



Grain Transportation Report

A weekly publication of the Agricultural Marketing Service
www.ams.usda.gov/GTR

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WEEKLY HIGHLIGHTS

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U.S. Crude Oil Production and Global Petroleum Inventories Up in 2018

The Energy Information Agency (EIA) [reported](#), in its Short Term Energy Outlook, that crude oil production in February averaged 10.3 million barrels per day—230,000 more barrels per day than the previous month. EIA reported U.S. crude oil production at 9.3 million barrels per day, in 2017. In 2018, EIA projects U.S. crude oil production will average 10.7 million barrels per day highest annual average of daily production in history. While global petroleum inventories declined by 0.6 million barrels per day in 2017, EIA estimates inventories will grow by about 0.4 million barrels per day in 2018.

Soybean Inspections Lowest Since July 2017

For the week ending March 15, [total inspections of grain](#) (corn, wheat, and soybeans) for export, from all major U.S. export regions, reached 2.37 million metric tons (mmt); down 15 percent from the previous week, down 15 percent from last year, and 2 percent below the 3-year average. The decrease in total grain inspections was driven by a 47 percent drop in soybean inspections. Soybean inspections were the lowest, since late July of last year, with shipments down primarily to Asia. Inspections of wheat and corn increased slightly from the previous week. Pacific Northwest (PNW) grain inspections decreased 28 percent from the previous week, but Mississippi Gulf inspections increased 4 percent. Current outstanding (unshipped) export sales were up for corn and soybeans, but down for wheat.

Navigation Conditions Improve, Barge Spot Rates Decline

After several weeks of flooding, river levels on the Mississippi and Ohio rivers are receding and thus easing some navigational issues for barge operators in many locations. For the week ending on March 17, total barge grain shipments through Mississippi River Locks 27 increased 133 percent (594 thousand tons) from the average of the previous three weeks when high water conditions began. Similarly, barge grain shipments through Ohio River Locks 52 increased 177 percent (209 thousand tons). Nevertheless, there is still some congestion and delayed transit times on the lower Ohio River, as well as at Cairo, IL, where the Ohio River flows into the Mississippi River. Southbound barge traffic on stretches of the lower Mississippi River continues to be restricted to daylight hours with reduced tow sizes. As of March 20, barge spot rates for export grain dropped 10 to 24 percent, compared to the previous week at major originating locations.

Snapshots by Sector

Export Sales

For the week ending March 8, [unshipped balances](#) of wheat, corn, and soybeans totaled 37.6 mmt, up 17 percent from the same time last year. Net weekly [wheat export sales](#) were .163 mmt, down 58 percent from the previous week. Net [corn export sales](#) were 2.51 mmt, up 35 percent from the previous week. Net [soybean export sales](#) totaled 1.27 mmt, down 49 percent from the previous week.

Rail

U.S. Class I railroads originated 22,995 [grain carloads](#), for the week ending March 10; down 1 percent from the previous week and 5 percent from last year, but up 3 percent from the 3-year average.

Average April shuttle [secondary railcar](#) bids/offers, per car, were \$238 above tariff, for the week ending March 15, down \$8 from last week, and \$434 higher than last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending March 17, [barge grain movements](#) totaled 838,866 tons, 133 percent higher than the previous week and down 4 percent from the same period last year.

For the week ending March 17, 537 grain barges [moved down river](#), 284 barges more than the previous week. There were 569 grain barges [unloaded in New Orleans](#), 21 percent lower than the previous week.

Ocean

For the week ending March 15, 37 [ocean-going grain vessels](#) were loaded in the Gulf, 16 percent less than the same period last year. Sixty-two vessels are expected to be loaded within the next 10 days, 15 percent less than the same period last year.

For the week ending March 15, the ocean freight rate for shipping bulk grain from the Gulf to Japan was \$45.25 per metric ton, up 1 percent from the previous week. The cost of shipping from the PNW to Japan was \$24.50 per metric ton, up 2 percent from the previous week.

Fuel

During the week ending March 19, average [diesel fuel prices](#) was \$2.97 per gallon, unchanged from the previous week but 43 cents higher than the same week last year.

Feature Article/Calendar

Importance of Rail for Moving Grain to Mexico

Mexico is the second largest importer of U.S. grain (corn, wheat, and soybeans), behind China. According to USDA’s Foreign Agricultural Service, grain and feed accounted for \$5.1 billion of the \$17.9 billion in agricultural products the U.S. exported to Mexico, in 2016.¹ Corn and soybeans were the top two commodities exported at \$2.6 billion and \$1.5 billion, respectively. Because of Mexico’s proximity to the U.S., through their shared land border, Mexico imports roughly 80 percent of U.S. grain by rail and 20 percent by ocean vessel.² The rail link offers Mexican importers a cheaper alternative to ocean vessels. It also gives U.S. exporters a competitive advantage over other countries, that must rely exclusively on more distant and expensive ocean shipping, to reach Mexico.

Rail transportation represents about 95 percent of the transportation costs for shipping grain to Mexico from the U.S. As a result, the cost of rail service significantly affects the competitiveness of U.S. shipments to Mexico. This article looks at average rail rates through time, by origin-destination routes, shipment geography and cost-effective incentives for shipping grain between the two countries.

Rail Rates

In the last quarter of 2017, the transportation share of the landed costs for shipping grain by land, from the United States to Guadalajara, Mexico, ranged from 23 to 42 percent (See March 1, 2018 *Grain Transportation Report*). However, the rail cost alone accounted for 94 to 95 percent of the transportation costs, depending on the commodity and the shipping origin-destination pairs. Since 2014, average rail rates for shipping grain from the U.S. to Mexico have been stable and shown only small variations (*figure 1*).³ However, a few exceptions are worth noting. Rates for Texas and Montana wheat have gone up by 11 and 6 percent, respectively (*see table 1*). In contrast, rail rates for wheat from Iowa, Nebraska, and Oklahoma have gone down by 9, 7, and 6 percent, respectively. Unlike shipments from the Corn Belt, shipments from Texas locations travel shorter distances to various destinations in Mexico. Average rail rates are typically higher on shorter distance movements than

Figure 1: Average Rail rate by Commodity and Year in \$/MT

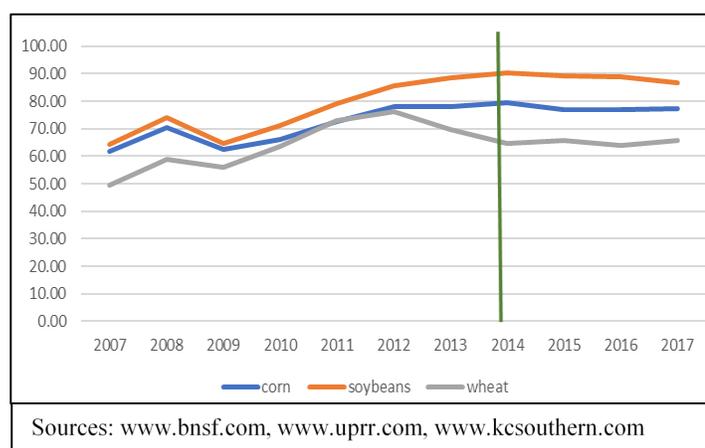


Table 1

Origin State and Commodity	Average Rail Rate to Mexico (including fuel surcharge) in \$/MT				Percent change from 2014
	2014	2015	2016	2017	
IA - corn	93.94	92.41	87.17	85.80	-9%
KS - soybeans	75.12	74.49	75.20	75.20	0%
KS- wheat	75.25	73.65	71.91	74.60	-1%
MO - corn	73.09	70.50	73.24	74.20	2%
MO- soybeans	90.02	89.17	89.23	88.38	-2%
MT - wheat	71.78	76.91	76.21	76.21	6%
NE - corn	82.44	79.75	82.23	83.20	1%
NE - soybeans	98.17	96.69	95.48	91.65	-7%
OK - wheat	69.47	68.74	63.87	65.33	-6%
SD - corn	75.54	73.13	72.87	73.16	-3%
TX - wheat	42.05	43.75	44.27	46.69	11%

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

¹ <https://apps.fas.usda.gov/gats/default.aspx>

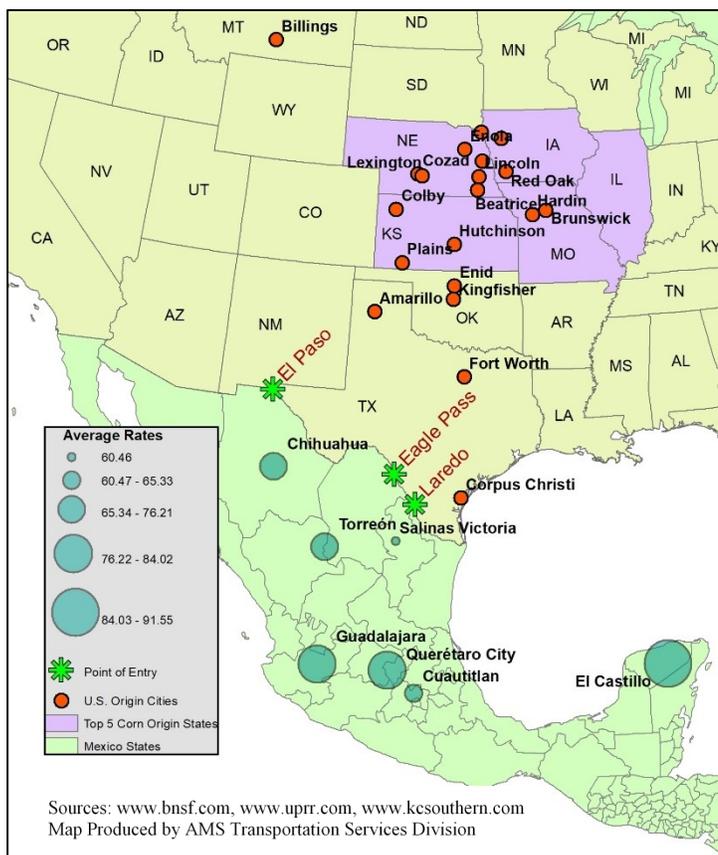
² U.S. Department of Transportation, Bureau of Transportation Statistics, *Freight Analysis Framework*.

³ Rail rates include U.S. and Mexico portions of the movement. Mexico rail rates are estimated based on actual quoted market rates. BNSF and Union Pacific quoted rail tariff rates are through-rates for shuttle trains. Rail rates include fuel surcharges, but do not include the cost of purchasing empty rail cars in the secondary market, which could exceed the rail tariff rate plus the fuel surcharge shown in the table.

longer ones, because fixed operational costs, on shorter routes, cannot be averaged across as many miles. However, in some States, a much greater percentage of tonnage moves at higher rates because under the law railroads are allowed to “differentially price” and charge higher rates for customers, with fewer alternative transportation options.⁴ For wheat, these captive States include Montana, North Dakota, and Texas.

Shipment Geography

Most of the grain shipped to Mexico originates in the Corn Belt (see map below). However, shipments can originate as far north as Billings, MT, and as close to the border as Corpus Christi, TX. Laredo, Eagle Pass, and El Paso, TX, are the main rail entry points of U.S. grain to Mexico. The destination regions for the largest shipments are located in the center of the country, close to the major processing and consuming areas, such as Cuautitlan, Guadalajara, Queretaro, Salinas Victoria and Torreon. The map shows rates are lower closer to the border, such as \$60.46 per ton for Salinas Victoria. Rates gradually increase for more distant cities like El Castillo, where average rates for 2017 were \$91.55 per metric ton. In addition to distance, other factors, such as the commodity, proximity to modal competition (captive shippers) and equipment availability are also considerations when determining railroad shipping rates.



Cost-effective Incentives for Grain Shipments

There are several U.S.-Mexico incentives used to promote or facilitate cost-effective cross-border shipments of grain that benefit U.S. producers. Under NAFTA, U.S. grain can enter Mexico tariff-free. Another incentive is Despacho Previo;⁵ a process developed for clearing southbound rail shipments into Mexico and reducing congestion and interchange delays at the border. Despacho Previo allows for the interchange of run-through trains, rather than individual cars; expediting southbound shipments. The process applies to all car types, except for intermodal equipment.

Summary

Historically, grain rail rates to Mexico have been relatively stable. This has helped make U.S. grain shipments to Mexico very competitive. Even though U.S. production costs are higher than South American costs, the price of U.S. grain in Mexico is cheaper because of lower transportation costs, allowing U.S. grain to compete favorably. Rail will continue to be an important mode of transporting grains to Mexico as long as the transportation costs continue to provide a competitive advantage.

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⁴ Differential pricing allows railroads to recover fixed costs more effectively across their network by imposing higher rates on traffic with fewer transportation alternatives, even though the characteristics of the movement may be similar to a shipper with more competitive transportation options.

⁵ <https://www.upr.com/customers/mexico/despacho/index.htm>

Grain Transportation Indicators

Table 1
Grain Transport Cost Indicators¹

For the week ending	Truck	Rail		Barge	Ocean	
		Unit Train	Shuttle		Gulf	Pacific
03/21/18	199	275	224	264	202	174
03/14/18	200	275	272	317	201	170

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)

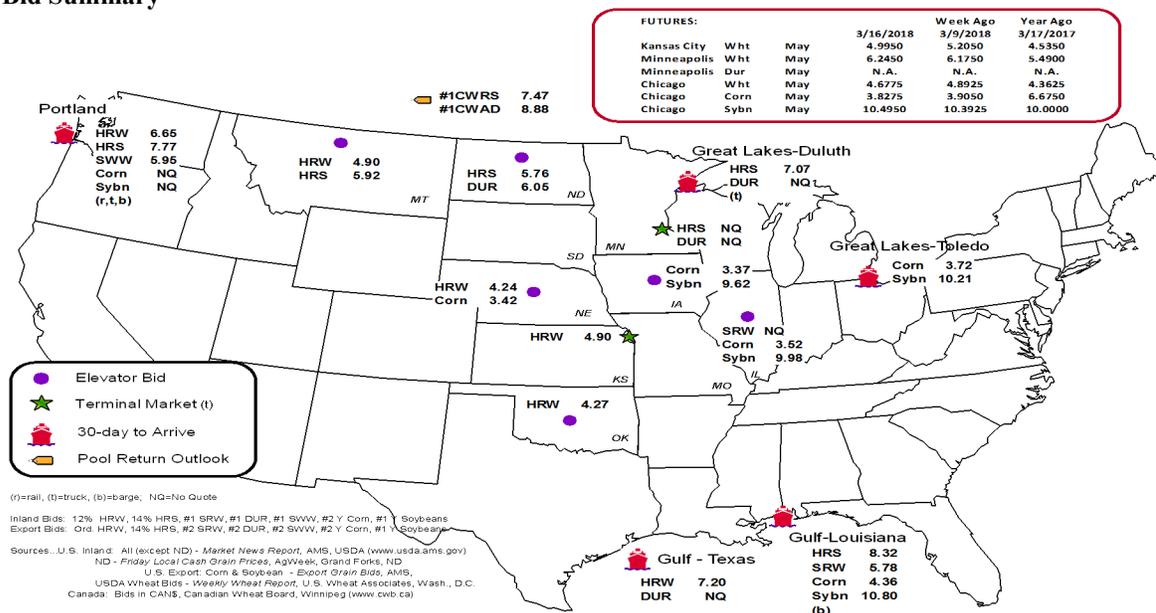
Commodity	Origin--Destination	3/16/2018	3/9/2018
Corn	IL--Gulf	-0.84	-0.92
Corn	NE--Gulf	-0.94	-1.06
Soybean	IA--Gulf	-1.18	-1.31
HRW	KS--Gulf	-2.30	-2.30
HRS	ND--Portland	-2.01	-1.87

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 Mexico ³
	Gulf	Texas Gulf	Northwest	East Gulf			
03/14/2018 ^p	329	1,813	6,728	286	9,156	3/10/2018	1,726
03/07/2018 ^r	367	1,754	6,597	345	9,063	3/3/2018	1,667
2018 YTD ^r	5,126	17,138	66,302	3,015	91,581	2018 YTD	19,056
2017 YTD ^r	9,424	21,735	69,845	7,457	108,461	2017 YTD	22,328
2018 YTD as % of 2017 YTD	54	79	95	40	84	% change YTD	85
Last 4 weeks as % of 2017 ²	36	75	86	62	78	Last 4wks % 2017	87
Last 4 weeks as % of 4-year avg. ²	47	92	99	49	91	Last 4wks % 4 yr	98
Total 2017	28,766	76,045	289,178	21,999	415,988	Total 2017	119,661
Total 2016	36,925	87,863	299,606	29,007	453,401	Total 2016	92,982

¹Data is incomplete as it is voluntarily provided

²Compared with same 4-weeks in 2017 and prior 4-year average.

³Cross-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 Grupo Mexico.

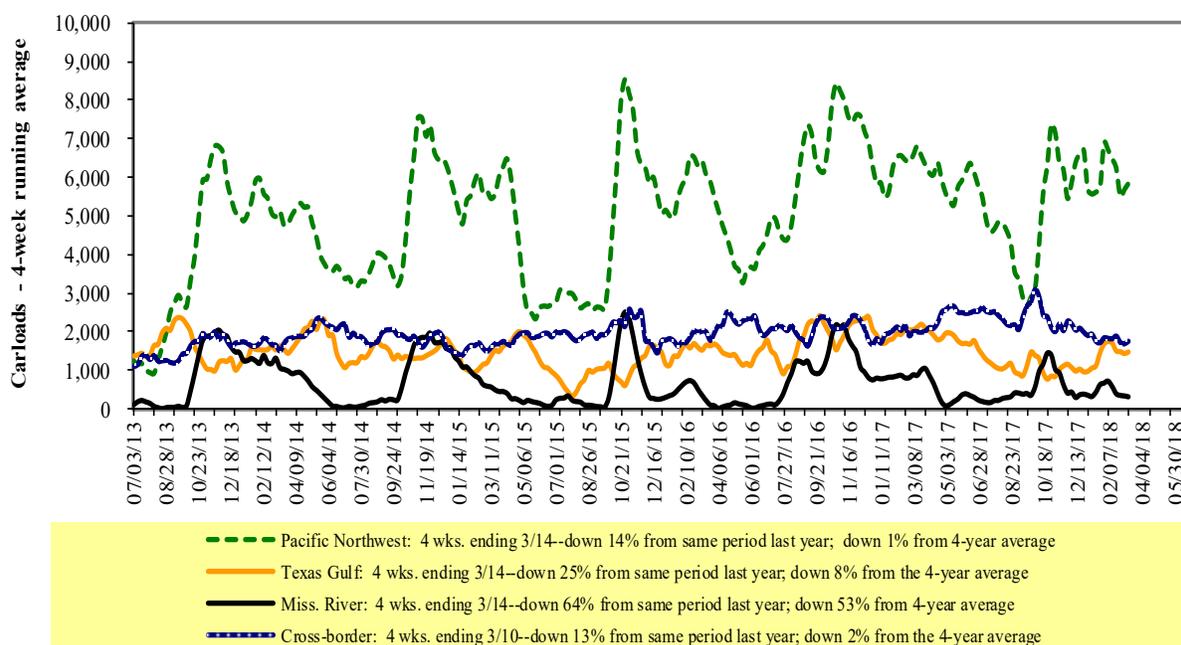
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

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)

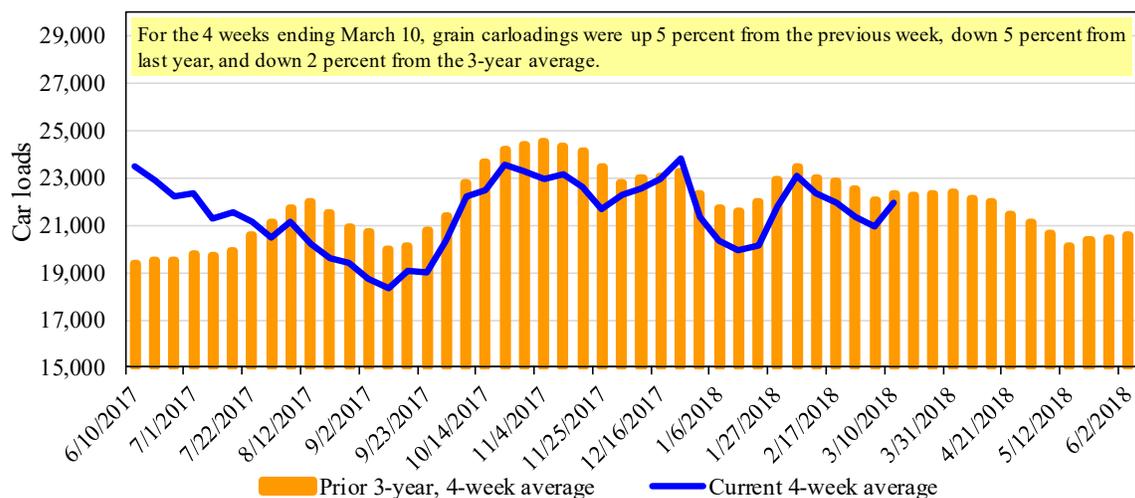
For the week ending: 3/10/2018	East		West			U.S. total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,711	2,365	13,205	816	4,898	22,995	3,585	4,746
This week last year	1,925	2,718	11,641	853	7,111	24,248	3,474	4,306
2018 YTD	17,804	24,297	115,992	9,656	51,200	218,949	33,535	42,047
2017 YTD	19,836	28,002	111,845	10,212	61,936	231,831	38,605	41,624
2018 YTD as % of 2017 YTD	90	87	104	95	83	94	87	101
Last 4 weeks as % of 2017*	96	99	102	98	80	95	79	101
Last 4 weeks as % of 3-yr avg.**	93	91	105	106	89	98	82	100
Total 2017	89,465	142,824	578,964	50,223	289,574	1,151,050	198,736	244,766

*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: 3/15/2018		Delivery period							
		Apr-18	Apr-17	May-18	May-17	Jun-18	Jun-17	Jul-18	Jul-17
BNSF ³	COT grain units	0	no bids	0	no bids	no bids	no bids	no bids	3
	COT grain single-car ⁵	144	0	2	1	0	1	0	7
UP ⁴	GCAS/Region 1	10	no bids	10	no bids	no bids	no bids	n/a	n/a
	GCAS/Region 2	no offer	no bids	18	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.

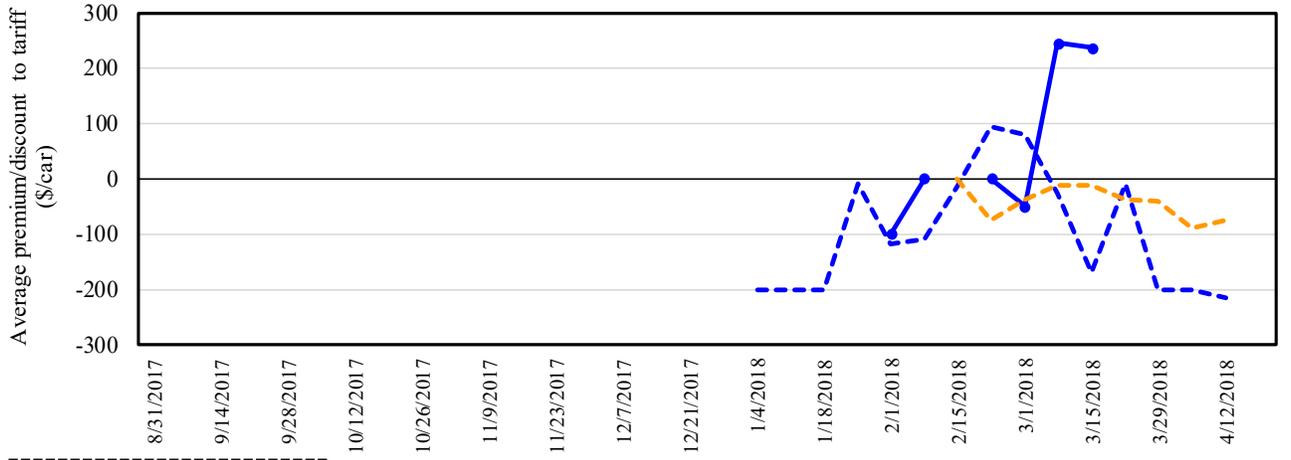
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

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 April 2018, Secondary Market



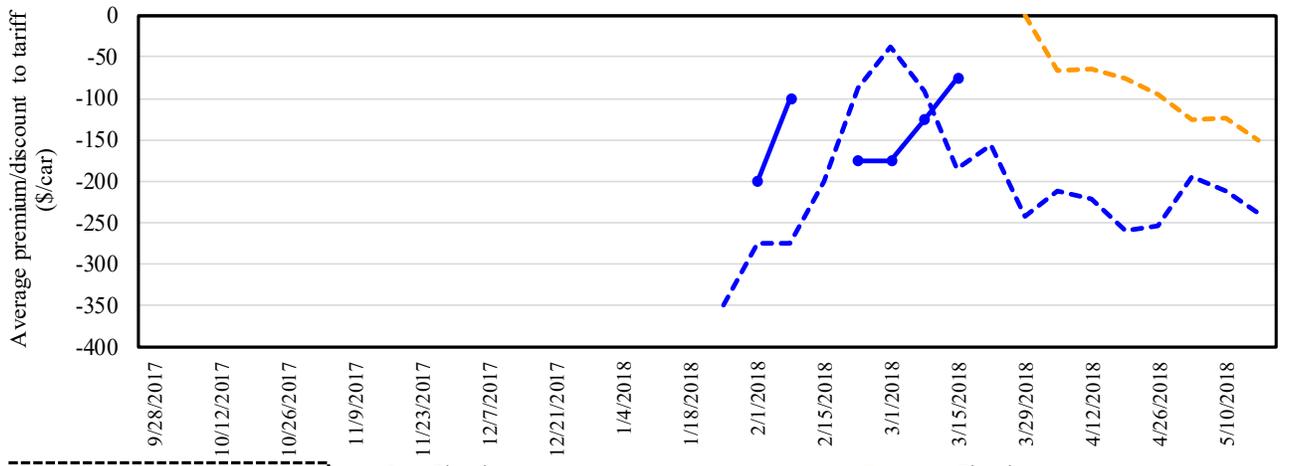
3/15/2018		BNSF	UP
Non-Shuttle	n/a	n/a	n/a
Shuttle	\$300	\$175	

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

There were no Non-Shuttle bids/offers this week.
 Average Shuttle bids/offers fell \$8 this week and are \$8 below the peak.

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 May 2018, Secondary Market



3/15/2018		BNSF	UP
Non-Shuttle	n/a	n/a	n/a
Shuttle	n/a	-\$75	

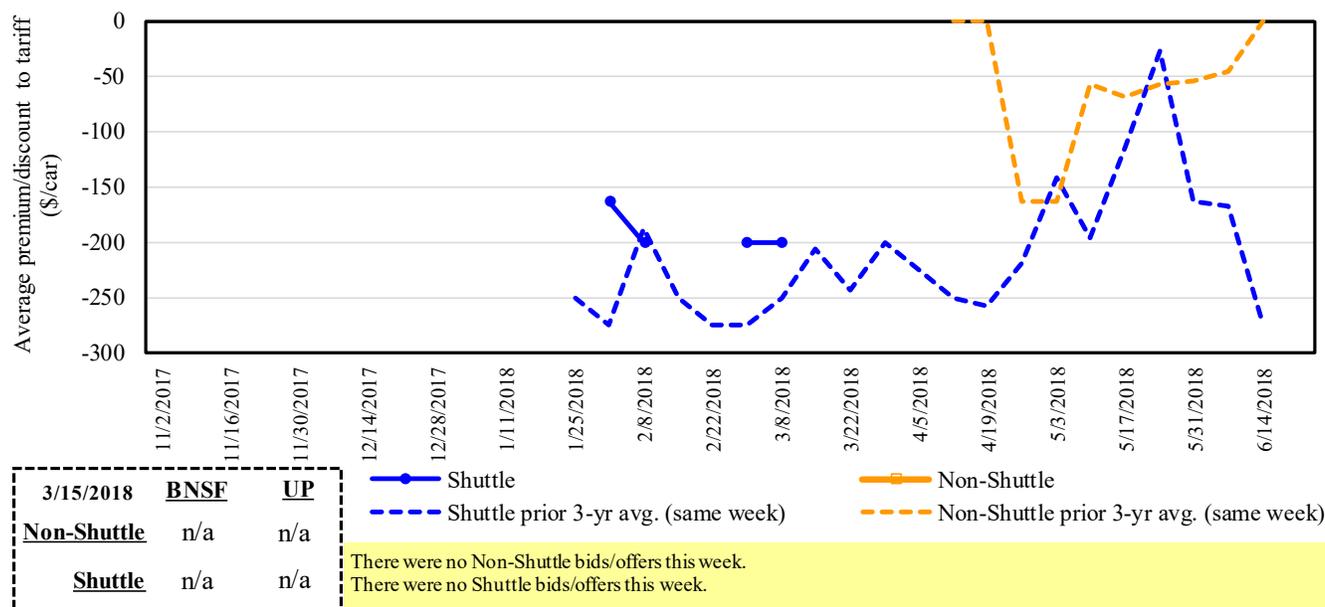
—●— Shuttle
- - - Shuttle prior 3-yr avg. (same week)
—■— Non-Shuttle
- - - Non-Shuttle prior 3-yr avg. (same week)

There were no Non-Shuttle bids/offers this week.
 Average Shuttle bids/offers rose \$50 this week and are at the peak.

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 June 2018, Secondary Market



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: 3/15/2018		Delivery period					
		Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18
Non-shuttle	BNSF-GF	n/a	n/a	n/a	n/a	n/a	n/a
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2017	n/a	n/a	n/a	n/a	n/a	n/a
	UP-Pool	n/a	n/a	n/a	n/a	n/a	n/a
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2017	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	BNSF-GF	300	n/a	n/a	n/a	n/a	n/a
	Change from last week	(250)	n/a	n/a	n/a	n/a	n/a
	Change from same week 2017	394	n/a	n/a	n/a	n/a	n/a
	UP-Pool	175	(75)	n/a	n/a	n/a	n/a
	Change from last week	233	50	n/a	n/a	n/a	n/a
	Change from same week 2017	475	75	n/a	n/a	n/a	n/a

¹Average 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

March, 2018	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	\$96	\$39.51	\$1.08	4	
	Grand Forks, ND	Duluth-Superior, MN	\$4,143	\$0	\$41.14	\$1.12	0	
	Wichita, KS	Los Angeles, CA	\$7,050	\$0	\$70.01	\$1.91	1	
	Wichita, KS	New Orleans, LA	\$4,540	\$169	\$46.76	\$1.27	5	
	Sioux Falls, SD	Galveston-Houston, TX	\$6,786	\$0	\$67.39	\$1.83	1	
	Northwest KS	Galveston-Houston, TX	\$4,816	\$185	\$49.66	\$1.35	5	
	Amarillo, TX	Los Angeles, CA	\$5,021	\$258	\$52.42	\$1.43	5	
Corn	Champaign-Urbana, IL	New Orleans, LA	\$3,931	\$191	\$40.93	\$1.04	9	
	Toledo, OH	Raleigh, NC	\$6,344	\$0	\$63.00	\$1.60	5	
	Des Moines, IA	Davenport, IA	\$2,258	\$40	\$22.82	\$0.58	1	
	Indianapolis, IN	Atlanta, GA	\$5,446	\$0	\$54.08	\$1.37	5	
	Indianapolis, IN	Knoxville, TN	\$4,540	\$0	\$45.08	\$1.15	5	
	Des Moines, IA	Little Rock, AR	\$3,609	\$119	\$37.02	\$0.94	4	
	Des Moines, IA	Los Angeles, CA	\$5,327	\$346	\$56.34	\$1.43	5	
Soybeans	Minneapolis, MN	New Orleans, LA	\$4,131	\$179	\$42.80	\$1.16	16	
	Toledo, OH	Huntsville, AL	\$5,287	\$0	\$52.50	\$1.43	5	
	Indianapolis, IN	Raleigh, NC	\$6,460	\$0	\$64.15	\$1.75	5	
	Indianapolis, IN	Huntsville, AL	\$4,764	\$0	\$47.31	\$1.29	5	
	Champaign-Urbana, IL	New Orleans, LA	\$4,745	\$191	\$49.02	\$1.33	7	
Shuttle Train								
Wheat	Great Falls, MT	Portland, OR	\$3,953	\$0	\$39.26	\$1.07	0	
	Wichita, KS	Galveston-Houston, TX	\$4,171	\$0	\$41.42	\$1.13	2	
	Chicago, IL	Albany, NY	\$5,663	\$0	\$56.24	\$1.53	3	
	Grand Forks, ND	Portland, OR	\$5,611	\$0	\$55.72	\$1.52	0	
	Grand Forks, ND	Galveston-Houston, TX	\$5,931	\$0	\$58.90	\$1.60	0	
	Northwest KS	Portland, OR	\$5,812	\$304	\$60.73	\$1.65	5	
	Minneapolis, MN	Portland, OR	\$5,000	\$0	\$49.65	\$1.26	0	
Corn	Sioux Falls, SD	Tacoma, WA	\$4,960	\$0	\$49.26	\$1.25	0	
	Champaign-Urbana, IL	New Orleans, LA	\$3,731	\$191	\$38.95	\$0.99	10	
	Lincoln, NE	Galveston-Houston, TX	\$3,700	\$0	\$36.74	\$0.93	0	
	Des Moines, IA	Amarillo, TX	\$3,970	\$150	\$40.91	\$1.04	4	
	Minneapolis, MN	Tacoma, WA	\$5,000	\$0	\$49.65	\$1.26	0	
	Council Bluffs, IA	Stockton, CA	\$4,820	\$0	\$47.86	\$1.22	2	
	Soybeans	Sioux Falls, SD	Tacoma, WA	\$5,600	\$0	\$55.61	\$1.51	0
		Minneapolis, MN	Portland, OR	\$5,650	\$0	\$56.11	\$1.53	0
		Fargo, ND	Tacoma, WA	\$5,500	\$0	\$54.62	\$1.49	0
		Council Bluffs, IA	New Orleans, LA	\$4,775	\$220	\$49.61	\$1.35	8
Toledo, OH	Huntsville, AL	\$4,352	\$0	\$43.22	\$1.18	3		
Grand Island, NE	Portland, OR	\$5,710	\$311	\$59.79	\$1.63	7		

¹A unit train refers to shipments of at least 25 cars. Shuttle train rates are generally 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

Table 8

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

Date: March, 2018			Fuel				Percent
Commodity	Origin state	Destination region	Tariff rate/car ¹	surcharge per car ²	Tariff plus surcharge per:		change ⁴ Y/Y
					metric ton ³	bushel ³	
Wheat	MT	Chihuahua, CI	\$7,459	\$0	\$76.21	\$2.07	0
	OK	Cuautitlan, EM	\$6,631	\$132	\$69.10	\$1.88	1
	KS	Guadalajara, JA	\$7,309	\$311	\$77.85	\$2.12	2
	TX	Salinas Victoria, NL	\$4,292	\$80	\$44.67	\$1.21	2
Corn	IA	Guadalajara, JA	\$8,313	\$284	\$87.85	\$2.23	2
	SD	Celaya, GJ	\$7,700	\$0	\$78.68	\$2.00	2
	NE	Queretaro, QA	\$8,013	\$271	\$84.64	\$2.15	3
	SD	Salinas Victoria, NL	\$6,743	\$0	\$68.90	\$1.75	2
	MO	Tlalnepantla, EM	\$7,379	\$264	\$78.09	\$1.98	3
	SD	Torreon, CU	\$7,300	\$0	\$74.59	\$1.89	2
Soybeans	MO	Bojay (Tula), HG	\$8,134	\$265	\$85.81	\$2.33	-5
	NE	Guadalajara, JA	\$8,692	\$290	\$91.76	\$2.49	-2
	IA	El Castillo, JA	\$8,960	\$0	\$91.55	\$2.49	0
	KS	Torreon, CU	\$7,489	\$214	\$78.70	\$2.14	1
Sorghum	NE	Celaya, GJ	\$7,345	\$264	\$77.74	\$1.97	3
	KS	Queretaro, QA	\$7,819	\$165	\$81.58	\$2.07	4
	NE	Salinas Victoria, NL	\$6,452	\$133	\$67.28	\$1.71	5
	NE	Torreon, CU	\$6,790	\$207	\$71.48	\$1.81	4

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.

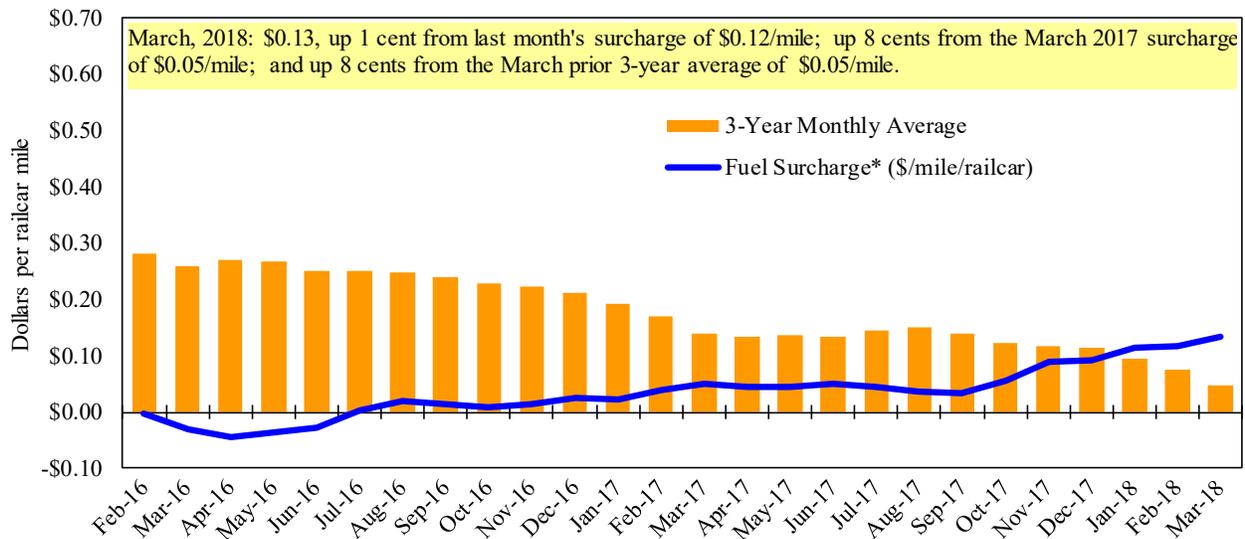
²Fuel surcharge adjusted to reflect the change in Ferrocarril Mexicano, S.A. de C.V. railroad fuel surcharge policy as of 10/01/2009

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.

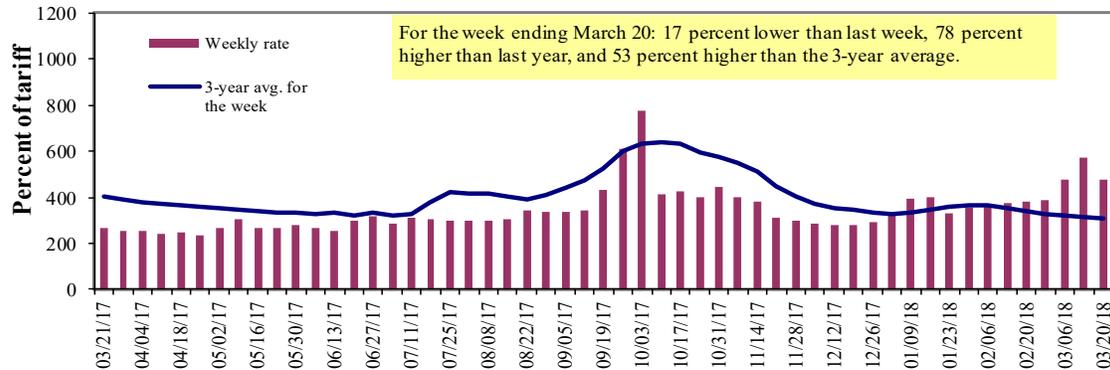
**CSX strike price changed from \$2.00/gal. to \$3.75/gal. starting January 1, 2015.

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
Rate ¹	3/20/2018	-	463	475	350	438	438	333
	3/13/2018	-	583	570	458	488	488	395
\$/ton	3/20/2018	-	24.63	22.04	13.97	20.54	17.70	10.46
	3/13/2018	-	31.02	26.45	18.27	22.89	19.72	12.40
Current week % change from the same week:								
	Last year	-	64	78	65	80	80	90
	3-year avg. ²	-	41	53	54	81	82	74
Rate ¹	April	495	423	425	308	388	388	288
	June	438	375	375	288	333	333	243

¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average; ton = 2,000 pounds; "-" = closed

Source: Transportation & Marketing Programs/AMS/USDA

Figure 9 Benchmark tariff rates

Calculating barge rate per ton:
(Rate * 1976 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.

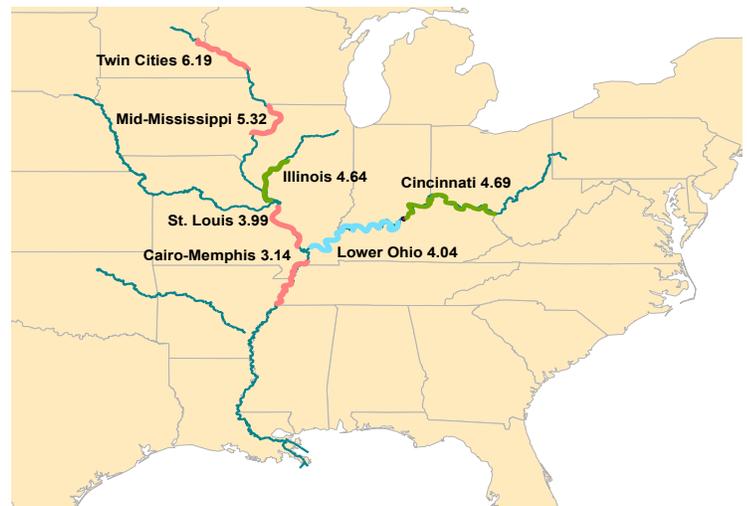
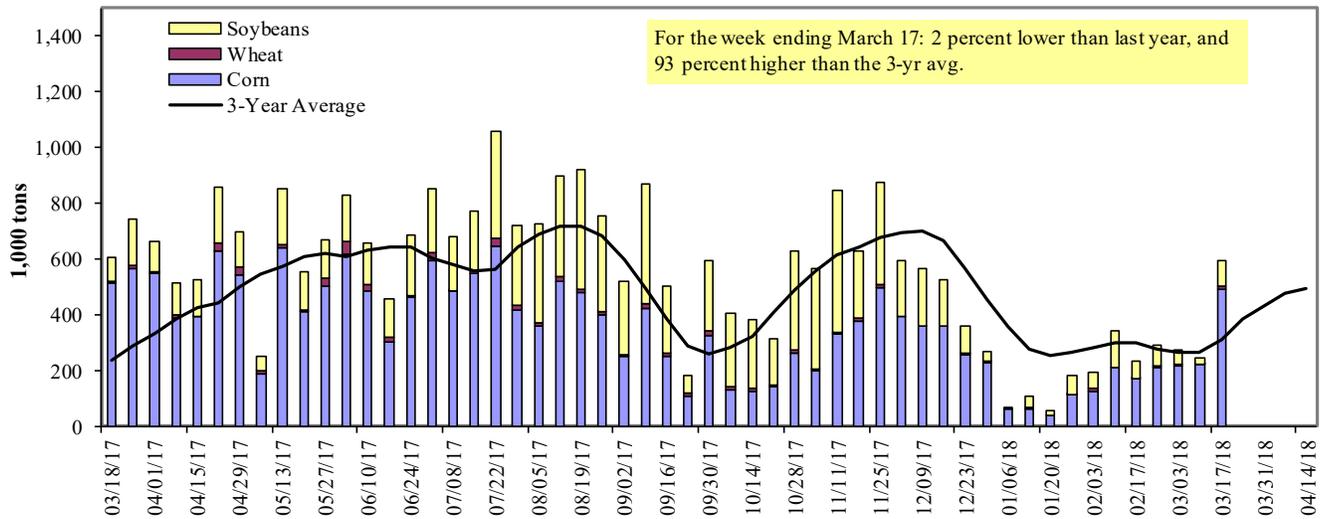


Figure 10

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 03/17/2018	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	47	0	5	0	51
Winfield, MO (L25)	220	0	41	0	261
Alton, IL (L26)	507	6	89	0	601
Granite City, IL (L27)	493	10	92	0	594
Illinois River (L8)	251	8	41	0	300
Ohio River (L52)	116	7	78	7	209
Arkansas River (L1)	10	15	11	0	36
Weekly total - 2018	618	32	181	7	839
Weekly total - 2017	628	39	205	5	877
2018 YTD ¹	2,865	283	2,345	35	5,527
2017 YTD	4,458	410	3,050	128	8,048
2018 as % of 2017 YTD	64	69	77	27	69
Last 4 weeks as % of 2017 ²	68	60	60	58	65
Total 2017	22,242	2,210	16,123	360	40,936

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.

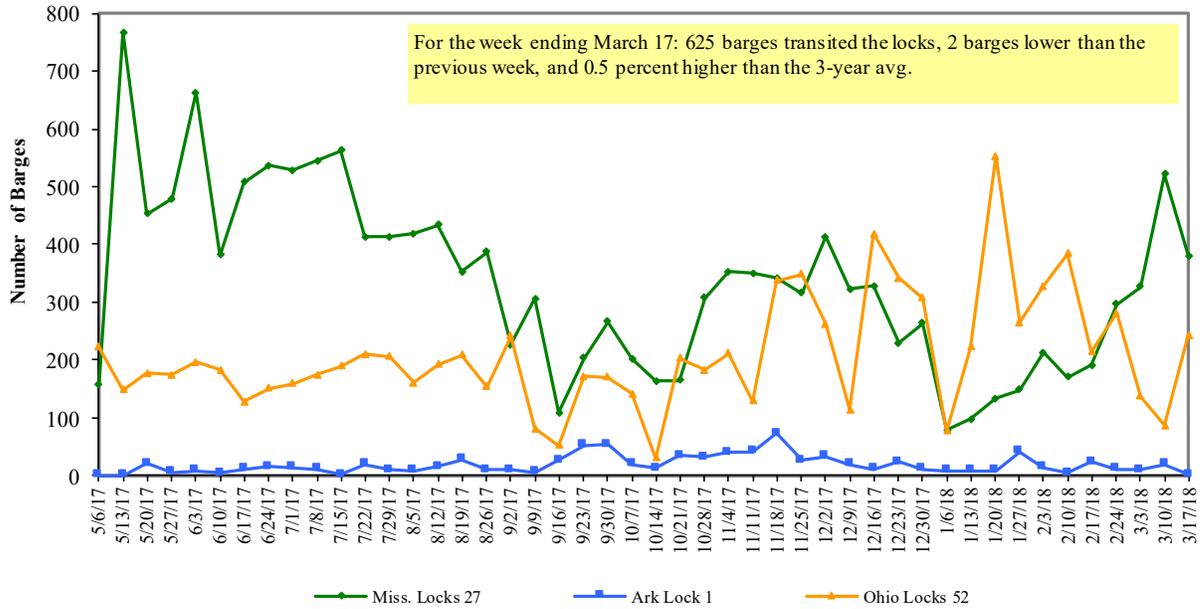
² As a percent of same period in 2017.

Note: Total may not add exactly, due to rounding.

Source: U.S. Army Corps of Engineers

Figure 11

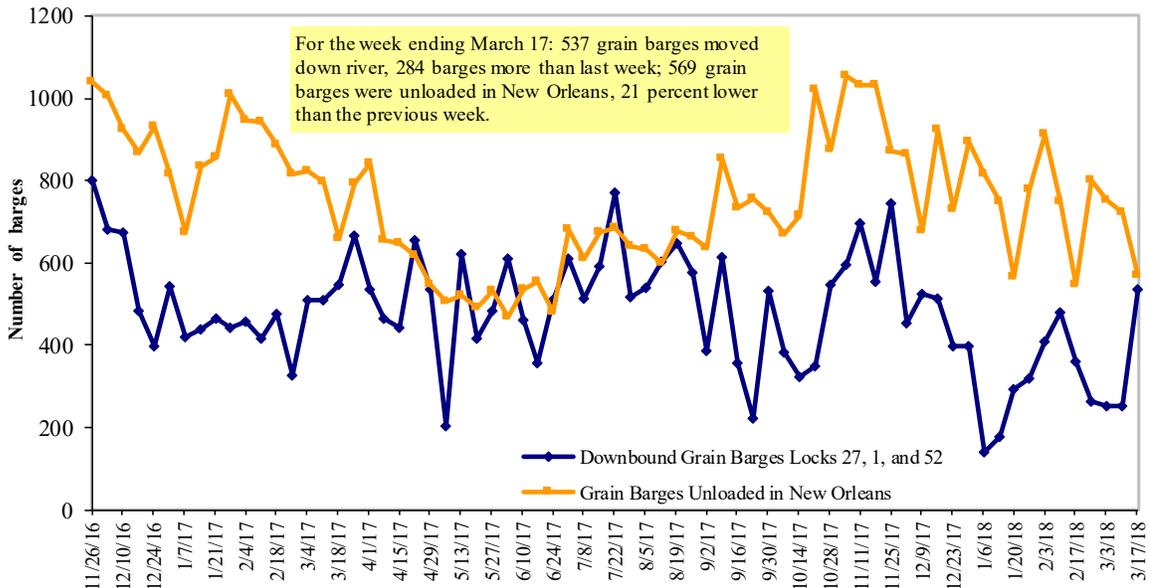
Upbound Empty Barges Transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Locks and Dam 52



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 Prices, Week Ending 3/19/2018 (US \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	3.009	-0.015	0.409
	New England	3.101	-0.006	0.479
	Central Atlantic	3.200	-0.021	0.462
	Lower Atlantic	2.858	-0.013	0.360
II	Midwest ²	2.898	-0.001	0.434
III	Gulf Coast ³	2.786	0.004	0.406
IV	Rocky Mountain	2.925	0.635	0.335
V	West Coast	3.384	-0.002	0.558
	West Coast less California	3.060	0.008	0.358
	California	3.641	-0.011	0.713
Total	U.S.	2.972	-0.004	0.433

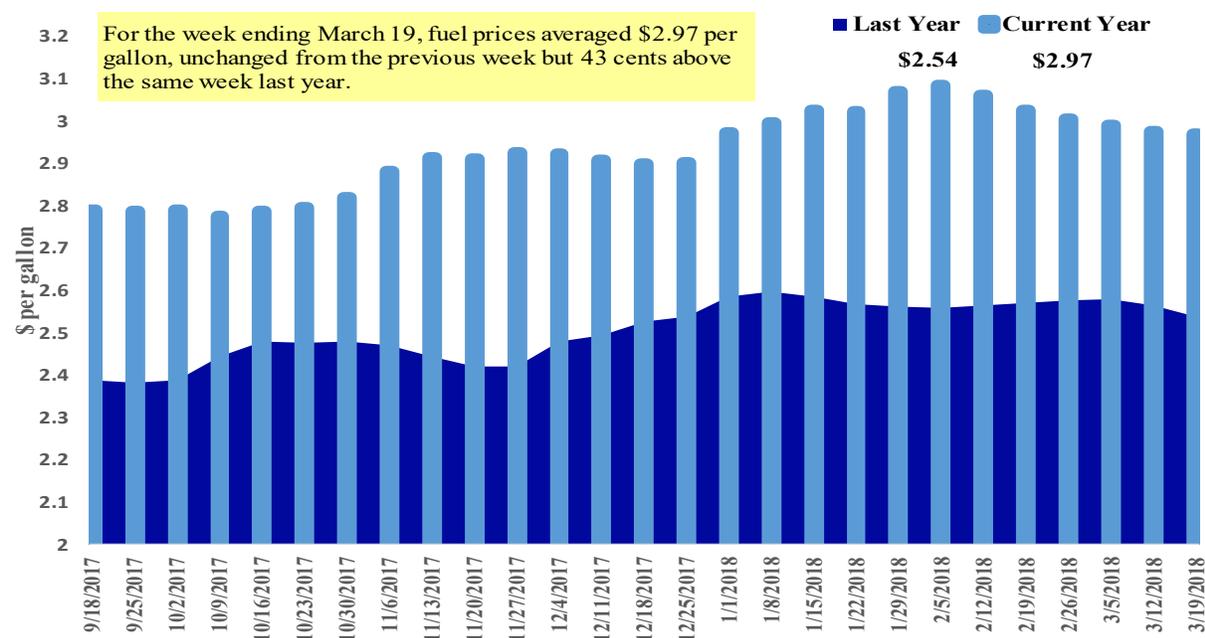
¹Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

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						Corn	Soybeans	Total
	HRW	SRW	HRS	SWW	DUR	All wheat			
Export Balances¹									
3/8/2018	1,358	636	1,423	1,015	95	4,528	23,420	9,608	37,555
This week year ago	2,087	527	2,138	1,383	96	6,230	17,615	8,135	31,980
Cumulative exports-marketing year²									
2017/18 YTD	7,374	1,710	4,356	3,945	276	17,661	20,212	39,667	77,541
2016/17 YTD	8,193	1,722	5,828	3,050	344	19,136	27,745	45,259	92,141
YTD 2017/18 as % of 2016/17	90	99	75	129	80	92	73	88	84
Last 4 wks as % of same period 2016/17	72	125	67	72	95	75	125	106	111
2016/17 Total	11,096	2,285	7,923	4,254	484	26,042	41,864	51,156	119,062
2015/16 Total	5,538	3,057	6,285	3,551	670	19,101	45,564	49,821	114,486

¹ Current unshipped (outstanding) export sales to date

² Shipped export sales to date; new marketing year now in effect for wheat, corn, and soybeans

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 3/8/2018	Total Commitments ²		% change current MY from last MY	Exports ³ 3-year avg 2014-2016
	2017/18	2016/17		
	Current MY	Last MY		
- 1,000 mt -				
Mexico	11,511	11,277	2	12,297
Japan	7,928	8,434	(6)	11,450
Korea	2,574	3,930	(35)	4,494
Colombia	2,998	3,254	(8)	4,179
Peru	2,196	2,150	2	2,693
Top 5 Importers	27,207	29,045	(6)	35,113
Total US corn export sales	43,632	45,360	(4)	49,308
% of Projected	77%	78%		
Change from prior week ²	2,505	1,210		
Top 5 importers' share of U.S. corn export sales	62%	64%		71%
USDA forecast, March 2018	56,616	58,346	(3)	
Corn Use for Ethanol USDA forecast, March 2018	141,605	137,973	3	

¹ Based on FAS Marketing Year Ranking Reports for 2016/17 - www.fas.usda.gov; Marketing year (MY) = Sep 1 - Aug 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 previous week's
outstanding sales or accumulated sales.

³ FAS 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 3/08/2018	Total Commitments ²		% change current MY from last MY	Exports ³ 3-yr avg. 2014-2016
	2017/18 Current MY	2016/17 Last MY		
	- 1,000 mt -			- 1,000 mt -
China	28,202	34,564	(18)	31,881
Mexico	3,558	2,966	20	3,452
Indonesia	1,450	1,496	(3)	1,987
Japan	1,617	1,696	(5)	2,067
Netherlands	925	1,176	(21)	2,098
Top 5 importers	35,752	41,897	(15)	41,486
Total US soybean export sales	49,275	53,394	(8)	52,919
% of Projected	88%	90%		
Change from prior week ²	1,270	472		
Top 5 importers' share of U.S. soybean export sales	73%	78%		78%
USDA forecast, March 2018	56,267	59,237	95	

(n) indicates negative number.

¹Based on FAS Marketing Year Ranking Reports for 2016/17 - 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/esquery/. Total commitments change (net sales) from prior week could include revisions from previous week's outstanding sales and/or accumulated sales³FAS 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 3/08/2018	Total Commitments ²		% change current MY from last MY	Exports ³ 3-yr avg 2014-2016
	2017/18 Current MY	2016/17 Last MY		
	- 1,000 mt -			- 1,000 mt -
Japan	2,631	2,374	11	2,620
Mexico	2,780	2,864	(3)	2,743
Philippines	2,461	2,362	4	2,395
Brazil	111	1,156	(90)	862
Nigeria	1,061	1,286	(18)	1,254
Korea	1,401	1,184	18	1,104
China	926	1,167	(21)	1,623
Taiwan	1,010	891	13	768
Indonesia	1,164	935	25	726
Colombia	606	749	(19)	635
Top 10 importers	14,152	14,967	(5)	14,729
Total US wheat export sales	22,190	25,366	(13)	22,804
% of Projected	88%	88%		
Change from prior week ²	163	264		
Top 10 importers' share of U.S. wheat export sales	64%	59%		65%
USDA forecast, March 2018	25,204	28,747	(12)	

(n) indicates negative number.

¹Based on FAS Marketing Year Ranking Reports for 2016/17 - www.fas.usda.gov; Marketing year = Jun 1 - May 31.²Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query--
http://www.fas.usda.gov/esquery/. Total commitments change (net sales) from prior week could include revisions from the previous week's outstanding and/or accumulated sales³FAS 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 03/15/18	Previous Week*	Current Week as % of Previous	2018 YTD*	2017 YTD*	2018 YTD as % of 2017 YTD	Last 4-weeks as % of:		2017 Total*
							Last Year	Prior 3-yr. avg.	
Pacific Northwest									
Wheat	259	241	107	2,315	2,701	86	65	69	14,805
Corn	438	555	79	3,268	2,865	114	112	154	10,928
Soybeans	144	374	39	3,236	3,003	108	120	109	13,246
Total	841	1,170	72	8,819	8,569	103	98	110	38,978
Mississippi Gulf									
Wheat	110	52	212	914	992	92	81	97	4,198
Corn	867	661	131	5,867	8,199	72	79	103	28,690
Soybeans	239	452	53	6,916	8,021	86	92	95	32,911
Total	1,216	1,165	104	13,697	17,212	80	83	100	65,800
Texas Gulf									
Wheat	79	92	85	1,049	1,279	82	57	86	6,354
Corn	0	0	n/a	98	211	47	59	70	733
Soybeans	0	0	n/a	0	0	n/a	n/a	n/a	292
Total	79	92	85	1,147	1,490	77	58	84	7,379
Interior									
Wheat	18	37	49	355	400	89	91	110	1,727
Corn	80	137	58	1,380	1,485	93	79	91	8,758
Soybeans	112	131	86	1,199	1,150	104	126	140	5,508
Total	210	305	69	2,934	3,035	97	96	110	15,993
Great Lakes									
Wheat	0	0	n/a	19	8	251	0	0	711
Corn	0	0	n/a	0	0	n/a	n/a	n/a	192
Soybeans	0	0	n/a	0	0	n/a	n/a	n/a	890
Total	0	0	n/a	19	8	251	0	0	1,793
Atlantic									
Wheat	0	29	0	29	36	81	n/a	145	46
Corn	0	0	n/a	0	0	n/a	n/a	0	32
Soybeans	21	22	94	488	591	83	149	92	2,001
Total	21	51	41	517	627	82	180	96	2,079
U.S. total from ports*									
Wheat	467	451	103	4,681	5,416	86	68	80	27,841
Corn	1,385	1,353	102	10,612	12,761	83	87	113	49,333
Soybeans	516	979	53	11,839	12,765	93	104	103	54,847
Total	2,367	2,783	85	27,132	30,941	88	88	103	132,021

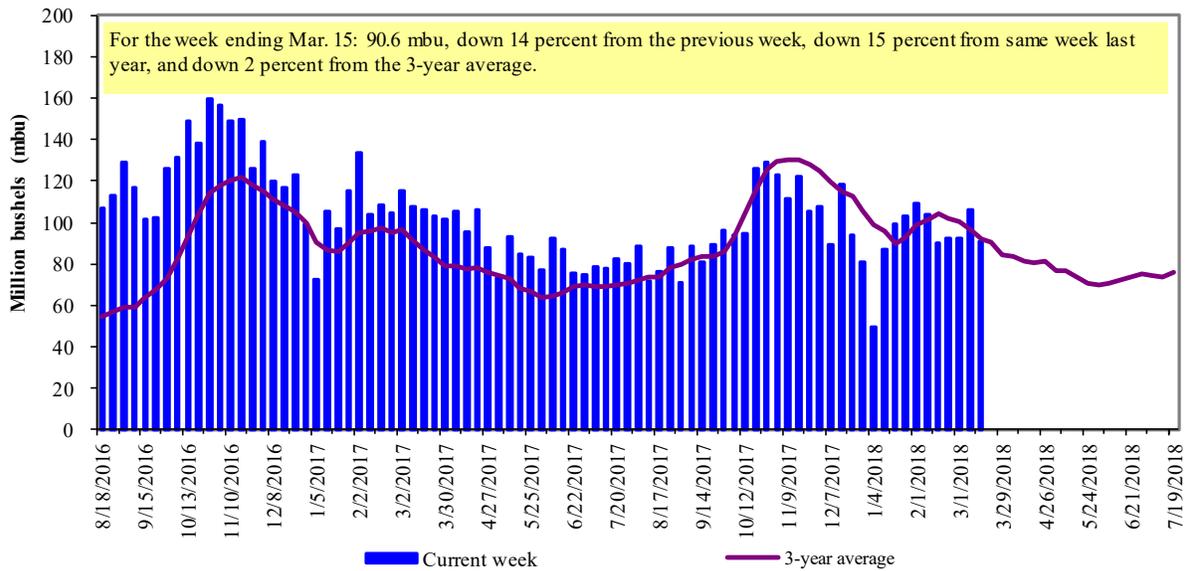
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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

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 55 percent of the U.S. export grain shipments departed through the U.S. Gulf region in 2017.

Figure 14

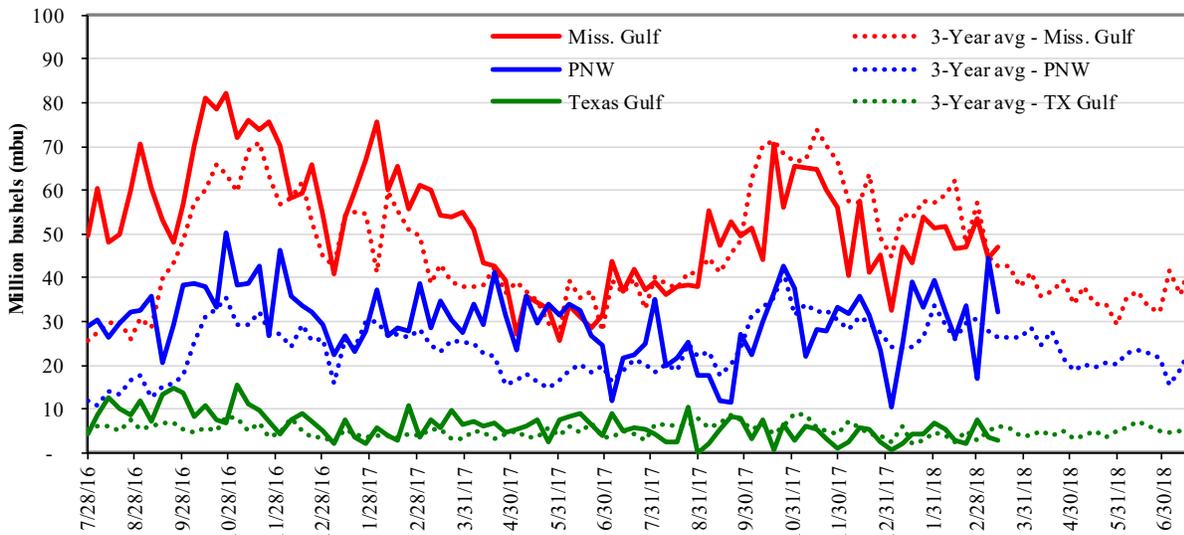
U.S. grain inspected for export (wheat, corn, and soybeans)



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)



Week ending 03/15/18 inspections (mbu):		Percent change from:				
Mississippi Gulf:	47.0	Last Week:	MS Gulf up 5	TX Gulf down 15	U.S. Gulf up 4	PNW down 28
PNW:	32.0	Last Year (same week):	down 14	down 50	down 17	down 8
Texas Gulf:	2.9	3-yr avg. (4-wk. mov. Avg):	down 2	down 39	down 6	up 12

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

Ocean Transportation

Table 17

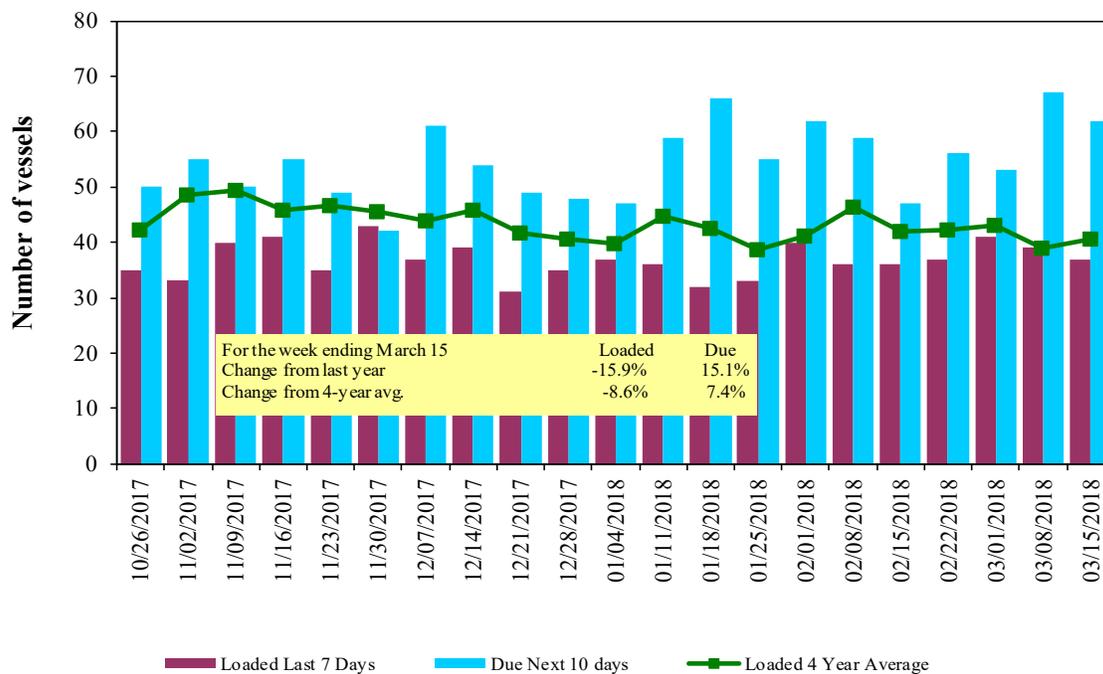
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

Date	Gulf			Pacific Northwest
	In port	Loaded 7-days	Due next 10-days	In port
3/15/2018	53	37	62	24
3/8/2018	54	39	67	27
2017 range	(25..66)	(28..54)	(37..87)	(5..44)
2017 avg.	46	38	56	20

Source: Transportation & Marketing Programs/AMS/USDA

Figure 16

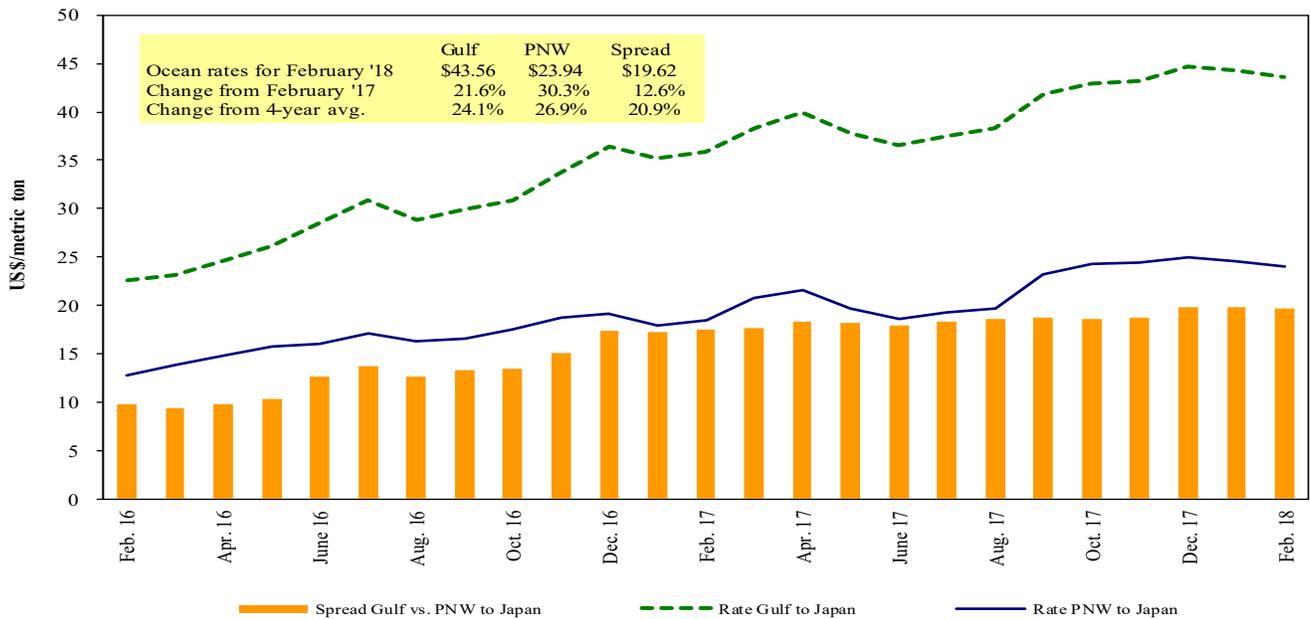
U.S. Gulf Vessel Loading Activity



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 03/17/2018

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	China	Heavy Grain	Jan 1/10	60,000	45.50
U.S. Gulf	Djibouti	Sorghum	Apr 16/26	18,200	69.87*
U.S. Gulf	Somalia	Sorghum	Apr 16/26	40,000	130.77*
PNW	Bangladesh	Wheat	Apr 6/16	43,500	46.61*
Brazil	China	Heavy Grain	Mar 12/21	66,000	32.00
Brazil	China	Heavy Grain	Mar 1/10	66,000	30.00
EC S. America	China	Heavy Grain	Mar 15/24	60,000	33.50
France	Morocco	Heavy Grain	Jan 6/12	30,000	15.00
Portugal	China	Heavy Grain	Feb 10	65,000	38.00

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

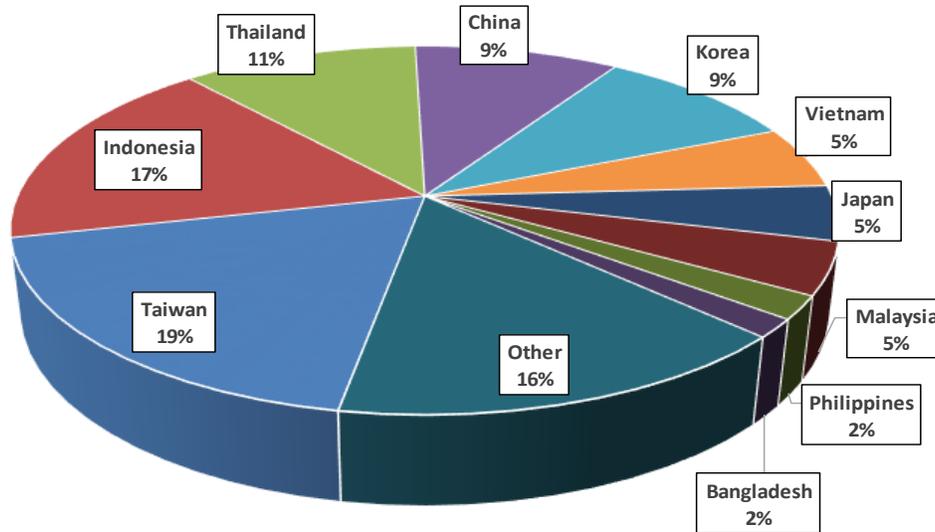
* 50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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

In 2017, containers were used to transport 7 percent of total U.S. waterborne grain exports. Approximately 62 percent of U.S. waterborne grain exports in 2017 went to Asia, of which 10 percent were moved in containers. Approximately 93 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 2017

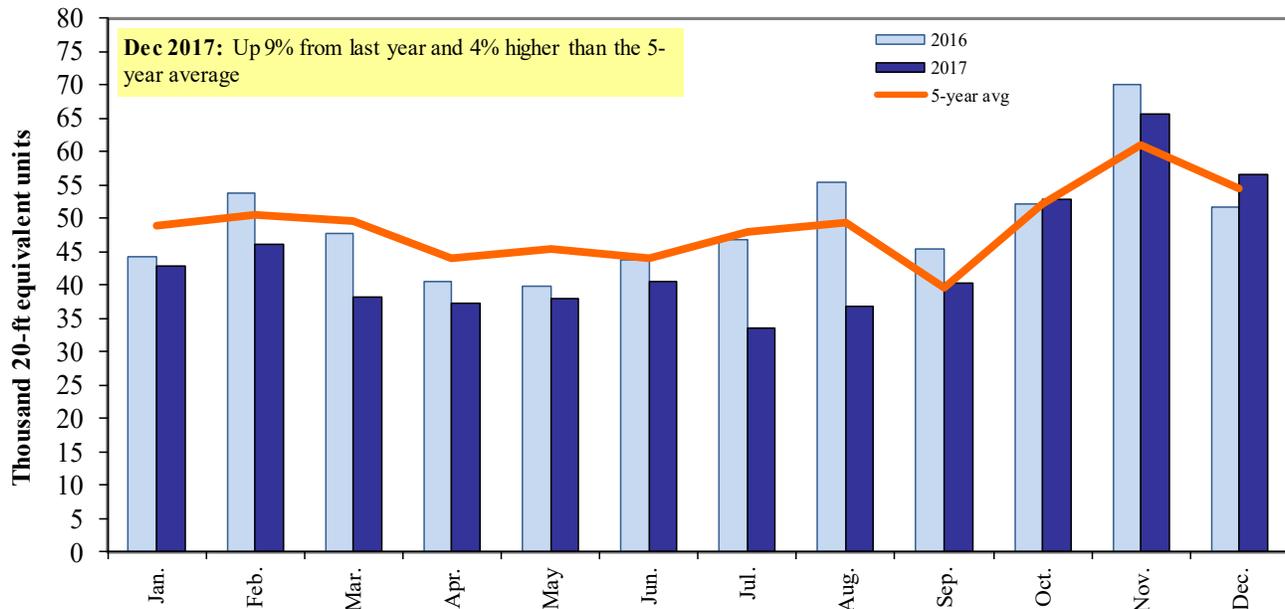


Source: USDA/Agricultural Marketing Service/Transportation Services Division analysis of Port Import Export Reporting Service (PIERS) data

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, 110220, 110290, 120100, 120810, 230210, 230310, 230330, and 230990.

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