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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March 14, 2019

Contents

The next release is March 21, 2019

WEEKLY HIGHLIGHTS

Grain Inspections Down but Sizeable Wheat Inspections

For the week ending March 7, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions reached 2.24 million metric tons (mmt). This total is a 1 percent decrease from the previous week, a 20 percent decrease from last year, and is 15 percent below the 3-year average. Despite the decrease in total inspections of grain, wheat inspections jumped 21 percent from week to week. However, the increase in wheat inspections could not offset the decrease in inspections of corn and soybeans, which accounted for 72 percent of total grain inspections. Grain inspections in the Pacific Northwest (PNW) decreased 9 percent from the previous week, but Mississippi Gulf grain inspections increased 6 percent.

Navigation Conditions Continue to Challenge Barge Shippers

Barge logistics saw some improvement when Smithland Locks and Dam on the Ohio River reopened on March 9. It had been closed since February 20 due to highwater conditions. The reopening allowed traffic to resume in and out of the Ohio River. However, due to the closure, no down-bound grain traffic was reported down river at Olmsted Locks and Dam for the week ending March 9. Navigation conditions on the lower Mississippi River continue to concern grain exporters and hamper barge operations. American Commercial Barge Line's website reports their tow size from Cairo, IL to the Gulf has been reduced from 40 to 25 barges. Highwater and occasional fog has disrupted barge operations on the Mississippi River for the last several weeks. For the week ending March 9, only 486 grain barges were unloaded in the New Orleans area, the lowest since June 2017. This reduction shows in analysis of the number of barges unloaded weekly in New Orleans, with the 4-week average being 21 percent less than the 3-year average during the same period of the year.

Diesel Fuel Prices Increase for Fourth Consecutive Week

According to the Energy Information Administration (EIA), average on-highway diesel fuel prices have increased 11.3 cents per gallon over the past 4 weeks. For the week ending March 11, **average prices** were $3.079 per gallon. This is 10.3 cents higher than last year. Average crude oil prices increased from January to February, due to supply volatility and trade sanctions with Venezuela.

Snapshots by Sector

Export Sales

For the week ending February 28, **unshipped balances** of wheat, corn, and soybeans totaled 33.3 mmt. This marks an 8 percent reduction from the same period last year. Net weekly **wheat export sales** were .622 mmt, up 31 percent from the previous week. Net **corn export sales** totaled .970 mmt, down 20 percent from the previous week. Net **soybean export sales** were .312 mmt, down 85 percent from the past week.

Rail

U.S. Class I railroads originated 20,314 **grain carloads** for the week ending March 2, which is down 6 percent from the previous week, 13 percent from last year, and 12 percent from the 3-year average.

Average March shuttle **secondary railcar** bids/offers (per car) were $1,796 above tariff for the week ending March 7. This is down $265 from last week, and up $446 from last year. Average non-shuttle secondary railcar bids/offers were $438 above tariff, up $163 from last week. There were no non-shuttle bids/offers this week last year.

Barge

For the week ending March 9, **barge grain movements** totaled 361,522 tons. This is 53 percent higher than the previous week and up 1 percent from the same period last year.

For the week ending March 9, 248 grain barges **moved down river.** This is 87 barges more than the previous week. There were 486 grain barges **unloaded in New Orleans**, 5 percent lower than the previous week.

Ocean

For the week ending March 7, 29 **ocean-going grain vessels** were loaded in the Gulf. This is 26 percent less than the same period last year. Fifty-eight vessels are expected to be loaded within the next 10 days, 13 percent less than the same period last year.

For the week ending March 7, the ocean freight rate for shipping bulk grain from the Gulf to Japan was $40.00 per metric ton. This is 1 percent more than the previous week. The cost of shipping from the PNW to Japan was $23.00 per metric ton, 1 percent more than the previous week.

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Feature Article/Calendar

Soybean and Wheat Landed Costs to Mexico Decrease, Corn's Increased

The landed costs of shipping soybeans and wheat to Mexico decreased during the fourth quarter of 2018, compared to the previous quarter (see table below). The decrease in landed costs was caused by a decline in farm values for both soybeans and wheat. On the other hand, corn landed costs were pushed up by an increase in farm values. Changes in the total transportation costs were mixed during the quarter. Total transportation costs for waterborne corn and soybeans decreased in the fourth quarter, compared to the previous quarter, while the cost of shipping wheat increased.

Quarterly costs of transporting U.S. grain to Veracruz and Guadalajara, Mexico

	Water route (to Veracruz) $/metric ton					Land route (to Guadalajara) $/metric ton				
	2017 4th qtr.	2018 3rd qtr.	2018 4th qtr.	Percent change Yr. to Yr.	Qtr. to Qtr.	2017 4th qtr.	2018 3rd qtr.	2018 4th qtr.	Percent change Yr. to Yr.	Qtr. to Qtr.
Corn										
Origin			**IL**					**IA**		
Truck	14.39	10.54	12.10	-15.9	14.8	4.91	5.12	5.20	5.9	1.6
Rail [1]						87.27	88.41	91.13	4.4	3.1
Barge	19.59	25.32	21.38	9.1	-15.6					
Ocean[2]	14.26	14.68	15.63	9.6	6.5					
Total transportation cost[3]	48.24	50.54	49.11	1.8	-2.8	92.18	93.53	96.33	4.5	3.0
Farm Value[4]	128.60	133.98	137.99	7.3	3.0	125.58	130.83	135.43	7.8	3.5
Landed Cost[5]	176.84	184.52	187.10	5.8	1.4	217.76	224.36	231.76	6.4	3.3
Transport % of landed cost	27	27	26			42	42	42		
Soybeans										
Origin			**IL**					**NE**		
Truck	14.39	10.54	12.10	-15.9	14.8	4.91	5.12	5.20	5.9	1.6
Rail						91.23	92.60	94.37	3.4	1.9
Barge	19.59	25.32	21.38	9.1	-15.6					
Ocean	14.26	14.68	15.63	9.6	6.5					
Total transportation cost	48.24	50.54	49.11	1.8	-2.8	96.14	97.72	99.57	3.6	1.9
Farm Value	349.07	330.94	323.34	-7.4	-2.3	329.10	317.83	300.20	-8.8	-5.5
Landed Cost	397.31	381.48	372.45	-6.3	-2.4	425.24	415.55	399.77	-6.0	-3.8
Transport % of landed cost	12	13	13			23	24	25		
Wheat										
Origin			**KS**					**KS**		
Truck	4.91	5.12	5.20	5.9	1.6	4.91	5.12	5.20	5.9	1.6
Rail	41.42	42.66	42.66	3.0	0.0	77.46	79.08	79.66	2.8	0.7
Ocean	14.26	13.97	15.63	9.6	11.9					
Total transportation cost	60.59	61.75	63.49	4.8	2.8	82.37	84.20	84.86	3.0	0.8
Farm Value	128.97	184.94	175.14	35.8	-5.3	128.97	184.94	175.14	35.8	-5.3
Landed Cost	189.56	246.69	238.63	25.9	-3.3	211.34	269.14	260.00	23.0	-3.4
Transport % of landed cost	32	25	27			39	31	33		

[1]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 fuel surcharge shown in the table.

[2]Source: O'Neil Commodity Consulting

[3]Transportation costs for Kansas wheat transported via water route were revised from previous estimates

[4]Source: USDA/NASS

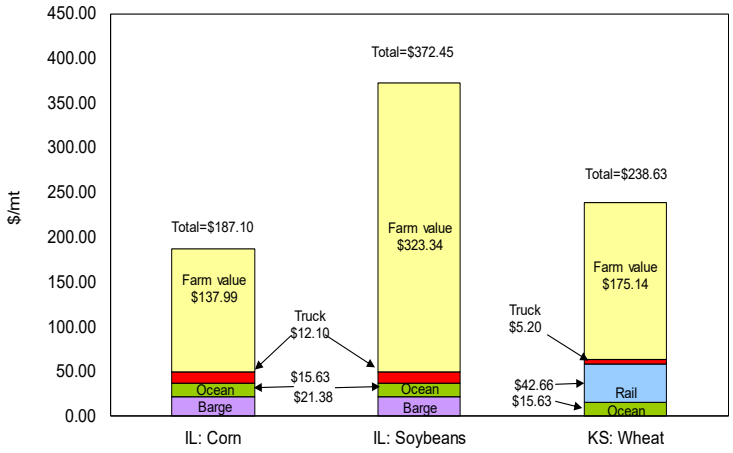
[5]Landed cost is total transportation cost plus farm value

Despite the decrease in total transportation costs of shipping waterborne corn to Mexico, the increase in the farm value was large enough to push up the landed costs. Total transportation costs of shipping all the grains through the land route to Mexico increased during the fourth quarter. However, the decline in the farm values for soybeans and wheat more than offset the increase in total transportation costs, pushing down the landed costs for both commodities.

Ocean freight rates for shipping bulk grains increased during the quarter due to strong global dry bulk trades for commodities such as iron ore, coal and other minor bulks (see February 14, 2019 *Grain Transportation Report*). Truck rates also increased during the quarter, partly due to increased demand for trucking services. Tariff rail rates increased during the quarter as well. However, barge rates declined during the quarter as the decline in soybean movement was not offset by the increase in the corn movement. As a result, the demand for barge services was reduced.

Year-to-year farm values increased for both corn and wheat across all routes, while there was a decline in value for soybeans. Changes in the year-to-year landed costs followed the same pattern as the farm values for all the commodities. The landed costs ranged from $187 to $372 per metric ton (mt) (see table and figure 1) for the water route, and $232 to $400 per mt for the land route (see table and figure 2). The transportation share of the landed costs ranged from 13 to 27 percent for the water route, and 25 to 42 percent for the land route (see table).

Figure 1. Water route shipment costs ($/mt) to Veracruz, Mexico

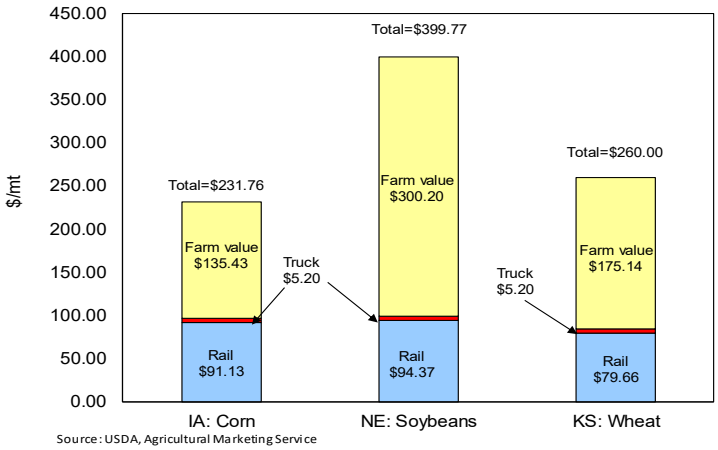


Source: USDA, Agricultural Marketing Service

According to USDA's grain inspection data, more corn, soybeans and wheat were inspected for export to Mexico during the fourth quarter of 2018, as compared to 2017. In 2018, 3.60 million metric tons (mmt) of corn, 1.18 mmt of soybeans, and 0.65 mmt of wheat were inspected for export to Mexico. This compares to 2.75 mmt, 0.91 mmt and 0.48 mmt, respectively, in 2017.

Total corn and soybean exports to Mexico were also greater than in the calendar year 2017. Corn exports were 14.24 mmt in 2018, compared to 13.63 mmt in 2017. Soybean exports were 4.46 in 2018 and 3.62 mmt last year. In comparison, less wheat was inspected for export to Mexico. Wheat exports totaled 2.59 mmt in 2018, compared to 3.32 mmt during the previous year. In addition to proximity, lower farm values and transportation costs enhanced the competitiveness of U.S. grain exports to Mexico. *surajudeen.olowolayemo@ams.usda.gov*

Figure 2. Land route shipment costs ($/mt) to Guadalajara, Mexico



Source: USDA, Agricultural Marketing Service

Grain Transportation Indicators

Table 1

Grain Transport Cost Indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Unit Train	Shuttle		Gulf	Pacific
03/13/19	207	304	297	275	179	163
03/06/19	206	295	308	292	177	161

[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)

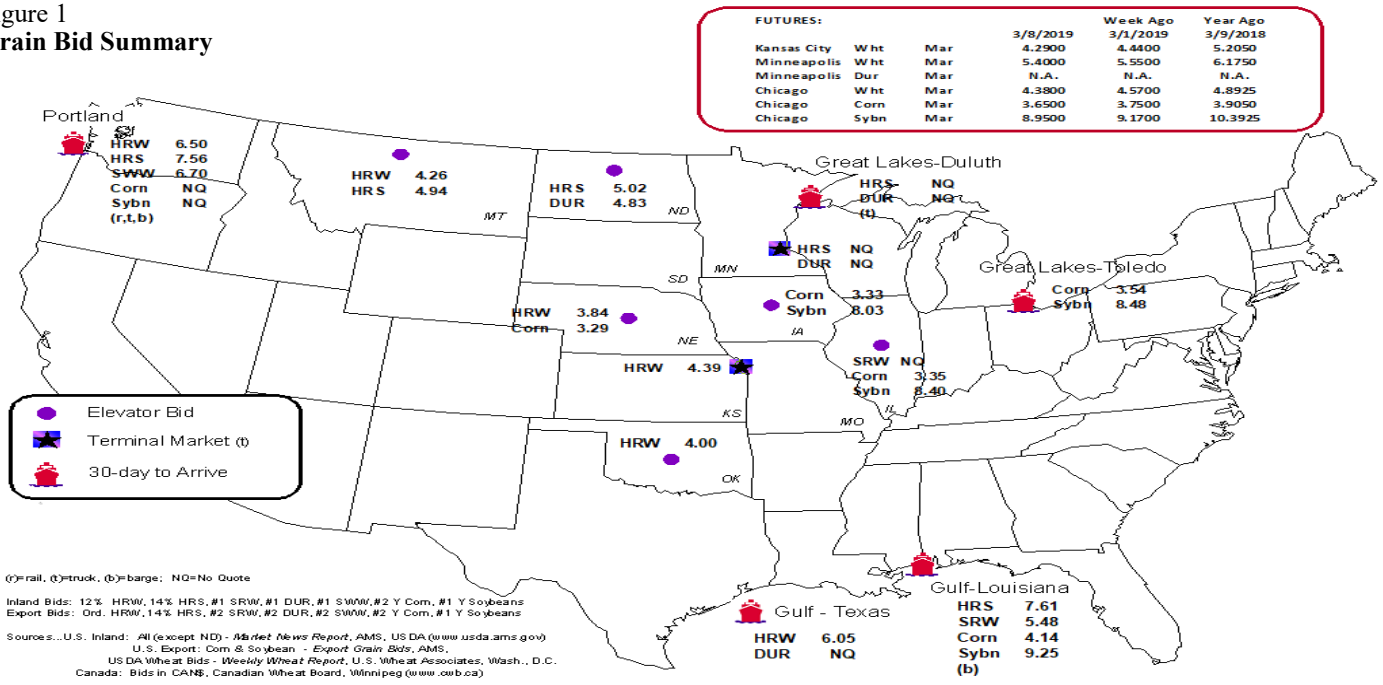
Commodity	Origin--Destination	3/8/2019	3/1/2019
Corn	IL--Gulf	-0.79	-0.79
Corn	NE--Gulf	-0.85	-0.86
Soybean	IA--Gulf	-1.22	-1.24
HRW	KS--Gulf	-1.66	-1.73
HRS	ND--Portland	-2.54	-1.93

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]
3/06/2019[p]	1,340	907	5,350	280	7,877	3/2/2019	1,584
2/27/2019[r]	756	1,657	4,431	244	7,088	2/23/2019	2,063
2019 YTD[r]	6,550	11,129	51,785	3,885	73,349	2019 YTD	21,381
2018 YTD[r]	4,797	15,520	61,663	2,729	84,709	2018 YTD	17,330
2019 YTD as % of 2018 YTD	137	72	84	142	87	% change YTD	123
Last 4 weeks as % of 2018[2]	275	94	81	92	92	Last 4wks % 2018	116
Last 4 weeks as % of 4-year avg.[2]	170	94	81	55	87	Last 4wks % 4 yr	108
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.

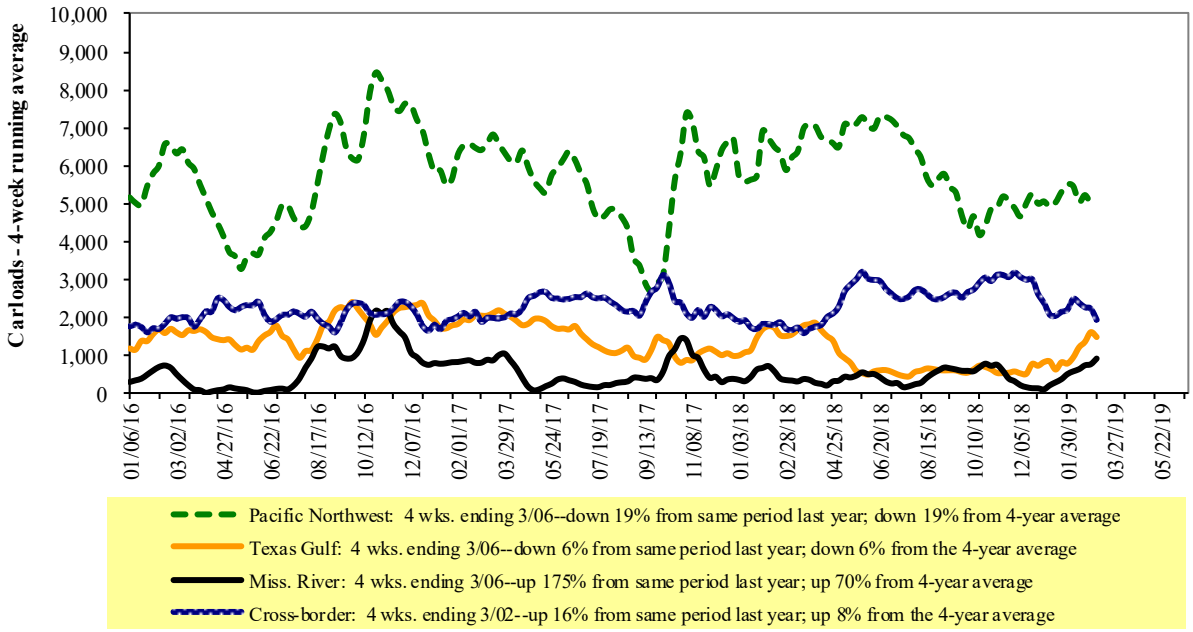
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

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	
3/2/2019	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,607	2,596	10,499	1,076	4,536	20,314	4,143	4,494
This week last year	1,772	3,120	11,094	951	6,338	23,275	3,312	4,212
2019 YTD	17,325	23,849	98,245	9,693	45,963	195,075	35,449	35,630
2018 YTD	16,093	22,010	102,787	8,840	46,302	196,032	29,706	37,301
2019 YTD as % of 2018 YTD	108	108	96	110	99	100	119	96
Last 4 weeks as % of 2018*	124	107	94	124	98	100	136	92
Last 4 weeks as % of 3-yr avg.**	111	101	94	123	91	97	115	89
Total 2018	98,978	133,142	635,458	48,638	267,713	1,183,929	211,881	244,697

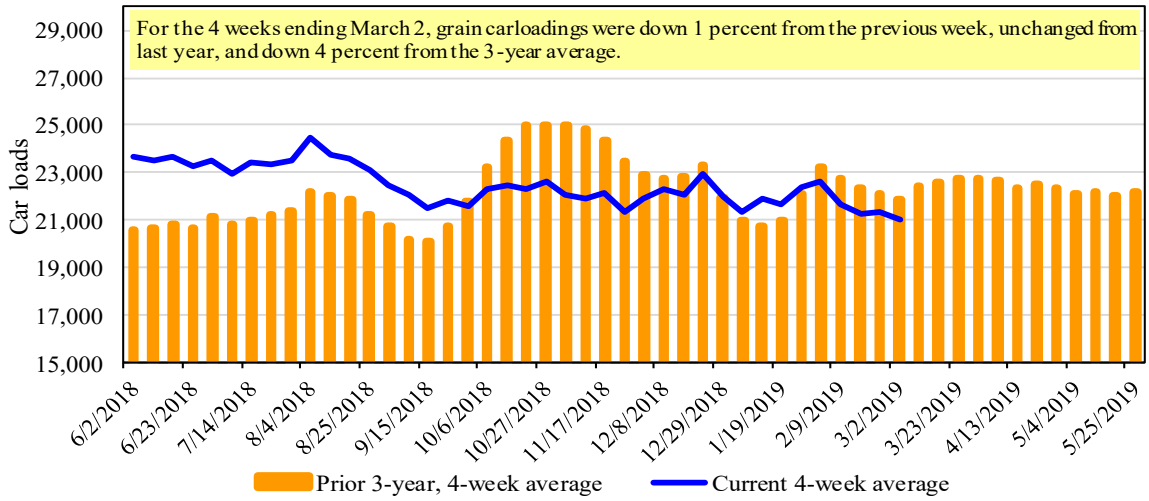
*The past 4 weeks of this year as a percent of the same 4 weeks last year.

**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							
3/7/2019		Mar-19	Mar-18	Apr-19	Apr-18	May-19	May-18	Jun-19	Jun-18
BNSF[3]	COT grain units	no offer	no offer	no offer	0	0	0	0	0
	COT grain single-car[5]	no offer	197	no offer	20	116	0	6	0
UP[4]	GCAS/Region 1	no offer	no offer	no offer	no bids	no bid	no bids	n/a	n/a
	GCAS/Region 2	no offer	no offer	301	51	10	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.

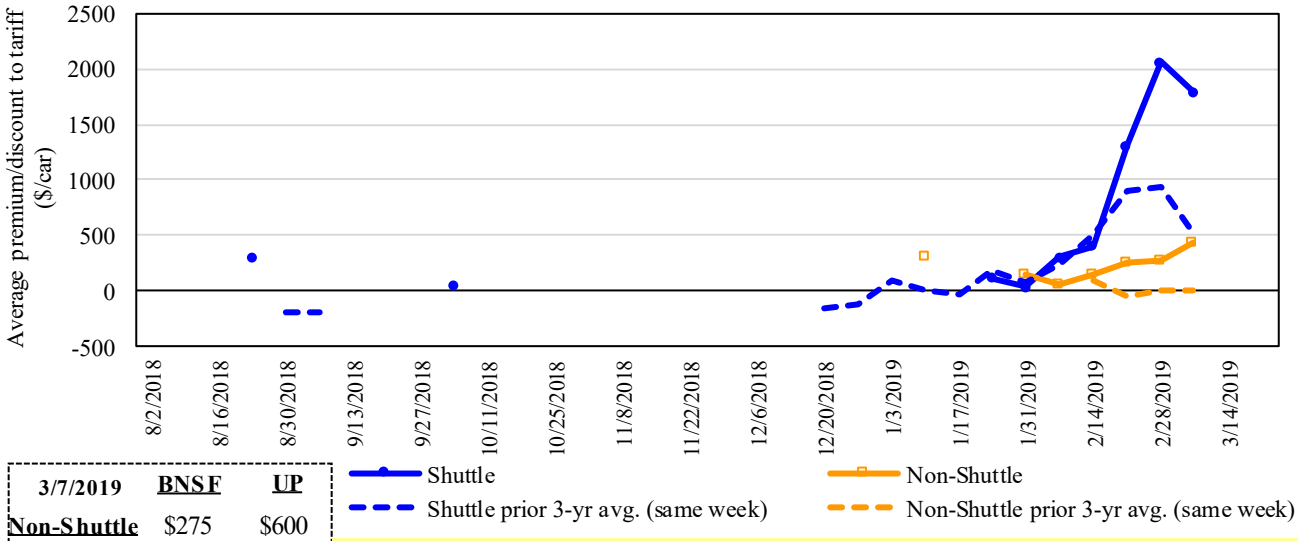
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

[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 March 2019, Secondary Market

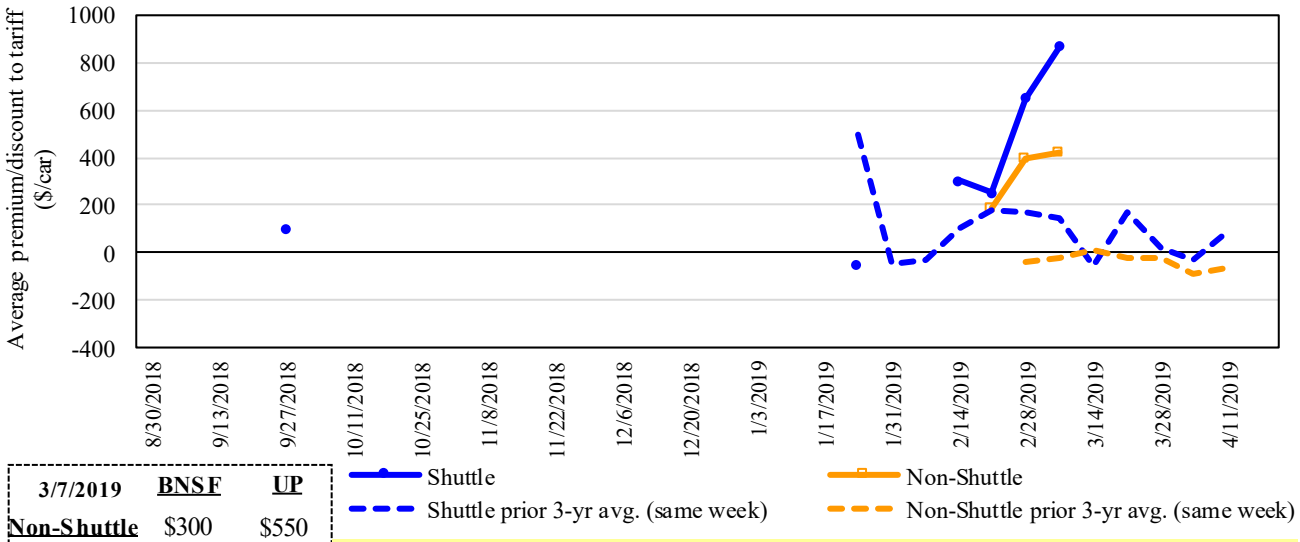


3/7/2019	BNSF	UP
Non-Shuttle	$275	$600
Shuttle	$2,675	$917

Average Non-shuttle bids/offers rose $163 this week, and are at the peak.
Average Shuttle bids/offers fell $265 this week and are $265 below 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 April 2019, Secondary Market



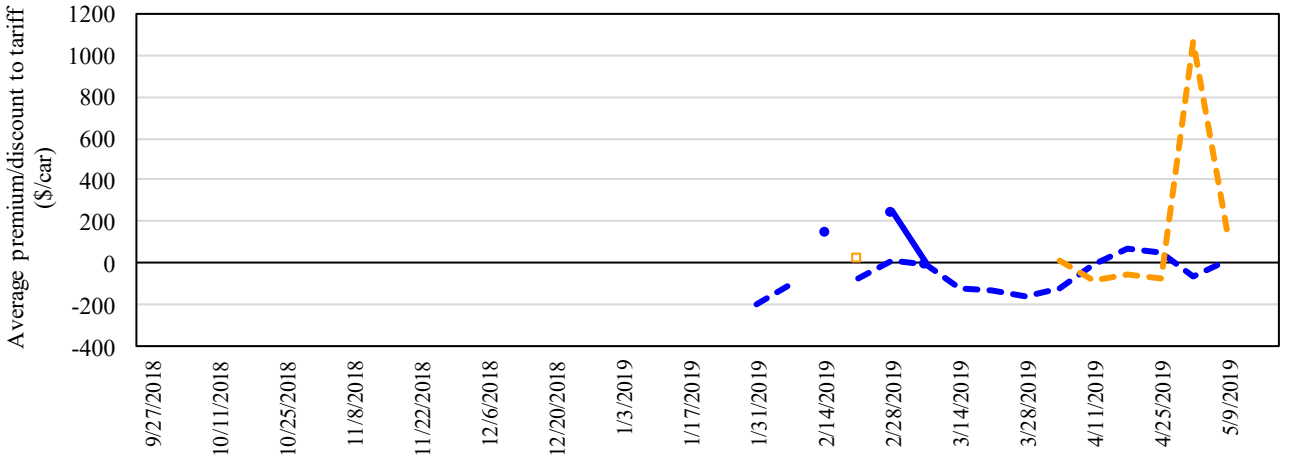
3/7/2019	BNSF	UP
Non-Shuttle	$300	$550
Shuttle	$1,383	$350

Average Non-shuttle bids/offers rose $25 this week, and are at the peak.
Average Shuttle bids/offers rose $217 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 May 2019, Secondary Market



3/7/2019	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	n/a	$0

There were no Non-Shuttle bids/offers this week.
Average Shuttle bids/offers fell $250 this week and are $250 below the peak.

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: 3/7/2019	Delivery period					
		Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
Non-shuttle	**BNSF-GF**	**275**	**300**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	125	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	**600**	**550**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	200	150	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**	**2675**	**1383**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	(214)	733	n/a	n/a	n/a	n/a
	Change from same week 2018	1325	833	n/a	n/a	n/a	n/a
	UP-Pool	**917**	**350**	**0**	**n/a**	**n/a**	**n/a**
	Change from last week	(316)	n/a	(100)	n/a	n/a	n/a
	Change from same week 2018	n/a	408	125	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]

March, 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	$91	$40.46	$1.10	2
	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	$160	$46.68	$1.27	0
	Sioux Falls, SD	Galveston-Houston, TX	$6,911	$0	$68.63	$1.87	2
	Northwest KS	Galveston-Houston, TX	$4,816	$176	$49.57	$1.35	0
	Amarillo, TX	Los Angeles, CA	$5,121	$244	$53.28	$1.45	2
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$181	$41.52	$1.05	1
	Toledo, OH	Raleigh, NC	$6,581	$0	$65.35	$1.66	4
	Des Moines, IA	Davenport, IA	$2,258	$38	$22.80	$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	$113	$36.96	$0.94	0
	Des Moines, IA	Los Angeles, CA	$5,327	$328	$56.16	$1.43	0
Soybeans	Minneapolis, MN	New Orleans, LA	$4,131	$171	$42.72	$1.16	0
	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	$181	$48.92	$1.33	0
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	$288	$61.57	$1.68	1
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	$181	$39.53	$1.00	2
	Lincoln, NE	Galveston-Houston, TX	$3,880	$0	$38.53	$0.98	5
	Des Moines, IA	Amarillo, TX	$4,060	$142	$41.72	$1.06	2
	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	$209	$49.49	$1.35	0
	Toledo, OH	Huntsville, AL	$4,634	$0	$46.02	$1.25	6
	Grand Island, NE	Portland, OR	$5,710	$295	$59.63	$1.62	0

[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: March, 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	$125	$70.18	$1.91	2
	KS	Guadalajara, JA	$7,371	$456	$79.97	$2.17	3
	TX	Salinas Victoria, NL	$4,329	$77	$45.02	$1.22	1
Corn	IA	Guadalajara, JA	$8,528	$388	$91.10	$2.31	4
	SD	Celaya, GJ	$7,880	$0	$80.51	$2.04	2
	NE	Queretaro, QA	$8,207	$265	$86.56	$2.20	2
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	2
	MO	Tlalnepantla, EM	$7,573	$258	$80.02	$2.03	2
	SD	Torreon, CU	$7,480	$0	$76.43	$1.94	2
Soybeans	MO	Bojay (Tula), HG	$8,284	$361	$88.33	$2.40	3
	NE	Guadalajara, JA	$8,842	$387	$94.29	$2.56	3
	IA	El Castillo, JA	$9,110	$0	$93.08	$2.53	2
	KS	Torreon, CU	$7,714	$275	$81.62	$2.22	4
Sorghum	NE	Celaya, GJ	$7,527	$350	$80.48	$2.04	4
	KS	Queretaro, QA	$8,000	$157	$83.34	$2.11	2
	NE	Salinas Victoria, NL	$6,633	$126	$69.05	$1.75	3
	NE	Torreon, CU	$6,962	$256	$73.75	$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

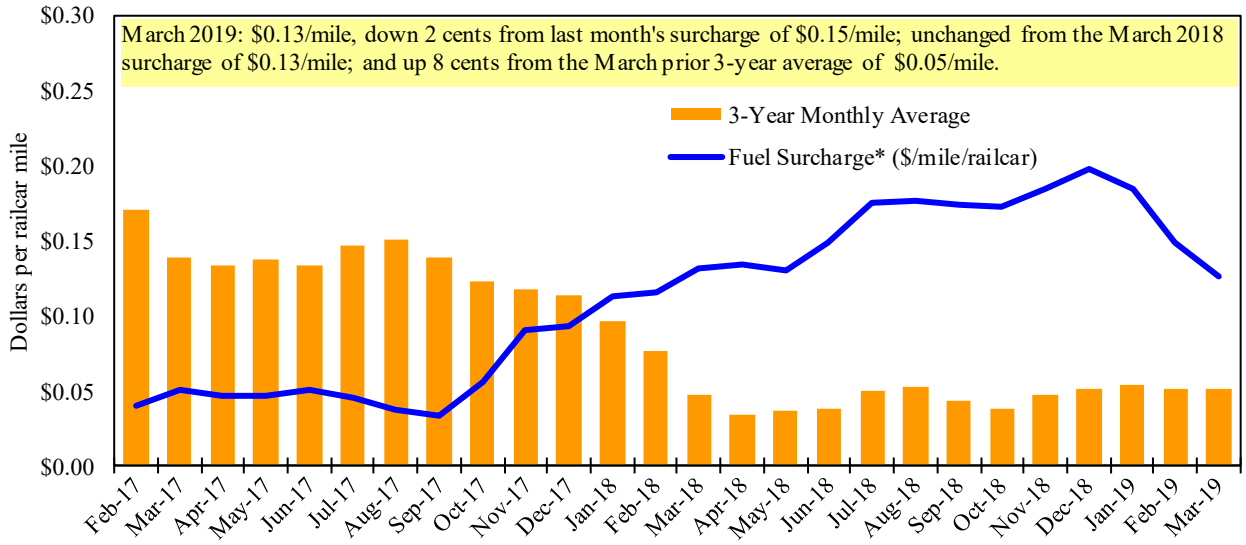
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

[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.

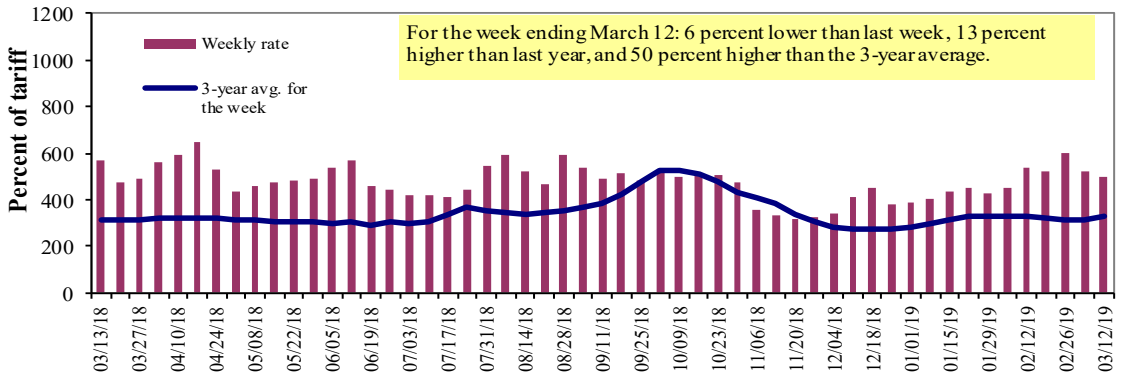
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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]	3/12/2019	-	-	495	400	513	513	360
	3/5/2019	-	-	525	400	-	-	375
$/ton	3/12/2019	-	-	22.97	15.96	24.06	20.73	11.30
	3/5/2019	-	-	24.36	15.96	-	-	11.78
Current week % change from the same week:								
	Last year	-	-	-13	-13	5	5	-9
	3-year avg. [2]	-	-	50	63	82	81	70
Rate[1]	April	488	463	463	368	438	438	350
	June	463	433	430	330	363	363	318

[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.

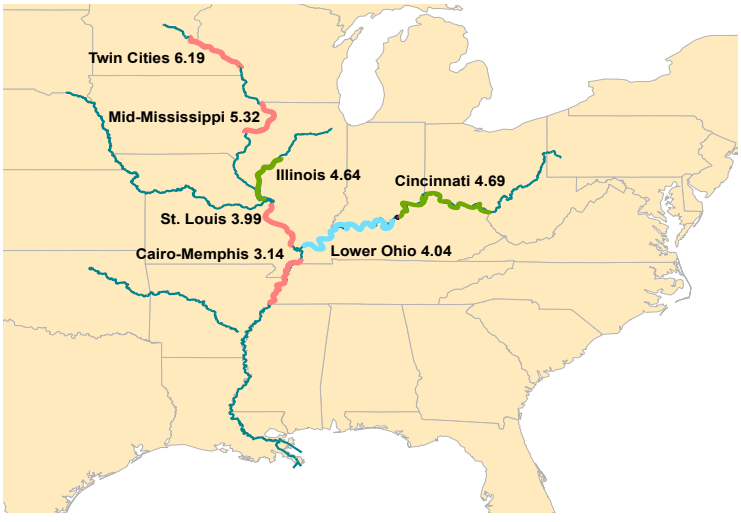
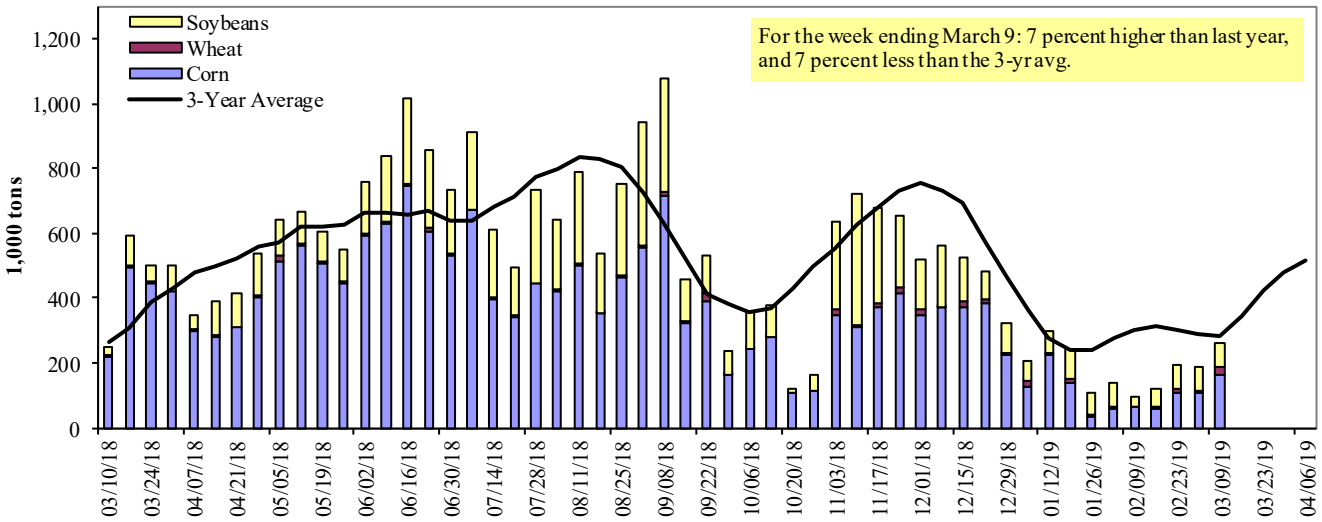


Figure 10

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 03/09/2019	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	0	0	0	0	0
Winfield, MO (L25)	0	0	5	0	5
Alton, IL (L26)	170	21	69	17	277
Granite City, IL (L27)	166	21	77	17	280
Illinois River (L8)	126	14	69	6	216
Ohio River (OLMSTED)	0	0	0	0	0
Arkansas River (L1)	0	32	49	0	81
Weekly total - 2019	166	53	126	17	362
Weekly total - 2018	228	37	92	3	359
2019 YTD[1]	1,811	394	1,875	27	4,107
2018 YTD[1]	2,246	251	2,163	28	4,688
2019 as % of 2018 YTD	81	157	87	99	88
Last 4 weeks as % of 2018[2]	58	148	105	225	79
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.

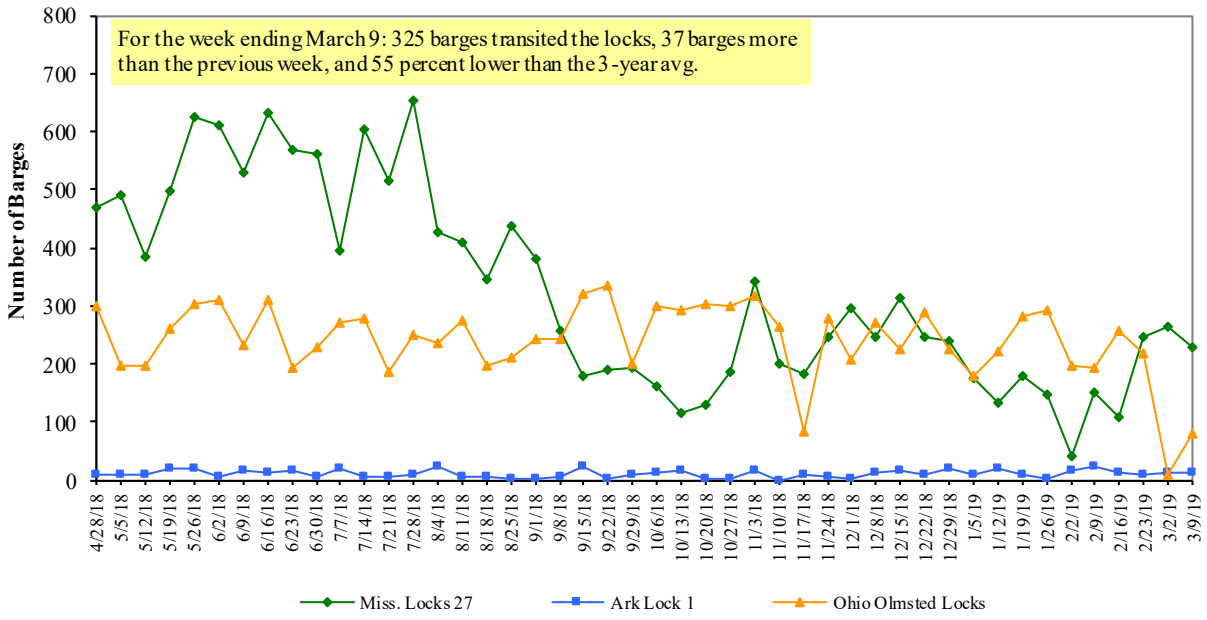
[2] As a percent of same period in 2018.

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

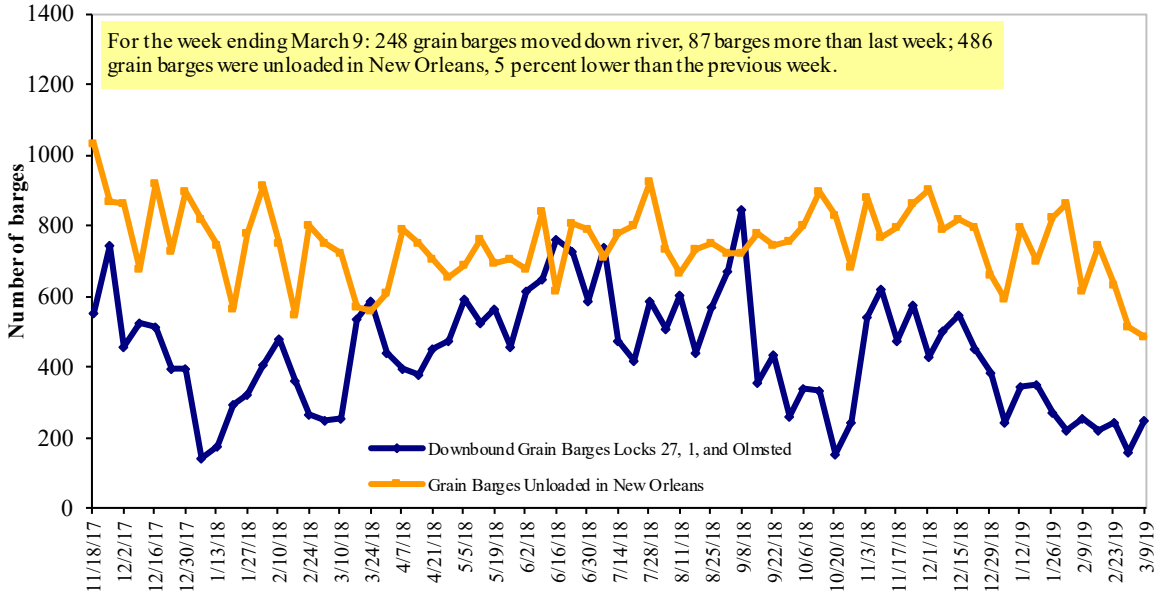
Upbound Empty Barges Transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 3/11/2019 (US $/gallon)

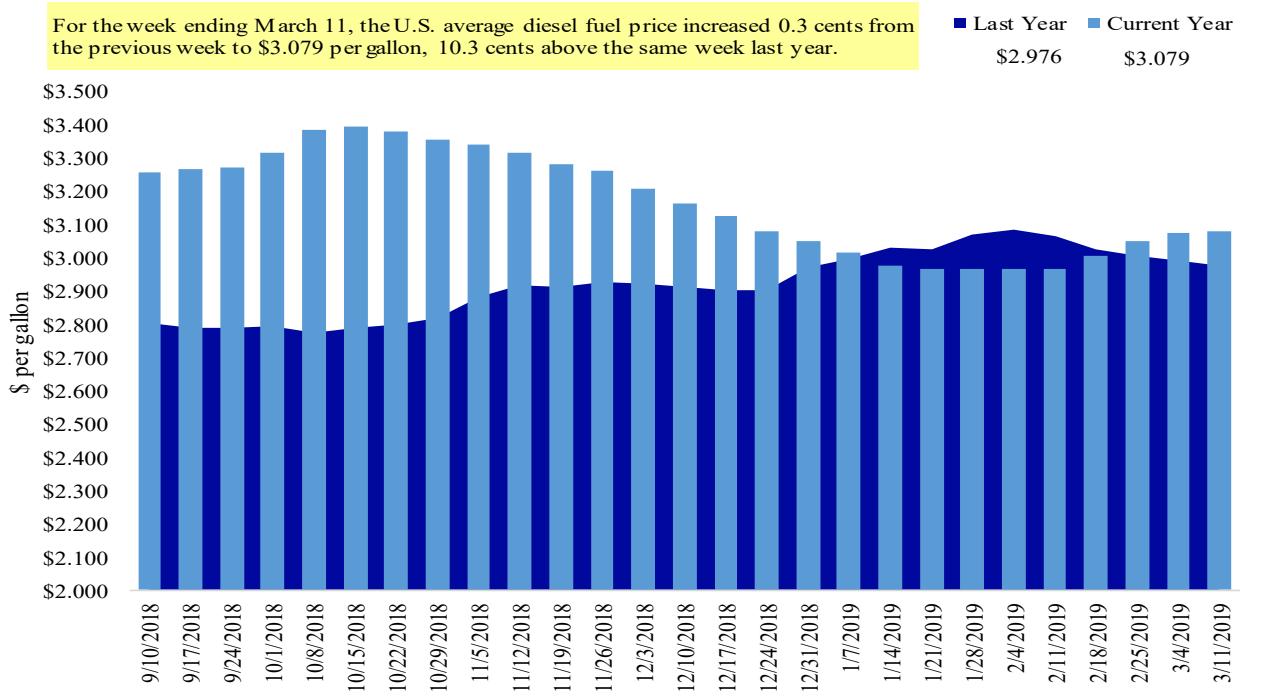
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	3.123	0.004	0.099
	New England	3.183	0.006	0.076
	Central Atlantic	3.315	0.014	0.094
	Lower Atlantic	2.981	-0.004	0.110
II	Midwest	3.011	-0.003	0.112
III	Gulf Coast	2.881	0.011	0.099
IV	Rocky Mountain	2.939	0.000	0.649
V	West Coast	3.505	0.002	0.119
	West Coast less California	3.162	0.007	0.110
	California	3.778	-0.001	0.126
Total	U.S.	3.079	0.003	0.103

[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]									
2/28/2019	2,586	998	1,464	1,148	112	6,308	14,256	12,713	33,277
This week year ago	1,447	646	1,422	1,090	95	4,700	22,321	9,238	36,259
Cumulative exports-marketing year[2]									
2018/19 YTD	5,209	1,986	4,895	3,826	358	16,274	26,269	26,558	69,101
2017/18 YTD	7,279	1,645	4,297	3,829	276	17,327	18,806	38,767	74,899
YTD 2018/19 as % of 2017/18	72	121	114	100	130	94	140	69	92
Last 4 wks as % of same period 2017/18	133	112	77	87	92	102	47	107	69
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

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 2/28/2019	Total Commitments[2]		% change	Exports[3]
	2018/19	2017/18	current MY	3-year avg
	Current MY	Last MY	from last MY	2015-2017
	- 1,000 mt -			
Mexico	13,349	11,313	18	13,691
Japan	8,403	7,090	19	11,247
Korea	3,088	2,367	30	4,754
Colombia	3,179	2,861	11	4,678
Peru	1,899	2,125	(11)	2,975
Top 5 Importers	**29,918**	**25,755**	**16**	**37,344**
Total US corn export sales	**40,526**	**41,126**	**(1)**	**53,184**
% of Projected	65%	66%		
Change from prior week[2]	**970**	**1,858**		
Top 5 importers' share of U.S. corn export sales	74%	63%		70%
USDA forecast, March 2019	**62,341**	**62,036**	**0**	
Corn Use for Ethanol USDA forecast, March 2019	**140,970**	**142,367**	**(1)**	

(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

Table 14

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

For the week ending 2/28/2019	Total Commitments[2] 2018/19 Current MY	2017/18 Last MY	% change current MY from last MY	Exports[3] 3-yr avg. 2015-2017
		- 1,000 mt -		- 1,000 mt -
China	9,368	27,692	(66)	31,228
Mexico	4,531	3,492	30	3,716
Indonesia	1,505	1,294	16	2,250
Japan	1,812	1,508	20	2,145
Netherlands	1,615	840	92	2,209
Top 5 importers	**18,832**	**34,827**	**(46)**	**41,549**
Total US soybean export sales	**39,270**	**48,005**	**(18)**	**55,113**
% of Projected	77%	83%		
Change from prior week[2]	**312**	**2,509**		
Top 5 importers' share of U.S. soybean export sales	48%	73%		**75%**
USDA forecast, March 2019	**51,090**	**58,011**	**88**	

(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)

Table 15

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

For the week ending 2/28/2019	Total Commitments[2] 2018/19 Current MY	2017/18 Last MY	% change current MY from last MY	Exports[3] 3-yr avg 2015-2017
	- 1,000 mt -			- 1,000 mt -
Mexico	2,713	2,743	(1)	2,781
Japan	2,479	2,631	(6)	2,649
Philippines	2,878	2,432	18	2,441
Korea	1,478	1,385	7	1,257
Nigeria	1,311	1,061	24	1,254
Indonesia	1,123	1,164	(4)	1,076
Taiwan	1,041	1,009	3	1,066
China	40	890	(96)	944
Colombia	577	289	100	714
Thailand	742	630	18	618
Top 10 importers	**14,381**	**14,235**	1	**14,800**
Total US wheat export sales	**22,582**	**22,027**	**3**	**22,869**
% of Projected	86%	90%		
Change from prior week[2]	**622**	**391**		
Top 10 importers' share of U.S. wheat export sales	64%	65%		65%
USDA forecast, March 2019	**26,294**	**24,550**	**7**	

(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.

Table 16

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

Port Regions	For the Week Ending 03/07/19	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	299	258	116	2,543	2,056	124	173	132	13,315
Corn	158	184	86	1,939	2,830	69	46	59	20,024
Soybeans	221	306	72	2,551	3,092	82	122	116	7,719
Total	**678**	**748**	**91**	**7,033**	**7,978**	**88**	**97**	**100**	**41,058**
Mississippi Gulf									
Wheat	146	91	160	998	804	124	106	96	3,896
Corn	462	518	89	4,848	5,029	96	82	73	33,735
Soybeans	483	424	114	6,121	6,677	92	109	102	28,124
Total	**1,091**	**1,033**	**106**	**11,967**	**12,510**	**96**	**95**	**87**	**65,755**
Texas Gulf									
Wheat	174	121	143	1,103	970	114	167	167	3,198
Corn	31	0	n/a	94	98	96	87	49	730
Soybeans	0	0	n/a	0	0	n/a	n/a	n/a	69
Total	**205**	**121**	**169**	**1,197**	**1,068**	**112**	**161**	**151**	**3,997**
Interior									
Wheat	4	43	9	271	336	81	49	64	1,614
Corn	102	142	72	1,235	1,301	95	101	104	8,650
Soybeans	142	141	101	1,214	1,088	112	113	128	6,729
Total	**248**	**326**	**76**	**2,721**	**2,725**	**100**	**98**	**108**	**16,993**
Great Lakes									
Wheat	0	0	n/a	23	19	117	n/a	n/a	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**	**0**	**n/a**	**39**	**19**	**202**	**n/a**	**n/a**	**2,491**
Atlantic									
Wheat	0	1	n/a	1	29	2	2	2	69
Corn	0	7	0	28	0	n/a	n/a	229	138
Soybeans	21	21	101	264	467	57	33	35	2,047
Total	**21**	**29**	**74**	**293**	**496**	**59**	**32**	**33**	**2,253**
U.S. total from ports*									
Wheat	623	514	121	4,939	4,214	117	141	125	22,986
Corn	752	850	88	8,144	9,258	88	72	73	63,682
Soybeans	868	893	97	10,167	11,325	90	109	106	45,879
Total	**2,243**	**2,258**	**99**	**23,249**	**24,797**	**94**	**98**	**95**	**132,547**

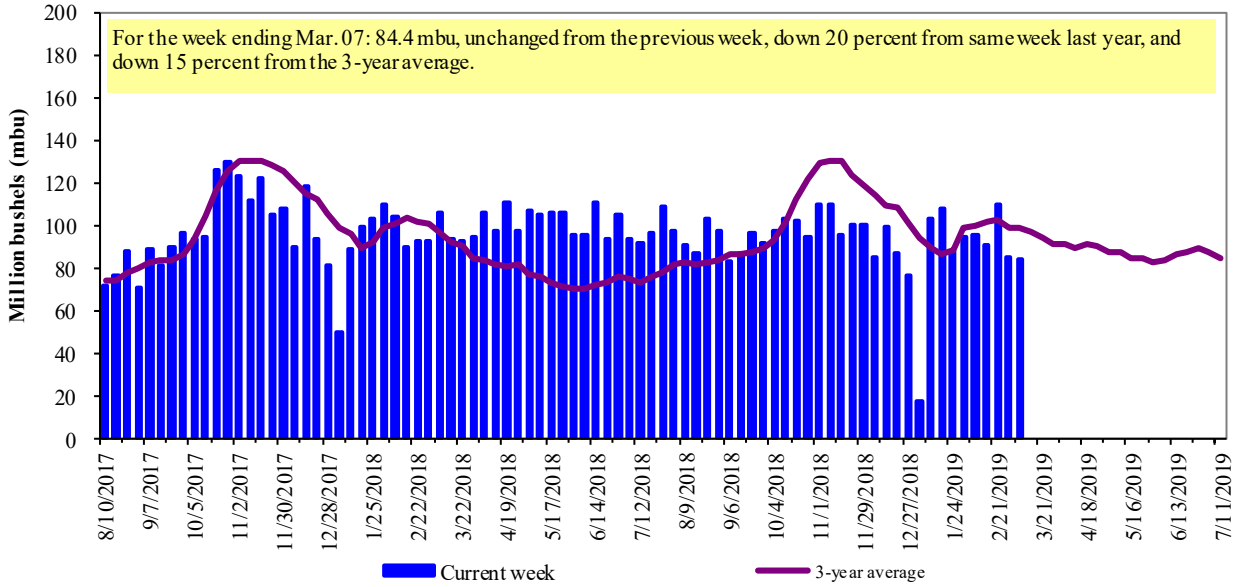
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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

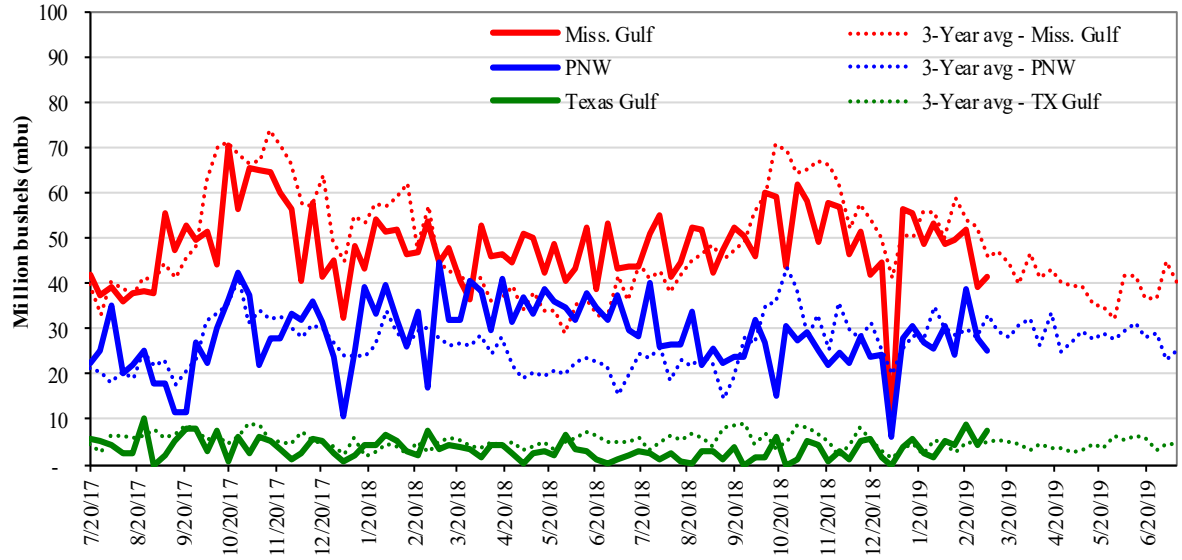
U.S. grain inspected for export (wheat, corn, and soybeans)



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 03/07/19 inspections (mbu):	
Mississippi Gulf:	41.3
PNW:	25.3
Texas Gulf:	7.6

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last Week:	up 5	up 71	up 12	down 9
Last Year (same week):	down 7	up 125	up 2	down 43
3-yr avg. (4-wk.mov. Avg):	down 22	up 73	down 15	down 15

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

Table 17

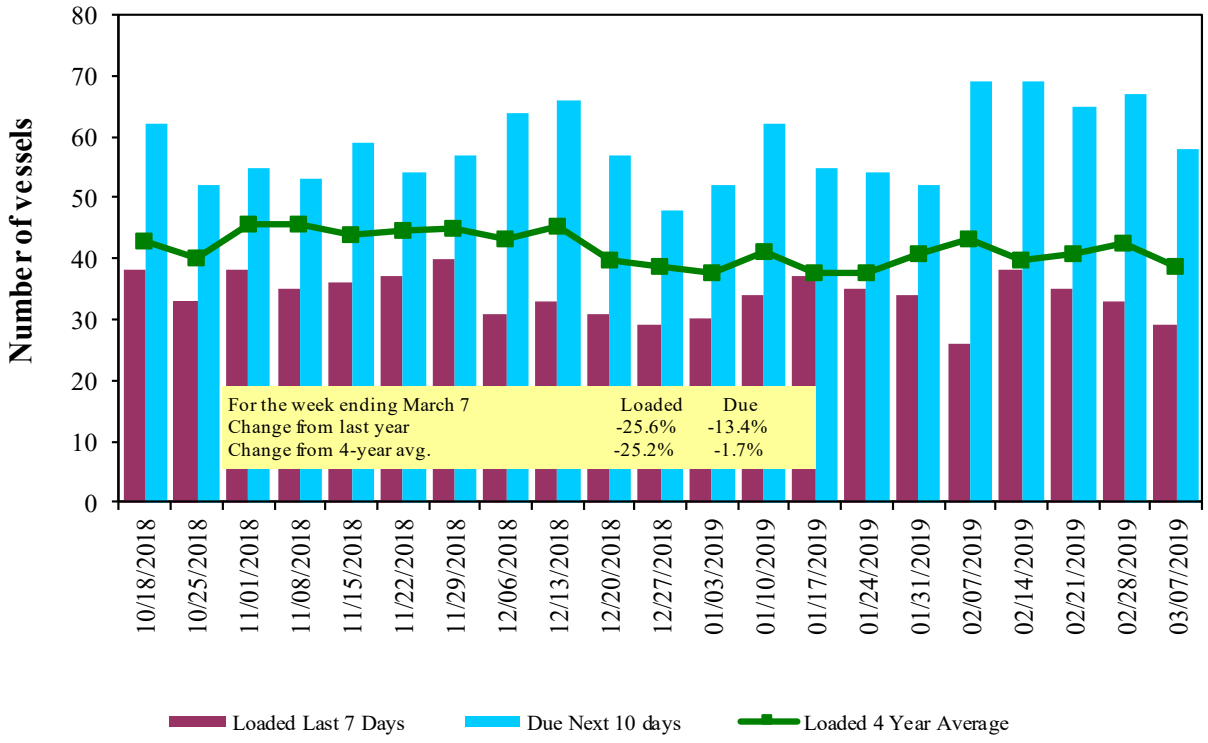
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
3/7/2019	47	29	58	28
2/28/2019	36	33	67	28
2018 range	(23..88)	(24..41)	(38..67)	(4..30)
2018 avg.	40	34	54	17

Source: Transportation & Marketing Programs/AMS/USDA

Figure 16

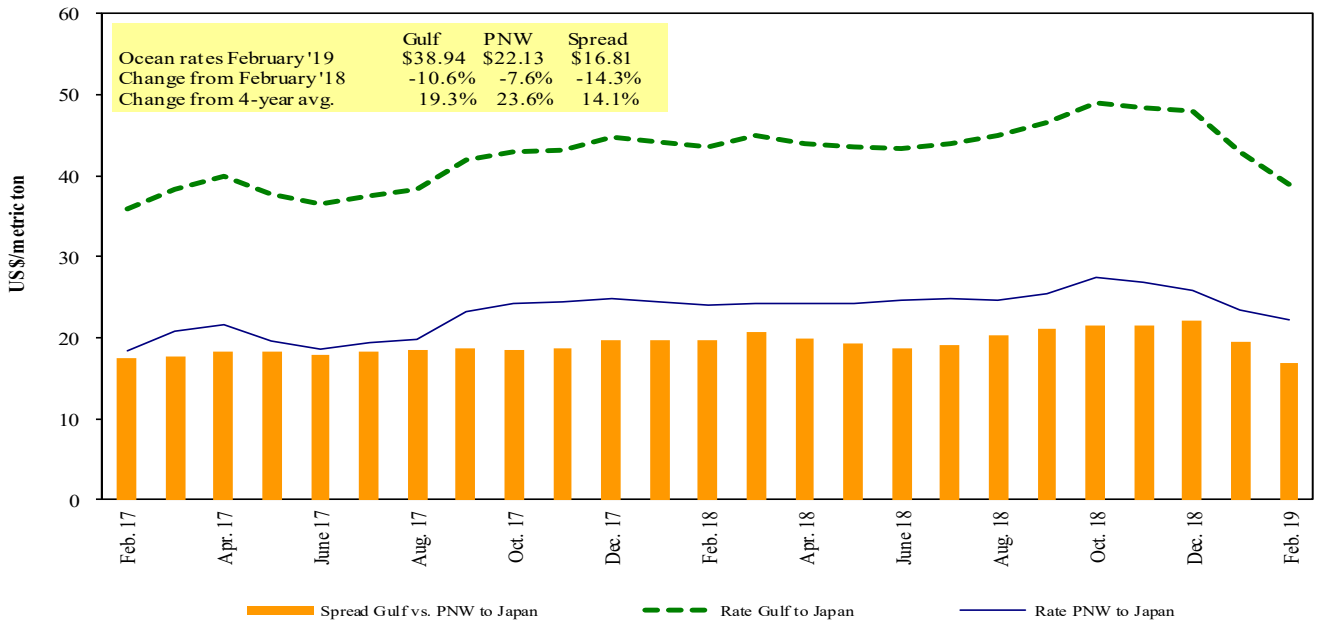
U.S. Gulf Vessel Loading Activity



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 03/09/2019

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	China	Heavy Grain	Mar 15/Apr 15	63,000	40.00
PNW	China	Heavy Grain	Mar 2/18	60,000	27.50
PNW	Oman	Wheat	Feb 18/28	25,000	69.94*
PNW	Taiwan	Heavy Grain	Sep 15/Oct 31	63,000	25.00
Brazil	China	Heavy Grain	Mar 20/30	66,000	13.30
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	Feb 13/26	60,000	26.75
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

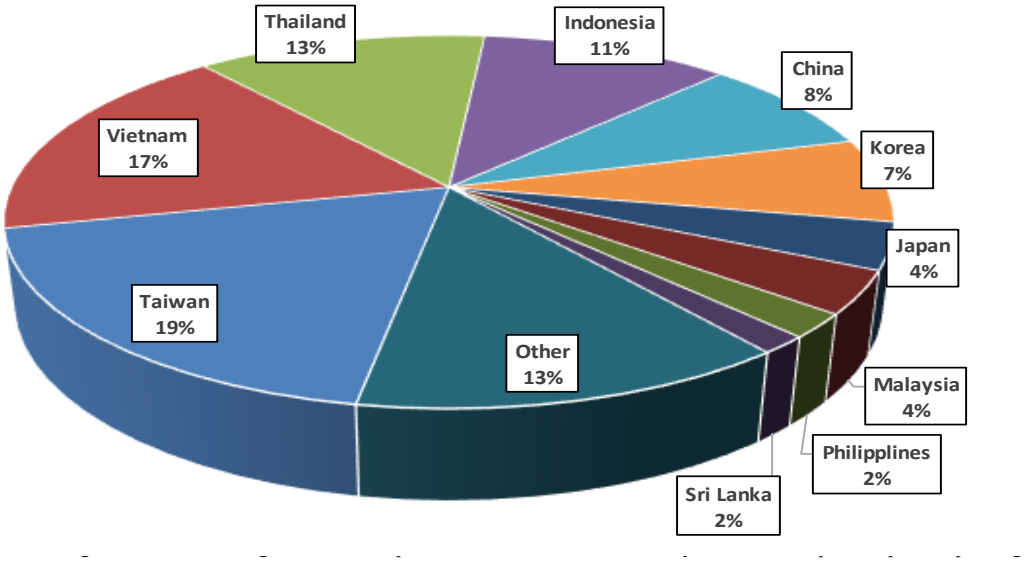
Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), F.O.B., except where otherwise indicated; op = option

*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.

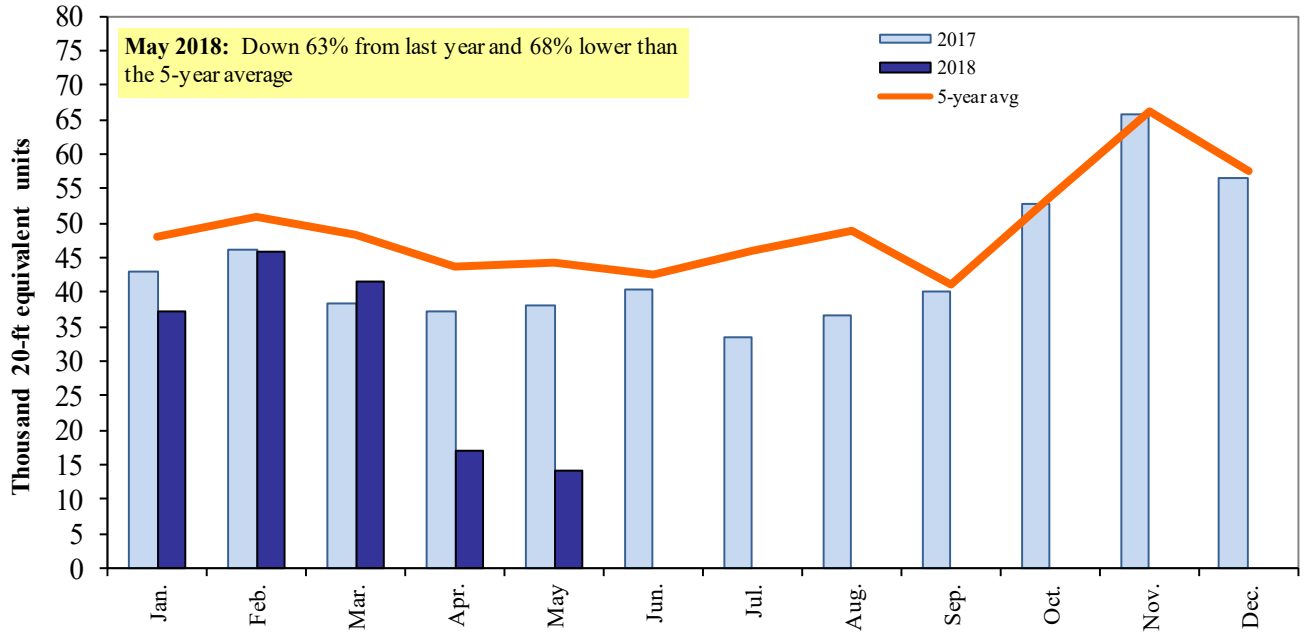
Figure 18
Top 10 Destination Markets for U.S. Containerized Grain Exports, January-May 2018



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.

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