USDA United States Department of Agriculture

Grain Transportation Report

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

Contact Us

May 9, 2019

Contents

The next release is May 16, 2019

WEEKLY HIGHLIGHTS

Wheat and Corn Drives Grain Inspections Down

For the week ending May 2, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions reached 2.10 million metric tons (mmt). The amount indicates an 18 percent decrease from the previous week, an 18 percent decrease from last year, and a 10 percent decrease from the 3-year average. The decrease in inspections was driven by a 26 percent drop in wheat inspections and a 29 percent drop in corn inspections. Soybean inspections, however, continued to increase; rising 18 percent from week to week. Pacific Northwest (PNW) grain inspections decreased 22 percent from the previous week, and Mississippi Gulf grain inspections decreased 21 percent.

Flood Waters Stop Mississippi River Traffic

Rising flood waters have stopped Mississippi River traffic at St. Louis, MO. On May 3, river levels at St. Louis exceeded 38 feet, which is the threshold at which the U.S. Coast Guard closes the river to all vessel traffic in the St. Louis area. Forecasts indicate river levels will not recede below the 38-foot stage until mid-May. Further upstream, river conditions have been very disruptive. For example, year-to-date (YTD) there has been no grain traffic at Mississippi River Locks and Dam (L&D)15, (near Davenport, IA). On average, by the first week of May, L&D 15 has a YTD total of 1.3 million tons of down-bound grain. For the week ending on May 4, YTD down-bound barge tonnages at Mississippi River Locks 27 (upstream from the St. Louis closure) were 3.6 million tons, down 43 percent from the 5-year average. Down-bound grain on the Ohio River has also been impacted. Year-to-date grain tonnages at Ohio River Olmsted L&D were 4.0 million tons, 11 percent lower than the 5-year average. However, YTD rail deliveries of grain to the Mississippi Gulf were 14,639 cars, 102 percent higher than last year at this time.

UP Announces Plans to Simplify Chicago Intermodal Complex

Union Pacific Railroad (UP) announced it will be idling its Global 3 Intermodal Ramp in Rochelle, IL, in early July. UP seeks to simplify operations through the congested Chicago region by allowing its Global 2 and Global 4 facilities to focus on a specific business segment. The Global 2 facility will distribute domestic intermodal volume while the Global 4 facility will handle predominantly international intermodal shipments. UP hopes the new configurations will make operations faster and more efficient, while offering benefits for its customers as well. UP reports, "By condensing specific shipment types to a single facility, customers will likely benefit from fewer vendors to manage, simplified billing and, in some cases, reduced chassis repositioning costs." The Chicago region originates the majority of containerized grain exports in the country. See the UP website for more information.

Snapshots by Sector

Export Sales

For the week ending April 25, **unshipped balances** of wheat, corn, and soybeans totaled 28.9 mmt. This indicates a 16 percent decrease in outstanding sales, compared to the same time last year. Net weekly **wheat export sales** were .122 mmt, down 71 percent from the previous week. Net **corn export sales** totaled .587 mmt, down 25 percent from the previous week. Net **soybean export sales** totaled .250 mmt, down 58 percent from the past week.

Rail

U.S. Class I railroads originated 25,048 **grain carloads** for the week ending April 27. This is up 1 percent from the previous week, 5 percent from last year, and 11 percent from the 3-year average.

Average May shuttle **secondary railcar** bids/offers (per car) were $90 below tariff for the week ending May 2, down $181 from last week, and $281 below last year. Average non-shuttle secondary railcar bids/offers were $263 above tariff, down $88 from last week, and $805 below last year.

Barge

For the week ending May 4, **barge grain movements** totaled 498,644 tons. This is 18 percent higher than the previous week and 44 percent lower than the same period last year.

For the week ending May 4, 307 grain barges **moved down river.** This is 39 more barges than the previous week. There were 559 grain barges **unloaded in New Orleans**, 6 percent less than the previous week.

Ocean

For the week ending May 2, 27 **ocean-going grain vessels** were loaded in the Gulf. This is 18 percent less than the same period last year. Sixty-seven vessels are expected to be loaded within the next 10 days. This is 68 percent more than the same period last year.

As of May 2, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $42.50. This is 1 percent more than the previous week. The rate for the Pacific Northwest to Japan was $23.00 per mt. This is unchanged from the previous week.

Fuel

For the week ending May 6, the **U.S. average diesel fuel price** increased 0.2 cents, from the previous week, to $3.171 per gallon. This price is unchanged from the same week last year.

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Feature Article/Calendar

Agricultural Transportation Session at the 2019 Transportation Research Forum

The Transportation Services Division (TSD) of USDA's Agricultural Marketing Service (AMS) sponsored a session on agricultural transportation research during this year's 60th Annual Meeting of the Transportation Research Forum (TRF).[1] The meeting was held May 2-4, 2019, in Washington, DC. During the TRF Forum, presenters shared their latest findings on a range of research, spanning different modes, trends, policy, logistics, new technologies, and more. In addition, TSD also sponsored a "Best Student Ag Transport Paper" award to encourage emerging scholars to conduct new, high-quality research.

Agricultural Transportation Session

The agricultural transportation session contained four presentations from researchers whose work is funded through TSD cooperative research agreements. This section provides a brief summary of the key points from each presentation.

Presentation I: "Prioritization of Agriculture Transportation Projects"

Dr. David Ellis (recently retired from Texas A&M Transportation Institute) presented a method of explaining the importance of investing in transportation infrastructure projects using a cost/benefit analysis, from selected highway networks used to transport agricultural products. The study identified six major components to measure the benefits of improving the transportation system: (1) vehicle operating cost saving; (2) business time and reliability cost saving; (3) personal time and reliability cost saving; (4) safety reduction value; (5) shipper logistics productivity improvement; and (6) social and environmental value. The method ranks the overall value to agriculture of competing projects and relies on economic data to form a story, to which people—such as the public and policy makers—can relate.

Dr. Ellis offered the following steps to enhance the public's awareness and increase the chances that beneficial transportation projects for agriculture receive funding: (1) clearly identify the problem; (2) recognize the best solutions; (3) estimate the costs of the best solutions; (4) identify and estimate the benefits; (5) identify potential partners to implement the solutions; and (6) always provide a solution.

Presentation II: "Measuring Market Power in Wheat Transportation"

Dr. James Nolan and Chi Su, a research assistant, of the University of Saskatchewan, presented research that examined market structure (the level of competition) over time in two major rail-duopoly wheat corridors: (1) North Dakota to Minnesota, and (2) Kansas/Oklahoma to Texas.[2] They developed three models for each region and applied data from the Surface Transportation Board's Carload Waybill Sample (Waybill). Their preliminary results suggest the Kansas/Oklahoma to Texas corridor is relatively more competitive than the North Dakota to Minnesota corridor. Overall, the work attempts to better understand railroad price and behavior within major wheat transportation corridors.

Presentation III: "Rail Prices for Grain Shipments over Time and Geography"

Dr. Wesley Wilson (University of Oregon) highlighted the need to better understand the factors behind rail rates for grain shippers. His research shows transportation rates are a key determinant of grain shipment patterns, such as the degree to which grain shipments occur between certain origins and destinations, and the economic well-being of shippers.

[1] The Transportation Research Forum is an independent organization of transportation professionals aiming to provide an impartial meeting ground for carriers, shippers, researchers, government officials, and other stakeholders to exchange information and ideas related to passenger and freight transportation.

[2] A "duopoly" is a type of market dominated by two major suppliers.

He discussed trends in shipment characteristics and railroad rates, specifically focusing on trends for corn, soybeans, and wheat. For instance, rail rates for grain (and other commodities) generally increased from about 2003 to 2014 and fell through 2016. Rail shipment distances have increased for all three commodities, most notably for soybeans, which traveled about 650 miles (on average) in 2000 and 1,470 miles in 2015.

A major goal of the research was to identify the determinants of rail rates using an econometric model, which includes factors such as shipment characteristics and measures of intramodal and intermodal competition. The study applied a variety of data using the Waybill and Waterborne Commerce Statistics from the Army Corps of Engineers.

The preliminary findings show rail rates (measured as revenue per ton-mile) tend to decrease as shipment sizes and distances increase. The presence of railroad competition has resulted in lower rates, but the effect has lessened over time, while the discount for using private cars has declined as well.

Presentation IV: Dynamic Changes in Rail Shipping Mechanisms for Grain

Dr. William Wilson, of North Dakota State University, described how grain transportation involves many sources of risk and uncertainty for shippers. Mechanisms for pricing rail and allocating grain cars have evolved over the past few decades to deal with these challenges. The primary and secondary railcar auction markets have emerged as the two key markets for procuring railcars. They help allocate capacity across shippers, time, and space. Two critical features to these markets, as explained by Dr. Wilson, are rail velocity and transferability. Another key finding was these railcars markets are determined simultaneously with grain basis, the difference the local cash price and the futures price. In other words, basis influences these railcar markets *and* these markets influence basis (e.g., when car value goes up, basis goes up; when basis goes down, car value goes down).

Best Student Ag Transport Paper Award

The recipient of this year's best student award paper was Satpal Wadhwa, a PhD candidate at North Dakota State University. His paper was titled "An Agent Based Simulation Model for Inland Hard Red Spring Wheat to Determine the Impact of Market Factors on Wheat Flows." Satpal and his coauthors, Drs. Kimberly Vachal and Alan Dybing, applied geographic information systems (GIS) data and spatial analysis software to develop a simulation model to study the market behavior for hard red spring wheat shipments in North Dakota. The model aims to assess the market impacts of policy, investment, and service level changes, which involves a complicated interplay among farms, elevators, and railroads.

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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
05/08/19	213	294	216	n/a	190	163
05/01/19	213	299	224	214	189	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

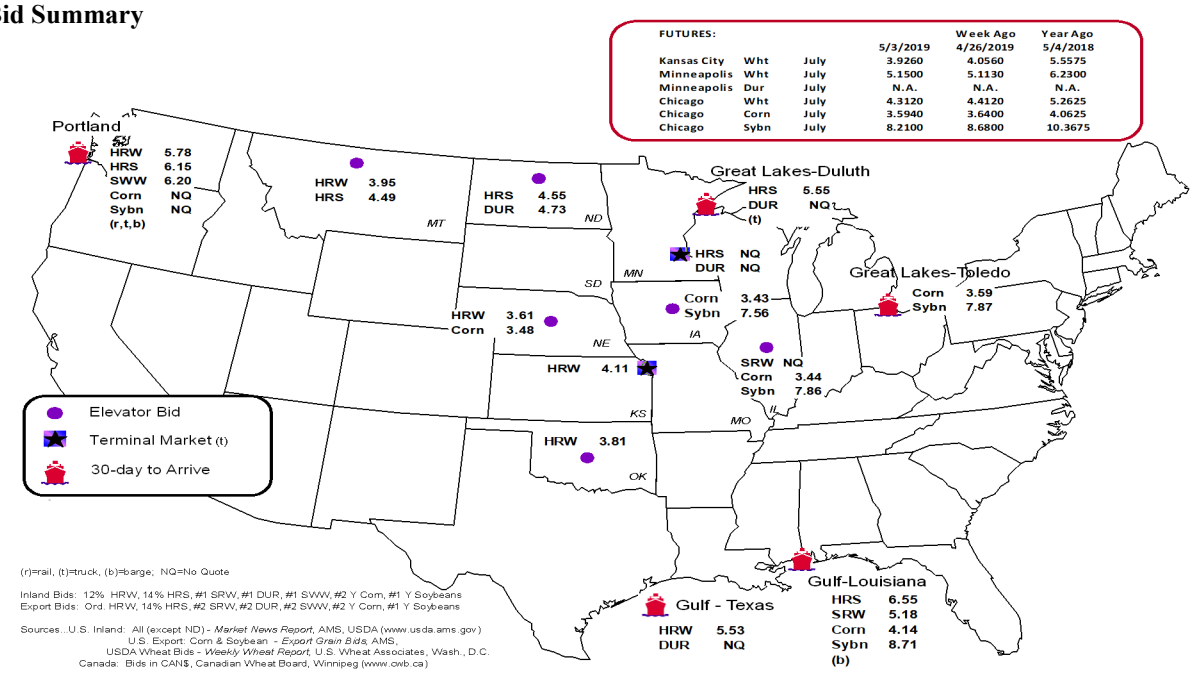
Market Update: U.S. Origins to Export Position Price Spreads ($/bushel)

Commodity	Origin--Destination	5/3/2019	4/26/2019
Corn	IL--Gulf	-0.70	-0.70
Corn	NE--Gulf	-0.66	-0.71
Soybean	IA--Gulf	-1.15	-1.10
HRW	KS--Gulf	-1.42	-1.52
HRS	ND--Portland	-1.60	-1.56

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]
5/01/2019[p]	774	974	4,835	486	7,069	4/27/2019	2,682
4/24/2019[r]	925	1,235	6,015	190	8,365	4/20/2019	2,911
2019 YTD[r]	14,639	20,629	100,944	6,610	142,822	2019 YTD	38,791
2018 YTD[r]	7,232	27,137	115,662	7,518	157,549	2018 YTD	28,847
2019 YTD as % of 2018 YTD	202	76	87	88	91	% change YTD	134
Last 4 weeks as % of 2018[2]	284	126	91	45	99	Last 4wks % 2018	105
Last 4 weeks as % of 4-year avg.[2]	487	82	119	88	119	Last 4wks % 4 yr	106
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.

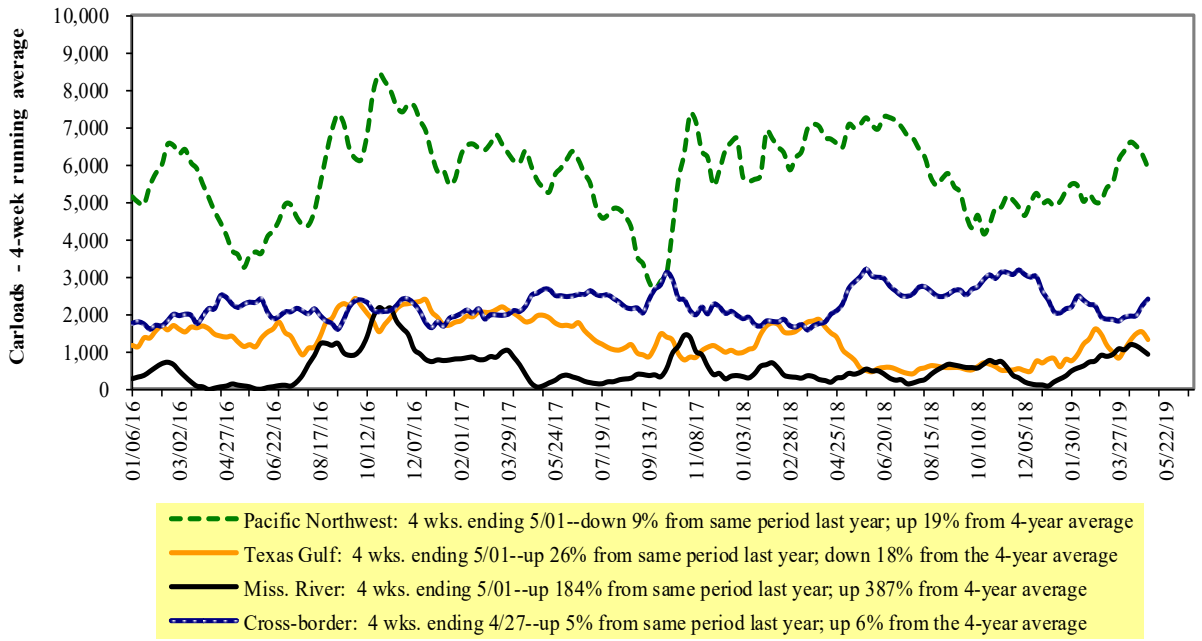
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

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	
4/27/2019	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,967	3,061	12,978	1,095	5,947	25,048	5,252	5,917
This week last year	2,365	2,878	12,403	830	5,482	23,958	4,320	3,986
2019 YTD	33,577	46,472	183,935	19,254	87,543	370,781	74,400	73,346
2018 YTD	32,784	41,854	208,381	15,708	89,456	388,183	62,309	74,247
2019 YTD as % of 2018 YTD	102	111	88	123	98	96	119	99
Last 4 weeks as % of 2018*	90	109	89	117	101	95	130	119
Last 4 weeks as % of 3-yr avg.**	104	110	103	114	102	104	145	122
Total 2018	98,978	133,174	635,458	48,638	267,713	1,183,961	211,831	244,697

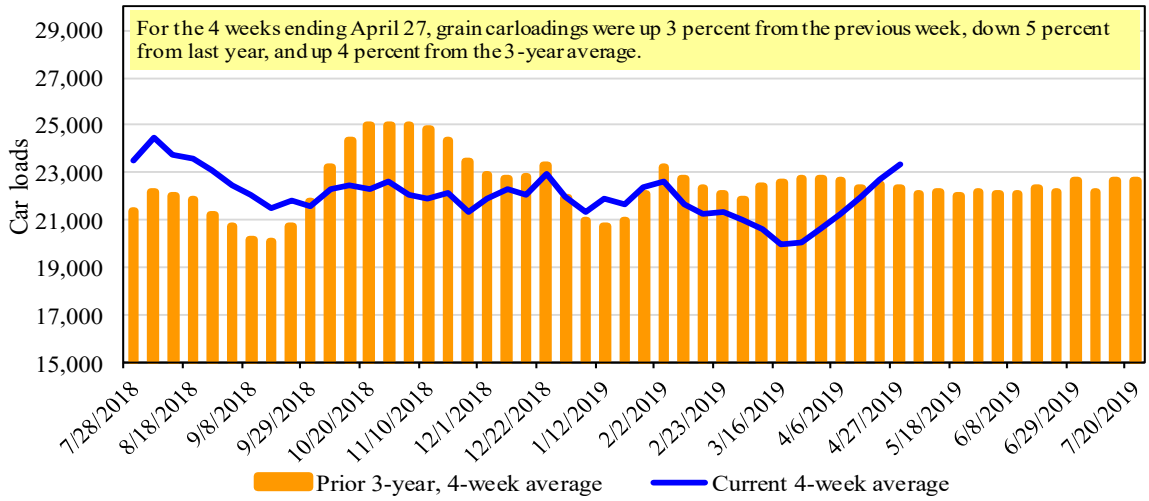
*The past 4 weeks of this year as a percent of the same 4 weeks last year.

**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							
5/2/2019		May-19	May-18	Jun-19	Jun-18	Jul-19	Jul-18	Aug-19	Aug-18
BNSF[3]	COT grain units	no offer	no offer	1	no offer	0	0	0	no bids
	COT grain single-car[5]	no offer	no offer	280	no offer	254	0	201	0
UP[4]	GCAS/Region 1	no offer	no offer	no offer	10	no offer	10	n/a	n/a
	GCAS/Region 2	no offer	no offer	no offer	no bids	no offer	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.

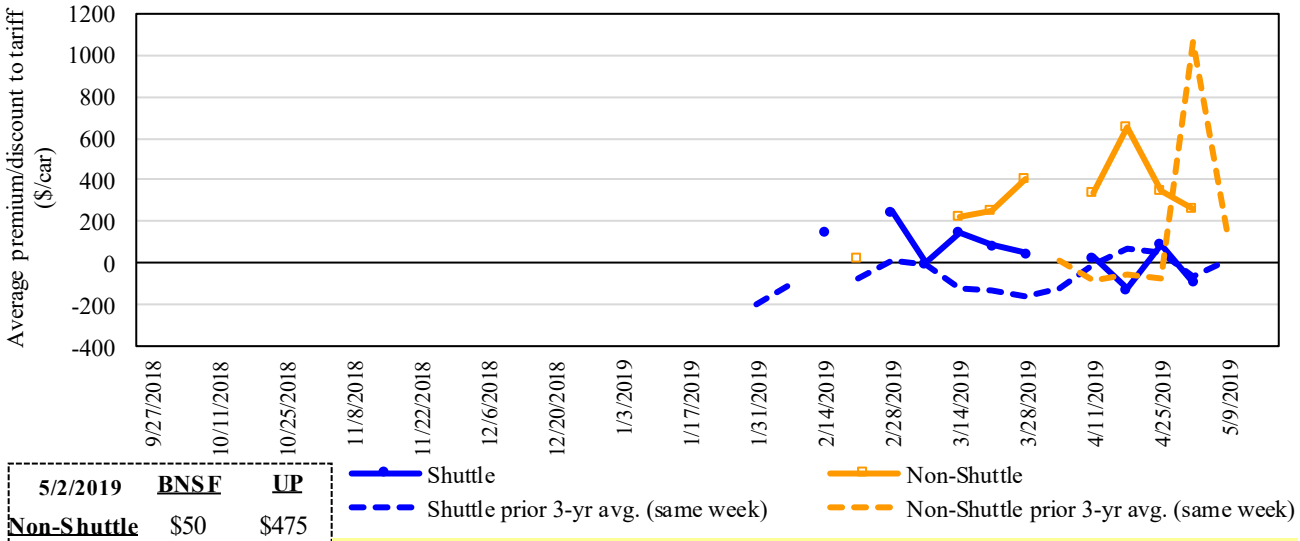
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

[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 May 2019, Secondary Market

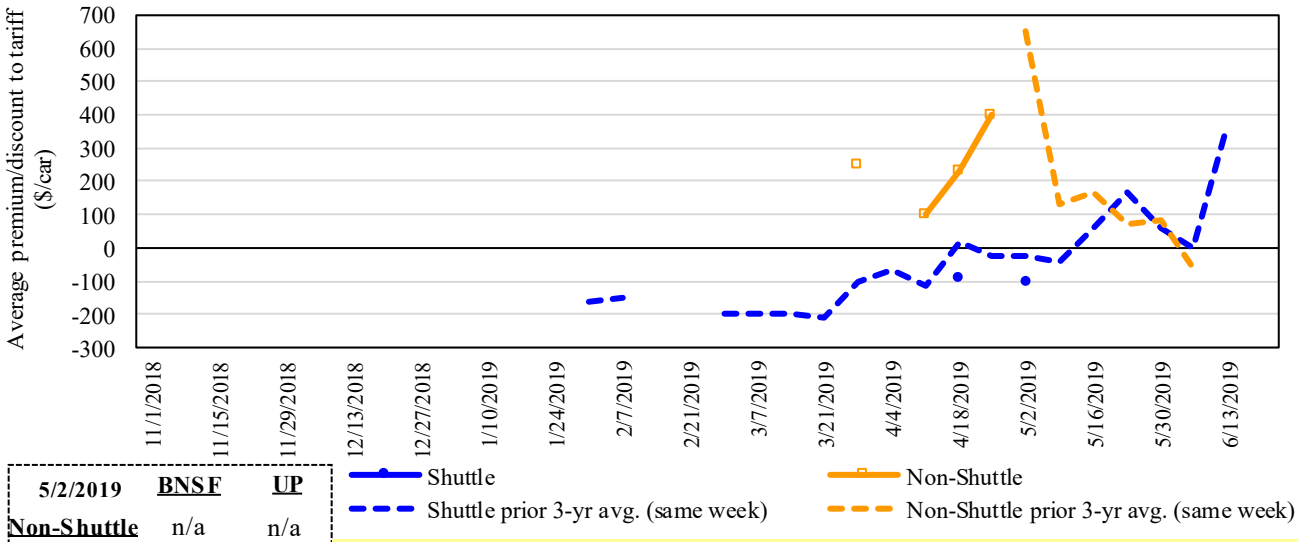


5/2/2019	BNSF	UP
Non-Shuttle	$50	$475
Shuttle	-$63	-$117

Average Non-shuttle bids/offers fell $88 this week, and are $388 below the peak.
Average Shuttle bids/offers fell $181 this week and are $340 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 June 2019, Secondary Market



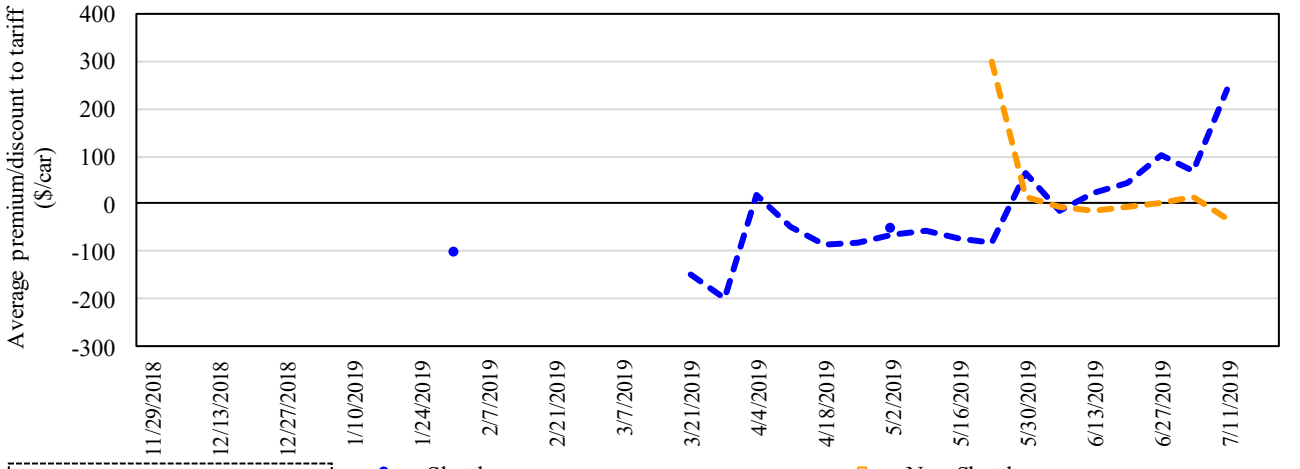
5/2/2019	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	n/a	-$100

There were no Non-Shuttle bids/offers this week.
There were no Shuttle bids/offers last week. Average Non-Shuttle bids/offers this week are $13 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 July 2019, Secondary Market



5/2/2019	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	n/a	-$50

There were no Non-Shuttle bids/offers this week.
There were no Shuttle bids/offers last week. Average Non-Shuttle bids/offers this week are at 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: 5/2/2019	Delivery period					
		May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-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	n/a	n/a	n/a	n/a	n/a	n/a
	UP-Pool	**475**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	(175)	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	(593)	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**(63)**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	(134)	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	(546)	n/a	n/a	n/a	n/a	n/a
	UP-Pool	**(117)**	**(100)**	**(50)**	**n/a**	**n/a**	**150**
	Change from last week	(230)	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	(17)	(100)	(150)	n/a	n/a	(300)

[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

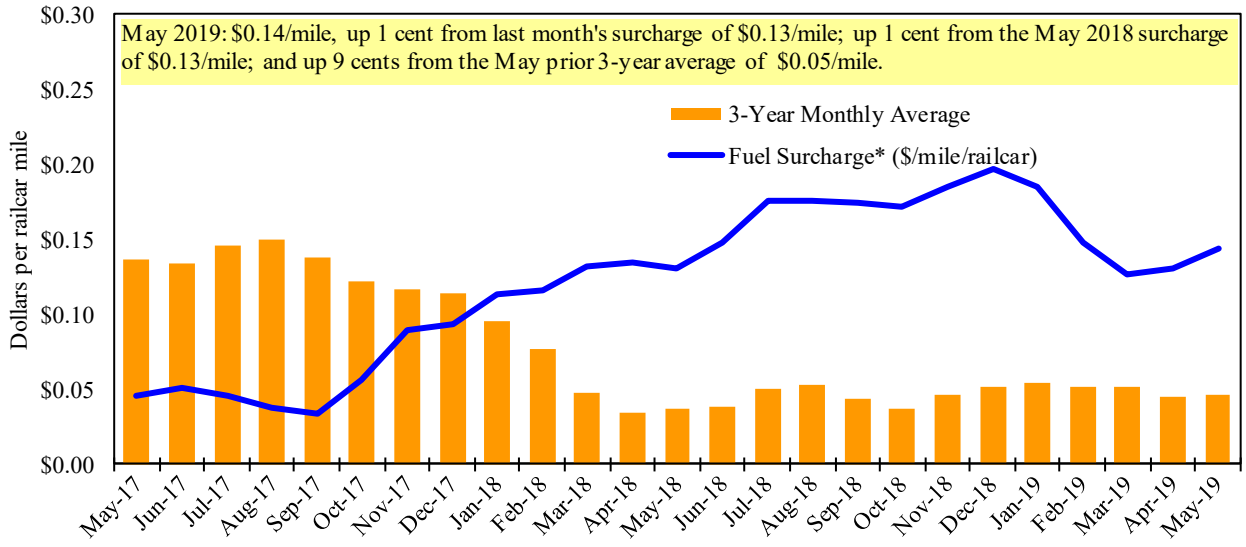
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

[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.

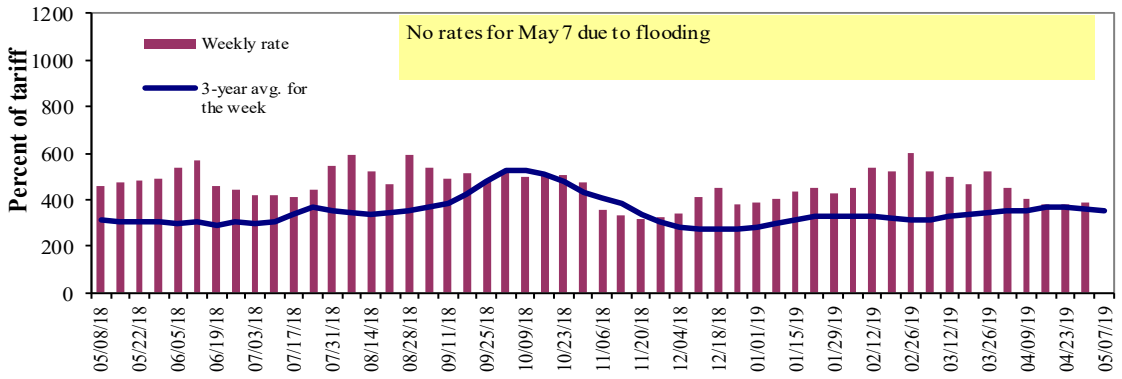
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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]	5/7/2019	-	-	-	-	375	375	273
	4/30/2019	-	-	385	272	278	278	262
$/ton	5/7/2019	-	-	-	-	17.59	15.15	8.57
	4/30/2019	-	-	17.86	10.85	13.04	11.23	8.23
Current week % change from the same week:								
	Last year	-	-	-	-	14	14	-11
	3-year avg. [2]	-	-	-	-	37	37	12
Rate[1]	June	425	400	400	293	325	325	280
	August	438	400	400	293	363	363	300

[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.

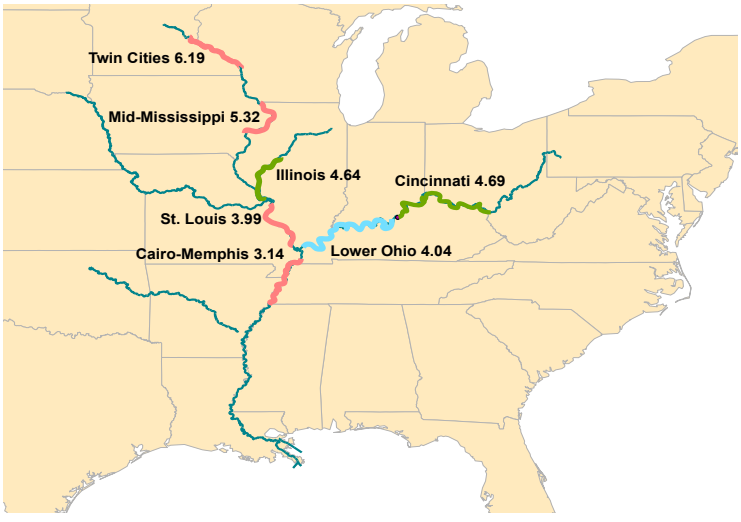
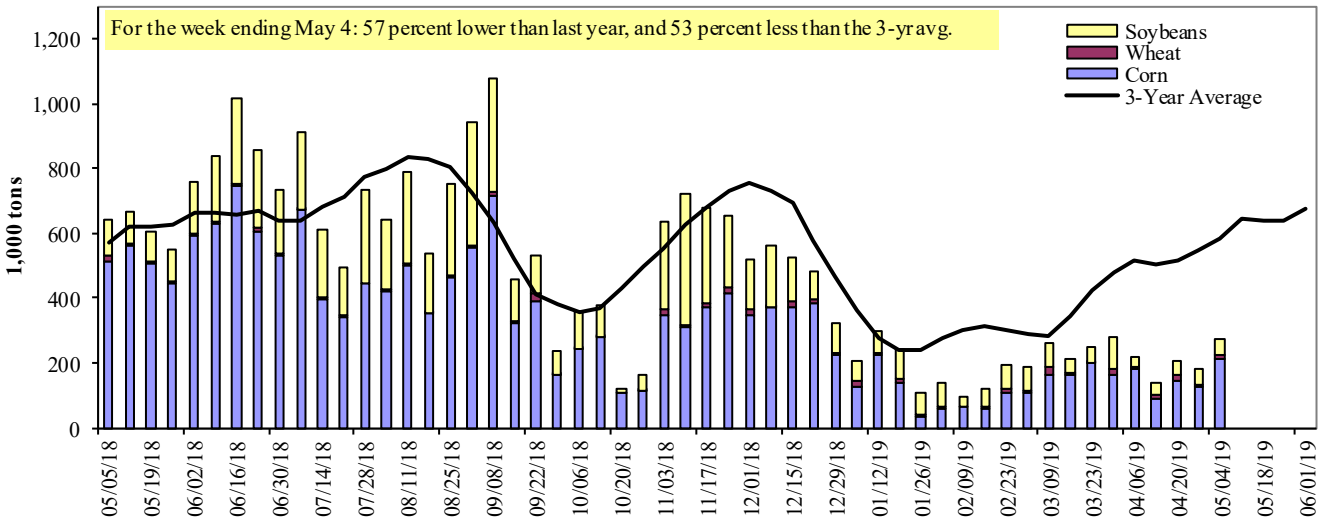


Figure 10

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 05/04/2019	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	0	0	0	0	0
Winfield, MO (L25)	66	5	11	0	82
Alton, IL (L26)	196	11	43	5	255
Granite City, IL (L27)	212	13	49	5	279
Illinois River (L8)	76	6	23	0	105
Ohio River (OLMSTED)	122	11	50	0	182
Arkansas River (L1)	0	15	22	0	38
Weekly total - 2019	334	39	121	5	499
Weekly total - 2018	604	52	227	2	884
2019 YTD[1]	4,321	802	3,286	51	8,460
2018 YTD[1]	6,400	555	3,717	55	10,727
2019 as % of 2018 YTD	68	145	88	93	79
Last 4 weeks as % of 2018[2]	57	121	66	145	63
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.

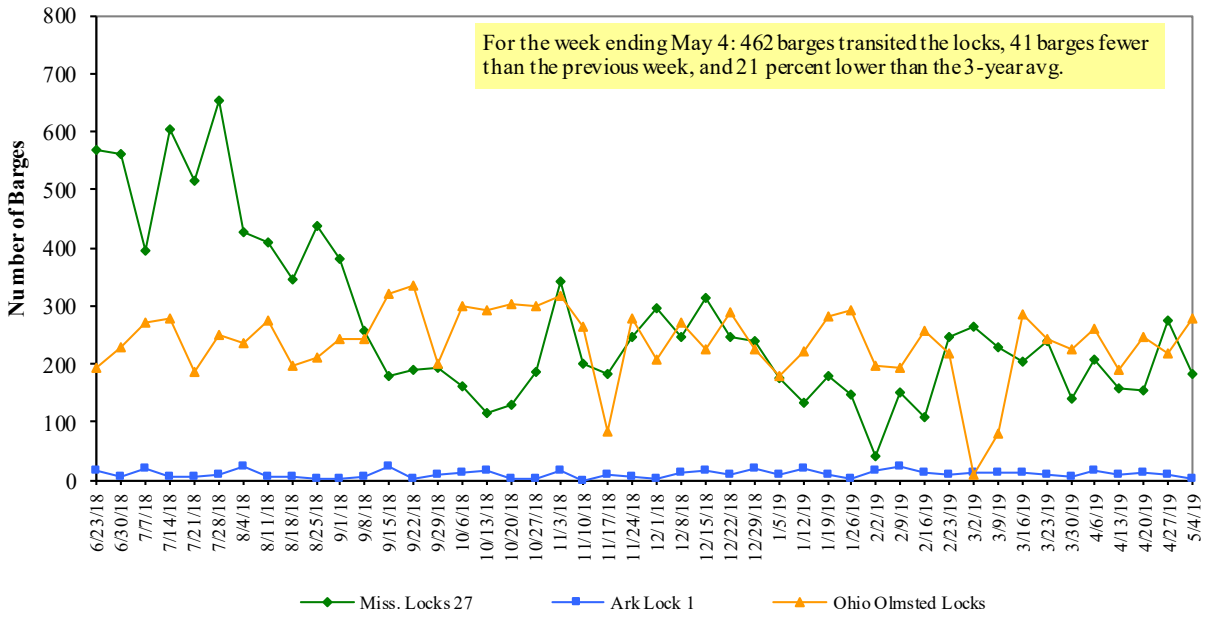
[2] As a percent of same period in 2018.

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

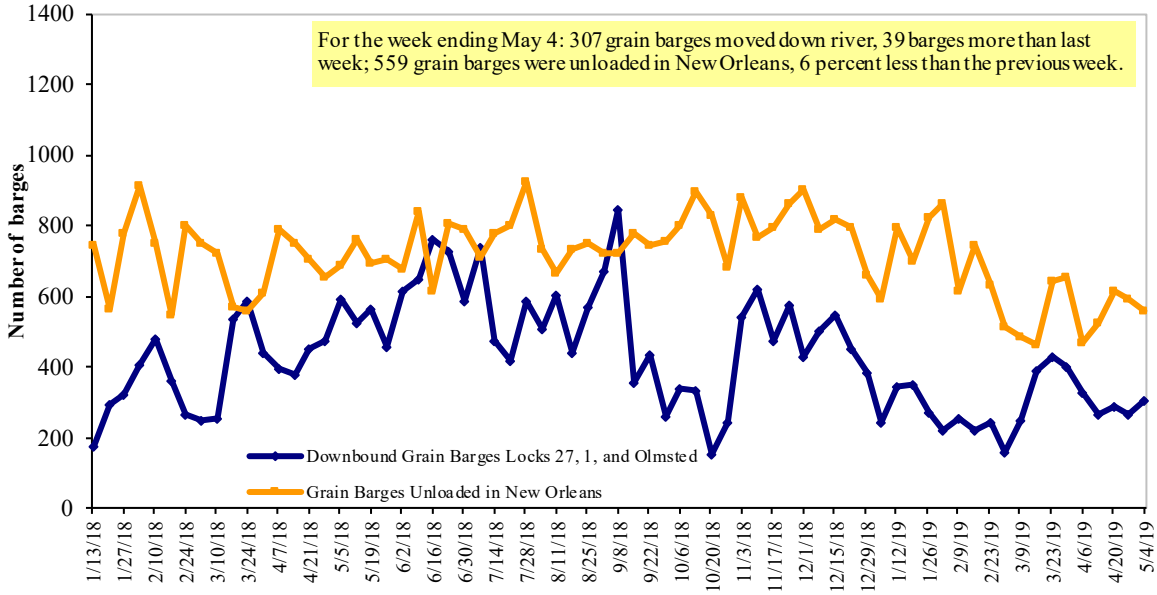
Upbound Empty Barges Transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 5/6/2019 (US $/gallon)

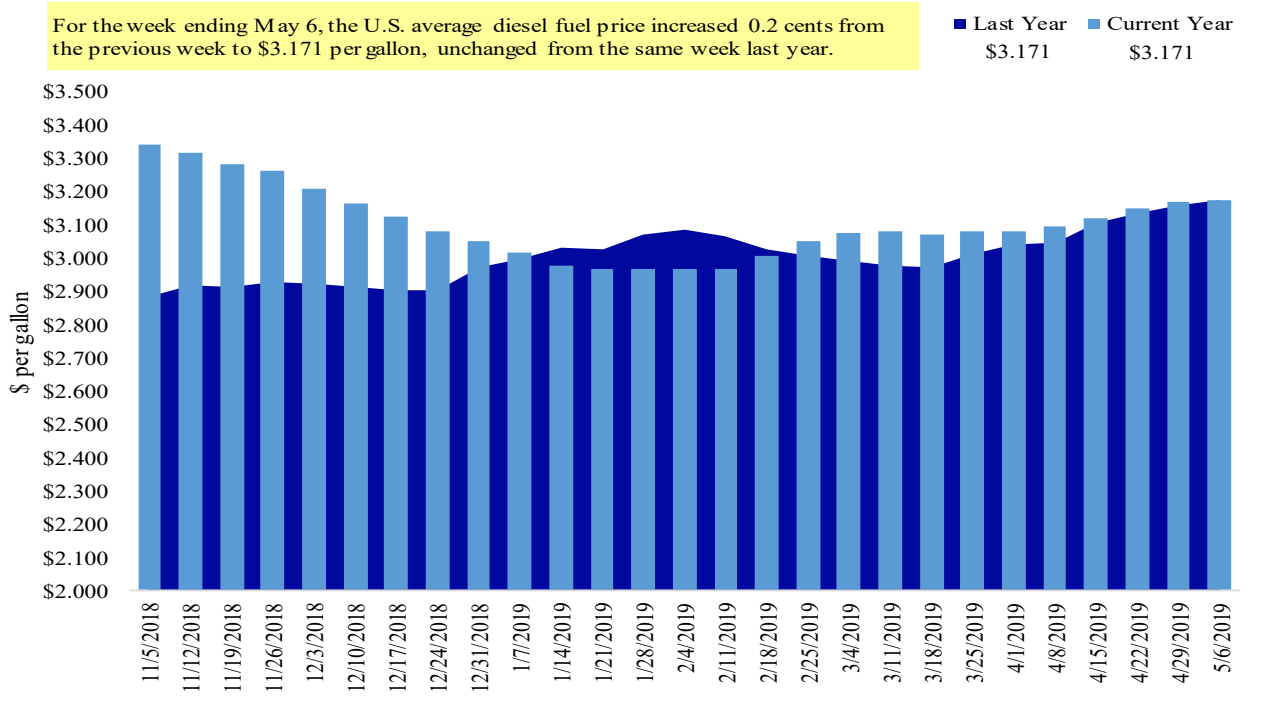
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	3.190	-0.004	0.012
	New England	3.245	0.009	0.030
	Central Atlantic	3.379	-0.006	0.043
	Lower Atlantic	3.051	-0.006	-0.010
II	Midwest	3.064	0.006	-0.028
III	Gulf Coast	2.927	-0.012	-0.028
IV	Rocky Mountain	3.186	0.003	-0.063
V	West Coast	3.765	0.035	0.103
	West Coast less California	3.345	-0.001	-0.064
	California	4.097	0.062	0.234
Total	U.S.	3.171	0.002	0.000

[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]									
4/25/2019	2,184	710	1,004	847	67	4,812	11,194	12,874	28,881
This week year ago	738	412	932	749	22	2,852	20,091	11,285	34,229
Cumulative exports-marketing year[2]									
2018/19 YTD	7,071	2,673	5,947	4,543	416	20,650	34,863	32,263	87,776
2017/18 YTD	8,529	2,093	5,135	4,522	372	20,651	30,845	43,485	94,981
YTD 2018/19 as % of 2017/18	83	128	116	100	112	100	113	74	92
Last 4 wks as % of same period 2017/18	322	194	127	125	344	188	60	115	89
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 4/25/2019	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	14,702	12,735	15	13,691
Japan	10,371	9,194	13	11,247
Korea	3,685	4,049	(9)	4,754
Colombia	3,938	3,657	8	4,678
Peru	1,992	2,532	(21)	2,975
Top 5 Importers	**34,687**	**32,166**	**8**	**37,344**
Total US corn export sales	**46,057**	**50,936**	**(10)**	**53,184**
% of Projected	79%	82%		
Change from prior week[2]	**587**	**1,020**		
Top 5 importers' share of U.S. corn export sales	75%	63%		70%
USDA forecast, April 2019	**58,524**	**62,036**	**(6)**	
Corn Use for Ethanol USDA forecast, April 2019	**139,700**	**142,367**	**(2)**	

(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 8

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

For the week ending 4/25/2019	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	13,270	28,733	(54)	31,228
Mexico	4,668	4,049	15	3,716
Indonesia	1,858	1,963	(5)	2,250
Japan	2,173	1,840	18	2,145
Netherlands	1,829	1,320	39	2,209
Top 5 importers	**23,798**	**37,905**	**(37)**	**41,549**
Total US soybean export sales	**45,137**	**54,770**	**(18)**	**55,113**
% of Projected	88%	94%		
Change from prior week[2]	**250**	**416**		
Top 5 importers' share of U.S. soybean export sales	53%	69%		**75%**
USDA forecast, April 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 4/25/2019	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	3,273	2,946	11	2,781
Japan	2,741	2,899	(5)	2,649
Philippines	3,128	2,535	23	2,441
Korea	1,578	1,485	6	1,257
Nigeria	1,584	1,188	33	1,254
Indonesia	1,328	1,130	17	1,076
Taiwan	1,107	1,134	(2)	1,066
China	42	900	(95)	944
Colombia	654	360	82	714
Thailand	746	664	12	618
Top 10 importers	**16,178**	**15,240**	6	**14,800**
Total US wheat export sales	**25,462**	**23,503**	**8**	**22,869**
% of Projected	99%	96%		
Change from prior week[2]	**122**	**235**		
Top 10 importers' share of U.S. wheat export sales	64%	65%		65%
USDA forecast, April 2019	**25,749**	**24,550**	**5**	

(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 05/02/19	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	311	315	99	4,740	4,157	114	121	114	13,315
Corn	316	490	64	4,603	7,233	64	70	105	20,024
Soybeans	0	0	n/a	4,018	3,946	102	48	52	7,719
Total	**627**	**805**	**78**	**13,361**	**15,336**	**87**	**84**	**104**	**41,058**
Mississippi Gulf									
Wheat	77	172	45	1,792	1,549	116	132	111	3,896
Corn	453	659	69	9,652	11,587	83	73	84	33,735
Soybeans	451	417	108	8,906	8,867	100	107	135	28,124
Total	**982**	**1,248**	**79**	**20,351**	**22,003**	**92**	**85**	**97**	**65,755**
Texas Gulf									
Wheat	73	106	68	2,161	1,521	142	192	142	3,198
Corn	28	33	85	272	216	126	236	259	730
Soybeans	0	0	n/a	0	0	n/a	n/a	n/a	69
Total	**101**	**140**	**72**	**2,433**	**1,737**	**140**	**199**	**156**	**3,997**
Interior									
Wheat	30	40	76	592	528	112	122	146	1,614
Corn	162	160	101	2,449	2,738	89	81	88	8,650
Soybeans	119	111	107	2,281	2,152	106	102	136	6,729
Total	**312**	**311**	**100**	**5,323**	**5,418**	**98**	**93**	**109**	**16,993**
Great Lakes									
Wheat	12	46	26	122	135	91	80	91	894
Corn	0	0	n/a	0	70	0	0	0	404
Soybeans	0	0	n/a	43	0	n/a	n/a	301	1,192
Total	**12**	**46**	**26**	**165**	**205**	**80**	**64**	**77**	**2,491**
Atlantic									
Wheat	0	0	n/a	32	64	51	n/a	367	69
Corn	0	0	n/a	49	38	132	19	57	138
Soybeans	62	5	n/a	522	852	61	44	64	2,047
Total	**62**	**5**	**n/a**	**604**	**953**	**63**	**53**	**81**	**2,253**
U.S. total from ports*									
Wheat	503	680	74	9,440	7,953	119	132	120	22,986
Corn	960	1,342	71	17,026	21,882	78	73	91	63,682
Soybeans	632	534	118	15,770	15,818	100	94	118	45,879
Total	**2,095**	**2,556**	**82**	**42,236**	**45,652**	**93**	**88**	**103**	**132,547**

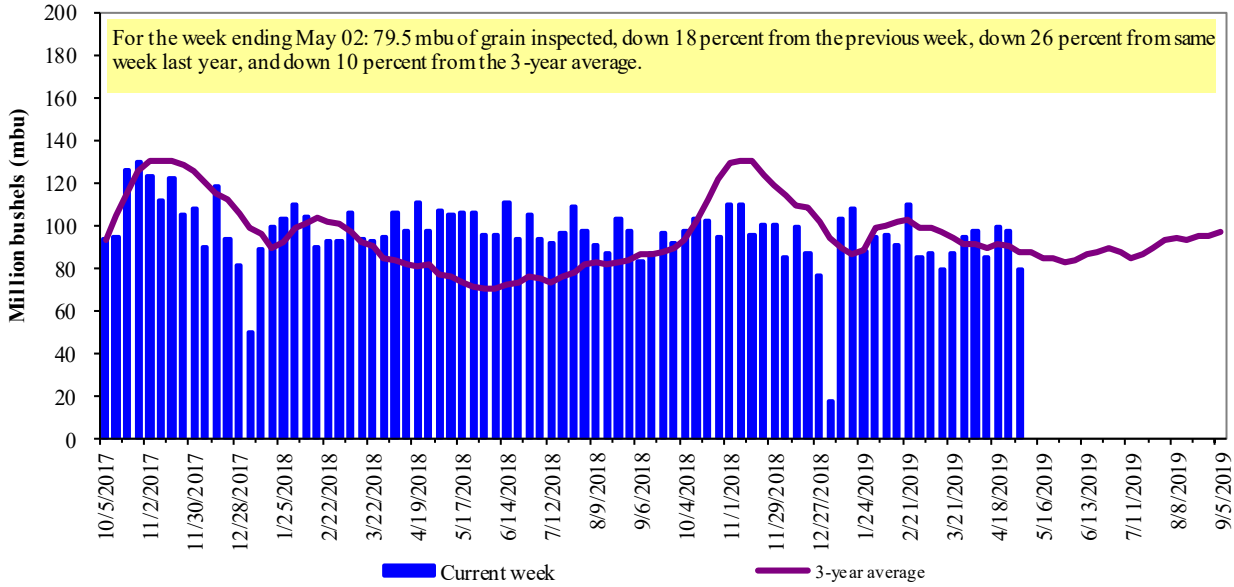
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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

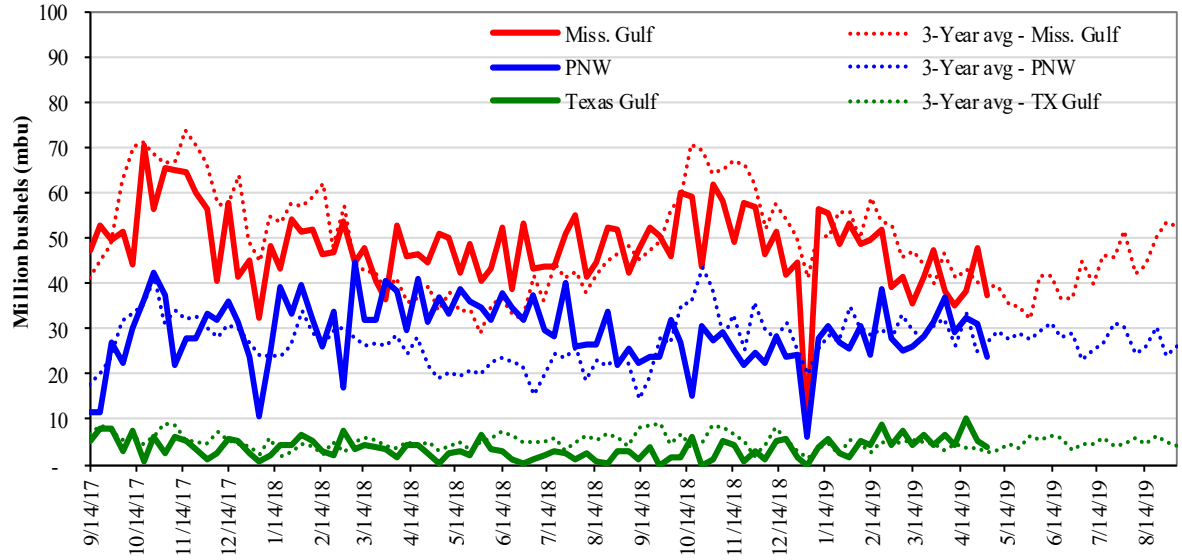
U.S. grain inspected for export (wheat, corn, and soybeans)



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 05/02/19 inspections (mbu):	
Mississippi Gulf:	37.3
PNW:	23.9
Texas Gulf:	3.8

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last Week:	down 22	down 28	down 22	down 23
Last Year (same week):	down 27	up 1019	down 20	down 35
3-yr avg. (4-wk.mov. Avg):	down 9	unchanged	down 8	down 15

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

Ocean Transportation

Table 17

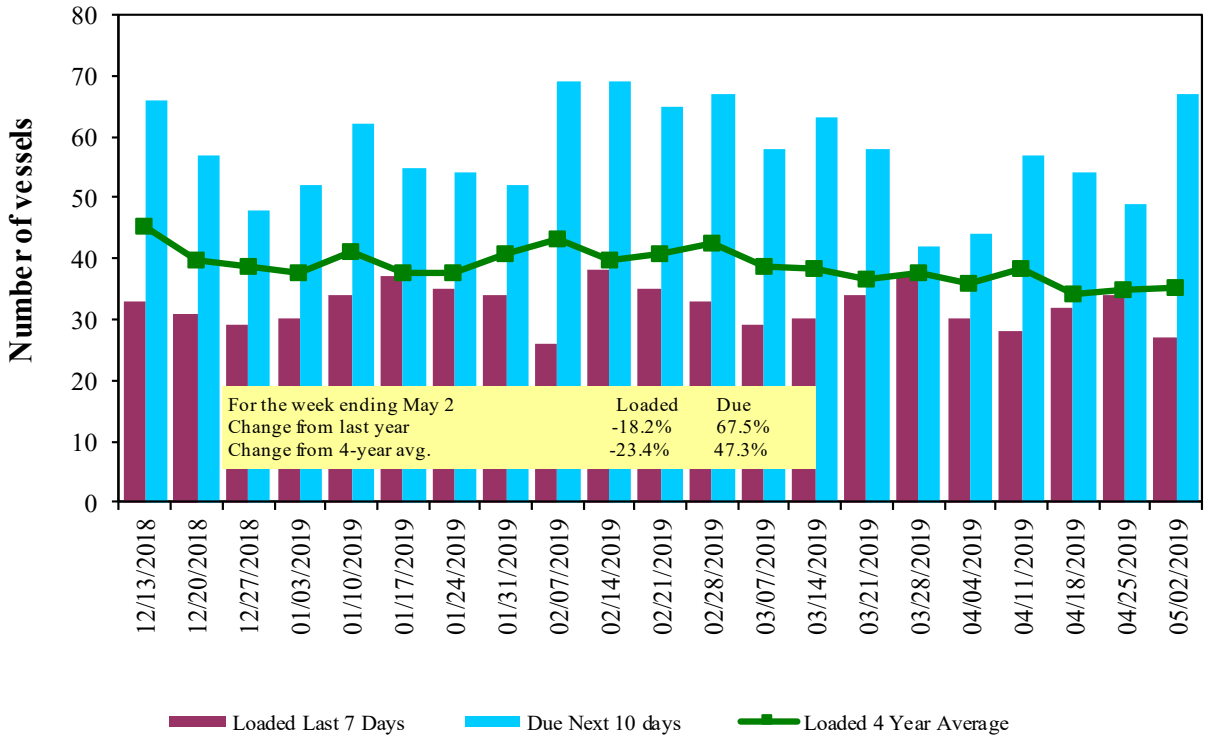
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
5/2/2019	26	27	67	16
4/25/2019	33	34	49	21
2018 range	(23..88)	(24..41)	(38..67)	(4..30)
2018 avg.	40	34	54	17

Source: Transportation & Marketing Programs/AMS/USDA

Figure 16

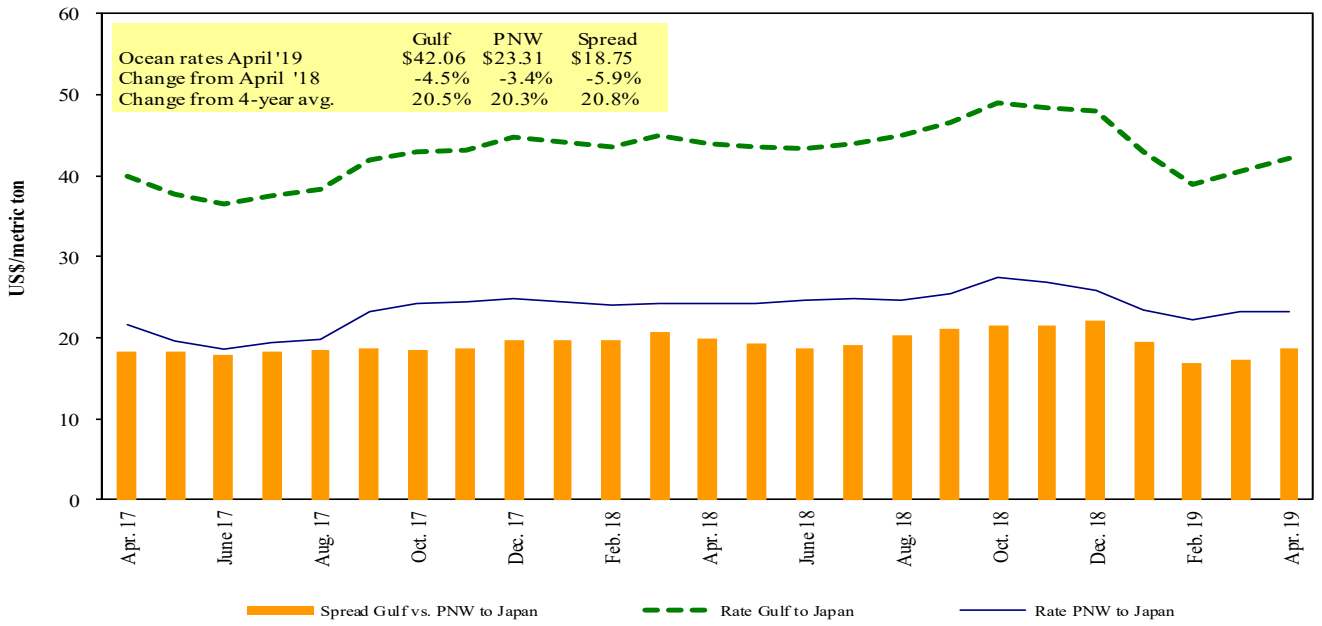
U.S. Gulf Vessel Loading Activity



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 04/27/2019

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

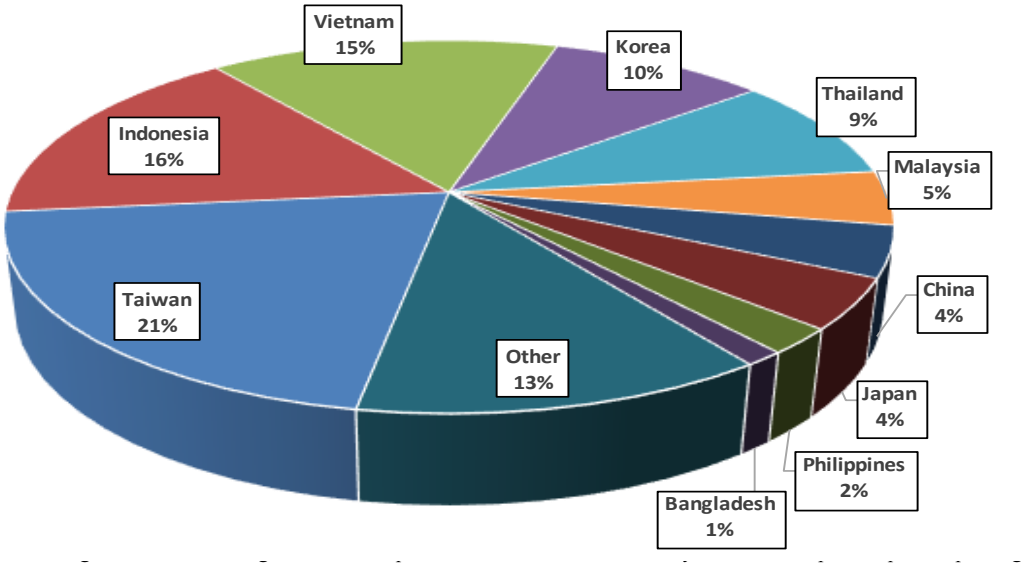
Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), F.O.B., except where otherwise indicated; op = option

*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.

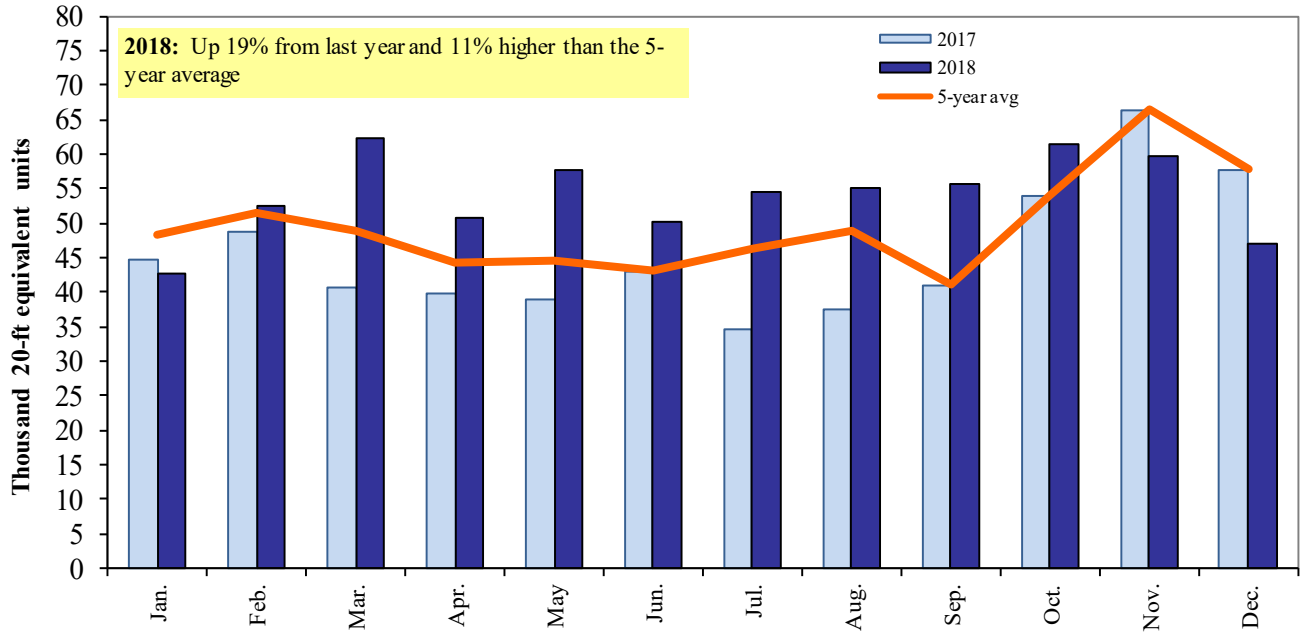
Figure 18
Top 10 Destination Markets for U.S. Containerized Grain Exports, 2018



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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