



Grain Transportation Report

A weekly publication of the Agricultural Marketing Service

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June 15, 2017

WEEKLY HIGHLIGHTS

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Ocean Freight Rates Continue to Fall

As of June 9, 2017, the ocean freight rate for shipping bulk grains from the U.S. Gulf to Japan was \$36 per metric ton (mt)—a 3 percent drop over the past 2 weeks and 13 percent below the year-to-date peak of \$40.50 per mt on April 20. The rate for shipping bulk grains from the Pacific Northwest (PNW) to Japan was \$18 per mt—a 5 percent decline over the past 2 weeks and 19 percent below the year-to-date peak of \$22.25 per mt on April 13. The bulk shipping market could not sustain the rally that occurred during the early part of the year, as excess vessel supply persists amid lagging demand for moving bulk materials, including grains.

Total Inspections of Grain Rebound and Remain Well Above-Average in PNW

For the week ending June 8, **total inspections of grain** (corn, wheat, and soybeans) for export from major U.S. export regions reached 2.4 million metric tons (mmt), up 18 percent from the previous week, up 2 percent from the same time last year, and 39 percent above the 3-year average. Total inspections rebounded primarily due to sizeable increases in inspections of wheat and soybeans. Inspections of corn inspections, however, were down 12 percent from the previous week as shipments to Asia decreased. Mississippi Gulf grain inspections jumped 31 percent from the previous week, while PNW grain inspections increased 8 percent. PNW grain inspections have been well above-average for several weeks, even reaching levels comparable to the Mississippi Gulf recently (**Figure 15**).

AgTC Annual Meeting Sheds Light on Agricultural Export Challenges

AMS staff attended the Agriculture Transportation Coalition's 29th Annual Meeting in Long Beach, CA, last week. Topics of interest included the new structure of the ocean container carrier alliances and its impact on rates and vessel service, availability and quality of chassis pools, container terminal productivity, and others. The meeting brings together agricultural exporters from all major commodity groups including, grains and soybeans, cotton, fruits, vegetables, nuts, and meat products. More information about the meeting will be provided in an upcoming *Grain Transportation Report* feature article.

Snapshots by Sector

Export Sales

For the week ending June 1, **unshipped balances** of wheat, corn, and soybeans totaled 24.6 mmt, down 4 percent from the same time last year. Net weekly **wheat export sales** were at .461 mmt for the new marketing year, up noticeably from the previous week. Net **corn export sales** were .349 mmt, down 15 percent from the previous week, and net **soybean export sales** were .159 mmt, down 74 percent from the past week.

Rail

U.S. Class I railroads originated 22,838 **grain carloads** for the week ending June 3, down 8 percent from the previous week, up 22 percent from last year, and up 21 percent from the 3-year average.

Average June shuttle **secondary railcar** bids/offers per car were \$180 below tariff for the week ending June 8, down \$134 from last week, and \$201 lower than last year. Average non-shuttle secondary railcar bids/offers per car were \$67 below tariff, up \$11 from last week, and \$17 lower than last year.

Barge

For the week ending June 10, **barge grain movements** totaled 727,954 tons, 24 percent lower than the last week, and down 19 percent from the same period last year.

For the week ending June 10, 462 grain barges **moved down river**, down 25 percent from last week, 534 grain barges were **unloaded in New Orleans**, up 14 percent from the previous week.

Ocean

For the week ending June 8, 32 **ocean-going grain vessels** were loaded in the Gulf, 14 percent less than the same period last year. Fifty-five vessels are expected to be loaded within the next 10 days, 17 percent more than the same period last year.

For the week ending June 8, the ocean freight rate for shipping bulk grain from the Gulf to Japan was \$36 per metric ton, 1 percent less than the previous week. The cost of shipping from the PNW to Japan was \$18 per metric ton, 3 percent less than the previous week.

Fuel

During the week ending June 12, **average diesel fuel prices** decreased 4 cents from the previous week at \$2.52 per gallon, 9 cents higher than the same week last year.

Railroad Rates for Wheat

The cost of transportation can make or break business for grain shippers and farmers, because U.S. grain markets operate within a competitive world market. For many agricultural producers and shippers, railroads are the only option to reach markets, especially for remote wheat producers who cannot cost-effectively reach them by barge or truck. Therefore, railroad rates are critically important to them. In recent years, cash prices for wheat and other grains in the United States have declined against increasing world production. At the same time, rail rates for wheat have continually increased, making wheat less competitive in export markets. U.S. wheat exports have been declining since 2011. Given the significance of rail rates to the grain industry, it is important to understand the factors influencing rates. This article discusses recent trends in wheat rail rates and sheds light on some of the factors affecting overall grain rail rates by evaluating the extent to which three factors explain trends in wheat rail rates. The factors are: (1) the demand for rail transportation from wheat and other grain shippers; (2) rail input costs; and (3) the demand for rail transportation from other commodities.

Wheat Rail Rates and Market Prices

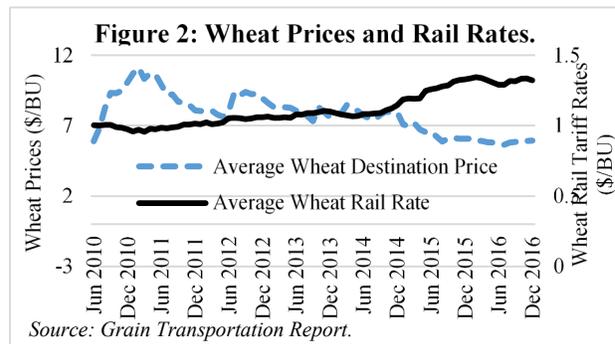
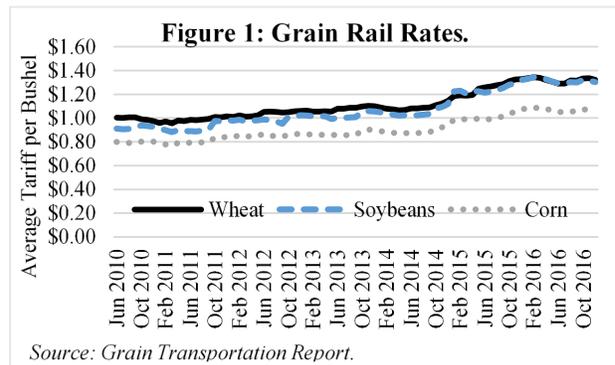
Figure 1 shows rail rates between 2010 and 2016 for corn, soybeans, and wheat.¹ The data reflect rail tariff rates for major origination/destination pairs in the agricultural sector, and come from [Table 7](#) of the *Grain Transportation Report (GTR)*. The chart shows the rates by commodity, averaged across railroads and locations. The trends in grain rail rates are clear. Grain rates have consistently risen over the past half-decade (even accounting for inflation), with a few brief exceptions. In 2010, rail rates for wheat were around \$1.00 per bushel. At the end of 2016, they were just under \$1.40.

Wheat (and soybean) rates are also high relative to other grains, such as corn and sorghum, even over the same origin/destination corridors. For instance, the average rail rate for wheat (including BNSF and Union Pacific) for shuttle service between Wichita, KS, and Houston, TX, in June 2017 is \$4,226/car, but \$3,215 for corn, \$3,959 for soybeans, and \$3,163 for sorghum (milo).

These rate changes and spreads are significant and puzzling relative to the price received for a bushel of wheat at its destination, which has declined. On the left axis, Figure 2 shows wheat destination prices from [Table 2](#) of the *GTR* (dashed blue line). On the right axis, the figure also shows rail rates from [Table 7](#) (solid black line). The chart demonstrates that while wheat prices have declined significantly in recent years, wheat rail rates have continued to increase. The puzzle is why rail rates for wheat have not declined as wheat prices have fallen. The joint USDA and U.S. Department of Transportation 2010 *Study of Rural Transportation Issues* showed that historically rail rates for wheat and wheat prices tend to move in the same direction.² While many factors can influence rail rates, at present none of them seem to satisfactorily explain recent trends in rail rates for wheat and other grains.

Factors behind Wheat Rail Rates

An increase in wheat production and the expected associated increase in the demand for rail transportation from wheat, might partially explain the decline in wheat prices with a rise in rail rates. If an increase in wheat's demand for rail transportation was the primary factor behind wheat rail rate increases, one would expect wheat carloadings to increase over time as well. That is, with an increase in demand, wheat rail rates and wheat carloads should move in the same direction. However, Figure 3 shows that wheat originations and wheat rail rates have been moving in opposite directions. Wheat rail tonnage declined between 2011 and 2016, while rail rates rose. Therefore, an



¹ Throughout the article: prices and rates are adjusted for inflation using the All Commodity, Producer Price Index from the St. Louis Federal Reserve; destination wheat prices are an average of hard red winter wheat prices in the Gulf and hard red spring wheat prices in Portland, OR; wheat rates and volumes include BNSF, Union Pacific, and CSX; corn and soybean rates and volumes include Canadian National as well.

² USDA and U.S. DOT, *Study of Rural Transportation Issues*, April 2010, p. 239.

increase in the demand for rail transportation from wheat shippers is not a plausible explanation of the increases in wheat rail rates. Instead, wheat's demand for rail transportation is down, as exports have decreased with increased world wheat production. This adds to the puzzle of why wheat rail rates are up if demand is down.

Another hypothesis that might explain what is happening is rail costs, which may play a role in the increase in rail rates. Figure 4 shows the Surface Transportation Board's indices of rail costs. By all three measures, overall rail costs were decreasing on average between 2010 and 2016. Therefore, changes in input costs are also not a plausible explanation of why rail wheat rates have been increasing.

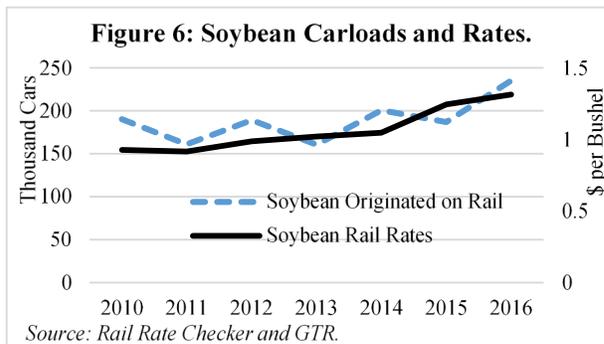
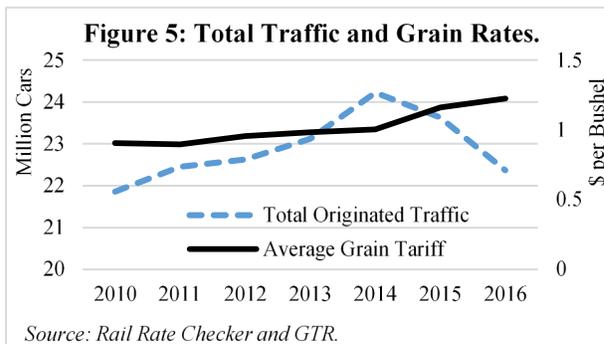
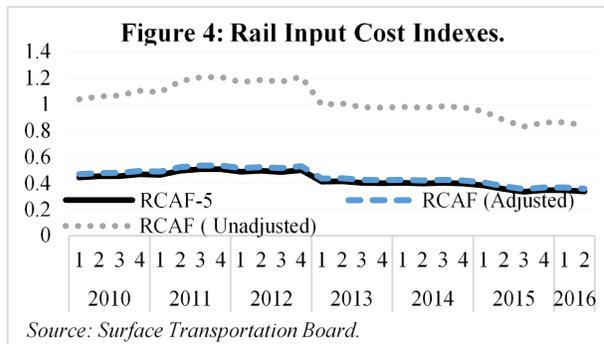
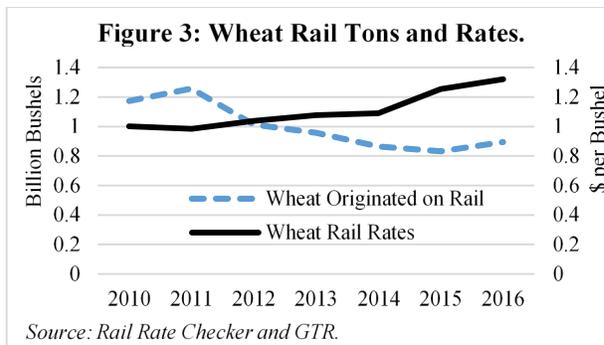
Another factor for consideration driving rail wheat rates is the potential for railroads to move other traffic besides wheat. Figure 5 shows that, between 2010 and 2014, there is a plausible connection between grain rates and total rail carloadings. Essentially, an increase in the total demand for rail transportation will push all rail rates up to some degree. However, this story breaks down after 2014 when total carloads declined significantly (mostly from coal), while grain rates continued to rise.

A related factor for consideration is that the demand for rail from other grain commodities is pushing up wheat rail rates. Figure 6 shows that soybean rates and carloadings have been moving in the same direction, indicating an increased demand for rail from soybeans, likely due to increased soybean production over time. *GTR* [Table 16](#) shows that, in 2016, there were more soybeans than wheat inspected in the Pacific Northwest for export. Therefore, it is possible that increased grain traffic pushed corn, soybean, and wheat rates up simultaneously. However, the biggest weakness with this explanation is that between 2014 and 2016 total carloads have decreased significantly more than grain carloads have increased (1.8 million carload decline in total carloads between 2014 and 2016 versus 90 thousand carload increase in total grain carloads, including corn, soybeans, and wheat). Moreover, even though soybean carloads have increased over time, total grain carloads have been relatively stable over the past half-decade. In 2010, grain carloads peaked at 1.71 million cars, declined through 2013, and rose through 2016, but only back to 1.69 million cars.

Conclusions

In recent times, wheat and other grain shippers have been struggling against falling grain prices and rising rail rates. Wheat shippers in particular have found it difficult to compete in export markets, as they face higher rail rates than other grain shippers over similar corridors and rates that have not declined in response to changes in world wheat markets. This article tries to explain changes in wheat rail rates over the past few years. However, no answer has been completely satisfactory. Wheat rail demand and rail costs both appear to be down. The demand for rail from soybeans has increased, which may explain some of the increase in wheat rates, but it does not sufficiently account for the significant decline in total rail traffic or the stable total grain carloadings. Therefore, the factors driving wheat rates is still an open question. A better understanding would benefit wheat and other grain producers and shippers, who rely on transportation to reach end markets.

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Grain Transportation Indicators

Table 1

Grain Transport Cost Indicators¹

For the week ending	Truck	Rail		Barge	Ocean	
		Unit Train	Shuttle		Gulf	Pacific
06/14/17	169	261	202	142	161	128
06/07/17	172	260	208	149	163	131

¹Indicator: Base year 2000 = 100; Weekly updates include truck = diesel (\$/gallon); rail = near-month secondary rail market bid and monthly tariff rate with fuel surcharge (\$/car); barge = Illinois River barge rate (index = percent of tariff rate); and ocean = routes to Japan (\$/metric ton)

Source: Transportation & Marketing Programs/AMS/USDA

Table 2

Market Update: U.S. Origins to Export Position Price Spreads (\$/bushel)

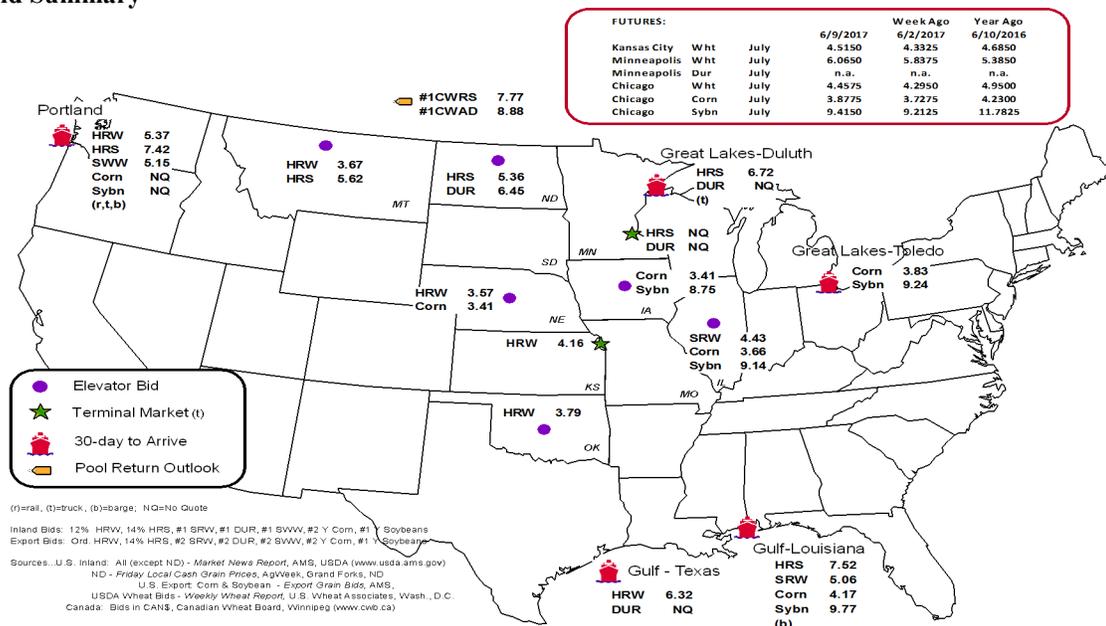
Commodity	Origin--Destination	6/9/2017	6/2/2017
Corn	IL--Gulf	-0.51	-0.52
Corn	NE--Gulf	-0.76	-0.76
Soybean	IA--Gulf	-1.02	-1.07
HRW	KS--Gulf	-2.16	-1.80
HRS	ND--Portland	-2.06	-1.93

Note: nq = no quote; n/a = not available

Source: Transportation & Marketing Programs/AMS/USDA

The **grain bid summary** illustrates the market relationships for commodities. Positive and negative adjustments in differential between terminal and futures markets, and the relationship to inland market points, are indicators of changes in fundamental market supply and demand. The map may be used to monitor market and time differentials.

Figure 1
Grain bid Summary



Rail Transportation

Table 3

Rail Deliveries to Port (carloads)¹

For the Week Ending	Mississippi		Pacific	Atlantic &	Total	Week ending	Cross-Border
	Gulf	Texas Gulf	Northwest	East Gulf			Mexico ³
06/07/2017 ^p	270	1,493	6,308	n/a	8,071	6/3/2017	2,380
05/31/2017 ^f	441	2,010	6,010	216	8,677	5/27/2017	2,491
2017 YTD ^f	14,093	43,677	140,250	10,886	208,906	2017 YTD	51,285
2016 YTD ^f	5,832	33,480	113,788	9,196	162,296	2016 YTD	47,132
2017 YTD as % of 2016 YTD	242	130	123	118	129	% change YTD	109
Last 4 weeks as % of 2016 ²	2,151	118	169	166	162	Last 4wks % 2016	103
Last 4 weeks as % of 4-year avg. ²	406	108	229	88	187	Last 4wks % 4 yr	129
Total 2016	36,925	86,992	299,932	28,728	452,577	Total 2016	92,982
Total 2015	29,054	60,819	239,029	26,730	355,632	Total 2015	97,736

¹ Data is incomplete as it is voluntarily provided

² Compared with same 4-weeks in 2016 and prior 4-year average.

³ Cross-border weekly data is approximately 15 percent below the Association of American Railroads' reported weekly carloads received by Mexican railroads to reflect switching between KCSM and FerroMex.

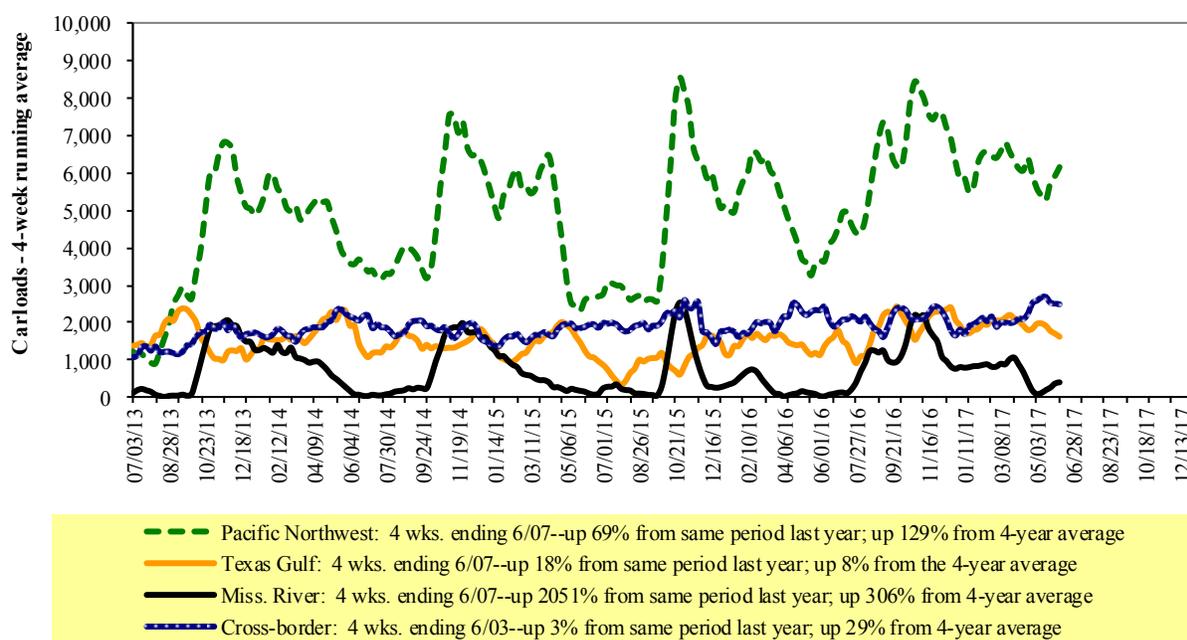
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

Source: Transportation & Marketing Programs/AMS/USDA

Railroads originate approximately 24 percent of U.S. grain shipments. Trends in these loadings are indicative of market conditions and expectations.

Figure 2

Rail Deliveries to Port



Source: Transportation & Marketing Programs/AMS/USDA

Table 4

Class I Rail Carrier Grain Car Bulletin (grain carloads originated)

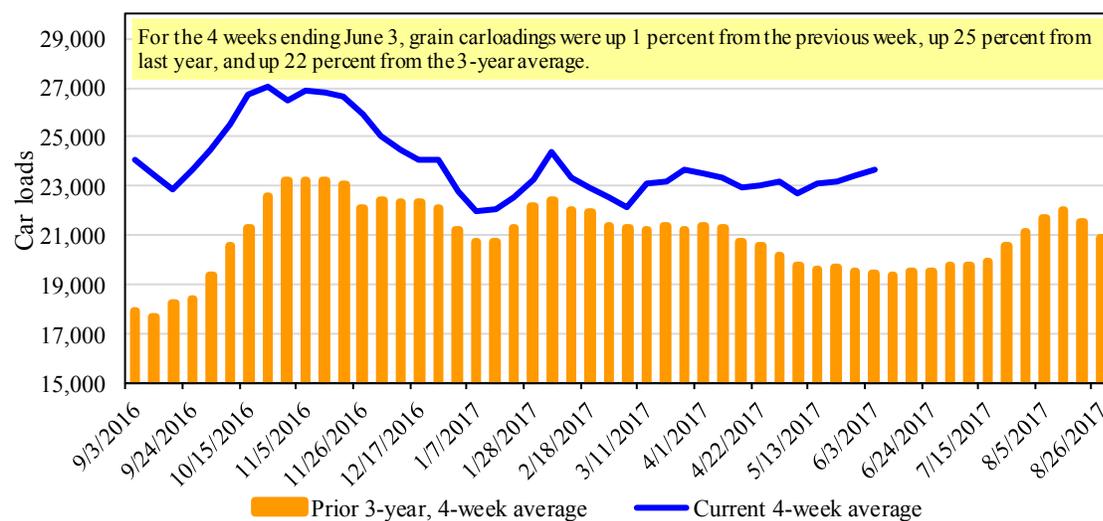
For the week ending: 6/3/2017	East		West			U.S. total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,623	2,792	12,290	740	5,393	22,838	3,075	4,002
This week last year	1,486	2,938	8,588	772	4,863	18,647	2,599	3,084
2017 YTD	39,871	61,532	255,321	21,197	132,882	510,803	85,851	95,488
2016 YTD	40,676	60,650	219,823	19,495	114,782	455,426	71,179	90,962
2017 YTD as % of 2016 YTD	98	101	116	109	116	112	121	105
Last 4 weeks as % of 2016*	97	96	151	101	112	125	151	126
Last 4 weeks as % of 3-yr avg**	96	93	145	104	111	122	105	91
Total 2016	95,179	151,024	590,779	45,246	300,836	1,183,064	193,966	234,738

*The past 4 weeks of this year as a percent of the same 4 weeks last year.

**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date.

Source: Association of American Railroads (www.aar.org)

Figure 3

Total Weekly U.S. Class I Railroad Grain Car Loadings

Source: Association of American Railroads

Table 5

Railcar Auction Offerings¹ (\$/car)²

For the week ending: 6/8/2017		Delivery period							
		Jun-17	Jun-16	Jul-17	Jul-16	Aug-17	Aug-16	Sep-17	Sep-16
BNSF ³	COT grain units	no bids	0	0	0	0	0	no bids	0
	COT grain single-car ⁵	0	0-1	0	0	0	0	0	0
UP ⁴	GCAS/Region 1	no bids	no offer	no bids	no bids	no bids	no bids	n/a	n/a
	GCAS/Region 2	no bids	no offer	no bids	no bids	no bids	no bids	n/a	n/a

¹Auction offerings are for single-car and unit train shipments only.

²Average premium/discount to tariff, last auction

³BNSF - COT = Certificate of Transportation; north grain and south grain bids were combined effective the week ending 6/24/06.

⁴UP - GCAS = Grain Car Allocation System

Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

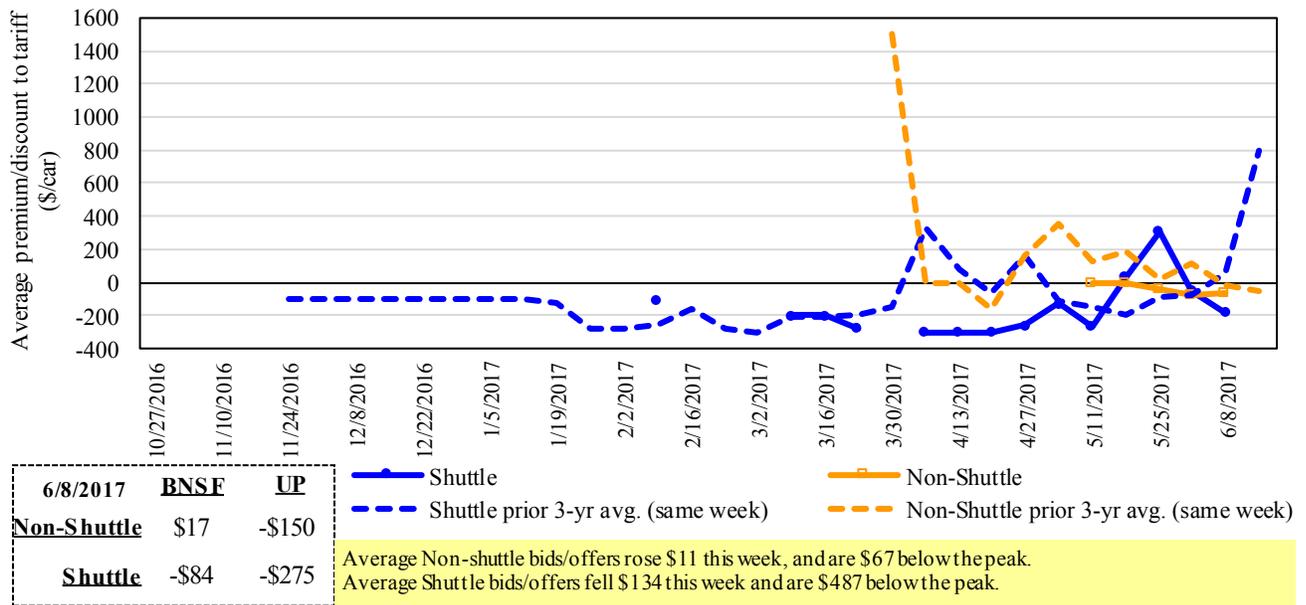
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

⁵Range is shown because average is not available. Not available = n/a.

Source: Transportation & Marketing Programs/AMS/USDA.

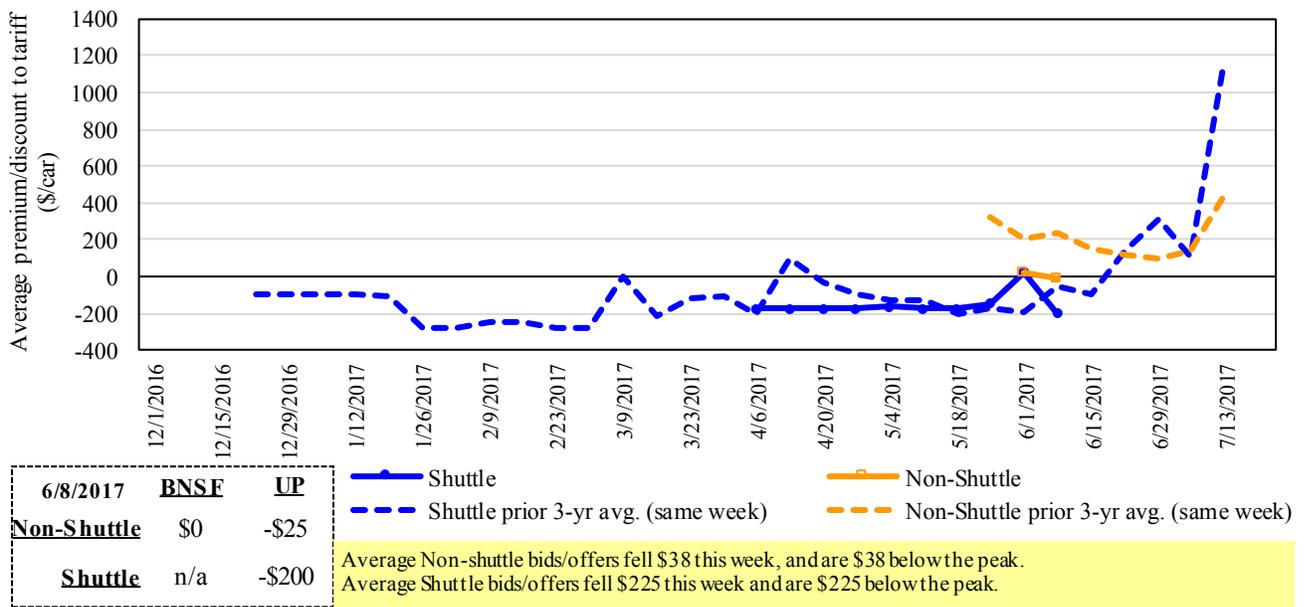
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

Figure 4
Bids/Offers for Railcars to be Delivered in June 2017, Secondary Market



Non-shuttle bids include unit-train and single-car bids. n/a = not available.
 Source: Transportation & Marketing Programs/AMS/USDA

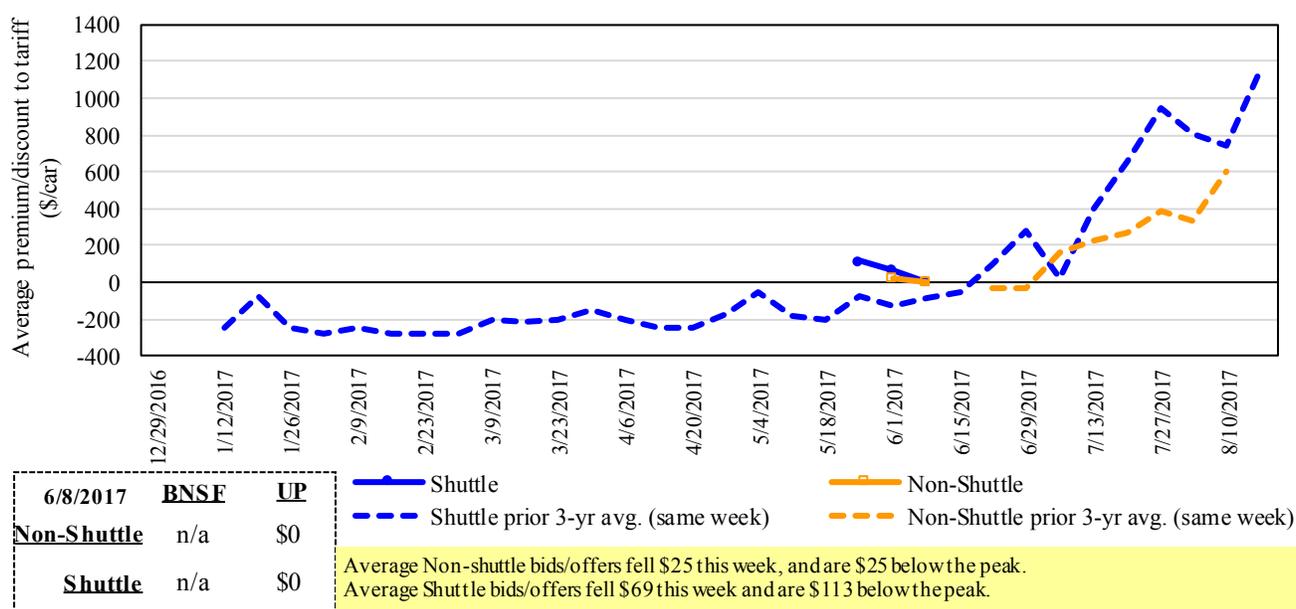
Figure 5
Bids/Offers for Railcars to be Delivered in July 2017, Secondary Market



Non-shuttle bids include unit-train and single-car bids. n/a = not available.
 Source: Transportation & Marketing Programs/AMS/USDA

Figure 6

Bids/Offers for Railcars to be Delivered in August 2017, Secondary Market



6/8/2017	BNSF	UP
Non-Shuttle	n/a	\$0
Shuttle	n/a	\$0

— Shuttle
- - - Shuttle prior 3-yr avg. (same week)
— Non-Shuttle
- - - Non-Shuttle prior 3-yr avg. (same week)

Average Non-shuttle bids/offers fell \$25 this week, and are \$25 below the peak.
 Average Shuttle bids/offers fell \$69 this week and are \$113 below the peak.

Non-shuttle bids include unit-train and single-car bids. n/a = not available.
 Source: Transportation & Marketing Programs/AMS/USDA

Table 6

Weekly Secondary Railcar Market (\$/car)¹

For the week ending:		Delivery period					
		6/8/2017	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17
Non-shuttle	BNSF-GF	17	0	n/a	n/a	n/a	n/a
	Change from last week	10	n/a	n/a	n/a	n/a	n/a
	Change from same week 2016	n/a	(50)	n/a	n/a	n/a	n/a
	UP-Pool	(150)	(25)	0	n/a	n/a	n/a
	Change from last week	13	(50)	(25)	n/a	n/a	n/a
	Change from same week 2016	(100)	25	n/a	n/a	n/a	n/a
Shuttle	BNSF-GF	(84)	n/a	n/a	150	n/a	n/a
	Change from last week	(167)	n/a	n/a	(25)	n/a	n/a
	Change from same week 2016	(105)	n/a	n/a	(250)	n/a	n/a
	UP-Pool	(275)	(200)	0	50	650	n/a
	Change from last week	(100)	(50)	0	0	0	n/a
	Change from same week 2016	n/a	(150)	0	50	150	n/a

¹ Average premium/discount to tariff, \$/car-last week

Note: Bids listed are market INDICATORS only & are NOT guaranteed prices,

n/a = not available; GF = guaranteed freight; Pool = guaranteed pool

Sources: Transportation and Marketing Programs/AMS/USDA

Data from James B. Joiner Co., Tradewest Brokerage Co.

The **tariff rail rate** is the base price of freight rail service, and together with **fuel surcharges** and any **auction and secondary rail** values constitute the full cost of shipping by rail. Typically, auction and secondary rail values are a small fraction of the full cost of shipping by rail relative to the tariff rate. High auction and secondary rail values, during times of high rail demand or short supply, can exceed the cost of the tariff rate plus fuel surcharge.

Table 7

Tariff Rail Rates for Unit and Shuttle Train Shipments¹

June, 2017	Origin region ³	Destination region ³	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per:		Percent change Y/Y ⁴	
					metric ton	bushel ²		
Unit train								
Wheat	Wichita, KS	St. Louis, MO	\$3,883	\$51	\$39.06	\$1.06	9	
	Grand Forks, ND	Duluth-Superior, MN	\$4,143	\$0	\$41.14	\$1.12	20	
	Wichita, KS	Los Angeles, CA	\$7,050	\$0	\$70.01	\$1.91	1	
	Wichita, KS	New Orleans, LA	\$4,540	\$89	\$45.97	\$1.25	9	
	Sioux Falls, SD	Galveston-Houston, TX	\$6,786	\$0	\$67.39	\$1.83	5	
	Northwest KS	Galveston-Houston, TX	\$4,816	\$98	\$48.79	\$1.33	9	
	Amarillo, TX	Los Angeles, CA	\$5,021	\$136	\$51.21	\$1.39	9	
Corn	Champaign-Urbana, IL	New Orleans, LA	\$3,681	\$101	\$37.55	\$0.95	3	
	Toledo, OH	Raleigh, NC	\$6,061	\$0	\$60.19	\$1.53	0	
	Des Moines, IA	Davenport, IA	\$2,258	\$21	\$22.63	\$0.57	5	
	Indianapolis, IN	Atlanta, GA	\$5,191	\$0	\$51.55	\$1.31	4	
	Indianapolis, IN	Knoxville, TN	\$4,311	\$0	\$42.81	\$1.09	0	
	Des Moines, IA	Little Rock, AR	\$3,534	\$63	\$35.72	\$0.91	4	
	Des Moines, IA	Los Angeles, CA	\$5,202	\$182	\$53.47	\$1.36	7	
Soybeans	Minneapolis, MN	New Orleans, LA	\$3,634	\$74	\$36.83	\$1.00	0	
	Toledo, OH	Huntsville, AL	\$5,051	\$0	\$50.16	\$1.37	0	
	Indianapolis, IN	Raleigh, NC	\$6,178	\$0	\$61.35	\$1.67	0	
	Indianapolis, IN	Huntsville, AL	\$4,529	\$0	\$44.98	\$1.22	0	
	Champaign-Urbana, IL	New Orleans, LA	\$4,495	\$101	\$45.64	\$1.24	5	
Shuttle Train								
Wheat	Great Falls, MT	Portland, OR	\$3,953	\$0	\$39.26	\$1.07	3	
	Wichita, KS	Galveston-Houston, TX	\$4,171	\$0	\$41.42	\$1.13	8	
	Chicago, IL	Albany, NY	\$5,492	\$0	\$54.54	\$1.48	0	
	Grand Forks, ND	Portland, OR	\$5,611	\$0	\$55.72	\$1.52	2	
	Grand Forks, ND	Galveston-Houston, TX	\$5,931	\$0	\$58.90	\$1.60	2	
	Northwest KS	Portland, OR	\$5,812	\$160	\$59.30	\$1.61	9	
Corn	Minneapolis, MN	Portland, OR	\$5,000	\$0	\$49.65	\$1.26	0	
	Sioux Falls, SD	Tacoma, WA	\$4,960	\$0	\$49.26	\$1.25	0	
	Champaign-Urbana, IL	New Orleans, LA	\$3,481	\$101	\$35.57	\$0.90	3	
	Lincoln, NE	Galveston-Houston, TX	\$3,700	\$0	\$36.74	\$0.93	3	
	Des Moines, IA	Amarillo, TX	\$3,895	\$79	\$39.46	\$1.00	5	
	Minneapolis, MN	Tacoma, WA	\$5,000	\$0	\$49.65	\$1.26	0	
	Council Bluffs, IA	Stockton, CA	\$4,740	\$0	\$47.07	\$1.20	2	
	Soybeans	Sioux Falls, SD	Tacoma, WA	\$5,600	\$0	\$55.61	\$1.51	2
		Minneapolis, MN	Portland, OR	\$5,650	\$0	\$56.11	\$1.53	3
		Fargo, ND	Tacoma, WA	\$5,500	\$0	\$54.62	\$1.49	2
Council Bluffs, IA		New Orleans, LA	\$4,525	\$116	\$46.09	\$1.25	5	
Toledo, OH		Huntsville, AL	\$4,226	\$0	\$41.97	\$1.14	0	
Grand Island, NE	Portland, OR	\$5,460	\$164	\$55.85	\$1.52	5		

¹A unit train refers to shipments of at least 25 cars. Shuttle train rates are available for qualified shipments of 75-120 cars that meet railroad efficiency requirements.

²Approximate load per car = 111 short tons (100.7 metric tons): corn 56 lbs./bu., wheat and soybeans 60 lbs./bu.

³Regional economic areas are defined by the Bureau of Economic Analysis (BEA)

⁴Percentage change year over year calculated using tariff rate plus fuel surcharge

Sources: www.bnsf.com, www.cn.ca, www.csx.com, www.up.com

Table 8
Tariff Rail Rates for U.S. Bulk Grain Shipments to Mexico

Commodity	Origin		Tariff rate/car ¹	Fuel surcharge		Tariff plus surcharge per:		Percent change ⁴ Y/Y
	state	Destination region		per car ²	metric ton ³	bushel ³		
Wheat	MT	Chihuahua, CI	\$7,459	\$0	\$76.21	\$2.07	0	
	OK	Cuautitlan, EM	\$6,631	\$70	\$68.46	\$1.86	3	
	KS	Guadalajara, JA	\$7,309	\$261	\$77.35	\$2.10	7	
	TX	Salinas Victoria, NL	\$4,292	\$43	\$44.29	\$1.20	5	
Corn	IA	Guadalajara, JA	\$8,187	\$212	\$85.82	\$2.18	3	
	SD	Celaya, GJ	\$7,580	\$0	\$77.45	\$1.97	1	
	NE	Queretaro, QA	\$7,909	\$145	\$82.30	\$2.09	2	
	SD	Salinas Victoria, NL	\$6,635	\$0	\$67.79	\$1.72	1	
	MO	Tlalnepantla, EM	\$7,268	\$142	\$75.71	\$1.92	2	
	SD	Torreon, CU	\$7,180	\$0	\$73.36	\$1.86	1	
Soybeans	MO	Bojay (Tula), HG	\$8,647	\$223	\$90.63	\$2.46	2	
	NE	Guadalajara, JA	\$8,942	\$227	\$93.68	\$2.55	0	
	IA	El Castillo, JA	\$8,960	\$0	\$91.55	\$2.49	-5	
	KS	Torreon, CU	\$7,489	\$152	\$78.07	\$2.12	2	
Sorghum	NE	Celaya, GJ	\$7,164	\$190	\$75.14	\$1.91	0	
	KS	Queretaro, QA	\$7,608	\$87	\$78.62	\$2.00	2	
	NE	Salinas Victoria, NL	\$6,213	\$70	\$64.19	\$1.63	2	
	NE	Torreon, CU	\$6,607	\$140	\$68.94	\$1.75	1	

¹Rates are based upon published tariff rates for high-capacity shuttle trains. Shuttle trains are available for qualified shipments of 75--110 cars that meet railroad efficiency requirements.

²Fuel surcharge adjusted to reflect the change in Ferrocarril Mexicano, S.A. de C.V railroad fuel surcharge policy as of 10/01/2009

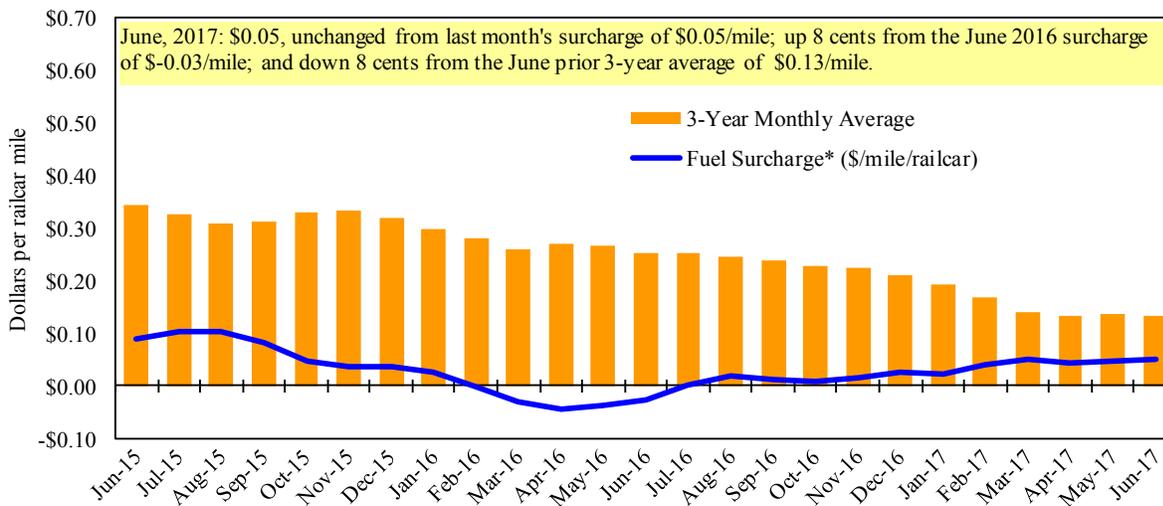
³Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

⁴Percentage change calculated using tariff rate plus fuel surcharge

Sources: www.bnsf.com, www.uprr.com, www.kcsouthern.com

Figure 7

Railroad Fuel Surcharges, North American Weighted Average¹



¹ Weighted by each Class I railroad's proportion of grain traffic for the prior year.

* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

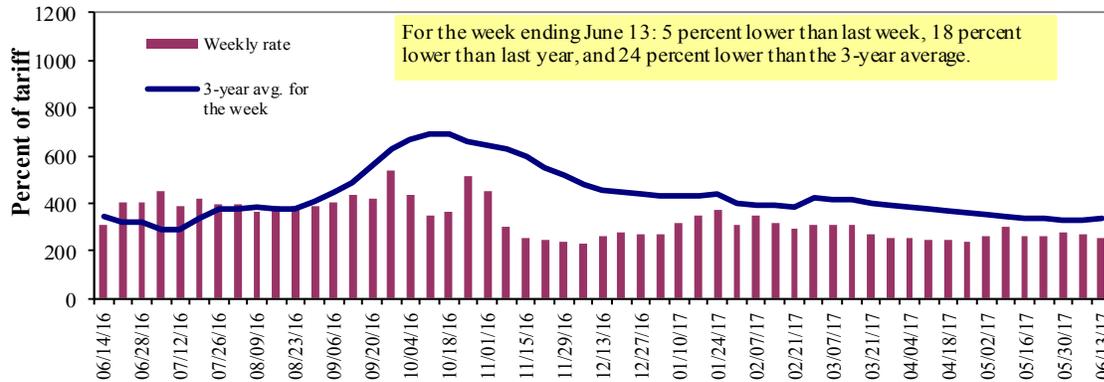
**CSX strike price changed from \$2.00/gal. to \$3.75/gal. starting January 1, 2015.

Sources: www.bnsf.com, www.cn.ca, www.cpr.ca, www.csx.com, www.kcsi.com, www.nscorp.com, www.uprr.com

Barge Transportation

Figure 8

Illinois River Barge Freight Rate^{1,2}



¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average of the 3-year average.
Source: Transportation & Marketing Programs/AMS/USDA

Table 9

Weekly Barge Freight Rates: Southbound Only

		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate¹	6/13/2017	318	260	255	183	193	193	168
	6/6/2017	333	273	268	185	200	200	168
\$/ton	6/13/2017	19.68	13.83	11.83	7.30	9.05	7.80	5.28
	6/6/2017	20.61	14.52	12.44	7.38	9.38	8.08	5.28
Current week % change from the same week:								
	Last year	-14	-19	-18	-15	-1	-1	-13
	3-year avg. ²	-21	-24	-24	-21	-13	-13	-18
Rate¹	July	325	273	270	190	205	205	175
	September	400	350	350	275	350	350	263

¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average; ton = 2,000 pounds
Source: Transportation & Marketing Programs/AMS/USDA

Figure 9

Benchmark tariff rates

Calculating barge rate per ton:

$(\text{Rate} * 1976 \text{ tariff benchmark rate per ton}) / 100$

Select applicable index from market quotes included in tables on this page. The 1976 benchmark rates per ton are provided in map.

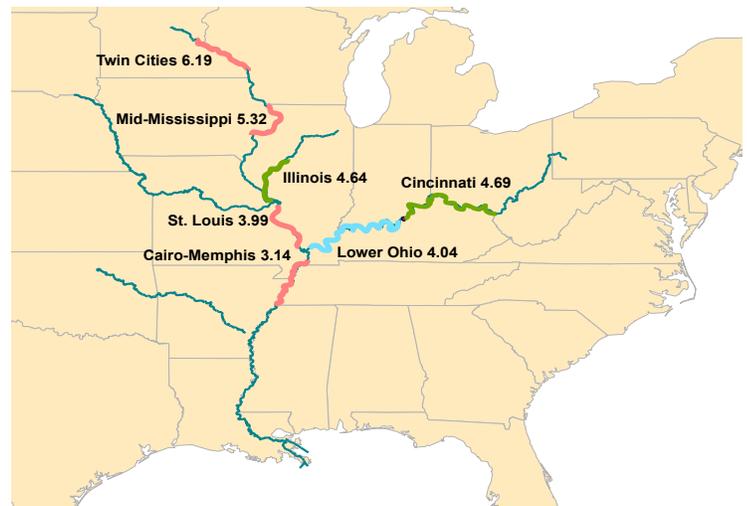
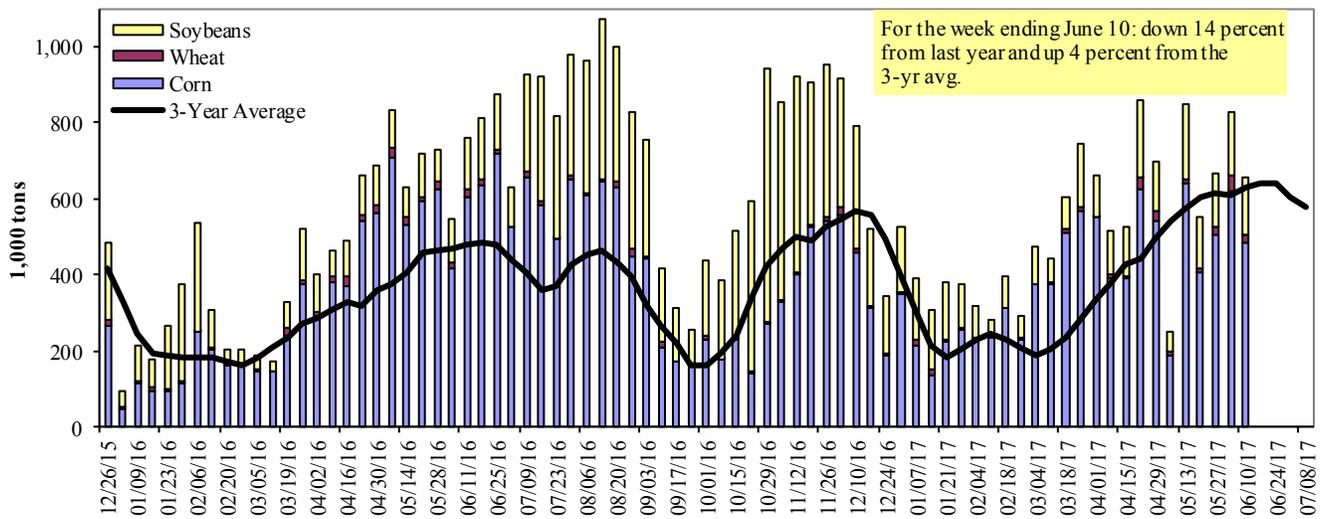


Figure 10

Barge Movements on the Mississippi River¹ (Locks 27 - Granite City, IL)



¹ The 3-year average is a 4-week moving average.

Source: U.S. Army Corps of Engineers

Table 10

Barge Grain Movements (1,000 tons)

For the week ending 6/10/2017	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	190	16	72	2	280
Winfield, MO (L25)	325	10	97	2	433
Alton, IL (L26)	462	19	139	2	621
Granite City, IL (L27)	486	21	148	2	656
Illinois River (L8)	158	13	47	0	218
Ohio River (L52)	24	6	16	0	45
Arkansas River (L1)	0	15	11	0	27
Weekly total - 2017	509	42	175	2	728
Weekly total - 2016	640	57	190	16	903
2017 YTD ¹	11,189	959	5,367	152	17,667
2016 YTD	10,288	817	4,589	141	15,835
2017 as % of 2016 YTD	109	117	117	107	112
Last 4 weeks as % of 2016 ²	92	94	125	36	98
Total 2016	24,136	2,030	16,668	344	43,178

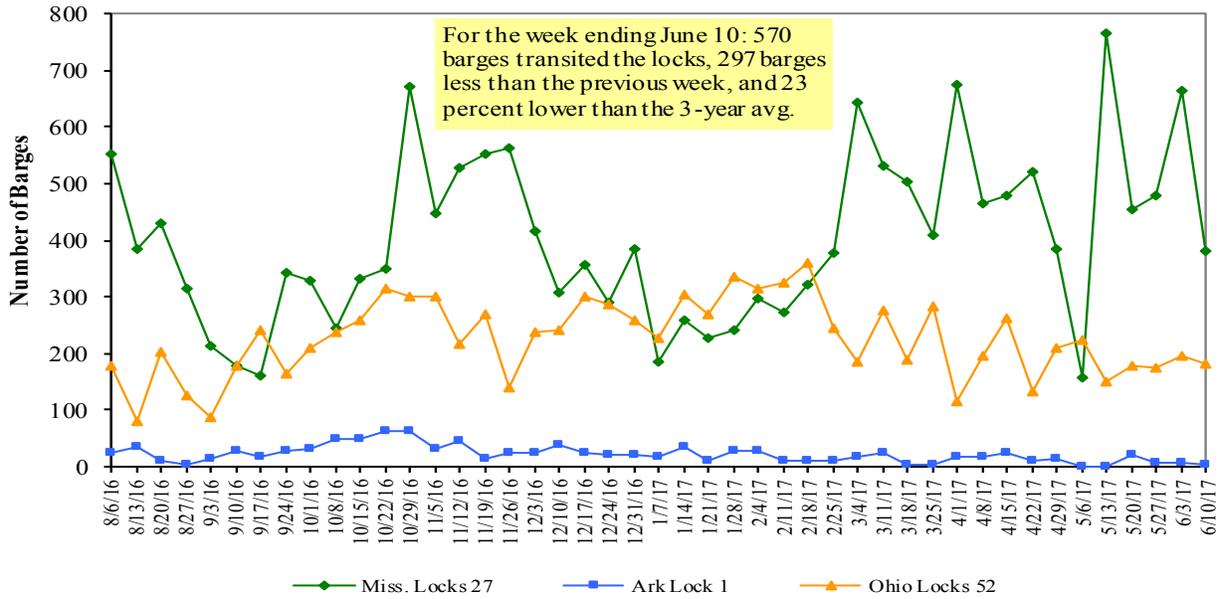
¹ Weekly total, YTD (year-to-date) and calendar year total includes Miss/27, Ohio/52, and Ark/1; "Other" refers to oats, barley, sorghum, and rye.

² As a percent of same period in 2016.

Note: Total may not add exactly, due to rounding

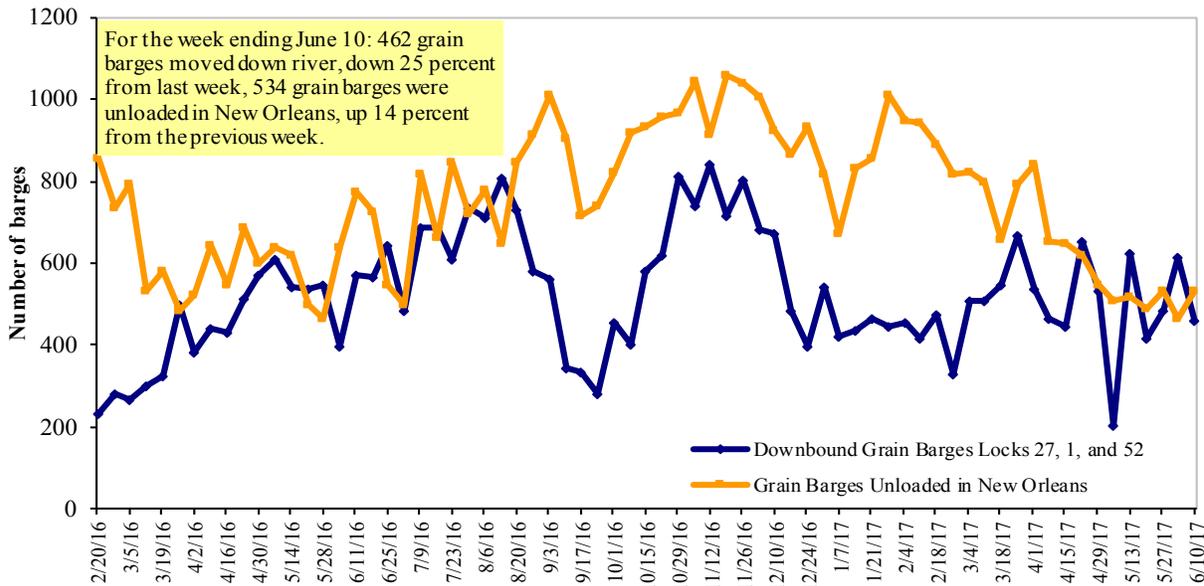
Source: U.S. Army Corps of Engineers

Figure 11
Upbound Empty Barges Transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Locks and Dam 52



Source: U.S. Army Corps of Engineers

Figure 12
Grain Barges for Export in New Orleans Region



Source: U.S. Army Corps of Engineers and GIPSA

Truck Transportation

The **weekly diesel price** provides a proxy for trends in U.S. truck rates as diesel fuel is a significant expense for truck grain movements.

Table 11

Retail on-Highway Diesel Prices¹, Week Ending 6/12/2017(US \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	2.590	-0.009	0.141
	New England	2.626	0.002	0.134
	Central Atlantic	2.737	-0.007	0.200
	Lower Atlantic	2.475	-0.015	0.103
II	Midwest ²	2.498	-0.007	0.108
III	Gulf Coast ³	2.411	-0.006	0.104
IV	Rocky Mountain	2.667	0.003	0.254
V	West Coast	2.829	-0.007	0.118
	West Coast less California	2.713	-0.011	0.103
	California	2.923	-0.004	0.132
Total	U.S.	2.524	-0.040	0.093

¹Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

²Same as North Central ³Same as South Central

Source: Energy Information Administration/U.S. Department of Energy (www.eia.doe.gov)

Figure 13

Weekly Diesel Fuel Prices, U.S. Average



Source: Retail On-Highway Diesel Prices, Energy Information Administration, Dept. of Energy

Grain Exports

Table 12

U.S. Export Balances and Cumulative Exports (1,000 metric tons)

For the week ending	Wheat					All wheat	Corn	Soybeans	Total
	HRW	SRW	HRS	SWW	DUR				
Export Balances¹									
6/1/2017	2,245	590	1,858	1,621	201	6,515	10,939	7,122	24,575
This week year ago	1,777	623	2,032	1,068	144	5,644	14,676	5,326	25,646
Cumulative exports-marketing year²									
2016/17 YTD	78	12	2	0	2	94	43,078	51,476	94,648
2015/16 YTD	89	17	14	0	0	121	29,958	43,128	73,207
YTD 2016/17 as % of 2015/16	87	67	17	0	0	78	144	119	129
Last 4 wks as % of same period 2015/16	76	56	53	86	80	68	83	133	90
2015/16 Total	5,538	3,057	6,285	3,551	670	19,101	45,564	49,821	114,487
2014/15 Total	7,009	3,654	7,250	3,758	665	22,336	45,205	49,614	117,155

¹ Current unshipped (outstanding) export sales to date

² Shipped export sales to date; new marketing year now in effect for wheat

Note: YTD = year-to-date. Marketing Year: wheat = 6/01-5/31, corn & soybeans = 9/01-8/31

Source: Foreign Agricultural Service/USDA (www.fas.usda.gov)

Table 13

Top 5 Importers¹ of U.S. Corn

For the week ending 6/01/2017	Total Commitments ²			% change current MY from last MY	Exports ³ 3-year avg 2013-2015
	2017/18 Next MY	2016/17 Current MY	2015/16 Last MY		
	- 1,000 mt -				- 1,000 mt -
Mexico	1,423	12,867	12,053	7	11,204
Japan	546	10,872	9,519	14	11,284
Korea	0	5,531	2,136	159	3,931
Colombia	7	4,012	4,334	(7)	4,134
Peru	28	2,802	1,937	45	2,109
Top 5 Importers	2,004	36,084	29,979	20	32,662
Total US corn export sales	2,741	54,016	44,634	21	46,633
% of Projected	6%	95%	92%		
Change from prior week ²	128	349	1,500		
Top 5 importers' share of U.S. corn export sales	73%	67%	67%		70%
USDA forecast, June 2017	47,710	56,616	48,295	17	
Corn Use for Ethanol USDA forecast, June 2017	139,700	138,430	132,690	5	

¹Based on FAS Marketing Year Ranking Reports for 2015/16 - www.fas.usda.gov; Marketing year (MY) = Sep 1 - Aug 31.

²Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query--
http://www.fas.usda.gov/esrquery/. Total commitments change (net sales) from prior week could include revisions from previous
week's outstanding sales or accumulated sales.

³FAS Marketing Year Ranking Reports - http://apps.fas.usda.gov/export-sales/myrkaug.htm; 3-yr average

Table 14

Top 5 Importers¹ of U.S. Soybeans

For the week ending 6/01/2017	Total Commitments ²			% change current MY from last MY	Exports ³ 3-yr avg. 2013-2015
	2017/18	2016/17	2015/16		
	Next MY	Current MY	Last MY		
		- 1,000 mt -			- 1,000 mt -
China	1,042	35,896	27,393	31	29,033
Mexico	247	3,499	3,250	8	3,295
Indonesia	3	1,982	1,699	17	2,065
Japan	186	2,077	2,102	(1)	1,994
Netherlands	0	1,553	1,428	9	1,644
Top 5 importers	1,478	45,008	35,871	25	38,032
Total US soybean export sales	3,123	58,597	48,454	21	48,389
% of Projected	5%	105%	92%		
Change from prior week ²	222	159	759		
Top 5 importers' share of U.S. soybean export sales	47%	77%	74%		79%
USDA forecast, June 2017	58,583	55,858	52,752	6	

(n) indicates negative number.

¹Based on FAS Marketing Year Ranking Reports for 2015/16 - www.fas.usda.gov; Marketing year (MY) = Sep 1- Aug 31.²Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query--http://www.fas.usda.gov/esrquery/. The total commitments change (net sales) from prior week could include revisions from previous week's outstanding sales and/or accumulated sales³ FAS Marketing Year Final Reports - www.fas.usda.gov/export-sales/myfi_rpt.htm. (Carryover plus Accumulated Exports)

Table 15

Top 10 Importers¹ of All U.S. Wheat

For the week ending 6/01/2017	Total Commitments ²		% change current MY from last MY	Exports ³ 3-yr avg 2014-2016
	2017/18	2016/17		
	Current MY	Last MY		
		- 1,000 mt -		- 1,000 mt -
Japan	460	307	50	2,620
Mexico	881	571	54	2,743
Philippines	554	550	1	2,395
Brazil	30	110	(73)	862
Nigeria	217	257	(15)	1,254
Korea	587	260	126	1,104
China	323	196	65	1,623
Taiwan	149	128	16	768
Indonesia	190	25	660	726
Colombia	104	63	66	635
Top 10 importers	3,495	2,466	42	14,729
Total US wheat export sales	6,609	5,765	15	24,485
% of Projected	23%	27%		
Change from prior week ²	461	224		
Top 10 importers' share of U.S. wheat export sales	53%	43%		60%
USDA forecast, June 2017	28,202	21,117	34	

(n) indicates negative number.

¹ Based on FAS Marketing Year Ranking Reports for 2015/16 - www.fas.usda.gov; Marketing year = Jun 1 - May 31.² Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query--http://www.fas.usda.gov/esrquery/. Total commitments change (net sales) from prior week could include revisions from the previous outstanding and/or accumulated sales³ FAS Marketing Year Final Reports - www.fas.usda.gov/export-sales/myfi_rpt.htm.

Table 16

Grain Inspections for Export by U.S. Port Region (1,000 metric tons)

Port Regions	For the Week Ending 06/08/17	Previous Week ¹	Current Week as % of Previous	2017 YTD	2016 YTD	2017 YTD as % of 2016 YTD	Last 4-weeks as % of:		2016 Total
							Last Year	Prior 3-yr. avg.	
Pacific Northwest									
Wheat	398	249	159	6,873	5,286	130	147	145	12,325
Corn	338	498	68	7,381	4,123	179	177	202	12,009
Soybeans	148	72	204	4,379	4,425	99	1379900	9695	14,447
Total	883	819	108	18,633	13,834	135	183	193	38,782
Mississippi Gulf									
Wheat	131	82	160	2,252	1,596	141	206	160	3,480
Corn	464	448	104	16,091	13,515	119	74	78	31,420
Soybeans	269	131	205	11,198	9,420	119	229	170	35,278
Total	865	661	131	29,541	24,531	120	97	97	70,178
Texas Gulf									
Wheat	216	174	124	3,222	1,376	234	166	153	6,019
Corn	0	29	0	376	406	93	31	35	1,669
Soybeans	0	0	n/a	0	92	0	n/a	n/a	1,105
Total	216	203	106	3,598	1,873	192	141	134	8,792
Interior									
Wheat	26	46	55	806	564	143	159	164	1,543
Corn	177	177	100	3,498	3,074	114	98	123	7,197
Soybeans	113	77	146	2,261	1,718	132	172	184	4,577
Total	315	301	105	6,565	5,356	123	121	142	13,317
Great Lakes									
Wheat	44	0	n/a	253	172	147	193	129	1,186
Corn	38	0	n/a	83	105	79	46	101	584
Soybeans	0	8	0	104	23	448	n/a	795	910
Total	83	8	1,096	441	300	147	142	154	2,681
Atlantic									
Wheat	0	0	n/a	37	182	20	44	2	315
Corn	0	0	n/a	5	14	38	n/a	0	294
Soybeans	4	13	34	895	863	104	130	194	2,269
Total	5	13	35	937	1,058	89	127	49	2,878
U.S. total from ports²									
Wheat	815	552	148	13,444	9,177	146	162	148	24,867
Corn	1,018	1,152	88	27,434	21,236	129	97	107	53,173
Soybeans	535	302	177	18,837	16,541	114	277	237	58,587
Total	2,367	2,005	118	59,715	46,954	127	128	131	136,627

¹ Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

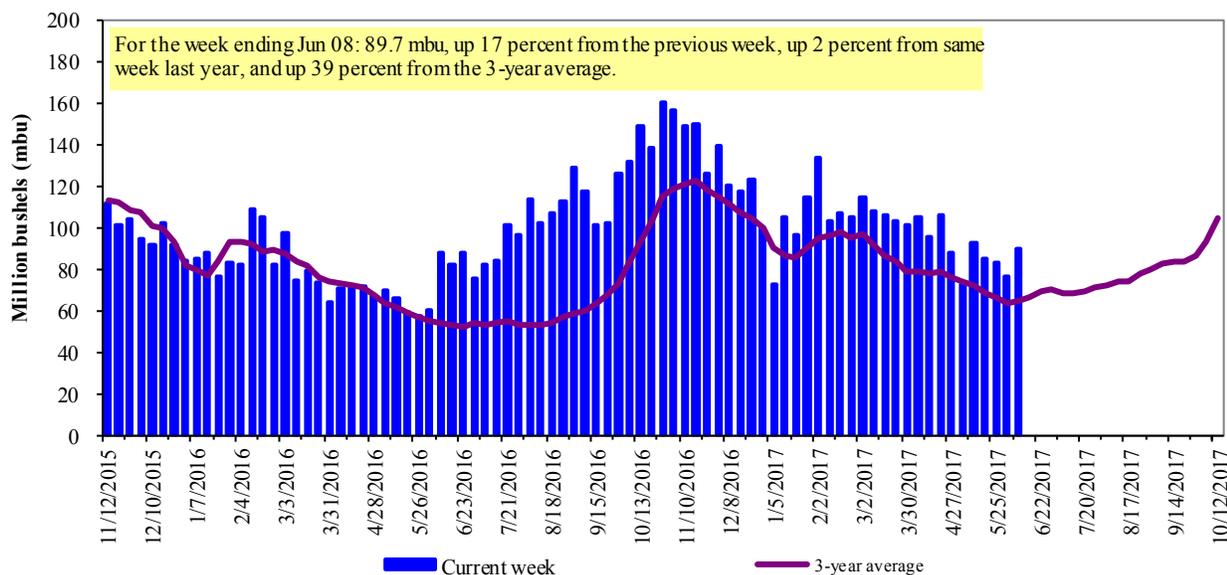
Source: Grain Inspection, Packers and Stockyards Administration/USDA (www.gipsa.usda.gov); YTD= year-to-date; n/a = not applicable

² Total only includes regions shown above.

The United States exports approximately one-quarter of the grain it produces. On average, this includes nearly 45 percent of U.S.-grown wheat, 35 percent of U.S.-grown soybeans, and 20 percent of the U.S.-grown corn. Approximately 58 percent of the U.S. export grain shipments departed through the U.S. Gulf region in 2016.

Figure 14

U.S. grain inspected for export (wheat, corn, and soybeans)

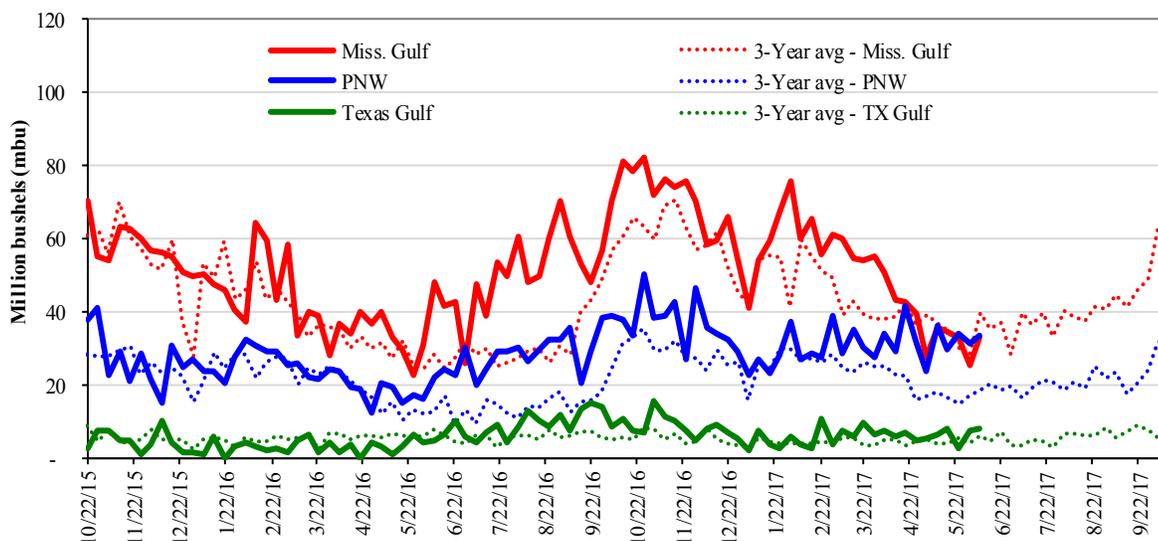


Source: Grain Inspection, Packers and Stockyards Administration/USDA (www.gipsa.usda.gov)

Note: 3-year average consists of 4-week running average

Figure 15

U.S. Grain Inspections: U.S. Gulf and PNW¹ (wheat, corn, and soybeans)



<u>Week ending 06/08/17 inspections (mbu):</u>	<u>Percent change from:</u>	<u>MS Gulf</u>	<u>TX Gulf</u>	<u>U.S. Gulf</u>	<u>PNW</u>
Mississippi Gulf: 33.0	Last Week:	up 30	up 5	up 24	up 6
PNW: 33.3	Last Year (same week):	down 31	up 63	down 22	up 51
Texas Gulf: 7.9	3-yr avg (4-wk. mov. Avg):	unchanged	up 64	up 9	up 100

Source: Grain Inspection, Packers and Stockyards Administration/USDA (www.gipsa.usda.gov)

¹The 3-year average is based on a 4-week running average

Ocean Transportation

Table 17

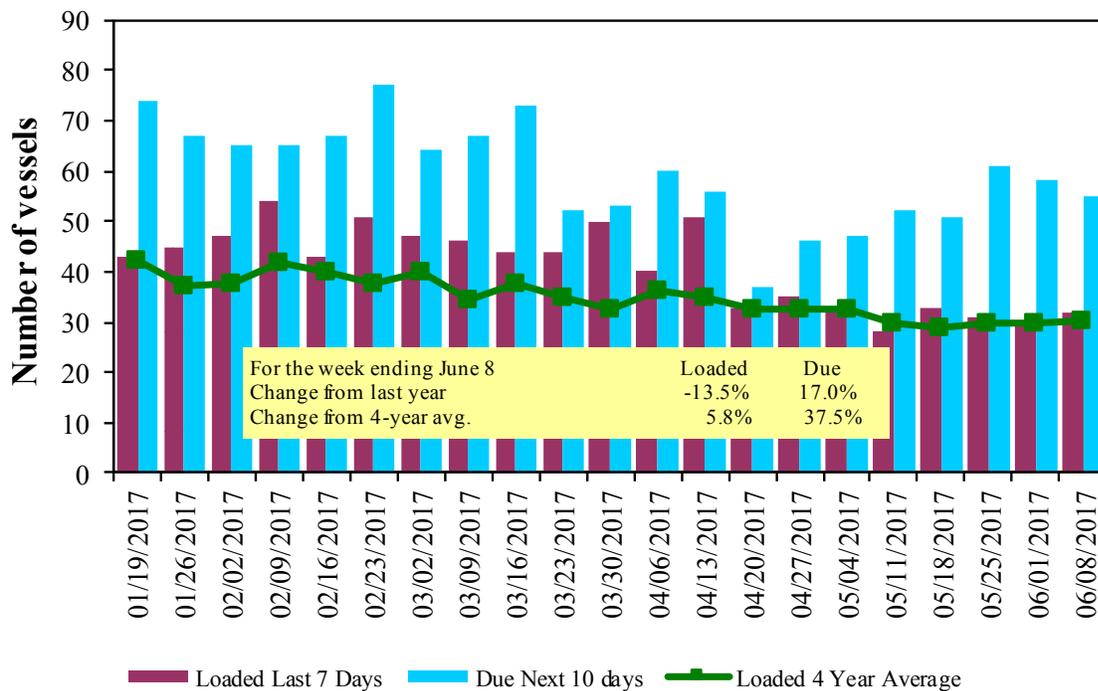
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

Date	Gulf			Pacific Northwest	Vancouver B.C.
	In port	Loaded 7-days	Due next 10-days	In port	In port
6/8/2017	48	32	55	24	n/a
6/1/2017	41	30	58	26	n/a
2016 range	(21..62)	(27..55)	(40..87)	(6..27)	n/a
2016 avg.	43	40	62	15	n/a

Source: Transportation & Marketing Programs/AMS/USDA

Figure 16

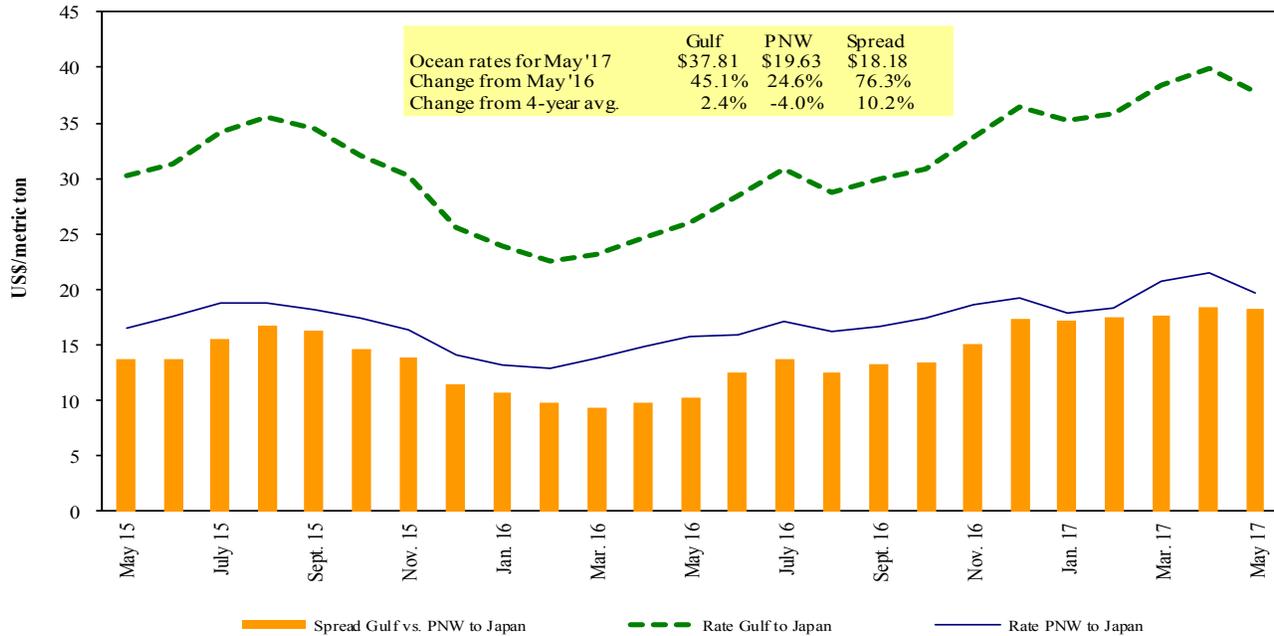
U.S. Gulf Vessel Loading Activity



Source: Transportation & Marketing Programs/AMS/USDA
¹U.S. Gulf includes Mississippi, Texas, and East Gulf

Figure 17

Grain Vessel Rates, U.S. to Japan



Data Source: O'Neil Commodity Consulting

Table 18

Ocean Freight Rates For Selected Shipments, Week Ending 06/10/2017

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	Algeria	Heavy Grain	Jun 1/10	60,000	21.00
U.S. Gulf	Cote d'Ivoire	Rice	Jun 19/29	6,000	93.33*
U.S. Gulf	Ghana	Rice	Jun 9/19	6,000	341.67*
U.S. Gulf	Ghana	Soybean Meal	Jun 9/19	5,000	86.75*
U.S. Gulf	Jordan	Wheat	Jun 19/28	50,000	36.00
PNW	Taiwan	Wheat	Jun 9/23	48,425	29.70
PNW	Taiwan	Wheat	May 6/20	52,500	28.48
PNW	Taiwan	Wheat	Apr 19/May 3	50,350	29.12
Brazil	China	Heavy Grain	Jul 1/10	60,000	22.00
Brazil	China	Heavy Grain	Jun 20/30	60,000	24.00
Brazil	China	Heavy Grain	Jun 10/20	60,000	24.75
Brazil	China	Heavy Grain	May 20/30	60,000	25.50
Brazil	China	Heavy Grain	May 20/30	60,000	26.50
Brazil	Iran	Heavy Grain	Jun 15/18	70,000	22.75
EC S. America	China	Heavy Grain	May 20/30	60,000	29.75
River Plate	China	Heavy Grain	May 10/20	63,000	35.50

Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), F.O.B., except where otherwise indicated; op = option

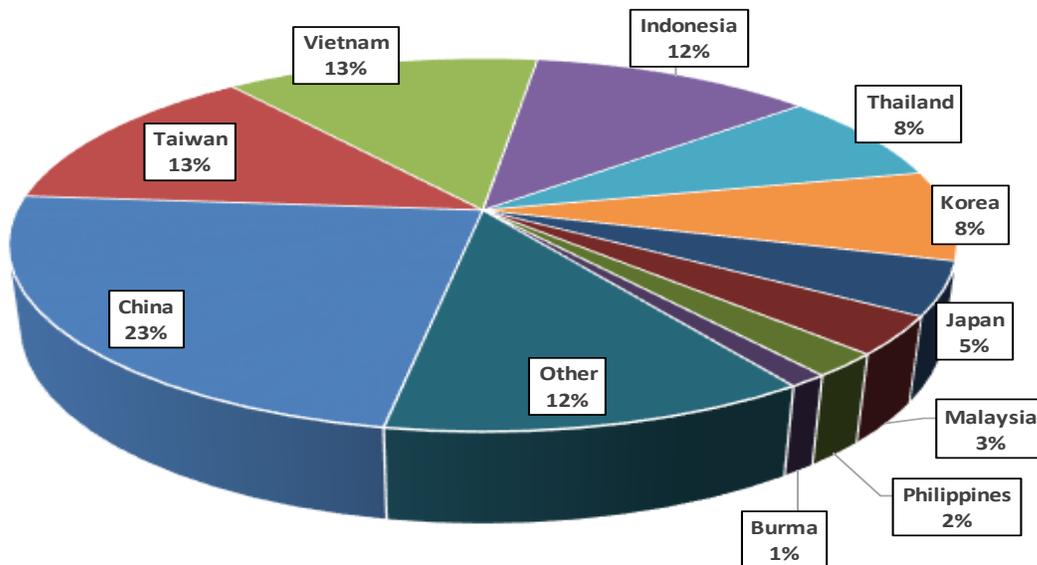
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

Source: Maritime Research Inc. (www.maritime-research.com)

In 2015, containers were used to transport 8 percent of total U.S. waterborne grain exports. Approximately 64 percent of U.S. waterborne grain exports in 2015 went to Asia, of which 12 percent were moved in containers. Approximately 94 percent of U.S. waterborne containerized grain exports were destined for Asia.

Figure 18

Top 10 Destination Markets for U.S. Containerized Grain Exports, January-December 2016

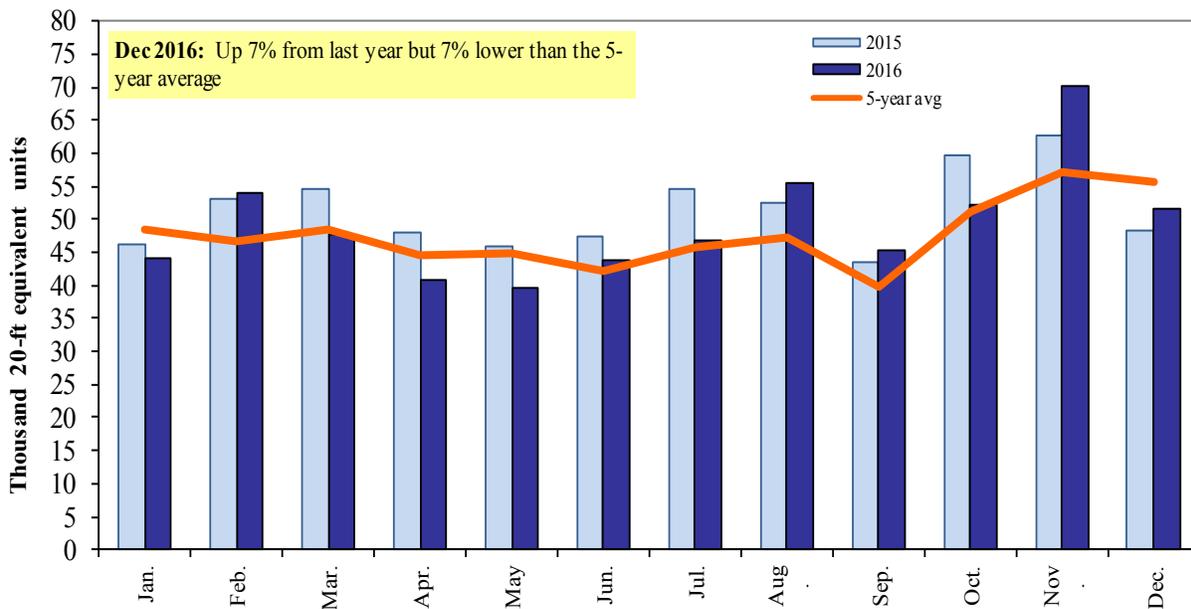


Source: USDA/Agricultural Marketing Service/Transportation Services Division analysis of Port Import Export Reporting Service (PIERS) data

Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: 100190, 100200, 100300, 100400, 100590, 100700, 110100, 230310, 110220, 110290, 120100, 230210, 230990, 230330, and 120810.

Figure 19

Monthly Shipments of Containerized Grain to Asia



Source: USDA/Agricultural Marketing Service/Transportation Services Division analysis of Port Import Export Reporting Service (PIERS) data.

Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: 100190, 100200, 100300, 100400, 100590, 100700, 110100, 230310, 110220, 110290, 120100, 230210, 230990, 230330, and 120810.

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