



Grain Transportation Report

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

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May 27, 2021

WEEKLY HIGHLIGHTS

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Scheduled Lock Maintenance on Panama Canal Reduces Transit Capacity

On May 27, 2021, the east lane of Miraflores Panamax locks on the Panama Canal [will be closed](#) for 12 hours, for scheduled maintenance and repair work. During this time, the transit capacity of the Panamax Locks is estimated at 26-28 vessels per day, rather than the normal capacity of 34-36 vessels. Capacity (whether normal or constricted) depends on the types of vessels transiting, transit restrictions, and other factors. Vessels may experience some transit delays, but no major delays are anticipated.

CHS To Improve Louisiana Export Terminal

CHS, Inc., recently [announced plans to renovate and expand](#) its grain export facility in Myrtle Grove, LA. As one major upgrade, CHS plans to add six new bins with 580,000 bushels of new storage capacity, bringing the site's total capacity to 850,000 bushels. Other planned improvements include a new dock and an enhanced barge-unloading system. CHS expects the renovations to begin in August 2021 and to complete by summer 2023. The proposed enhancements may positively impact future demand for domestic barges and ocean vessels. The Myrtle Grove export terminal ships corn, distillers' dried grains with solubles, rice, soybeans, and wheat.

I-40 Bridge Closure May Cost the Trucking Industry \$2.4 Million Daily

The Interstate-40 (I-40) Hernando de Soto Bridge, which crosses the Mississippi River between Tennessee and Arkansas, has been shut down since May 11 when a crack was found in one of the bridge's support beams. The Arkansas Trucking Association (ATA) has estimated the bridge closure is [costing the trucking industry \\$2.4 million for each day the bridge is closed](#). Using global positioning system data, ATA found the usual 8-minute drive across the bridge now averages 84 minutes. ATA estimated the daily cost by tallying the extra transit time of 76 minutes at \$1.20/minute for 26,500 trucks. The I-40 bridge typically carries more than 40,000 vehicles daily over the Mississippi River.

Midwest Diesel Prices Highest Since 2018

For the week ending May 23, the Department of Energy's Energy Information Agency (EIA) [reported Midwest on-highway diesel prices at \\$3.199 per gallon](#). This was the highest price since the week ending November 18, 2018. Midwest diesel prices are 43 percent above the August 2020 low and have risen 23 percent since the start of the calendar year. At \$4.047 per gallon, California diesel prices are the highest in the Nation.

Snapshots by Sector

Export Sales

For the week ending May 13, [unshipped balances](#) of wheat, corn, and soybeans totaled 27.3 million metric tons (mmt). This was 9 percent lower than last week, but 21 percent higher than the same time last year. Net [corn export sales](#) were 0.278 mmt, down significantly from the past week. Net [soybean export sales](#) were 0.084 mmt, down 11 percent from the previous week. Net weekly [wheat export sales](#) were 0.121 mmt, up significantly from the previous week.

Rail

U.S. Class I railroads originated 25,473 [grain carloads](#) during the week ending May 15. This was a 1-percent increase from the previous week, 23 percent more than last year, and 12 percent more than the 3-year average.

Average June shuttle [secondary railcar](#) bids/offers (per car) were \$244 below tariff for the week ending May 20. This was \$94 less than last week and \$146 lower than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending May 22, [barged grain movements](#) totaled 1,023,220 tons. This was 18 percent more than the previous week and 61 percent more than the same period last year.

For the week ending May 22, 578 grain barges [moved down river](#)—43 more barges than the previous week. There were 714 grain barges [unloaded in New Orleans](#), 11 percent lower than the previous week.

Ocean

For the week ending May 20, 29 [oceangoing grain vessels](#) were loaded in the Gulf—15 percent fewer than the same period last year. Within the next 10 days (starting May 21), 42 vessels were expected to be loaded—24 percent more than the same period last year.

As of May 20, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was \$66.00. This was 1 percent less than the previous week. The rate from the Pacific Northwest to Japan was \$38.50 per mt, 3 percent less than the previous week.

Feature Article/Calendar

First-Quarter 2021 Corn and Soybean Transport Costs

From fourth quarter 2020 to first quarter 2021 (quarter to quarter), transportation costs for shipping corn and soybeans from Minneapolis, MN, to Japan via the U.S. Gulf (Gulf route) decreased slightly. Meanwhile, for the same time period, costs to ship from Minneapolis to Japan via the Pacific Northwest (PNW route) increased. From first quarter 2020 to first quarter 2021 (year to year), costs to ship corn and soybeans by the U.S. Gulf route increased substantially because of rate increases for all modes. For the same period, costs to ship by the PNW route increased moderately, primarily because of higher truck and ocean freight rates (see tables 1 and 2). The year-to-year increase in ocean rates reflected the reopening of world economies and higher demand for iron ore ([Grain Transportation Report \(GTR\), April 15, 2021](#)). Total landed costs for shipping corn and soybeans to Japan by each route increased both from quarter to quarter and from year to year.

Table 1: Cost of shipping corn and soybeans from Minneapolis to Japan through the U.S. Gulf

	Corn					Soybeans				
	\$/metric ton			Percent change		\$/metric ton			Percent Change	
	1st qtr. '20	4th qtr. '20	1st qtr. '21	Yr. to Yr.	Qtr to Qtr	1st qtr. '20	4th qtr. '20	1st qtr. '21	Yr. to Yr.	Qtr to Qtr
Truck	10.70	11.38	13.66	27.66	20.04	10.70	11.38	13.66	27.66	20.04
Barge ¹	9.00	28.80	12.47	38.56	-56.70	9.00	28.80	12.47	38.56	-56.70
Rail ²	39.00	39.83	39.94	2.41	0.28	36.73	36.27	36.38	-0.95	0.30
Ocean	39.06	42.11	52.19	33.61	23.94	39.06	42.11	52.19	33.61	23.94
Total transportation cost	97.76	122.12	118.26	20.97	-3.16	95.49	118.56	114.70	20.12	-3.26
Farm value ³	139.89	140.02	173.48	24.01	23.90	289.79	364.86	465.42	60.61	27.56
Total landed cost	237.65	262.14	291.74	22.76	11.29	385.28	483.42	580.12	50.57	20.00
Transportation % landed cost	41.14	46.59	40.54			24.78	24.53	19.77		

Table 2: Cost of shipping corn and soybeans from Minneapolis to Japan through the Pacific Northwest

	Corn					Soybeans				
	\$/metric ton			Percent change		\$/metric ton			Percent Change	
	1st qtr. '20	4th qtr. '20	1st qtr. '21	Yr. to Yr.	Qtr to Qtr	1st qtr. '20	4th qtr. '20	1st qtr. '21	Yr. to Yr.	Qtr to Qtr
Truck	10.70	11.38	13.66	27.66	20.04	10.70	11.38	13.66	27.66	20.04
Rail ²	51.44	51.44	51.44	0.00	0.00	58.59	58.59	58.59	0.00	0.00
Ocean	23.10	23.40	29.85	29.22	27.56	23.10	23.40	29.85	29.22	27.56
Total Transportation Cost	85.24	86.22	94.95	11.39	10.13	92.39	93.37	102.10	10.51	9.35
Farm Value ³	139.89	140.02	173.48	24.01	23.90	289.79	364.86	465.42	60.61	27.56
Total Landed Cost	225.13	226.24	268.43	19.23	18.65	382.18	458.23	567.52	48.50	23.85
Transportation % Landed Cost	37.86	38.11	35.37			24.17	20.38	17.99		

¹ Barge rates are from St. Louis to the Gulf for all quarters.

² Rail rates quotes are from MN to St. Louis in Gulf. All rail tariffs include fuel surcharges and revisions for heavy axle rail cars and shuttle trains. The rail tariff rate is a base price of rail freight rates, but during periods of high rail demand or car shortages, high auction and secondary market rates could exceed the base rail tariffs per car.

³ USDA, National Agricultural Statistics Service is the source for corn and soybean prices

Note: qtr. = quarter; yr. = year.

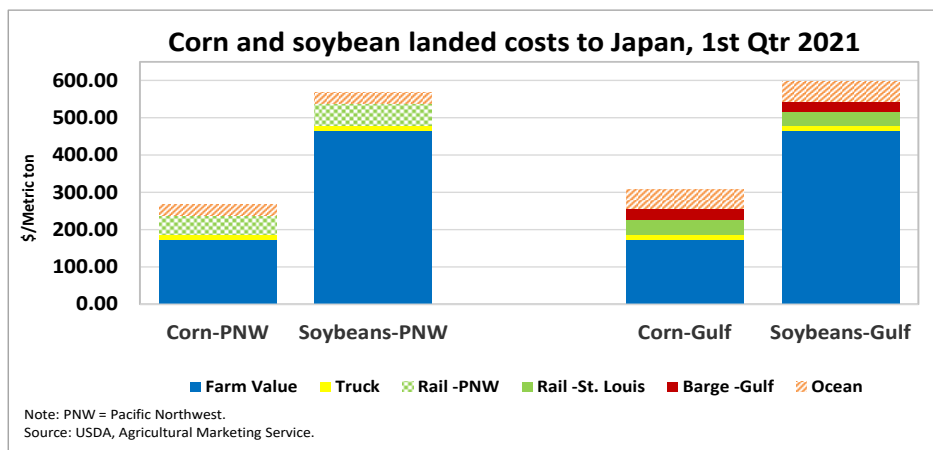
Source: USDA, Agricultural Marketing Service.

U.S. Gulf Costs

Transportation costs. From quarter to quarter, transportation costs for shipping corn and soybeans via the Gulf route decreased 3 percent, mainly owing to lower barge rates, which dropped 57 percent (see table 1). Year to year, transportation costs rose 21 percent for corn and 20 percent for soybeans, because of substantial increases in truck, barge, and ocean rates. First-quarter transportation costs for shipping corn accounted for 41 percent of Gulf-route landed costs for corn, and transportation costs for shipping soybeans accounted for 20 percent of Gulf-route landed costs for soybeans. These shares reflect quarter-to-quarter decreases for corn and soybeans and a year-to-year decrease for soybeans, but an insignificant year-to-year change for corn (see table 1).

Landed costs. For first-quarter 2021, Gulf-route total landed costs were roughly \$292 per metric ton (mt) for shipping corn and \$580 per mt for soybeans (see figure, page 3). Quarter to quarter, total landed costs increased 11 percent for corn and 20 percent for soybeans; both increases stemmed from rising truck and ocean rates and higher farm values. Year to year, landed costs increased 23 percent for corn and 51 percent for soybeans, because of higher transport costs and higher farm values (see table 1).

Inspections. Year to year, U.S. Gulf inspections of corn for export increased 97 percent and exceeded the 5-year average by 66 percent. First-quarter 2021 inspections of corn for export totaled 12.5 million metric tons (mmt), representing 66 percent of total corn exports. Year to year, U.S. Gulf inspections of soybeans for export increased 52 percent, and were 27 percent above the 5-year average. U.S. Gulf inspections of soybeans totaled 9.5 mmt, representing 63 percent of total soybean exports in first quarter 2021 ([GTR, April 8 2021](#)).



Pacific Northwest

Transportation costs. Quarter to quarter, transportation costs for shipping via the PNW route rose 10 percent for corn and 9 percent for soybeans (table 2). Truck and ocean rates showed significant quarter-to-quarter increases, while rail rates remained unchanged. Year to year, higher truck and ocean rates pushed transportation costs up 11 percent each for corn and soybeans. First-quarter 2021 transportation costs for shipping corn accounted for 35 percent of the total landed costs for corn, a slight quarter-to-quarter decrease. First-quarter 2021 transportation costs for shipping soybeans accounted for 18 percent of the total landed costs for soybeans, a moderate quarter-to-quarter decrease. Year to year, transportation costs were down moderately for corn and down notably for soybeans.

Landed costs. First-quarter 2021 total landed costs were roughly \$268 per mt for corn and \$568 per mt for soybeans (see figure). Quarter to quarter, total landed costs were up 19 percent for corn and up 24 percent for soybeans. Year to year, landed costs increased 19 percent for corn and 49 percent for soybeans (table 2).

Inspections. First-quarter 2021 inspections of corn for export rose 194 percent from year to year and surpassed the 5-year average by 55 percent. First-quarter 2021 PNW-route corn exports totaled 4.4 mmt, representing 23 percent of total corn exports ([GTR, April 8, 2021](#)). First-quarter 2021 soybean exports increased 89 percent from year to year and were 8 percent above the 5-year average. First-quarter 2021 PNW-route soybean exports totaled 3.4 mmt, representing 22 percent of total soybean exports. Johnny.Hill@usda.gov

Grain Transportation Indicators

Table 1

Grain transport cost indicators¹

For the week ending	Truck		Rail		Barge	Ocean	
		Non-Shuttle	Shuttle			Gulf	Pacific
05/26/21	218	297	214		210	295	273
05/19/21	218	297	218		208	300	280

¹Indicator: 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); ocean = routes to Japan (\$/metric ton); n/a = not available.

Source: USDA, Agricultural Marketing Service.

Table 2

Market Update: U.S. origins to export position price spreads (\$/bushel)

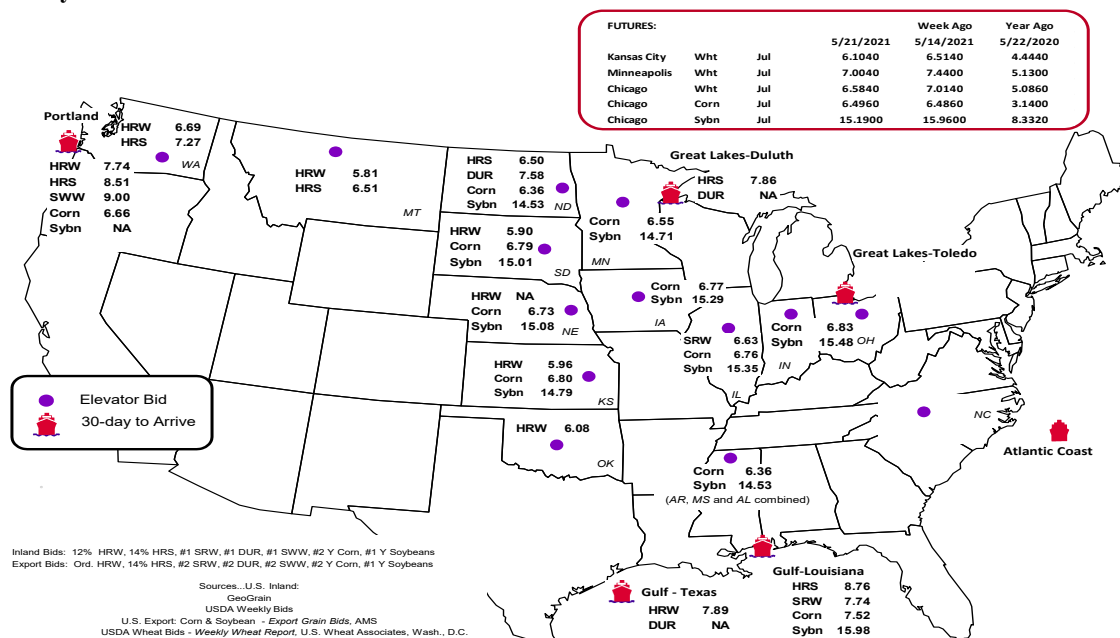
Commodity	Origin-destination	5/21/2021	5/14/2021
Corn	IL-Gulf	-0.76	-0.74
Corn	NE-Gulf	-0.79	-0.78
Soybean	IA-Gulf	-0.69	-0.75
HRW	KS-Gulf	-1.93	-1.90
HRS	ND-Portland	-2.01	-2.06

Note: nq = no quote; n/a = not available; HRW = hard red winter wheat; HRS = hard red spring wheat.

Source: USDA, Agricultural Marketing Service.

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		Pacific	Atlantic &	Total	Week ending	Cross-border Mexico ³
	Gulf	Texas Gulf	Northwest	East Gulf			
5/19/2021 ^P	850	1,115	5,999	120	8,084	5/15/2021	3,532
5/12/2021 ^r	654	1,116	6,453	107	8,330	5/8/2021	3,401
2021 YTD ^r	31,487	32,568	134,658	9,806	208,519	2021 YTD	53,400
2020 YTD ^r	8,712	15,761	92,991	4,071	121,535	2020 YTD	47,605
2021 YTD as % of 2020 YTD	361	207	145	241	172	% change YTD	112
Last 4 weeks as % of 2020 ²	139	95	126	94	121	Last 4wks. % 2020	129
Last 4 weeks as % of 4-year avg. ²	151	102	121	47	117	Last 4wks. % 4 yr.	113
Total 2020	45,294	64,116	299,882	24,458	433,750	Total 2020	126,407
Total 2019	40,974	51,167	251,181	16,192	359,514	Total 2019	127,622

¹Data is incomplete as it is voluntarily provided.

²Compared with same 4-weeks in 2020 and prior 4-year average.

³Cross-border weekly data is approximately 15 percent below the Association of American Railroads' reported weekly carloads received by Mexican railroads. to reflect switching between Kansas City Southern de Mexico (KCSM) and Grupo Mexico.

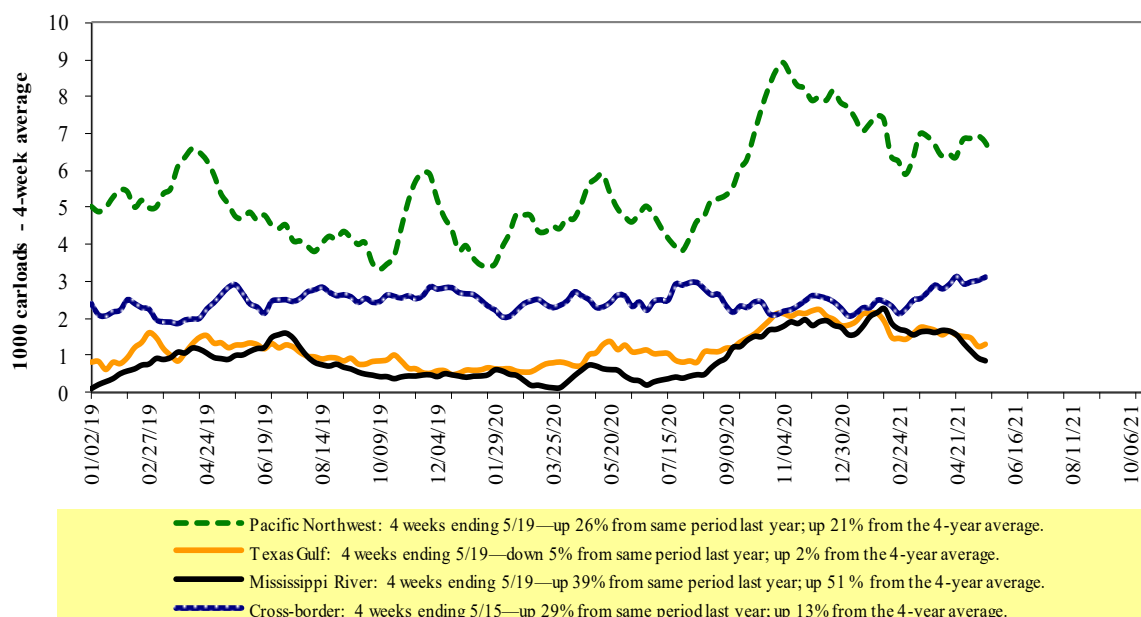
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available; wks. = weeks; avg. = average.

Source: USDA, Agricultural Marketing Service.

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: USDA, Agricultural Marketing Service.

Table 4

Class I rail carrier grain car bulletin (grain carloads originated)

For the week ending: 5/15/2021	East		West			U.S. total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	2,111	2,481	12,503	1,508	6,870	25,473	4,189	5,877
This week last year	1,411	2,367	10,601	835	5,495	20,709	3,646	4,901
2021 YTD	38,185	49,176	250,010	20,375	126,222	483,968	93,427	104,834
2020 YTD	33,859	46,472	212,962	20,908	97,085	411,286	76,293	85,380
2021 YTD as % of 2020 YTD	113	106	117	97	130	118	122	123
Last 4 weeks as % of 2020*	123	105	124	126	118	120	106	114
Last 4 weeks as % of 3-yr. avg.**	101	93	112	119	122	111	103	121
Total 2020	91,659	130,687	613,630	57,782	296,701	1,190,459	238,728	261,778

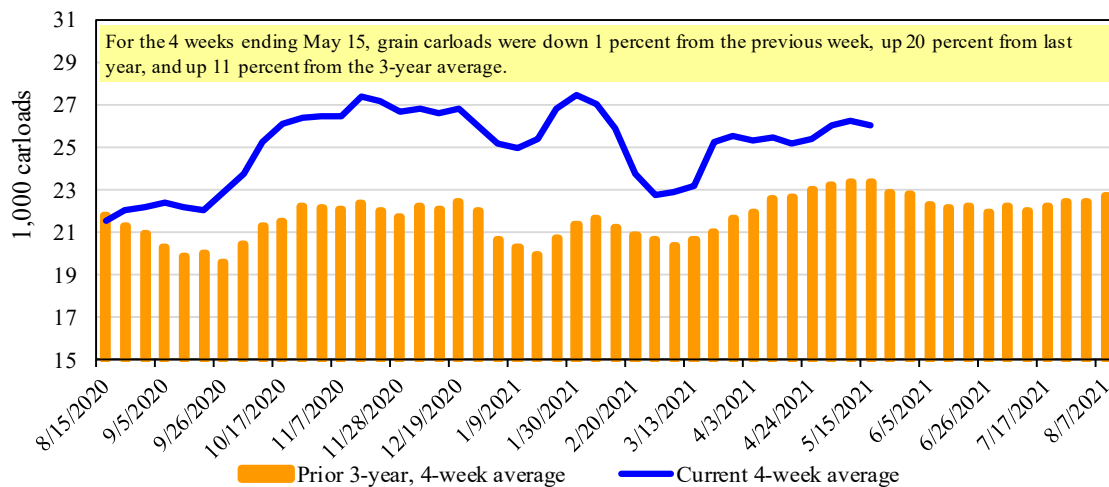
*The past 4 weeks of this year as a percent of the same 4 weeks last year.

**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

Note: NS = Norfolk Southern; KCS = Kansas City Southern; UP = Union Pacific; CN = Canadian National; CP = Canadian Pacific.

Source: Association of American Railroads.

Figure 3

Total weekly U.S. Class I railroad grain carloads

Source: Association of American Railroads.

Table 5

Railcar auction offerings¹ (\$/car)²

For the week ending: 5/20/2021		Delivery period							
5/20/2021		Jun-21	Jun-20	Jul-21	Jul-20	Aug-21	Aug-20	Sep-21	Sep-20
BNSF ³	COT grain units	0	no bids	no bids	no bids	no bids	no bids	0	no bids
	COT grain single-car	43	0	18	no bids	0	0	0	0
UP ⁴	GCAS/Region 1	no offer	no offer	no offer	no offer	no offer	no offer	n/a	n/a
	GCAS/Region 2	no offer	no bid	no offer	no bid	no offer	no bid	n/a	n/a

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

²Average premium/discount to tariff, last auction. n/a = not available.

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

⁴UP - GCAS = Union Pacific Railroad Grain Car Allocation System.

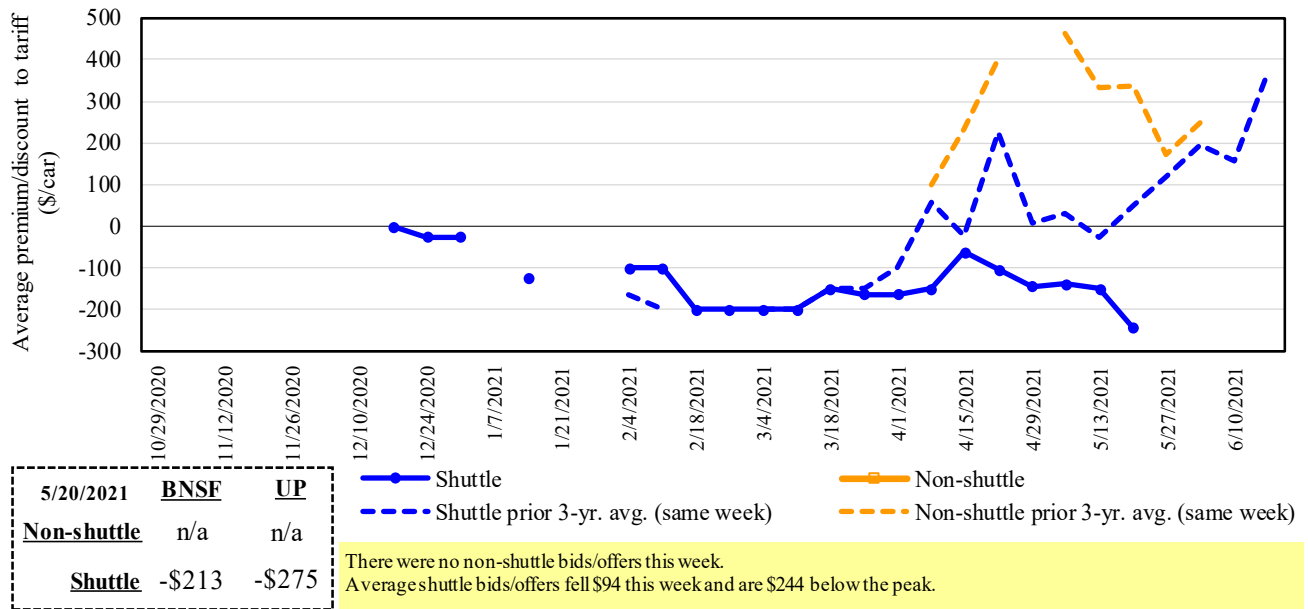
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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

Source: USDA, Agricultural Marketing Service.

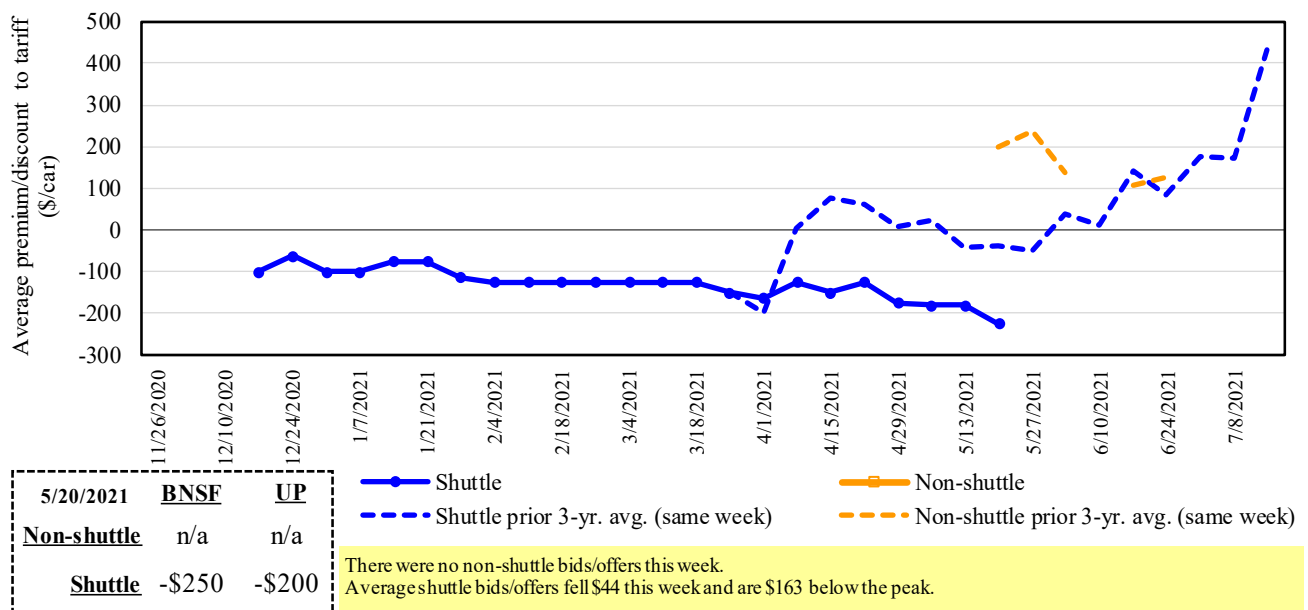
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

Figure 4
Bids/offers for railcars to be delivered in June 2021, secondary market



Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = year; BNSF = BNSF Railway; UP = Union Pacific Railroad.
Source: USDA, Agricultural Marketing Service.

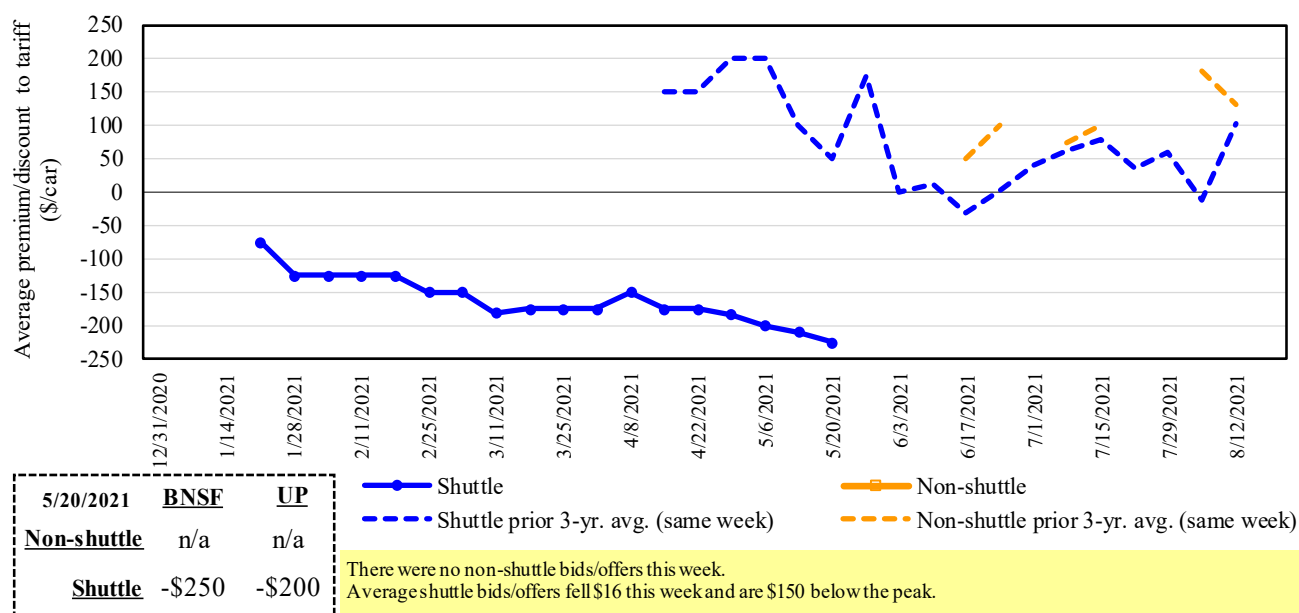
Figure 5
Bids/offers for railcars to be delivered in July 2021, secondary market



Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = year; BNSF = BNSF Railway; UP = Union Pacific Railroad.
Source: USDA, Agricultural Marketing Service.

Figure 6

Bids/offers for railcars to be delivered in August 2021, secondary market



Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = year; BNSF = BNSF Railway; UP = Union Pacific Railroad.
 Source: USDA, Agricultural Marketing Service.

Table 6

Weekly secondary railcar market (\$/car)¹

For the week ending: 5/20/2021		Delivery period					
		Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Non-shuttle	BNSF-GF	n/a	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 2020	n/a	n/a	n/a	n/a	n/a	n/a
	UP-Pool	n/a	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 2020	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	BNSF-GF	(213)	(250)	(250)	78	1200	n/a
	Change from last week	(38)	(37)	(6)	(185)	17	n/a
	Change from same week 2020	(117)	n/a	n/a	n/a	900	n/a
	UP-Pool	(275)	(200)	(200)	(175)	875	375
	Change from last week	(150)	(50)	(25)	(25)	(50)	n/a
	Change from same week 2020	(175)	(113)	n/a	n/a	675	n/a

¹Average premium/discount to tariff, \$/car-last week.

Note: Bids listed are market indicators only and are not guaranteed prices. n/a = not available; GF = guaranteed freight; Pool = guaranteed pool;

BNSF = BNSF Railway; UP = Union Pacific Railroad.

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

Source: USDA, Agricultural Marketing Service.

The **tariff rail rate** is the base price of freight rail service. Together with **fuel surcharges** and any **auction and secondary rail** values, the tariff rail rate constitutes 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. However, during times of high rail demand or short supply, high auction and secondary rail values can exceed the cost of the tariff rate plus fuel surcharge.

Table 7

Tariff rail rates for unit and shuttle train shipments¹

May 2021	Origin region ³	Destination region ³	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per:		Percent change Y/Y ⁴
					metric ton	bushel ²	
Unit train							
Wheat	Wichita, KS	St. Louis, MO	\$3,983	\$111	\$40.66	\$1.11	1
	Grand Forks, ND	Duluth-Superior, MN	\$4,208	\$0	\$41.79	\$1.14	-3
	Wichita, KS	Los Angeles, CA	\$7,115	\$0	\$70.66	\$1.92	-2
	Wichita, KS	New Orleans, LA	\$4,525	\$196	\$46.88	\$1.28	2
	Sioux Falls, SD	Galveston-Houston, TX	\$6,851	\$0	\$68.03	\$1.85	-2
	Colby, KS	Galveston-Houston, TX	\$4,801	\$215	\$49.81	\$1.36	2
	Amarillo, TX	Los Angeles, CA	\$5,121	\$299	\$53.82	\$1.46	2
Corn	Champaign-Urbana, IL	New Orleans, LA	\$3,900	\$221	\$40.93	\$1.04	2
	Toledo, OH	Raleigh, NC	\$7,833	\$0	\$77.79	\$1.98	15
	Des Moines, IA	Davenport, IA	\$2,455	\$47	\$24.84	\$0.63	2
	Indianapolis, IN	Atlanta, GA	\$5,979	\$0	\$59.37	\$1.51	3
	Indianapolis, IN	Knoxville, TN	\$5,040	\$0	\$50.05	\$1.27	3
	Des Moines, IA	Little Rock, AR	\$3,900	\$138	\$40.10	\$1.02	4
	Des Moines, IA	Los Angeles, CA	\$5,780	\$401	\$61.38	\$1.56	4
Soybeans	Minneapolis, MN	New Orleans, LA	\$5,246	\$225	\$54.33	\$1.48	46
	Toledo, OH	Huntsville, AL	\$6,595	\$0	\$65.49	\$1.78	17
	Indianapolis, IN	Raleigh, NC	\$7,125	\$0	\$70.75	\$1.93	3
	Indianapolis, IN	Huntsville, AL	\$5,247	\$0	\$52.11	\$1.42	3
	Champaign-Urbana, IL	New Orleans, LA	\$4,645	\$221	\$48.32	\$1.32	2
Shuttle train							
Wheat	Great Falls, MT	Portland, OR	\$4,018	\$0	\$39.90	\$1.09	-3
	Wichita, KS	Galveston-Houston, TX	\$4,236	\$0	\$42.07	\$1.14	-3
	Chicago, IL	Albany, NY	\$6,376	\$0	\$63.32	\$1.72	-10
	Grand Forks, ND	Portland, OR	\$5,676	\$0	\$56.37	\$1.53	-2
	Grand Forks, ND	Galveston-Houston, TX	\$5,996	\$0	\$59.54	\$1.62	-2
	Colby, KS	Portland, OR	\$6,012	\$352	\$63.20	\$1.72	2
	Corn	Minneapolis, MN	Portland, OR	\$5,180	\$0	\$51.44	\$1.31
Sioux Falls, SD		Tacoma, WA	\$5,140	\$0	\$51.04	\$1.30	0
Champaign-Urbana, IL		New Orleans, LA	\$3,820	\$221	\$40.13	\$1.02	2
Lincoln, NE		Galveston-Houston, TX	\$3,880	\$0	\$38.53	\$0.98	0
Des Moines, IA		Amarillo, TX	\$4,320	\$173	\$44.62	\$1.13	4
Minneapolis, MN		Tacoma, WA	\$5,180	\$0	\$51.44	\$1.31	0
Council Bluffs, IA		Stockton, CA	\$5,100	\$0	\$50.65	\$1.29	2
Soybeans	Sioux Falls, SD	Tacoma, WA	\$5,850	\$0	\$58.09	\$1.58	0
	Minneapolis, MN	Portland, OR	\$5,900	\$0	\$58.59	\$1.59	0
	Fargo, ND	Tacoma, WA	\$5,750	\$0	\$57.10	\$1.55	0
	Council Bluffs, IA	New Orleans, LA	\$4,875	\$255	\$50.95	\$1.39	2
	Toledo, OH	Huntsville, AL	\$4,945	\$0	\$49.11	\$1.34	3
	Grand Island, NE	Portland, OR	\$5,260	\$360	\$55.81	\$1.52	3

¹A 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.

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

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

⁴Percentage change year over year (Y/Y) calculated using tariff rate plus fuel surcharge.

Source: BNSF Railway, Canadian National Railway, CSX Transportation, and Union Pacific Railroad.

Table 8

Tariff rail rates for U.S. bulk grain shipments to Mexico

Date: May 2021			Tariff rate per car ¹	Fuel surcharge per car ²	Tariff rate plus fuel surcharge per:		Percent change ⁴ Y/Y
Commodity	Origin state	Destination region			metric ton ³	bushel ³	
Wheat	MT	Chihuahua, CI	\$7,384	\$0	\$75.45	\$2.05	-2
	OK	Cuautitlan, EM	\$6,713	\$153	\$70.15	\$1.91	0
	KS	Guadalajara, JA	\$7,471	\$663	\$83.11	\$2.26	3
	TX	Salinas Victoria, NL	\$4,347	\$93	\$45.37	\$1.23	1
Corn	IA	Guadalajara, JA	\$8,902	\$571	\$96.79	\$2.46	3
	SD	Celaya, GJ	\$8,140	\$0	\$83.17	\$2.11	0
	NE	Queretaro, QA	\$8,300	\$317	\$88.05	\$2.23	2
	SD	Salinas Victoria, NL	\$6,905	\$0	\$70.55	\$1.79	0
	MO	Tlahpantla, EM	\$7,665	\$309	\$81.48	\$2.07	2
	SD	Torreon, CU	\$7,690	\$0	\$78.57	\$1.99	0
Soybeans	MO	Bojay (Tula), HG	\$8,547	\$536	\$92.80	\$2.52	3
	NE	Guadalajara, JA	\$9,157	\$561	\$99.28	\$2.70	2
	IA	El Castillo, JA	\$9,410	\$0	\$96.15	\$2.61	-1
	KS	Torreon, CU	\$8,014	\$389	\$85.86	\$2.33	3
Sorghum	NE	Celaya, GJ	\$7,772	\$507	\$84.59	\$2.15	3
	KS	Queretaro, QA	\$8,108	\$191	\$84.80	\$2.15	1
	NE	Salinas Victoria, NL	\$6,713	\$154	\$70.16	\$1.78	1
	NE	Torreon, CU	\$7,092	\$357	\$76.11	\$1.93	2

¹Rates 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.

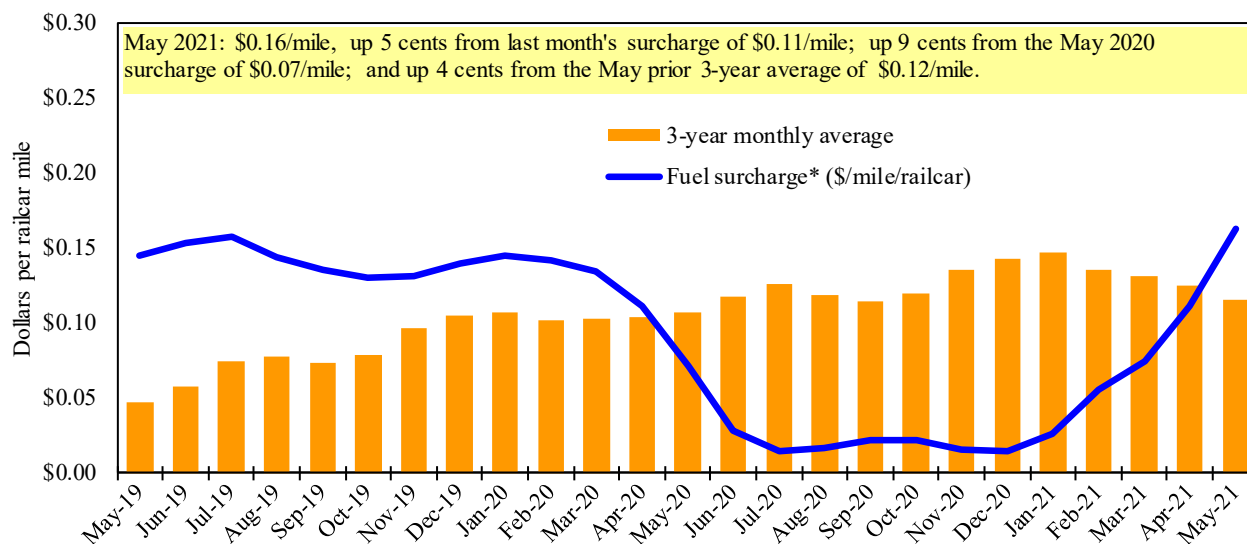
²Fuel surcharge adjusted to reflect the change in Ferrocarril Mexicano, S.A. de C.V railroad fuel surcharge policy as of 10/01/2009.

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

⁴Percentage change calculated using tariff rate plus fuel surcharge; Y/Y = year over year.

Sources: BNSF Railway, Union Pacific Railroad, Kansas City Southern.

Figure 7

Railroad fuel surcharges, North American weighted average¹

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.

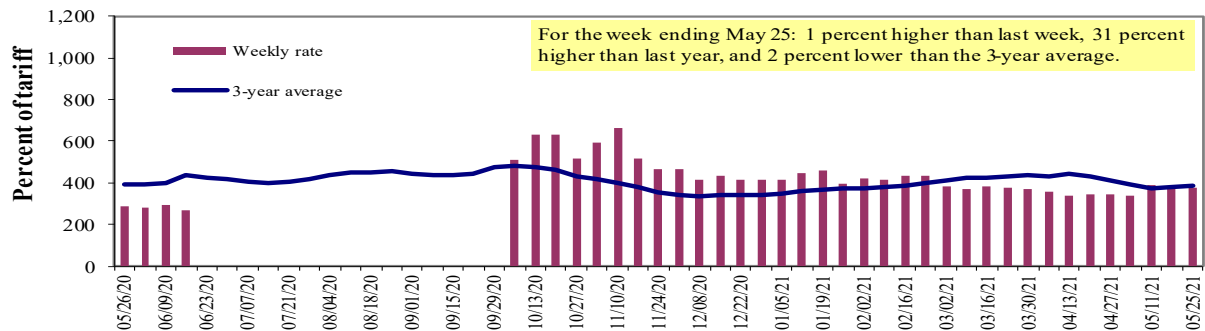
**CSX strike price changed from \$2.00/gal. to \$3.75/gal. starting January 1, 2015.

Sources: BNSF Railway, Canadian National Railway, CSX Transportation, Canadian Pacific Railway, Union Pacific Railroad, Kansas City Southern Railway, Norfolk Southern Corporation.

Barge Transportation

Figure 8

Illinois River barge freight rate^{1,2,3}



¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average of the 3-year average.

³No rates data from 06/23/20 to 09/29/20 due to the lock closure for rehabilitation and replacement of lock machinery.

Source: USDA, Agricultural Marketing Service.

Table 9

Weekly barge freight rates: Southbound only

		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate ¹	5/25/2021	462	380	378	267	271	271	237
	5/18/2021	450	383	374	279	271	271	249
\$/ton	5/25/2021	28.60	20.22	17.54	10.65	12.71	10.95	7.44
	5/18/2021	27.86	20.38	17.35	11.13	12.71	10.95	7.82
Current week % change from the same week:								
	Last year	23	25	31	34	51	51	27
	3-year avg. ²	8	-1	-2	-1	-5	-5	-5
Rate ¹	June	431	350	346	255	258	258	230
	August	431	361	361	273	330	330	296

¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average; ton = 2,000 pounds; "-" not available due to closure.

Source: USDA, Agricultural Marketing Service.

Figure 9

Benchmark tariff rates

Calculating barge rate per ton:

(Rate * 1976 tariff benchmark rate per ton)/100

Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.

Map Credit: USDA, Agricultural Marketing Service

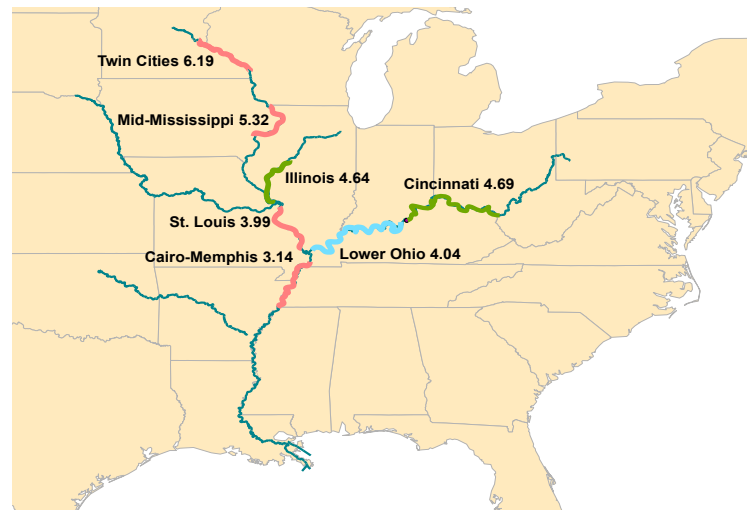
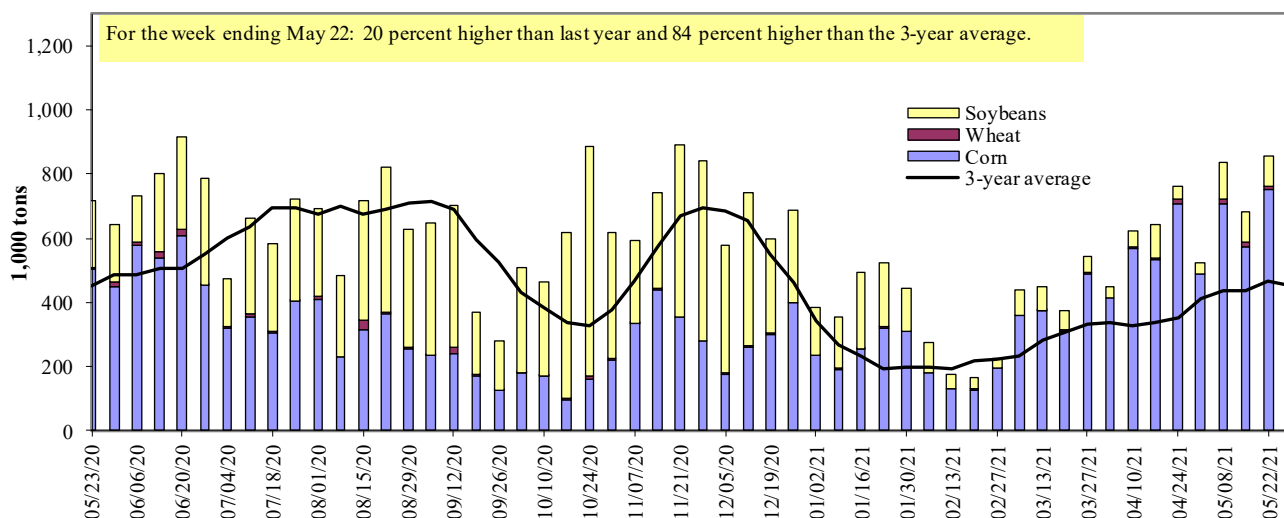


Figure 10

Barge movements on the Mississippi River¹ (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 05/22/2021	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	374	3	49	0	427
Winfield, MO (L25)	595	10	78	0	683
Alton, IL (L26)	755	10	97	0	861
Granite City, IL (L27)	753	10	95	0	858
Illinois River (La Grange)	177	0	31	0	208
Ohio River (Olmsted)	72	0	22	8	103
Arkansas River (L1)	0	52	11	0	63
Weekly total - 2021	826	62	128	8	1,023
Weekly total - 2020	356	62	216	0	634
2021 YTD ¹	11,946	512	3,734	150	16,342
2020 YTD ¹	6,135	653	4,353	41	11,182
2021 as % of 2020 YTD	195	78	86	368	146
Last 4 weeks as % of 2020 ²	156	118	44	89	116
Total 2020	18,942	1,765	19,205	237	40,149

¹ Weekly total, YTD (year-to-date), and calendar year total include MI/27, OH/Olmsted, and AR/1; Other refers to oats, barley, sorghum, and rye.

Total may not add exactly due to rounding.

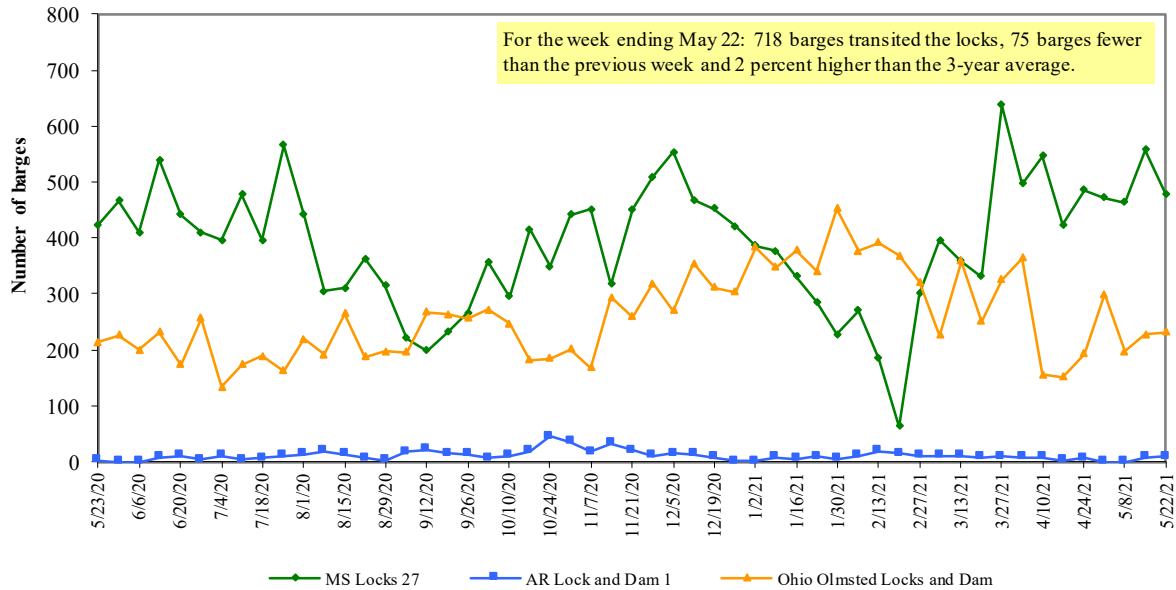
² As a percent of same period in 2020.

Note: L (as in "L15") refers to a lock, locks, or locks and dam facility.

Source: U.S. Army Corps of Engineers.

Figure 11

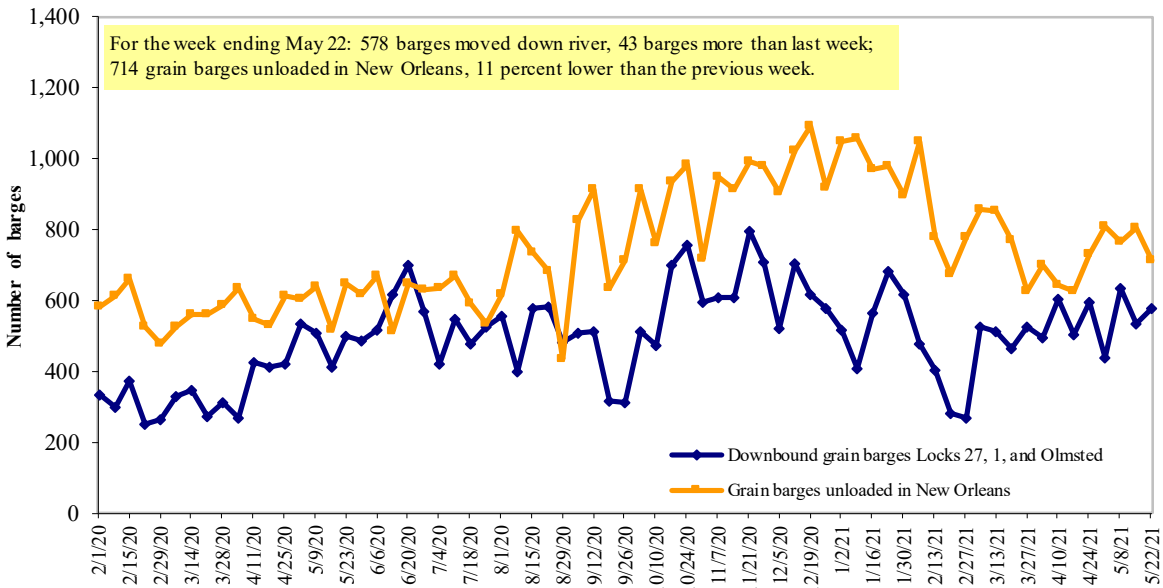
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



Source: U.S. Army Corps of Engineers.

Figure 12

Grain barges for export in New Orleans region



Note: Olmsted = Olmsted Locks and Dam.

Source: U.S. Army Corps of Engineers and USDA, Agricultural Marketing Service.

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 5/24/2021 (U.S. \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	3.235	0.007	0.737
	New England	3.150	-0.002	0.526
	Central Atlantic	3.406	0.011	0.740
	Lower Atlantic	3.137	0.007	0.778
II	Midwest	3.199	0.002	0.969
III	Gulf Coast	3.029	0.000	0.854
IV	Rocky Mountain	3.362	0.001	1.014
	West Coast	3.751	0.016	0.849
V	West Coast less California	3.395	0.012	0.834
	California	4.047	0.018	0.865
Total	United States	3.253	0.004	0.863

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

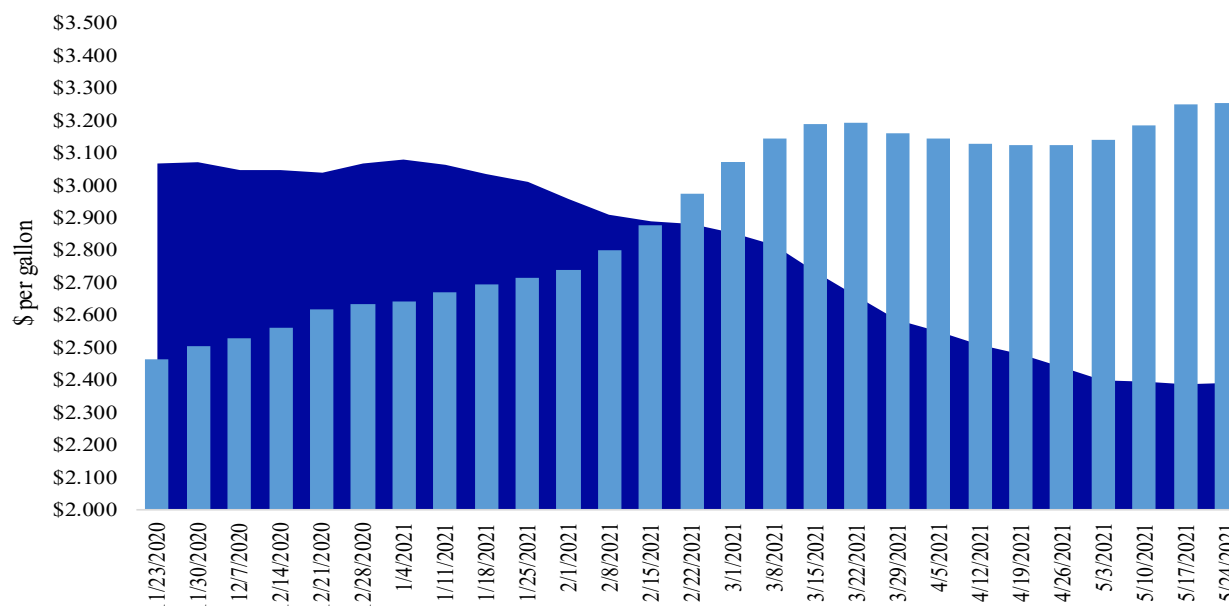
Source: U.S. Department of Energy, Energy Information Administration.

Figure 13

Weekly diesel fuel prices, U.S. average

For the week ending May 24, the U.S. average diesel fuel price increased 0.4 cents from the previous week to \$3.253 per gallon, 86.3 cents above the same week last year.

■ Last year ■ Current year
\$2.390 \$3.253



Source: U.S. Department of Energy, Energy Information Administration, Retail On-Highway Diesel Prices.

Table 14

Top 5 importers¹ of U.S. soybeans

For the week ending 5/13/2021	Total commitments ²			% change current MY from last MY	Exports ³ 3-yr. avg. 2017-19
	2021/22 next MY	2020/21 current MY	2019/20 last MY		
			1,000 mt -		- 1,000 mt -
China	3,062	35,697	14,552	145	19,106
Mexico	313	4,654	4,264	9	4,591
Egypt	0	2,725	2,951	(8)	2,980
Indonesia	1	2,024	1,761	15	2,360
Japan	74	2,120	2,172	(2)	2,288
Top 5 importers	3,449	47,219	25,700	84	31,324
Total U.S. soybean export sales	7,022	61,463	41,297	49	49,352
% of projected exports	12%	99%	90%		
change from prior week ²	96	84	1,205		
Top 5 importers' share of U.S. soybean export sales	49%	77%	62%		63%
USDA forecast, May 2021	56,540	62,125	45,831	136	

¹Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2019/20; marketing year (MY) = Sep 1 - Aug 31.

²Cumulative exports (shipped) + outstanding sales (unshipped), FAS weekly export sales report, or export sales query. The total commitments change (net sales) from prior week could include revisions from previous week's outstanding sales and/or accumulated sales.

³FAS marketing year ranking reports (carryover plus accumulated export); yr. = year; avg. = average.

Note: A red number in parentheses indicates a negative number; mt = metric ton.

Source: USDA, Foreign Agricultural Service.

Table 15

Top 10 importers¹ of all U.S. wheat

For the week ending 05/13/2021	Total Commitmei			% change current MY from last MY	Exports ³ 3-yr. avg. 2017-19
	2021/22 next MY	2020/21 current MY	2019/20 last MY		
			1,000 mt -		- 1,000 mt -
Mexico	530.9	3,696	3,837	(4)	3,213
Philippines	637.5	3,184	3,575	(11)	2,888
Japan	241.1	2,492	2,748	(9)	2,655
Nigeria	179	1,464	1,575	(7)	1,433
Korea	142	1,919	1,657	16	1,372
Indonesia	0	1,004	1,066	(6)	1,195
Taiwan	81.2	1,189	1,426	(17)	1,175
Thailand	0	812	878	(7)	727
Italy	0	616	945	(35)	622
Colombia	82.5	392	798	(51)	618
Top 10 importers	1,894	16,766	18,506	(9)	15,897
Total U.S. wheat export sale:	3,577	25,649	26,556	(3)	23,821
% of projected exports	15%	98%	101%		
change from prior week ²	318	121	176		
Top 10 importers' share of U.S. wheat export sales	53%	65%	70%		67%
USDA forecast, May 2021	24,523	26,294	26,294	0	

¹Based on USDA, Foreign Agricultural Service(FAS) marketing year ranking reports for 2019/20; Marketing year (MY) = Jun 1 - May 31.

²Cumulative exports (shipped) + outstanding sales (unshipped), FAS weekly export sales report, or export sales query. The total commitments change (net sales) from prior week could include revisions from the previous week's outstanding and/or accumulated sales.

³FAS marketing year final reports (carryover plus accumulated export); yr. = year; avg. = average.

Note: A red number in parentheses indicates a negative number.

Source: USDA, Foreign Agricultural Service.

Table 16

Grain inspections for export by U.S. port region (1,000 metric tons)

Port regions	For the week ending 05/20/21	Previous week*	Current week as % of previous	2021 YTD*	2020 YTD*	2021 YTD as % of 2020 YTD	Last 4-weeks as % of:		2020 total*
							Last year	Prior 3-yr. avg.	
Pacific Northwest									
Wheat	386	416	93	6,764	6,201	109	127	130	15,966
Corn	454	647	70	8,538	3,509	243	184	145	9,969
Soybeans	0	11	0	3,669	2,733	134	8	7	14,028
Total	840	1,074	78	18,971	12,443	152	139	124	39,963
Mississippi Gulf									
Wheat	40	109	37	955	1,449	66	141	75	3,422
Corn	1,008	1,083	93	20,695	11,873	174	157	168	28,781
Soybeans	124	200	62	9,815	9,187	107	55	37	38,013
Total	1,172	1,393	84	31,465	22,508	140	133	121	70,215
Texas Gulf									
Wheat	65	96	68	1,432	1,547	93	83	78	4,248
Corn	0	7	0	223	333	67	32	41	723
Soybeans	0	0	n/a	656	7	n/a	0	0	2,098
Total	65	103	63	2,311	1,887	122	71	71	7,068
Interior									
Wheat	76	42	180	1,084	937	116	170	186	2,263
Corn	229	212	108	3,714	3,251	114	102	106	8,683
Soybeans	72	109	67	2,668	2,685	99	75	73	7,274
Total	377	362	104	7,466	6,873	109	99	101	18,220
Great Lakes									
Wheat	38	32	118	155	204	76	143	107	891
Corn	7	0	n/a	32	0	n/a	n/a	30	111
Soybeans	0	1	n/a	12	17	71	143	36	1,111
Total	45	33	136	199	220	90	150	84	2,113
Atlantic									
Wheat	0	0	n/a	72	1	n/a	n/a	n/a	65
Corn	0	0	n/a	14	8	174	0	0	33
Soybeans	8	6	122	1,005	369	272	87	27	1,870
Total	8	6	122	1,091	379	288	72	24	1,968
U.S. total from ports*									
Wheat	604	695	87	10,461	10,339	101	123	112	26,854
Corn	1,697	1,949	87	33,215	18,974	175	152	148	48,301
Soybeans	204	327	62	17,825	14,998	119	53	41	64,394
Total	2,505	2,970	84	61,502	44,311	139	125	114	139,548

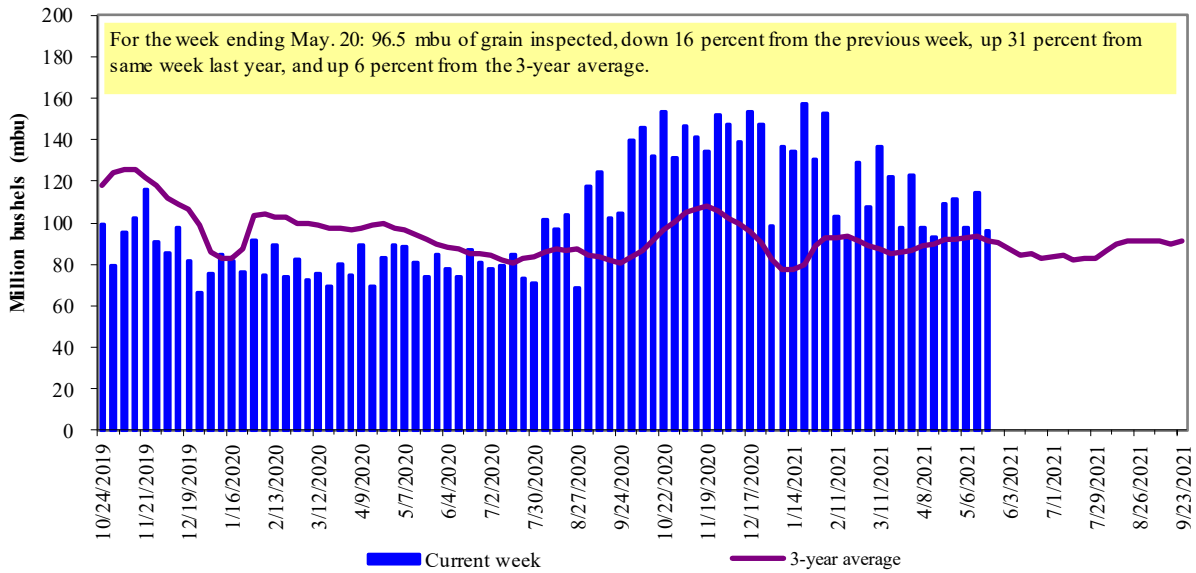
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

Source: USDA, Federal Grain Inspection Service; YTD= year-to-date; n/a = not applicable or no change.

The United States exports approximately one-quarter of the grain it produces. On average, this includes nearly 45 percent of U.S.-grown wheat, 50 percent of U.S.-grown soybeans, and 20 percent of the U.S.-grown corn. Approximately 55 percent of the U.S. export grain shipments departed through the U.S. Gulf region in 2019.

Figure 14

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

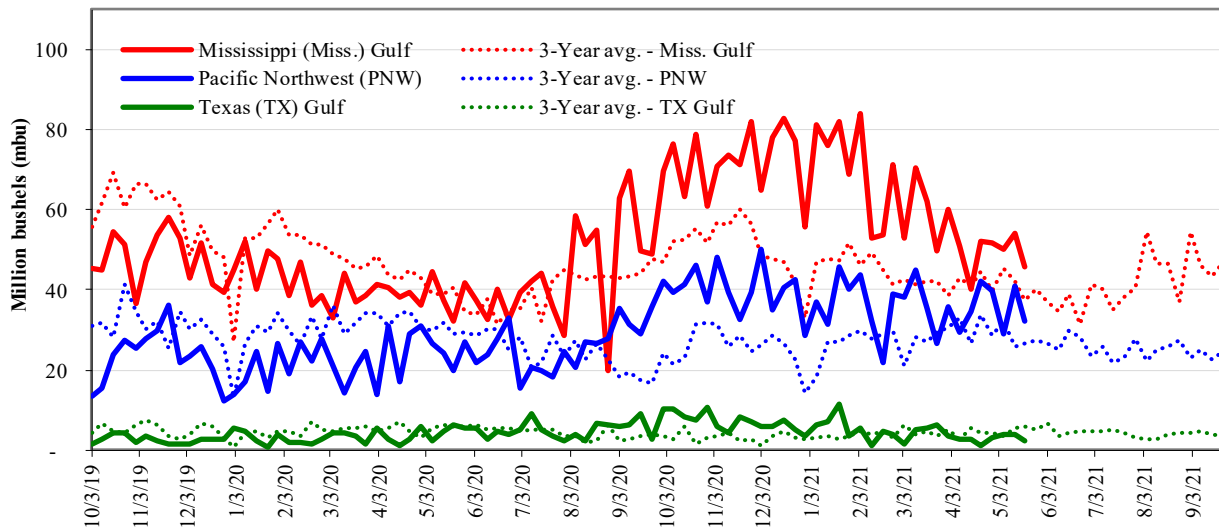


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

U.S. Grain inspections: U.S. Gulf and PNW¹ (wheat, corn, and soybeans)



Week ending 05/20/21 inspections (mbu):		Percent change from:			
		MS Gulf	TX Gulf	U.S. Gulf	PNW
MS Gulf:	45.7	Last wk: down 15	down 37	down 17	down 22
PNW:	32.0	Last Year (same wk): up 42	down 61	up 26	up 61
TX Gulf:	2.4	3-yr avg.(4-wk. mov. Avg): up 11	down 50	up 5	up 13

Source: USDA, Federal Grain Inspection Service.

Ocean Transportation

Table 17

Weekly port region grain ocean vessel activity (number of vessels)

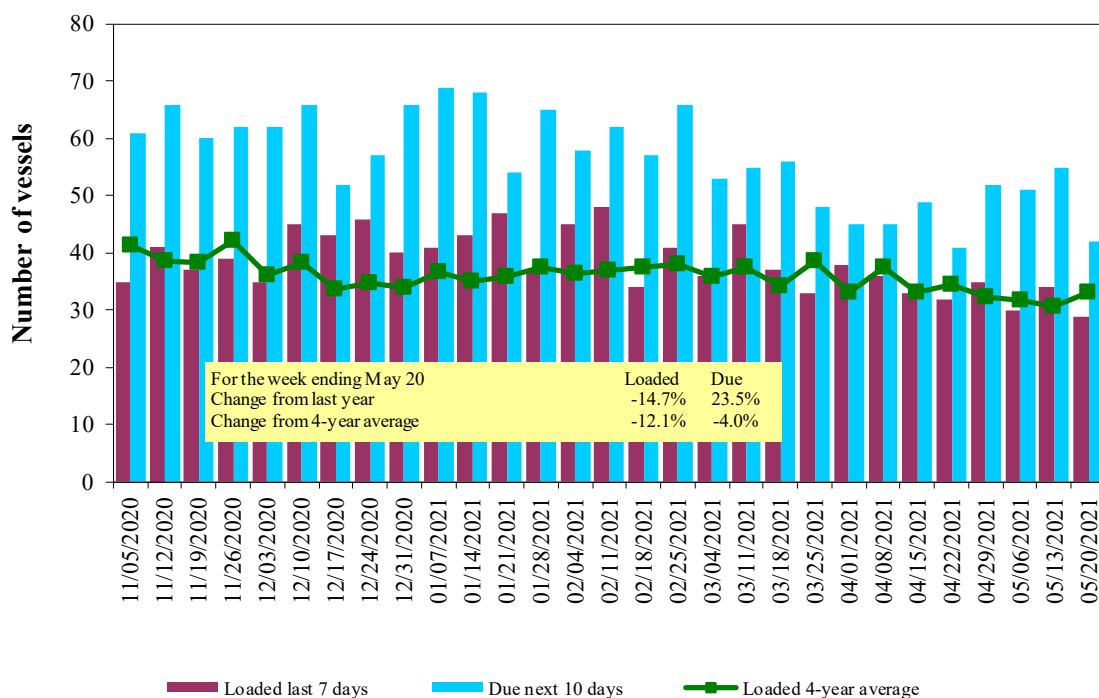
Date	Gulf			Pacific Northwest
	In port	Loaded	Due next	In port
		7-days	10-days	
5/20/2021	30	29	42	13
5/13/2021	21	34	55	14
2020 range	(22...60)	(23...46)	(34...68)	(7...24)
2020 average	37	33	49	15

Note: n/a = not available due to holiday.

Source: USDA, Agricultural Marketing Service.

Figure 16

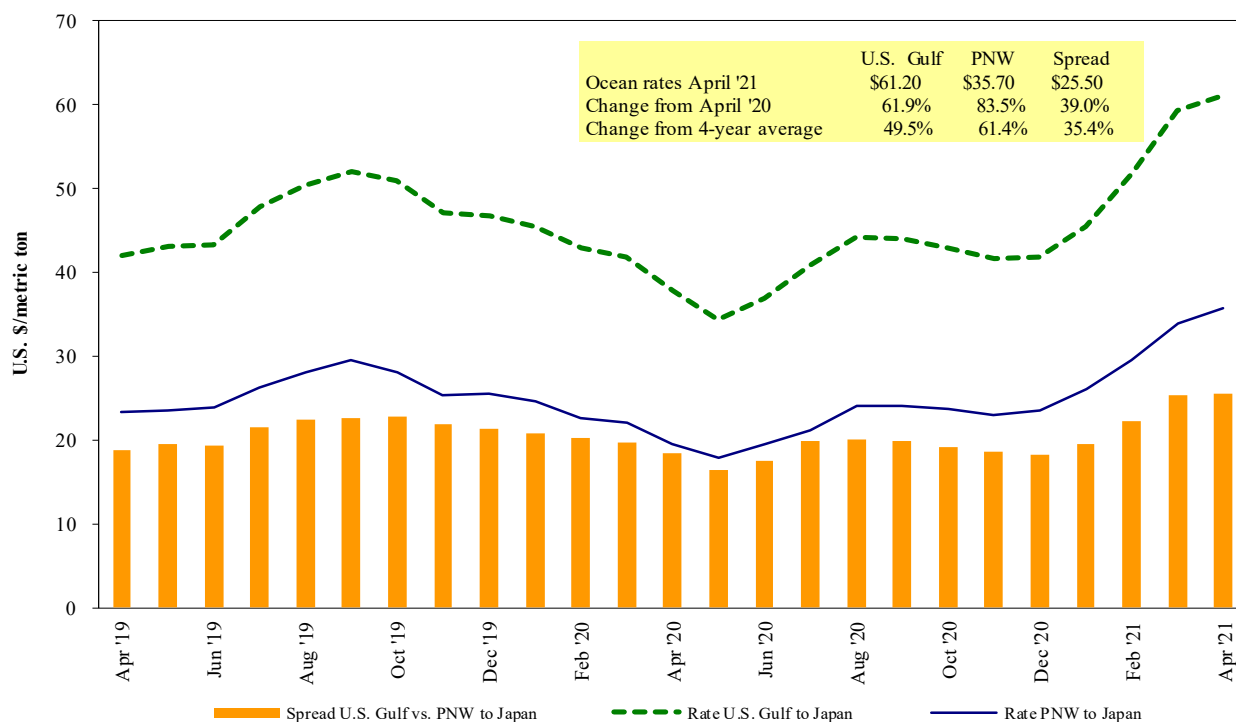
U.S. Gulf¹ vessel loading activity



¹U.S. Gulf includes Mississippi, Texas, and East Gulf.
Source: USDA, Agricultural Marketing Service.

Figure 17

Grain vessel rates, U.S. to Japan



Note: PNW = Pacific Northwest

Source: O'Neil Commodity Consulting

Table 18

Ocean freight rates for selected shipments, week ending 05/22/2021

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	Japan	Heavy grain	Aug 21/Sep 9	50,000	60.90
U.S. Gulf	Japan	Heavy grain	Jul 1/15	50,000	64.10
U.S. Gulf	Japan	Grain	May 25/Jun 25	50,000	46.85 op 47.85
U.S. Gulf	Japan	Wheat	May 1/15	31,877	58.33
U.S. Gulf	Japan	Wheat	May 1/14	47,405	67.50
U.S. Gulf	Japan	Heavy grain	Apr 15/May 15	50,000	47.00
U.S. Gulf	Japan	Heavy grain	Apr 1/30	48,000	46.75
U.S. Gulf	China	Heavy grain	Apr 14/29	68,000	63.50
U.S. Gulf	Sudan	Wheat	May 20/30	48,000	112.75*
PNW	Japan	Wheat	Jun 5/15	50,600	49.30
PNW	Japan	Grain	Mar 5/14	28,000	48.10
PNW	Yemen	Wheat	Jun 10/20	22,230	132.25*
PNW	Taiwan	Wheat	May 29/Jun 12	45,665	48.00
PNW	Taiwan	Corn	Feb 20/Mar 15	65,000	24.90
Brazil	China	Heavy grain	Mar 21/31	66,000	44.00
Brazil	China	Heavy grain	Mar 21/30	66,000	45.50
River Plate	S. Korea	Corn	May 1/31	68,000	52.60*

*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

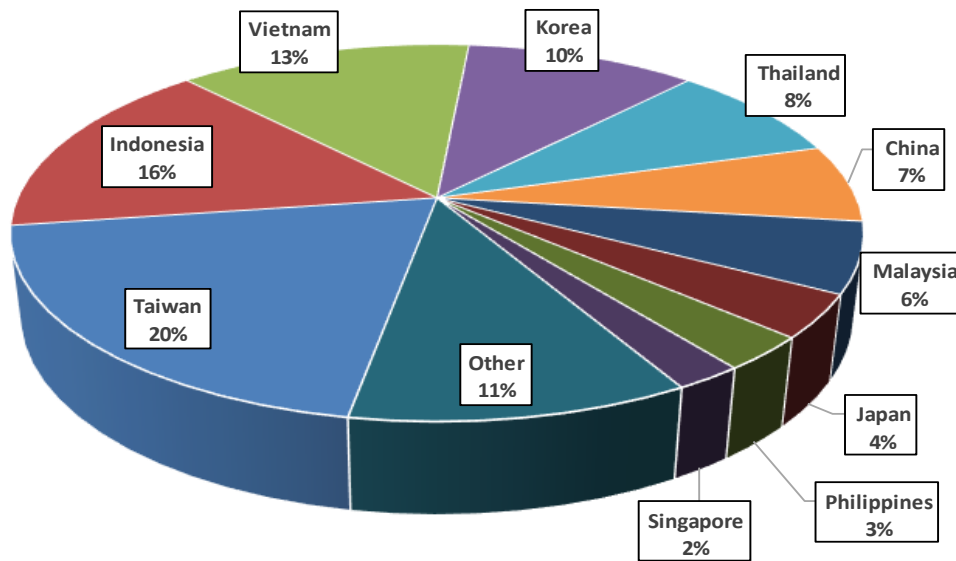
Note: Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), free on board (F.O.B), except where otherwise indicated;

op = option.

Source: Maritime Research, Inc.

In 2019, containers were used to transport 9 percent of total U.S. waterborne grain exports. Approximately 60 percent of U.S. waterborne grain exports in 2019 went to Asia, of which 14 percent were moved in containers. Approximately 94 percent of U.S. waterborne containerized grain exports were destined for Asia.

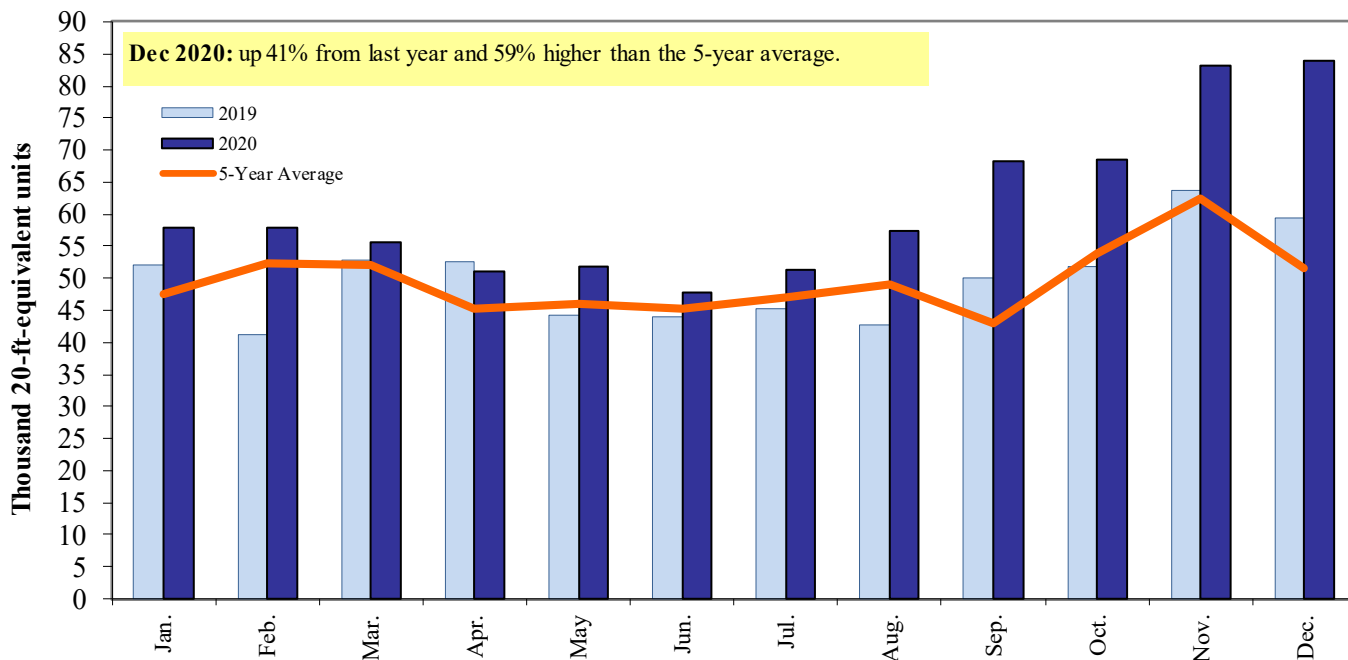
Figure 18
Top 10 destination markets for U.S. containerized grain exports, Jan-Dec 2020



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, 120810, and 120190.

Source: USDA, Agricultural Marketing Service, Transportation Services Division analysis of PIERS data.

Figure 19
Monthly shipments of containerized grain to Asia



Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: 100190, 100200, 100300, 100400, 100590, 100700, 110100, 110220, 110290, 1201, 120100, 120190, 120810, 230210, 230310, 230330, and 230990.

Source: USDA, Agricultural Marketing Service, Transportation Services Division analysis of PIERS data.

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