43	29.79	29.76			
Total transportation ²	87.10	92.38	94.56	94.06	92.03	97.57	97.03	96.34	95.78	96.68			
Farm price ³	438.47	460.52	456.85	415.20	442.76	336.45	335.59	456.85	417.65	386.64			
Landed cost	525.57	552.90	551.41	509.26	534.79	434.02	432.62	553.19	513.43	483.32			
Transport % of landed cost	16.6	16.7	17.15	18.47	17.2	22.5	22.4	17.42	18.65	20.2			

**Rail service is required due to seasonal closure of the Minneapolis segment of the Mississippi River

¹The Mississippi River closes from Minneapolis to just north of St. Louis from mid-December to late March.

²The Baltic Exchange; excludes handling charges ³Source: USDA/NASS

Average cost of transporting U.S. soybeans to Hamburg, Germany, and Shanghai, China																
	2005	2006	2007	2008	2009	2010	2011	% Change 2010-11	2005	2006	2007	2008	2009	2010	2011	% Change 2010-11
							Тс	rg, Germany								
	Minneapolis, Minnesota US\$/mt								Davenport, Iowa US\$/mt							
Truck	8.59	9.75	10.09	11.50	10.01	9.45	11.38	20.42	8.59	9.75	10.09	11.50	10.01	9.45	11.38	20.42
Rail**	-	-	-	26.00	-	10.86	10.86	-	-	-	-	-	-	10.86	23.84	-
Barge ¹	25.74	33.21	29.38	34.75	25.56	31.25	31.93	2.15	21.84	25.59	23.89	30.41	19.77	25.45	25.99	2.10
Ocean ²	28.61	24.03	58.81	52.66	21.10	28.94	23.42	-19.08	28.61	24.03	58.81	52.66	21.10	26.22	23.42	-10.67
Total transportation ²	62.93	66.99	98.28	105.41	56.67	72.36	75.39	4.19	59.04	59.38	92.79	94.57	50.88	63.83	67.40	5.58
Farm price ³	217.58	200.41	274.79	411.71	363.76	353.90	446.13	26.06	215.65	204.05	285.77	416.89	370.01	362.78	458.68	26.43
Landed cost	280.51	267.40	373.07	517.12	420.46	426.26	521.52	22.35	274.69	263.43	378.56	511.46	420.89	426.62	526.08	23.31
Transport % of landed cost	22.47	24.94	25.7	20.1	13.5	17.0	14.5	-14.8	21.54	22.49	23.9	18.3	12.1	15.0	12.8	-14.3
							1	To Shang	hai, Chi	na						
				Minnea US	polis, Mir \$/mt	nnesota			Davenport, Iowa US\$/mt							
Truck	8.59	9.75	10.09	11.50	10.01	9.45	11.38	20.42	8.59	9.75	10.09	11.50	10.01	9.45	11.38	20.42
Rail**	-	-	-	26.00	-	10.86	34.74	-	-	-	-	-	-	10.86	10.86	-
Barge ¹	25.74	33.21	29.38	34.75	25.56	41.41	31.93	-22.90	21.84	25.59	23.89	30.41	19.77	35.61	25.99	-27.02
Ocean ²	49.50	41.59	81.36	91.18	51.21	54.56	53.08	-2.71	49.50	41.59	81.36	91.18	51.21	51.84	53.08	2.40
Total transportation ²	83.83	84.54	120.84	143.93	86.78	108.13	105.05	-2.85	79.93	76.93	115.35	133.09	80.99	99.61	97.06	-2.56
Farm price ³	217.58	200.41	274.79	411.71	363.80	355.37	446.13	25.54	215.65	204.07	285.74	416.89	370.01	364.16	458.68	25.96
Landed cost	301.40	284.95	395.62	555.64	450.57	463.51	551.18	18.92	295.58	281.00	401.09	549.98	450.99	463.77	555.74	19.83
Transport % of landed cost	27.84	29.54	30.1	25.4	19.2	23.3	19.1	-18.3	27.08	27.31	28.3	23.7	17.9	21.5	17.5	-18.7

**Rail service is required due to seasonal closure of the Minneapolis segment of the Mississippi River

¹The Mississippi River closes from Minneapolis to just north of St. Louis from mid-December to late March. The distance by barge between Minneapolis and Davenport to the Port of New Orleans is 1,713 and 1,343 miles, respectively.

²The Baltic Exchange; excludes handling charges

³USDA/NASS

Average quarterly exchange rate															
	1st qtr	2nd qtr	3rd qtr	4th qtr	2006	1st qtr	2nd qtr	3rd qtr	4th qtr	2007	1st qtr	2nd qtr	3rd qtr	4th qtr	2008
Real per US\$	2.1959	2.1852	2.1711	2.1520	2.1761	2.1082	1.9818	1.9177	1.7857	1.9484	1.7365	1.6561	1.6678	2.2779	1.8346
	1st qtr	2nd qtr	3rd qtr	4th qtr	2009	1st qtr	2nd qtr	3rd qtr	4th qtr	2010	1st qtr	2nd qtr	3rd qtr	4th qtr	2011
Real per US\$	2.3113	2.0728	1.8680	1.7386	1.9977	1.8003	1.7927	1.7487	1.6963	1.7595	1.6673	1.5962	1.6357	1.8012	1.6751

Source: Banco Central do Brasil

Selected quarterly Brazilian farm prices (US\$/metric ton)*												
Year	Rio Grande do Sul	Mato Grosso	Goiás	Paraná								
2005												
1st qtr	202.61	145.15	174.70	196.31								
2nd qtr	210.19	161.38	179.81	207.04								
3rd qtr	214.23	175.08	188.26	222.81								
4th qtr	206.36	174.28	184.89	214.81								
Average	208.35	163.97	181.92	210.24								
2006												
1st qtr	202.56	157.86	180.71	206.88								
2nd qtr	198.03	150.72	175.49	194.83								
3rd qtr	207.37	161.30	185.73	211.06								
4th qtr	233.43	189.65	216.60	242.47								
Average	210.34	164.88	189.63	213.81								
2007												
1st qtr	249.78	196.22	231.95	251.13								
2nd qtr	228.00	198.61	225.49	239.48								
3rd qtr	256.59	234.16	267.93	272.70								
4th qtr	333.86	306.30	349.22	361.26								
Average	267.06	233.82	268.65	281.14								
2008												
1st qtr	404.89	349.23	406.90	423.63								
2nd qtr	429.72	389.20	401.89	434.42								
3rd qtr	435.02	419.80	409.37	435.49								
4th qtr	309.01	277.74	274.34	303.68								
Average	394.66	358.99	373.13	399.31								
2009												
1st qtr	315.99	264.63	288.68	326.95								
2nd qtr	359.68	315.88	336.86	373.16								
3rd qtr	374.28	347.80	356.43	391.57								
4th qtr	388.08	369.07	371.29	398.17								
Average	359.51	324.34	338.31	372.46								
2010												
1st qtr	331.49	261.05	309.89	325.22								
2nd qtr	304.36	269.58	271.15	300.32								
3rd qtr	342.98	328.51	315.43	350.41								
4th qtr	400.78	413.46	400.62	425.79								
Average	344.90	318.15	324.27	350.44								
2011												
1st qtr	431.68	406.96	441.07	459.96								
2nd qtr	425.42	386.58	413.15	435.53								
3rd qtr	428.53	416.62	417.65	440.47								
4th qtr	377.84	358.24	379.70	390.69								
Average	415.87	392.10	412.89	431.66								

Source: Companhia Nacional de Abastecimento (CONAB)

Major river export routes



Source: National Agency for Waterway Transportation (ANTAQ)



Major river system corridors

Sources: Ministério dos Transportes, Brazil National Agency for Waterway Transportation (ANTAQ)

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