USDA United States Department of Agriculture

Grain Transportation Report

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

Contact Us

June 27, 2019

Contents

The next release is July 4, 2019

WEEKLY HIGHLIGHTS

Barge Traffic Resumes on Upper Mississippi and Illinois Rivers

Barge traffic has resumed, as river conditions on the Upper Mississippi and Illinois Rivers are improving. As of June 27, the U.S. Army Corps of Engineers' Lock Status Report shows no lock closures on the Upper Mississippi River or the Illinois River. The River Industry Action Committee (RIAC), an association of companies and organizations who are stakeholders in the commercial industry on the inland waterways, has established queue guidelines for tows waiting to transit previously closed portions of the river. RIAC guidelines are helping ease congestion and direct the orderly flow of traffic at locks above St. Louis. While most of the river system is reported open, some tows are still restricted by high water preventing passage under some bridges. See today's **feature** for more information on the flooding impact on agricultural transportation.

Grain Inspections Continue to Fall

For the week ending June 20, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions reached 1.75 million metric tons (mmt). This amount indicates a 2 percent decline from the previous week, a 30 percent drop from last year, and a 24 percent decrease from the 3-year average. Week-to-week inspections of corn were down 9 percent from the past week, but inspections of wheat increased 6 percent. Inspections of soybeans were unchanged from the previous week. Grain inspections jumped 21 percent from the previous week in the Pacific Northwest (PNW), but decreased 12 percent in the Mississippi Gulf. Additionally, total year-to-date inspections of grain are down 12 percent, due primarily to lower shipments of corn.

FRA Announces More Than $326 Million in Grants to Support Railroad Infrastructure

On June 12, the Federal Railroad Administration (FRA) announced the recipients of more than $326 million in grant funds under the Consolidated Rail Infrastructure and Safety Improvements and the Special Transportation Circumstances Programs. The grants fund 45 projects in 29 states and will be used to improve the safety, efficiency, and reliability of intercity passenger and freight rail systems. Over one-third of the funds—more than $118 million—were awarded to rural projects. For one project, up to $7.2 million will be used to replace nine timber railroad bridges with concrete bridges on the tracks of the Indiana Rail Road Company, a Class II railroad with operations in central/southwest Indiana and central Illinois. Another short line, Nebraska Central Railroad, will receive up to $8.1 million to improve bridges and replace degraded track in northeastern and central Nebraska.

Snapshots by Sector

Export Sales

For the week ending June 13, **unshipped balances** of wheat, corn, and soybeans totaled 23.2 mmt. This indicates a 13 percent decrease in outstanding sales, compared to the same time last year. Net **corn export sales** decreased 78 percent from the previous week, reaching .038 mmt. Net **soybean export sales** totaled .572 mmt, up 123 percent from the past week. Net weekly **wheat export sales** reached .188 mmt, up noticeably from the previous week.

Rail

U.S. Class I railroads originated 22,425 **grain carloads** for the week ending June 15. This is a 6 percent increase from the previous week, 4 percent lower than last year, and 1 percent below the 3-year average.

Average July shuttle **secondary railcar** bids/offers (per car) were $200 above tariff for the week ending June 20. This is $263 more than last week and $117 lower than last year. There were no non-shuttle bids/offers this week. Average non-shuttle secondary railcar bids/offers were $180 above tariff. There were no non-shuttle bids/offers last week or this week last year.

Barge

For the week ending June 22, **barge grain movements** totaled 161,662 tons. This is a 51 percent decrease from the previous week and 85 percent lower than the same period last year.

For the week ending June 22, 91 grain barges **moved down river**. This is 97 fewer barges than the previous week. There were 265 grain barges **unloaded in New Orleans**, 24 percent lower than the previous week.

Ocean

For the week ending June 20, 21 **ocean-going grain vessels** were loaded in the Gulf. This is 28 percent fewer than the same period last year. Thirty-nine vessels are expected to be loaded within the next 10 days. This is 15 percent fewer than the same period last year.

As of June 20, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $42.75. This is 1 percent less than the previous week. The rate from the Pacific Northwest to Japan was $23.75 per mt. This is unchanged from the previous week.

Fuel

For the week ending June 24, the U.S. average **diesel fuel price** decreased 2.7 cents from the previous week, to $3.043 per gallon. This price is 17.3 cents less than the same week last year.

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Feature Article/Calendar

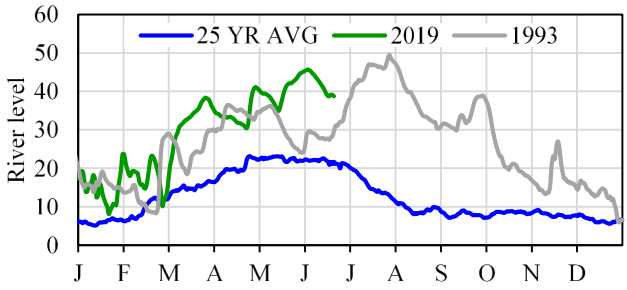
2019 Flooding Challenges Grain Transportation

Portions of the Midwest have dealt with bouts of severe weather, record rainfall, and flood conditions since mid-March, with few respites from the disruptions. Water levels on the Mississippi River and its tributaries have risen to near-record highs, slowing barge grain traffic and resulting in closures along portions of the river system. Railroad operations have been affected by flooding and washouts, but crews continue to make substantial progress restoring service. This article describes some of the effects of the Midwest flooding on grain transportation, such as reduced and slowed shipments, and includes a summary of current river and rail operations. It also briefly examines other impacts on agriculture, such as delayed crop progress and a reduction in next year's corn crop, before concluding with an outlook on transportation and weather.

A Look at Impacts on Barge and Rail Transportation

Barge: River levels on the Mississippi River have increased throughout the year, slowing barge traffic considerably. Figure 1 shows 2019 river levels at St. Louis are well above-average and have been, at times, above 1993 levels. The flood in 1993 brought the Mississippi River to many record levels, including a 49.6-foot reading at St. Louis on August 1 of that year. This year, barge traffic was stopped at St. Louis on May 23, when the river gauge exceeded 38 feet.[1] River closures occur at certain gauges, set by the U.S. Coast Guard, U.S. Army Corps of Engineers, and River Industry representatives. At the "Extreme High Water" stage of 38 feet and rising, the Mississippi River at St. Louis is closed until the gauge is below 38 feet. On June 21-22, St. Louis was reopened when levels dropped close to the 38-foot threshold. However, by June 23, river levels rose enough to close the river again. On June 26, river levels began to drop close to the 38-foot level, and barges were allowed through St. Louis with no restrictions for northbound vessels and unrestricted daytime southbound traffic. However, during nighttime hours, southbound tows are limited to 6 barges.

Figure 1: Mississippi River Levels at St. Louis



Note: River level is measured by gauge height (in feet).
Source: USGS Surface-Water Daily Data for the Nation.

Barge movements are restricted to daylight-only hours on the Mississippi River at Memphis, Vicksburg, and Baton Rouge. Due to extreme flooding, the Arkansas River is closed.

So far this year, 14,191 barges of grain have been unloaded at ports on the lower Mississippi River, 17 percent below the 3-year average. Year-to-date rail deliveries of grain to Lower Mississippi River Ports were 22,780 carloads, 117 percent higher than the 3-year average, indicating grain shippers have been substituting rail service for barge service. Year-to-date tonnages of down-bound grain on the Upper Mississippi River (as measured by movements at Mississippi River Locks 27) were 4.0 million tons, 67 percent less than the 3-year average. However, some Mississippi River barge tonnage losses have been softened by increases in Ohio River tonnages. Year-to-date tonnages of down-bound grain on the Ohio River (as measured by movements at Olmsted Locks and Dam) were 5.9 million tons, 27 percent higher than the 3-year average.

Rail: Railroads also have dealt with poor weather and flood conditions for the past few months. Despite these challenges, carriers continue to make considerable progress in restoring service. As of June 24, two segments remain out of service for Union Pacific Railroad (UP), which said in a recent report, "up to eight subdivisions [were] impacted by flooding" and "water was eight feet above the rail" in spots.[2] This is a notable recovery from the last week in May. BNSF Railway (BNSF) has resumed operations in two subdivisions, with a third expected to be restored within the week. However, two remain out of service: (1) the Napier Subdivision in Iowa and Missouri, and (2) the River Subdivision, extending south from St. Louis. On June 17, Kansas City Southern Railway (KCS) restored service to the Roodhouse Subdivision (an east-west route near Louisiana, MO). Earlier this week, KCS also quickly resumed service through the Heavener Subdivision (a north-south route between Neosho and Noel, MO).

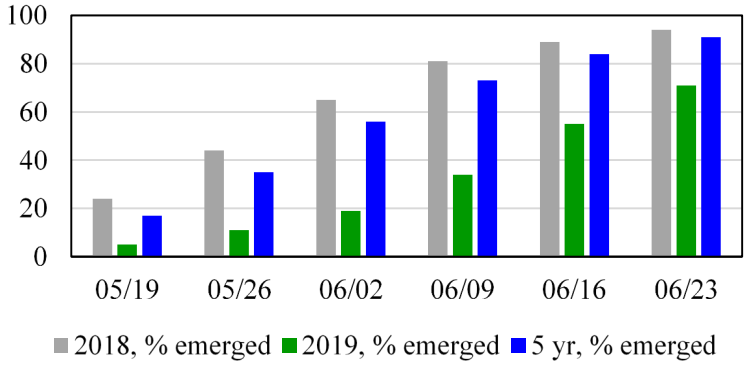
[1] "Gauge height" is the relative measure of the water surface above the gauge datum (zero point). Gauge height is often used interchangeably with the more general term, "stage," although gauge height is more appropriate when used with a gauge reading. The St. Louis Gauge is located at the Eads Bridge about 15 miles downstream of the confluence with the Missouri River at mile marker 180 on the Mississippi River.
[2] The two subdivisions experiencing a service outage are UP's River Subdivision (between Jefferson City and Kansas City, MO) and Sparta Subdivision (between Ellis Grove and Coulterville, IL). The quotes are from UP's June 12, 2019 customer announcement.

As of June 15, grain carloads across all U.S. Class I railroads were 3 percent lower than the prior 3-year average over the past 4 weeks (**GTR Figure 3**). Additionally, the Surface Transportation Board's data on rail performance illustrate the flooding impact, especially in March and June, but show some potential signs of recovery in the latest week of data. BNSF and UP appear to have been affected the most. For those two railroads, grain train speeds in March averaged 7 percent below the prior 3-yr average. After some recovery, train speeds declined again at the end of May and early June. BNSF and UP grain origin dwell times show a similar pattern, spiking significantly in March and June, up 164 percent and 97 percent, respectively, from the prior 3-year average. This means, in addition to moving slower on their network, trains are experiencing delays getting underway from origination points. However, for the week ending June 19, average BNSF and UP grain origin dwell times fell 43 percent from the previous week, suggesting some recovery is underway.

A Look at Other Agricultural Impacts

Crop Progress: Despite acceleration in recent weeks, planting progress for corn and soybeans has lagged the normal pace, at times by a considerable margin. For the week ending June 23, the percent of soybeans planted nationally was 85 percent complete, compared to five-year average of 97 percent. Just three weeks ago, soybean plantings were 40 percentage points behind the five-year average. Additionally, only 96 percent of the corn acreage had been planted through June 23. Typically, nearly all U.S. corn is planted by the beginning of June.

Figure 2: Soybeans, Percent Emerged



Source: USDA National Agricultural Statistics Service.

Similarly, the "percent emerged" data for corn and soybeans is well below historical figures. Last week, only 55 percent of soybeans and 79 percent of corn had emerged, compared to their respective five-year averages of 84 and 97 percent. Figure 2 shows the percent of soybeans emerged in recent weeks. Since late May, the share of corn and soybeans emerged has lagged all respective time periods in the previous twenty years. Later-emerging crops increases the risk of problems at harvest, which can impact yields and the derived demand for transportation.

Upcoming Grain Production: USDA anticipates some effects on agricultural production in marketing year (MY) 2019/20 as a result of the flooding and planting issues, particularly for corn. According to the latest (June) *World Agricultural Supply and Demand Estimates (WASDE)* report, USDA forecasts U.S. farmers will produce 13.68 billion bushels (bbu) of corn in MY2019/20, down 1.35 bbu (9 percent) from its previous projection in May. If realized, this would be the lowest volume of corn production since MY2015/16, down 7 percent from the 3-year average. The report explains, "Unprecedented planting delays observed through early June are expected to prevent some plantings and reduce yield prospects." This could translate into less transportation demand for domestic and export-destined corn movements, as USDA projects use for feed and exports to decline 3 percent from last year and 6 percent from its previous forecast. In the June *WASDE*, USDA indicated little change to soybean production: "Although adverse weather has significantly slowed soybean planting progress this year, area and production forecasts are unchanged with several weeks remaining in the planting season." The next *WASDE* will be released on July 11.

Transportation and Weather Outlook

Mississippi River barge traffic at St. Louis has resumed; the National Weather Service forecasts river levels are likely to continue to recede. According to its June 21 Network Update, BNSF is working aggressively to fill washouts and re-surface track. The railroad anticipates being able to reopen the River Subdivision by mid-July and restore service along the entire Napier Subdivision in late July. UP estimates re-opening its River and Sparta Subdivisions by the end of this week. According to USDA's *Agricultural Weather Highlights* from June 27, significant rainfall will mostly remain across the northern U.S. over the next several days, including the northern Plains and Midwest. Mostly dry weather is expected to prevail in the southern Plains.

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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
06/26/19	204	287	229	257	191	168
06/19/19	206	282	230	293	193	168

[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
Source: Transportation & Marketing Program/AMS/USDA

Table 2

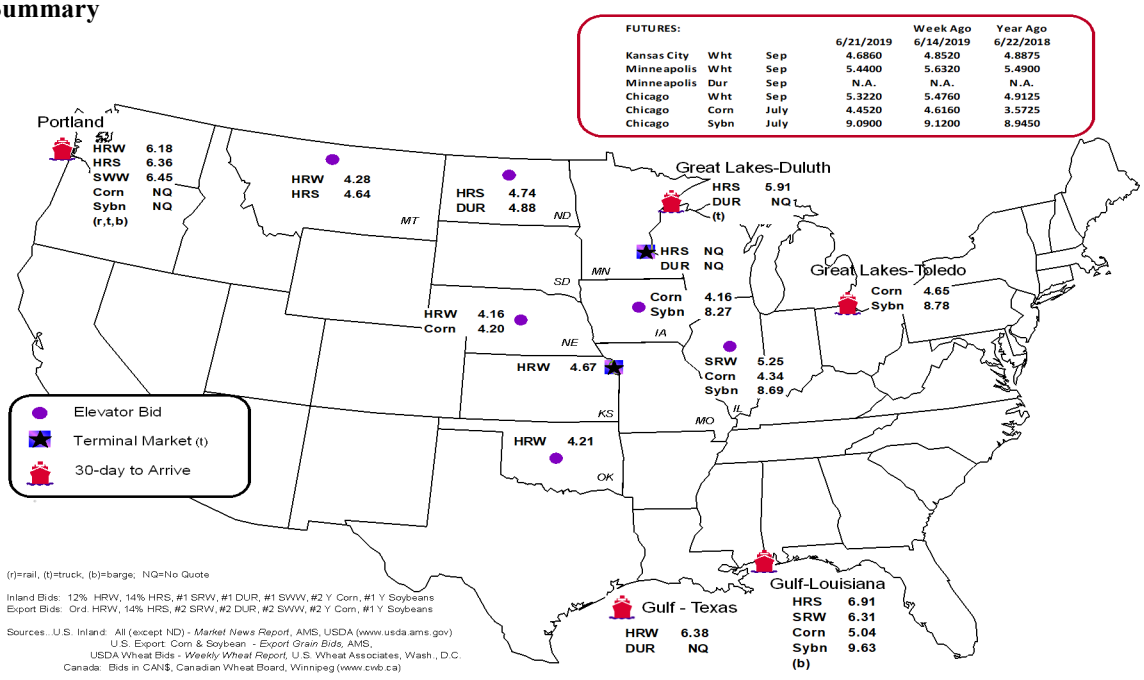
Market Update: U.S. Origins to Export Position Price Spreads ($/bushel)

Commodity	Origin--Destination	6/21/2019	6/14/2019
Corn	IL--Gulf	-0.70	-0.75
Corn	NE--Gulf	-0.84	-0.86
Soybean	IA--Gulf	-1.36	-1.37
HRW	KS--Gulf	-1.71	-1.66
HRS	ND--Portland	-1.62	-1.64

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]
6/19/2019[p]	1,477	990	4,505	519	7,491	6/15/2019	2,500
6/12/2019[r]	1,254	894	4,094	265	6,507	6/8/2019	2,519
2019 YTD[r]	22,780	29,321	133,781	8,765	194,647	2019 YTD	56,217
2018 YTD[r]	10,687	31,036	166,491	10,986	219,200	2018 YTD	54,832
2019 YTD as % of 2018 YTD	213	94	80	80	89	% change YTD	103
Last 4 weeks as % of 2018[2]	286	198	64	66	84	Last 4wks % 2018	72
Last 4 weeks as % of 4-year avg.[2]	559	92	91	125	108	Last 4wks % 4 yr	91
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.

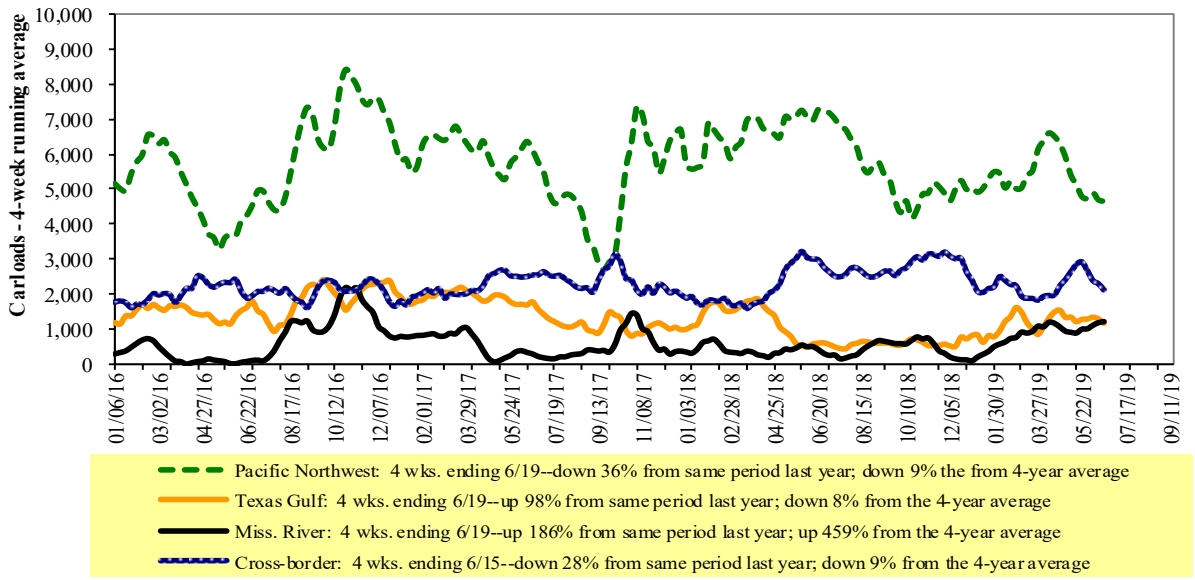
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

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	
6/15/2019	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,482	3,186	11,382	1,121	5,254	22,425	5,172	4,530
This week last year	1,526	2,933	12,316	1,106	5,367	23,248	3,796	5,154
2019 YTD	46,195	67,990	263,779	26,823	122,608	527,395	105,671	103,676
2018 YTD	46,299	60,183	298,558	22,927	126,513	554,480	90,027	110,819
2019 YTD as % of 2018 YTD	100	113	88	117	97	95	117	94
Last 4 weeks as % of 2018*	88	111	86	107	95	92	112	85
Last 4 weeks as % of 3-yr avg.**	99	106	95	125	94	97	132	96
Total 2018	98,978	133,163	635,458	48,638	267,713	1,183,950	211,808	244,697

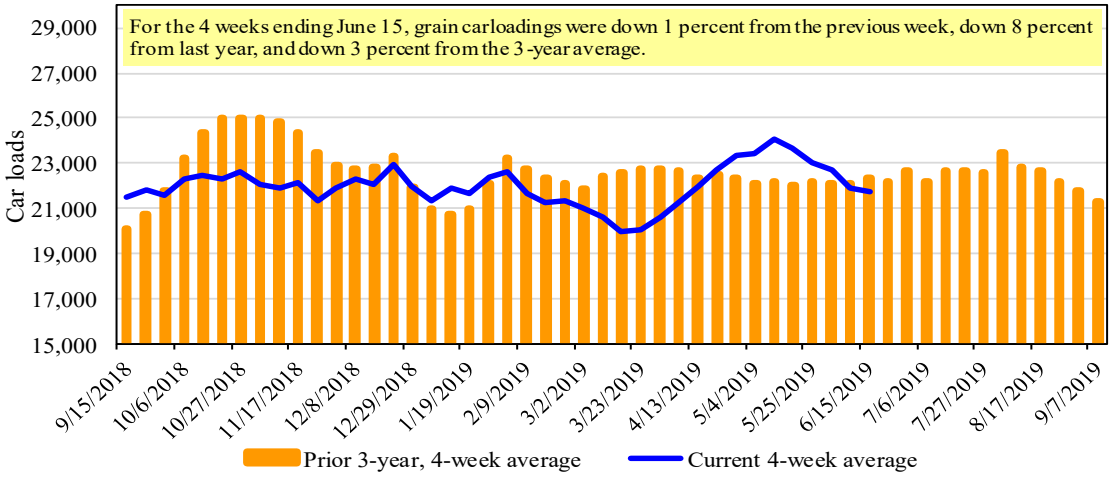
*The past 4 weeks of this year as a percent of the same 4 weeks last year.

**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							
6/20/2019		Jul-19	Jul-18	Aug-19	Aug-18	Sep-19	Sep-18	Oct-19	Oct-18
BNSF[3]	COT grain units	0	no offer	no bids	0	0	0	no bids	no bids
	COT grain single-car[5]	0	no offer	0	0	49	0	51	14
UP[4]	GCAS/Region 1	no offer	no offer	no offer	no bids	no offer	no offer	n/a	n/a
	GCAS/Region 2	no offer	no offer	no bids	no bids	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.

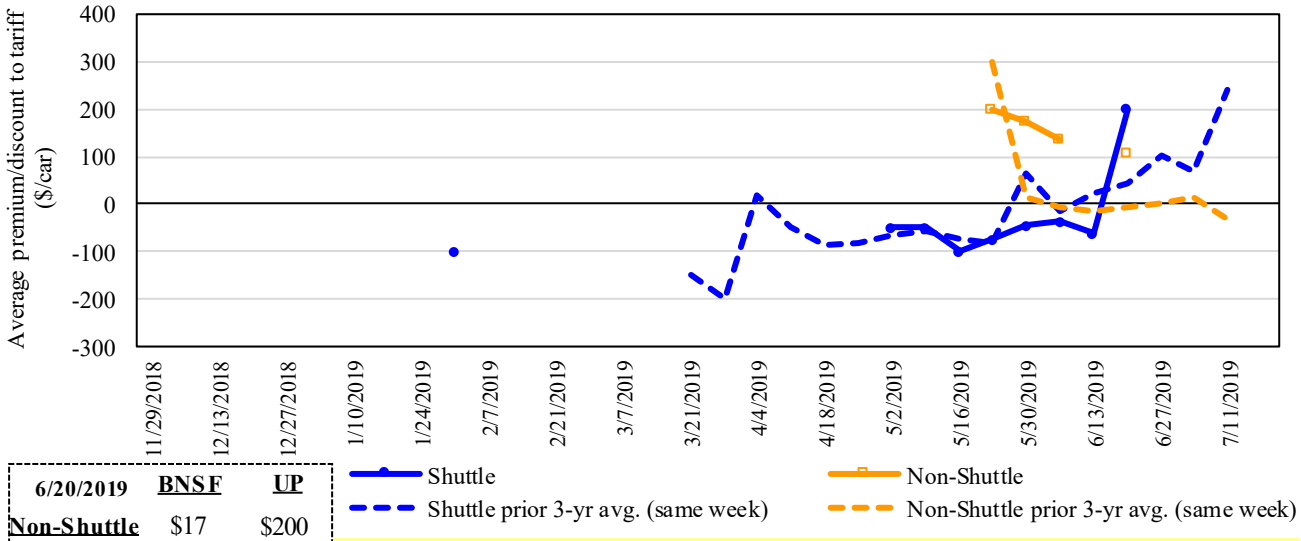
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

[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 July 2019, Secondary Market

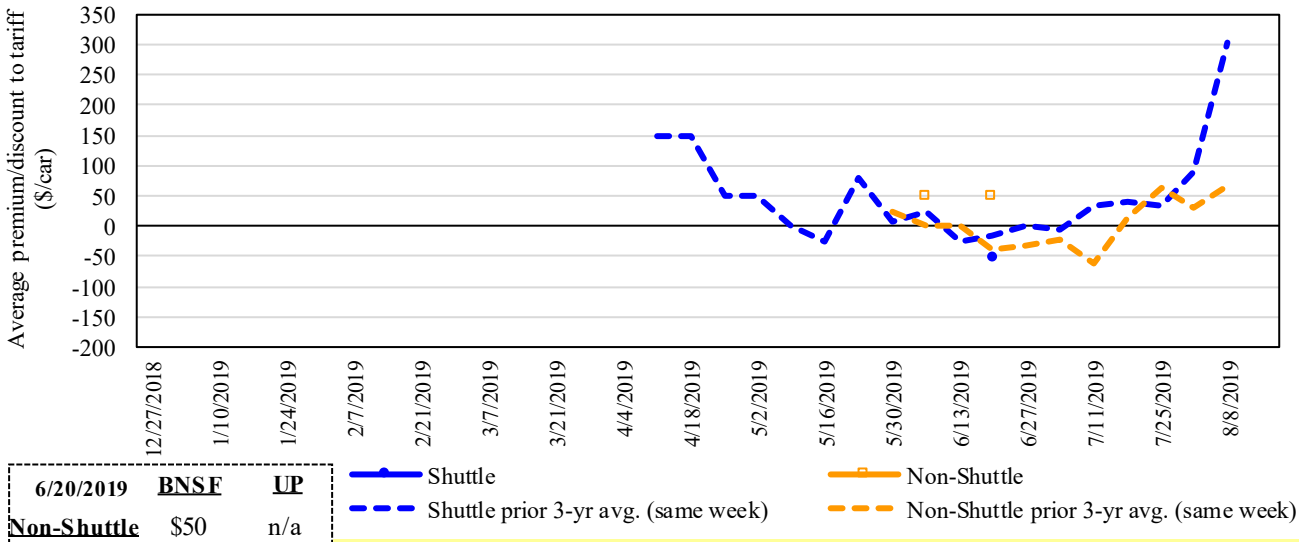


6/20/2019	BNSF	UP
Non-Shuttle	$17	$200
Shuttle	$325	$75

There were no Non-Shuttle bids/offers last week. Average Non-Shuttle bids/offers this week are $92 below the peak.
Average Shuttle bids/offers rose $263 this week and are at the peak.

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

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



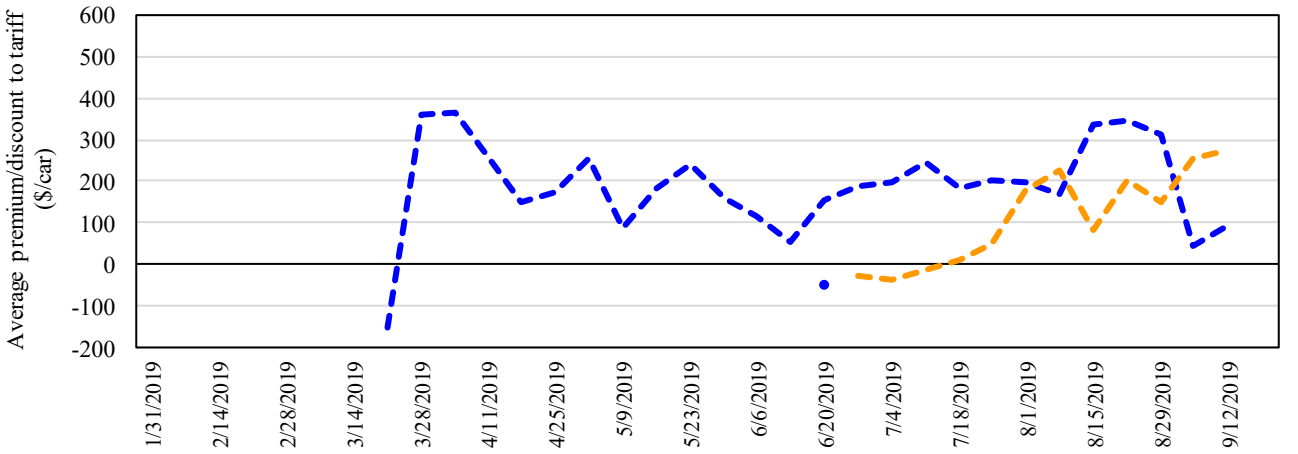
6/20/2019	BNSF	UP
Non-Shuttle	$50	n/a
Shuttle	$0	-$100

There were no Non-Shuttle bids/offers last week. Average Non-Shuttle bids/offers this week are at the peak.
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

Figure 6

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



6/20/2019	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	$0	-$100

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

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: 6/20/2019	Delivery period					
		Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Non-shuttle	**BNSF-GF**	**17**	**50**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	n/a	n/a	n/a	n/a	n/a	n/a
	UP-Pool	**200**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**325**	**0**	**0**	**n/a**	**n/a**	**n/a**
	Change from last week	375	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	(133)	(200)	(200)	n/a	n/a	n/a
	UP-Pool	**75**	**(100)**	**(100)**	**(100)**	**n/a**	**n/a**
	Change from last week	150	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	(100)	(100)	(150)	(950)	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]

June, 2019	Origin region[3]	Destination region[3]	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per: metric ton	Tariff plus surcharge per: bushel[2]	Percent change Y/Y[4]
Unit train							
Wheat	Wichita, KS	St. Louis, MO	$3,983	$106	$40.61	$1.11	3
	Grand Forks, ND	Duluth-Superior, MN	$4,268	$0	$42.38	$1.15	3
	Wichita, KS	Los Angeles, CA	$7,240	$0	$71.90	$1.96	1
	Wichita, KS	New Orleans, LA	$4,525	$187	$46.79	$1.27	0
	Sioux Falls, SD	Galveston-Houston, TX	$6,976	$0	$69.28	$1.89	3
	Northwest KS	Galveston-Houston, TX	$4,801	$205	$49.71	$1.35	0
	Amarillo, TX	Los Angeles, CA	$5,121	$285	$53.68	$1.46	2
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$211	$41.82	$1.06	2
	Toledo, OH	Raleigh, NC	$6,581	$0	$65.35	$1.66	4
	Des Moines, IA	Davenport, IA	$2,258	$45	$22.87	$0.58	0
	Indianapolis, IN	Atlanta, GA	$5,646	$0	$56.07	$1.42	4
	Indianapolis, IN	Knoxville, TN	$4,704	$0	$46.71	$1.19	4
	Des Moines, IA	Little Rock, AR	$3,860	$131	$39.64	$1.01	7
	Des Moines, IA	Los Angeles, CA	$5,720	$383	$60.60	$1.54	7
Soybeans	Minneapolis, MN	New Orleans, LA	$3,631	$208	$38.13	$1.04	-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	$211	$49.22	$1.34	0
Shuttle Train							
Wheat	Great Falls, MT	Portland, OR	$4,078	$0	$40.50	$1.10	3
	Wichita, KS	Galveston-Houston, TX	$4,361	$0	$43.31	$1.18	2
	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	$6,012	$336	$63.04	$1.72	4
Corn	Minneapolis, MN	Portland, OR	$5,180	$0	$51.44	$1.31	4
	Sioux Falls, SD	Tacoma, WA	$5,140	$0	$51.04	$1.30	4
	Champaign-Urbana, IL	New Orleans, LA	$3,800	$211	$39.83	$1.01	2
	Lincoln, NE	Galveston-Houston, TX	$3,880	$0	$38.53	$0.98	5
	Des Moines, IA	Amarillo, TX	$4,060	$165	$41.96	$1.07	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	$244	$49.84	$1.36	0
	Toledo, OH	Huntsville, AL	$4,634	$0	$46.02	$1.25	6
	Grand Island, NE	Portland, OR	$5,710	$344	$60.12	$1.64	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: June, 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	$6,643	$146	$69.37	$1.89	0
	KS	Guadalajara, JA	$7,371	$611	$81.56	$2.22	4
	TX	Salinas Victoria, NL	$4,329	$89	$45.14	$1.23	1
Corn	IA	Guadalajara, JA	$8,678	$522	$94.00	$2.39	7
	SD	Celaya, GJ	$7,880	$0	$80.51	$2.04	2
	NE	Queretaro, QA	$8,207	$304	$86.96	$2.21	2
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	2
	MO	Tlalnepantla, EM	$7,573	$297	$80.41	$2.04	3
	SD	Torreon, CU	$7,480	$0	$76.43	$1.94	2
Soybeans	MO	Bojay (Tula), HG	$8,497	$494	$91.86	$2.50	7
	NE	Guadalajara, JA	$8,982	$517	$97.06	$2.64	6
	IA	El Castillo, JA	$9,110	$0	$93.08	$2.53	2
	KS	Torreon, CU	$7,814	$361	$83.52	$2.27	6
Sorghum	NE	Celaya, GJ	$7,657	$466	$83.00	$2.11	6
	KS	Queretaro, QA	$8,000	$183	$83.61	$2.12	2
	NE	Salinas Victoria, NL	$6,633	$147	$69.27	$1.76	3
	NE	Torreon, CU	$7,067	$333	$75.61	$1.92	6

[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

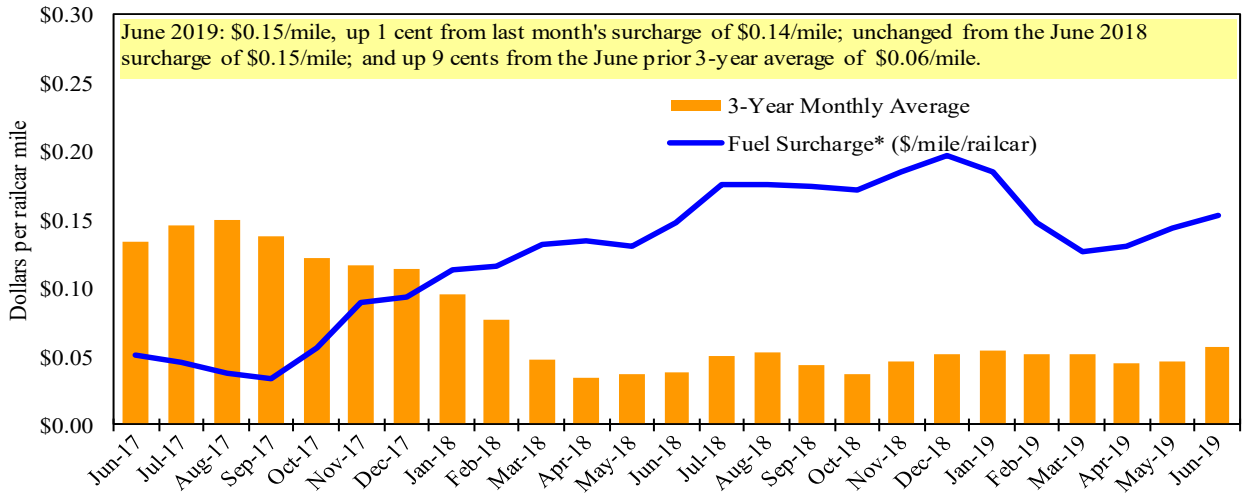
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

[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.

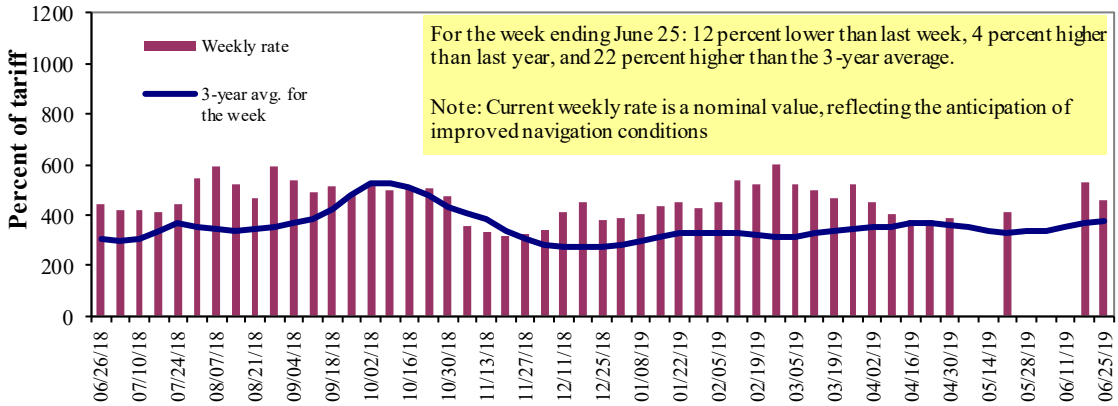
**CSX strike price changed from $2.00/gal. to $3.75/gal. starting January 1, 2015.

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]	6/25/2019	475 *	463 *	463 *	-	275	275	278
	6/18/2019	-	-	528	310	270	270	258
$/ton	6/25/2019	29.40 *	24.63 *	21.48 *	-	12.90	11.11	8.73
	6/18/2019	-	-	24.50	12.37	12.66	10.91	8.10
Current week % change from the same week:								
	Last year	-	-	4	-	-25	-25	-5
	3-year avg. [2]	-	-	22	-	-	-	16
Rate[1]	July	467	447	447	325	280	280	278
	September	433	417	417	330	400	400	325

[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

* - Current weekly rate is a nominal value, reflecting the anticipation of improved navigation conditions

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.

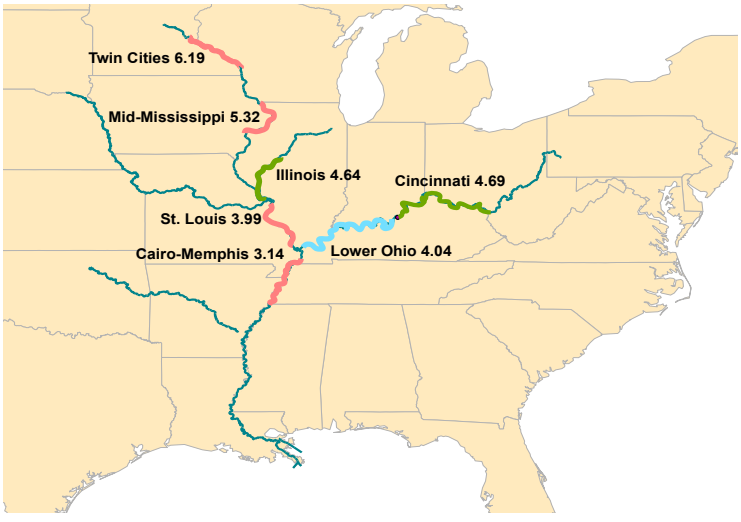
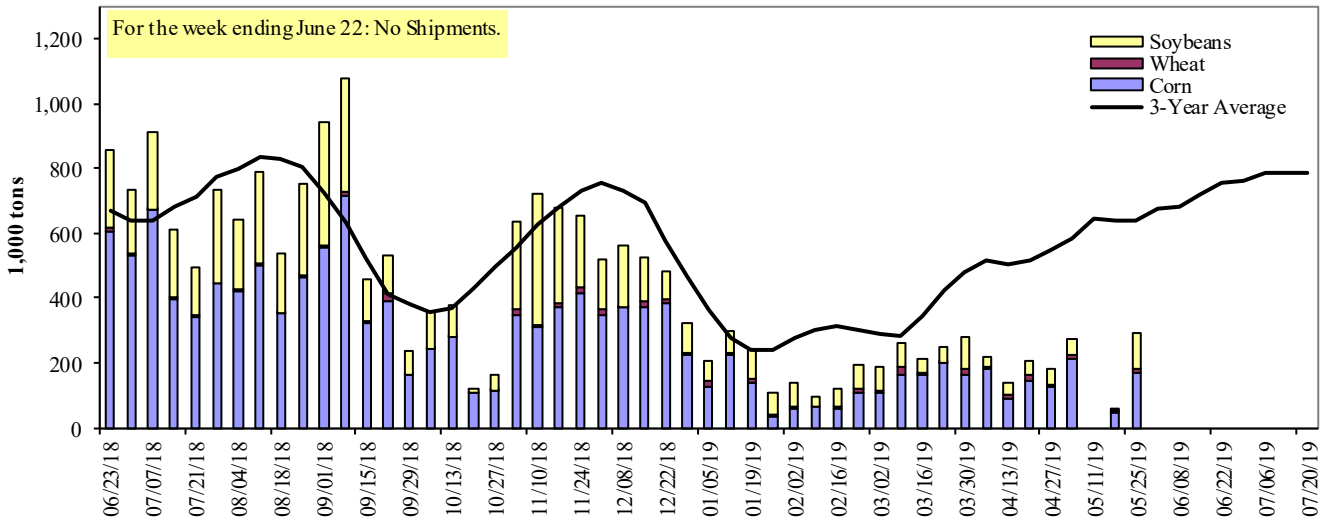


Figure 10

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 06/22/2019	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	13	0	18	2	32
Winfield, MO (L25)	0	0	0	0	0
Alton, IL (L26)	0	0	0	0	0
Granite City, IL (L27)	0	0	0	0	0
Illinois River (LAGRANGE)	159	10	93	0	262
Ohio River (OLMSTED)	73	22	61	2	157
Arkansas River (L1)	0	1	3	0	4
Weekly total - 2019	73	23	64	2	162
Weekly total - 2018	721	42	305	2	1,069
2019 YTD[1]	5,595	899	4,197	71	10,762
2018 YTD[1]	11,205	752	5,441	65	17,462
2019 as % of 2018 YTD	50	120	77	109	62
Last 4 weeks as % of 2018[2]	17	41	39	26	24
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.

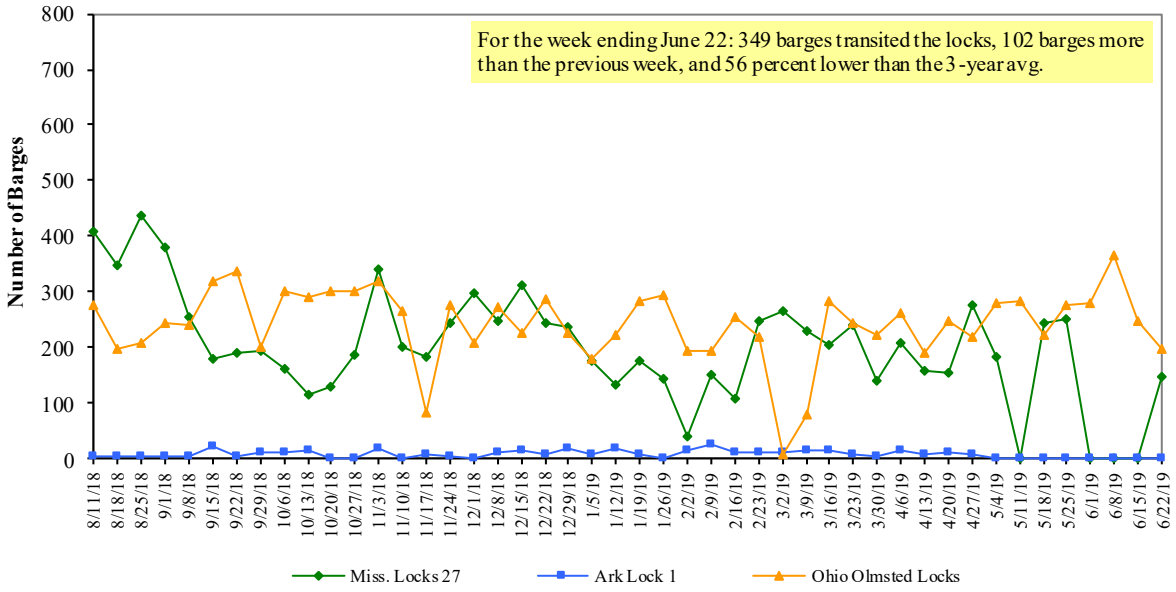
[2] As a percent of same period in 2018.

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

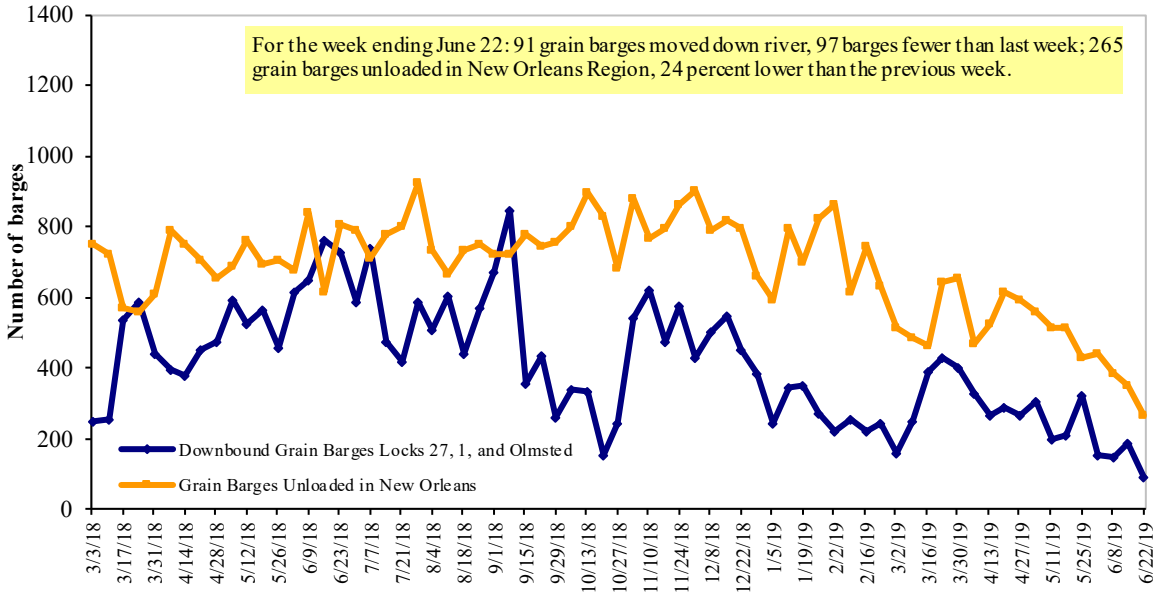
Upbound Empty Barges Transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 6/24/2019 (US $/gallon)

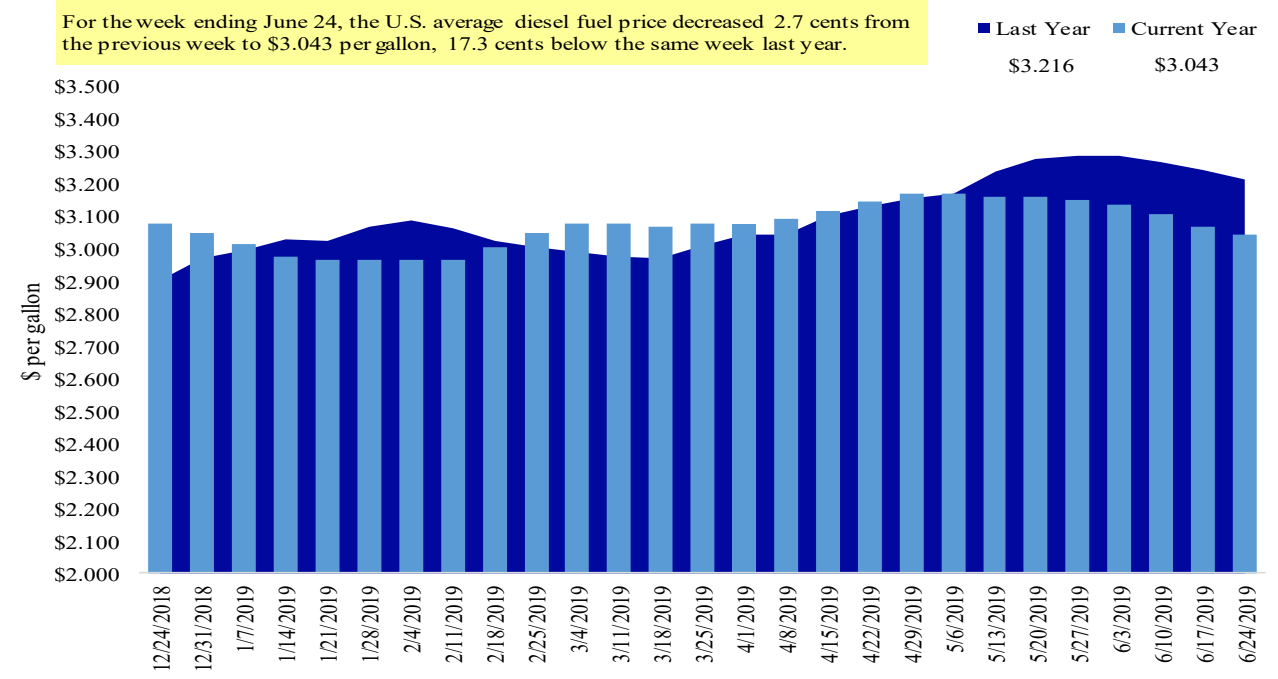
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	3.079	-0.020	-0.136
	New England	3.136	-0.017	-0.145
	Central Atlantic	3.258	-0.024	-0.122
	Lower Atlantic	2.946	-0.018	-0.140
II	Midwest	2.926	-0.031	-0.217
III	Gulf Coast	2.797	-0.023	-0.181
IV	Rocky Mountain	3.030	-0.042	-0.291
V	West Coast	3.631	-0.035	-0.104
	West Coast less California	3.206	-0.032	-0.247
	California	3.968	-0.038	0.009
Total	U.S.	3.043	-0.027	-0.173

[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]									
6/13/2019	2,146	896	1,358	946	179	5,525	6,545	11,101	23,171
This week year ago	952	499	1,476	1,225	100	4,251	14,231	8,258	26,740
Cumulative exports-marketing year[2]									
2018/19 YTD	454	46	173	105	33	811	41,900	36,408	79,119
2017/18 YTD	171	129	193	242	2	737	42,172	48,114	91,023
YTD 2018/19 as % of 2017/18	266	35	90	43	2,063	110	99	76	87
Last 4 wks as % of same period 2017/18	172	106	61	53	105	90	53	139	86
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 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 6/13/2019	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	1,842	15,020	14,223	6	13,691
Japan	540	11,721	10,776	9	11,247
Korea	0	3,694	5,022	(26)	4,754
Colombia	19	4,534	4,283	6	4,678
Peru	0	1,992	2,924	(32)	2,975
Top 5 Importers	**2,401**	**36,961**	**37,228**	**(1)**	**37,344**
Total US corn export sales	**3,069**	**48,445**	**56,403**	**(14)**	**53,184**
% of Projected	6%	87%	91%		
Change from prior week[2]	**363**	**38**	**166**		
Top 5 importers' share of U.S. corn export sales	78%	76%	66%		70%
USDA forecast, June 2019	**54,707**	**55,980**	**62,036**	**(10)**	
Corn Use for Ethanol USDA forecast, June 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 6/13/2019	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	13,637	28,612	(52)	31,228
Mexico	505	4,772	4,236	13	3,716
Indonesia	8	2,080	2,310	(10)	2,250
Japan	110	2,408	2,157	12	2,145
Netherlands	65	1,515	1,650	(8)	2,209
Top 5 importers	**751**	**24,411**	**38,965**	**(37)**	**41,549**
Total US soybean export sales	**1,995**	**47,509**	**56,372**	**(16)**	**55,113**
% of Projected	4%	103%	97%		
Change from prior week[2]	**200**	**572**	**222**		
Top 5 importers' share of U.S. soybean export sales	38%	51%	69%		**75%**
USDA forecast, June 2019	**53,134**	**46,322**	**58,011**	**80**	

(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 6/13/2019	Total Commitments[2]		% change current MY from last MY	Exports[3] 3-yr avg 2015-2017
	2019/20 Current MY	2018/19 Last MY		
	- 1,000 mt -			- 1,000 mt -
Mexico	761	349	118	2,781
Japan	525	652	(20)	2,649
Philippines	737	540	37	2,441
Korea	307	463	(34)	1,257
Nigeria	481	140	244	1,254
Indonesia	284	100	184	1,076
Taiwan	245	181	35	1,066
China	0	0	n/a	944
Colombia	0	156	(100)	714
Thailand	196	264	(26)	618
Top 10 importers	**3,534**	**2,844**	24	**14,800**
Total US wheat export sales	**6,336**	**4,988**	**27**	**22,869**
% of Projected	24%	20%		
Change from prior week[2]	**188**	**462**		
Top 10 importers' share of U.S. wheat export sales	56%	57%		65%
USDA forecast, June 2019	**25,886**	**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 06/20/19	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	244	233	105	6,608	5,890	112	92	76	13,315
Corn	154	110	140	6,211	10,896	57	32	43	20,024
Soybeans	214	165	130	4,749	5,035	94	135	230	7,719
Total	**612**	**508**	**121**	**17,568**	**21,822**	**81**	**62**	**73**	**41,058**
Mississippi Gulf									
Wheat	5	18	29	2,502	2,026	123	55	52	3,896
Corn	322	310	104	12,548	17,004	74	49	52	33,735
Soybeans	317	403	79	11,442	11,194	102	109	166	28,124
Total	**645**	**731**	**88**	**26,492**	**30,224**	**88**	**67**	**77**	**65,755**
Texas Gulf									
Wheat	151	88	172	3,470	1,889	184	322	125	3,198
Corn	0	30	0	362	375	96	28	35	730
Soybeans	0	0	n/a	0	67	0	0	0	69
Total	**151**	**119**	**128**	**3,832**	**2,331**	**164**	**181**	**108**	**3,997**
Interior									
Wheat	4	43	10	799	743	108	128	111	1,614
Corn	121	216	56	3,569	4,150	86	90	91	8,650
Soybeans	103	141	73	3,149	3,139	100	92	122	6,729
Total	**228**	**400**	**57**	**7,517**	**8,031**	**94**	**93**	**103**	**16,993**
Great Lakes									
Wheat	23	20	110	431	256	169	278	232	894
Corn	0	0	n/a	0	214	0	0	0	404
Soybeans	24	0	n/a	169	195	86	59	148	1,192
Total	**46**	**20**	**226**	**600**	**665**	**90**	**76**	**119**	**2,491**
Atlantic									
Wheat	0	0	n/a	32	64	51	n/a	0	69
Corn	10	0	n/a	85	67	126	n/a	n/a	138
Soybeans	59	7	903	653	1,083	60	56	113	2,047
Total	**69**	**7**	**n/a**	**770**	**1,214**	**63**	**68**	**135**	**2,253**
U.S. total from ports*									
Wheat	428	403	106	13,843	10,867	127	124	91	22,986
Corn	607	666	91	22,774	32,706	70	47	54	63,682
Soybeans	718	716	100	20,161	20,714	97	102	162	45,879
Total	**1,752**	**1,785**	**98**	**56,778**	**64,288**	**88**	**73**	**83**	**132,547**

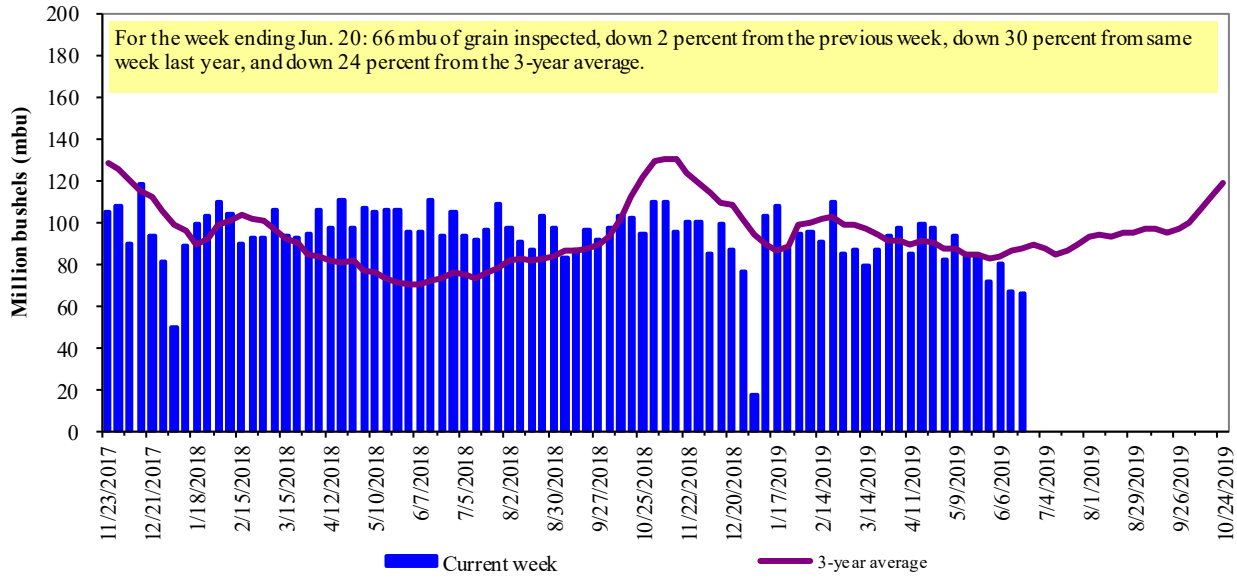
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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

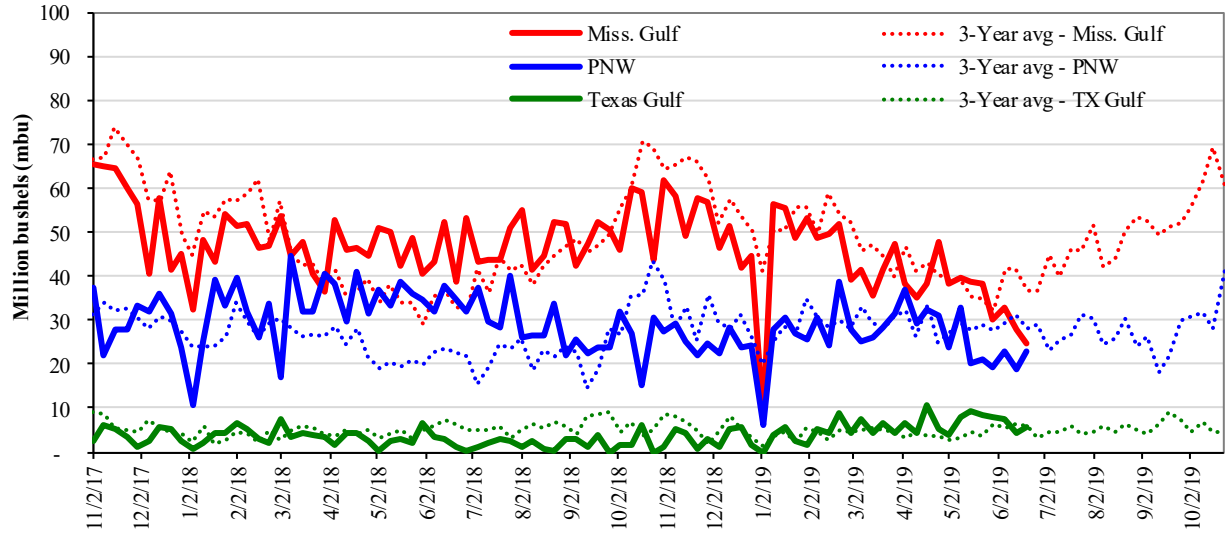
U.S. grain inspected for export (wheat, corn, and soybeans)



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 06/20/19 inspections (mbu):	
Mississippi Gulf:	24.5
PNW:	22.9
Texas Gulf:	5.6

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last Week:	down 11	up 25	down 6	up 21
Last Year (same week):	down 37	up 317	down 25	down 34
3-yr avg. (4-wk. mov. Avg):	down 36	down 6	down 32	down 21

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

Table 17

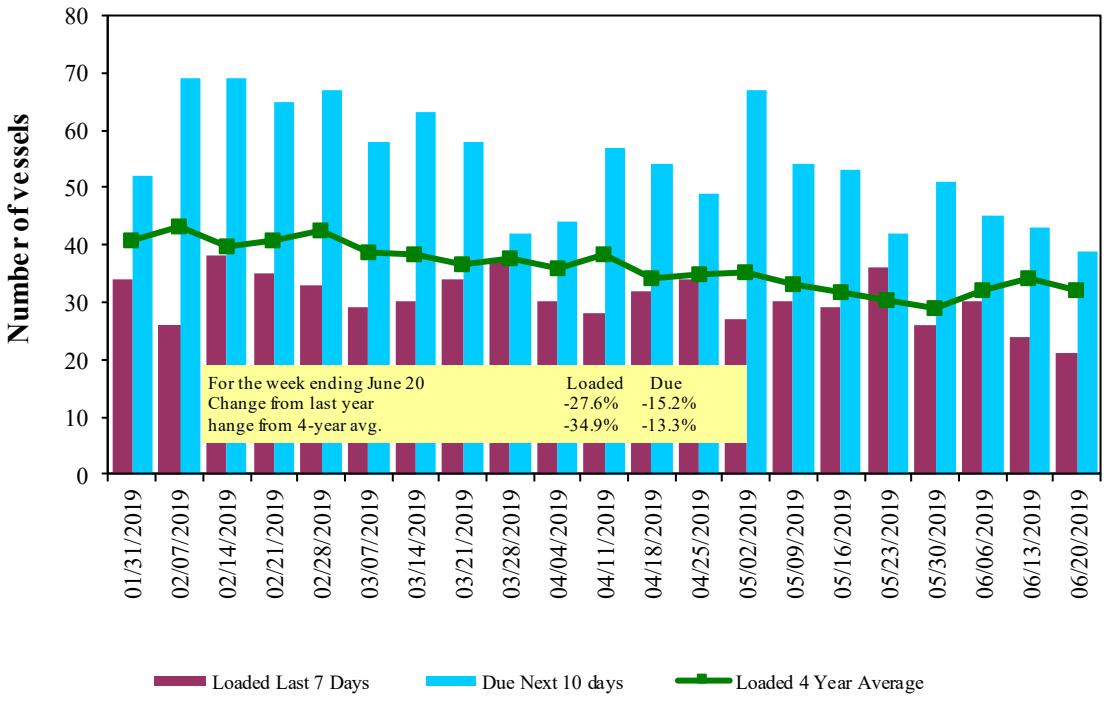
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
6/20/2019	55	21	39	13
6/13/2019	48	24	43	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

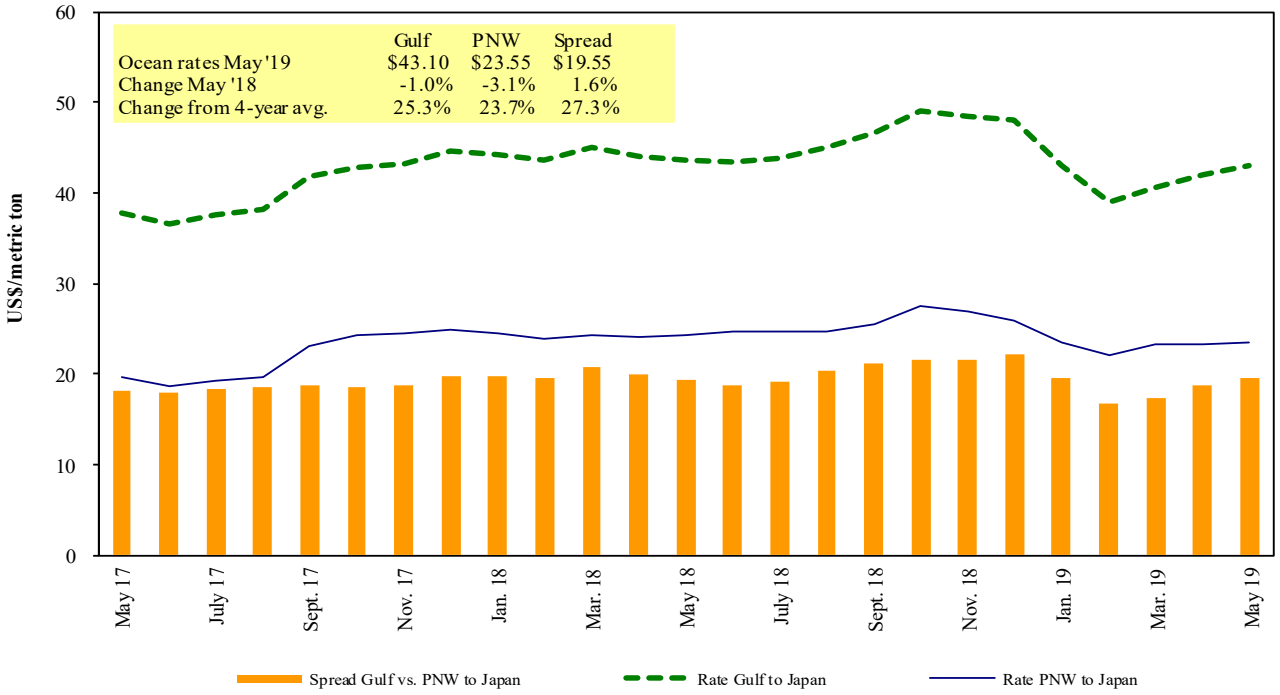
U.S. Gulf Vessel Loading Activity



Source:Transportation & Marketing Program/AMS/USDA
[1]U.S. Gulfincludes 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 06/22/2019

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
U.S. Gulf	Durban	Sorghum	Jul 19/29	11,000	145.22*
PNW	China	Heavy Grain	Mar 2/18	60,000	27.50
Brazil	China	Heavy Grain	Jun 10/20	65,000	33.00
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 3/11	63,000	27.50
River Plate	China	Heavy Grain	Apr 21/30	65,000	37.85

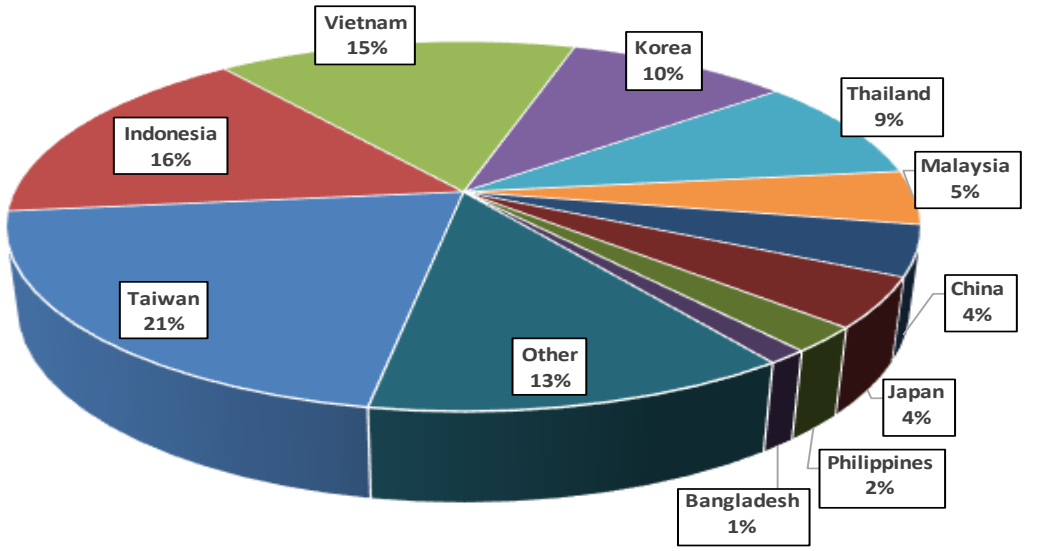
Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), F.O.B., except where otherwise indicated; op = option

*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.

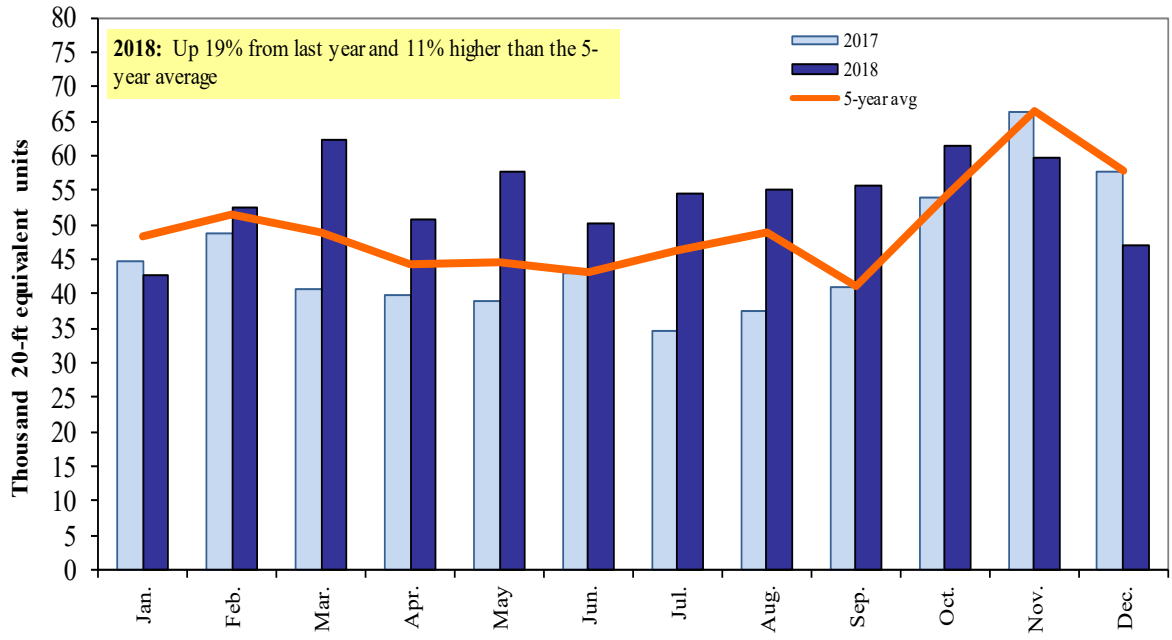
Figure 18
Top 10 Destination Markets for U.S. Containerized Grain Exports, 2018



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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