USDA 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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May 23, 2019

Contents

The next release is May 30, 2019

WEEKLY HIGHLIGHTS

Grain Inspections Down from Past Week

For the week ending May 16, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions reached 2.13 million metric tons (mmt). This amount signifies a 13 percent decrease from the previous week, a 24 percent drop from last year, and a 5 percent decrease from the 3-year average. Inspections decreased for each of the three major grains, falling 18 percent for corn, 14 percent for wheat, and 3 percent for soybeans. Pacific Northwest (PNW) grain inspections dropped 44 percent from the previous week and were the lowest since early January. Mississippi Gulf inspections, however, decreased only 4 percent from the previous week.

Grain Barge Shipments Remain Low, While Upbound Fertilizer Movements Increase

Barge shipments of grain transiting Mississippi River Locks and Dam 27 (above St. Louis, MO), Arkansas River Lock and Dam 1 (near Tichnor, AR), and Ohio Olmsted Locks and Dam (near Olmsted, OH) remained low for the week ending May18. Total grain barge movements for the week were 369,250 tons, about the same as the week before and 54 percent less than the 3-year average. Year-to-date (YTD) grain movement by barge for calendar year 2019 is 9.2 million tons, 26 percent less than the same time last year (**GTR Table 10**). Due to lock closures because of flooding earlier in the year, YTD shipments of up-bound fertilizer by barge are 11 percent lower than the 3-year average, at 4.4 million tons. However, for the week ending May 18, barges shipped 370,500 tons of fertilizer, 42 percent more than the 3-year average for the same period. This surge reflects strong demand for fertilizer, as planting—currently well behind schedule—continues. The barge industry expects more delays in the coming weeks, as lock closures and high water conditions continue to challenge barge operations.

TRB Pre-Publication Study on Freight Transportation Resilience

Last week, the Transportation Research Board's (TRB) National Cooperative Freight Research Program released a pre-publication (not yet finalized) version of Research Report 39, Freight Transportation Resilience in Response to Supply Chain Disruptions. The purpose of the project "was to develop guidance for stakeholders to plan for, mitigate, and adapt to disruptions to supply chains with the aim of enhancing freight transportation system resilience." Among its contributions, the report identifies factors affecting resiliency, analyzes potential mitigation measures, and examines the dynamics of supply chain responses to system disruptions. Appendices A and C describe and model a flood event or lock closure on the Mississippi River. The model is designed to simulate the disruption of grain shipments by barge between Chicago and New Orleans.

Snapshots by Sector

Export Sales

For the week ending May 9, **unshipped balances** of wheat, corn, and soybeans totaled 25.3 mmt. This indicates a 20 percent decrease in outstanding sales, compared to the same time last year. Net weekly **wheat export sales** were .114 mmt, up 25 percent from the previous week. Net **corn export sales** totaled .553 mmt, up 92 percent from the previous week. At .249 mmt, net **soybean export sales** rebounded from negative sales during the previous week.

Rail

U.S. Class I railroads originated 24,176 **grain carloads** for the week ending May 11. This is 8 percent higher than the previous week, unchanged from last year, and 10 percent above the 3-year average.

Average June shuttle **secondary railcar** bids/offers (per car) were $158 above tariff for the week ending May 16. This is $71 below last week and $424 lower than last year. Average non-shuttle secondary railcar bids/offers were $225 above tariff, $50 below last week and $113 lower than last year.

Barge

For the week ending May 18, **barge grain movements** totaled 369,250 tons. This is 0.1 percent less than the previous week and 60 percent lower than the same period last year.

For the week ending May 18, 210 grain barges **moved down river.** This is 10 more barges than the previous week. There were 513 grain barges **unloaded in New Orleans**, unchanged from the previous week.

Ocean

For the week ending May 16, 29 **ocean-going grain vessels** were loaded in the Gulf. This is 9 percent less than the same period last year. Fifty-three vessels are expected to be loaded within the next 10 days. This is 23 percent more than the same period last year.

As of May 16, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $43.00. This is 1 percent more than the previous week. The rate from the Pacific Northwest to Japan was $23.50 per mt, a 2 percent increase from the previous week.

Fuel

For the week ending May 20, the **U.S. average diesel fuel price** increased 0.3 cents, from the previous week, to $3.163 per gallon. This price is 11.4 cents below the same week last year.

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Web: **http://dx.doi.org/10.9752/TS056.05-23-2019**

Feature Article/Calendar

Wheat Transportation and Landed Costs Mostly Down During First Quarter

During the first quarter of 2019, transportation costs for shipping wheat from Kansas and North Dakota to Japan decreased from the previous quarter. The costs for transporting wheat were down, except for rail rates from North Dakota to the Pacific Northwest (PNW), which increased from the previous quarter. Significantly lower trucking and ocean freight rates contributed to a substantial decrease in year-to-year transportation costs for shipping wheat from each state through the PNW and Gulf (*see tables 1 and 2*). Higher wheat farm values helped boost total landed costs for shipping wheat from Kansas. North Dakota wheat farm values were unchanged from year to year, with low trucking and ocean rates driving down landed costs. First quarter exports of wheat to Japan were below the same time last year, while remaining well above the fourth quarter of last year.

Quarter-to-quarter transportation costs for shipping wheat through the PNW to Japan from Kansas decreased 7 percent. North Dakota costs decreased 6 percent for the same period. Transportation costs to ship wheat through the Gulf decreased 11 percent for Kansas and 9 percent for North Dakota, quarter to quarter. Year-to-year transportation costs for shipping wheat to Japan through the PNW were down 5 percent from Kansas and down 4 percent from North Dakota. For the same period, transportation costs for shipping wheat through the Gulf decreased 7 percent from Kansas and 6 percent from North Dakota (*see tables 1 and 2).*

Table 1: Quarterly rate comparisons for shipping Kansas & North Dakota wheat to Japan through the PNW

	Kansas					North Dakota				
Mode	2018 1st qtr	2018 4th qtr	2019 1st qtr	Year-to-Year change	Quarterly change	2018 1st qtr	2018 4th qtr	2019 1st qtr	Year-to-Year change	Quarterly change
			$/metric ton	%	%			$/metric ton	%	%
Truck	13.87	12.10	8.78	-36.70	-27.44	13.87	12.10	8.78	-36.70	-27.44
Rail[1]	60.42	62.63	62.10	2.78	-0.85	55.67	56.96	58.46	5.01	2.63
Ocean vessel	24.25	26.69	22.98	-5.24	-13.90	24.25	26.69	22.98	-5.24	-13.90
Transportation Costs	98.54	101.42	93.86	-4.75	-7.45	93.79	95.75	90.22	-3.81	-5.78
Farm Value[2]	155.92	175.14	181.39	16.34	3.57	209.32	187.39	187.39	-10.48	0.00
Total Landed Cost	254.46	276.56	275.25	8.17	-0.47	303.11	283.14	277.61	-8.41	-1.95
Transport % of landed cost	38.73	36.67	34.10			30.94	33.82	32.50		

Table 2: Quarterly rate comparisons for shipping Kansas & North Dakota wheat to Japan through the Gulf

	Kansas					North Dakota				
Mode	2018 1st qtr	2018 4th qtr	2019 1st qtr	Year-to-Year change	Quarterly change	2018 1st qtr	2018 4th qtr	2019 1st qtr	Year-to-Year change	Quarterly change
			$/metric ton	%	%			$/metric ton	%	%
Truck	13.87	12.10	8.78	-36.70	-27.44	13.87	12.10	8.78	-36.70	-27.44
Rail[1]	41.42	42.66	42.66	2.99	0.00	58.90	60.14	60.14	2.11	0.00
Ocean vessel	44.27	48.46	40.86	-7.70	-15.68	44.27	48.46	40.86	-7.70	-15.68
Transportation Costs	99.56	103.22	92.30	-7.29	-10.58	117.04	120.70	109.78	-6.20	-9.05
Farm Value[2]	155.92	175.14	181.39	16.34	3.57	209.32	187.39	187.39	-10.48	0.00
Total Landed Cost	255.48	278.36	273.69	7.13	-1.68	326.36	308.09	297.17	-8.94	-3.54
Transport % of landed cost	38.97	37.08	33.72			35.86	39.18	36.94		

Source: USDA/AMS/TMP

[1] Rail tariff rates include fuel surcharges and revisions for heavy axle railcars and shuttle trains. The rail tariff rate is a base price of rail freight rates, but during periods of high rail demand or car shortages, high auction and secondary market rates could exceed the base rail tariffs per car

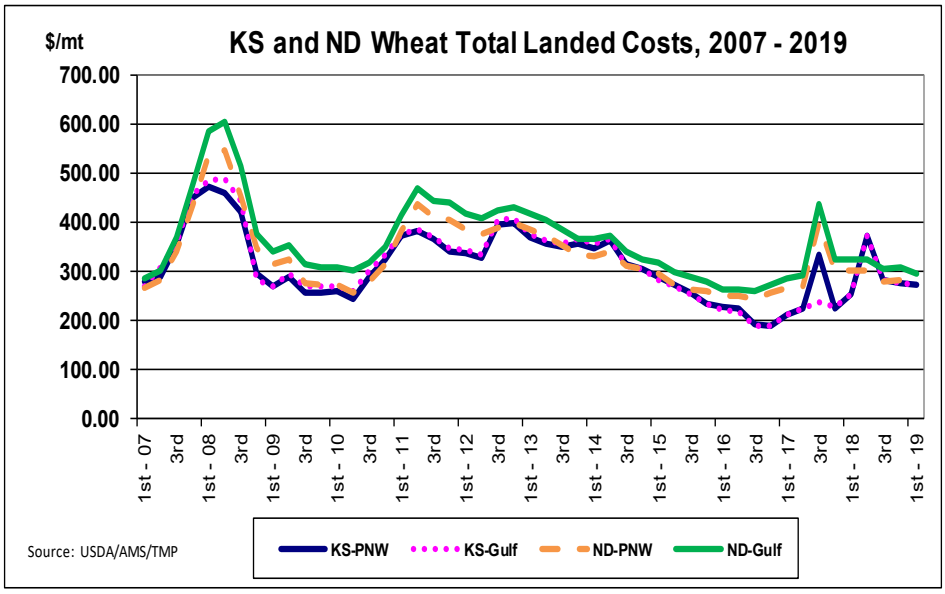
[2] Source: USDA/NASS, wheat prices for North Dakota (mainly HRS) and Kansas (mainly HRW)

Quarter-to-quarter ocean freight rates for shipping wheat to Japan decreased 14 percent from the PNW and 16 percent from the Gulf (*see tables 1, 2*). Quarter-to-quarter ocean rates in the PNW and Gulf remained low, as overall trade slowed down and coal trade started to decline (see *April 25, 2019 GTR*). Compared to last year, PNW ocean rates for shipping wheat to Japan decreased 5 percent, while Gulf ocean rates decreased 8 percent. Truck rates for transporting grain were down 27 percent from quarter to quarter, and down 37 percent from year to year due in part to lower diesel prices.

Quarter-to-quarter rail tariff rates for shipping wheat through the PNW to Japan from Kansas were down slightly, but up 3 percent from North Dakota (*see table 1*). Year-to-year rail rates for shipping wheat from the PNW from Kansas were up 3 percent and up 5 percent from North Dakota. Rail rates for shipping

wheat from each state to the Gulf remained unchanged (*see table 2*). Year-to-year rail rates to the Gulf increased 3 percent from Kansas and 2 percent from North Dakota.

During the first quarter of 2019, total landed costs for shipping wheat from Kansas to Japan decreased slightly from the previous quarter. Landed costs for shipping wheat from Kansas, however, increased 8 and 7 percent from year to year. Lower transportation costs caused a quarter-to-quarter decrease in landed costs from Kansas. Higher farm values caused year-to-year landed costs from Kansas to increase. Total landed costs for shipping from North Dakota decreased 2 and 4 percent from quarter to quarter. From year to year, North Dakota landed costs decreased 8 and 9 percent (*tables 1 and 2*). Lower trucking rates and farm values caused year-to-year landed costs to decrease from North Dakota.



The total landed costs, for shipping wheat were below the $300 mark for each route (*see figure*), ranging from $275 to $297 per metric ton (*tables 1 and 2*). First quarter Kansas transportation costs were below the previous quarter and last year and represented 34 and 33 percent of the total landed costs, respectively. Transportation costs represented 34 and 37 percent of the total landed costs for shipping wheat through the Gulf from North Dakota, which were below the previous quarter but above last year. (*tables 1 and 2*)

According to the Federal Grain Inspection Service, first quarter 2019 inspections of wheat for export to Japan, totaled .651 million metric tons (mmt). This is a decrease of 5 percent from last year but is unchanged from the fourth quarter of 2018. First quarter wheat exports to Japan represented 14 percent of total U.S. wheat exports. Total U.S. wheat exports in the first quarter reached 5.9 mmt, up 14 percent from last year, due to increasing global demand for wheat *(April 18, 2019 GTR)*. Currently, outstanding export balances of wheat are up 59 percent from the same time last year (GTR Table 12). According to USDA's *World Agricultural Supply and Demand Estimates* report in May, U.S. wheat exports for 2019/20 are projected to reach 24.5 mmt, down 3 percent from last year but unchanged from the April forecast.
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Grain Transportation Indicators

Table 1

Grain Transport Cost Indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Unit Train	Shuttle		Gulf	Pacific
05/22/19	212	291	213	229	192	167
05/15/19	212	285	223	n/a	190	163

[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)
n/a = not available due to flooding of the river
Source: Transportation & Marketing Program/AMS/USDA

Table 2

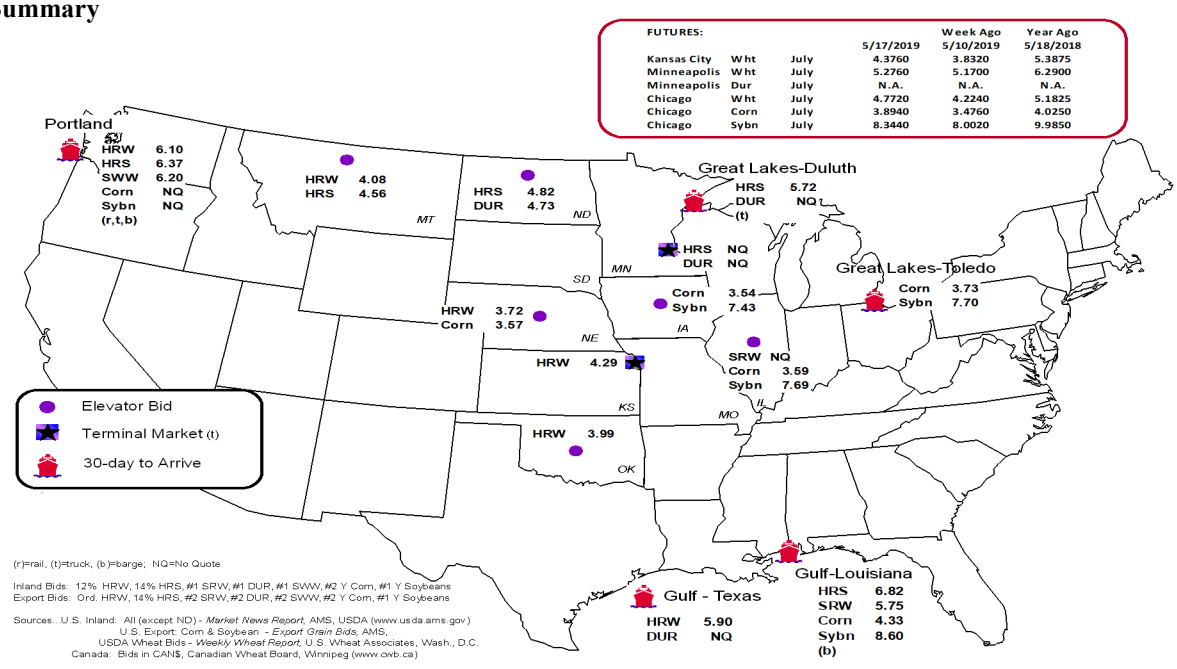
Market Update: U.S. Origins to Export Position Price Spreads ($/bushel)

Commodity	Origin--Destination	5/17/2019	5/10/2019
Corn	IL--Gulf	-0.74	-0.68
Corn	NE--Gulf	-0.76	-0.68
Soybean	IA--Gulf	-1.17	-1.14
HRW	KS--Gulf	-1.61	-1.43
HRS	ND--Portland	-1.55	-1.63

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]
5/15/2019[p]	949	1,038	4,913	392	7,292	5/11/2019	2,869
5/08/2019[r]	944	1,617	4,686	320	7,567	5/4/2019	2,881
2019 YTD[r]	16,532	23,284	110,543	7,322	157,681	2019 YTD	44,541
2018 YTD[r]	8,090	28,268	130,642	9,059	176,059	2018 YTD	40,305
2019 YTD as % of 2018 YTD	204	82	85	81	90	% change YTD	111
Last 4 weeks as % of 2018[2]	214	155	73	44	84	Last 4wks % 2018	99
Last 4 weeks as % of 4-year avg.[2]	387	87	113	96	116	Last 4wks % 4 yr	116
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.

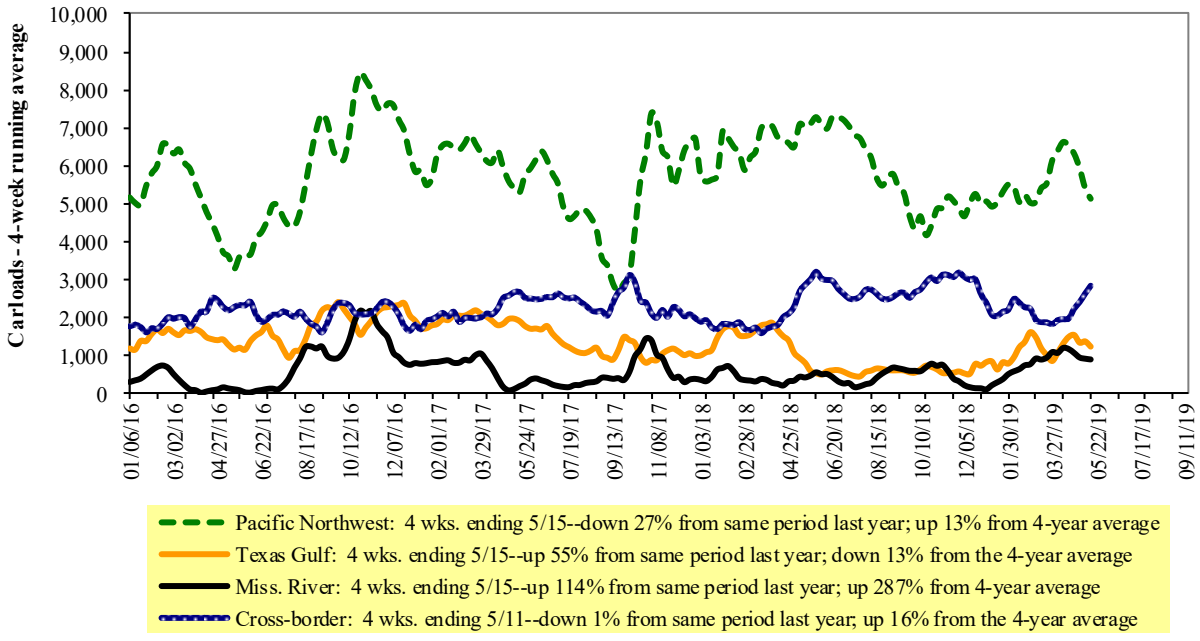
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

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	
5/11/2019	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,822	3,390	12,977	828	5,159	24,176	4,361	4,493
This week last year	2,170	2,274	12,860	1,175	5,728	24,207	4,164	5,628
2019 YTD	37,326	53,006	207,894	21,299	97,719	417,244	83,537	82,390
2018 YTD	36,986	47,100	235,158	17,891	100,353	437,488	70,666	85,793
2019 YTD as % of 2018 YTD	101	113	88	119	97	95	118	96
Last 4 weeks as % of 2018*	85	118	95	98	98	97	117	97
Last 4 weeks as % of 3-yr avg.**	101	121	113	101	97	108	133	111
Total 2018	98,978	133,162	635,458	48,638	267,713	1,183,949	211,818	244,697

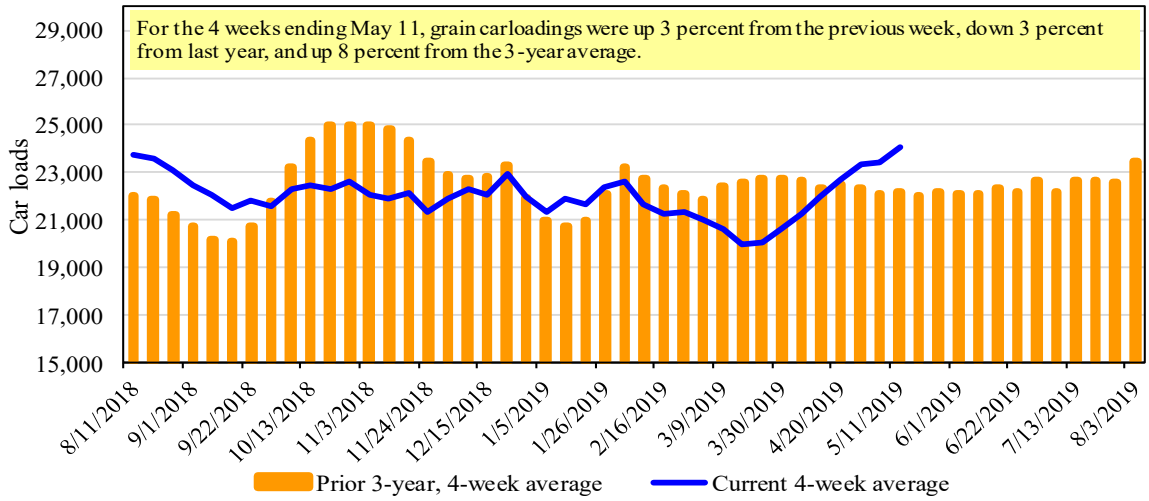
*The past 4 weeks of this year as a percent of the same 4 weeks last year.

**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							
5/16/2019		Jun-19	Jun-18	Jul-19	Jul-18	Aug-19	Aug-18	Sep-19	Sep-18
BNSF[3]	COT grain units	0	no offer	no bids	0	0	0	n/a	0
	COT grain single-car[5]	213	no offer	180	0	75	0	n/a	35
UP[4]	GCAS/Region 1	no offer	no offer	no offer	no offer	no offer	no offer	n/a	n/a
	GCAS/Region 2	no offer	no offer	no offer	no offer	no offer	no offer	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.

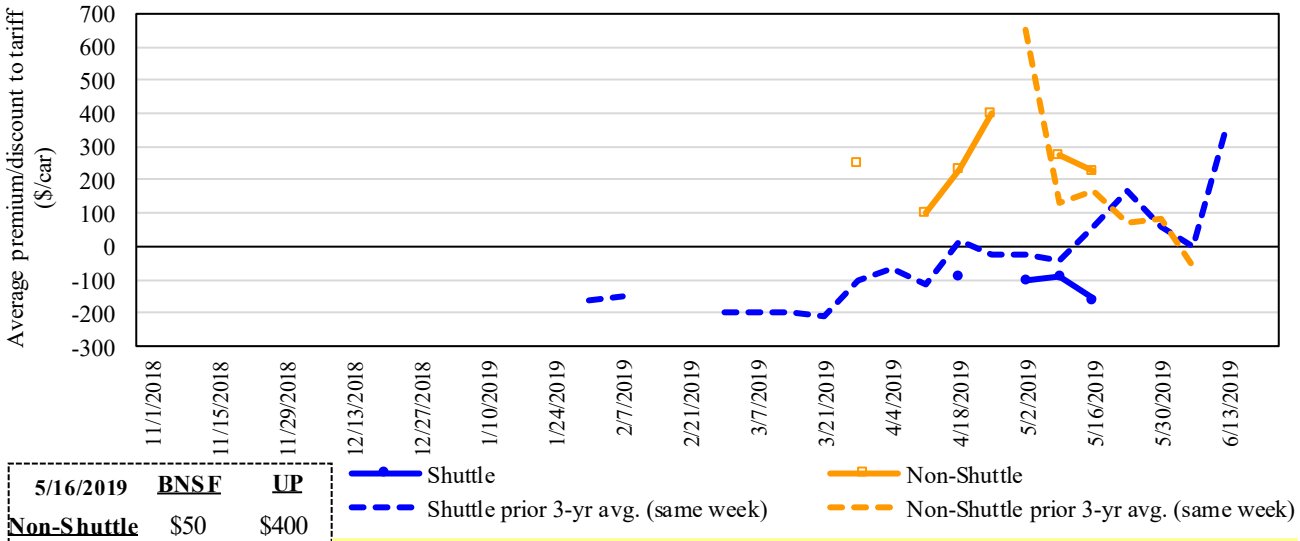
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

[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 June 2019, Secondary Market

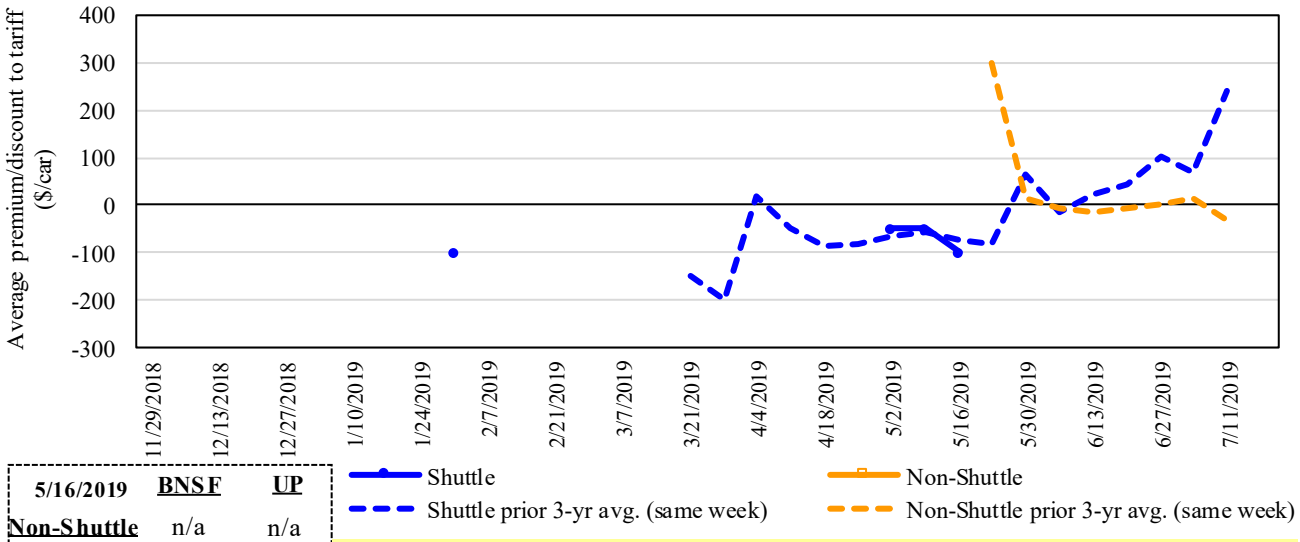


5/16/2019	BNSF	UP
Non-Shuttle	$50	$400
Shuttle	-$133	-$183

Average Non-shuttle bids/offers fell $50 this week, and are $175 below the peak.
Average Shuttle bids/offers fell $71 this week and are $71 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 July 2019, Secondary Market



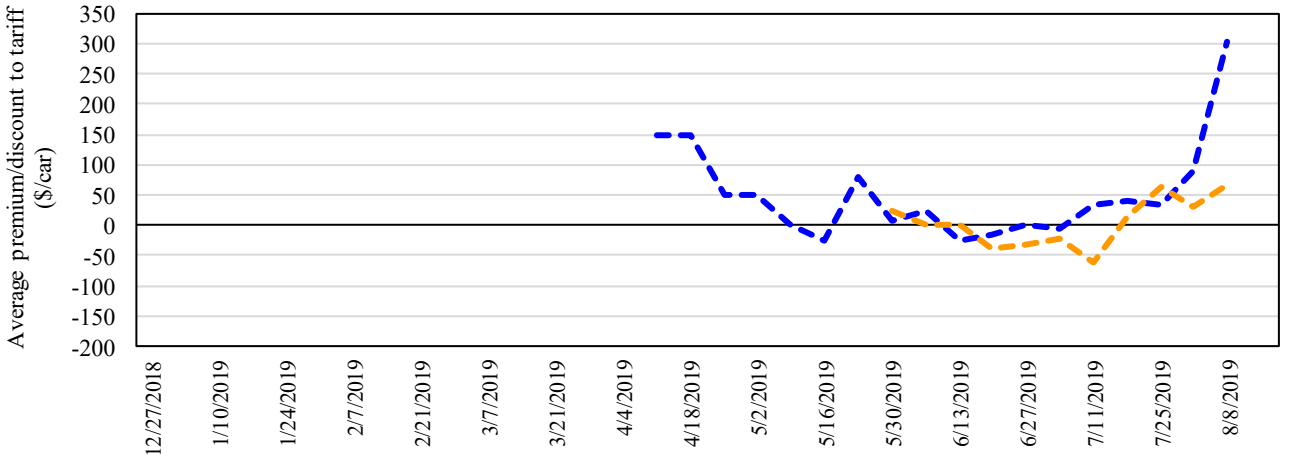
5/16/2019	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	n/a	-$100

There were no Non-Shuttle bids/offers this week.
Average Shuttle bids/offers fell $50 this week and are $50 below 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 August 2019, Secondary Market



5/16/2019	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: 5/16/2019	Delivery period					
		Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19
Non-shuttle	**BNSF-GF**	**50**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	0	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	(200)	n/a	n/a	n/a	n/a	n/a
	UP-Pool	**400**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	(100)	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	(25)	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**(133)**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	(58)	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	(733)	n/a	n/a	n/a	n/a	n/a
	UP-Pool	**(183)**	**(100)**	**n/a**	**n/a**	**150**	**n/a**
	Change from last week	(83)	(50)	n/a	n/a	25	n/a
	Change from same week 2018	(115)	(150)	n/a	n/a	(250)	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]

May, 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	$101	$40.56	$1.10	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	$178	$46.85	$1.28	0
	Sioux Falls, SD	Galveston-Houston, TX	$6,911	$0	$68.63	$1.87	2
	Northwest KS	Galveston-Houston, TX	$4,816	$195	$49.76	$1.35	0
	Amarillo, TX	Los Angeles, CA	$5,121	$271	$53.55	$1.46	2
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$201	$41.72	$1.06	2
	Toledo, OH	Raleigh, NC	$6,581	$0	$65.35	$1.66	4
	Des Moines, IA	Davenport, IA	$2,258	$43	$22.85	$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	$125	$37.08	$0.94	0
	Des Moines, IA	Los Angeles, CA	$5,327	$365	$56.52	$1.44	1
Soybeans	Minneapolis, MN	New Orleans, LA	$3,631	$194	$37.98	$1.03	-11
	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	$201	$49.12	$1.34	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	$320	$61.88	$1.68	2
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	$201	$39.73	$1.01	2
	Lincoln, NE	Galveston-Houston, TX	$3,880	$0	$38.53	$0.98	5
	Des Moines, IA	Amarillo, TX	$4,060	$157	$41.88	$1.06	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	$232	$49.72	$1.35	0
	Toledo, OH	Huntsville, AL	$4,634	$0	$46.02	$1.25	6
	Grand Island, NE	Portland, OR	$5,710	$327	$59.95	$1.63	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: May, 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	$139	$70.32	$1.91	2
	KS	Guadalajara, JA	$7,371	$424	$79.65	$2.17	2
	TX	Salinas Victoria, NL	$4,329	$85	$45.10	$1.23	1
Corn	IA	Guadalajara, JA	$8,528	$373	$90.95	$2.31	4
	SD	Celaya, GJ	$7,880	$0	$80.51	$2.04	2
	NE	Queretaro, QA	$8,207	$291	$86.83	$2.20	3
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	2
	MO	Tlalnepantla, EM	$7,573	$284	$80.28	$2.04	3
	SD	Torreon, CU	$7,480	$0	$76.43	$1.94	2
Soybeans	MO	Bojay (Tula), HG	$8,284	$346	$88.18	$2.40	3
	NE	Guadalajara, JA	$8,842	$374	$94.16	$2.56	3
	IA	El Castillo, JA	$9,110	$0	$93.08	$2.53	2
	KS	Torreon, CU	$7,714	$271	$81.58	$2.22	4
Sorghum	NE	Celaya, GJ	$7,527	$340	$80.38	$2.04	3
	KS	Queretaro, QA	$8,000	$174	$83.52	$2.12	2
	NE	Salinas Victoria, NL	$6,633	$140	$69.20	$1.76	3
	NE	Torreon, CU	$6,962	$255	$73.74	$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

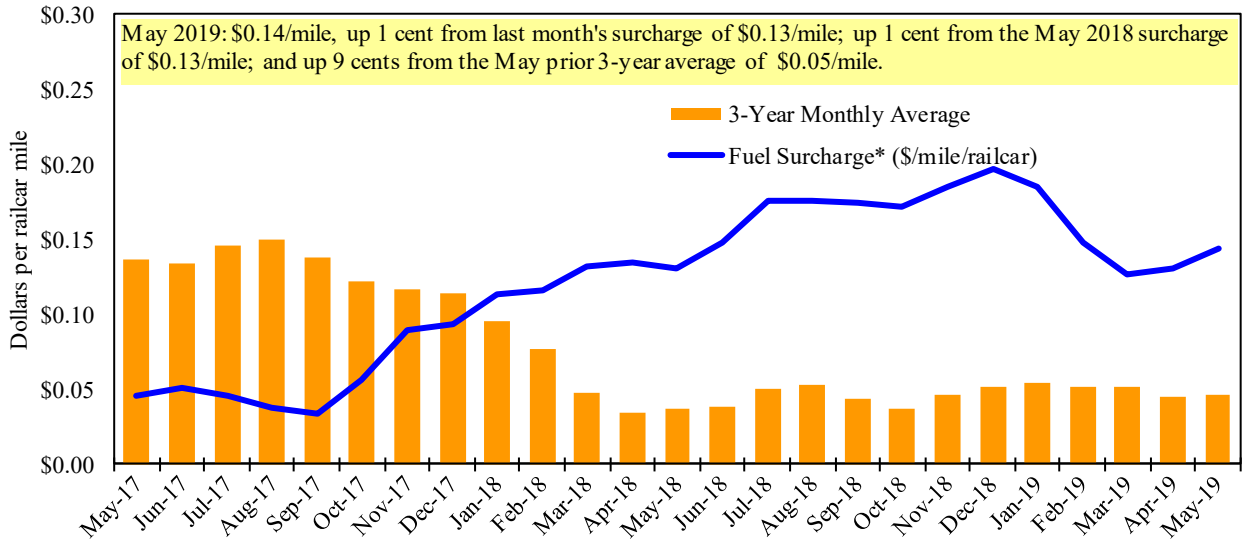
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

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

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

Figure 7

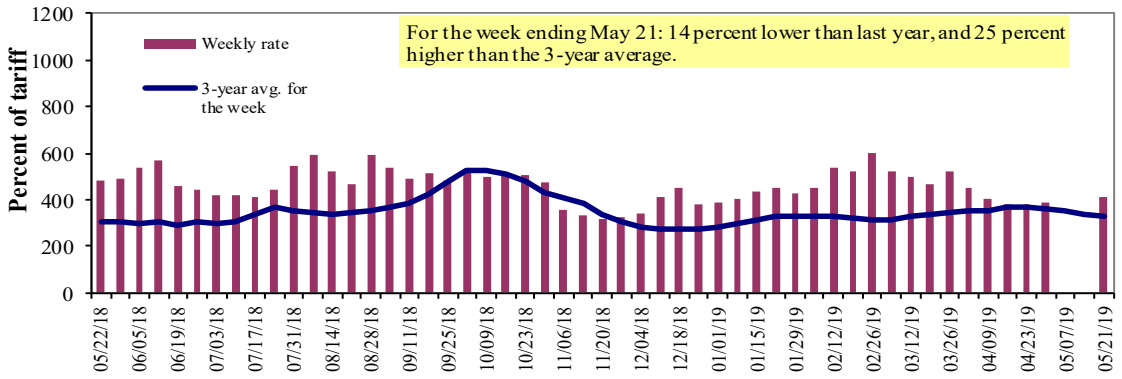
Railroad Fuel Surcharges, North American Weighted Average[1]



[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]	5/21/2019	-	-	413	283	328	328	287
	5/14/2019	-	-	-	-	338	338	275
$/ton	5/21/2019	-	-	19	11	15.38	13.25	9.01
	5/14/2019	-	-	-	-	15.85	13.66	8.64
Current week % change from the same week:								
	Last year	-	-	-14	-15	3	2	0
	3-year avg. [2]	-	-	25	19	36	35	31
Rate[1]	June	423	397	367	292	313	313	277
	August	437	407	407	295	328	328	292

[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.

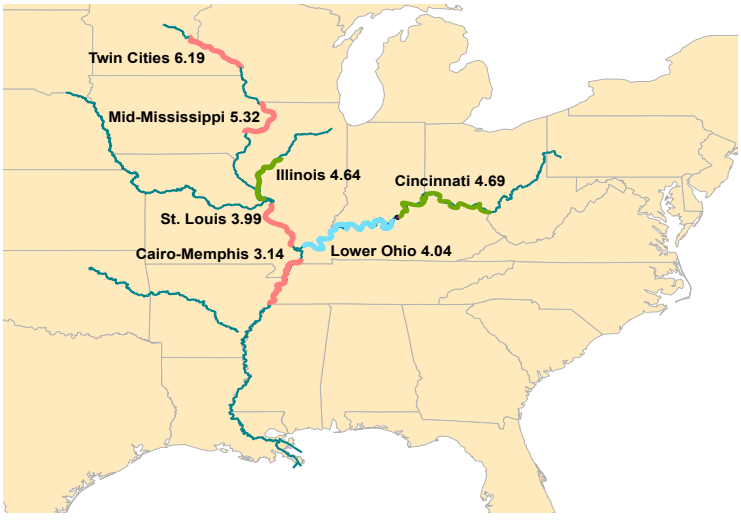
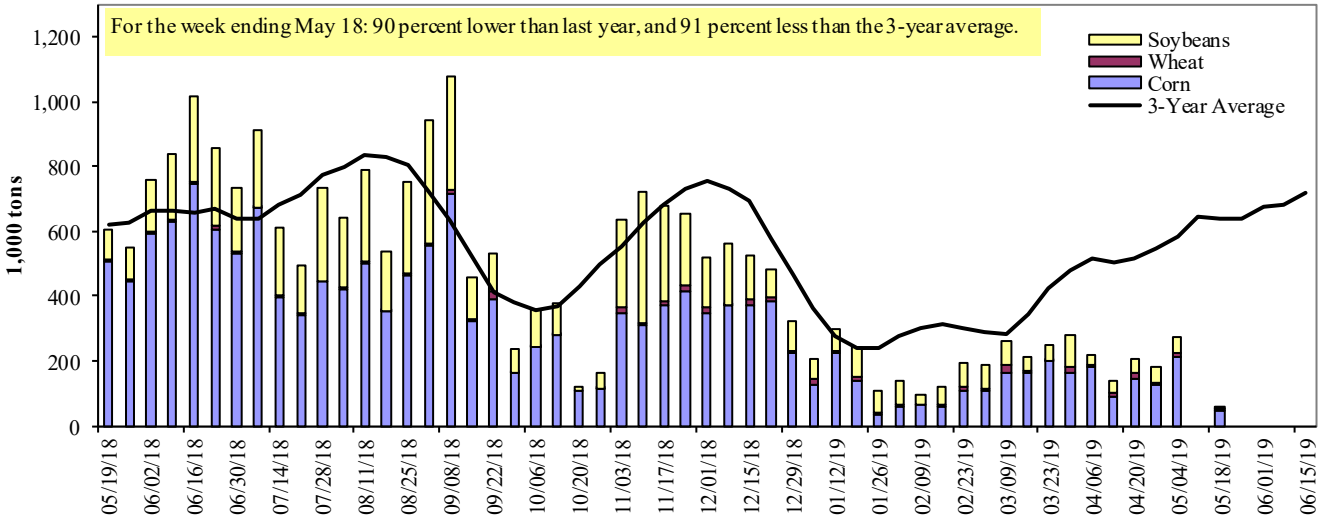


Figure 10

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 05/18/2019	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	0	0	0	0	0
Winfield, MO (L25)	2	0	2	0	3
Alton, IL (L26)	45	3	5	0	53
Granite City, IL (L27)	45	6	10	0	60
Illinois River (L8)	31	0	14	0	46
Ohio River (OLMSTED)	184	2	118	5	309
Arkansas River (L1)	0	0	0	0	0
Weekly total - 2019	229	8	127	5	369
Weekly total - 2018	667	24	225	0	915
2019 YTD[1]	4,773	837	3,525	66	9,199
2018 YTD[1]	7,731	591	4,098	56	12,476
2019 as % of 2018 YTD	62	142	86	116	74
Last 4 weeks as % of 2018[2]	42	91	64	202	49
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.

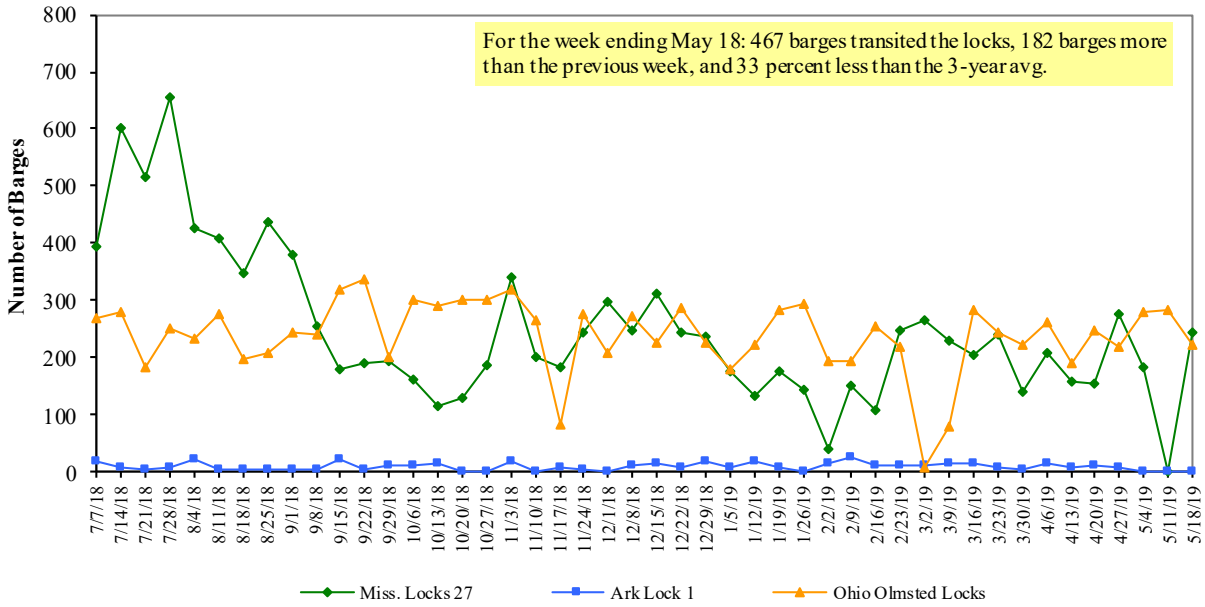
[2] As a percent of same period in 2018.

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

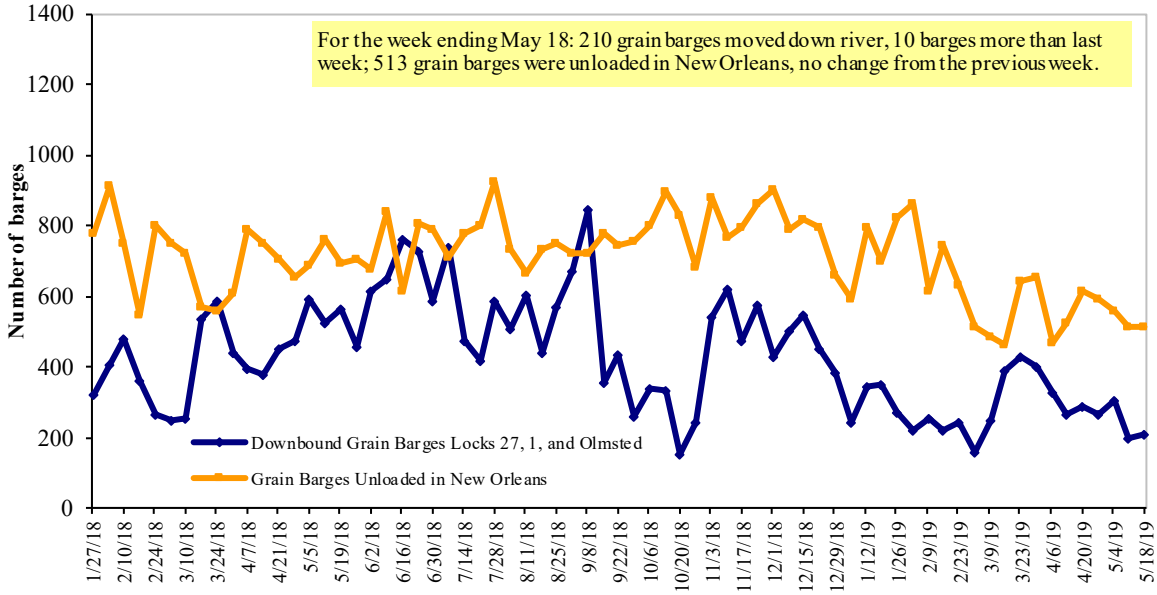
Upbound Empty Barges Transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 AMS FGIS

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 5/20/2019 (US $/gallon)

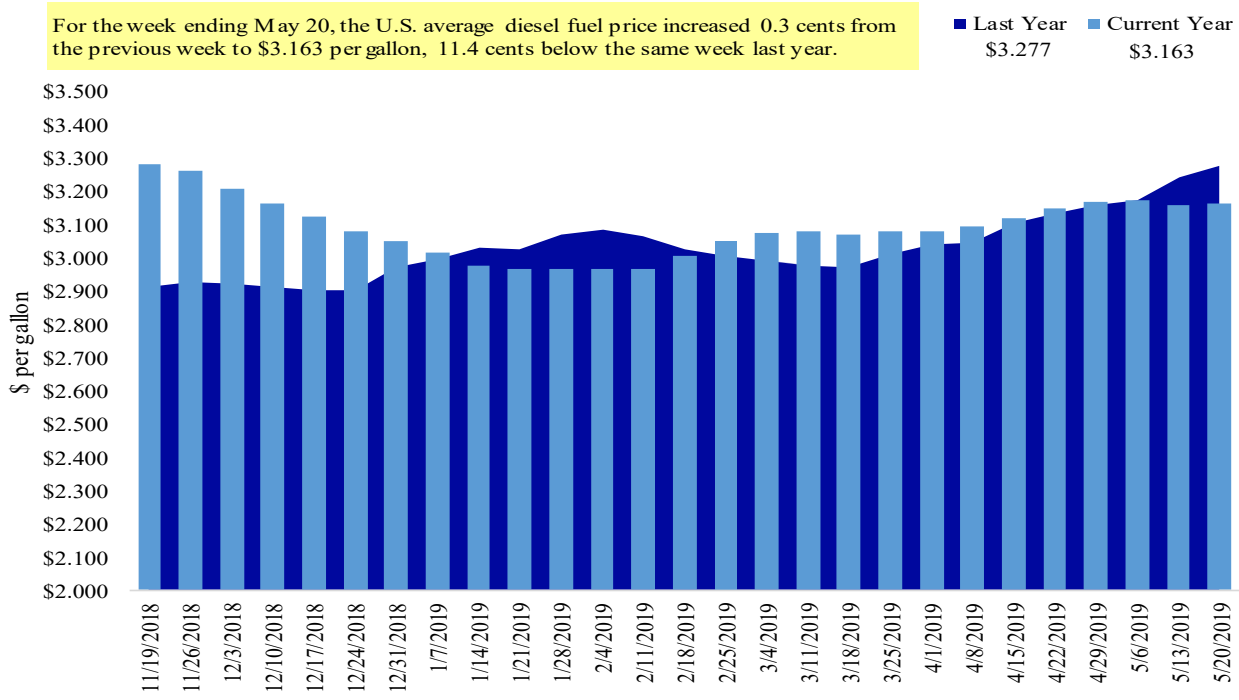
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	3.176	0.000	-0.095
	New England	3.238	0.000	-0.044
	Central Atlantic	3.375	0.010	-0.045
	Lower Atlantic	3.030	-0.005	-0.133
II	Midwest	3.049	0.003	-0.169
III	Gulf Coast	2.907	0.002	-0.148
IV	Rocky Mountain	3.192	0.011	-0.156
V	West Coast	3.794	0.004	0.029
	West Coast less California	3.352	-0.003	-0.151
	California	4.145	0.009	0.172
Total	U.S.	3.163	0.003	-0.114

[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]									
5/9/2019	1,642	476	738	610	52	3,518	9,897	11,873	25,288
This week year ago	465	311	848	573	22	2,219	18,424	10,795	31,438
Cumulative exports-marketing year[2]									
2018/19 YTD	7,700	2,861	6,333	4,807	448	22,149	37,001	33,364	92,514
2017/18 YTD	8,804	2,209	5,281	4,707	383	21,383	34,190	44,537	100,110
YTD 2018/19 as % of 2017/18	87	130	120	102	117	104	108	75	92
Last 4 wks as % of same period 2017/18	438	210	110	135	280	201	59	116	88
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 5/09/2019	Total Commitments[2]			% change current MY from last MY	Exports[3] 3-year avg 2015-2017
	2019/20 Next MY	2018/19 Current MY	2017/18 Last MY		
		- 1,000 mt -			
Mexico	1,616	14,831	13,220	12	13,691
Japan	540	10,525	9,836	7	11,247
Korea	0	3,752	4,316	(13)	4,754
Colombia	5	4,278	4,052	6	4,678
Peru	0	1,992	2,663	(25)	2,975
Top 5 Importers	**2,161**	**35,377**	**34,086**	**4**	**37,344**
Total US corn export sales	**2,330**	**46,898**	**52,614**	**(11)**	**53,184**
% of Projected	4%	80%	85%		
Change from prior week[2]	**81**	**553**	**983**		
Top 5 importers' share of U.S. corn export sales	93%	75%	65%		70%
USDA forecast, May 2019	**57,888**	**58,524**	**62,036**	**(6)**	
Corn Use for Ethanol USDA forecast, May 2019	**139,700**	**138,430**	**142,367**	**(3)**	

(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 5/09/2019	Total Commitments[2]			% change current MY from last MY	Exports[3] 3-yr avg. 2015-2017
	2019/20 Next MY	2018/19 Current MY	2017/18 Last MY		
		- 1,000 mt -			- 1,000 mt -
China	63	13,276	28,735	(54)	31,228
Mexico	484	4,695	4,137	13	3,716
Indonesia	5	1,903	2,042	(7)	2,250
Japan	106	2,204	1,926	14	2,145
Netherlands	0	1,848	1,458	27	2,209
Top 5 importers	**658**	**23,926**	**38,298**	**(38)**	**41,549**
Total US soybean export sales	**1,419**	**45,237**	**55,331**	**(18)**	**55,113**
% of Projected	3%	94%	95%		
Change from prior week[2]	**303**	**249**	**207**		
Top 5 importers' share of U.S. soybean export sales	46%	53%	69%		**75%**
USDA forecast, May 2019	**53,134**	**48,365**	**58,011**	**83**	

(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 5/09/2019	Total Commitments[2]			% change current MY from last MY	Exports[3] 3-yr avg 2015-2017
	2019/20 Next MY	2018/19 Current MY	2017/18 Last MY		
		- 1,000 mt -			- 1,000 mt -
Mexico	256	3,300	2,957	12	2,781
Japan	166	2,753	2,928	(6)	2,649
Philippines	491	3,209	2,597	24	2,441
Korea	217	1,439	1,462	(2)	1,257
Nigeria	375	1,628	1,187	37	1,254
Indonesia	0	1,420	1,141	24	1,076
Taiwan	74	1,107	1,137	(3)	1,066
China	0	42	900	(95)	944
Colombia	114	654	368	78	714
Thailand	158	757	664	14	618
Top 10 importers	**1,851**	**16,309**	**15,342**	6	**14,800**
Total US wheat export sales	**2,977**	**25,667**	**23,602**	**9**	**22,869**
% of Projected	12%	102%	96%		
Change from prior week[2]	**419**	**114**	**63**		
Top 10 importers' share of U.S. wheat export sales	62%	64%	65%		65%
USDA forecast, May 2019	**24,523**	**25,204**	**24,550**	**3**	

(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 05/16/19	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	276	463	60	5,484	4,644	118	142	122	13,315
Corn	213	404	53	5,220	8,276	63	67	98	20,024
Soybeans	0	0	n/a	4,018	4,312	93	0	0	7,719
Total	**489**	**867**	**56**	**14,722**	**17,232**	**85**	**76**	**97**	**41,058**
Mississippi Gulf									
Wheat	233	210	111	2,264	1,728	131	254	211	3,896
Corn	363	431	84	10,447	13,049	80	60	68	33,735
Soybeans	411	412	100	9,730	9,637	101	120	192	28,124
Total	**1,007**	**1,053**	**96**	**22,440**	**24,414**	**92**	**88**	**108**	**65,755**
Texas Gulf									
Wheat	187	214	88	2,580	1,627	159	366	182	3,198
Corn	59	0	n/a	331	265	125	170	181	730
Soybeans	0	0	n/a	0	0	n/a	n/a	n/a	69
Total	**247**	**214**	**115**	**2,911**	**1,892**	**154**	**306**	**181**	**3,997**
Interior									
Wheat	39	26	148	639	590	108	116	116	1,614
Corn	171	141	121	2,769	3,217	86	71	80	8,650
Soybeans	97	123	79	2,505	2,473	101	75	118	6,729
Total	**306**	**290**	**106**	**5,913**	**6,280**	**94**	**76**	**95**	**16,993**
Great Lakes									
Wheat	63	12	534	231	160	144	162	174	894
Corn	0	0	n/a	0	93	0	0	0	404
Soybeans	11	0	n/a	53	52	103	21	31	1,192
Total	**74**	**12**	**625**	**284**	**305**	**93**	**79**	**101**	**2,491**
Atlantic									
Wheat	0	0	n/a	32	64	51	n/a	0	69
Corn	0	7	0	56	53	107	32	97	138
Soybeans	4	5	70	511	941	54	40	77	2,047
Total	**4**	**12**	**30**	**599**	**1,057**	**57**	**39**	**72**	**2,253**
U.S. total from ports*									
Wheat	798	925	86	11,229	8,813	127	183	148	22,986
Corn	806	983	82	18,824	24,952	75	64	80	63,682
Soybeans	523	541	97	16,817	17,414	97	79	131	45,879
Total	**2,127**	**2,449**	**87**	**46,870**	**51,179**	**92**	**86**	**105**	**132,547**

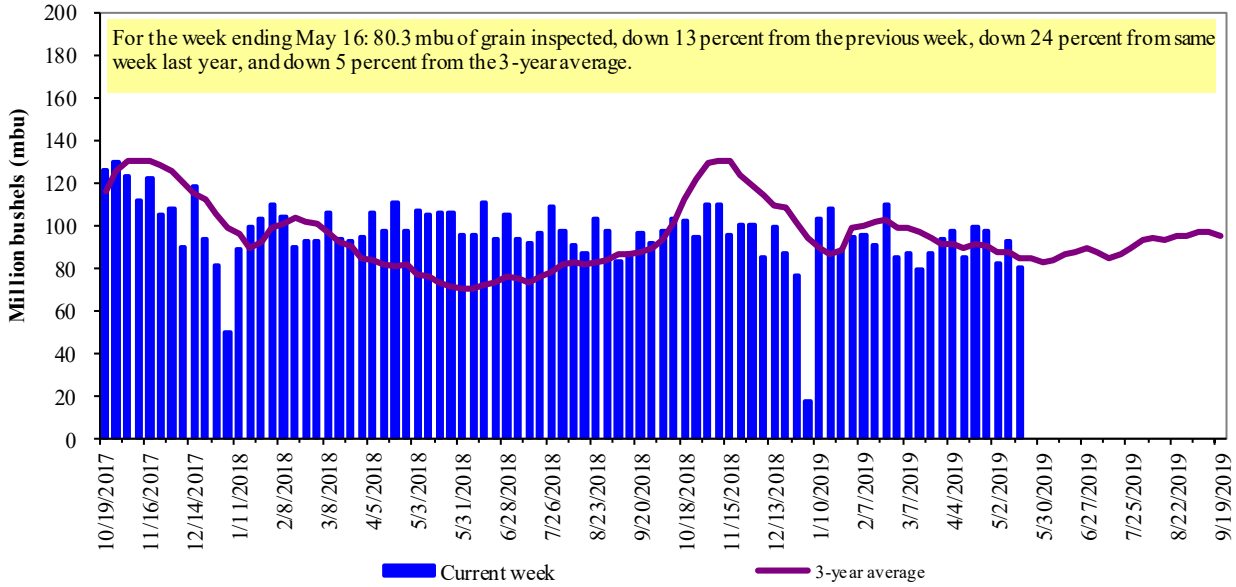
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

Source: USDA/Federal Grain Inspection Service (www.gipsa.usda.gov/fgis); 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 53 percent of the U.S. export grain shipments departed through the U.S. Gulf region in 2018.

Figure 14

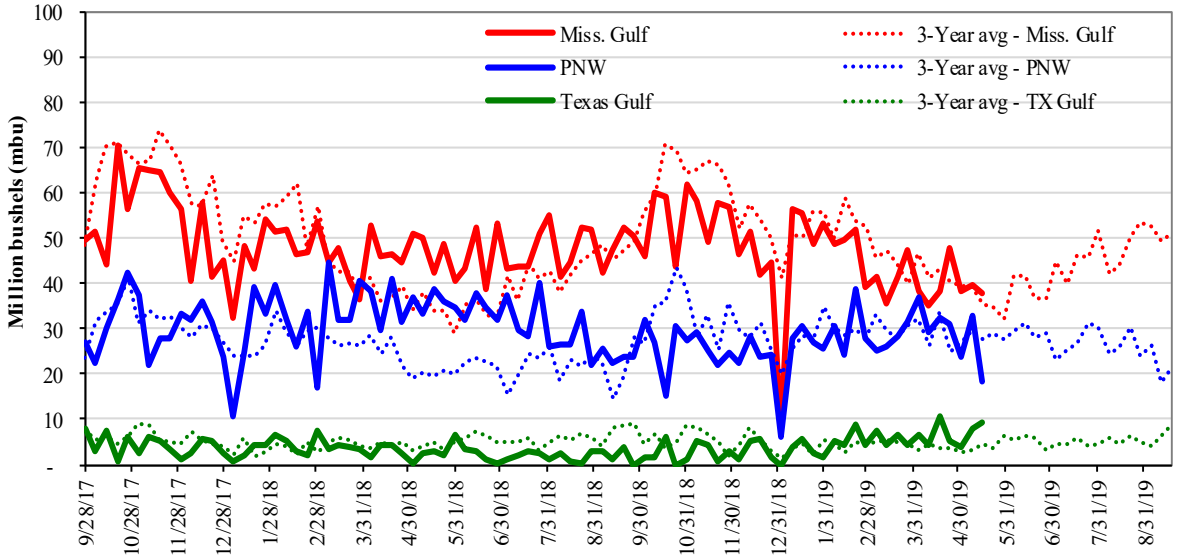
U.S. grain inspected for export (wheat, corn, and soybeans)



Source: USDA/Federal Grain Inspection Service (www.gipsa.usda.gov/fgis)
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 05/16/19 inspections (mbu):	
Mississippi Gulf:	38.0
PNW:	18.5
Texas Gulf:	9.2

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last Week:	down 5	up 17	down 1	down 44
Last Year (same week):	down 10	up 198	up 4	down 52
3-yr avg. (4-wk.mov. Avg):	down 2	up 157	up 12	down 32

Source: USDA/Federal Grain Inspection Service (www.gipsa.usda.gov/fgis)

Ocean Transportation

Table 17

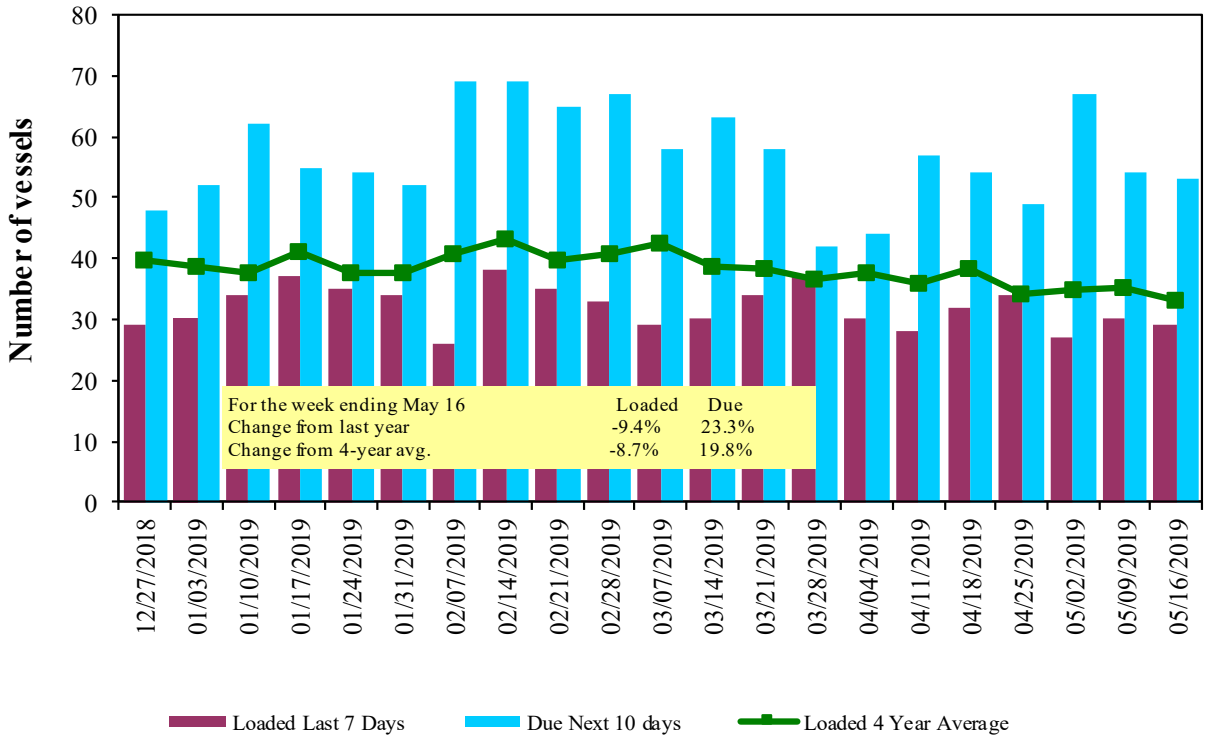
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
5/16/2019	37	29	53	14
5/9/2019	37	30	54	11
2018 range	(23..88)	(24..41)	(38..67)	(4..30)
2018 avg.	40	34	54	17

Source: Transportation & Marketing Programs/AMS/USDA

Figure 16

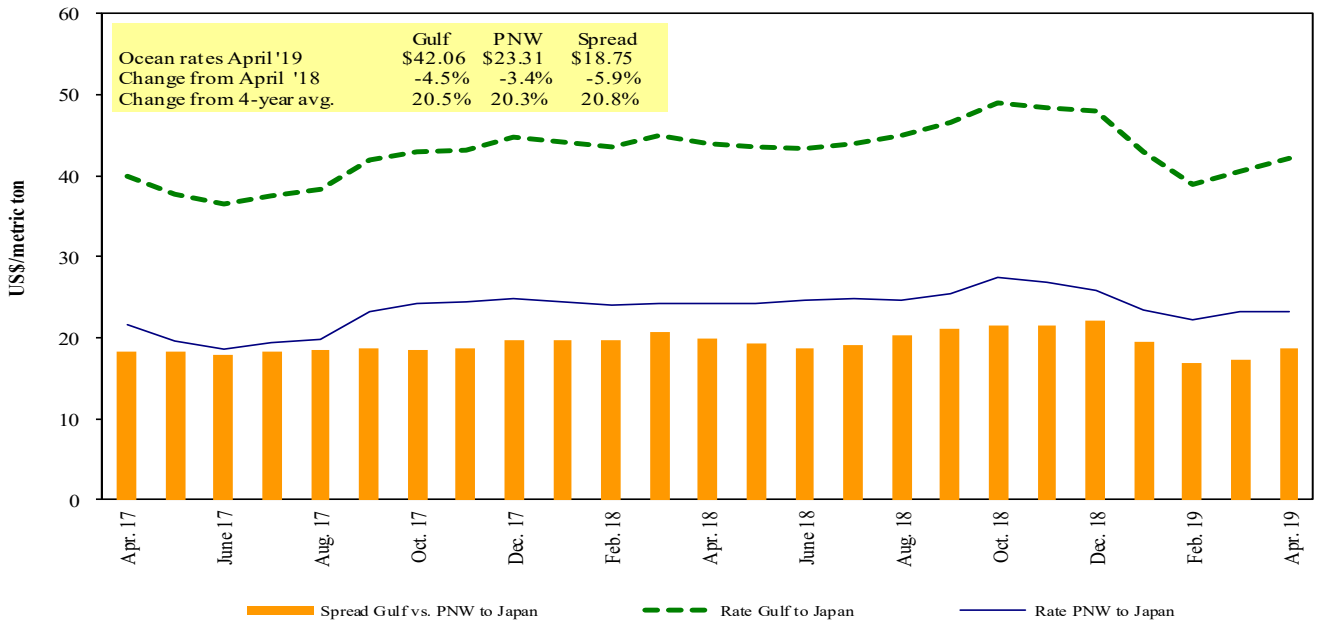
U.S. Gulf Vessel Loading Activity



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 05/18/2019

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	China	Heavy Grain	Jun 1/30	63,000	42.00
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*
Brazil	China	Heavy Grain	Apr 20/May 5	63,000	33.00
Brazil	China	Heavy Grain	Apr 15/30	63,000	32.50
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
River Plate	China	Heavy Grain	Apr 21/30	65,000	37.85

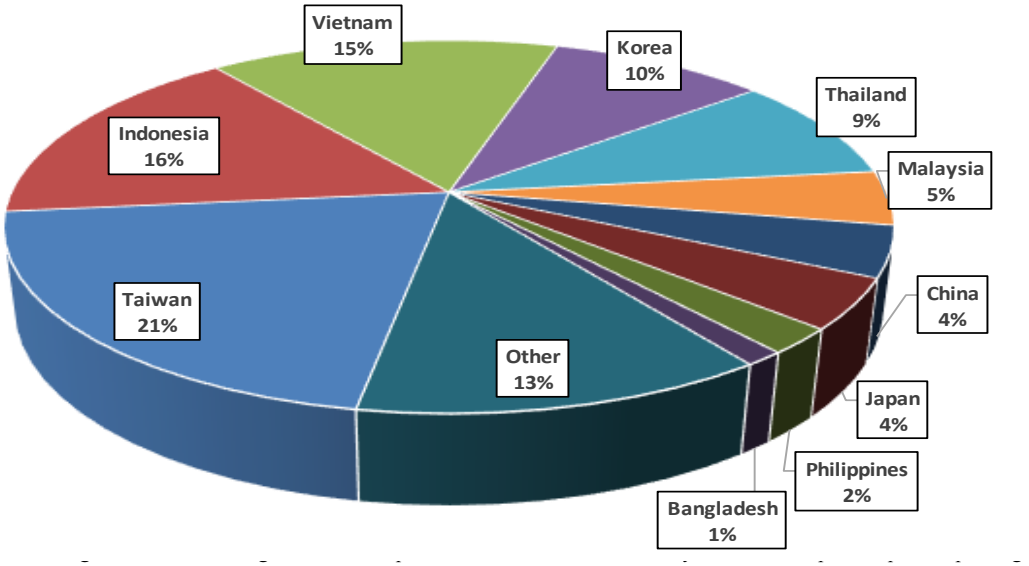
Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), F.O.B., except where otherwise indicated; op = option

*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.

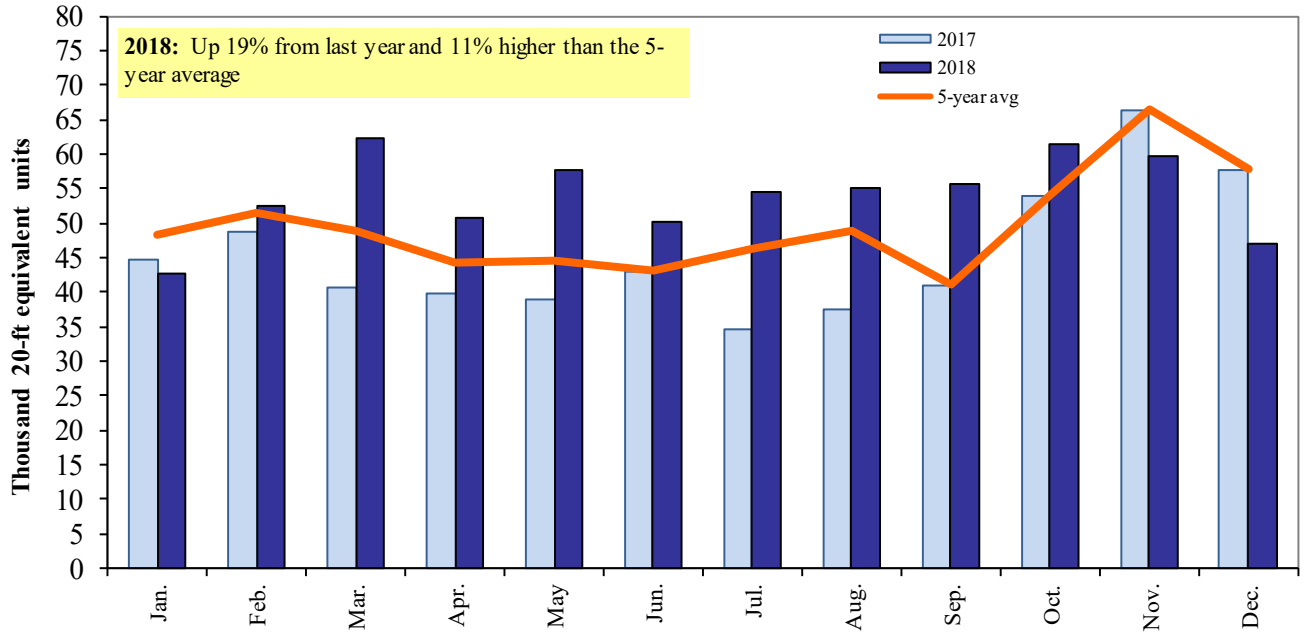
Figure 18
Top 10 Destination Markets for U.S. Containerized Grain Exports, 2018



Service (PIERS) data

Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: 1001, 100190, 1002, 1003 100300, 1004, 100400, 1005, 100590, 1007, 100700, 1102, 110100, 230310, 110220, 110290, 1201, 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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