USDA United States Department of Agriculture

Grain Transportation Report

A weekly publication of the Agricultural Marketing Service
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February 24, 2022

Contents

The next release is March 3, 2022

WEEKLY HIGHLIGHTS

EIA Forecasts Average Crude Oil and Diesel Fuel Prices To Fall in 2022

In its February 8 *Short-Term Energy Outlook*, the Department of Energy's Energy Information Administration (EIA) forecasts average 2022 price trends for both crude oil and diesel fuel. EIA estimates prices for both commodities will increase in February and then start to decrease in March and throughout the remainder of the year. To explain the projected rise in prices, EIA cites expectations of lower global supplies during the first half of 2022. EIA further explains, "Oil prices have also risen as result of heightened market concerns about the possibility of oil supply disruptions, notably related to tensions regarding Ukraine, paired with receding market concerns that the Omicron variant of COVID-19 will have widespread effects on oil consumption." For the week ending February 21, U.S. average **diesel fuel prices** reached $4.055 per gallon—the highest in 9 years and 3.6 cents above the previous week. Prices have risen 44.2 cents per gallon over the past 7 weeks.

Grain Inspections Rise in the Texas Gulf and Atlantic Port Regions

For the week ending February 17, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions totaled 3.1 million metric tons (mmt)—unchanged from the previous week. Year to date, total grain inspections were down 16 percent from the same period last year. Mainly because of rising shipments to Asia and Mexico, wheat inspections increased 17 percent, while corn inspections increased 8 percent from the previous week. Soybean inspections were down 16 percent. Also, Texas Gulf total grain inspections increased 31 percent, while Atlantic total grain inspections increased 12 percent from the previous week. Grain inspections for the last 4 weeks were 7 percent below the same period last year and 14 percent above the 3-year average.

Panama Canal Announces Closures for Maintenance Work

Today, February 24, the east lane of the Panama Canal's Miraflores Panamax Locks will be out of service for 12 hours for scheduled maintenance work. During the outage, the locks' daily estimated transit capacity will be 25-27 vessels, down from their normal capacity of 34-36 vessels. On March 2, the Miraflores Panamax Locks' west lane will be closed for scheduled maintenance. During the west lane closure, the locks' estimated daily transit capacity will be reduced to 28-30 vessels (down from 34-36, normally). The locks' exact transit capacity depends on vessel mix, transit restrictions, and other factors. The Panama Canal is a vital outlet for U.S. grain destined to Asia.

Snapshots by Sector

Export Sales

For the week ending February 10, **unshipped balances** of wheat, corn, and soybeans for marketing year 2021/22 totaled 37.7 million metric tons (mmt), down 26 percent from the same time last year, and down 2 percent from the previous week. Net **corn export sales** were 0.820 mmt, up 39 percent from the previous week. Net **soybean export sales** were 1.362 mmt, down 15 percent from the previous week. Net weekly **wheat export sales** were 0.118 mmt, up 39 percent from the previous week.

Rail

U.S. Class I railroads originated 24,265 **grain carloads** during the week ending February 12. This was a 3-percent increase from the previous week, 6 percent more than last year, and 18 percent more than the 3-year average.

Average March shuttle **secondary railcar** bids/offers (per car) were $21 above tariff for the week ending February 17. This was $10 less than last week and $202 lower than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending February 19, **barged grain movements** totaled 540,250 tons. This was 27 percent higher than the previous week and 11 percent higher than the same period last year.

For the week ending February 19, 365 grain barges **moved down river**—95 more barges than the previous week. There were 741 grain barges **unloaded** in the New Orleans Region, 10 percent fewer than last week.

Ocean

For the week ending February 17, 39 **oceangoing grain vessels** were loaded in the Gulf—15 percent more than the same period last year. Within the next 10 days (starting February 18), 48 vessels were expected to be loaded—16 percent fewer than the same period last year.

As of February 17, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $66.00. This was 2 percent more than the previous week. The rate from the Pacific Northwest to Japan was $36.25 per mt, 1 percent more than the previous week.

Preferred citation: U.S. Department of Agriculture, Agricultural Marketing Service. *Grain Transportation Report.* February 24, 2022.
Web: **http://dx.doi.org/10.9752/TS056.02-24-2022**

Feature Article/Calendar

Transportation and Landed Costs of Grain to Mexico Varied in Fourth Quarter 2021

Mexico is the leading destination for U.S. corn and wheat (***GTR* tables 13** and **15**) and the second-leading destination for U.S. soybeans (***GTR* table 14**). Low transportation and landed costs for U.S.-Mexico routes are vital to the competitiveness of U.S. grain in Mexico and globally. U.S. grain is transported to Mexico either by cross-border land movements or by sea movements to Mexican ports for inland distribution. This article examines the costs of transporting U.S. grain to Mexico over land to Guadalajara (land routes) and by sea to Veracruz (water routes), tracking changes over time (table 1).

Table 1. Quarterly costs of transporting U.S. grain to Veracruz and Guadalajara, Mexico

	Water route (to Veracruz) $/metric ton					Land route (to Guadalajara) $/metric ton				
	2020 4th qtr.	2021 3rd qtr.	2021 4th qtr.	Percent change Yr. to yr.	Percent change Qtr. to qtr.	2020 4th qtr.	2021 3rd qtr.	2021 4th qtr.	Percent change Yr. to yr.	Percent change Qtr. to qtr.
Corn										
Origin			**IL**					**IA**		
Truck	11.38	13.19	13.50	18.6	2.4	4.85	4.93	5.55	14.4	12.6
Rail [1]	-	-	-	-	-	94.04	97.06	99.50	5.8	2.5
Barge[2]	25.88	22.10	29.41	13.6	33.1	-	-	-	-	-
Ocean[3]	14.43	27.68	25.23	74.8	-8.9	-	-	-	-	-
Total transportation cost	51.69	62.97	68.14	31.8	8.2	98.89	101.99	105.05	6.2	3.0
Farm value[4]	147.50	232.93	205.50	39.3	-11.8	150.65	238.83	207.21	37.5	-13.2
Landed cost[5]	199.19	295.90	273.64	37.4	-7.5	249.54	340.82	312.26	25.1	-8.4
Transport % of landed cost	26	21	25	-	-	40	30	34	-	-
Soybeans										
Origin			**IL**					**NE**		
Truck	11.38	13.19	13.50	18.6	2.4	4.85	4.93	5.55	14.4	12.6
Rail	-	-	-	-	-	96.55	99.56	100.37	4.0	0.8
Barge	25.88	22.10	29.41	13.6	33.1	-	-	-	-	-
Ocean	14.43	27.68	25.23	74.8	-8.9	-	-	-	-	-
Total transportation cost	51.69	62.97	68.14	31.8	8.2	101.40	104.49	105.92	4.46	1.4
Farm value	370.25	492.37	448.27	21.1	-9.0	368.05	485.02	439.70	19.5	-9.3
Landed cost	421.94	555.34	516.41	22.4	-7.0	469.45	589.51	545.62	16.2	-7.4
Transport % of landed cost	12	11	13	-	-	22	18	19	-	-
Wheat										
Origin			**KS**					**KS**		
Truck	4.85	4.93	5.55	14.4	12.6	4.85	4.93	5.55	14.4	12.6
Rail	42.07	42.07	43.80	4.1	4.1	80.17	83.99	85.05	6.1	1.3
Ocean	14.43	27.68	25.23	74.8	-8.9	-	-	-	-	-
Total transportation cost	61.35	74.68	74.58	21.6	-0.1	85.02	88.92	90.60	6.6	1.9
Farm value	193.39	239.45	283.91	46.8	18.6	193.39	239.45	283.91	46.8	18.6
Landed cost	254.74	314.13	358.49	40.7	14.1	278.41	328.37	374.51	34.5	14.1
Transport % of landed cost	24	24	21	-	-	31	27	24	-	-

[1]Rail rates include U.S. and Mexico portions of the movement. Mexico rail rates are estimated based on actual quoted market rates. BNSF and Union Pacific quoted rail tariff rates are through rates for shuttle trains. Rail rates include fuel surcharges, but do not include the cost of purchasing empty rail cars in the secondary market, which could exceed the rail tariff rate plus fuel surcharge shown in the table.

[2]Due to the closure of several lock and dam facilities on Illinois River between July 1 and October 27, 2020, mid-Mississippi barge rate was substituted for Illinois rate as the benchmark for calculating cost index during the closures.

[3]Source for ocean freight rates: O'Neil Commodity Consulting.

[4]Source for farm values: USDA, National Agricultural Statistics Service.

[5]Landed cost is total transportation cost plus farm value.

Note: "-" indicates data not required or applicable. Total may not add exactly because of rounding.

Source: Compiled by the USDA, Agricultural Marketing Service.

Quarter-to-quarter transportation costs. From third quarter 2021 to fourth quarter 2021 (quarter to quarter), total transportation costs increased for wheat through the land route and for U.S. corn and soybeans through both water and land routes. Transportation costs of shipping wheat through the water route remained stable. Rising water-route shipping costs reflected higher truck and barge rates.[1] Land-route shipping costs increased with rising truck and rail rates (public tariff, plus fuel surcharge). Truck rates rose partly because of quarter-to-quarter rises in diesel fuel prices (***GTR* fig. 13**, *Grain Truck and*

[1] Water routes typically involve truck transportation to barge to oceangoing vessel, or truck to rail to oceangoing vessel.

Ocean Rates Advisory). Barge rates rose amid a high demand for empty barges and limited supply. The supply constraints resulted from logistical challenges in repositioning empty barges upriver from New Orleans (*GTR, January* 27, 2022).

Responding to lower demand for shipping bulk items, ocean freight rates fell quarter to quarter, (*GTR,* January 20, 2022).

Year-to-year transportation costs. From fourth quarter 2020 to fourth quarter 2021 (year to year), total costs of shipping all grain (U.S. corn, soybeans, and wheat) to Mexico by the water routes rose because of higher truck, barge, and ocean freight rates. Likewise, total costs of shipping all grain to Mexico by the land routes rose because of higher truck and rail tariff rates.

Quarter-to-quarter landed costs. Quarter to quarter, landed costs fell for corn and soybeans shipped via the water and land routes. The lower landed costs reflected a decline in farm values that exceeded the increase in transportation costs (table 1 and figs. 1 and 2). Rising farm values pushed up wheat landed costs. The share of landed costs comprising transportation ranged from 13 percent to 25 percent for the water routes and from 19 percent to 34 percent for the land routes.

Year-to-year landed costs. Year to year, landed costs increased for both waterborne and land-route grains, because of both higher transportation costs and higher farm values.

U.S. Exports to Mexico. According to USDA's Federal Grain Inspection Service, Mexico imported 4.24 million metric tons (mmt) of U.S. corn, 1.55 mmt of U.S. soybeans, and 0.76 mmt of U.S. wheat in fourth quarter 2021. Quarter to quarter, U.S. inspections for export to Mexico increased 17 percent for corn, increased 70 percent for soybeans, and decreased 28 percent for wheat. Year to year, U.S. inspections destined to Mexico showed rises of 20 percent for corn, 6 percent for soybeans, and 11 percent for wheat. Despite a general increase in transportation costs, total U.S. grain shipments to Mexico have been strong, as corn, soybeans, and wheat shipments have increased year to year.

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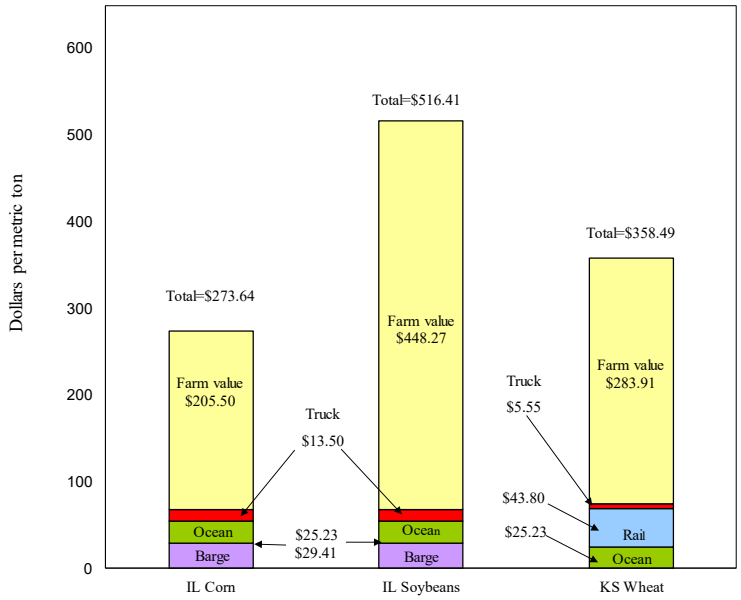
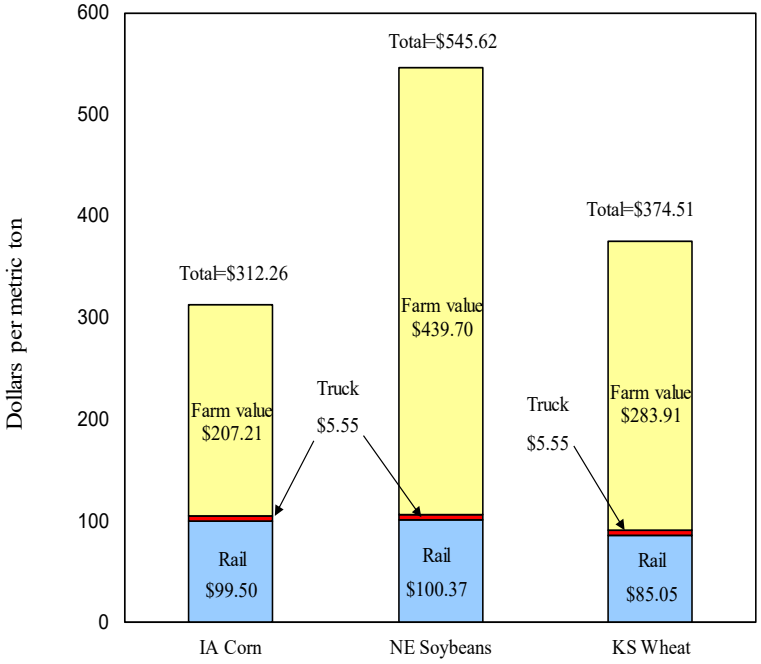
Figure 1. Fourth-quarter 2021 water-route landed costs to Veracruz, Mexico



Note: IL = Illinois; KS = Kansas.
Source: USDA, Agricultural Marketing Service.

Figure 2. Fourth-quarter land-route landed costs to Guadalajara, Mexico



Note: IA = Iowa; NE = Nebraska; KS = Kansas.
Source: USDA, Agricultural Marketing Service.

Grain Transportation Indicators

Table 1

Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Non-Shuttle	Shuttle		Gulf	Pacific
02/23/22	272	298	229	309	295	257
02/16/22	270	298	230	385	291	255

[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)

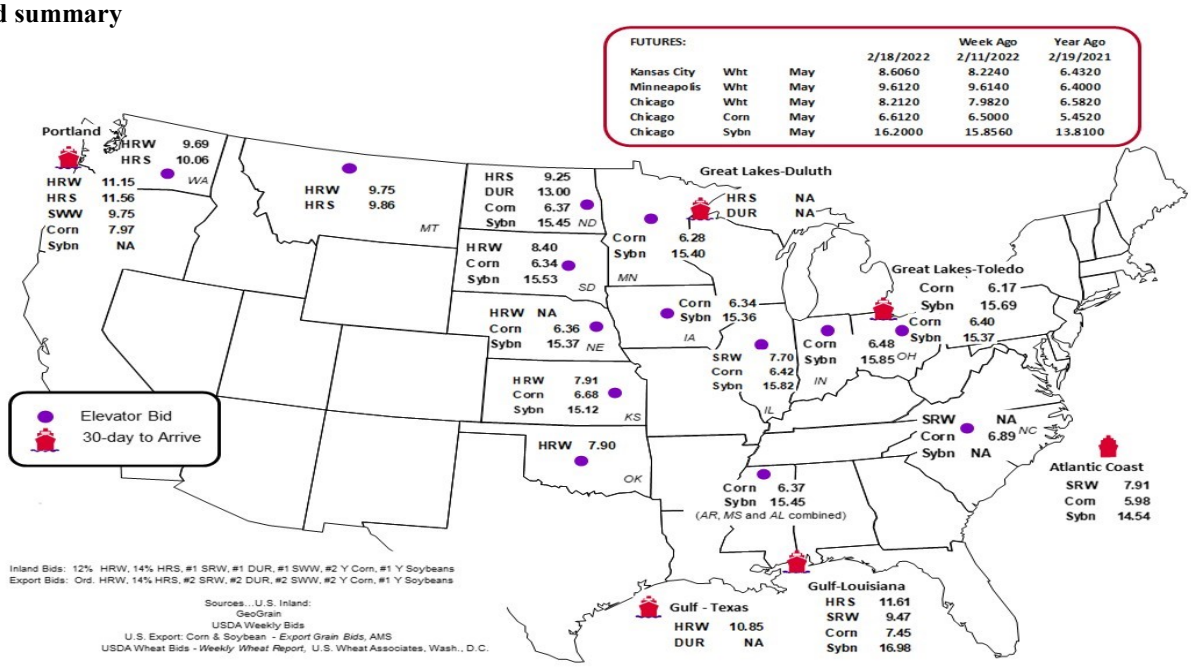
Commodity	Origin–destination	2/18/2022	2/11/2022
Corn	IL–Gulf	-1.03	-1.11
Corn	NE–Gulf	-1.09	-1.15
Soybean	IA–Gulf	-1.62	-1.84
HRW	KS–Gulf	-2.94	-2.96
HRS	ND–Portland	-2.31	-2.31

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]
2/16/2022[p]	2,166	2,089	6,936	680	11,871	2/12/2022	2,744
2/9/2022[r]	1,024	1,383	6,066	850	9,323	2/5/2022	2,538
2022 YTD[r]	9,713	9,643	41,331	4,596	65,283	2022 YTD	17,140
2021 YTD[r]	12,479	11,975	43,760	5,551	73,765	2021 YTD	13,423
2022 YTD as % of 2021 YTD	78	81	94	83	89	% change YTD	128
Last 4 weeks as % of 2021[2]	73	90	92	92	88	Last 4wks. % 2021	108
Last 4 weeks as % of 4-year avg.[2]	182	134	119	188	132	Last 4wks. % 4 yr.	122
Total 2021	54,982	69,213	311,407	22,567	458,169	Total 2021	147,859
Total 2020	45,294	64,116	299,882	24,458	433,750	Total 2020	128,714

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

[2] Compared with same 4-weeks in 2021 and prior 4-year average.

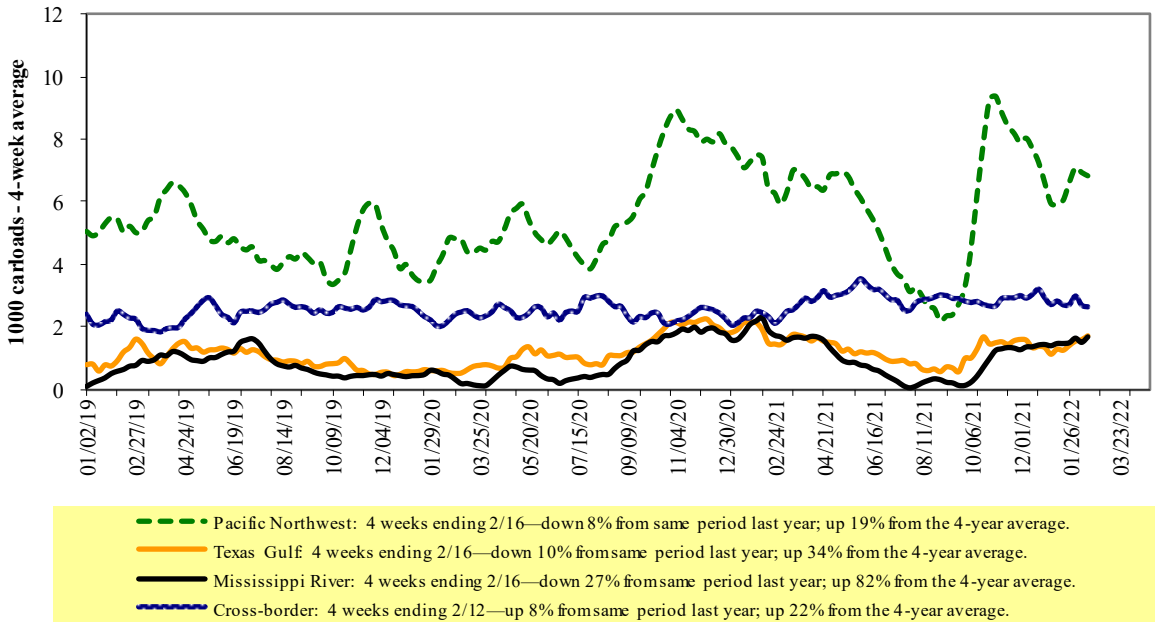
[3] Cross-border weekly data is approximately 15 percent below the Association of American Railroads' reported weekly carloads received by Mexican railroads to reflect switching between Kansas City Southern de Mexico (KCSM) and Grupo Mexico.

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	
2/12/2022	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	2,142	2,289	11,921	1,366	6,547	24,265	3,580	4,325
This week last year	1,846	2,440	11,377	710	6,445	22,818	3,886	4,054
2022 YTD	10,912	13,299	70,981	8,308	38,796	142,296	20,171	21,091
2021 YTD	12,767	17,351	81,344	6,031	41,321	158,814	31,041	28,715
2022 YTD as % of 2021 YTD	85	77	87	138	94	90	65	73
Last 4 weeks as % of 2021*	89	75	89	153	101	93	71	82
Last 4 weeks as % of 3-yr. avg.**	98	84	103	138	122	106	91	91
Total 2021	93,935	120,906	609,890	64,818	318,002	1,207,551	210,309	242,533

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

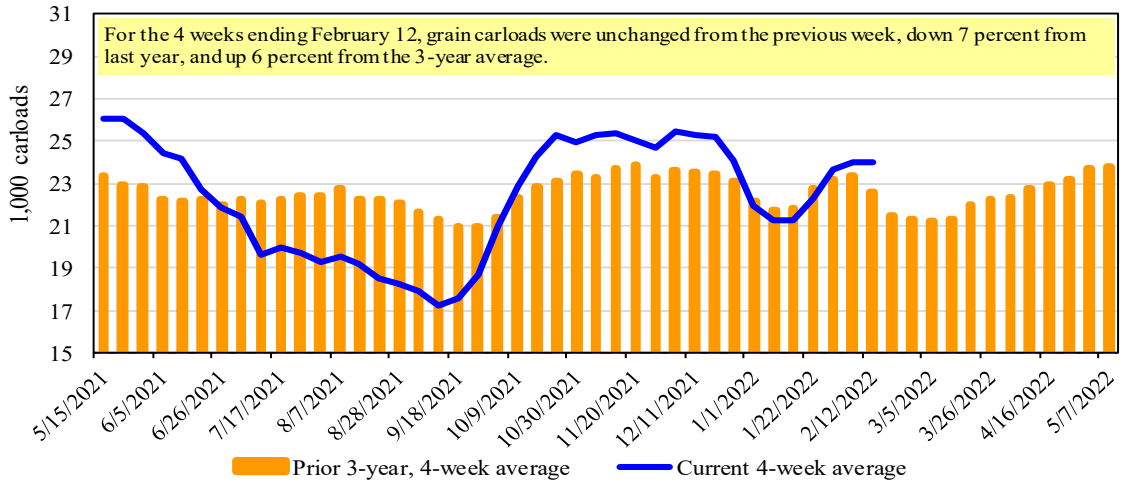
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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							
2/17/2022		Mar-22	Mar-21	Apr-22	Apr-21	May-22	May-21	Jun-22	Jun-21
BNSF[3]	COT grain units	no bids	no bids	no bids	0	no bids	0	no bids	no bids
	COT grain single-car	0	1	0	0	0	no bids	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 offer	no offer	no offer	no offer	no offer	n/a	n/a

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

[2]Average premium/discount to tariff, last auction. 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.

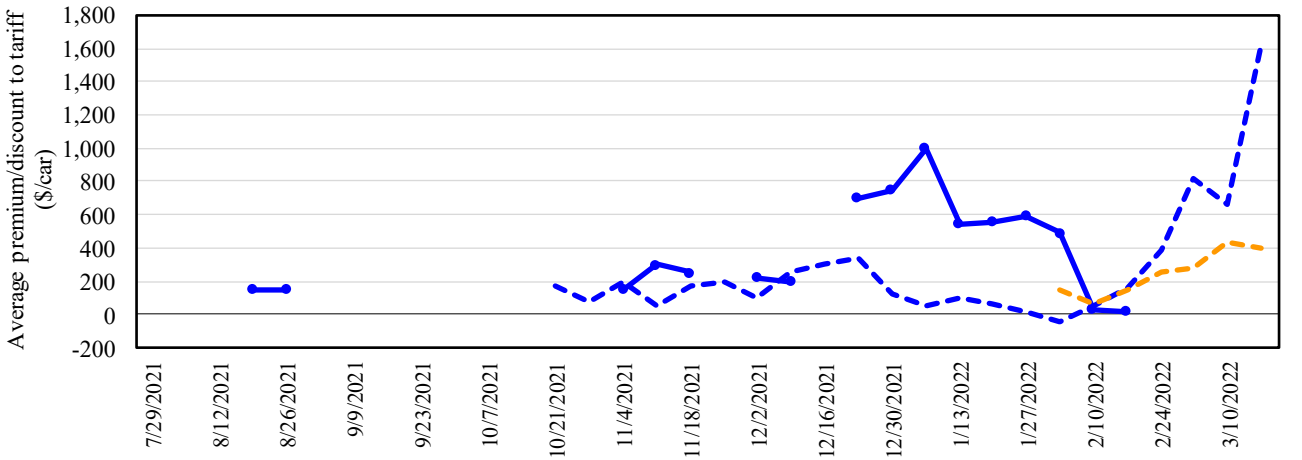
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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
Secondary market bids/offers for railcars to be delivered in March 2022

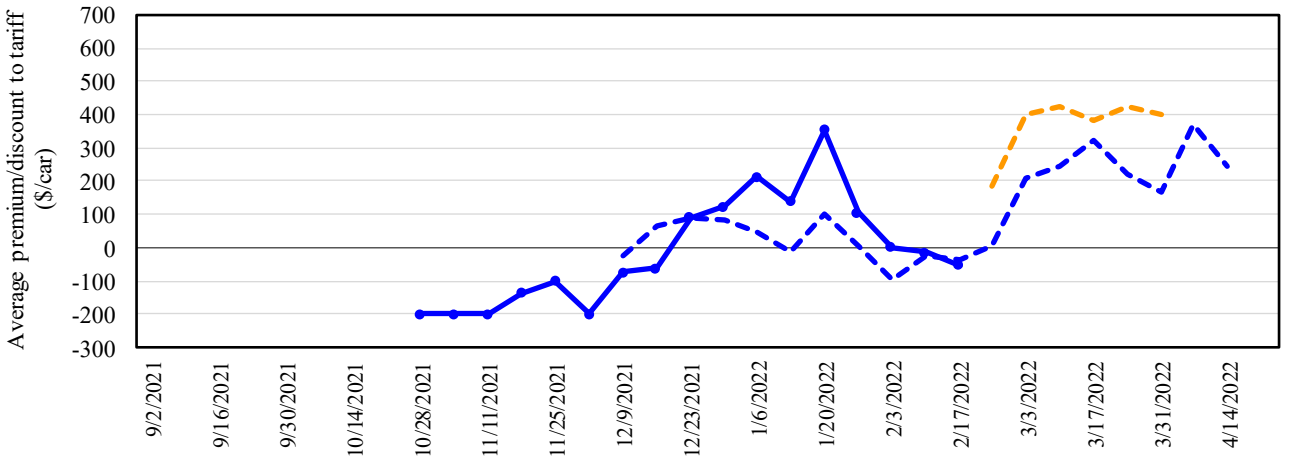


2/17/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	-$50	$92

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $10 this week and are $977 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
Secondary market bids/offers for railcars to be delivered in April 2022



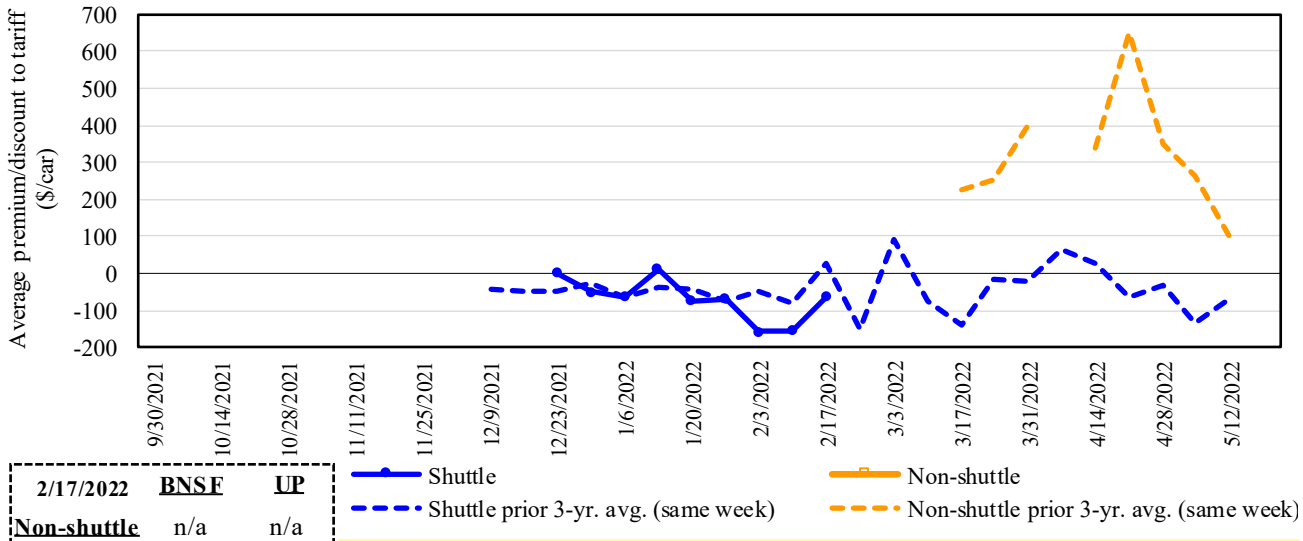
2/17/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	-$133	$25

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $42 this week and are $407 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

Secondary market bids/offers for railcars to be delivered in May 2022



2/17/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	-$125	$0

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $92 this week and are $75 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:	Delivery period					
	2/17/2022	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
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 2021	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 2021	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**(50)**	**(133)**	**(125)**	**n/a**	**n/a**	**(150)**
	Change from last week	38	(83)	33	n/a	n/a	0
	Change from same week 2021	(283)	17	(25)	n/a	n/a	0
	UP-Pool	**92**	**25**	**0**	**(100)**	**n/a**	**n/a**
	Change from last week	(58)	0	150	33	n/a	n/a
	Change from same week 2021	(121)	n/a	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]

February 2022	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	$157	$38.25	$1.04	3
	Grand Forks, ND	Duluth-Superior, MN	$3,658	$0	$36.33	$0.99	-13
	Wichita, KS	Los Angeles, CA	$7,290	$0	$72.39	$1.97	2
	Wichita, KS	New Orleans, LA	$4,436	$276	$46.79	$1.27	2
	Sioux Falls, SD	Galveston-Houston, TX	$7,026	$0	$69.77	$1.90	3
	Colby, KS	Galveston-Houston, TX	$4,712	$302	$49.79	$1.36	2
	Amarillo, TX	Los Angeles, CA	$5,121	$421	$55.03	$1.50	5
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$312	$42.82	$1.09	8
	Toledo, OH	Raleigh, NC	$8,130	$0	$80.73	$2.05	4
	Des Moines, IA	Davenport, IA	$2,505	$66	$25.53	$0.65	4
	Indianapolis, IN	Atlanta, GA	$6,227	$0	$61.84	$1.57	4
	Indianapolis, IN	Knoxville, TN	$5,247	$0	$52.11	$1.32	4
	Des Moines, IA	Little Rock, AR	$4,000	$194	$41.65	$1.06	6
	Des Moines, IA	Los Angeles, CA	$5,880	$565	$64.00	$1.63	8
Soybeans	Minneapolis, MN	New Orleans, LA	$3,631	$420	$40.22	$1.09	9
	Toledo, OH	Huntsville, AL	$6,714	$0	$66.67	$1.81	2
	Indianapolis, IN	Raleigh, NC	$7,422	$0	$73.70	$2.01	4
	Indianapolis, IN	Huntsville, AL	$5,367	$0	$53.30	$1.45	2
	Champaign-Urbana, IL	New Orleans, LA	$4,665	$312	$49.42	$1.35	5
Shuttle train							
Wheat	Great Falls, MT	Portland, OR	$4,193	$0	$41.64	$1.13	4
	Wichita, KS	Galveston-Houston, TX	$4,411	$0	$43.80	$1.19	4
	Chicago, IL	Albany, NY	$6,670	$0	$66.24	$1.80	5
	Grand Forks, ND	Portland, OR	$5,851	$0	$58.10	$1.58	3
	Grand Forks, ND	Galveston-Houston, TX	$5,199	$0	$51.63	$1.41	-13
	Colby, KS	Portland, OR	$6,012	$496	$64.62	$1.76	5
Corn	Minneapolis, MN	Portland, OR	$5,380	$0	$53.43	$1.36	4
	Sioux Falls, SD	Tacoma, WA	$5,340	$0	$53.03	$1.35	4
	Champaign-Urbana, IL	New Orleans, LA	$3,920	$312	$42.02	$1.07	8
	Lincoln, NE	Galveston-Houston, TX	$4,080	$0	$40.52	$1.03	5
	Des Moines, IA	Amarillo, TX	$4,420	$244	$46.32	$1.18	6
	Minneapolis, MN	Tacoma, WA	$5,380	$0	$53.43	$1.36	4
	Council Bluffs, IA	Stockton, CA	$5,300	$0	$52.63	$1.34	4
Soybeans	Sioux Falls, SD	Tacoma, WA	$6,050	$0	$60.08	$1.64	3
	Minneapolis, MN	Portland, OR	$6,100	$0	$60.58	$1.65	3
	Fargo, ND	Tacoma, WA	$5,950	$0	$59.09	$1.61	3
	Council Bluffs, IA	New Orleans, LA	$4,895	$360	$52.18	$1.42	5
	Toledo, OH	Huntsville, AL	$4,954	$0	$49.20	$1.34	0
	Grand Island, NE	Portland, OR	$5,280	$507	$57.47	$1.56	7

[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: December 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	$7,699	$0	$78.67	$2.14	4
	OK	Cuautitlan, EM	$6,900	$230	$72.85	$1.98	6
	KS	Guadalajara, JA	$7,619	$719	$85.19	$2.32	7
	TX	Salinas Victoria, NL	$4,420	$138	$46.57	$1.27	4
Corn	IA	Guadalajara, JA	$9,102	$663	$99.77	$2.53	6
	SD	Celaya, GJ	$8,300	$0	$84.81	$2.15	2
	NE	Queretaro, QA	$8,322	$462	$89.75	$2.28	5
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	0
	MO	Tlalnepantla, EM	$7,687	$450	$83.14	$2.11	5
	SD	Torreon, CU	$7,825	$0	$79.95	$2.03	2
Soybeans	MO	Bojay (Tula), HG	$8,647	$614	$94.63	$2.57	5
	NE	Guadalajara, JA	$9,207	$646	$100.67	$2.74	5
	IA	El Castillo, JA	$9,510	$0	$97.17	$2.64	1
	KS	Torreon, CU	$8,109	$466	$87.61	$2.38	5
Sorghum	NE	Celaya, GJ	$7,932	$597	$87.15	$2.21	6
	KS	Queretaro, QA	$8,108	$287	$85.77	$2.18	3
	NE	Salinas Victoria, NL	$6,713	$231	$70.94	$1.80	3
	NE	Torreon, CU	$7,225	$438	$78.29	$1.99	6

[1]Rates are based upon published tariff rates for high-capacity shuttle trains. Shuttle trains are available for qualified shipments of 75-110 cars that meet railroad efficiency requirements.

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

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

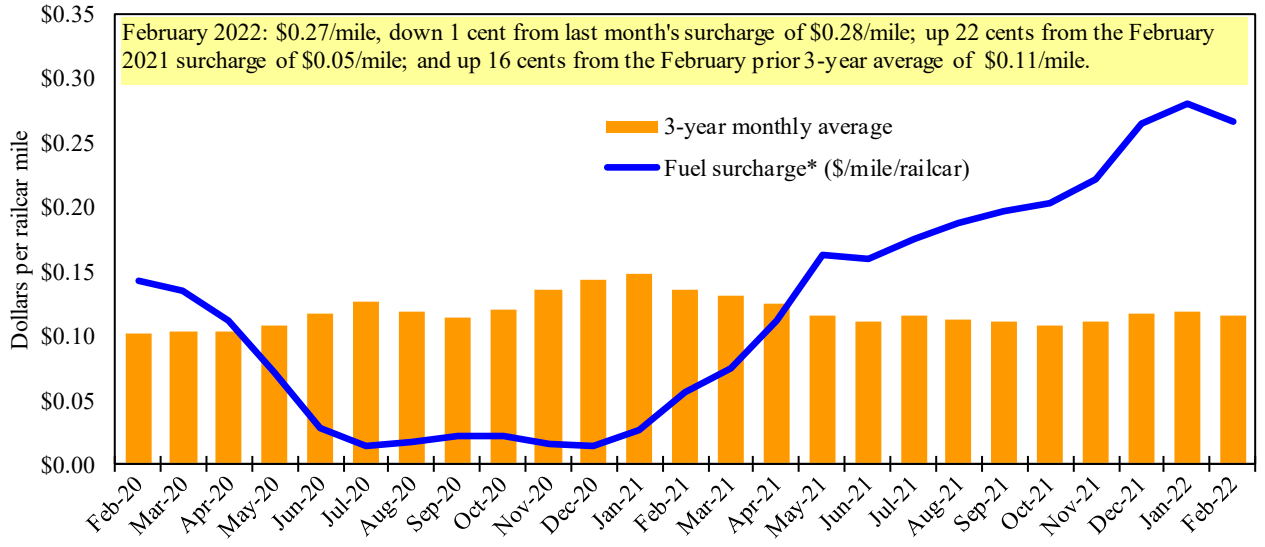
[4]Percentage change calculated using tariff rate plus fuel surchage; Y/Y = year over year.

[5] As of January 1, both BNSF and Union Pacific changed their billing and reporting of rates to Mexico. As we incorporate the change, Table 8 updates will be delayed.

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.

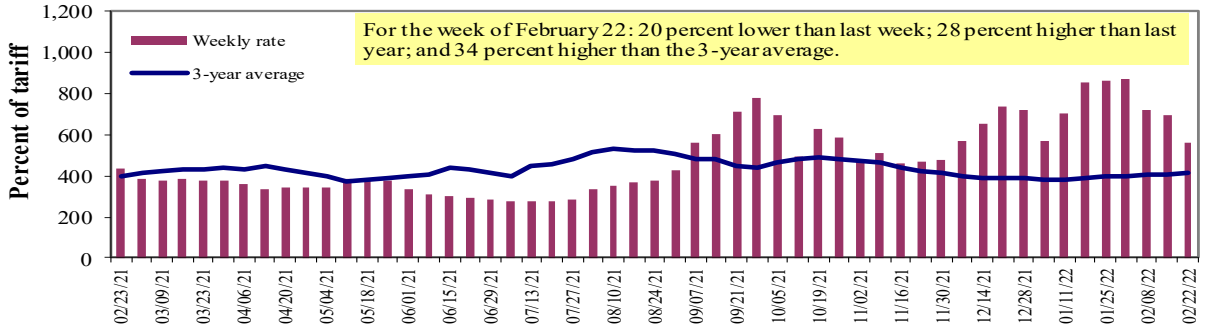
**CSX strike price changed from $2.00/gal. to $3.75/gal. starting January 1, 2015.

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]



[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average of the 3-year average.
*Source: USDA, Agricultural Marketing Service.

Table 9

Weekly barge freight rates: Southbound only

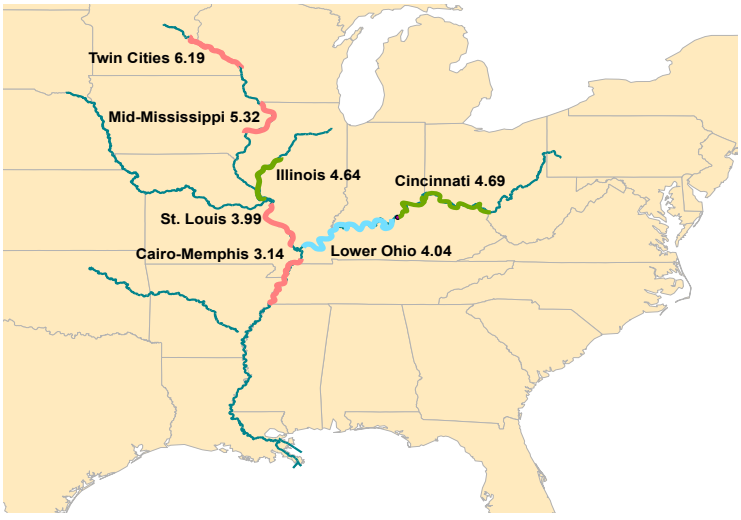
		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	2/22/2022	-	-	556	470	505	505	415
	2/15/2022	-	-	693	567	630	630	480
$/ton	2/22/2022	-	-	25.80	18.75	23.68	20.40	13.03
	2/15/2022	-	-	32.16	22.62	29.55	25.45	15.07
Current week % change from the same week:								
	Last year	-	-	28	73	62	62	68
	3-year avg. [2]	-	-	34	58	52	51	50
Rate[1]	March	-	575	499	415	460	460	370
	May	478	454	424	352	385	385	308

[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average; ton = 2,000 pounds; "-" not available due to lock closure.
Source: USDA, Agricultural Marketing Service.

Figure 9
Benchmark tariff rates

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

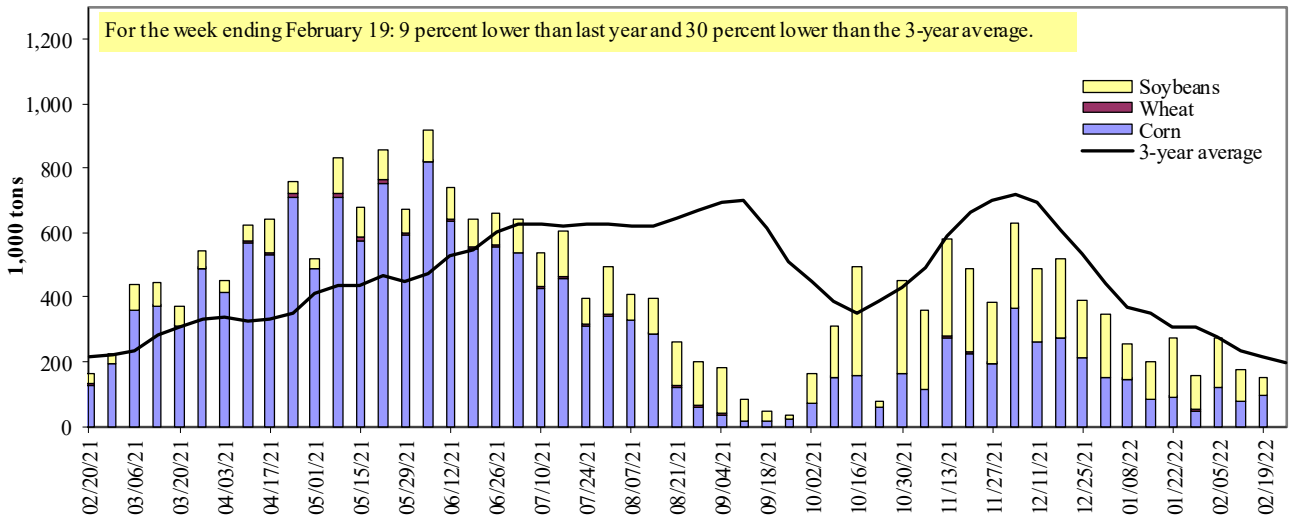
Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.



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 02/19/2022	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	0	0	0	0	0
Winfield, MO (L25)	0	0	4	0	4
Alton, IL (L26)	93	0	47	1	141
Granite City, IL (L27)	97	0	53	1	151
Illinois River (La Grange)	80	0	40	1	121
Ohio River (Olmsted)	254	2	89	0	345
Arkansas River (L1)	13	14	18	0	45
Weekly total - 2022	364	16	160	1	540
Weekly total - 2021	349	8	132	0	488
2022 YTD[1]	1,898	166	1,759	27	3,849
2021 YTD[1]	3,338	103	2,139	85	5,666
2022 as % of 2021 YTD	57	160	82	31	68
Last 4 weeks as % of 2021[2]	55	141	90	45	68
Total 2021	23,516	1,634	11,325	297	36,772

[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.

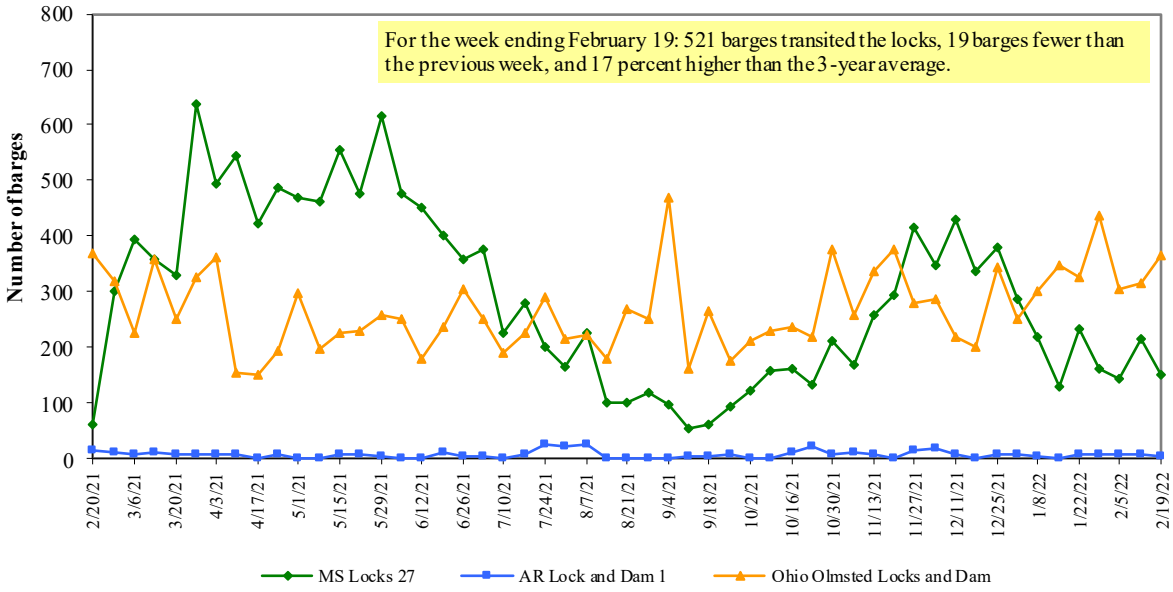
[2] As a percent of same period in 2020.

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

Source: U.S. Army Corps of Engineers.

Figure 11

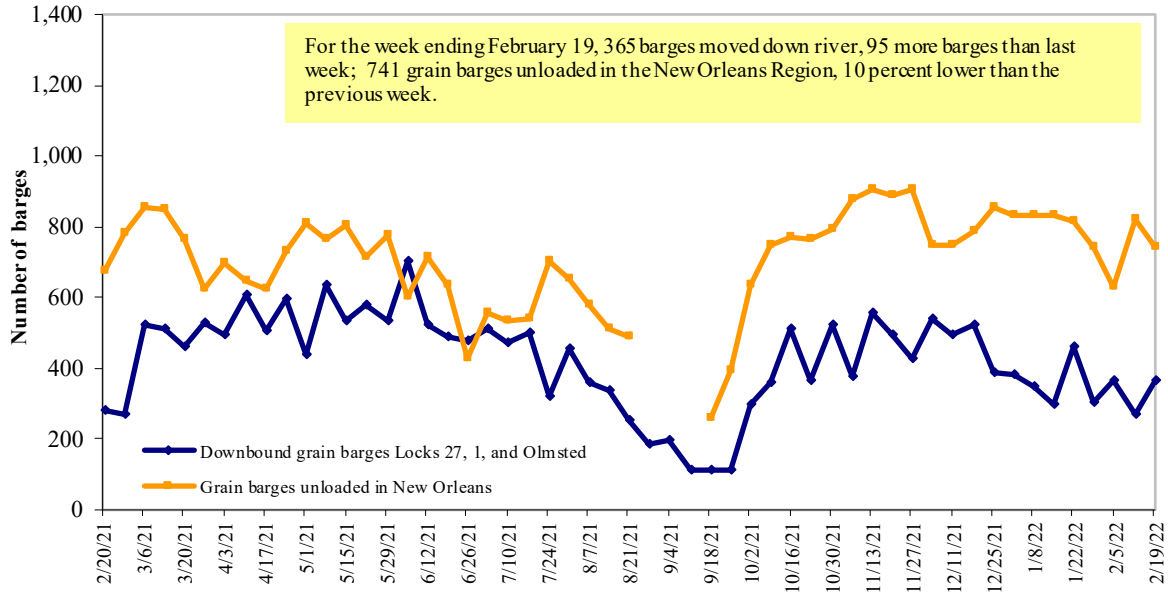
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 2/21/2022 (U.S. $/gallon)

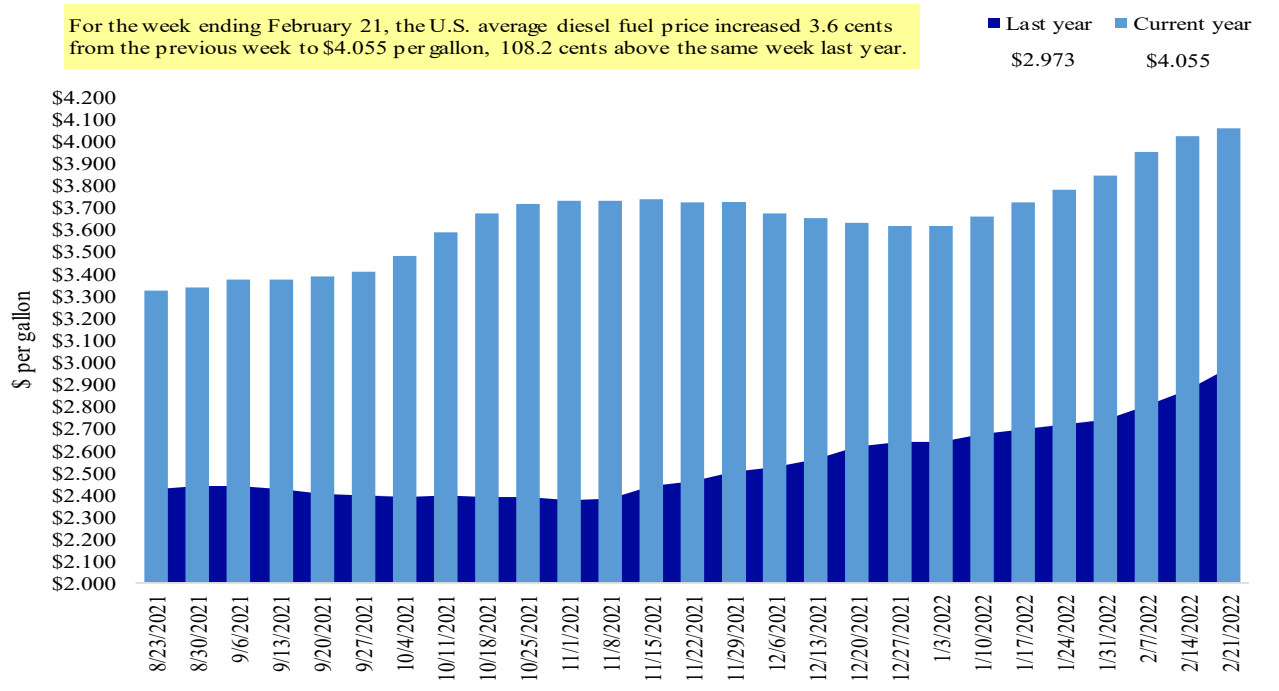
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	4.112	0.049	1.111
	New England	4.076	0.069	1.114
	Central Atlantic	4.278	0.068	1.146
	Lower Atlantic	4.014	0.034	1.093
II	Midwest	3.905	0.021	0.960
III	Gulf Coast	3.830	0.045	1.108
IV	Rocky Mountain	3.931	0.020	1.075
V	West Coast	4.679	0.028	1.247
	West Coast less California	4.256	-0.005	1.193
	California	5.051	0.057	1.312
Total	United States	4.055	0.036	1.082

[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]									
2/10/2022	1,825	611	1,120	618	56	4,230	24,200	9,312	37,741
This week year ago	1,431	439	2,058	2,476	172	6,576	35,585	9,178	51,339
Cumulative exports-marketing year[2]									
2021/22 YTD	5,141	1,963	3,554	2,464	113	13,235	22,333	38,810	74,378
2020/21 YTD	6,448	1,264	4,907	3,716	493	16,828	22,970	50,461	90,258
YTD 2021/22 as % of 2020/21	80	155	72	66	23	79	97	77	82
Last 4 wks. as % of same period 2020/21*	139	155	60	29	32	71	70	99	76
Total 2020/21	8,331	1,744	7,337	6,281	654	24,347	66,702	60,287	151,336
Total 2019/20	9,526	2,318	6,960	4,751	922	24,477	42,622	43,994	111,094

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

[2] Shipped export sales to date; 2021/22 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 2/10/2022	Total commitments[2] 2021/22 current MY	2020/21 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
	1,000 mt -			
Mexico	13,500	11,767	15	14,817
Japan	6,552	8,193	(20)	11,082
China	12,075	17,722	(32)	7,920
Columbia	2,928	2,560	14	4,491
Korea	83	1,456	(94)	3,302
Top 5 importers	**35,138**	**41,697**	**(16)**	**41,613**
Total U.S. corn export sales	**46,533**	**58,554**	**(21)**	**53,145**
% of projected exports	75%	84%		
Change from prior week[2]	**820**	**999**		
Top 5 importers' share of U.S. corn export sales	76%	71%		78%
USDA forecast February 2022	**61,705**	**70,051**	**(12)**	
Corn use for ethanol USDA forecast, February 2022	**135,255**	**127,711**	**6**	

[1] Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2020/21; 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 2/10/2022	Total commitments[2] 2021/22 current MY	2020/21 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2018-20
				- 1,000 mt -
China	25,918	35,792	(28)	21,666
Mexico	4,450	4,167	7	4,754
Egypt	2,370	2,270	4	3,093
Indonesia	1,038	1,586	(35)	2,325
Japan	1,589	1,520	5	2,275
Top 5 importers	**35,365**	**45,334**	**(22)**	**34,113**
Total U.S. soybean export sales	**48,122**	**59,639**	**(19)**	**50,758**
% of projected exports	86%	97%		
change from prior week[2]	**1,362**	**456**		
Top 5 importers' share of U.S. soybean export sales	73%	76%		**67%**
USDA forecast, February 2022	**55,858**	**61,608**	**(9)**	

[1] Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2020/21; 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 2/10/2022	Total Commitments[2] 2021/22 current MY	2020/21 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2018-20
		1,000 mt -		- 1,000 mt -
Mexico	3,014	3,040	(1)	3,388
Philippines	2,548	2,871	(11)	3,121
Japan	2,063	2,197	(6)	2,567
Korea	1,107	1,596	(31)	1,501
Nigeria	1,861	1,291	44	1,490
China	848	2,848	(70)	1,268
Taiwan	767	1,031	(26)	1,187
Indonesia	67	987	(93)	1,131
Thailand	536	699	(23)	768
Italy	190	545	(65)	681
Top 10 importers	**12,999**	**17,106**	(24)	**17,102**
Total U.S. wheat export sales	**17,465**	**23,404**	(25)	**24,617**
% of projected exports	79%	87%		
change from prior week[2]	**118**	**399**		
Top 10 importers' share of U.S. wheat export sales	74%	73%		69%
USDA forecast, February 2022	**22,071**	**27,030**	(18)	

[1] Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2020/21; 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 02/17/22	Previous week*	Current week as % of previous	2022 YTD*	2021 YTD*	2022 YTD as % of 2021 YTD	Last 4-weeks as % of: Last year	Last 4-weeks as % of: Prior 3-yr. avg.	2021 total*
Pacific Northwest									
Wheat	309	307	101	1,586	1,963	81	88	93	13,243
Corn	372	249	150	1,600	1,792	89	106	141	13,420
Soybeans	215	343	63	2,749	3,036	91	100	134	14,540
Total	**896**	**898**	**100**	**5,935**	**6,791**	**87**	**98**	**120**	**41,203**
Mississippi Gulf									
Wheat	92	62	148	523	273	191	177	92	3,202
Corn	975	947	103	5,330	5,884	91	91	126	38,498
Soybeans	577	646	89	4,966	7,004	71	81	93	27,159
Total	**1,645**	**1,655**	**99**	**10,819**	**13,161**	**82**	**88**	**109**	**68,858**
Texas Gulf									
Wheat	113	47	241	467	395	118	176	123	3,888
Corn	0	39	0	114	61	189	163	167	627
Soybeans	0	0	n/a	0	619	0	0	0	1,611
Total	**113**	**86**	**131**	**582**	**1,075**	**54**	**91**	**106**	**6,126**
Interior									
Wheat	53	67	79	352	320	110	127	147	2,972
Corn	198	191	104	1,193	1,102	108	110	123	10,147
Soybeans	141	151	93	1,032	1,096	94	108	109	6,525
Total	**393**	**409**	**96**	**2,577**	**2,519**	**102**	**111**	**120**	**19,644**
Great Lakes									
Wheat	0	0	n/a	6	17	38	134	129	536
Corn	0	0	n/a	0	0	n/a	n/a	n/a	145
Soybeans	0	0	n/a	0	0	n/a	n/a	n/a	592
Total	**0**	**0**	**n/a**	**6**	**17**	**38**	**134**	**129**	**1,273**
Atlantic									
Wheat	0	0	n/a	4	0	n/a	n/a	n/a	128
Corn	3	5	62	25	0	n/a	n/a	336	85
Soybeans	94	82	115	482	640	75	82	159	2,184
Total	**96**	**86**	**112**	**512**	**640**	**80**	**84**	**162**	**2,397**
U.S. total from ports*									
Wheat	568	483	117	2,940	2,968	99	108	102	23,969
Corn	1,549	1,430	108	8,262	8,838	93	97	129	62,921
Soybeans	1,026	1,221	84	9,229	12,395	74	86	107	52,612
Total	**3,143**	**3,135**	**100**	**20,431**	**24,201**	**84**	**93**	**114**	**139,501**

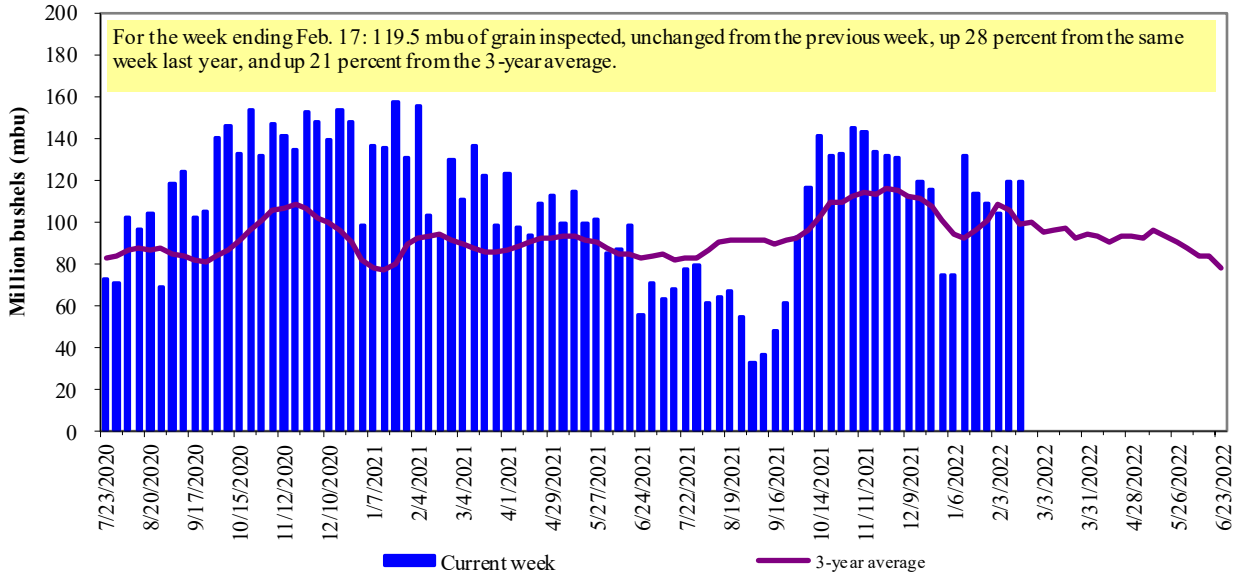
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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)

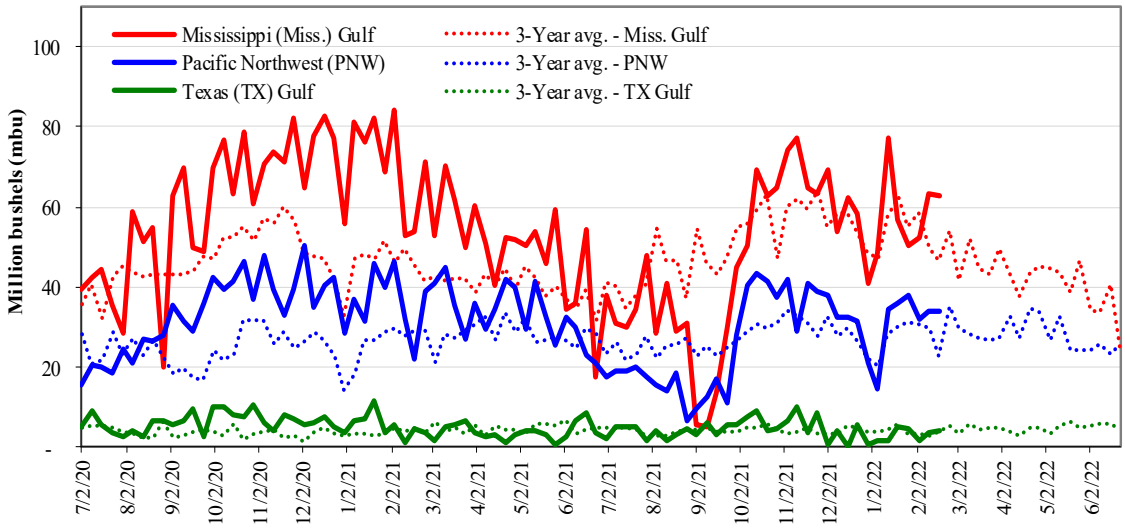


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

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



Week ending 02/17/22 inspections (mbu):	
MS Gulf:	63.0
PNW:	33.9
TX Gulf:	4.2

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last wk:	unchanged	up 27	unchanged	unchanged
Last Year (same wk):	up 17	down 11	up 15	up 55
3-yr avg. (4-wk. mov. Avg):	up 20	up 31	up 21	up 19

Source: USDA, Federal Grain Inspection Service.

Table 17

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

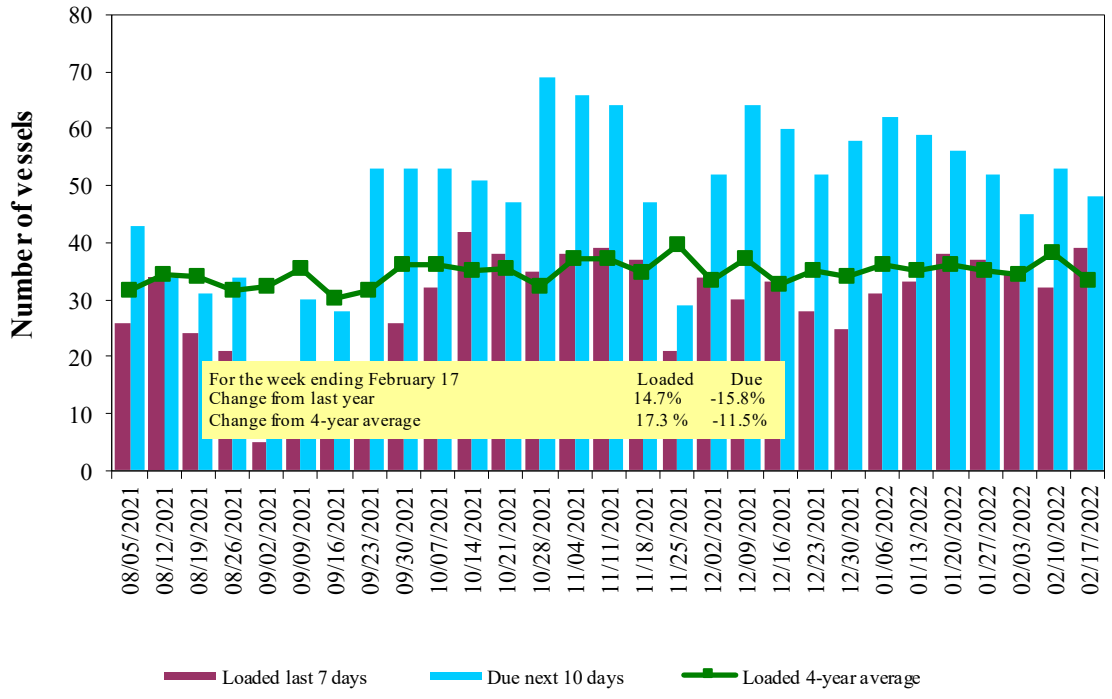
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
2/17/2022	33	39	48	17
2/10/2022	37	32	53	22
2021 range	(10…57)	(5...48)	(15...69)	(4…27)
2021 average	34	32	49	15

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

Source: USDA, Agricultural Marketing Service.

Figure 16

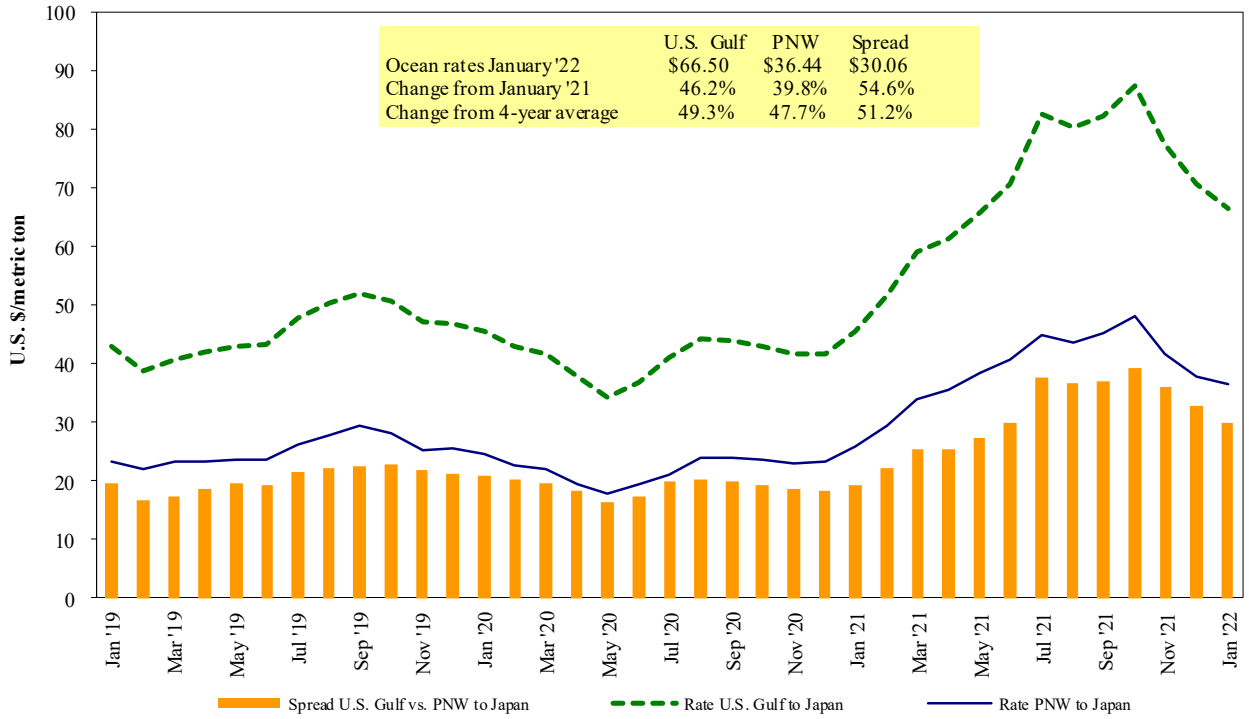
U.S. Gulf[1] vessel loading activity



[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 02/19/2022

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US $/metric ton)
U.S. Gulf	Japan	Heavy grain	May 1/20, 2022	50,000	78.90
U.S. Gulf	China	Heavy grain	Dec 1/10, 2021	65,000	76.00
U.S. Gulf	China	Heavy grain	Nov 1/10, 2021	66,000	89.00
U.S. Gulf	Djibouti	Sorghum	Mar 1/10, 2022	10,000	209.97*
U.S. Gulf	Honduras	Soybean Meal	Feb 18/28, 2022	7,820	57.15*
U.S. Gulf	Sudan	Sorghum	Mar 1/10, 2022	35,790	149.97*
U.S. Gulf	Sudan	Sorghum	Feb 1/10, 2022	35,780	77.60*
PNW	Japan	Wheat	Sep 1, 2021	52,170	56.55*
PNW	Taiwan	Wheat	Nov 1/10, 2021	49,580	67.30
PNW	Yemen	Wheat	Jan 24/Feb 4, 2022	29,960	124.00*
Brazil	N. China	Heavy grain	Jan 1/5, 2022	64,000	58.25
Australia	Japan	Barley	Nov 1/10, 2021	55,000	65.50

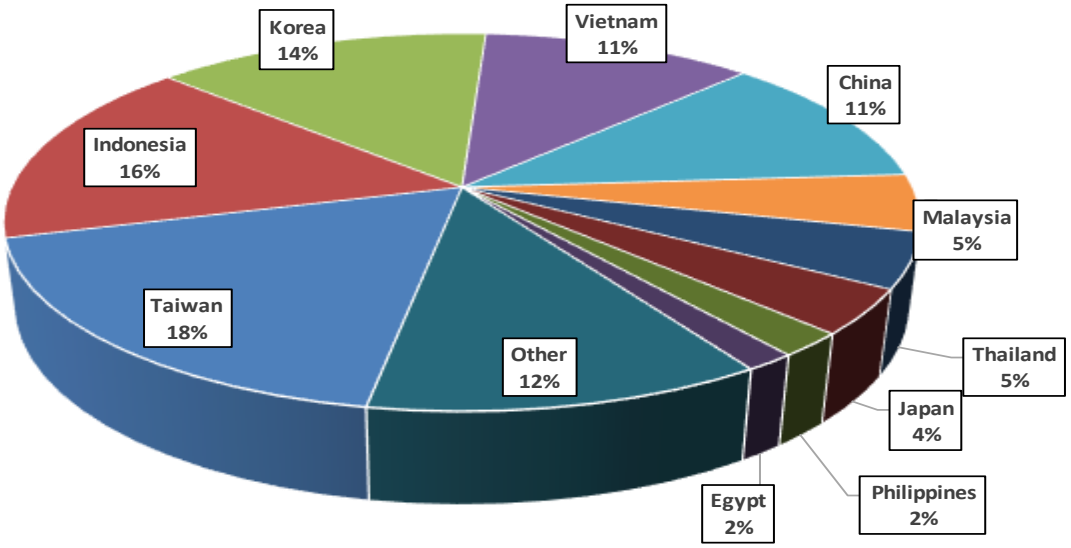
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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.

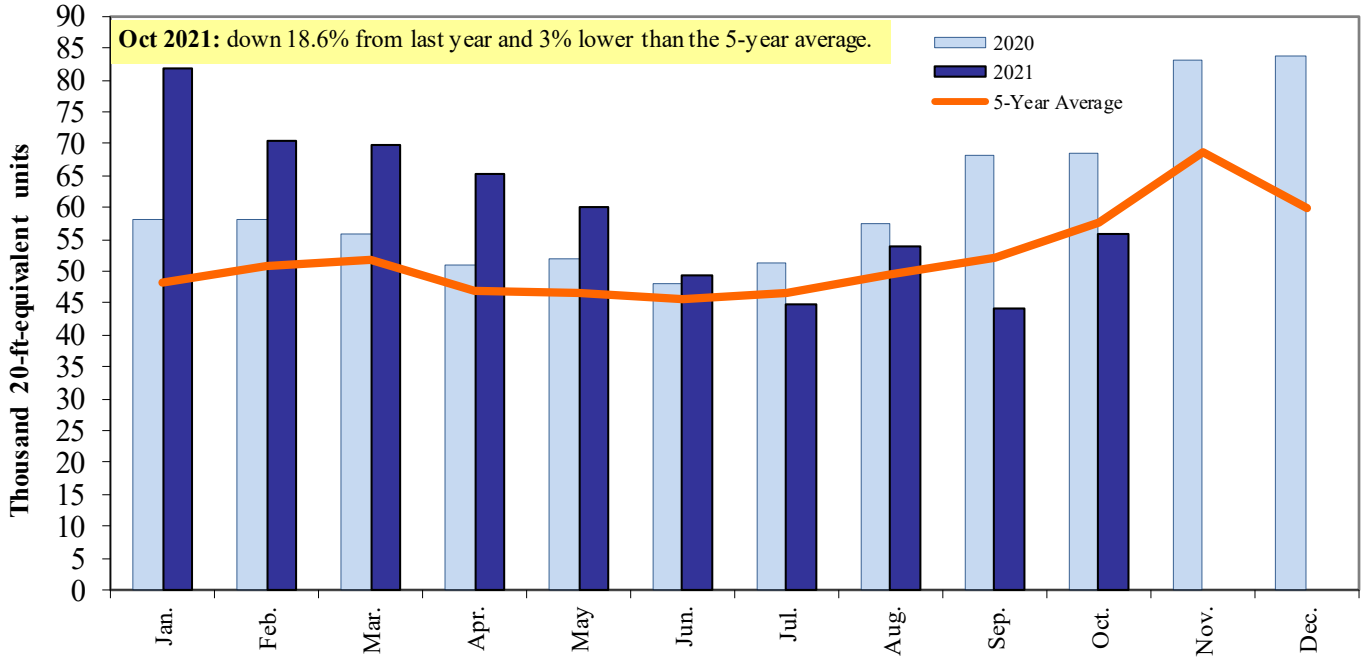
Figure 18
Top 10 destination markets for U.S. containerized grain exports, Jan-Oct 2021



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 U.S. containerized grain exports



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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Preferred citation: U.S. Department of Agriculture, Agricultural Marketing Service. *Grain Transportation Report.* February 24, 2022. Web: **http://dx.doi.org/10.9752/TS056.02-24-2022**