USDA United States Department of Agriculture

Grain Transportation Report

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

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Contents

The next release is February 4, 2021

WEEKLY HIGHLIGHTS

Pacific Northwest Inspections Drive Grain Exports Higher

For the week ending January 21, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions totaled 4 million metric tons (mmt). Total grain inspections were up 12 percent from the previous week, up 98 percent from last year, and up 90 percent from the 3-year average. The increase in total inspections mainly reflected an 85-percent jump in wheat inspections and a 52-percent increase in corn inspections. Soybean inspections, however, were down 13 percent from the previous week. The increase in total inspections also reflected a surge in Pacific Northwest grain inspections—up 44 percent from the previous week. Mississippi Gulf grain inspections increased 3 percent from the previous week. During the last 4 weeks, inspections were 62 percent above last year and 63 percent above the 3-year average.

ASCE Releases New Infrastructure Report

The American Society of Civil Engineers released a new report, *Failure to Act: Economic Impacts of Status Quo Investment Across Infrastructure System*, to explore the economic challenges associated with inadequate investments in infrastructure. The study compares current and projected needs for infrastructure investment against the current funding trends in surface transportation (highways, bridges), seaports, and inland waterways. The analysis finds current funding levels will cover only 57 percent of the aggregate infrastructure system needs by 2039. By 2039, inland waterways and marine ports are projected to have a funding deficit of $49 billion, and the projected funding gap for surface transportation is $2.5 trillion.

Incentive Program of the Port of LA To Move Trucks More Efficiently

On January 19, the Port of Los Angeles (LA) launched its Truck Turn-Time and Dual-Transaction program to move trucks in and out of terminals more quickly. Under the program, terminal operators can earn financial rewards two different ways: either by reducing drop-off and pick-up time for trucks or by letting trucks handle both drop-offs and pick-ups in the same trip. Terminals that can reduce truck turn times 5-20 percent will receive $.50-$2.75 per loaded or empty container. The size of the reward will depend on the terminal's turn times—rewards grow as turn times shorten. Additionally, terminal operators can earn $.40-$1.40 per container when at least half of all trucks dropping off a container leave with another in the same trip. The dual-transaction incentives increase as the share of dual transactions grow. Effective February 1, the incentive program is estimated to cost the Port of LA $7.5 million in its first year.

Snapshots by Sector

Export Sales

For the week ending January 14, **unshipped balances** of wheat, corn, and soybeans totaled 49.6 million metric tons (mmt). This total did not change from last week, but still represented a significant increase in outstanding sales from the same time last year. Net **corn export sales** were 1.438 mmt, unchanged from the past week. Net **soybean export sales** were 1.818 mmt, up significantly from the previous week. Net **wheat export sales** were 0.330 mmt, up 49 percent from the previous week.

Rail

U.S. Class I railroads originated 27,613 **grain carloads** during the week ending January 16. This was unchanged from the previous week, 43 percent more than last year, and 29 percent more than the 3-year average.

Average February shuttle **secondary railcar** bids/offers (per car) were $388 above tariff for the week ending January 21. This was $250 less than last week and $296 more than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending January 23, **barge grain movements** totaled 1,108,428 tons. This was 21 percent higher than the previous week and 93 percent more than the same period last year.

For the week ending January 23, 681 grain barges **moved down river**—118 barges more than the previous week. There were 977 grain barges **unloaded in New Orleans**, 1 percent more than the previous week.

Ocean

For the week ending January 21, 47 **oceangoing grain vessels** were loaded in the Gulf—57 percent more than the same period last year. Within the next 10 days (starting January 22, 2021), 54 vessels were expected to be loaded—20 percent more than the same period last year.

As of January 21, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $46.25. This was 1 percent more than the previous week. The rate from PNW to Japan was $26.50 per mt, unchanged from the previous week.

Fuel

For the week ending January 25, the U.S. average **diesel fuel price** increased 2 cents from the previous week to $2.716 per gallon, 29.4 cents below the same week last year.

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Feature Article/Calendar

Grain Barge Movements and Rates in 2020 Showed a Healthy Recovery From 2019

In 2020, the grain barge market made a healthy recovery from 2019. Stimulated by higher production and strong export demand for U.S. corn and soybeans (mostly from China), total 2020 downbound grain barge movements reached 40.2 million tons. This total was 37 percent higher than 2019 and 7 percent higher than the 5-year (2015-19) average.[1] Eventually, barge spot rates also reflected the recovering market: though below average in the first half of the year, barge spot rates rose in the fourth quarter. This article briefly highlights and explains the factors influencing barge movements and freight rates during 2020.

Grain Movements Buck Historical Trends

In 2020, downbound grain barge movements on the Mississippi River recovered from their low in 2019. The shift was mostly due to a new trade agreement with China signed in early 2020 that significantly increased demand for U.S. grain exports (fig. 1a).[2] For the first three quarters of 2020, the changes of weekly tonnages resembled the 5-year average, except for a brief departure in late June and early July. In the fourth week of June (week 25), total shipments spiked at 1.1 million tons, mostly because of rising export demand and pressure to make space for the fall harvests.

The composition of grain moved by barges in 2020 continued its historical pattern, except that corn and soybeans slightly reversed their long-term trends (fig. 1b). Since 2007, shares of corn movements have declined on average, while soybean shares have risen. However, in 2020, higher demand for corn—along with strong corn production in the river-market States—resulted in a 3-percent rise in corn shares and a 2.5-percent drop in soybean shares. However, both crops showed gains in their absolute tonnages, each reaching 19 million tons by the end of 2020. Together, corn and soybean accounted for 95 percent of total barge grain movements in 2020, exceeding prior years mostly because of strong export demand and higher production.

Figure 1a. Weekly downbound grain barge movements

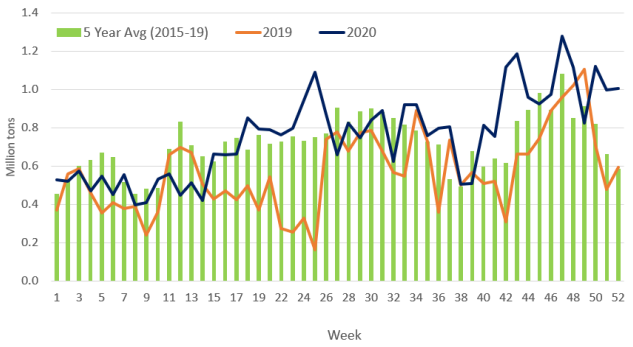
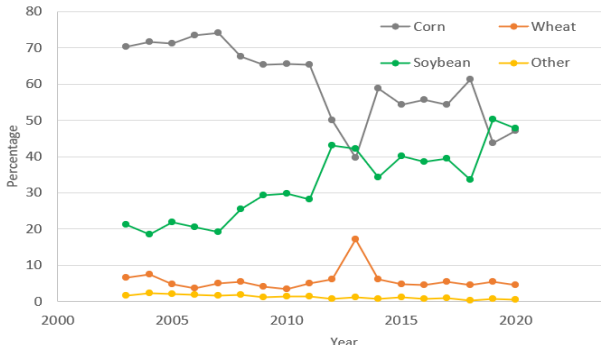


Figure 1b. Shares of major crops in downbound barge movements on the Mississippi River



Source: U.S. Army Corps of Engineer, Lock Performance Monitoring System. Data.

From early November through the year's end, grain barge movements differed notably from past years; they remained strong and did not exhibit the seasonal decline that typically starts in late October/early November (fig. 1a). Despite temporary slowdowns in weeks ending on November 7 and December 5 (weeks 45 and 49), weekly movements in the fourth-quarter never dipped below the 5-year-average. Movements remained strong, even in the

[1] The U.S. Army Corps of Engineers (USACE) supports commercial navigation on inland waterways through locks, dams, developed channels, and other features. Every week, USDA's Agricultural Marketing Service collects and reports weekly data on downbound grain barge movements along the Mississippi River system collected from the USACE Lock Performance Monitoring System (LPMS) (**GTR table 10**). The statistics in this article are based on the LPMS data.

[2] Barge movements showed low volumes for most of the 2019. The annual total grain barge movements were 23 percent lower than in 2018 and 28 percent lower than the previous-3-year average. The low tonnage in 2019 was due to several reasons. First, historically bad weather caused severe navigation disruptions, including complete outages of portions of the Mississippi River system. From late 2018 through August 2019, flooding severely slowed barge traffic. Then, in August, flooding was replaced by a rapid drop in water levels and delayed barge departures. Second, the trade dispute between United States and China caused a significant drop in export demand from China, consequently curtailing grain barge demand. Third, the production of corn and soybeans in market year 2019/20 was relatively low, compared to the previous 5 years.

last 2 weeks of December when they often drop off notably. In the first half of the fourth quarter, drier weather conditions in the Upper- and Mid-Mississippi areas facilitated a speedy harvest, and strong commitments from China and other destination countries created strong barge demand. In the last 2 months of 2020, the total weekly tonnage (13 million tons) was 2.7 million tons higher than the 5-year average and 3.9 million tons higher than 2019 (**GTR table 10**). The relatively high volume in fourth quarter 2020 suggests barged grain levels in early 2021 may exceed last year's—as long as demand from China stays strong.

Barge Rates, Down in Early 2020, Rally in Second Half of Year

Compared to the 5-year-averages, the St. Louis barge spot rates were low and flat for most of second quarter 2020 (fig. 2a).[1] During this time, U.S. corn and soybean exports slowed, as other major production countries such as Brazil and Argentina, entered their harvest seasons. Cold weather and icy river conditions may also have discouraged demand for grain barges in the first half of the year.

Figure 2a. Barge spot rates (St Louis)

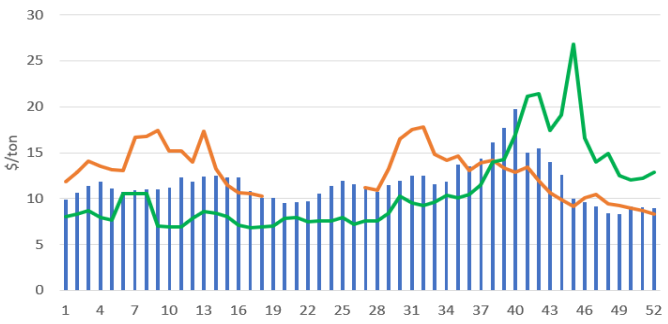
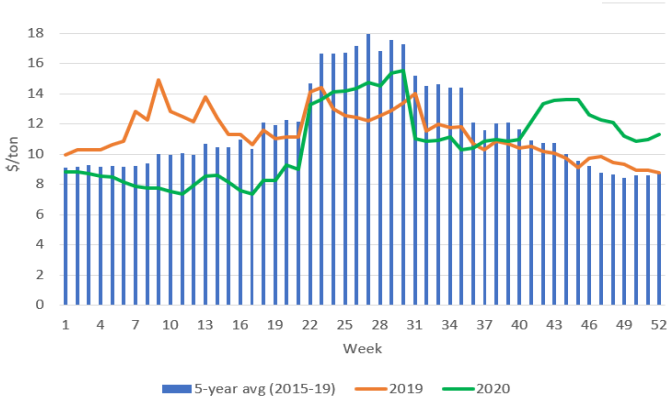


Figure 2b. Three-month forward barge rates



Note: Rates are adjusted for inflation (base year: 2020).

Sources: USDA/AMS/Transportation and Marketing Program.

However, spot rates gradually rose in the third quarter, as the market prepared for the new crop year by clearing old crops from storage. Then, in fourth quarter 2020, spot rates rose sharply when barge demand swelled in response to increased production of corn and soybeans and strong export demand from China for both crops (*Grain Transportation Report,* December 31). Average spot rates for fourth quarter 2020 were 46 percent higher than the 5-year average, and the peak (in the second week of November) was 5 weeks later than usual. The average monthly St. Louis spot tariff rate in October 2020 reached $19.6 per ton, a record high since 2014.

High demand was not the only cause of high spot rates. Although dry weather expedited the harvest, it also caused low water levels in the Lower Mississippi. These conditions forced the barge industry to restrict drafts and tow sizes, which delayed departures and lengthened transit times. Some shippers might also have had difficulties positioning empty barges as scheduled. Thus, the high spot rates resulted from a combination of high demand and unstable supply. The 3-month forward rates (i.e., cost to purchase barge service to use 3 months later), began rising in June and peaked in late July/early August (fig. 2b), close to typical trends.[2] However, the higher-than-usual 3-month forward rates for most of the fourth quarter indicate the industry expected the demand for grain barges to stay strong in early 2021.

Barge Market Recovery in 2020 Sustains Strength in Early 2021

The grain barge market made a healthy recovery in the second half of 2020 and, so far, has continued to be strong in 2021. High yield and robust demand for corn and soybeans from the international export market (mostly China) created a bullish market for grain barges. Records for spot rates and 3-month forward rates also indicate a strong market for barges since the new crop year started. *matt.chang@usda.gov*

[1] The presented rates are the St Louis barge tariff rates converted into dollars per ton and adjusted for inflation (using 2020 as the base year).

[2] These rates reflect the industry's common preference of purchasing barge services in advance of when they are needed—in this case, to fulfill high fourth-quarter demand.

Grain Transportation Indicators

Table 1

Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Unit train	Shuttle		Gulf	Pacific
01/27/21	182	306	234	219	207	188
01/20/21	181	302	241	256	206	188

[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)

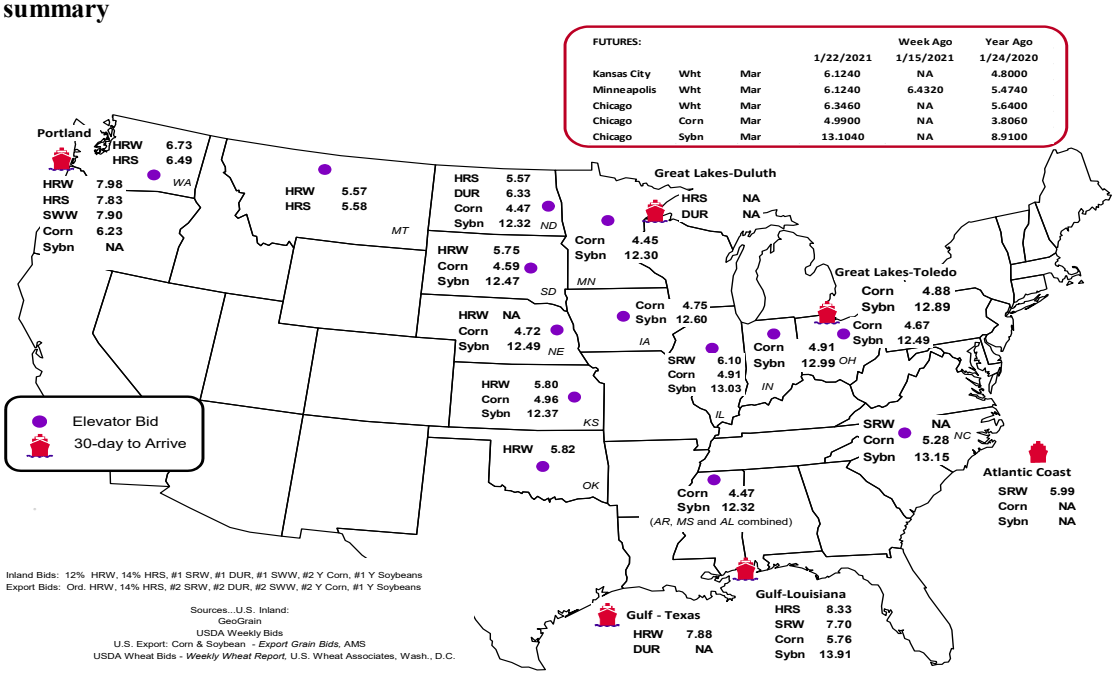
Commodity	Origin–destination	1/22/2021	1/15/2021
Corn	IL–Gulf	-0.85	-0.86
Corn	NE–Gulf	-1.04	-1.03
Soybean	IA–Gulf	-1.31	-1.29
HRW	KS–Gulf	-2.08	-2.08
HRS	ND–Portland	-2.26	-2.37

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]
1/20/2021[p]	2,747	2,625	7,190	868	13,430	1/16/2021	3,005
1/13/2021[r]	1,796	2,246	6,757	1,340	12,139	1/9/2021	2,215
2021 YTD[r]	6,120	6,997	21,341	3,031	37,489	2021 YTD	6,670
2020 YTD[r]	1,349	1,802	10,719	671	14,541	2020 YTD	7,292
2021 YTD as % of 2020 YTD	454	388	199	452	258	% change YTD	91
Last 4 weeks as % of 2020[2]	375	326	206	437	250	Last 4wks. % 2019	98
Last 4 weeks as % of 4-year avg.[2]	315	181	142	213	167	Last 4wks. % 4 yr.	112
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.

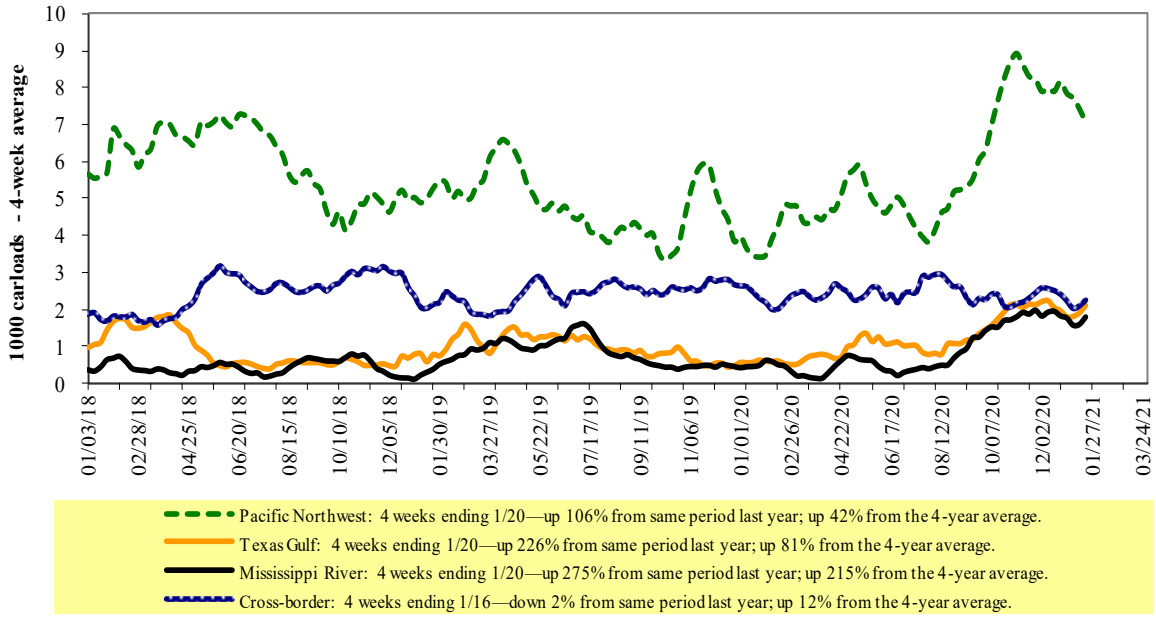
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available; wks. = weeks; avg. = average.

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	
1/16/2021	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	2,008	2,836	13,194	846	8,729	27,613	5,128	5,869
This week last year	1,998	2,205	9,883	756	4,525	19,367	2,666	2,934
2021 YTD	4,445	6,423	27,098	2,330	14,967	55,263	10,101	10,256
2020 YTD	5,219	7,268	29,276	3,153	12,296	57,212	10,458	10,020
2021 YTD as % of 2020 YTD	85	88	93	74	122	97	97	102
Last 4 weeks as % of 2020*	122	117	139	110	168	140	146	148
Last 4 weeks as % of 3-yr. avg.**	111	107	126	116	153	128	138	128
Total 2020	91,659	130,849	613,630	57,782	296,701	1,190,621	239,197	261,778

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

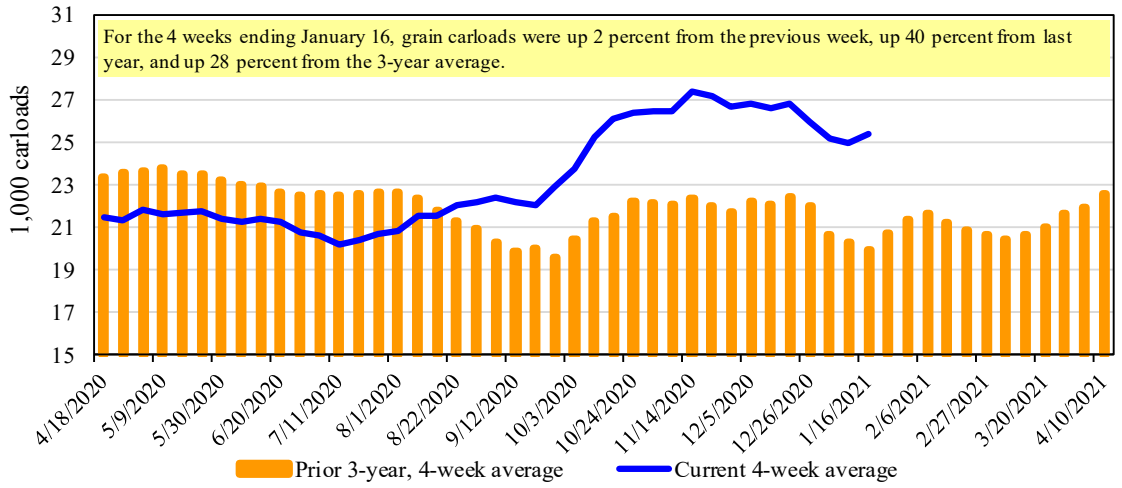
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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							
1/21/2021		Feb-21	Feb-20	Mar-21	Mar-20	Apr-21	Apr-20	May-21	May-20
BNSF[3]	COT grain units	0	0	no bids	0	no bids	0	no bids	0
	COT grain single-car	6	38	0	0	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

[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.

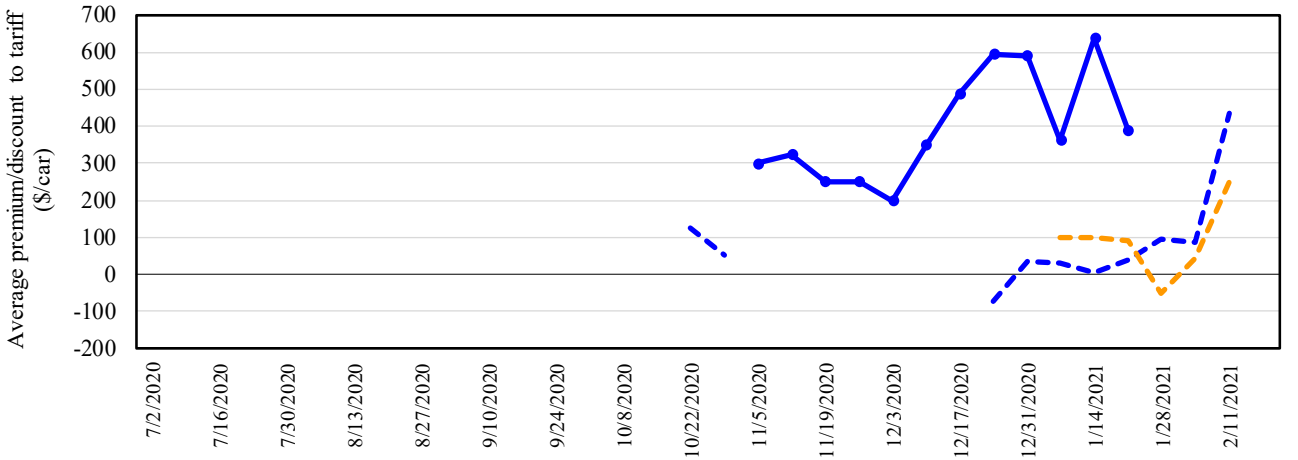
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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 February 2021, secondary market

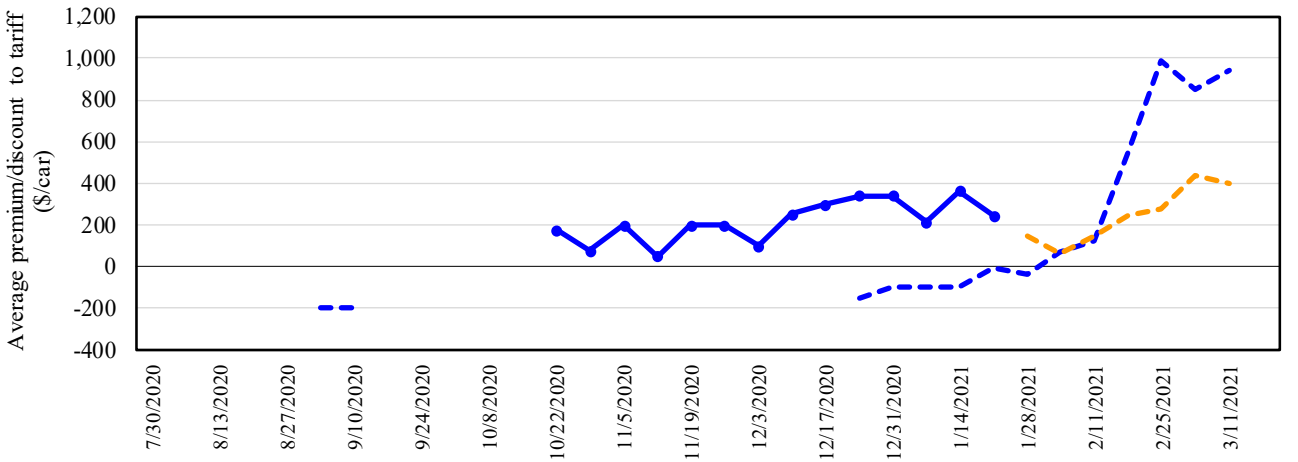


1/21/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$425	$350

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $250 this week and are $250 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 March 2021, secondary market



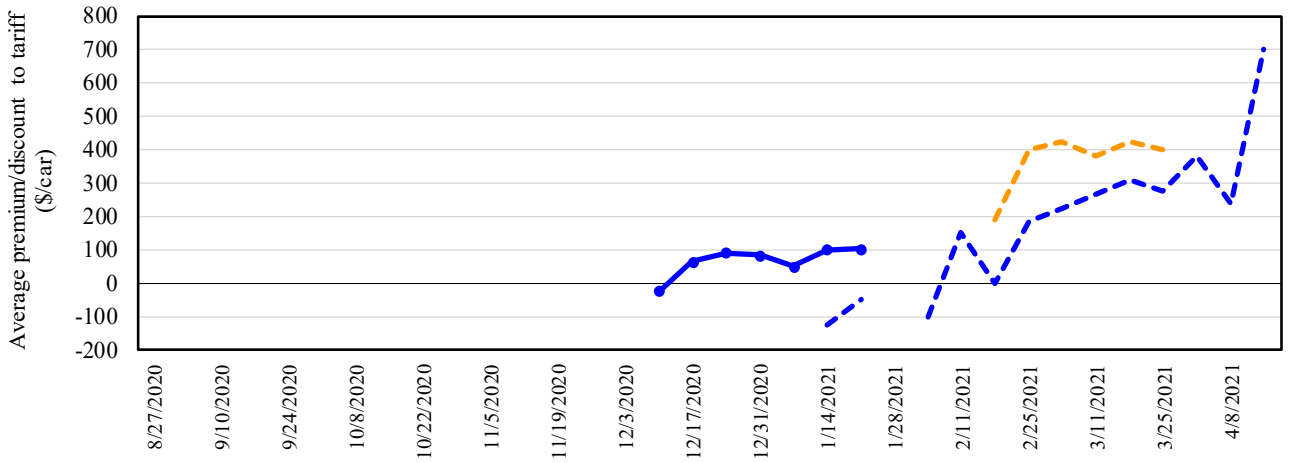
1/21/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$300	$188

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $119 this week and are $119 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 April 2021, secondary market



1/21/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$163	$42

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $2 this week and are at 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: 1/21/2021	Delivery period					
		Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-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**	**425**	**300**	**163**	**(44)**	**n/a**	**(75)**
	Change from last week	(288)	(125)	(13)	(6)	n/a	0
	Change from same week 2020	333	n/a	n/a	n/a	n/a	n/a
	UP-Pool	**350**	**188**	**42**	**n/a**	**n/a**	**(75)**
	Change from last week	(213)	(113)	17	n/a	n/a	0
	Change from same week 2020	n/a	300	n/a	n/a	n/a	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]

January 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	$3,983	$35	$39.90	$1.09	-2
	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	$62	$45.55	$1.24	-2
	Sioux Falls, SD	Galveston-Houston, TX	$6,851	$0	$68.03	$1.85	-2
	Colby, KS	Galveston-Houston, TX	$4,801	$68	$48.35	$1.32	-3
	Amarillo, TX	Los Angeles, CA	$5,121	$95	$51.80	$1.41	-3
Corn	Champaign-Urbana, IL	New Orleans, LA	$3,900	$70	$39.43	$1.00	-3
	Toledo, OH	Raleigh, NC	$7,833	$0	$77.79	$1.98	15
	Des Moines, IA	Davenport, IA	$2,455	$15	$24.53	$0.62	1
	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	$44	$39.16	$0.99	0
	Des Moines, IA	Los Angeles, CA	$5,780	$128	$58.67	$1.49	-2
Soybeans	Minneapolis, MN	New Orleans, LA	$5,771	$37	$57.68	$1.57	52
	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	$70	$46.83	$1.27	-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	$112	$60.81	$1.66	-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	$70	$38.63	$0.98	-3
	Lincoln, NE	Galveston-Houston, TX	$3,880	$0	$38.53	$0.98	0
	Des Moines, IA	Amarillo, TX	$4,320	$55	$43.45	$1.10	0
	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	$81	$49.22	$1.34	-3
	Toledo, OH	Huntsville, AL	$4,945	$0	$49.11	$1.34	3
	Grand Island, NE	Portland, OR	$5,260	$115	$53.37	$1.45	-13

[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: January 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	$6,713	$49	$69.08	$1.88	-2
	KS	Guadalajara, JA	$7,471	$449	$80.93	$2.20	-3
	TX	Salinas Victoria, NL	$4,347	$29	$44.72	$1.22	-1
Corn	IA	Guadalajara, JA	$8,902	$358	$94.62	$2.40	-2
	SD	Celaya, GJ	$8,140	$0	$83.17	$2.11	0
	NE	Queretaro, QA	$8,300	$99	$85.82	$2.18	-2
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	0
	MO	Tlalnepantla, EM	$7,665	$97	$79.30	$2.01	-2
	SD	Torreon, CU	$7,690	$0	$78.57	$1.99	0
Soybeans	MO	Bojay (Tula), HG	$8,547	$338	$90.78	$2.47	-2
	NE	Guadalajara, JA	$9,157	$347	$97.10	$2.64	-2
	IA	El Castillo, JA	$9,410	$0	$96.15	$2.61	-1
	KS	Torreon, CU	$8,014	$228	$84.21	$2.29	-1
Sorghum	NE	Celaya, GJ	$7,772	$308	$82.56	$2.10	-2
	KS	Queretaro, QA	$8,108	$61	$83.46	$2.12	-1
	NE	Salinas Victoria, NL	$6,713	$49	$69.09	$1.75	-1
	NE	Torreon, CU	$7,092	$201	$74.52	$1.89	-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.

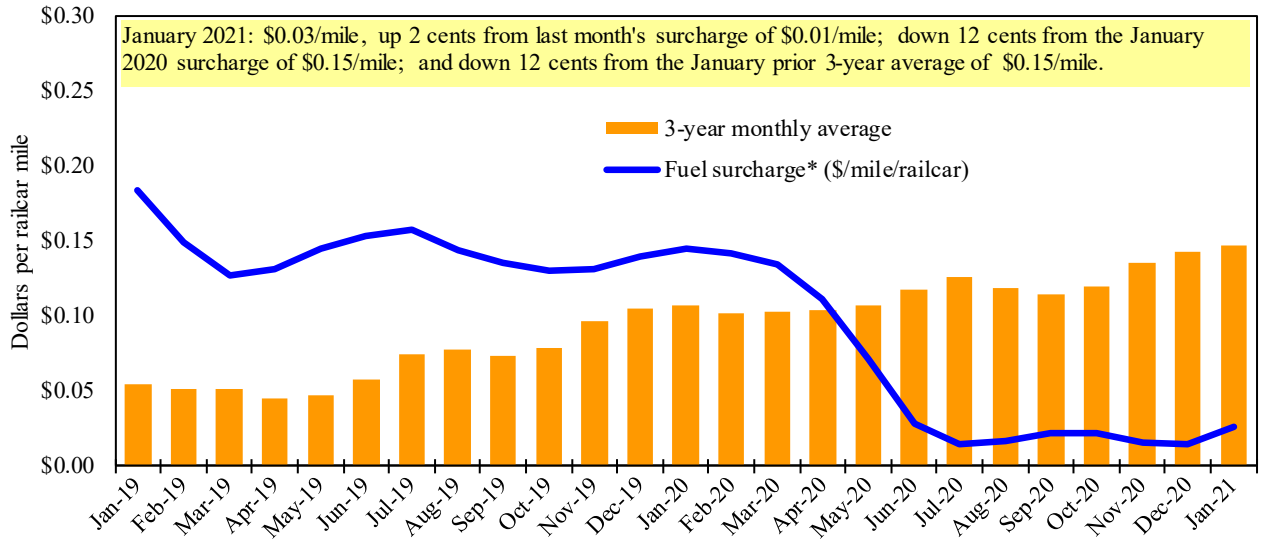
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu.

[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.

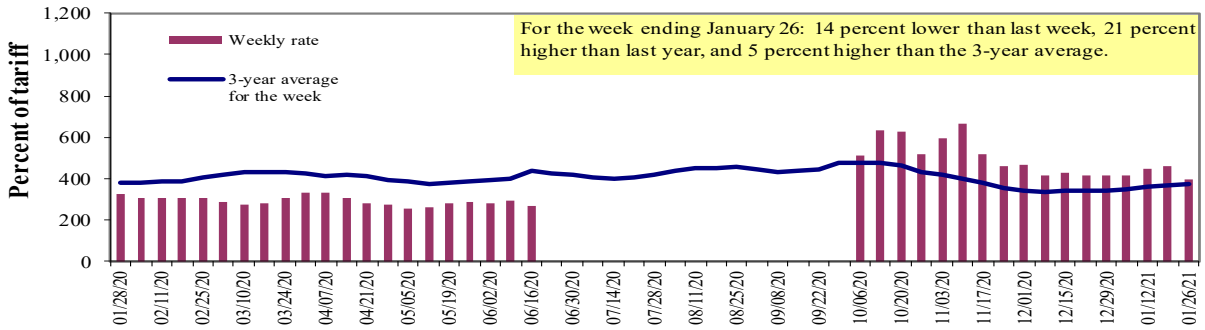
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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]	1/26/2021	-	-	395	283	329	329	255
	1/19/2021	-	-	460	336	363	363	284
$/ton	1/26/2021	-	-	18.33	11.29	15.43	13.29	8.01
	1/19/2021	-	-	21.34	13.41	17.02	14.67	8.92
Current week % change from the same week:								
	Last year	-	-	21	30	34	34	22
	3-year avg. [2]	-	-	5	-1	6	5	3
Rate[1]	February	-	-	401	285	288	288	249
	April	488	389	370	264	284	284	236

[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

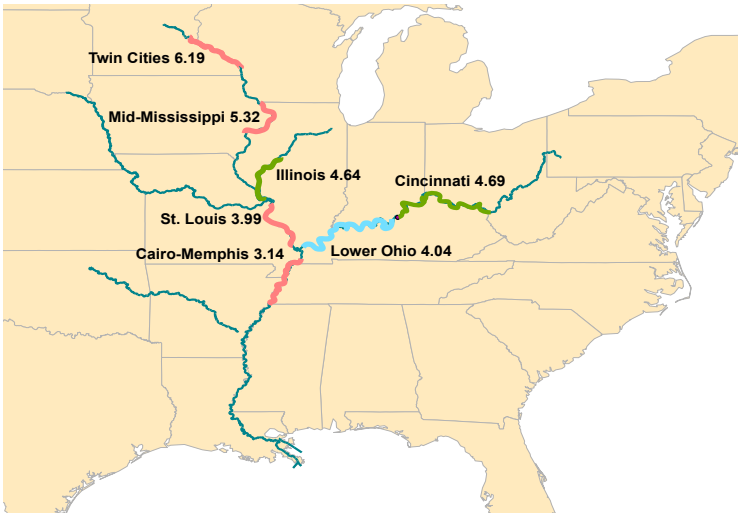
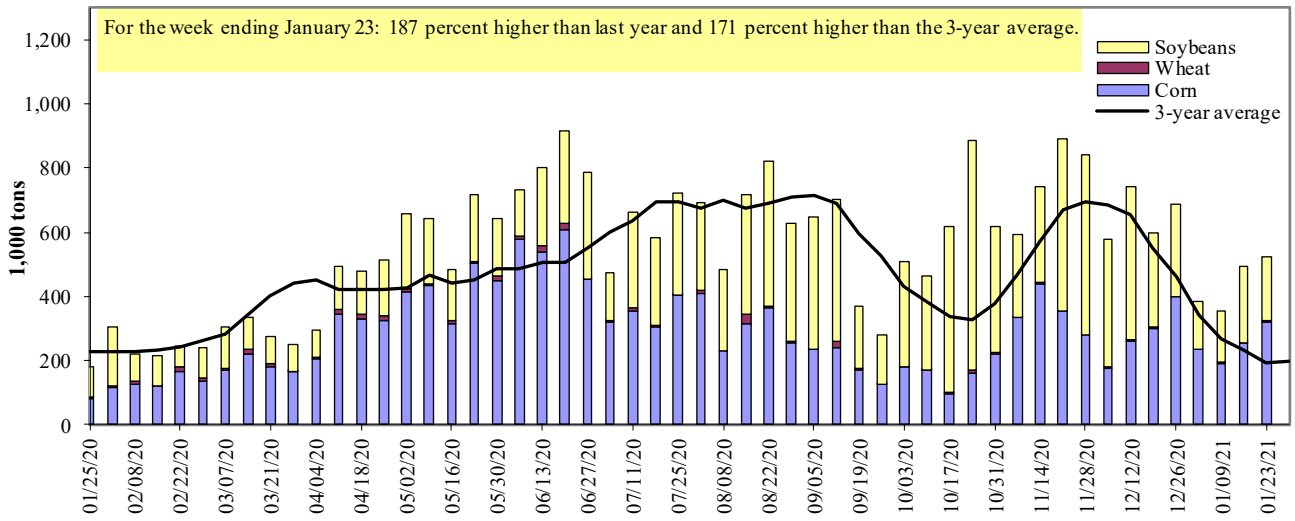


Figure 10

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 01/23/2021	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	0	0	0	0	0
Winfield, MO (L25)	0	0	0	0	0
Alton, IL (L26)	322	6	217	0	545
Granite City, IL (L27)	320	6	199	0	525
Illinois River (La Grange)	310	6	213	0	529
Ohio River (Olmsted)	325	0	209	5	540
Arkansas River (L1)	0	7	36	0	43
Weekly total - 2021	645	13	445	5	1,108
Weekly total - 2020	239	12	324	0	575
2021 YTD[1]	1,394	43	1,188	52	2,677
2020 YTD[1]	632	63	929	0	1,625
2021 as % of 2020 YTD	220	68	128	-	165
Last 4 weeks as % of 2020[2]	216	68	136	924	168
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.

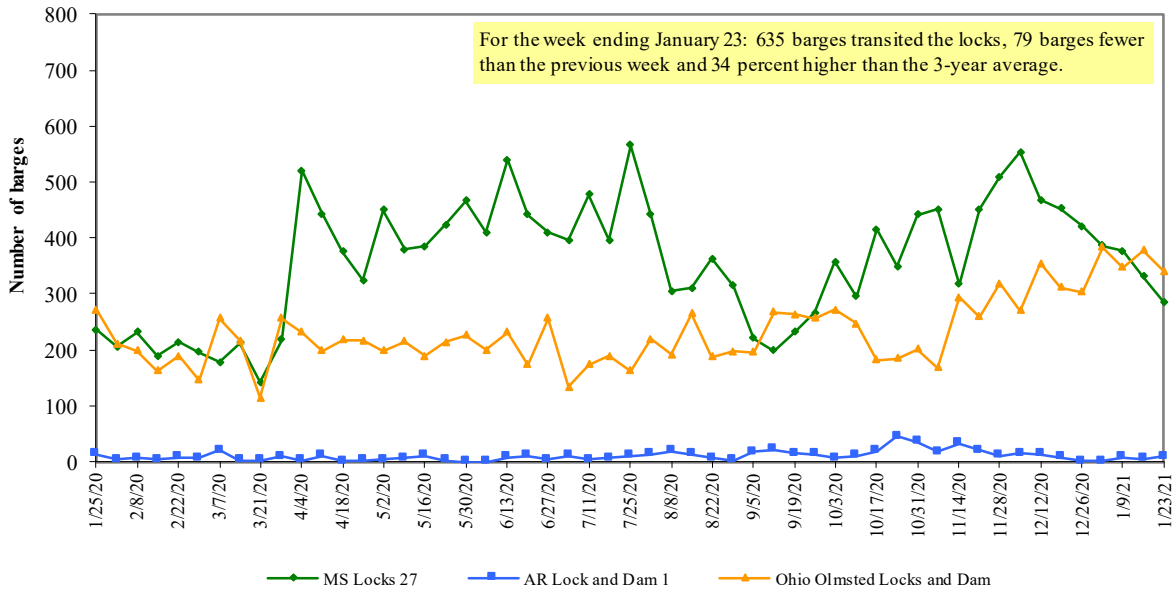
[2] As a percent of same period in 2020.

Note: L (as in "L15") refers to a lock, locks, or locks and dam facility. Olmsted = Olmsted Locks and Dam. La Grange = La Grange Lock and Dam.

Source: U.S. Army Corps of Engineers.

Figure 11

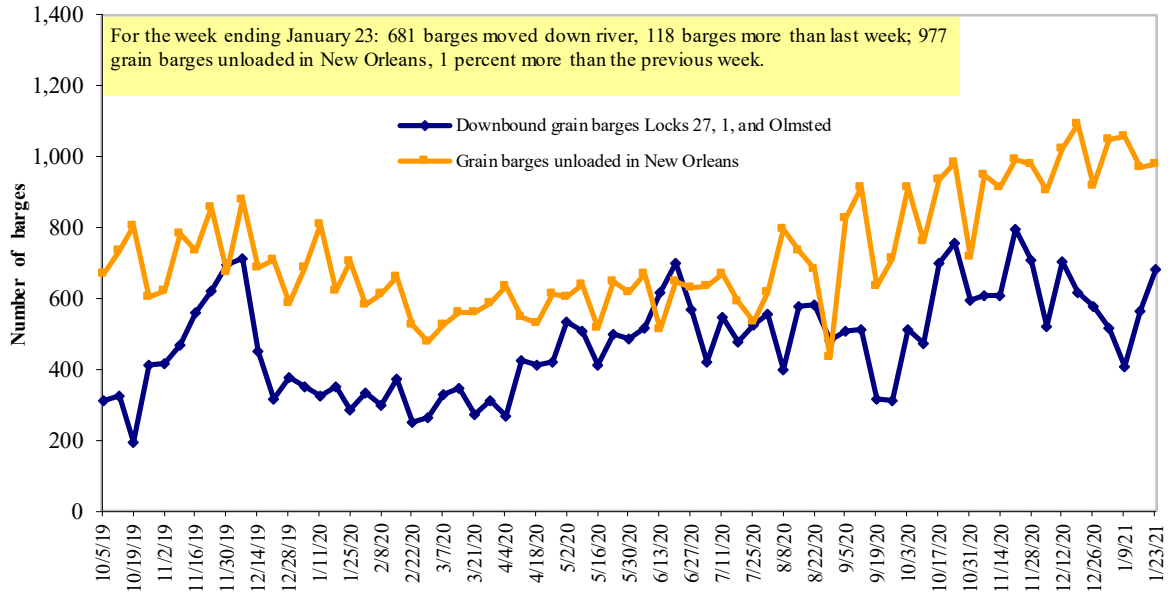
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 1/25/2021 (U.S. $/gallon)

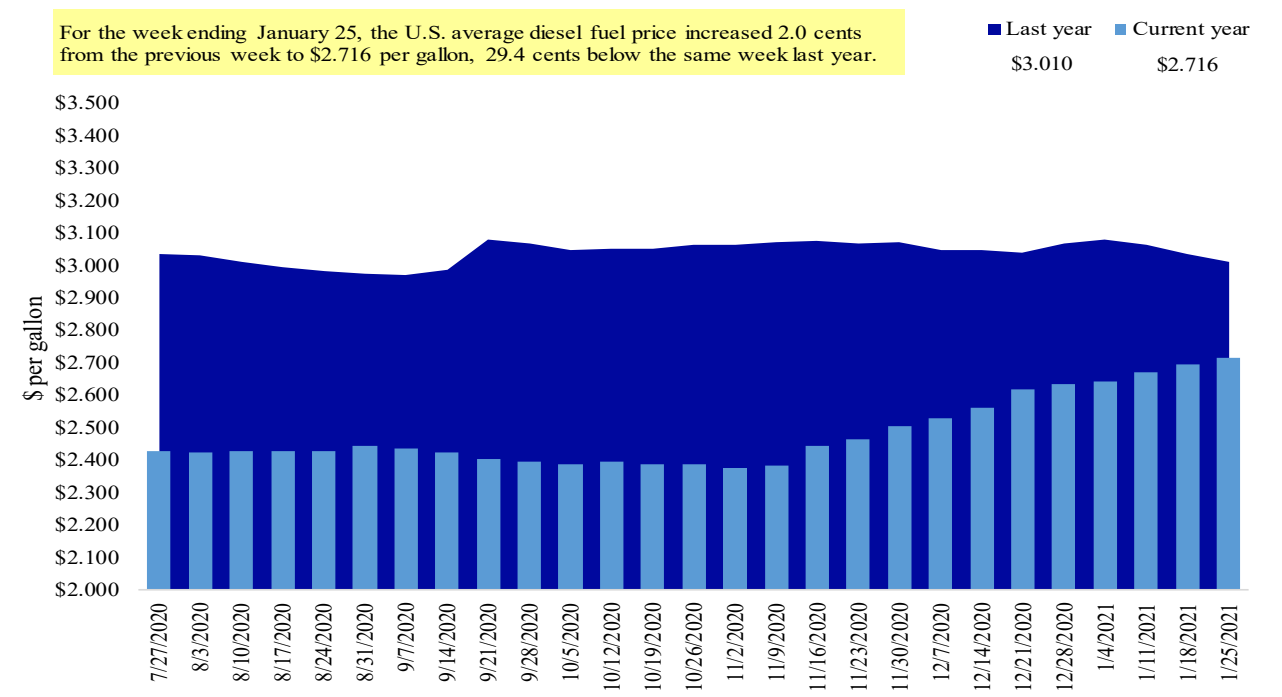
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	2.763	0.016	-0.284
	New England	2.781	0.017	-0.338
	Central Atlantic	2.942	0.018	-0.282
	Lower Atlantic	2.642	0.015	-0.272
II	Midwest	2.656	0.024	-0.245
III	Gulf Coast	2.483	0.022	-0.290
IV	Rocky Mountain	2.613	0.010	-0.371
V	West Coast	3.176	0.021	-0.389
	West Coast less California	2.816	0.012	-0.382
	California	3.477	0.029	-0.380
Total	United States	2.716	0.020	-0.294

[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]									
1/14/2021	1,394	476	1,922	2,423	171	6,385	29,212	14,000	49,597
This week year ago	1,609	437	1,431	1,129	190	4,796	10,482	6,978	22,255
Cumulative exports-marketing year[2]									
2020/21 YTD	5,855	1,110	4,350	3,202	489	15,005	17,607	43,368	75,980
2019/20 YTD	5,825	1,693	4,374	2,970	624	15,485	9,826	24,226	49,538
YTD 2020/21 as % of 2019/20	101	66	99	108	78	97	179	179	153
Last 4 wks. as % of same period 2019/20*	92	113	125	226	63	134	276	221	228
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 1/14/2021	Total commitments[2]		% change	Exports[3]
	2020/21 current MY	2019/20 last MY	current MY from last MY	3-yr. avg. 2017-19
		- 1,000 mt -		
Mexico	10,535	9,331	13	14,869
Japan	6,347	3,607	76	11,221
Columbia	2,309	1,813	27	4,830
Korea	1,136	79	1,340	4,011
China	11,769	60	19,515	909
Top 5 importers	**32,096**	**14,890**	**116**	**35,840**
Total U.S. corn export sales	**46,820**	**20,308**	**131**	**49,983**
% of projected exports	72%	45%		
Change from prior week[2]	**1,438**	**1,007**		
Top 5 importers' share of U.S. corn export sales	69%	73%		72%
USDA forecast January 2021	**64,885**	**45,242**	**43**	
Corn use for ethanol USDA forecast, January 2021	**125,730**	**123,241**	**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 1/14/2021	Total commitments[2] 2020/21 current MY	2019/20 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2017-19
		- 1,000 mt -		- 1,000 mt -
China	34,411	11,614	196	19,106
Mexico	3,643	3,185	14	4,591
Egypt	1,951	1,546	26	2,980
Indonesia	1,209	1,017	19	2,360
Japan	1,302	1,351	(4)	2,288
Top 5 importers	**42,516**	**18,713**	**127**	**31,324**
Total U.S. soybean export sales	**57,368**	**31,204**	**84**	**49,352**
% of projected exports	94%	68%		
change from prior week[2]	**1,818**	**790**		
Top 5 importers' share of U.S. soybean export sales	74%	60%		**63%**
USDA forecast, January 2021	**60,763**	**45,831**	**133**	

[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 1/14/2021	Total commitments[2] 2020/21 current MY	2019/20 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2017-19
		1,000 mt -		- 1,000 mt -
Mexico	2,803	2,861	(2)	3,213
Philippines	2,649	2,554	4	2,888
Japan	2,016	2,043	(1)	2,655
Nigeria	1,016	1,130	(10)	1,433
Korea	1,418	1,124	26	1,372
Indonesia	937	744	26	1,195
Taiwan	942	1,056	(11)	1,175
Thailand	701	751	(7)	727
Italy	545	708	(23)	622
Colombia	302	563	(46)	618
Top 10 importers	**13,329**	**13,532**	(1)	**15,897**
Total U.S. wheat export sales	**21,390**	**20,281**	5	**23,821**
% of projected exports	80%	77%		
change from prior week[2]	**330**	**696**		
Top 10 importers' share of U.S. wheat export sales	62%	67%		67%
USDA forecast, January 2021	**26,839**	**26,294**	2	

[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 01/21/21	Previous week*	Current week as % of previous	2021 YTD*	2020 YTD*	2021 YTD as % of 2020 YTD	Last 4-weeks as % of: Last year	Last 4-weeks as % of: Prior 3-yr. avg.	2020 total*
Pacific Northwest									
Wheat	311	172	181	693	985	70	100	120	15,966
Corn	411	101	409	849	65	n/a	n/a	193	9,969
Soybeans	491	571	86	1,495	859	174	205	185	14,028
Total	**1,213**	**843**	**144**	**3,037**	**1,910**	**159**	**199**	**164**	**39,963**
Mississippi Gulf									
Wheat	76	23	328	110	286	39	44	45	3,422
Corn	786	624	126	2,293	1,502	153	191	187	28,781
Soybeans	1,224	1,380	89	3,854	3,196	121	148	167	38,013
Total	**2,087**	**2,027**	**103**	**6,257**	**4,985**	**126**	**155**	**166**	**70,215**
Texas Gulf									
Wheat	107	39	277	203	342	59	59	71	4,248
Corn	3	0	n/a	3	32	10	10	10	723
Soybeans	104	158	66	376	0	n/a	n/a	n/a	2,098
Total	**214**	**197**	**109**	**583**	**374**	**156**	**182**	**213**	**7,068**
Interior									
Wheat	45	64	71	126	141	89	111	126	2,263
Corn	166	174	96	443	475	93	118	116	8,683
Soybeans	183	177	103	499	534	93	115	142	7,274
Total	**394**	**415**	**95**	**1,067**	**1,150**	**93**	**116**	**128**	**18,220**
Great Lakes									
Wheat	12	0	n/a	12	1	n/a	n/a	182	891
Corn	0	0	n/a	0	0	n/a	n/a	n/a	111
Soybeans	0	0	n/a	0	0	n/a	n/a	0	1,111
Total	**12**	**0**	**n/a**	**12**	**1**	**n/a**	**n/a**	**100**	**2,113**
Atlantic									
Wheat	0	0	n/a	0	0	n/a	n/a	n/a	65
Corn	0	0	n/a	0	0	n/a	n/a	0	33
Soybeans	81	106	76	258	103	250	264	222	1,870
Total	**81**	**106**	**76**	**258**	**103**	**250**	**264**	**214**	**1,968**
U.S. total from ports*									
Wheat	551	298	185	1,145	1,756	65	85	98	26,854
Corn	1,367	899	152	3,587	2,075	173	216	172	48,301
Soybeans	2,083	2,392	87	6,483	4,692	138	167	181	64,394
Total	**4,001**	**3,589**	**112**	**11,215**	**8,523**	**132**	**162**	**163**	**139,548**

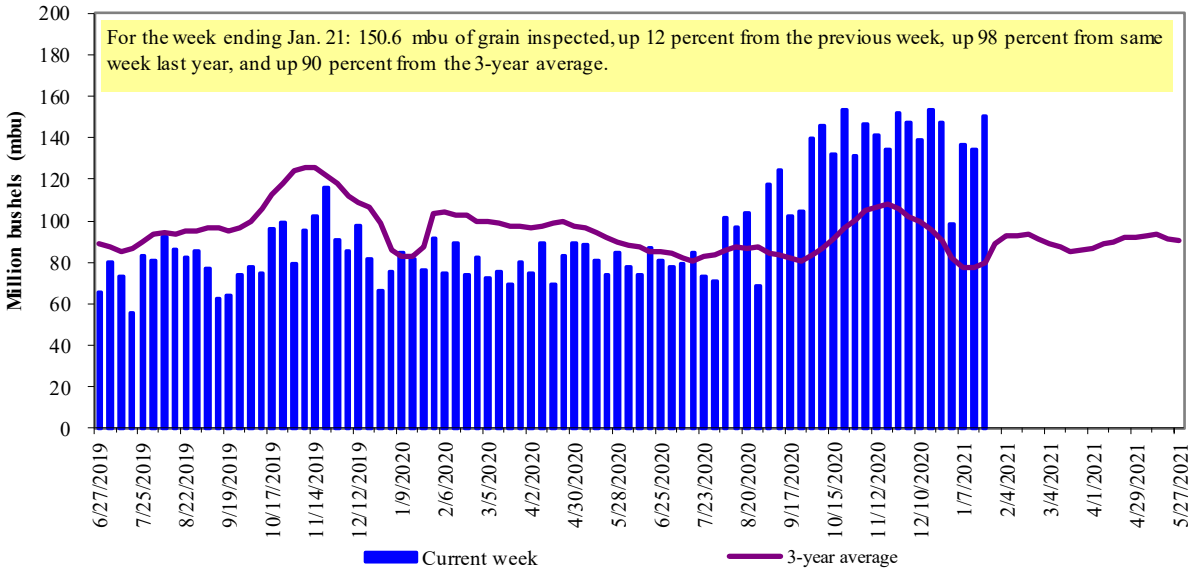
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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)

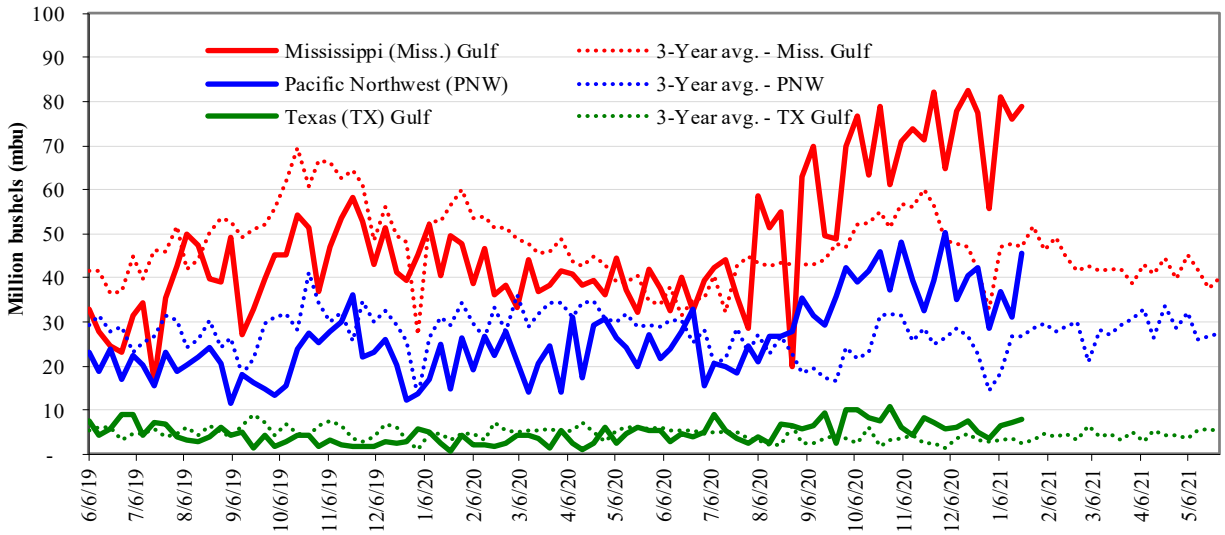


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

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



Week ending 01/21/21 inspections (mbu):	
MS Gulf:	78.7
PNW:	45.7
TX Gulf:	7.9

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last wk:	up 3	up 9	up 4	up 46
Last Year (same wk):	up 59	up 858	up 72	up 208
3-yr avg. (4-wk. mov. Avg):	up 80	up 167	up 86	up 111

Source: USDA, Federal Grain Inspection Service.

Ocean Transportation

Table 17

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

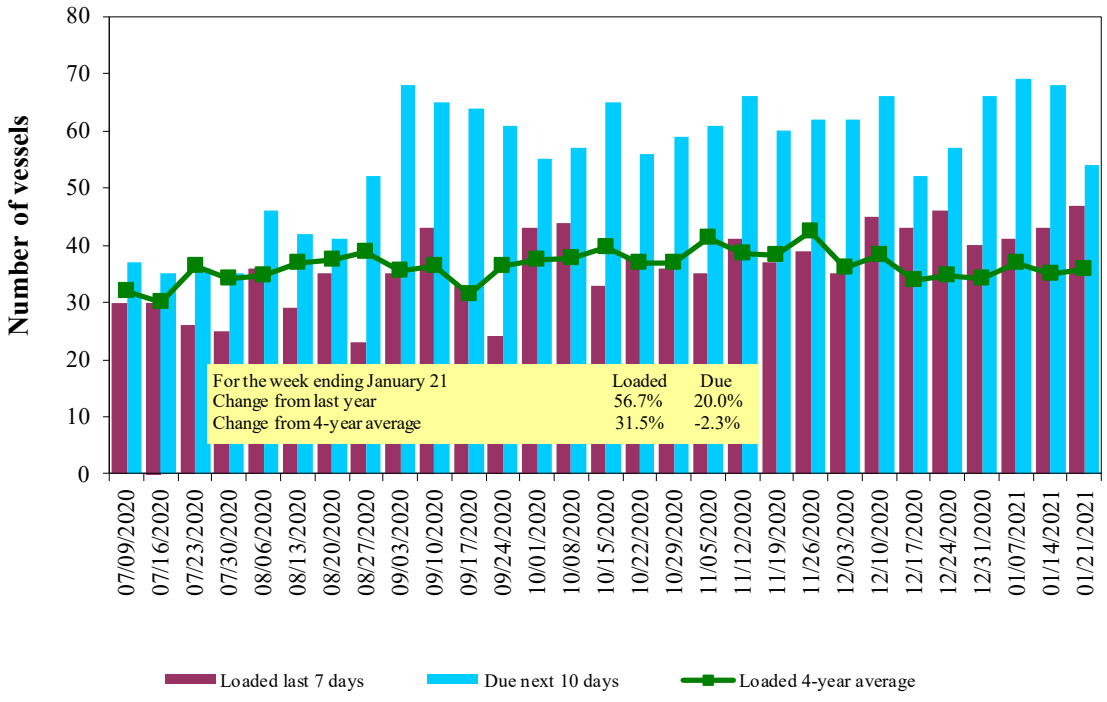
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
1/21/2021	47	47	54	18
1/14/2021	46	43	68	17
2020 range	(22…60)	(23...46)	(34...68)	(7…24)
2020 average	37	33	49	15

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

Source: USDA, Agricultural Marketing Service.

Figure 16

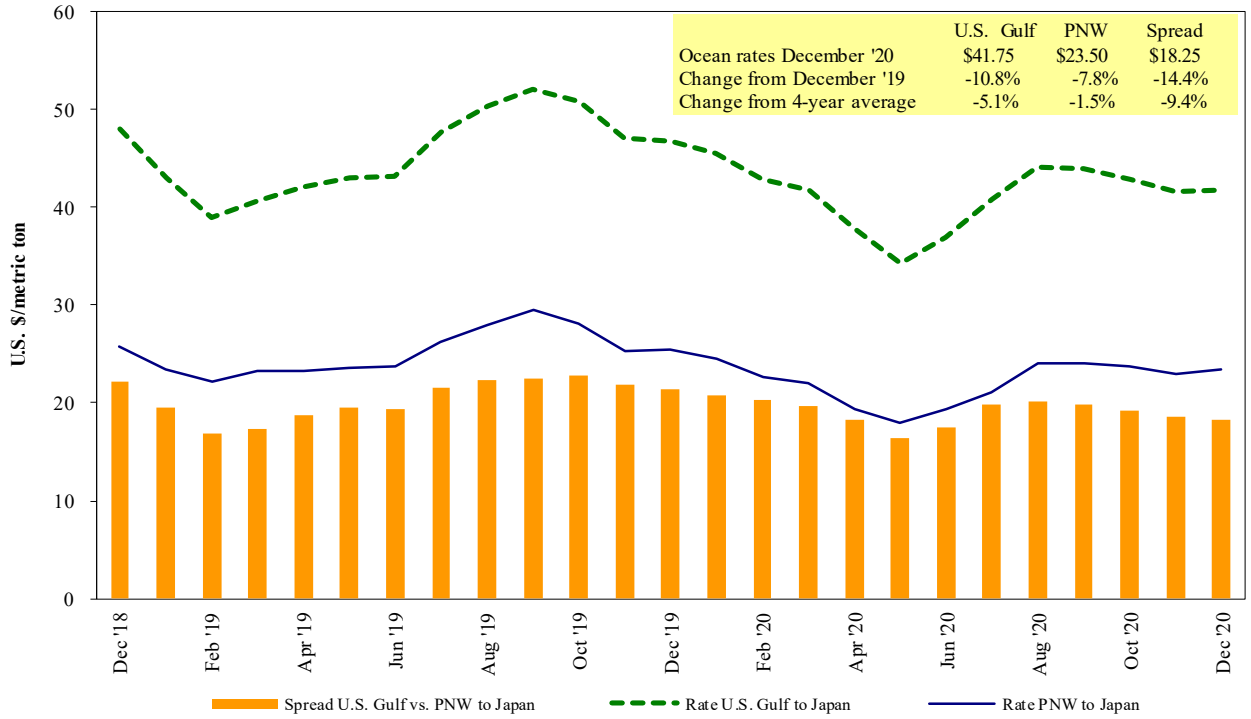
U.S. Gulf[1] vessel loading activity



[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 01/23/2021

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	Japan	Heavy grain	Apr 1/30	48,000	46.75
U.S. Gulf	China	Heavy grain	Dec 6/11	66,000	39.25
U.S. Gulf	China	Heavy grain	Nov 20/30	65,000	37.25
U.S. Gulf	China	Heavy grain	Oct 16/25	66,000	41.75
U.S. Gulf	Djibouti	Wheat	Oct 16/26	12,180	94.48*
PNW	Taiwan	Wheat	Feb 18/Mar 4	40,925	35.24*
PNW	Taiwan	Corn	Feb 20/Mar 15	65,000	24.90
PNW	China	Soybeans	Sep 1/30	63,000	22.10 op 22.60
PNW	Indonesia	Soybean Meal	Nov 10/20	8,600	37.86*
PNW	Yemen	Wheat	Aug 4/14	15,000	42.95*
Ukraine	China	Corn	Feb 10/17	60,000	36.40 op 38.90
Vancouver	Japan	Wheat	Sep 15/30	20,000	24.30
Vancouver	Japan	Canola	Sep 15/30	30,000	24.30
Brazil	Japan	Corn	Sep 11/20	49,000	34.75
Brazil	Japan	Corn	Sep 1/10	60,000	34.00

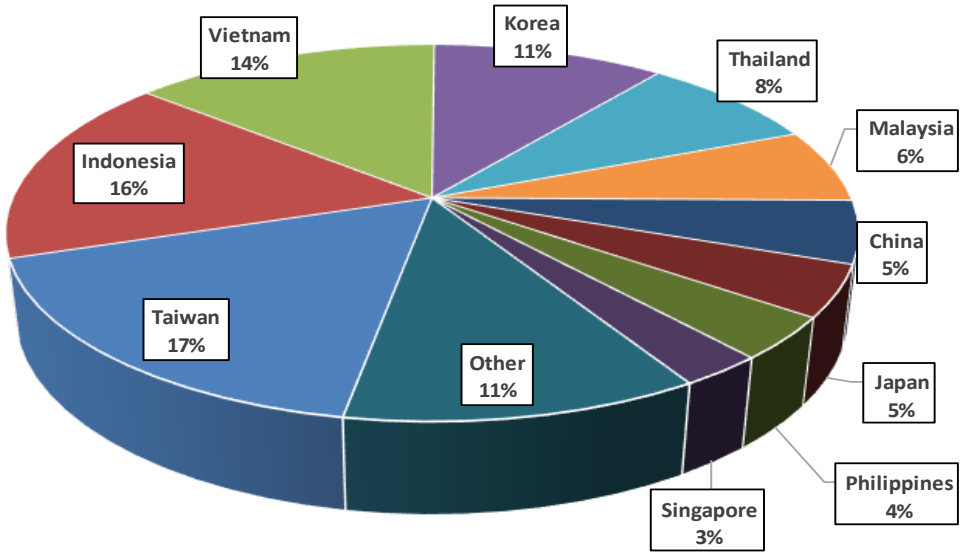
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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.

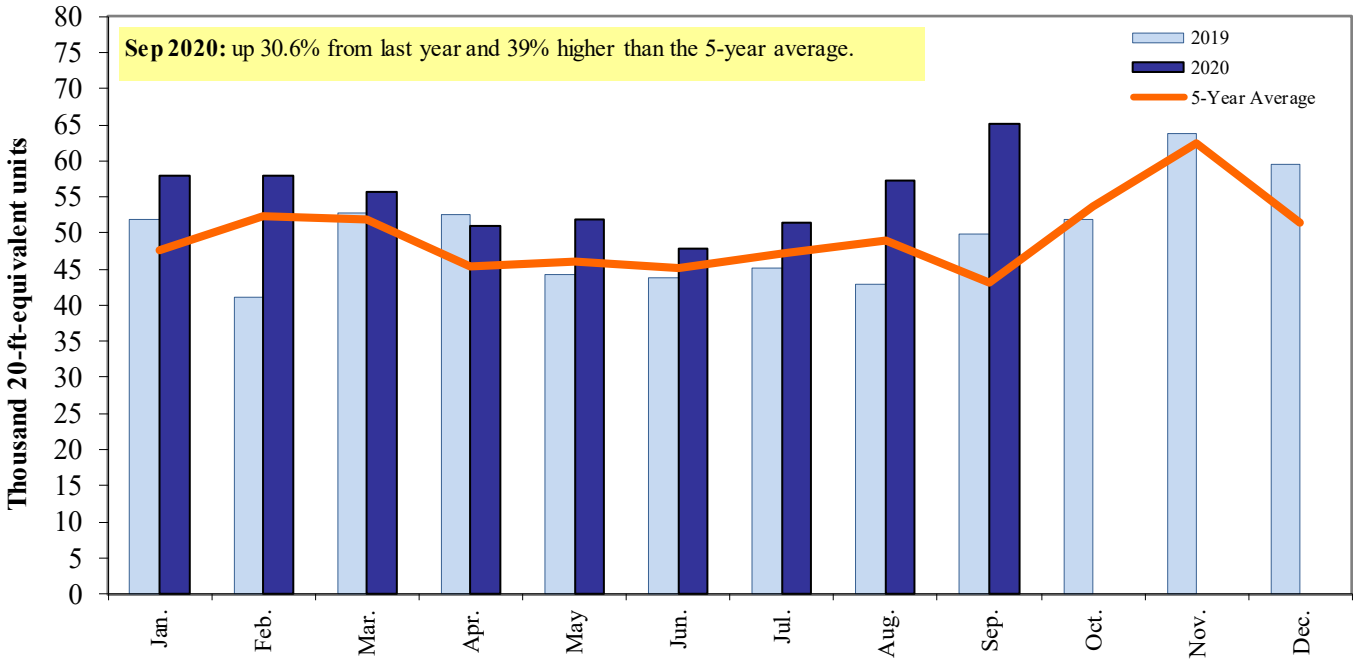
Figure 18
Top 10 destination markets for U.S. containerized grain exports, Jan-Sep 2020



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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