United States Department of Agriculture

Grain Transportation Report

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

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February 14, 2019

Contents

The next release is February 21, 2019

WEEKLY HIGHLIGHTS

USDA to Release Complete Set of Tables for Agricultural Projections to 2028

On February 14, USDA will release the complete set of tables prepared for the upcoming USDA Agricultural Projections to 2028 report. The new tables will include projections for farm income, U.S. fruits, nuts, vegetables supply and use, and global commodity trade. On November 2, 2018, tables containing long-term supply, use, and price projections to 2028, for major U.S. crops and livestock products as well as supporting U.S. and international macroeconomic assumptions, were released. USDA's long-term agricultural projections are developed through a consensus of departmental agencies and provide a long-term representative scenario of the agricultural sector, over the next decade. The projections can be useful to agricultural shippers in anticipating future transportation demand patterns for agricultural products. The tables will be in MS Excel format and posted to the USDA Office of the Chief Economist's website.

Grain Inspections Down but Wheat Inspections Rebound

For the week ending February 7, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions reached 2.44 million metric tons (mmt), which is down 2 percent from the previous week, down 12 percent from last year, and 8 percent below the 3-year average. Although corn and soybean inspections dropped 17 and 3 percent, respectively from week-to-week, inspections of wheat increased 27 percent. Wheat inspections increased primarily due to increased shipments to Asia, the highest since late December of last year. Inspections of grain in the Mississippi Gulf decreased 8 percent from the previous week, but Pacific Northwest (PNW) inspections increased 9 percent for the same period.

2019 Grain Barge Shipments Lower Than Usual

Since the beginning of 2019, down-bound grain barge shipments on the Mississippi, Ohio, and Arkansas Rivers have been hampered by severe cold weather and difficult navigation conditions. For the week ending February 9, total year-to-date (YTD) grain barge shipments were 2.7 million tons, 7 percent less than the same time last year and 27 percent less than the 3-year-average. Corn shipments YTD were 1.2 million tons, which is 2 percent higher than last year but 28 percent less than the 3-year average. Soybean shipments YTD were 1.3 million tons, 19 percent less than last year and 32 percent less than the 3-year average. The total number of empty up-bound barges that traveled through Mississippi Locks 27, Arkansas Lock 1, and Ohio Olmsted Locks YTD was 3,410, 17 percent lower than last year and 23 percent lower than 3-year average. The total number of grain barges unloaded in the New Orleans Port Region YTD was 4,392, 4 percent lower than last year and 6 percent less than the 3-year average.

Snapshots by Sector

Rail

U.S. Class I railroads originated 21,508 **grain carloads** for the week ending February 2, unchanged from the previous week, down 13 percent from last year, and down 12 percent from the 3-year average.

Average February shuttle **secondary railcar** bids/offers per car were $467 above tariff for the week ending February 7, up $237 from last week, and up $67 from last year. Average non-shuttle secondary railcar bids/offers per car were $69 above tariff, up $119 from last week. There were no non-shuttle bids/offers this week last year.

Barge

For the week ending February 9, **barge grain movements** totaled 410,462 tons, 16 percent higher than the previous week and down 46 percent from the same period last year.

For the week ending February 9, 253 grain barges **moved down river**, 33 barges more than the previous week. There were 617 grain barges **unloaded in New Orleans**, 29 percent lower than the previous week.

Ocean

For the week ending February 7, 26 **ocean-going grain vessels** were loaded in the Gulf, 28 percent less than the same period last year. Sixty-nine vessels are expected to be loaded within the next 10 days, 17 percent more than the same period last year.

For the week ending February 7, the ocean freight rate for shipping bulk grain, from the Gulf to Japan, was $38.00 per metric ton, 3 percent less than the previous week. The cost of shipping, from the PNW to Japan, was $21.50 per metric ton, 2 percent less than the previous week.

Fuel

For the week ending February 11, the **U.S. average diesel fuel price** was unchanged from the previous week at $2.966 per gallon, 9.7 cents below the same week last year.

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Feature Article/Calendar

Fourth Quarter Ocean Freight Rates Up in 2018, Pushing Rates the Highest Since 2014

Ocean freight rates for shipping bulk commodities, including grains, increased from 2017 to 2018, which is the highest since 2014. In 2018, average ocean freight rates for shipping bulk grain from the U.S. Gulf and Pacific Northwest (PNW) to Japan were $45.39 and $25.07 per metric ton (mt), which respectively is 15 and 19 percent higher than the previous year. The cost of shipping grain from the U.S. Gulf to Europe was $19.85 per mt, 28 percent more than the previous year. However, the rates were still lower than the historic highs recorded in 2008, as there was still an excess supply of vessels in the market.

A General Look at 2018 Ocean Rates:
Following is a brief summary of the year by quarter.

First Quarter - Ocean freight rates for shipping bulk commodities, including grains, were mixed during the first quarter of 2018. The rates for shipping bulk grains from the U.S. Gulf to Japan averaged $44.27 per metric ton (mt) during the quarter, which is 2 percent higher than the previous quarter, 21 percent higher than the same period a year earlier, and 22 percent higher than the 4-year average. The cost of shipping from the Pacific Northwest (PNW) to Japan averaged $24.25 per mt, which is 1 percent less than the previous quarter, 27 percent more than the same period a year ago, and 24 percent more than the 4-year average. It cost $16.82 per mt to ship grain from the U.S. Gulf to Europe during the quarter—4 percent below the previous quarter, but 14 percent above the same period a year earlier, and 5 percent above the 4-year average. The year began with slightly declining ocean freight rates caused by a temporary lull in economic activity due to various holidays. In addition to the cuts in steel production in China, unfavorable weather conditions, including heavy snow and winds, slowed construction activity. Low steel production dampened the demand for iron ore imports. The rates continued to fall during February, as industrial activity slowed down in China, amid the Chinese New Year celebrations. High coal prices also affected the demand from countries that were not facing peak demand season. The rates bounced back in March, as shipments of grain, other minor bulks, and concentrates increased (April 19, 2018 *Grain Transportation Report* (*GTR*)).

Second Quarter – Regarding bulk grains, changes in second quarter ocean freight rates from the previous quarter were mixed, however, were above the same period last year and the 4-year average. The rates for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan averaged $43.68 during the quarter, which is 1 percent below the previous quarter but 15 and 23 percent above last year and the 4-year average, respectively. The rates from the Pacific Northwest (PNW) to Japan averaged $24.37 per mt, which is almost unchanged from the previous quarter, 22 percent more than the same period last year, and 25 percent higher than the 4-year average. It cost $20.67 per mt to ship grain from the U.S. Gulf to Rotterdam, Germany—23, 43 and 34 percent more than the previous quarter, the same period last year, and the 4-year average, respectively. The second quarter began with declining rates for both the U.S. Gulf-to-Japan and PNW-to-Japan routes. The decrease in rates was likely related to restrictions on coal imports in China, which put downward pressure on the rates for Panamax vessels. In addition, the fleet continued to expand, as demolition activity reached its lowest levels in the last two decades. Strikes by iron workers in Canada, and by truck drivers in Brazil, impacted the iron supply in the global market, thereby decreasing the number of Panamax vessels needed to move the smaller supply (July 26, 2018 *GTR*).

Third Quarter - Strong iron ore trade and firm coal demand pushed up ocean freight rates during the third quarter. The ocean freight rates for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan averaged $45.13 during the quarter. The cost of shipping averaged $24.97 per mt from the Pacific Northwest (PNW) to Japan; and $21.06 from the U.S Gulf to Europe. These rates were above the previous quarter, the same period last year, and the 4-year average. Rates started to climb in July due to strengthening iron ore trade in China and firm coal demand in Europe. Further, the Chinese government was pursuing expansionary policies by boosting investment in infrastructure and driving up steel and aluminum production (October 28, 2018 *GTR*). In addition, the hot summer drove up the demand for coal in Europe. The activity in the bulk shipping market was mixed in September. However, the market for the Panamax vessels was buoyant, as the U.S. Gulf-to-Japan and PNW-to-Japan rates increased and the U.S. Gulf-to-Europe rate declined. While there was a lull in coal demand in Europe ahead of restocking, coal trade strengthened in the Pacific-Australia-Far East route. Strong grain trade also supported the long-haul route between the United States and Japan, which pushed up the ocean freight rates for that route. The Baltic Panamax Index

reached 1,689 points at the end of September–the highest level, so far in 2018. This indicates the Panamax vessels normally used to haul grains were in high demand during September, which consequently led to rate increases in some of the major grain routes.

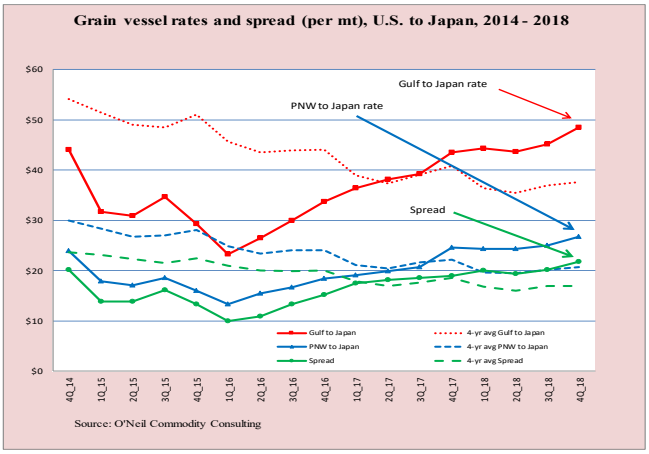
Fourth Quarter – Average ocean freight rates continued to increase during the 4th quarter, with the biggest monthly rate in October, and marginally decreases thereafter (see table and graph below). U.S. Gulf-to-Japan and PNW-to-Japan rates were above the previous quarter, the same period last year, and the 4-year average. The U.S. Gulf-to-Europe rate was also above the same period last year, as well as the 4-year average.

Ocean freight rates for grain routes during the fourth quarter 2018

Route	Oct.	Nov.	Dec.	4th quarter 2018	Change from 3rd qtr '18	Change from 4th qtr '17	Change from 4-yr avg
	--$/mt--			--$/mt--	Percent		
U.S. Gulf to Japan	49.00	48.38	48.00	48.46	7	11	29
PNW to Japan	27.44	26.81	25.83	26.69	7	4	29
Spread	21.56	21.57	22.17	21.77	8	15	29
U.S. Gulf to Europe	21.31	20.44	20.75	20.83	-1	18	28

Source: O'Neil Commodity Consulting

During October, robust steel production in India drove up the importation of iron ore to the country and the demand for Panamax vessels. According to *Drewry Maritime Research,* rising coal trade on log-haul routes and improved minor bulk trades (steel, iron-ore, wood chips, logs and bauxite) as a result of Chinese accommodative fiscal policy also boosted the demand for Panamax, which consequently increased the ocean freight rates. Strong dry bulk trades continued until December.



Current Market Situation and Outlook

Bulk ocean freight rates have been falling since the beginning of this year. The rates from the U.S. Gulf to Japan averaged $43 per mt—10 percent less than December. The rates from the PNW to Japan averaged $23.50 per mt—9 percent less than December. As of January 31, the rate for shipping grain from the U.S. Gulf to Japan was $39 per mt, 17 percent higher than the beginning of the year (January 3). The rate from the PNW to Japan was $22 per mt, 12 percent lower than the beginning of the year. The rates were also lower than last year. However, it is not certain if the rates will remain low or for how long. With the introduction of International Maritime Organization Ballast Water Management System (BWMS) on September 8, 2017, demolitions of older vessels are expected to increase in 2019. BWMS mandates that ships must manage their ballast water to remove aquatic organisms, or render them harmless, before the water is released into a new location. Older vessels are likely to be scrapped or taken out of operation and sent to ship repair yards for retrofitting jobs. This may temporarily reduce the supply of vessels and put upward pressure on the ocean freight rates.

According to *Drewry Maritime Research,* India steel consumption is expected to grow as it starts investing heavily on railway infrastructure. The Indian government has planned to double track all routes for smooth passage of trains and increased timeliness. This may encourage India to import more iron ore and coking coal, which may boost the demand for Panamax vessels and rates. China's increased use of aluminum has led to large imports of bauxite. China imported 22 percent more bauxite during the first 11 months of 2018. If this trend continues, the demand for Panamax vessels will increase as will the rates. Finally, another factor affecting bulk vessel demand is spodumene production for lithium batteries. A rapid increase in renewable sources of energy is creating the demand for lithium used in producing batteries for storing energy. Consequently, an increase in lithium production is creating a demand for spodumene, which is used in producing lithium. An increase in this minor bulk production has boosted the demand for bulk vessels and put upward pressure on the rates. *surajudeen.olowolayemo@ams.usda.gov*

Grain Transportation Indicators

Table 1

Grain Transport Cost Indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Unit Train	Shuttle		Gulf	Pacific
02/13/19	199	285	240	299	170	152
02/06/19	199	278	230	250	174	156

[1]Indicator: 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 Program/AMS/USDA

Table 2

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

Commodity	Origin--Destination	2/8/2019	2/1/2019
Corn	IL--Gulf	-0.79	-0.76
Corn	NE--Gulf	-0.89	-0.85
Soybean	IA--Gulf	-1.18	-1.15
HRW	KS--Gulf	-1.57	-1.57
HRS	ND--Portland	-1.74	-1.75

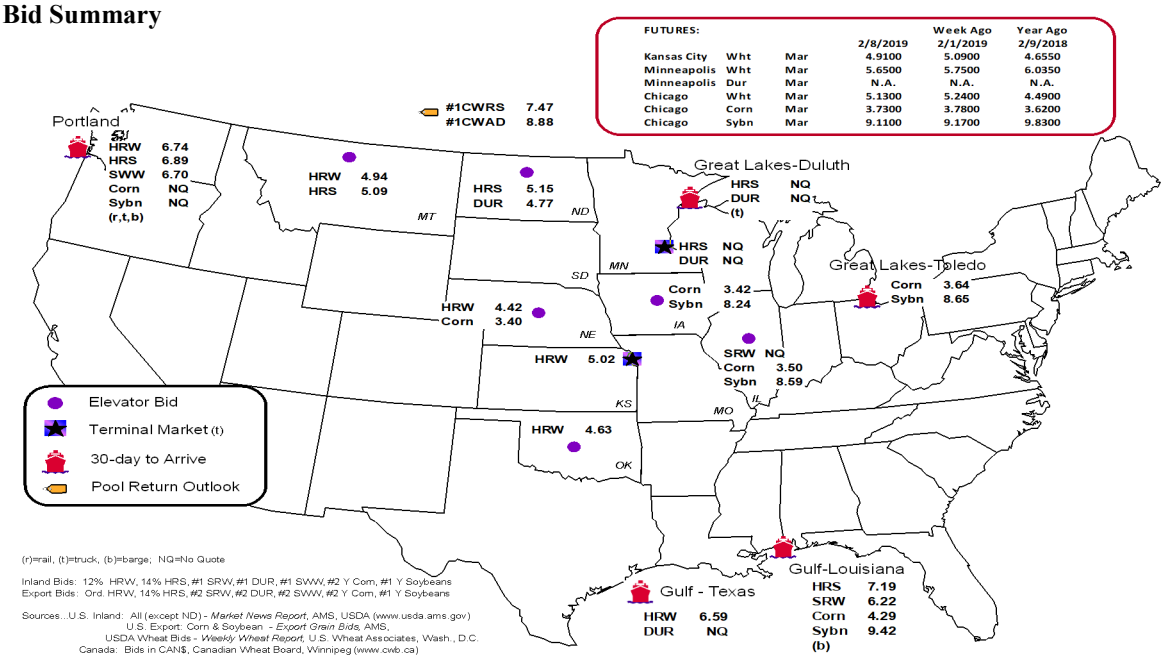
Note: nq = no quote; n/a = not available

Source: Transportation & Marketing Program/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 Gulf	Texas Gulf	Pacific Northwest	Atlantic & East Gulf	Total	Week ending	Cross-Border Mexico[3]
2/06/2019[p]	737	1,434	5,271	385	7,827	2/2/2019	2,744
1/30/2019[r]	636	615	5,247	457	6,955	1/26/2019	2,207
2019 YTD[r]	2,863	5,241	31,685	2,738	42,527	2019 YTD	13,591
2018 YTD[r]	3,454	9,268	36,868	1,488	51,078	2018 YTD	10,609
2019 YTD as % of 2018 YTD	83	57	86	184	83	% change YTD	128
Last 4 weeks as % of 2018[2]	80	52	81	173	78	Last 4wks % 2018	137
Last 4 weeks as % of 4-year avg.[2]	71	59	88	70	80	Last 4wks % 4 yr	137
Total 2018	22,118	46,532	310,449	21,432	400,531	Total 2018	129,116
Total 2017	28,796	75,543	287,267	21,312	412,918	Total 2017	119,661

[1] Data is incomplete as it is voluntarily provided

[2] Compared with same 4-weeks in 2018 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 Grupo Mexico.

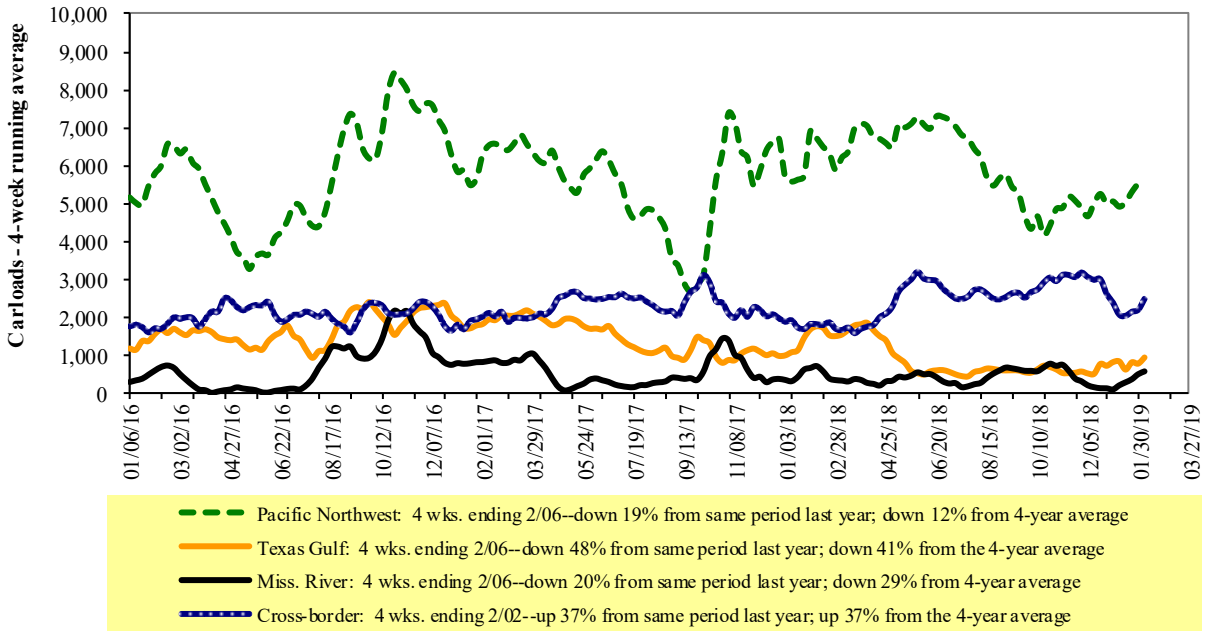
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

Source: Transportation & Marketing Program/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 Program/AMS/USDA

Table 4

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

For the week ending:	East		West			U.S. total	Canada	
2/2/2019	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,818	2,103	11,924	1,021	4,642	21,508	4,145	3,446
This week last year	2,125	2,367	13,814	1,150	5,241	24,697	3,751	4,625
2019 YTD	9,328	13,305	57,366	5,234	25,811	111,044	19,136	20,678
2018 YTD	9,655	12,186	59,250	5,237	25,837	112,165	17,720	21,089
2019 YTD as % of 2018 YTD	97	109	97	100	100	99	108	98
Last 4 weeks as % of 2018*	95	104	95	104	101	98	105	97
Last 4 weeks as % of 3-yr avg.**	92	94	100	104	96	98	106	99
Total 2018	98,978	133,146	635,458	48,638	267,713	1,183,933	212,018	244,697

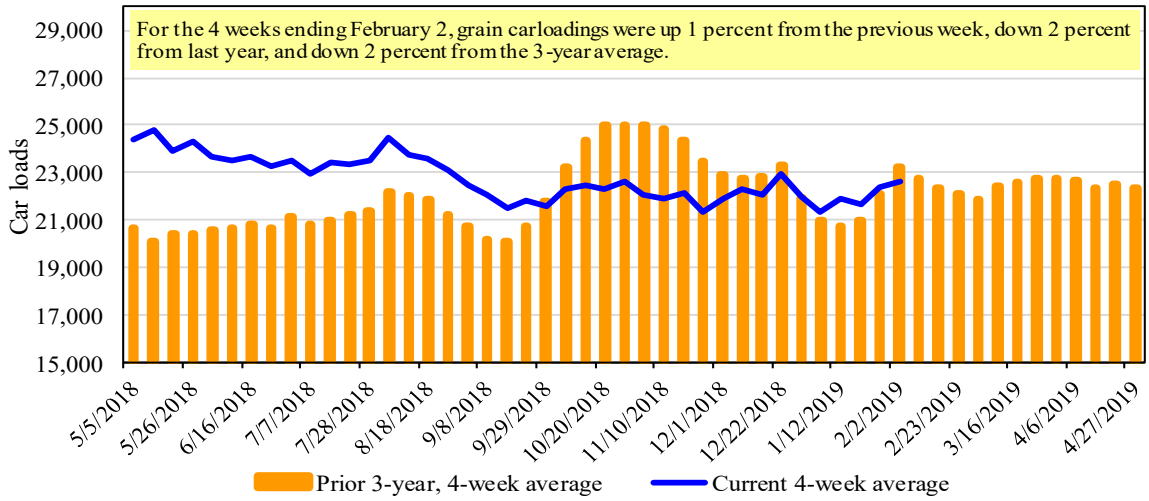
*The past 4 weeks of this year as a percent of the same 4 weeks last year.

**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 Offerings[1] ($/car)[2]

For the week ending:		Delivery period							
2/7/2019		Feb-19	Feb-18	Mar-19	Mar-18	Apr-19	Apr-18	May-19	May-18
BNSF[3]	COT grain units	no offer	no bids	no bids	no bids	no bids	no bids	no bids	no bids
	COT grain single-car[5]	no offer	0	0	0	0	no bids	0	no bids
UP[4]	GCAS/Region 1	no offer	no offer	10	no bids	no bid	no bids	n/a	n/a
	GCAS/Region 2	no offer	no offer	10	no bids	no bid	no bids	n/a	n/a

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

[2]Average premium/discount to tariff, last auction

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

[4]UP - GCAS = Grain Car Allocation System

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

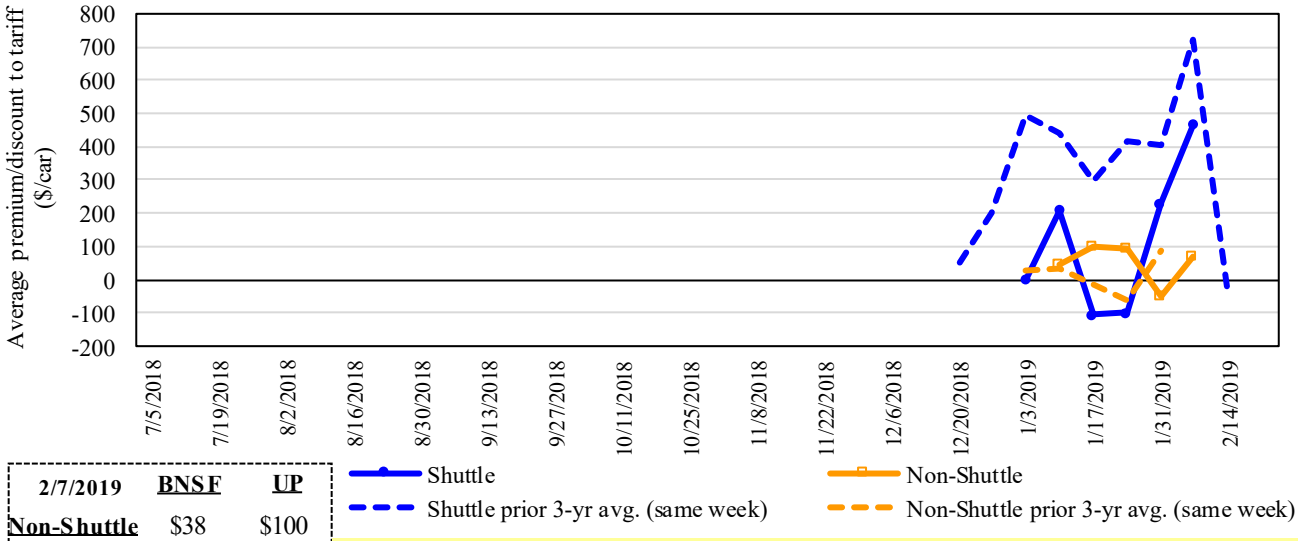
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

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

Source: Transportation & Marketing Program/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 February 2019, Secondary Market

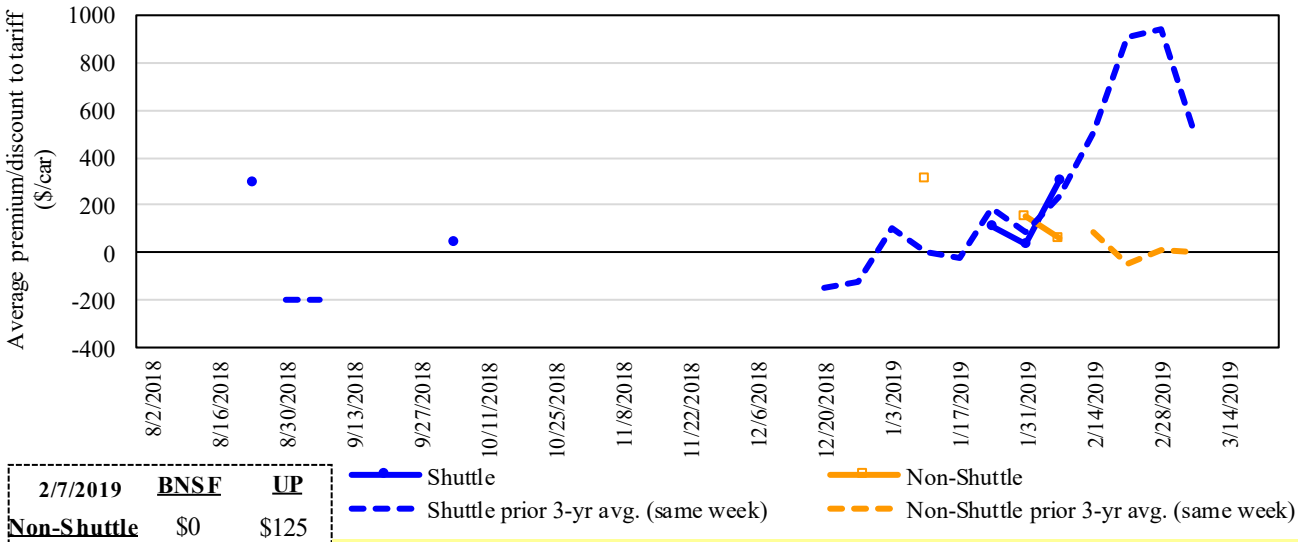


2/7/2019	BNSF	UP
Non-Shuttle	$38	$100
Shuttle	$750	$183

Average Non-shuttle bids/offers rose $119 this week, and are $31 below the peak.
Average Shuttle bids/offers rose $237 this week and are at the peak.

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

Figure 5
Bids/Offers for Railcars to be Delivered in March 2019, Secondary Market



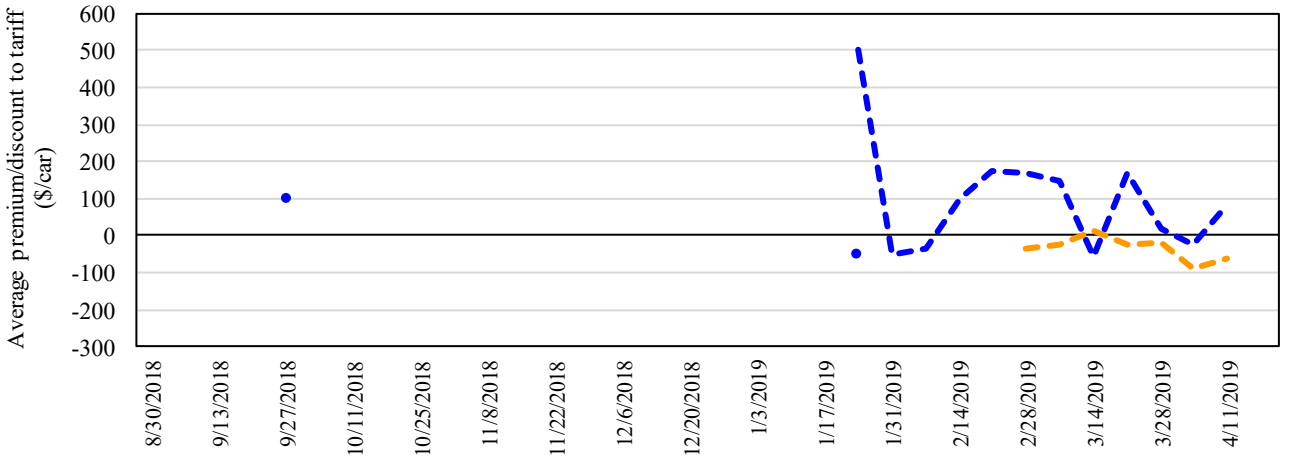
2/7/2019	BNSF	UP
Non-Shuttle	$0	$125
Shuttle	$533	$75

Average Non-shuttle bids/offers fell $88 this week, and are $250 below the peak.
Average Shuttle bids/offers rose $267 this week and are at the peak.

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

Figure 6

Bids/Offers for Railcars to be Delivered in April 2019, Secondary Market



2/7/2019	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	n/a	n/a

There were no Non-Shuttle bids/offers this week.
There were no Shuttle bids/offers this week.

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

Table 6

Weekly Secondary Railcar Market ($/car)[1]

	For the week ending: 2/7/2019	Delivery period					
		Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19
Non-shuttle	**BNSF-GF**	**38**	**0**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	88	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	n/a	n/a	n/a	n/a	n/a	n/a
	UP-Pool	**100**	**125**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	n/a	(25)	n/a	n/a	n/a	n/a
	Change from same week 2018	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**750**	**533**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	322	408	n/a	n/a	n/a	n/a
	Change from same week 2018	250	100	n/a	n/a	n/a	n/a
	UP-Pool	**183**	**75**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	152	125	n/a	n/a	n/a	n/a
	Change from same week 2018	(117)	75	n/a	n/a	n/a	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

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

Source: Transportation and Marketing Program/AMS/USDA

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 Shipments[1]

February, 2019	Origin region[3]	Destination region[3]	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per: metric ton	Tariff plus surcharge per: bushel[2]	Percent change Y/Y[4]
Unit train							
Wheat	Wichita, KS	St. Louis, MO	$3,983	$106	$40.61	$1.11	3
	Grand Forks, ND	Duluth-Superior, MN	$4,268	$0	$42.38	$1.15	3
	Wichita, KS	Los Angeles, CA	$7,175	$0	$71.25	$1.94	2
	Wichita, KS	New Orleans, LA	$4,540	$187	$46.94	$1.28	1
	Sioux Falls, SD	Galveston-Houston, TX	$6,911	$0	$68.63	$1.87	2
	Northwest KS	Galveston-Houston, TX	$4,816	$205	$49.86	$1.36	1
	Amarillo, TX	Los Angeles, CA	$5,121	$285	$53.68	$1.46	3
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$211	$41.82	$1.06	3
	Toledo, OH	Raleigh, NC	$6,581	$0	$65.35	$1.66	4
	Des Moines, IA	Davenport, IA	$2,258	$45	$22.87	$0.58	0
	Indianapolis, IN	Atlanta, GA	$5,646	$0	$56.07	$1.42	4
	Indianapolis, IN	Knoxville, TN	$4,704	$0	$46.71	$1.19	4
	Des Moines, IA	Little Rock, AR	$3,609	$131	$37.14	$0.94	1
	Des Moines, IA	Los Angeles, CA	$5,327	$383	$56.70	$1.44	1
Soybeans	Minneapolis, MN	New Orleans, LA	$4,131	$208	$43.09	$1.17	15
	Toledo, OH	Huntsville, AL	$5,459	$0	$54.21	$1.48	3
	Indianapolis, IN	Raleigh, NC	$6,698	$0	$66.51	$1.81	4
	Indianapolis, IN	Huntsville, AL	$4,937	$0	$49.03	$1.33	4
	Champaign-Urbana, IL	New Orleans, LA	$4,745	$211	$49.22	$1.34	1
Shuttle Train							
Wheat	Great Falls, MT	Portland, OR	$4,078	$0	$40.50	$1.10	3
	Wichita, KS	Galveston-Houston, TX	$4,296	$0	$42.66	$1.16	3
	Chicago, IL	Albany, NY	$5,896	$0	$58.55	$1.59	4
	Grand Forks, ND	Portland, OR	$5,736	$0	$56.96	$1.55	2
	Grand Forks, ND	Galveston-Houston, TX	$6,056	$0	$60.14	$1.64	2
	Northwest KS	Portland, OR	$5,912	$336	$62.04	$1.69	3
Corn	Minneapolis, MN	Portland, OR	$5,180	$0	$51.44	$1.31	4
	Sioux Falls, SD	Tacoma, WA	$5,140	$0	$51.04	$1.30	4
	Champaign-Urbana, IL	New Orleans, LA	$3,800	$211	$39.83	$1.01	3
	Lincoln, NE	Galveston-Houston, TX	$3,880	$0	$38.53	$0.98	5
	Des Moines, IA	Amarillo, TX	$4,060	$165	$41.96	$1.07	3
	Minneapolis, MN	Tacoma, WA	$5,180	$0	$51.44	$1.31	4
	Council Bluffs, IA	Stockton, CA	$5,000	$0	$49.65	$1.26	4
Soybeans	Sioux Falls, SD	Tacoma, WA	$5,750	$0	$57.10	$1.55	3
	Minneapolis, MN	Portland, OR	$5,800	$0	$57.60	$1.57	3
	Fargo, ND	Tacoma, WA	$5,650	$0	$56.11	$1.53	3
	Council Bluffs, IA	New Orleans, LA	$4,775	$244	$49.84	$1.36	1
	Toledo, OH	Huntsville, AL	$4,634	$0	$46.02	$1.25	6
	Grand Island, NE	Portland, OR	$5,710	$344	$60.12	$1.64	1

[1]A 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.

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

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

[4]Percentage 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

Date: February, 2019							
Commodity	Origin state	Destination region	Tariff rate/car[1]	Fuel surcharge per car[2]	Tariff plus surcharge per: metric ton[3]	Tariff plus surcharge per: bushel[3]	Percent change[4] Y/Y
Wheat	MT	Chihuahua, CI	$7,284	$0	$74.43	$2.02	-2
	OK	Cuautitlan, EM	$6,743	$146	$70.39	$1.91	2
	KS	Guadalajara, JA	$7,371	$403	$79.43	$2.16	3
	TX	Salinas Victoria, NL	$4,329	$89	$45.14	$1.23	1
Corn	IA	Guadalajara, JA	$8,528	$362	$90.83	$2.31	4
	SD	Celaya, GJ	$7,880	$0	$80.51	$2.04	2
	NE	Queretaro, QA	$8,207	$304	$86.96	$2.21	3
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	2
	MO	Tlalnepantla, EM	$7,573	$297	$80.41	$2.04	3
	SD	Torreon, CU	$7,480	$0	$76.43	$1.94	2
Soybeans	MO	Bojay (Tula), HG	$8,284	$335	$88.07	$2.39	3
	NE	Guadalajara, JA	$8,842	$363	$94.05	$2.56	3
	IA	El Castillo, JA	$9,110	$0	$93.08	$2.53	2
	KS	Torreon, CU	$7,714	$266	$81.53	$2.22	4
Sorghum	NE	Celaya, GJ	$7,527	$332	$80.30	$2.04	4
	KS	Queretaro, QA	$8,000	$183	$83.61	$2.12	3
	NE	Salinas Victoria, NL	$6,633	$147	$69.27	$1.76	3
	NE	Torreon, CU	$6,962	$253	$73.72	$1.87	3

[1]Rates 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.

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

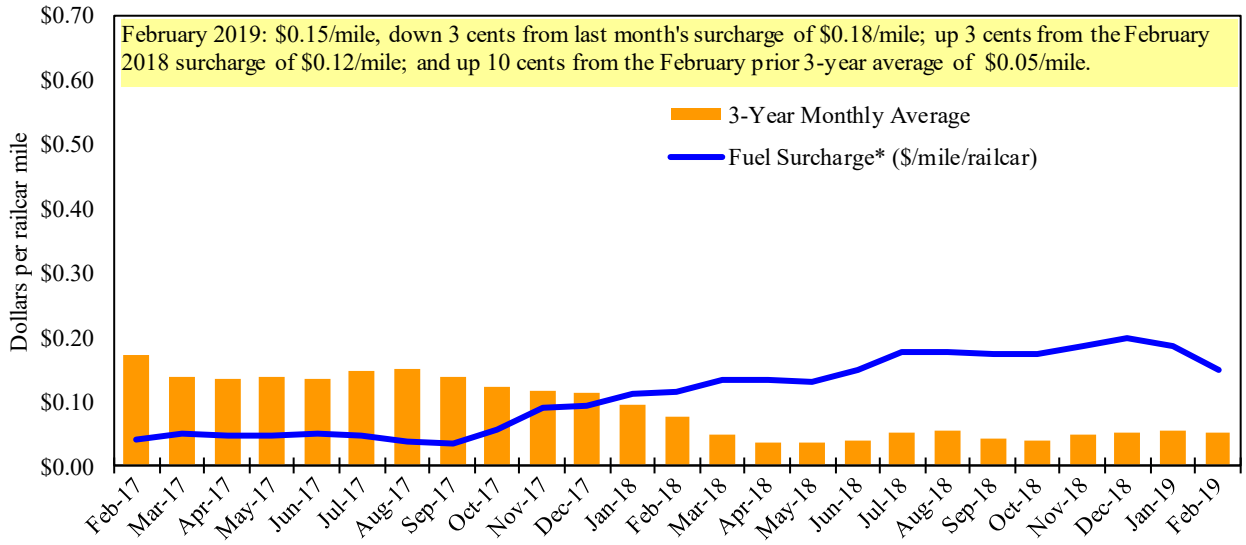
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

[4]Percentage change calculated using tariff rate plus fuel surchage

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

Figure 7

Railroad Fuel Surcharges, North American Weighted Average[1]



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

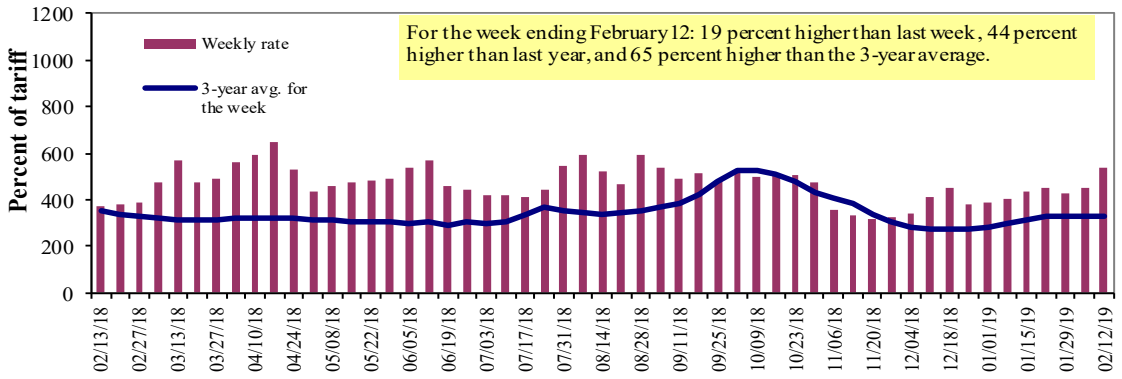
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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]



[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average of the 3-year average.
Source: Transportation & Marketing Program/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]	2/12/2019	-	-	538	438	538	538	400
	2/5/2019	-	-	450	343	383	383	350
$/ton	2/12/2019	-	-	24.96	17.48	25.23	21.74	12.56
	2/5/2019	-	-	20.88	13.69	17.96	15.47	10.99
Current week % change from the same week:								
	Last year	-	-	44	61	78	78	83
	3-year avg. [2]	-	-	65	85	103	102	103
Rate[1]	March	-	525	513	400	450	450	363
	May	463	438	430	338	388	388	313

[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average; ton = 2,000 pounds; "-" n/a due to closure
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.

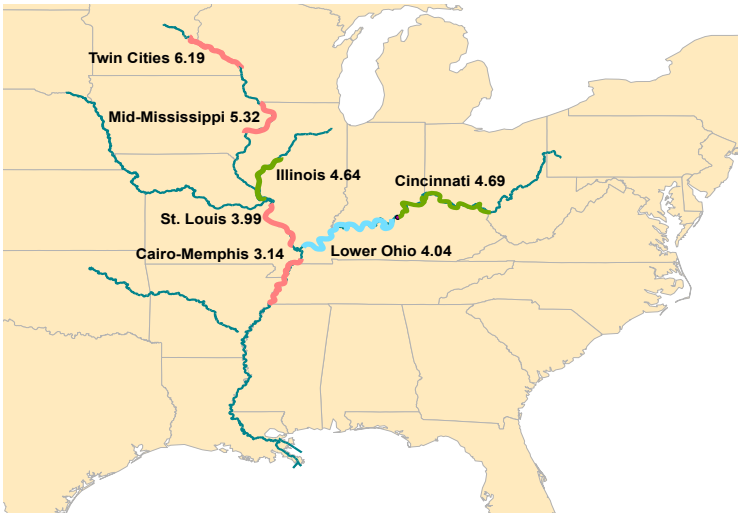
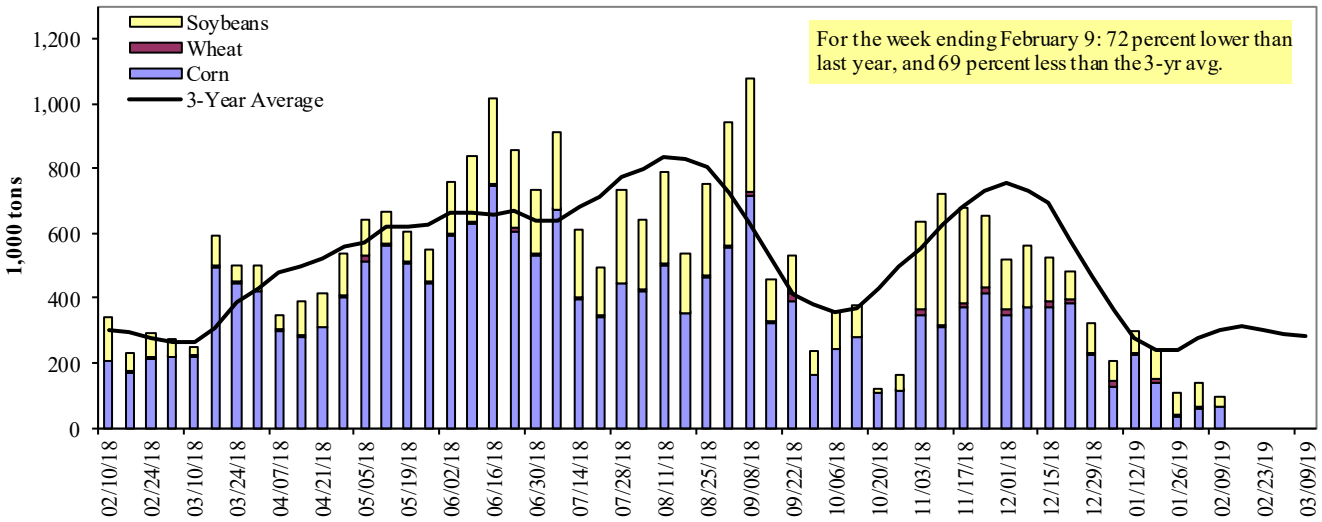


Figure 10

Barge Movements on the Mississippi River[1] (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 02/09/2019	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	0	0	0	0	0
Winfield, MO (L25)	0	0	0	0	0
Alton, IL (L26)	69	0	33	0	101
Granite City, IL (L27)	64	0	31	2	96
Illinois River (L8)	54	0	25	0	79
Ohio River (OLMSTED)	85	29	136	0	250
Arkansas River (L1)	0	18	46	0	65
Weekly total - 2019	148	47	214	2	410
Weekly total - 2018	362	34	358	11	764
2019 YTD[1]	1,195	235	1,299	9	2,738
2018 YTD[1]	1,177	144	1,613	19	2,953
2019 as % of 2018 YTD	102	163	81	45	93
Last 4 weeks as % of 2018[2]	70	142	71	45	74
Total 2018	23,349	1,674	12,819	133	37,975

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

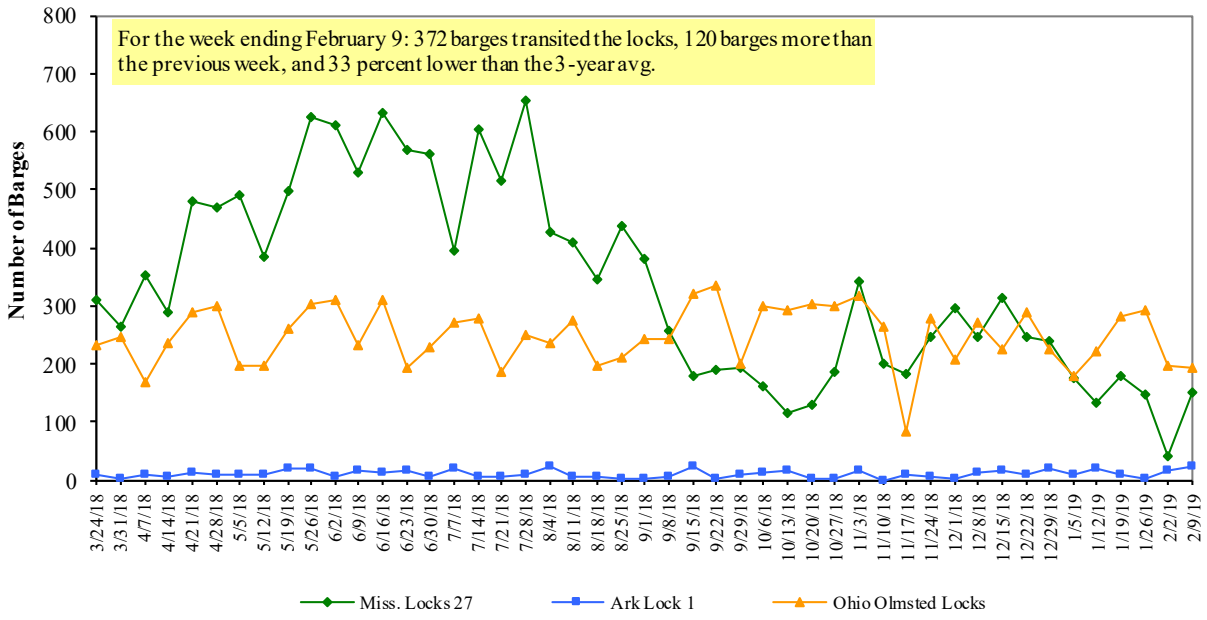
[2] As a percent of same period in 2018.

Note: 1. Total may not add exactly, due to rounding.
2. Starting from 11/24/2018, weekly movement through Ohio 52 is replaced by Olmsted.

Source: U.S. Army Corps of Engineers

Figure 11

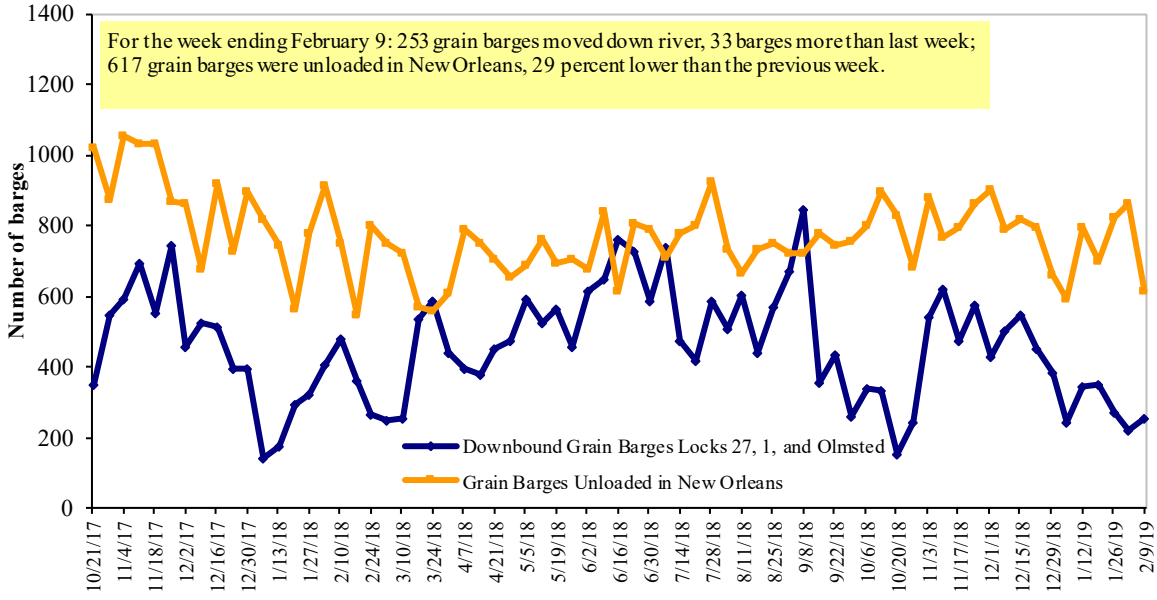
Upbound Empty Barges Transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 2/11/2019 (US $/gallon)

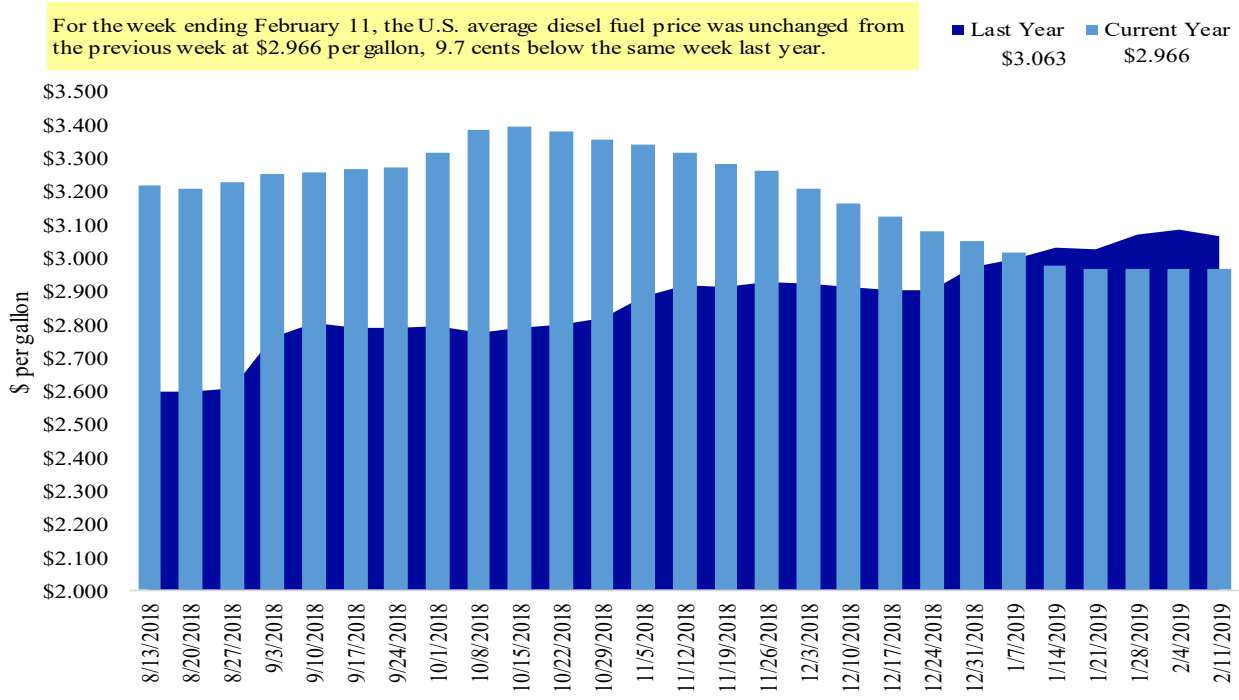
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	3.031	-0.007	-0.080
	New England	3.161	-0.015	0.007
	Central Atlantic	3.225	-0.002	-0.081
	Lower Atlantic	2.872	-0.007	-0.094
II	Midwest	2.849	0.010	-0.171
III	Gulf Coast	2.776	-0.003	-0.075
IV	Rocky Mountain	2.870	-0.013	-0.102
V	West Coast	3.435	0.000	0.003
	West Coast less California	3.084	-0.003	-0.023
	California	3.714	0.003	0.025
Total	U.S.	2.966	0.000	-0.097

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

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)

	Wheat						Corn	Soybeans	Total
For the week ending	HRW	SRW	HRS	SWW	DUR	All wheat			
Export Balances[1]									
1/31/2019*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
This week year ago	1,925	701	1,455	938	57	5,076	19,249	9,508	33,833
Cumulative exports-marketing year[2]									
2018/19 YTD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2017/18 YTD	6,477	1,397	3,956	3,625	272	15,727	14,772	34,754	65,253
YTD 2018/19 as % of 2017/18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Last 4 wks as % of same period 2017/18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2017/18 Total	9,150	2,343	5,689	4,854	384	22,419	57,209	56,214	135,842
2016/17 Total	11,096	2,285	7,923	4,254	484	26,042	41,864	51,156	119,062

[1] Current unshipped (outstanding) export sales to date

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

* Please note tha "N/A" notates that the data for this table is not current for this week due to the federal shutdown in December

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 Importers[1] of U.S. Corn

For the week ending 1/31/2019	Total Commitments[2] 2018/19 Current MY	2017/18 Last MY	% change current MY from last MY	Exports[3] 3-year avg 2015-2017
	- 1,000 mt -			
Mexico	n/a*	10,338	n/a	13,691
Japan	n/a	5,501	n/a	11,247
Korea	n/a	1,954	n/a	4,754
Colombia	n/a	2,485	n/a	4,678
Peru	n/a	1,905	n/a	2,975
Top 5 Importers	n/a	**22,183**	n/a	**37,344**
Total US corn export sales	**n/a**	**34,022**	**n/a**	**53,184**
% of Projected	n/a	65%		
Change from prior week[2]	**n/a**	**1,770**		
Top 5 importers' share of U.S. corn export sales	n/a	65%		70%
USDA forecast, January 2019	**n/a**	**52,163**	**n/a**	
Corn Use for Ethanol USDA forecast, January 2019	**n/a**	**140,335**	**n/a**	

(n) indicates negative number.

[1]Based on FAS Marketing Year Ranking Reports for 2017/18 - 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

*n/a indicates a missing value due to the recent partial federal government shutdown

Table 14

Top 5 Importers[1] of U.S. Soybeans

For the week ending 1/31/2019	Total Commitments[2] 2018/19 Current MY	Total Commitments[2] 2017/18 Last MY	% change current MY from last MY	Exports[3] 3-yr avg. 2015-2017
		- 1,000 mt -		- 1,000 mt -
China	n/a*	26,406	n/a	31,228
Mexico	n/a	2,658	n/a	3,716
Indonesia	n/a	1,197	n/a	2,250
Japan	n/a	1,411	n/a	2,145
Netherlands	n/a	911	n/a	2,209
Top 5 importers	n/a	**32,583**	**n/a**	**41,549**
Total US soybean export sales	**n/a**	**44,263**	**n/a**	**55,113**
% of Projected	n/a	77%		
Change from prior week[2]	**n/a**	**743**		
Top 5 importers' share of U.S. soybean export sales	n/a	74%		**75%**
USDA forecast, January, 2019	**n/a**	**57,221**	**n/a**	

(n) indicates negative number.

[1]Based on FAS Marketing Year Ranking Reports for 2017/18 - 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/. The total commitments change (net sales) from prior week could include reivisions from previous week's outstanding sales and/or accumulated sales

[3] FAS Marketing Year Final Reports - www.fas.usda.gov/export-sales/myfi_rpt.htm. (Carryover plus Accumulated Exports)

*n/a indicates a missing value due to the recent partial federal government shutdown

Table 15

Top 10 Importers[1] of All U.S. Wheat

For the week ending 1/31/2019	Total Commitments[2] 2018/19 Current MY	Total Commitments[2] 2017/18 Last MY	% change current MY from last MY	Exports[3] 3-yr avg 2015-2017
		- 1,000 mt -		- 1,000 mt -
Mexico	n/a*	2,602	n/a	2,781
Japan	n/a	2,409	n/a	2,649
Philippines	n/a	2,258	n/a	2,441
Korea	n/a	1,396	n/a	1,257
Nigeria	n/a	1,050	n/a	1,254
Indonesia	n/a	1,080	n/a	1,076
Taiwan	n/a	930	n/a	1,066
China	n/a	857	n/a	944
Colombia	n/a	539	n/a	714
Thailand	n/a	630	n/a	618
Top 10 importers	**n/a**	**13,751**	n/a	**14,800**
Total US wheat export sales	**n/a**	**20,804**	**n/a**	**22,869**
% of Projected	n/a	80%		
Change from prior week[2]	**n/a**	**394**		
Top 10 importers' share of U.S. wheat export sales	n/a	66%		65%
USDA forecast, January 2019	**n/a**	**25,886**	**n/a**	

(n) indicates negative number.

[1] Based on FAS Marketing Year Ranking Reports for 2017/18 - 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 week's outstanding and/or accumulated sales.

[3] FAS Marketing Year Final Reports - www.fas.usda.gov/export-sales/myfi_rpt.htm.

* n/a indicates a missing value due to the recent partial federal government shutdown

Table 16

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

Port Regions	For the Week Ending 02/07/19	Previous Week*	Current Week as % of Previous	2019 YTD*	2018 YTD*	2019 YTD as % of 2018 YTD	Last 4-weeks as % of: Last Year	Last 4-weeks as % of: Prior 3-yr. avg.	2018 Total*
Pacific Northwest									
Wheat	399	161	248	1,349	1,366	99	88	106	13,315
Corn	120	257	47	1,259	1,337	94	84	126	20,024
Soybeans	227	266	85	1,242	2,080	60	64	66	7,719
Total	**746**	**684**	**109**	**3,849**	**4,782**	**80**	**77**	**91**	**41,058**
Mississippi Gulf									
Wheat	66	228	29	610	438	139	201	196	3,896
Corn	480	530	90	2,825	2,549	111	115	103	33,735
Soybeans	747	652	115	3,724	4,483	83	86	85	28,124
Total	**1,293**	**1,410**	**92**	**7,159**	**7,471**	**96**	**102**	**97**	**65,755**
Texas Gulf									
Wheat	111	39	286	443	575	77	67	98	3,198
Corn	30	0	n/a	63	63	100	100	86	730
Soybeans	0	0	n/a	0	0	n/a	n/a	0	69
Total	**141**	**39**	**363**	**506**	**638**	**79**	**71**	**91**	**3,997**
Interior									
Wheat	15	28	53	186	165	113	94	116	1,614
Corn	101	91	111	680	772	88	88	96	8,650
Soybeans	135	148	91	666	617	108	118	125	6,729
Total	**251**	**267**	**94**	**1,532**	**1,554**	**99**	**101**	**110**	**16,993**
Great Lakes									
Wheat	0	10	0	21	19	111	90	269	894
Corn	0	0	n/a	0	0	n/a	n/a	n/a	404
Soybeans	0	0	n/a	16	0	n/a	n/a	n/a	1,192
Total	**0**	**10**	**0**	**38**	**19**	**195**	**160**	**481**	**2,491**
Atlantic									
Wheat	0	0	n/a	0	0	n/a	n/a	0	69
Corn	0	7	0	21	0	n/a	n/a	n/a	138
Soybeans	10	83	12	200	274	73	77	55	2,047
Total	**10**	**90**	**11**	**221**	**274**	**81**	**84**	**57**	**2,253**
U.S. total from ports*									
Wheat	592	466	127	2,610	2,563	102	98	119	22,986
Corn	731	885	83	4,849	4,721	103	102	107	63,682
Soybeans	1,120	1,149	97	5,847	7,454	78	82	81	45,879
Total	**2,442**	**2,500**	**98**	**13,306**	**14,739**	**90**	**92**	**95**	**132,547**

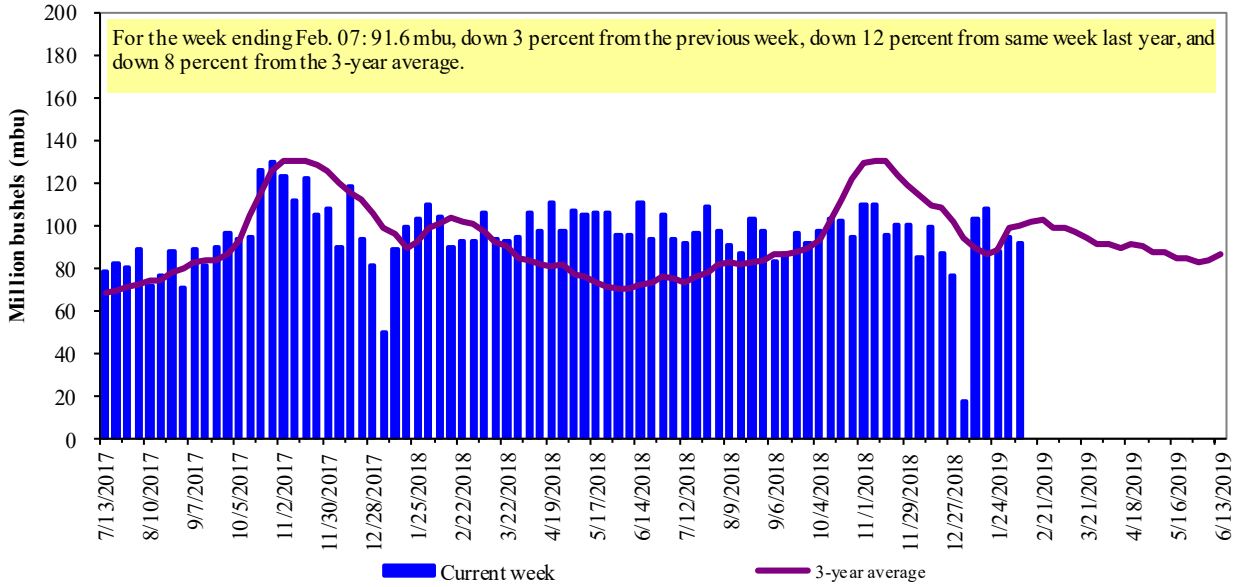
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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, 50 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

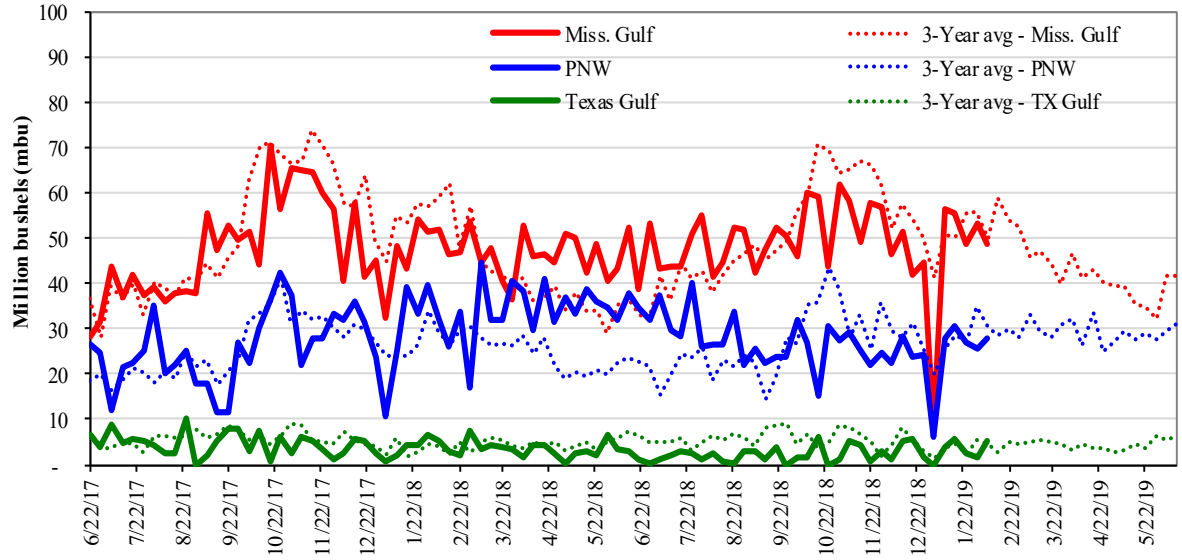
U.S. grain inspected for export (wheat, corn, and soybeans)



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 PNW[1] (wheat, corn, and soybeans)



Week ending 02/07/19 inspections (mbu):	
Mississippi Gulf:	48.8
PNW:	27.7
Texas Gulf:	5.3

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last Week:	down 8	up 269	down 1	up 7
Last Year (same week):	down 6	unchanged	down 5	down 14
3-yr avg. (4-wk.mov. Avg):	down 8	up 29	down 5	down 8

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

Table 17

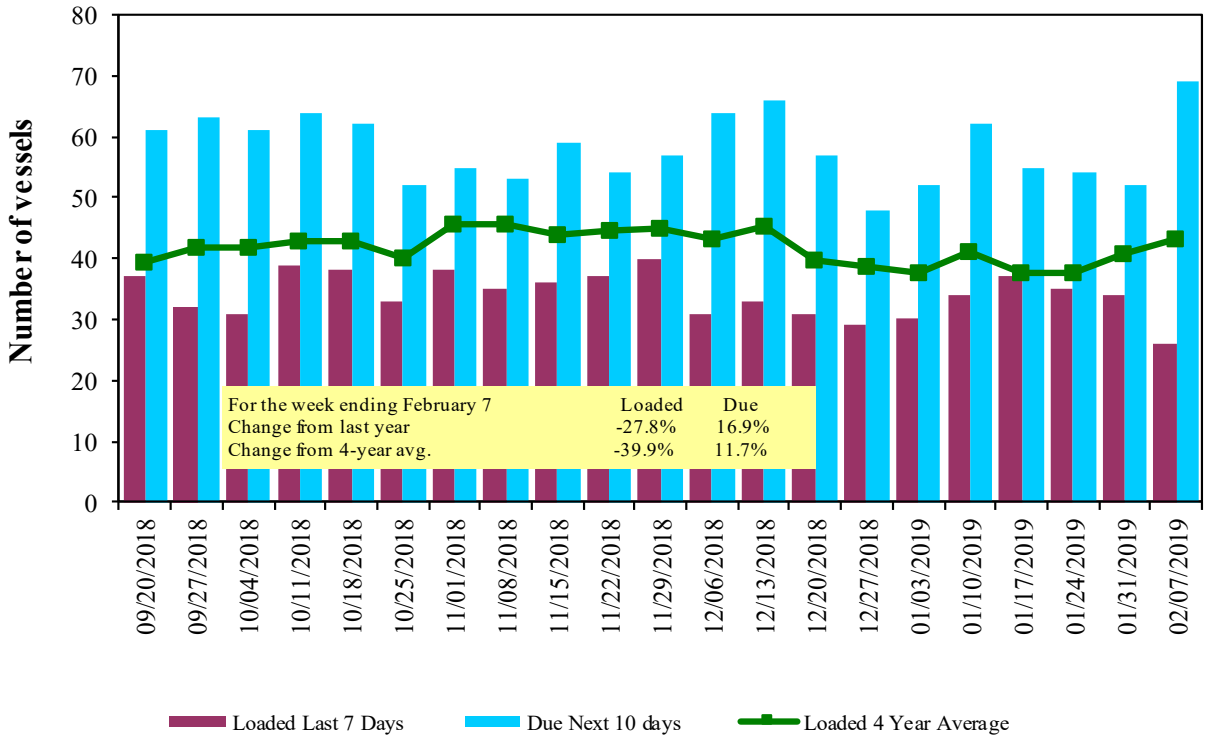
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
2/7/2019	46	26	69	20
1/31/2019	49	34	52	17
2018 range	(23..88)	(24..41)	(38..67)	(4..30)
2018 avg.	40	34	54	17

Source: Transportation & Marketing Programs/AMS/USDA

Figure 16

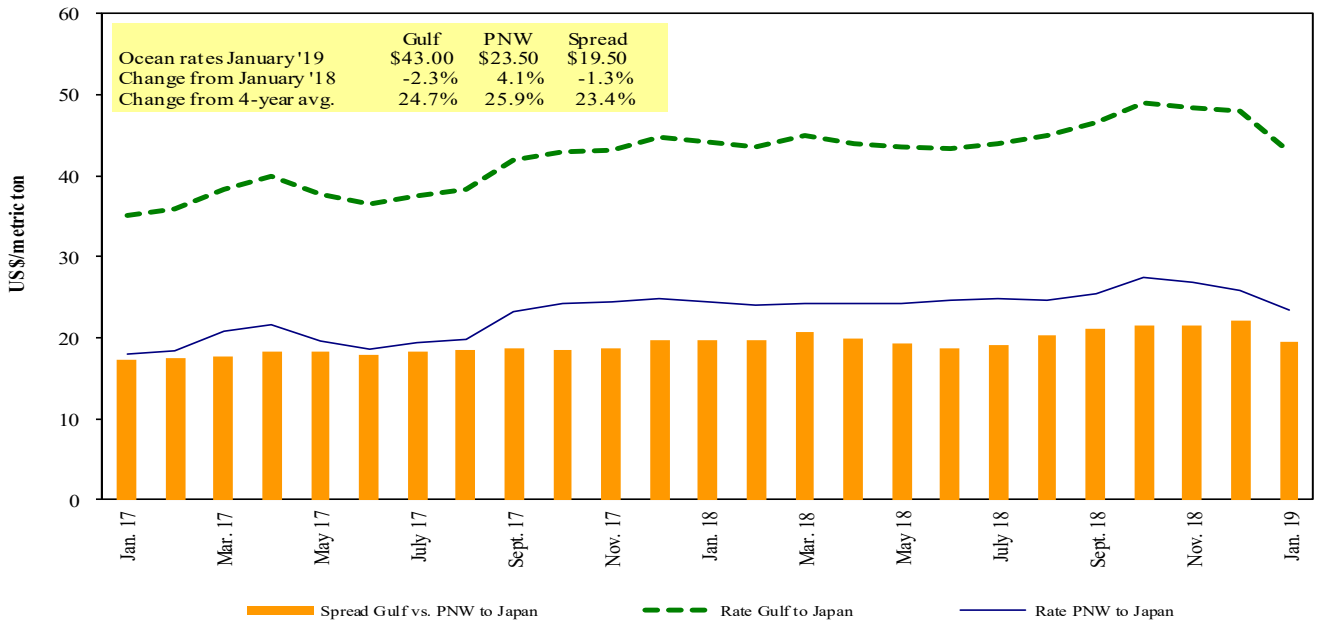
U.S. Gulf Vessel Loading Activity



Source: Transportation & Marketing Program/AMS/USDA
[1]U.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 02/09/2019

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	Djibouti	Wheat	Dec 27/Jan 7	9,800	113.11*
U.S. Gulf	Pt. Sudan	Sorghum	Dec 7/17	30,430	71.88*
U.S. Gulf	Djibouti	Wheat	Nov 2/12	21,470	85.44*
PNW	Taiwan	Heavy Grain	Sep 15/Oct 31	63,000	25.00
Brazil	China	Heavy Grain	Mar 3/11	63,000	27.50
Brazil	China	Heavy Grain	Feb 26/Mar 4	66,000	24.75
Brazil	China	Heavy Grain	Feb 20/25	65,000	26.00
Brazil	China	Heavy Grain	Jan 22/30	60,000	29.50
Brazil	China	Heavy Grain	Dec 15/20	60,000	37.50
Brazil	China	Heavy Grain	Dec 1/10	60,000	36.25
Brazil	China	Heavy Grain	Nov 20/30	60,000	38.00
Brazil	China	Heavy Grain	Nov 1/10	60,000	34.00
Brazil	S.Korea	Heavy Grain	Nov 5/10	66,000	43.00

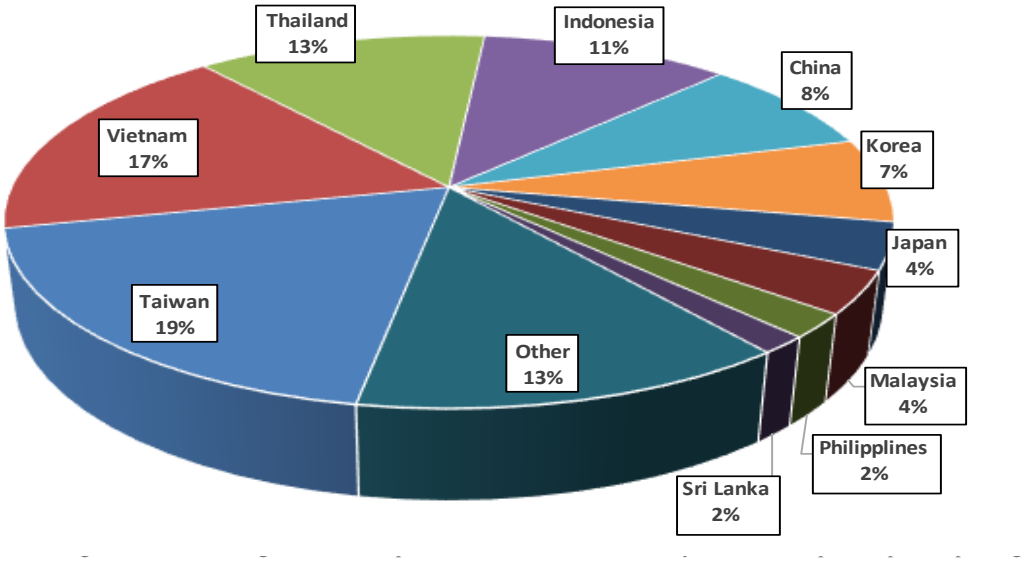
Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), F.O.B., except where otherwise indicated; op = option

*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.

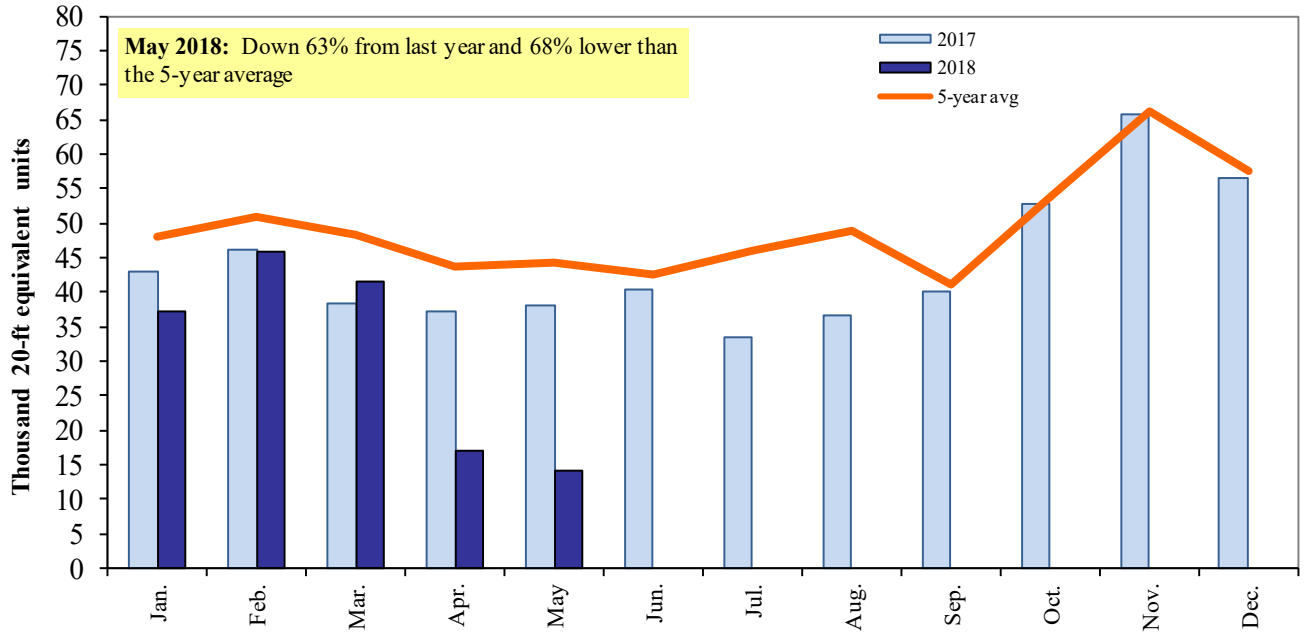
Figure 18
Top 10 Destination Markets for U.S. Containerized Grain Exports, January-May 2018



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.

Contacts and Links

Coordinators		
Surajudeen (Deen) Olowolayemo	surajudeen.olowolayemo@ams.usda.gov	(202) 720 - 0119
Kuo-Liang (Matt) Chang	matt.chang@ams.usda.gov	(202) 690 - 0992
Weekly Highlight Editors		
Surajudeen (Deen) Olowolayemo	surajudeen.olowolayemo@ams.usda.gov	(202) 720 - 0119
April Taylor	april.taylor@ams.usda.gov	(202) 720 - 7880
Nicholas Marathon	nick.marathon@ams.usda.gov	(202) 690 - 4430
Grain Transportation Indicators		
Surajudeen (Deen) Olowolayemo	surajudeen.olowolayemo@ams.usda.gov	(202) 720 - 0119
Rail Transportation		
Johnny Hill	johnny.hill@ams.usda.gov	(202) 690 - 3295
Jesse Gastelle	jesse.gastelle@ams.usda.gov	(202) 690 - 1144
Peter Caffarelli	petera.caffarelli@ams.usda.gov	(202) 690 - 3244
Barge Transportation		
Nicholas Marathon	nick.marathon@ams.usda.gov	(202) 690 - 4430
April Taylor	april.taylor@ams.usda.gov	(202) 720 - 7880
Kuo-Liang (Matt) Chang	matt.chang@ams.usda.gov	(202) 720 - 0299
Truck Transportation		
April Taylor	april.taylor@ams.usda.gov	(202) 720 - 7880
Grain Exports		
Johnny Hill	johnny.hill@ams.usda.gov	(202) 690 - 3295
Ocean Transportation		
Surajudeen (Deen) Olowolayemo (Freight rates and vessels)	surajudeen.olowolayemo@ams.usda.gov	(202) 720 - 0119
April Taylor (Container movements)	april.taylor@ams.usda.gov	(202) 720 - 7880

Subscription Information: Send relevant information to **GTRContactUs@ams.usda.gov** for an electronic copy *(printed copies are also available upon request)*.

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