USDA United States Department of Agriculture

Grain Transportation Report

A weekly publication of the Agricultural Marketing Service
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The next release is June 17, 2021

WEEKLY HIGHLIGHTS

STB Asks Class I Railroads To Keep Reporting Revenues From Demurrage and Accessorial Charges

The Surface Transportation Board (STB) recently requested Class I railroads to continue providing quarterly information about their revenues from demurrage and accessorial charges. STB first requested this information in 2018, in response to informal shipper complaints about unreasonable railroad demurrage and accessorial practices. Railroads charge these fees when shippers hold cars too long or require additional service, such as train diversions. However, railroads sometimes charge these fees even when delays are not the shipper's fault, but rather result from broader rail service issues. Average Class I accessorial and demurrage revenue, as a share of total revenue, has trended upward from 2.5 percent, in first quarter 2018, to 3 percent, in fourth quarter 2020. In recent months, shippers have complained of unreasonable, accumulating fees amid congestion and service issues. This latest request follows STB letters sent to the railroads expressing concern over recent reports of subpar service.

FMC Welcomes Applications for Its National Shipper Advisory Committee

On June 7, the Federal Maritime Commission (FMC) announced it is accepting applications for its National Shipper Advisory Committee (NSAC). Eligible applicants—who export cargo from or import to the United States—have until June 30, 2021 to submit the necessary documentation and meet all application requirements. Composed of 24 members (12 exporters and 12 importers), NSAC will meet at least once a year. The committee will advise FMC on policies related to the competitiveness, reliability, integrity, and fairness of the international ocean freight delivery system. Volunteer committee members will serve up to 3 years depending on when they are appointed.

Funding Available for Marine Highway Projects From DOT's Maritime Administration

The U.S. Department of Transportation's Maritime Administration (MARAD) recently announced the availability of $11 million in grants through America's Marine Highway Program (AMHP). Established in 2007, AMHP supports increasing use of the Nation's inland waterways, relieving landside congestion, providing new and efficient transportation options, and raising the productivity of the surface transportation system. From 2015 to 2019, the average annual tonnage of bulk grain moved through the U.S. domestic waterways system was 77 million tons. Since its inception, AMHP has designated 45 marine highway projects, 21 of which are currently operating. Only marine highway projects previously designated by the Secretary of Transportation are eligible to receive AMHP funding, and applications are due by 5 pm on June 25.

Snapshots by Sector

Export Sales

For the week ending May 27, **unshipped balances** of wheat, corn, and soybeans totaled 23.2 million metric tons (mmt). This was 8 percent lower than last week, but 12 percent higher than the same time last year. Net **corn export sales** were 0.531 mmt, down 5 percent from the past week. Net **soybean export sales** were 0.018 mmt, down 68 percent from the previous week. Net weekly **wheat export sales** were −0.033 mmt, down significantly from the previous week.

Rail

U.S. Class I railroads originated 25,450 **grain carloads** during the week ending May 29. This was unchanged from the previous week, 20 percent more than last year, and 13 percent more than the 3-year average.

Average June shuttle **secondary railcar** bids/offers (per car) were $304 below tariff for the week ending June 3. This was $23 less than last week and $273 lower than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending June 5, **barged grain movements** totaled 1,122,722 tons. This was 30 percent more than the previous week and 47 percent more than the same period last year.

For the week ending June 5, 703 grain barges **moved down river**—168 more barges than the previous week. There were 600 grain barges **unloaded in New Orleans**, 23 percent fewer than the previous week.

Ocean

For the week ending June 3, 36 **oceangoing grain vessels** were loaded in the Gulf—16 percent more than the same period last year. Within the next 10 days (starting June 4), 49 vessels were expected to be loaded—2 percent more than the same period last year.

As of June 3, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $66.00. This was unchanged from the previous week. The rate from the Pacific Northwest to Japan was $38.25 per mt, 1 percent less than the previous week.

Fuel

For the week ending June 7, the U.S. average **diesel fuel price** increased 1.9 cents from the previous week to $3.274 per gallon, 87.8 cents above the same week last year.

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Feature Article/Calendar

New Research Examines Modal Choice in the Mississippi River Valley

The description and findings contained in this article are drawn from recent USDA-sponsored research from Tobias Sytsma and Wesley Wilson.[1] The full report and a brief summary are available online.[2]

Supply and demand forces determine the destinations and volumes of agricultural shipments. One such supply force shaping agricultural freight flows is the availability of different transportation modes. Some Midwestern grain shippers have ready access to barge transportation, which costs less per ton-mile than rail. However, barge transportation is practical only for origins and destinations near rivers. When barge is unavailable or too costly to access, many grain shippers ship by rail. As their distance to a navigable waterway increases, barge becomes more expensive to access, and shippers' likelihood of choosing barge declines. Overall, barge and rail markets are closely related, but how they interact and compete in overlapping territory (e.g., within 300 miles of the inland waterway) is not well understood.

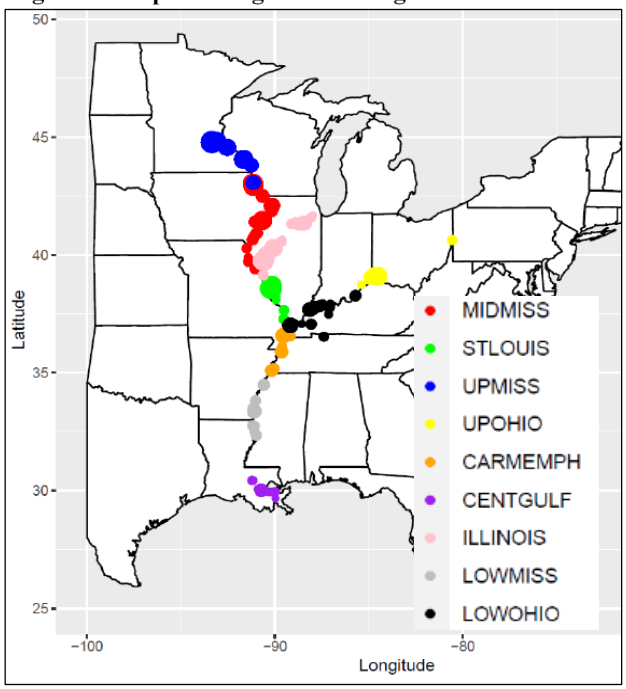
Sytsma and Wilson studied the conditions that led Midwest corn shippers to choose barge or rail. Using data from 2000 to 2017, the researchers measured how shippers' preference for each mode changed as their distance to a waterway changed. The following highlights and describes the study's main results.

Tonnages in Region Vary by Mode and Location

The researchers developed regional zones along the Mississippi River System to examine rail and barge flows of corn. Figure 1 depicts these barge regions with the points colored by region and sized by origination volumes of barged corn.[3] In these zones, barge transported about 86 percent of the combined barge and rail annual tonnage. The Illinois zone was the most significant origin for both modes, originating 21 percent of tonnage for barge shipments and 46 percent for rail. The next three largest origination zones for barge were the Upper Mississippi (19 percent), Mid-Mississippi (18 percent), and St. Louis (18 percent). After Illinois, the next two largest origination zones for rail were the Lower Ohio (16 percent) and the Upper Mississippi (11 percent).

The vast majority of barged corn shipments terminated in the Central (Louisiana) Gulf (fig. 2 left-pane, p. 3), while rail flows showed more variation (fig. 2 right-pane, p. 3). On average, 28 percent of annual rail tonnage terminated in the Central Gulf; 25

Figure 1: Shipment regions for barge.

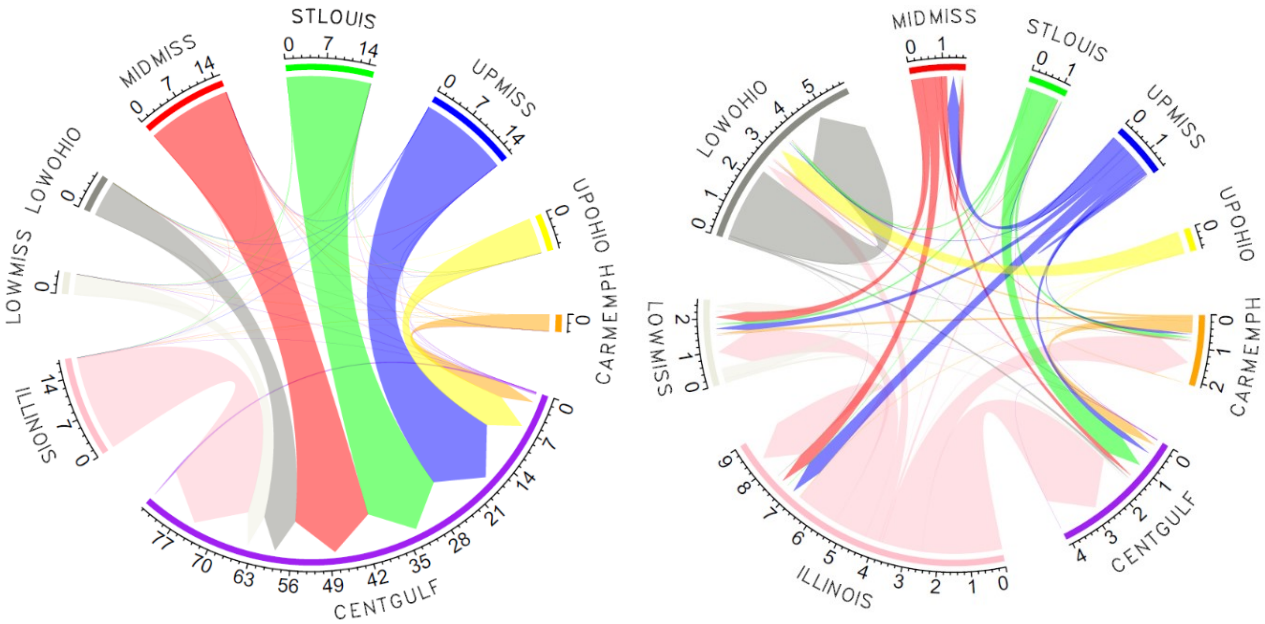


Note: The size of each point corresponds to the corn tonnage originated by barge at each location.
The abbreviations are as follows: Upper Mississippi (UPMISS), Middle Mississippi (MIDMISS), Illinois (ILLINOIS), St. Louis (STLOUIS), Lower Ohio (LOWOHIO), Upper Ohio (UPOHIO), Cairo-Memphis (CARMEMPH), Lower Mississippi (LOWMISS), and Central Gulf (CENTGULF).
Source: Figure 1 from the study (modified to enlarge the legend).

[1] Sytsma—a graduate student during his work on the report—is now an associate economist with the RAND Corporation, and Wilson is a professor in the Department of Economics (College of Arts and Sciences) at the University of Oregon.
[2] The Transportation Services Division (TSD) of USDA's Agricultural Marketing Service continually sponsors cooperative research on transportation matters relevant to USDA stakeholders. Visit our Cooperative Research Summaries page to access the full list of cooperative research reports and summaries. This research investigates issues affecting all major modes of agricultural transportation—truck, rail, barge, and ocean. Past projects have covered changes in rail rates over time, effects of barge traffic disruptions on shipping costs, protection of perishable food in trucks, container availability in the Pacific Northwest, and many other topics.
[3] For each barge zone is a corresponding rail zone with origins and terminations on lines that radiate from within and around each barge zone.

percent, in the Lower Ohio area; 16 percent, in the Illinois River area; and 15 percent, in the Mid-Mississippi River area.

Figure 2: Barge (left) and rail (right) corn flows between zones.



The images display the average annual volumes (in 100,000 tons) shipped and received by barge (left) and rail (right) for each zone from 2000 to 2017. The arrows denote shipment volumes and direction.

The abbreviations are as follows: Upper Mississippi (UPMISS), Middle Mississippi (MIDMISS), Illinois (ILLINOIS), St. Louis (STLOUIS), Lower Ohio (LOWOHIO), Upper Ohio (UPOHIO), Cairo-Memphis (CARMEMPH), Lower Mississippi (LOWMISS), and Central Gulf (CENTGULF).

Source: Figures 2 and 4 from the report, which are based on the authors' calculations.

Modal Substitution: Preference for Barge Declines as Distance to Water Increases

Rail is the dominant mode for long-distance, land-based shipments of heavy commodities. Railroads' ability to set price varies by location. More specifically, railroad pricing is constrained wherever shippers' proximity to waterways gives them viable access to barge transportation.

To analyze shippers' preference for barge versus rail in each river zone, the researchers studied shares of freight originations by mode at various distances from each waterway. In general, shippers preferred to ship by barge, which granted higher returns than rail, on average. However, preference for barge generally declined as distance to the waterway increased (and barge became more costly to access). Furthermore, as barge shipping conditions became less favorable—because of higher barge rates or longer distances to the waterway—shippers were more likely to ship by rail.

The preference for barge transportation was strongest for shippers nearest a navigable waterway, and the preference fell to zero for shippers beyond roughly 175 miles from the waterway.

Conclusions

The researchers analyzed rail and barge shipments of corn that originated and terminated within given distances of navigable Mississippi, Illinois, and Ohio waterways from 2000 to 2017. Shippers close to a waterway overwhelmingly shipped by barge. However, as a shipper's distance to the waterway increased, barge's market share decreased and rail's market share increased. Given shippers' tendency to substitute one mode for the other based on market conditions, trends in either market (rail or barge) will affect the supply-and-demand equilibrium of the other.

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Grain Transportation Indicators

Table 1

Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Non-Shuttle	Shuttle		Gulf	Pacific
06/09/21	220	291	211	171	295	271
06/02/21	218	291	212	185	295	273

[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); 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)

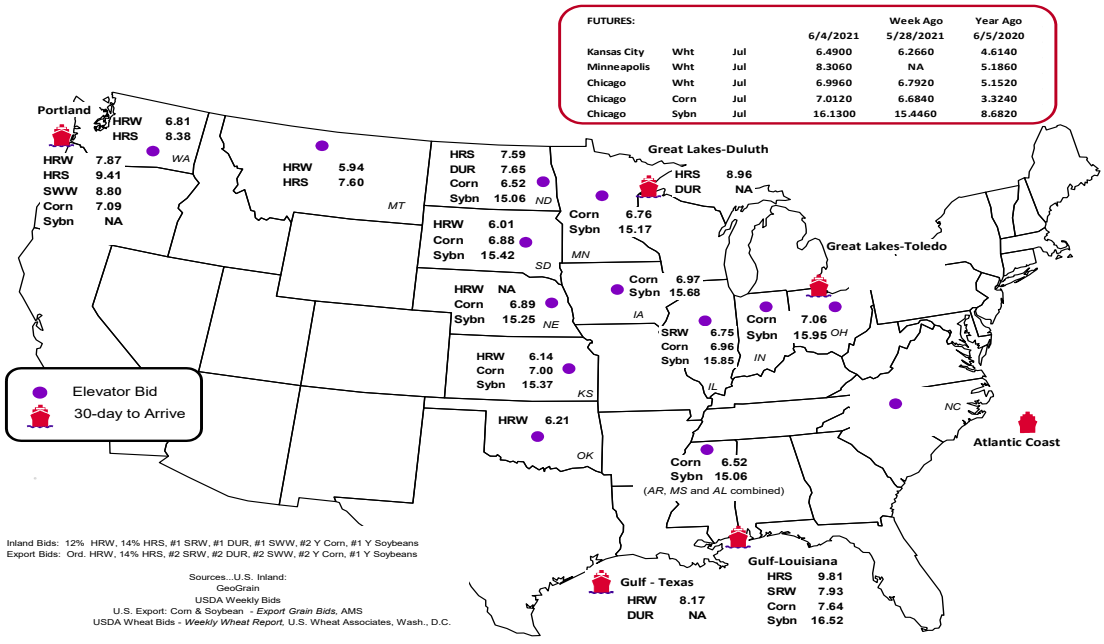
Commodity	Origin–destination	6/4/2021	5/28/2021
Corn	IL–Gulf	-0.68	-0.76
Corn	NE–Gulf	-0.75	-0.81
Soybean	IA–Gulf	-0.84	-0.79
HRW	KS–Gulf	-2.03	-1.98
HRS	ND–Portland	-1.82	-1.81

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 Gulf	Texas Gulf	Pacific Northwest	Atlantic & East Gulf	Total	Week ending	Cross-border Mexico[3]
6/02/2021[p]	848	1,509	5,575	0	7,932	5/29/2021	3,584
5/26/2021[r]	764	1,090	6,327	81	8,262	5/22/2021	3,516
2021 YTD[r]	33,099	35,167	146,560	9,887	224,713	2021 YTD	60,500
2020 YTD[r]	9,837	17,732	101,951	4,382	133,902	2020 YTD	52,799
2021 YTD as % of 2020 YTD	336	198	144	226	168	% change YTD	115
Last 4 weeks as % of 2020[2]	175	95	127	46	122	Last 4wks. % 2020	135
Last 4 weeks as % of 4-year avg.[2]	128	101	108	29	105	Last 4wks. % 4 yr.	134
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

[1]Data is incomplete as it is voluntarily provided.

[2] Compared with same 4-weeks in 2020 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 Kansas City Southern de Mexico (KCSM) and Grupo Mexico.

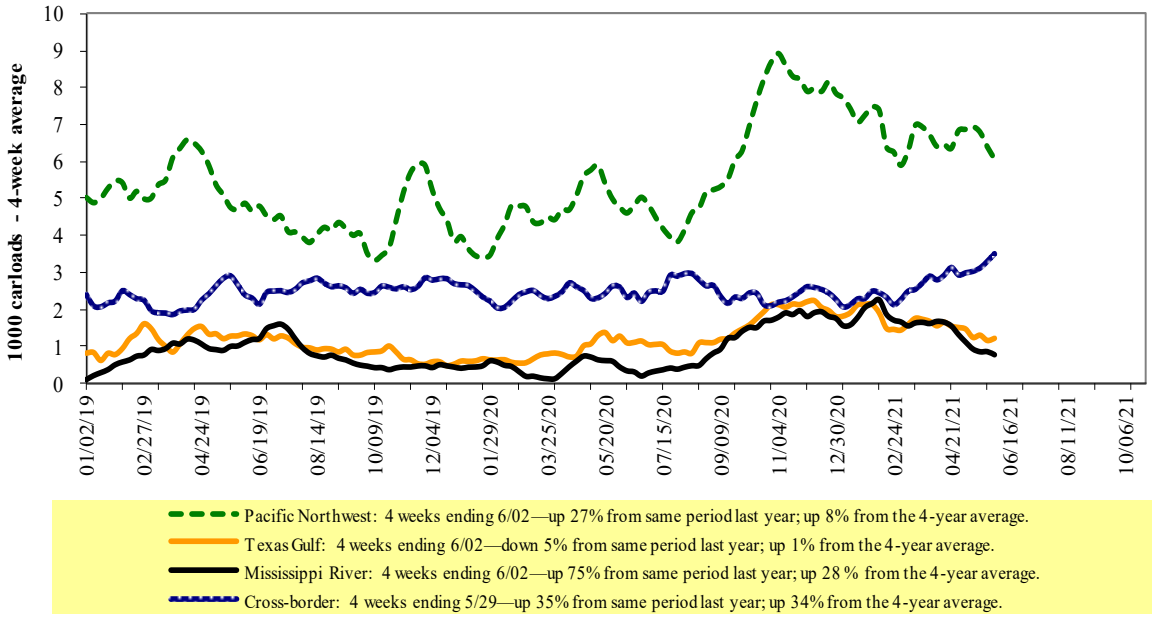
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available; wks. = weeks; avg. = average.

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:	East		West			U.S. total	Canada	
5/29/2021	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,885	2,749	12,878	776	7,162	25,450	3,881	4,396
This week last year	1,760	2,156	10,738	815	5,768	21,237	3,948	5,155
2021 YTD	42,012	54,807	275,772	22,564	139,659	534,814	100,601	114,114
2020 YTD	37,542	50,660	234,659	22,916	108,614	454,391	84,726	95,489
2021 YTD as % of 2020 YTD	112	108	118	98	129	118	119	120
Last 4 weeks as % of 2020*	120	122	119	109	118	119	101	102
Last 4 weeks as % of 3-yr. avg.**	103	104	109	109	125	111	99	106
Total 2020	91,659	130,569	613,630	57,782	296,701	1,190,341	238,690	261,778

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

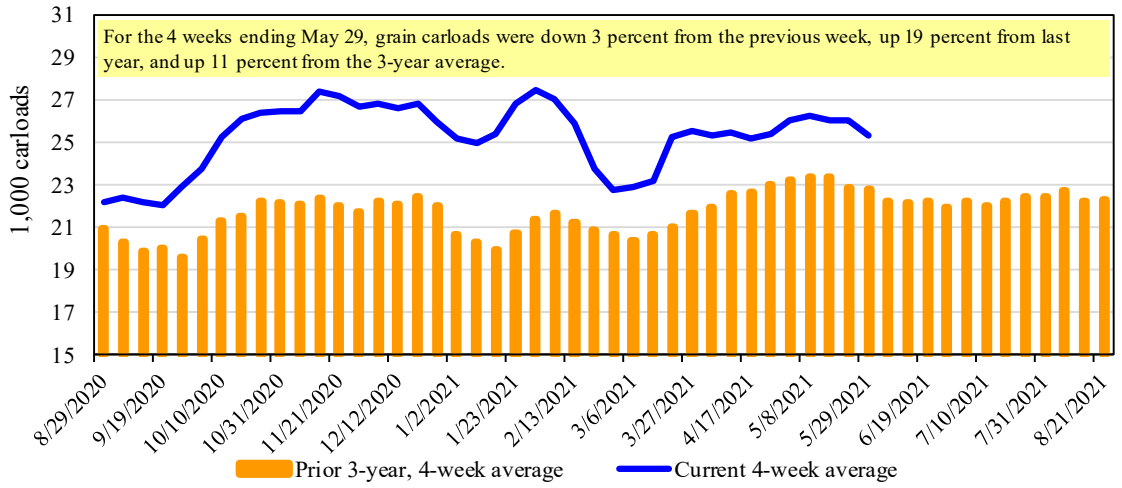
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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 offerings[1] ($/car)[2]

For the week ending:		Delivery period							
6/3/2021		Jun-21	Jun-20	Jul-21	Jul-20	Aug-21	Aug-20	Sep-21	Sep-20
BNSF[3]	COT grain units	0	0	0	no bids	no bids	no bids	no bids	no bids
	COT grain single-car	51	0	9	0	0	0	1	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

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

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

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

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

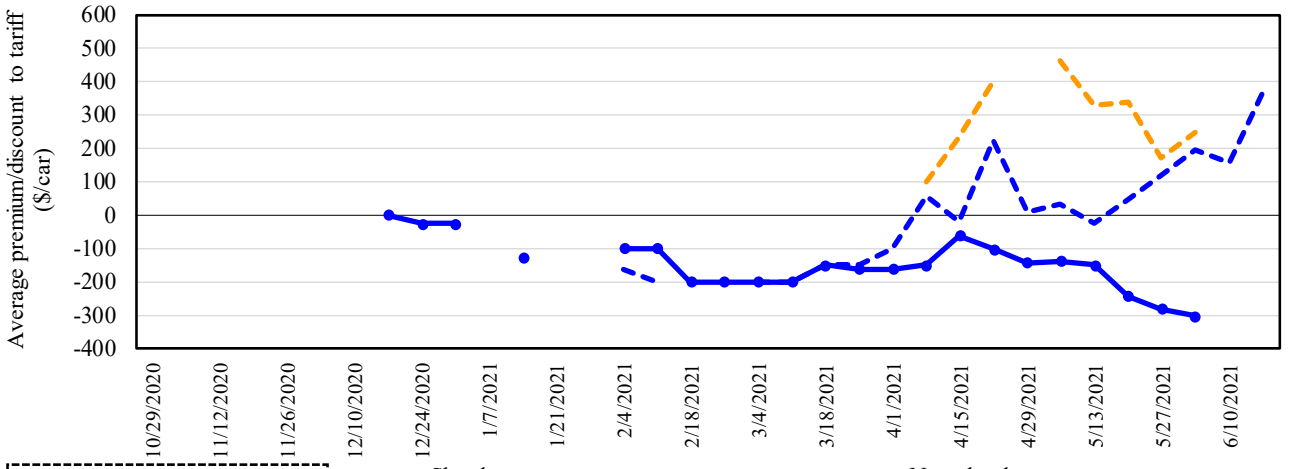
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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

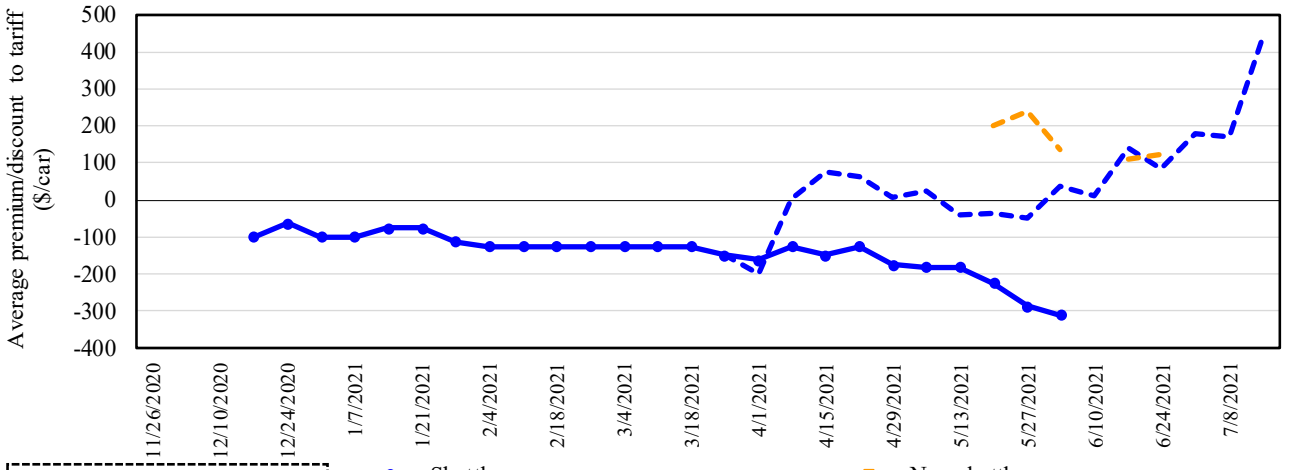


6/3/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	-$250	-$358

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $23 this week and are $304 below the peak.

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



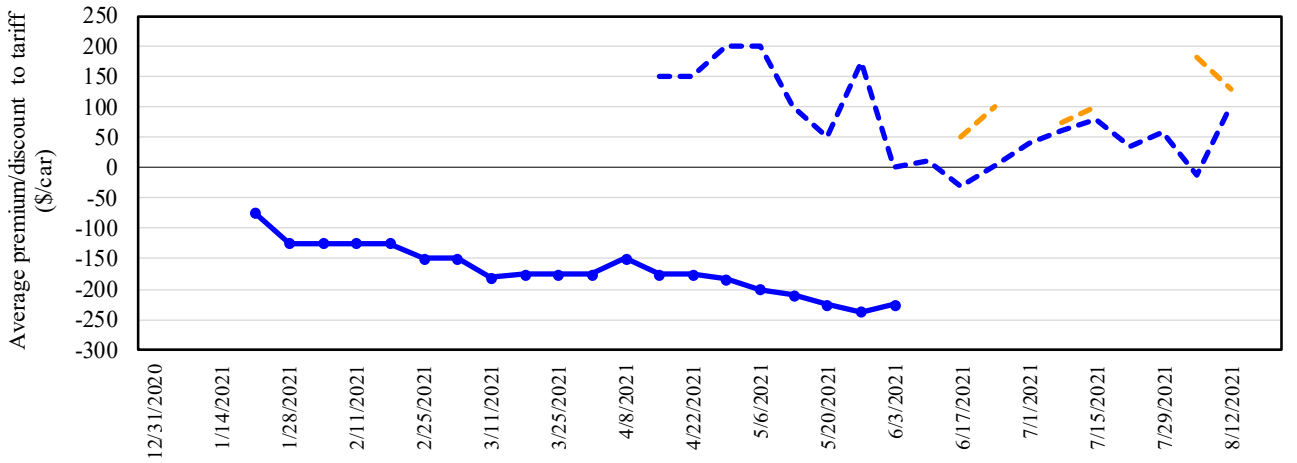
6/3/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	-$233	-$388

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $23 this week and are $248 below the peak.

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



6/3/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	-$225	-$225

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $13 this week and are $150 below the peak.

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: 6/3/2021	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**	**(250)**	**(233)**	**(225)**	**(33)**	**1000**	**n/a**
	Change from last week	13	17	25	(105)	(200)	n/a
	Change from same week 2020	(175)	(83)	n/a	n/a	n/a	n/a
	UP-Pool	**(358)**	**(388)**	**(225)**	**(200)**	**675**	**375**
	Change from last week	(58)	(63)	0	0	(175)	0
	Change from same week 2020	(371)	(338)	n/a	n/a	500	n/a

[1]Average 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 shipments[1]

June 2021	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	$3,695	$106	$37.75	$1.03	5
	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	$187	$46.79	$1.27	3
	Sioux Falls, SD	Galveston-Houston, TX	$6,851	$0	$68.03	$1.85	-2
	Colby, KS	Galveston-Houston, TX	$4,801	$205	$49.71	$1.35	3
	Amarillo, TX	Los Angeles, CA	$5,121	$285	$53.68	$1.46	3
Corn	Champaign-Urbana, IL	New Orleans, LA	$3,900	$211	$40.83	$1.04	3
	Toledo, OH	Raleigh, NC	$7,833	$0	$77.79	$1.98	15
	Des Moines, IA	Davenport, IA	$2,455	$45	$24.82	$0.63	3
	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	$131	$40.03	$1.02	5
	Des Moines, IA	Los Angeles, CA	$5,780	$383	$61.20	$1.55	6
Soybeans	Minneapolis, MN	New Orleans, LA	$3,631	$218	$38.22	$1.04	4
	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	$211	$48.23	$1.31	3
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	$336	$63.04	$1.72	3
Corn	Minneapolis, MN	Portland, OR	$5,180	$0	$51.44	$1.31	0
	Sioux Falls, SD	Tacoma, WA	$5,140	$0	$51.04	$1.30	0
	Champaign-Urbana, IL	New Orleans, LA	$3,820	$211	$40.03	$1.02	3
	Lincoln, NE	Galveston-Houston, TX	$3,880	$0	$38.53	$0.98	0
	Des Moines, IA	Amarillo, TX	$4,320	$165	$44.54	$1.13	5
	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	$244	$50.83	$1.38	3
	Toledo, OH	Huntsville, AL	$4,945	$0	$49.11	$1.34	3
	Grand Island, NE	Portland, OR	$5,260	$344	$55.65	$1.51	4

[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 pounds per bushel (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 (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: June 2021							
Commodity	Origin state	Destination region	Tariff rate per car[1]	Fuel surcharge per car[2]	Tariff rate plus fuel surcharge per: metric ton[3]	bushel[3]	Percent change[4] Y/Y
Wheat	MT	Chihuahua, CI	$7,384	$0	$75.45	$2.05	-2
	OK	Cuautitlan, EM	$6,813	$146	$71.10	$1.93	2
	KS	Guadalajara, JA	$7,531	$697	$84.08	$2.29	5
	TX	Salinas Victoria, NL	$4,347	$89	$45.33	$1.23	2
Corn	IA	Guadalajara, JA	$8,902	$593	$97.01	$2.46	3
	SD	Celaya, GJ	$8,140	$0	$83.17	$2.11	0
	NE	Queretaro, QA	$8,300	$304	$87.91	$2.23	3
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	0
	MO	Tlalnepantla, EM	$7,665	$297	$81.34	$2.06	3
	SD	Torreon, CU	$7,690	$0	$78.57	$1.99	0
Soybeans	MO	Bojay (Tula), HG	$8,547	$557	$93.01	$2.53	3
	NE	Guadalajara, JA	$9,157	$580	$99.49	$2.70	3
	IA	El Castillo, JA	$9,410	$0	$96.15	$2.61	-1
	KS	Torreon, CU	$8,014	$400	$85.96	$2.34	3
Sorghum	NE	Celaya, GJ	$7,772	$523	$84.76	$2.15	4
	KS	Queretaro, QA	$8,108	$183	$84.71	$2.15	1
	NE	Salinas Victoria, NL	$6,713	$147	$70.08	$1.78	1
	NE	Torreon, CU	$7,092	$364	$76.18	$1.93	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.

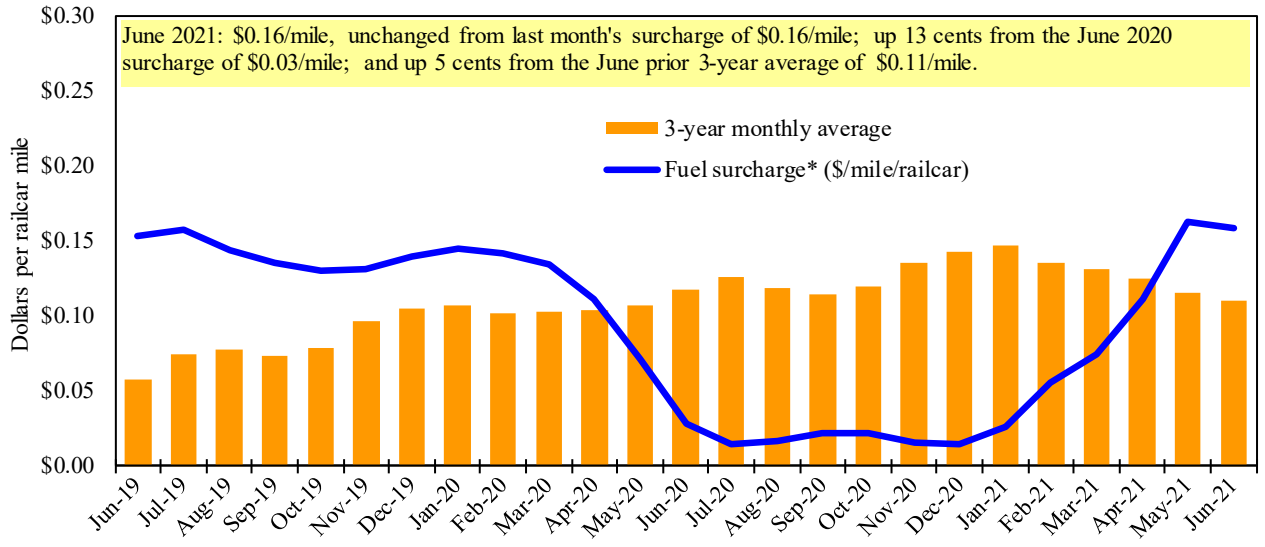
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu.

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

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

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.

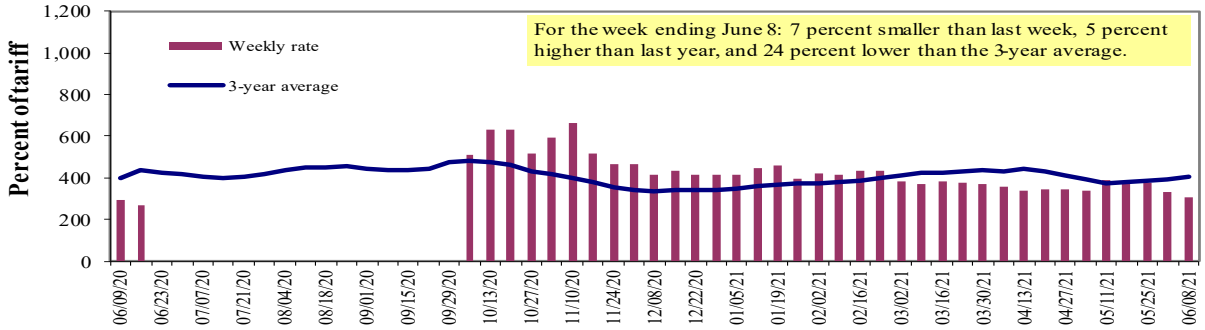
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

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

Sources: 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]



[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average of the 3-year average.
[3]No rates data from 06/23/20 to 9/29/20 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

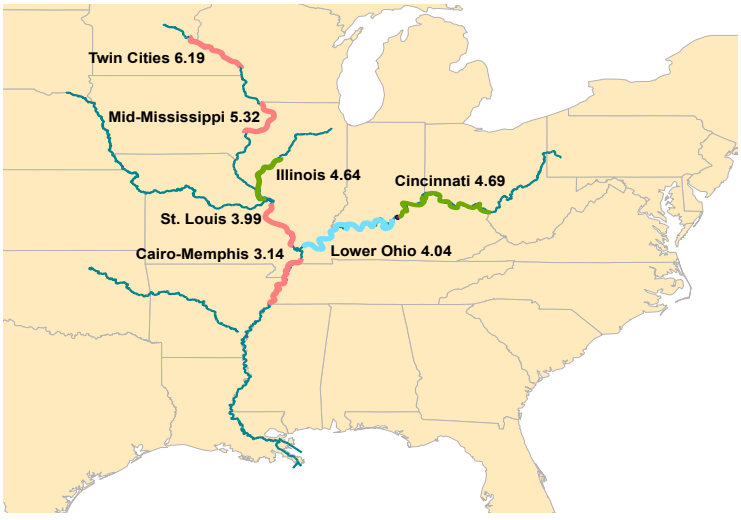
		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	6/8/2021	415	311	308	213	243	243	206
	6/1/2021	430	335	333	236	251	251	221
$/ton	6/8/2021	25.69	16.55	14.29	8.50	11.40	9.82	6.47
	6/1/2021	26.62	17.82	15.45	9.42	11.77	10.14	6.94
Current week % change from the same week:								
	Last year	18	4	5	12	34	34	14
	3-year avg. [2]	-9	-25	-24	-26	-16	-16	-21
Rate[1]	July	401	308	307	208	241	241	204
	September	520	483	474	437	489	489	417

[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-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

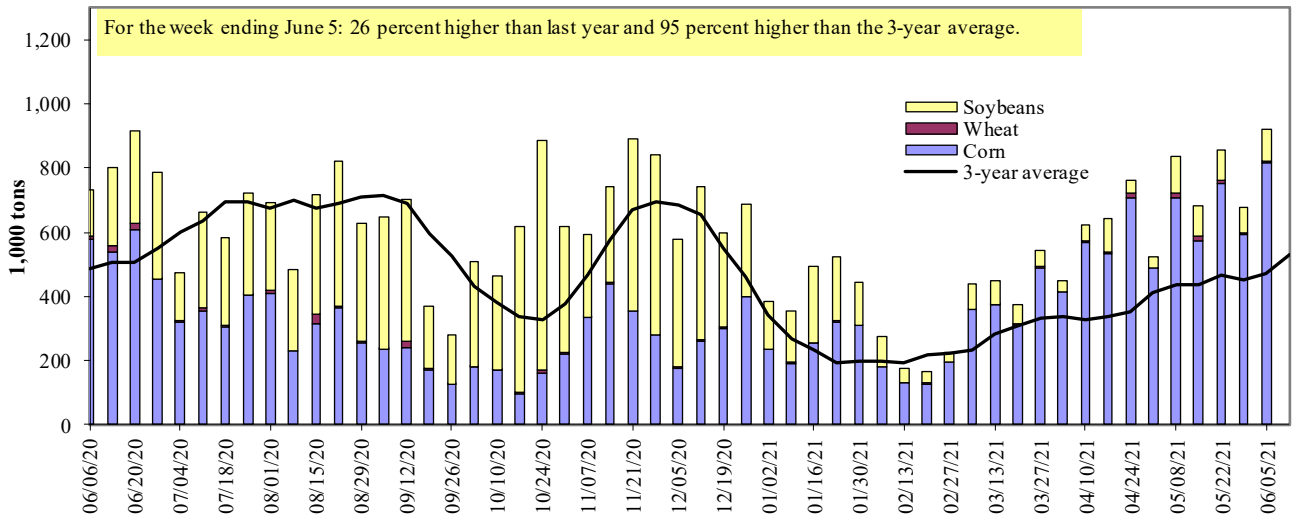
Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.



Map Credit: USDA, Agricultural Marketing Service

Figure 10

Barge movements on the Mississippi 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 06/05/2021	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	358	0	33	2	392
Winfield, MO (L25)	500	0	57	2	559
Alton, IL (L26)	717	5	102	2	826
Granite City, IL (L27)	818	5	99	2	923
Illinois River (La Grange)	157	5	31	0	192
Ohio River (Olmsted)	121	2	50	0	173
Arkansas River (L1)	0	25	1	0	27
Weekly total - 2021	938	32	151	2	1,123
Weekly total - 2020	507	30	223	5	764
2021 YTD[1]	13,587	568	4,002	168	18,325
2020 YTD[1]	7,183	689	4,815	51	12,737
2021 as % of 2020 YTD	189	82	83	333	144
Last 4 weeks as % of 2020[2]	157	147	62	301	130
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.

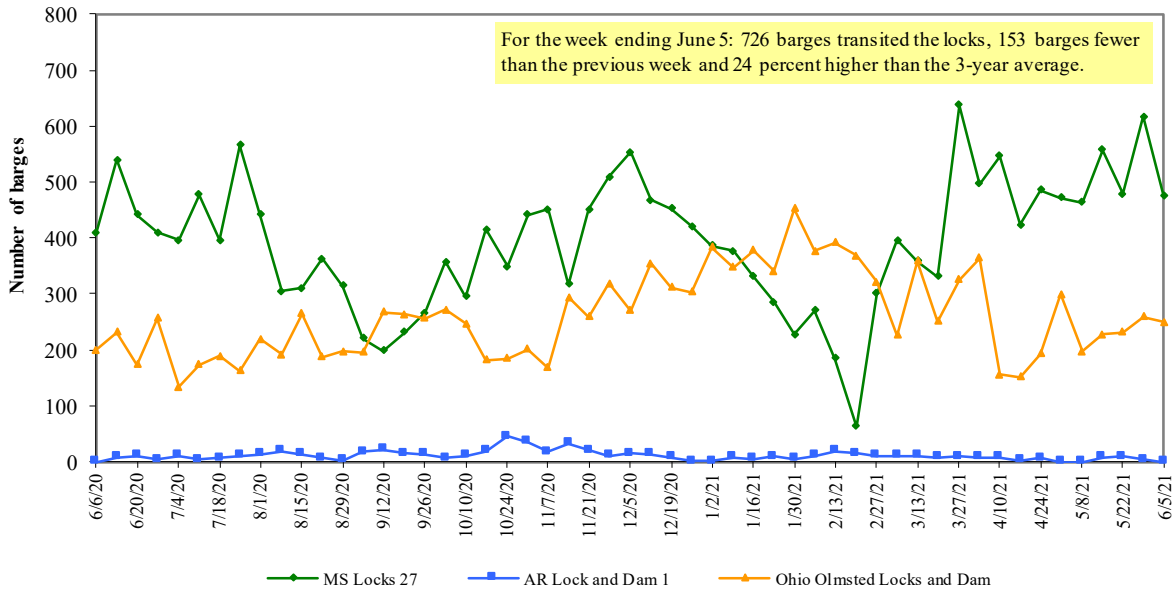
[2] As a percent of same period in 2020.

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

Source: U.S. Army Corps of Engineers.

Figure 11

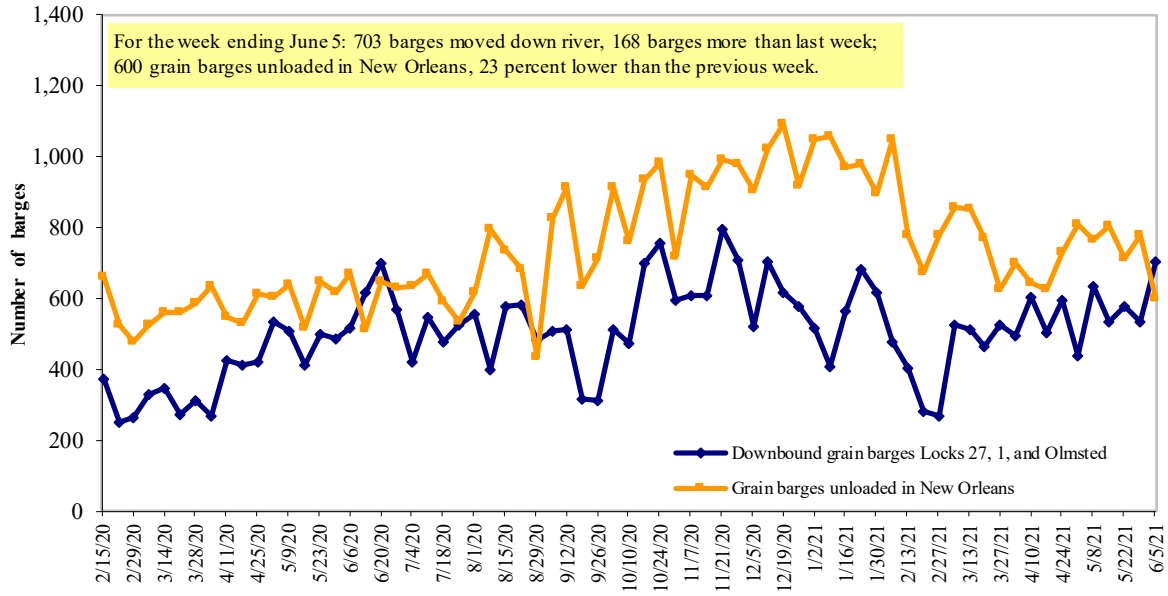
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 6/7/2021 (U.S. $/gallon)

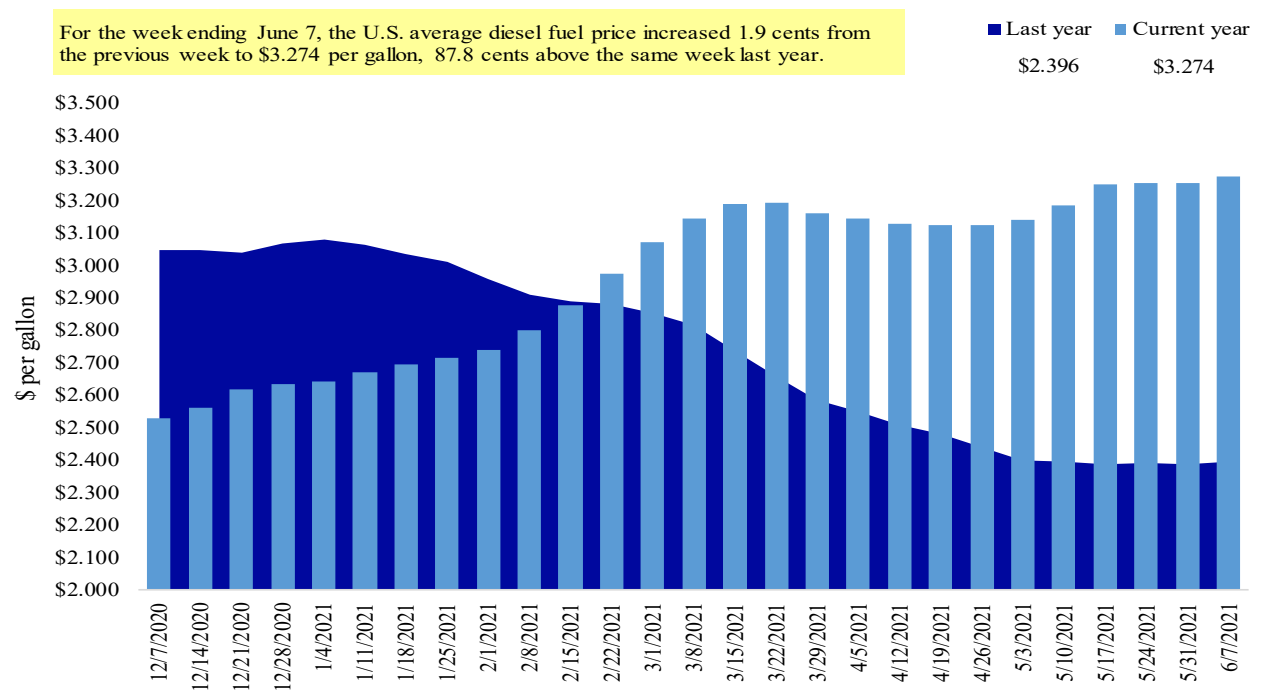
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	3.259	0.020	0.758
	New England	3.183	0.018	0.554
	Central Atlantic	3.424	0.010	0.752
	Lower Atlantic	3.163	0.028	0.804
II	Midwest	3.222	0.025	0.982
III	Gulf Coast	3.034	0.007	0.862
IV	Rocky Mountain	3.386	0.009	1.035
V	West Coast	3.786	0.024	0.868
	West Coast less California	3.446	0.036	0.868
	California	4.069	0.014	0.871
Total	United States	3.274	0.019	0.878

[1]Diesel 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



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

Grain Exports

Table 12

U.S. export balances and cumulative exports (1,000 metric tons)

	Wheat						Corn	Soybeans	Total
For the week ending	HRW	SRW	HRS	SWW	DUR	All wheat			
Export balances[1]									
5/27/2021	394	127	425	325	29	1,298	17,844	4,071	23,213
This week year ago	641	129	1,040	614	43	2,468	11,461	6,731	20,660
Cumulative exports-marketing year[2]									
2020/21 YTD	8,331	1,744	7,337	6,281	654	24,347	51,265	57,466	133,078
2019/20 YTD	9,526	2,318	6,960	4,751	922	24,477	29,011	35,705	89,194
YTD 2020/21 as % of 2019/20	87	75	105	132	71	99	177	161	149
Last 4 wks. as % of same period 2019/20*	83	131	61	81	89	76	176	65	128
Total 2019/20	9,526	2,318	6,960	4,751	922	24,477	42,622	43,994	111,094
Total 2018/19	8,591	3,204	6,776	5,164	479	24,214	48,924	46,189	119,327

[1] Current unshipped (outstanding) export sales to date.

[2] Shipped export sales to date; 2020/21 marketing year now in effect for wheat, corn, and soybeans.

Note: marketing year: wheat = 6/01-5/31, corn and soybeans = 9/01-8/31. YTD = year-to-date; wks. = weeks; HRW= hard red winter; SRW = soft red winter; HRS= hard red spring; SWW= soft white wheat; DUR= durum.

Source: USDA, Foreign Agricultural Service.

Table 13

Top 5 importers[1] of U.S. corn

For the week ending 05/27/2021	Total commitments[2]			% change	Exports[3]
	2021/22 next MY	2020/21 current MY	2019/20 last MY	current MY from last MY	3-yr. avg. 2017-19
			- 1,000 mt -		
Mexico	1,873	14,627	13,555	8	14,869
Japan	775	10,062	9,050	11	11,221
Columbia	0	3,746	4,026	(7)	4,830
Korea	0	3,537	2,315	53	4,011
China	10,744	23,155	1,266	1,729	909
Top 5 importers	**13,392**	**55,126**	**30,211**	**82**	**35,840**
Total U.S. corn export sales	**15,067**	**69,108**	**40,472**	**71**	**49,983**
% of projected exports	24%	98%	89%		
Change from prior week[2]	**440**	**531**	**634**		
Top 5 importers' share of U.S. corn export sales	89%	80%	75%		72%
USDA forecast May 2021	**62,341**	**70,611**	**45,242**	**56**	
Corn use for ethanol USDA forecast, May 2021	**132,080**	**126,365**	**123,368**	**2**	

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

[2] Cumulative exports (shipped) + outstanding sales (unshipped), FAS weekly export sales report, or export sales query. 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 (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 14

Top 5 importers[1] of U.S. soybeans

For the week ending 5/27/2021	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	3,092	35,707	14,946	139	19,106
Mexico	509	4,690	4,441	6	4,591
Egypt	0	2,777	3,190	(13)	2,980
Indonesia	1	2,104	1,835	15	2,360
Japan	74	2,174	2,250	(3)	2,288
Top 5 importers	**3,676**	**47,453**	**26,661**	**78**	**31,324**
Total U.S. soybean export sales	**7,451**	**61,537**	**42,437**	**45**	**49,352**
% of projected exports	13%	99%	93%		
change from prior week[2]	**180**	**18**	**495**		
Top 5 importers' share of U.S. soybean export sales	49%	77%	63%		**63%**
USDA forecast, May 2021	**56,540**	**62,125**	**45,831**	**136**	

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

[2]Cumulative 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.

[3]FAS 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 importers[1] of all U.S. wheat

For the week ending 05/27/2021	Total Commitmer			% 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	597.5	3,677	3,857	(5)	3,213
Philippines	803	3,188	3,584	(11)	2,888
Japan	371.7	2,495	2,780	(10)	2,655
Nigeria	303	1,465	1,590	(8)	1,433
Korea	218.4	1,874	1,657	13	1,372
Indonesia	0	1,010	1,066	(5)	1,195
Taiwan	140.4	1,191	1,428	(17)	1,175
Thailand	0	815	877	(7)	727
Italy	0	617	947	(35)	622
Colombia	90.3	394	793	(50)	618
Top 10 importers	**2,524**	**16,725**	**18,580**	(10)	**15,897**
Total U.S. wheat export sale	**4,349**	**25,645**	**26,945**	(5)	**23,821**
% of projected exports	18%	98%	102%		
change from prior week[2]	**398**	**-33**	**180**		
Top 10 importers' share of U.S. wheat export sales	58%	65%	69%		67%
USDA forecast, May 2021	**24,523**	**26,294**	**26,294**	0	

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

[2] Cumulative 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.

[3] FAS 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 06/03/21	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	325	103	317	7,205	6,843	105	103	122	15,966
Corn	472	499	95	9,510	4,145	229	178	148	9,969
Soybeans	10	0	n/a	3,678	2,736	134	28	5	14,028
Total	**806**	**602**	**134**	**20,393**	**13,725**	**149**	**137**	**119**	**39,963**
Mississippi Gulf									
Wheat	69	52	132	1,076	1,576	68	136	89	3,422
Corn	693	1,385	50	22,773	13,263	172	156	163	28,781
Soybeans	126	77	164	10,018	9,729	103	54	43	38,013
Total	**887**	**1,514**	**59**	**33,866**	**24,568**	**138**	**129**	**121**	**70,215**
Texas Gulf									
Wheat	0	0	n/a	1,432	1,798	80	33	30	4,248
Corn	0	0	n/a	239	374	64	24	26	723
Soybeans	0	0	n/a	656	7	n/a	n/a	0	2,098
Total	**0**	**0**	**n/a**	**2,327**	**2,179**	**107**	**32**	**30**	**7,068**
Interior									
Wheat	47	86	55	1,230	1,001	123	208	181	2,263
Corn	223	183	122	4,122	3,554	116	127	120	8,683
Soybeans	105	120	88	2,917	2,885	101	93	86	7,274
Total	**376**	**390**	**96**	**8,269**	**7,440**	**111**	**123**	**114**	**18,220**
Great Lakes									
Wheat	0	33	0	188	238	79	95	75	891
Corn	0	0	n/a	32	0	n/a	n/a	34	111
Soybeans	0	0	n/a	13	17	77	21	3	1,111
Total	**0**	**33**	**0**	**232**	**255**	**91**	**96**	**51**	**2,113**
Atlantic									
Wheat	0	0	n/a	72	5	n/a	0	0	65
Corn	0	0	n/a	14	8	174	n/a	0	33
Soybeans	8	7	116	1,026	388	265	106	47	1,870
Total	**8**	**7**	**116**	**1,112**	**401**	**277**	**94**	**38**	**1,968**
U.S. total from ports*									
Wheat	440	274	161	11,202	11,461	98	96	96	26,854
Corn	1,388	2,067	67	36,689	21,345	172	154	149	48,301
Soybeans	250	204	122	18,309	15,761	116	65	45	64,394
Total	**2,078**	**2,546**	**82**	**66,200**	**48,567**	**136**	**123**	**111**	**139,548**

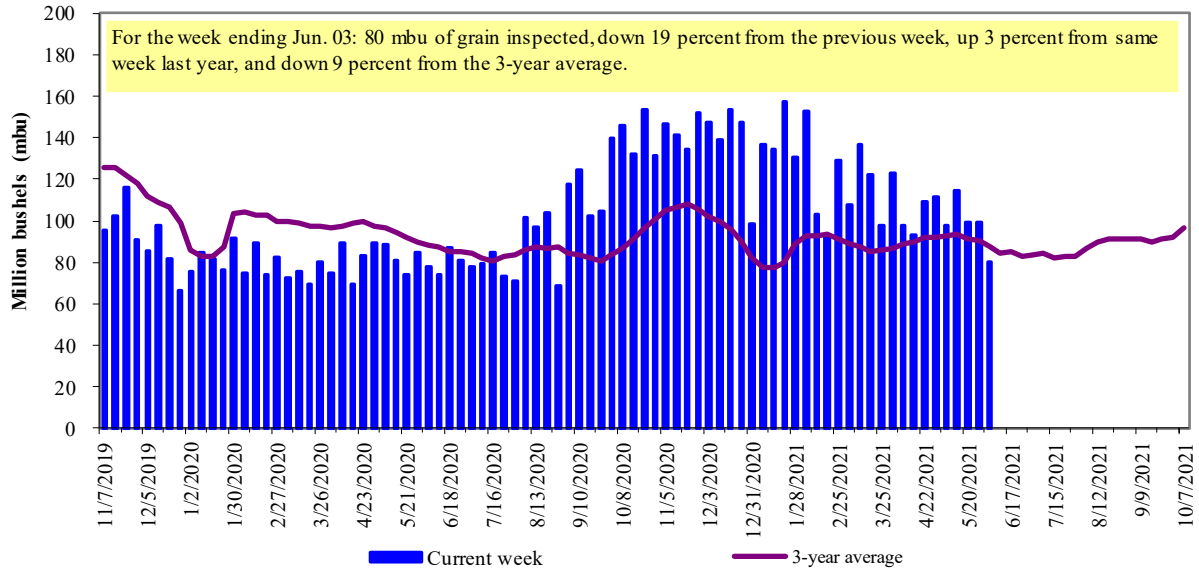
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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)

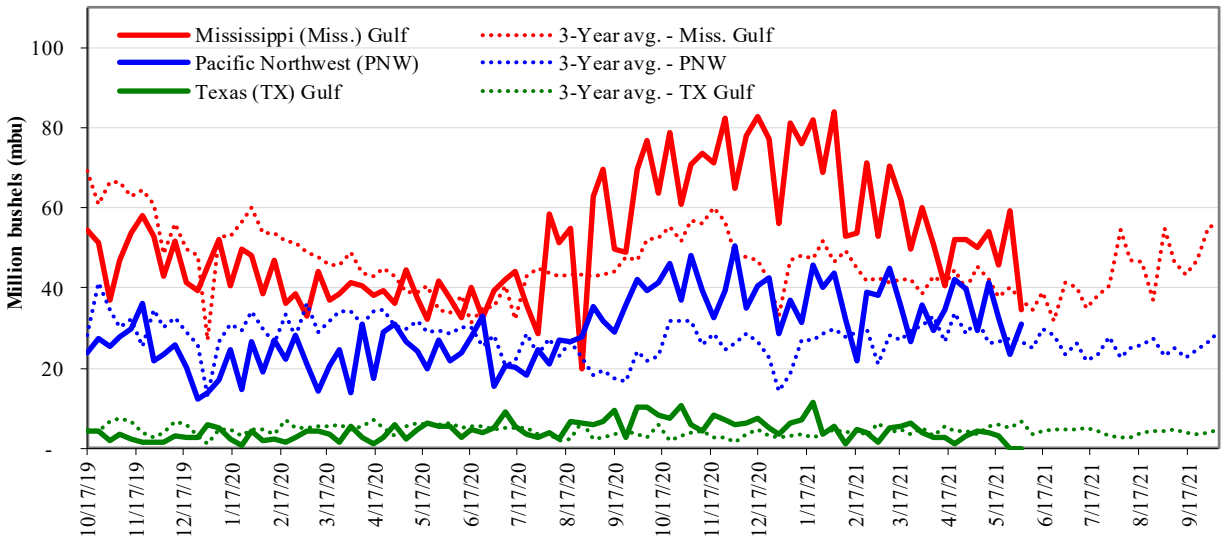


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

U.S. Grain inspections: U.S. Gulf and PNW[1] (wheat, corn, and soybeans)



Week ending 06/03/21 inspections (mbu):	
MS Gulf:	34.4
PNW:	30.9
TX Gulf:	0.0

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last wk:	down 42	n/a	down 42	up 32
Last Year (same wk):	down 8	down 100	down 20	up 42
3-yr avg. (4-wk. mov. Avg):	down 12	down 100	down 24	up 16

Source: USDA, Federal Grain Inspection Service.

Table 17

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

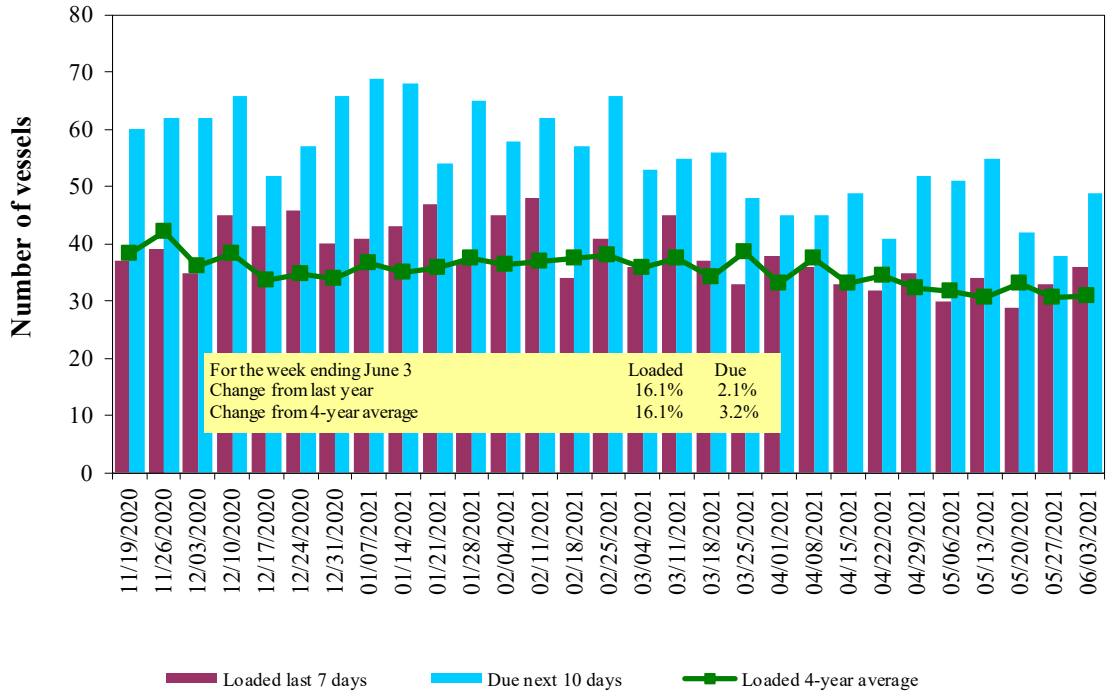
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
6/3/2021	18	36	49	13
5/27/2021	23	33	38	14
2020 range	(22…60)	(23...46)	(34...68)	(7…24)
2020 average	37	33	49	15

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

Source: USDA, Agricultural Marketing Service.

Figure 16

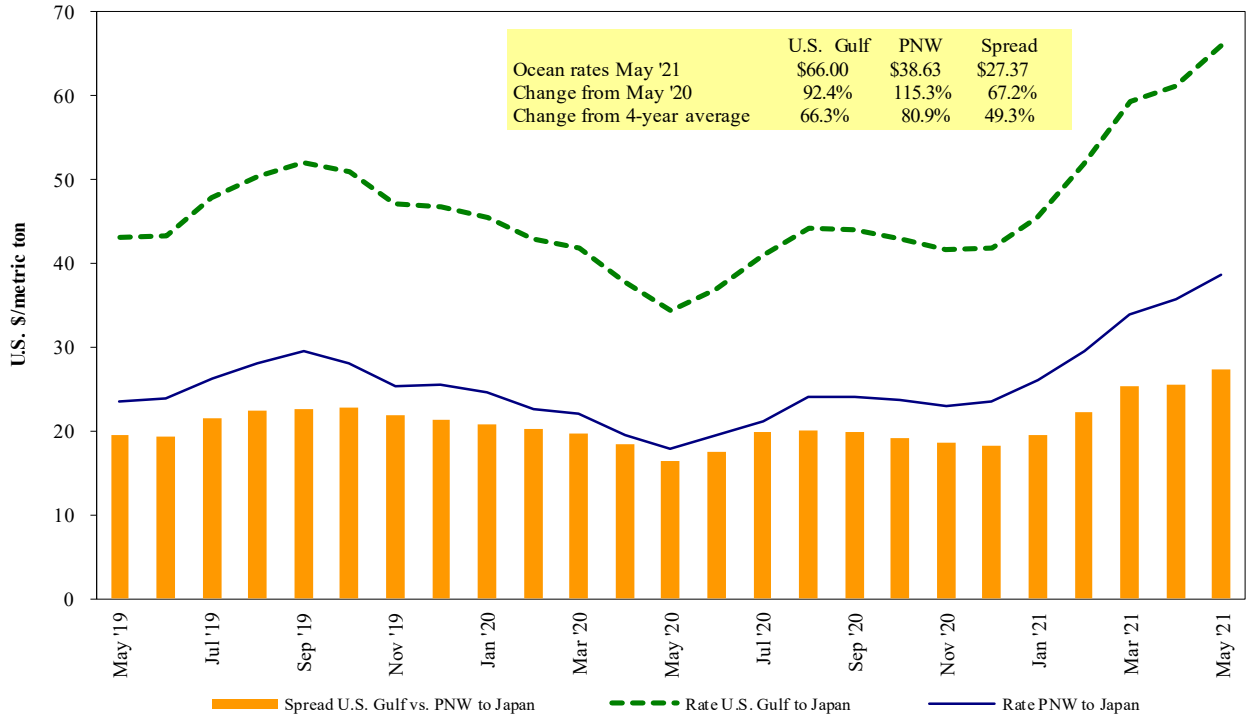
U.S. Gulf[1] vessel loading activity



[1]U.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 06/05/2021

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	Aug 1/10	50,000	69.75
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	Sudan	Wheat	May 20/30	48,000	112.75*
U.S. Gulf	Djibouti	Wheat	Jul 6/16	5,880	85.70*
PNW	Japan	Wheat	Jul 16/31	30,250	64.35
PNW	Japan	Wheat	Jun 5/15	50,600	49.30
PNW	Yemen	Wheat	Jun 10/20	22,230	132.25*
PNW	Taiwan	Wheat	May 29/Jun 12	45,665	48.00
River Plate	S. Korea	Corn	May 1/31	68,000	52.60*

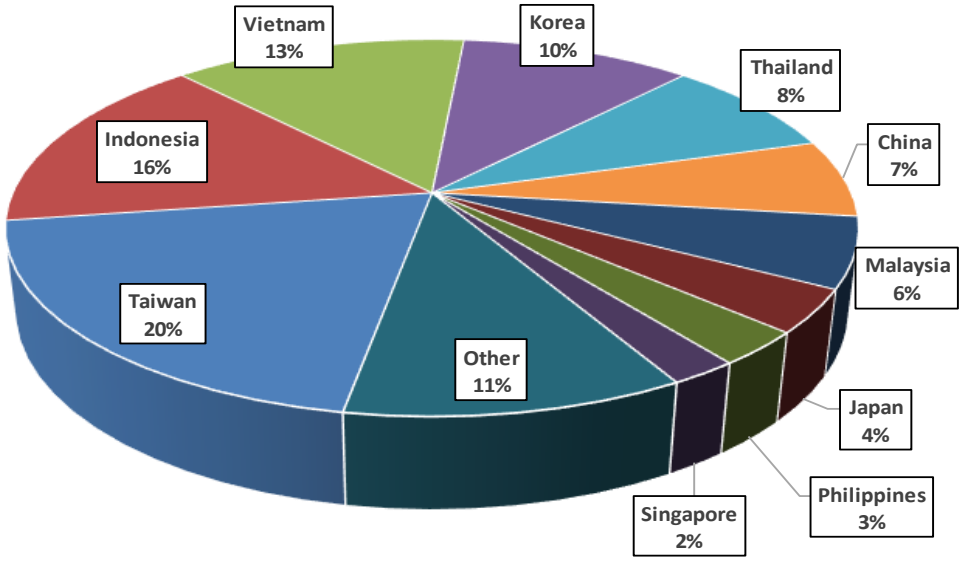
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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.

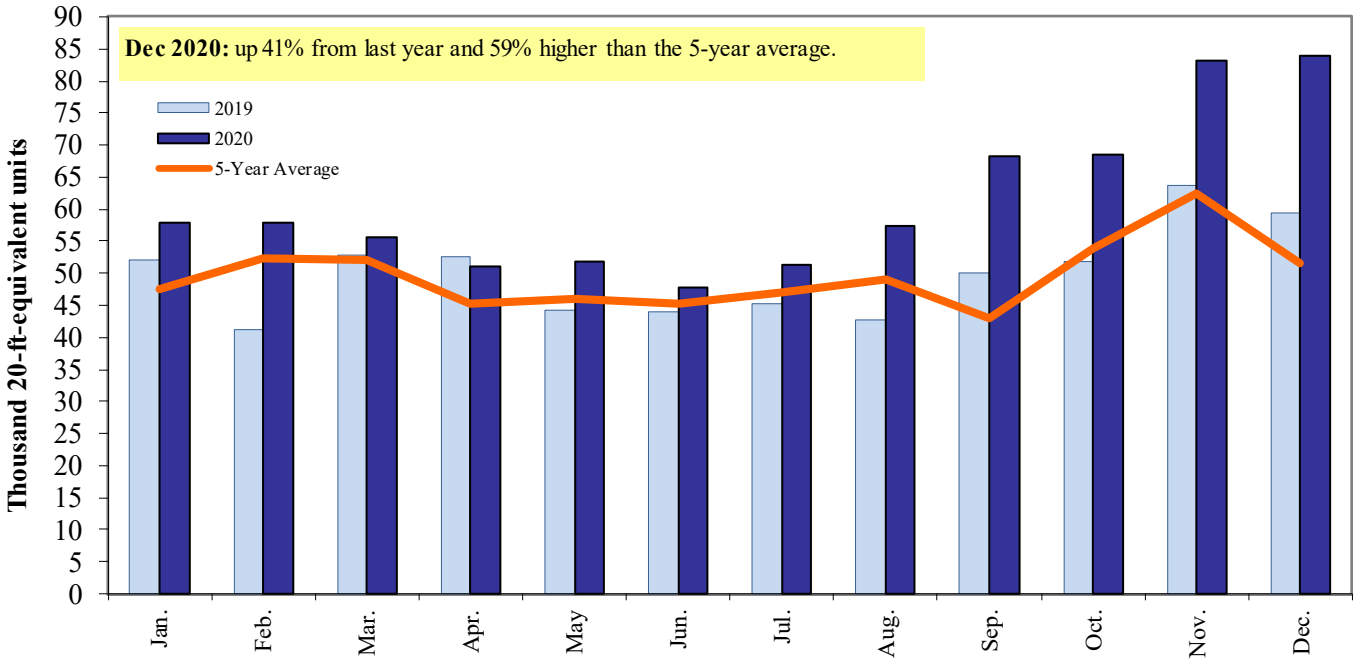
Figure 18
Top 10 destination markets for U.S. containerized grain exports, Jan-Dec 2020



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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