United States Department of Agriculture

Grain Transportation Report

A weekly publication of the Agricultural Marketing Service
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Contact Us

February 10, 2022

Contents

The next release is February 17, 2022

WEEKLY HIGHLIGHTS

Inland Waterways Users Board Reactivated After Long Wait

On February 3, the U.S. Army Corps of Engineers (USACE) announced it is officially reinstating the Inland Waterways Users Board (IWUB) with its full complement of 11 members. IWUB is an advisory board that monitors the Inland Waterways Trust Fund and advises USACE and Congress on the Fund's investment priorities. Along with other Federal advisory committees, IWUB operations were suspended in early 2021 as a result of the Department of Defense's (DOD) zero-based review of all DOD Federal advisory committees. The USACE Director of Civil Works (CW) serves as IWUB Executive Director. The USACE Assistant Secretary of the Army (CW) serves as an Inter-Agency Observer, along with representatives of the Maritime Administration, the National Oceanic and Atmospheric Administration, and Department of Agriculture. The composition of IWUB's membership reflects a balanced representation of each of the inland waterways system's six main geographic regions. A list of IWUB representatives (and their organizations) serving for IWUB's current term—January 31, 2022 to January 30, 2024—can be found here

USDA Releases Updated Report on the Role of U.S. Waterways in Agriculture

On February 9, USDA released an updated *A Reliable Waterway System Is Important to Agriculture* report, previously published in October 2018. The latest report summarizes statistics on U.S. grain and agricultural products, including bulk and containerized cargos transiting the U.S. waterway navigation system. In 2019, agricultural exports were responsible for 25.5 percent of U.S. farm income—driving rural economic activity and supporting more than 1 million American jobs on and off the farm. The report describes marine transportation's projected contribution to agricultural exports and imports in fiscal year 2022. It also provides statistical data showing the key role of U.S. waterways in moving many commodities, including grain, forestry and fishery products, and critical farm inputs (such as fertilizer, feed, and fuel). The report includes information related to harbor channels, waterway drafts, closures, and Federal budget issues, with a comprehensive bibliography on these subjects.

Fuel Price Jumps 10.5 Cents, to Highest Level Since 2014

For the week ending February 7, 2022, the U.S. average **diesel fuel price** increased by 10.5 cents from the previous week to $3.951 per gallon—$1.15 above the same week last year. The price of diesel, trucking's main fuel, has risen 33.8 cents a gallon over the past 5 weeks. This week's diesel price is the highest since May 5, 2014, when it was $3.964 per gallon. In the Midwest, which contains the major grain-producing States, the diesel price increased by 9.4 cents per gallon to $3.808 per gallon—$1.06 above the same time last year. According to the American Transportation Research Institute's (ATRI), *An Analysis of the Operational Costs of Trucking: 2021 Update*, fuel costs accounted for 19 percent of the total marginal cost of operating a truck in 2020.

Snapshots by Sector

Export Sales

For the week ending January 27, **unshipped balances** of wheat, corn, and soybeans for marketing year 2021/22 totaled 39.2. million metric tons (mmt), down 27 percent from the same time last year, and down 1 percent from the previous week. Net **corn export sales** were 1.175 mmt, down 16 percent from the previous week. Net **soybean export sales** were 1.096 mmt, up 7 percent from the previous week. Net weekly **wheat export sales** were 0.057 mmt, down 92 percent from the previous week.

Rail

U.S. Class I railroads originated 24,959 **grain carloads** during the week ending January 29. This was a 7-percent increase from the previous week, 9 percent fewer than last year, and 10 percent more than the 3-year average.

Average February shuttle **secondary railcar** bids/offers (per car) were $671 above tariff for the week ending February 3. This was $485 less than last week and $752 more than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending February 5, **barged grain movements** totaled 581,372 tons. This was 19 percent higher than the previous week and 27 percent less than the same period last year.

For the week ending February 5, 363 grain barges **moved down river**—63 more barges than the previous week. There were 628 grain barges unloaded in the New Orleans Region, 15 percent fewer than last week.

Ocean

For the week ending February 3, 35 **oceangoing grain vessels** were loaded in the Gulf—22 percent fewer than the same period last year. Within the next 10 days (starting February 4), 45 vessels were expected to be loaded—22 percent fewer than the same period last year.

As of February 3, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $61.00. This was 2 percent less than the previous week. The rate from the Pacific Northwest to Japan was $34.00 per mt, 1 percent less than the previous week.

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Feature Article/Calendar

Grain-Export Transportation Demand in 2021 and (So Far) in 2022

The majority of exported grain is moved to export facilities by barge and/or rail and, eventually, to final destinations by oceangoing vessels. The demand for these transportation modes depends on many factors, including the amount of grain intended for export, supply issues, economic volatility, and logistical challenges caused by adverse weather and other events (like pandemics). This article considers some of these factors as it reports the amount of grain inspected for export in 2021 and how each mode fared in the grain export market. The outlook for 2022 is also examined.

2021 Synopsis

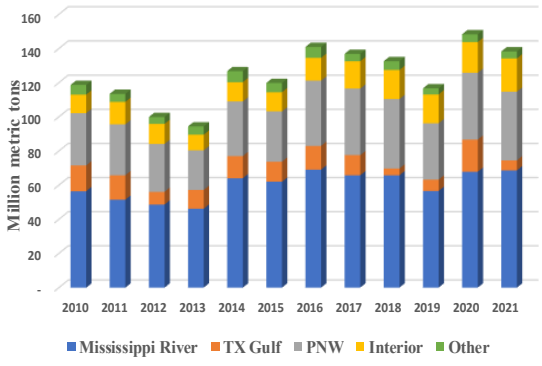
Despite the uncertainty and logistical challenges posed by the COVID-19 pandemic, the annual amount of grain inspected for export in 2020 and 2021 surpassed that of the previous 3 years: after a remarkable and record-setting year in 2016 (*Grain Transportation Report (GTR)*, March 23, 2017), demand for transporting U.S. grain exports declined markedly across all modes (barge, rail, and oceangoing grain vessel) for the next 3+ years. In 2019, transportation demand took a major hit from a trade war with China and a series of extreme weather events in the Midwest (*GTR*, April 4, 2019, and June 27, 2019). However, demand has since recovered following trade agreements with China and Mexico.

Regardless of pandemic-related challenges, a total 138.3 million metric tons (mmt) of U.S. grain was inspected for export in 2021 in all export regions, 7 percent less than in 2020 and 2 percent less than 2016 (fig. 1). However, the Mississippi Gulf, Pacific Northwest, Atlantic, and Interior regions reported higher inspections in 2021 than 2020.

In 2021, barges moved 36.77 million tons of grain on the Mississippi River to New Orleans for export, 8 percent less than 2020, 15 percent less than 2016, and 4 percent less than the 5-year average (38.30 million tons) (fig. 2). Additionally, weekly barge grain movements on the Mississippi exceeded 1 million tons only 5 times in 2021, versus 7 times in 2020, and 13 times in 2016. Possible reasons for the dip in barged grain movements from 2020 to 2021 include severe winter weather, which limited barge and labor supplies, and flooding and infrastructure damage from Hurricane Ida.

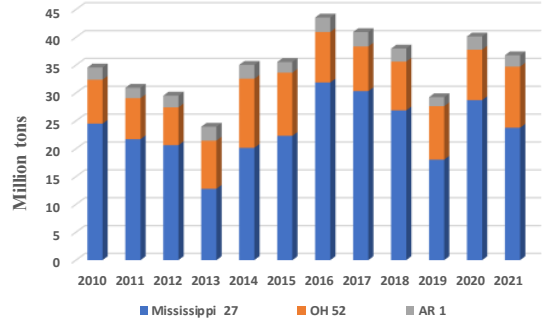
U.S. Class 1 railroads originated more carloads of grain (fig. 3) and rail deliveries to ports (fig. 4) in 2021 than in 2020 or 2016. In 2021, sample carloads of grain to U.S. ports totaled

Figure 1. Total grain inspected for export



Source: USDA, Agricultural Marketing Service.

Figure 2. Total grain movements by barge



Note: In 2019, OH 52 was replaced by Olmsted Locks and Dam.
Source: U.S. Army Corps of Engineers, LPMS Data.

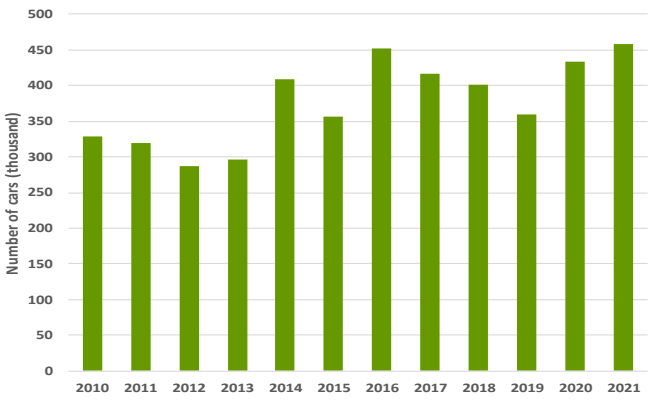
Figure 3. Originated grain carloadings

Source: Association of American Railroads.

a record 458,169—6 percent more than 2020's 433,750 carloads and 1 percent more than the previous record of 452,580 carloads in 2016.

In 2021, the average number of oceangoing grain vessels at berth (loading or waiting to load) per week in the U.S. Gulf was 34 compared to 37 in 2020 and 43 in 2016. In the Pacific Northwest (PNW), an average of 15 vessels were at berth per week in 2021, 2020, and 2016, respectively. Since 2010, the total tonnages of barged grain transiting the Mississippi River (at Locks No. 27) has closely paralleled the grain vessel-loading activity of oceangoing vessels (number of grain vessels loaded) in the U.S. Gulf.[1] The two indicators continued to be closely tied in 2021 (fig. 5).

Figure 4. Rail deliveries to ports



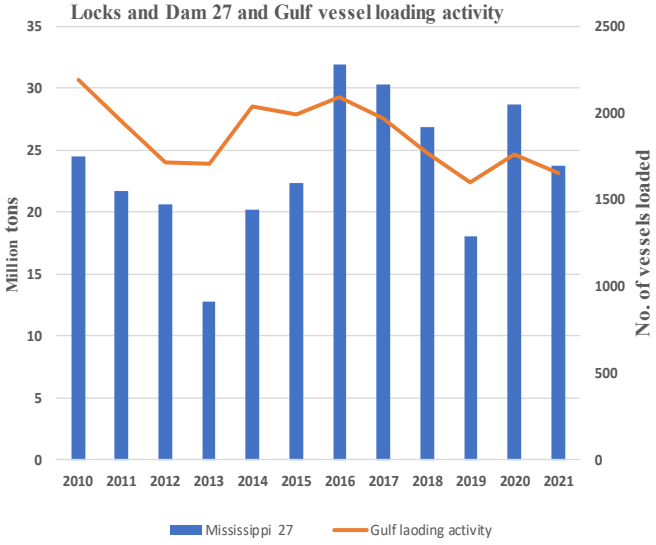
Source: USDA, Agricultural Marketing Service.

2022 and Beyond

Year-to- date (YTD) demand for grain-export transportation has been slow due to inclement winter weather, but demand could change as the year progresses, responding to any number of factors. As of February 5, 2022, YTD grain barge movements down the Mississippi River were 36 percent fewer than the same period in 2021 (***GTR* table 10**). As of February 2, 2022, YTD rail deliveries to ports were 12 percent fewer than the same period in 2021 (***GTR* table 3**). As of January 29, 2022, YTD grain carloads originated by U.S. Class I railroads were 14 percent fewer than the same period in 2021 (***GTR* table 4**). As of February 3, 2022, YTD weekly average of 48 grain vessels were at berth in the U.S. Gulf, compared to 42 vessels in 2021. In PNW, a weekly average of 22 grain vessels were at berth in 2022, compared to 18 vessels in 2021.

According to USDA's February *World Agricultural Supply and Demand Estimates*, the marketing year 2021/22 global outlook includes increased exports for wheat, corn and soybeans.

Figure 5. Grain movements by barge through Mississippi Locks and Dam 27 and Gulf vessel loading activity



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

As of December 1, 2021, total grain stocks in all locations were higher than 2020 levels. Both corn and soybean stocks were higher than in 2020. High stocks signal possible future movements, as grain is moved out of storage and into marketing channels. YTD grain inspections (***GTR* table 16**), as of February 3, and outstanding (unshipped) export balances of grain (***GTR* table 12**), as of January 27, were lower than in 2021. However, several factors could continue to boost U.S. exports, pushing up transportation demand for exported grain in the near future. These include the continued reopening of major economies, along with a possible reduction in global supply chain logjams.

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[1] Locks No. 27 (Chain of Rocks Locks)—located at the southern end of Chouteau Island near St. Louis, MO—contain a 1,200-foot main lock and a 600-foot auxiliary lock and are the southernmost locks on the Mississippi River.

Grain Transportation Indicators

Table 1

Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Non-Shuttle	Shuttle		Gulf	Pacific
02/09/22	265	298	253	401	273	241
02/02/22	258	299	272	484	280	245

[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

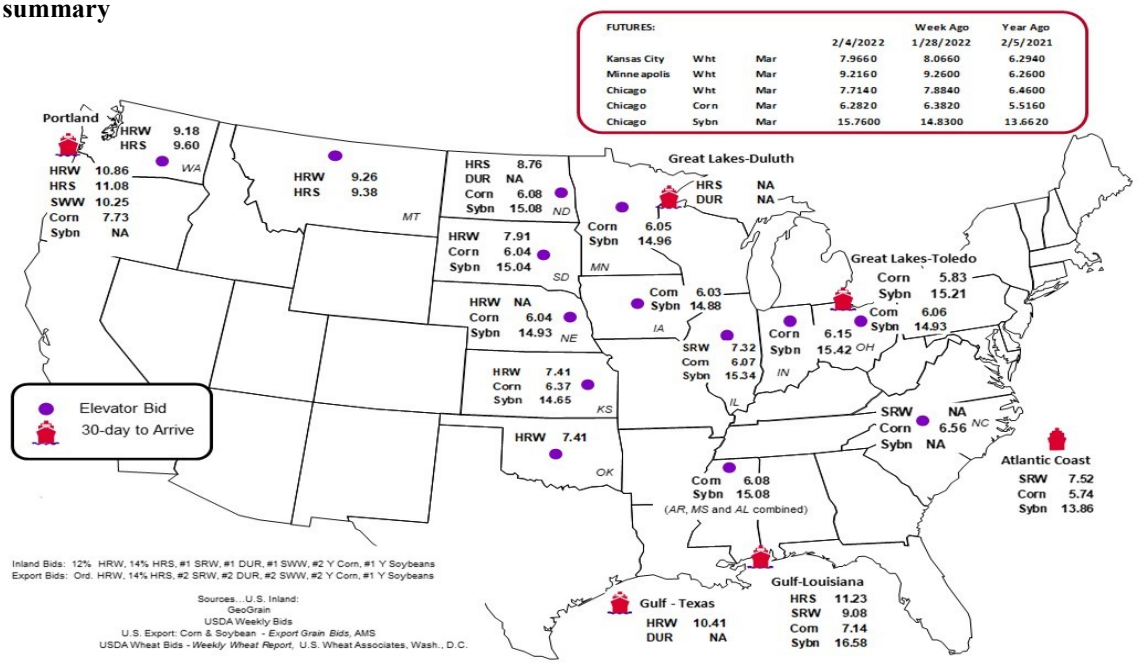
Market Update: U.S. origins to export position price spreads ($/bushel)

Commodity	Origin–destination	2/4/2022	1/28/2022
Corn	IL–Gulf	-1.07	-1.26
Corn	NE–Gulf	-1.10	-1.29
Soybean	IA–Gulf	-1.70	-1.76
HRW	KS–Gulf	-3.00	-3.15
HRS	ND–Portland	-2.32	-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]
2/2/2022[p]	2,007	1,431	7,426	632	11,496	1/29/2022	3,072
1/26/2022[r]	1,489	1,937	6,867	940	11,233	1/22/2022	2,152
2022 YTD[r]	6,523	6,171	28,329	3,066	44,089	2022 YTD	11,858
2021 YTD[r]	8,251	8,539	29,059	4,021	49,870	2021 YTD	9,127
2022 YTD as % of 2021 YTD	79	72	97	76	88	% change YTD	130
Last 4 weeks as % of 2021[2]	79	72	97	76	88	Last 4wks. % 2021	130
Last 4 weeks as % of 4-year avg.[2]	163	116	119	162	126	Last 4wks. % 4 yr.	134
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.

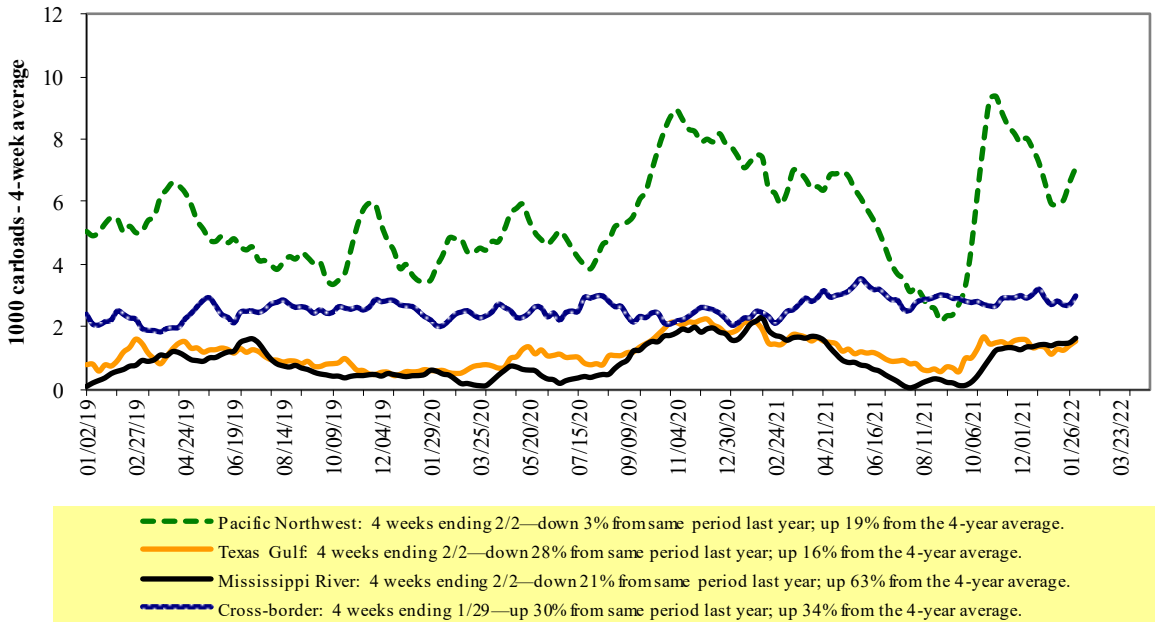
[3] Cross-border weekly data is approximately 15 percent below the Association of American Railroads' reported weekly carloads received by Mexican railroads to reflect switching between Kansas City Southern de Mexico (KCSM) and Grupo Mexico.

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	
1/29/2022	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	2,085	2,119	13,306	1,511	5,938	24,959	4,161	3,583
This week last year	2,084	3,150	13,756	1,133	7,350	27,473	5,931	4,869
2022 YTD	7,363	9,332	46,701	5,678	25,440	94,514	14,039	13,742
2021 YTD	9,135	12,352	55,441	4,494	28,488	109,910	22,235	20,260
2022 YTD as % of 2021 YTD	81	76	84	126	89	86	63	68
Last 4 weeks as % of 2021*	81	76	84	126	89	86	63	68
Last 4 weeks as % of 3-yr. avg.**	93	86	99	132	113	102	83	78
Total 2021	93,935	120,776	609,890	64,818	318,002	1,207,421	210,335	242,533

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

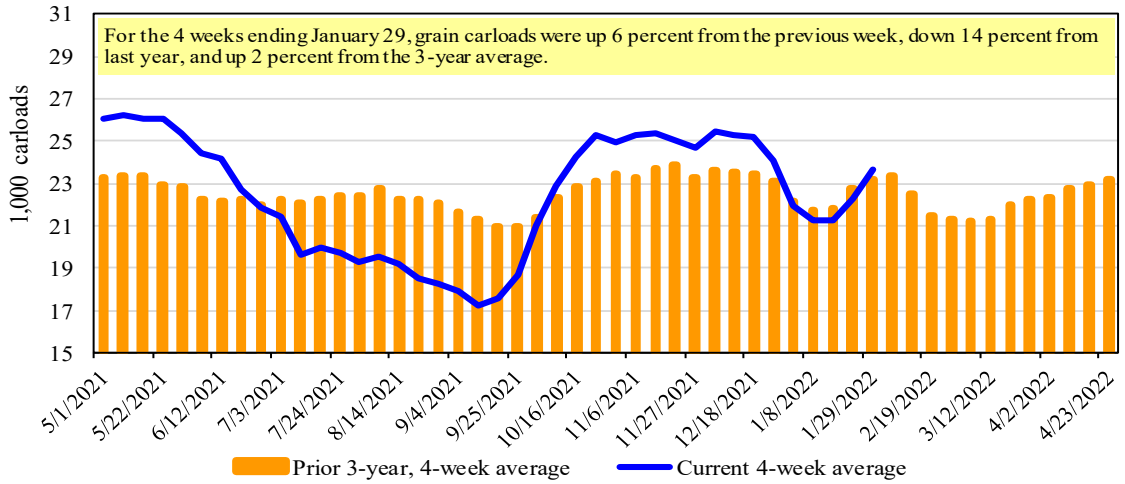
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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							
2/3/2022		Feb-22	Feb-21	Mar-22	Mar-21	Apr-22	Apr-21	May-22	May-21
BNSF[3]	COT grain units	no bids	no offer	no bids	0	no bids	no bids	no bids	no bids
	COT grain single-car	0	no offer	0	0	0	no bids	no bids	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.

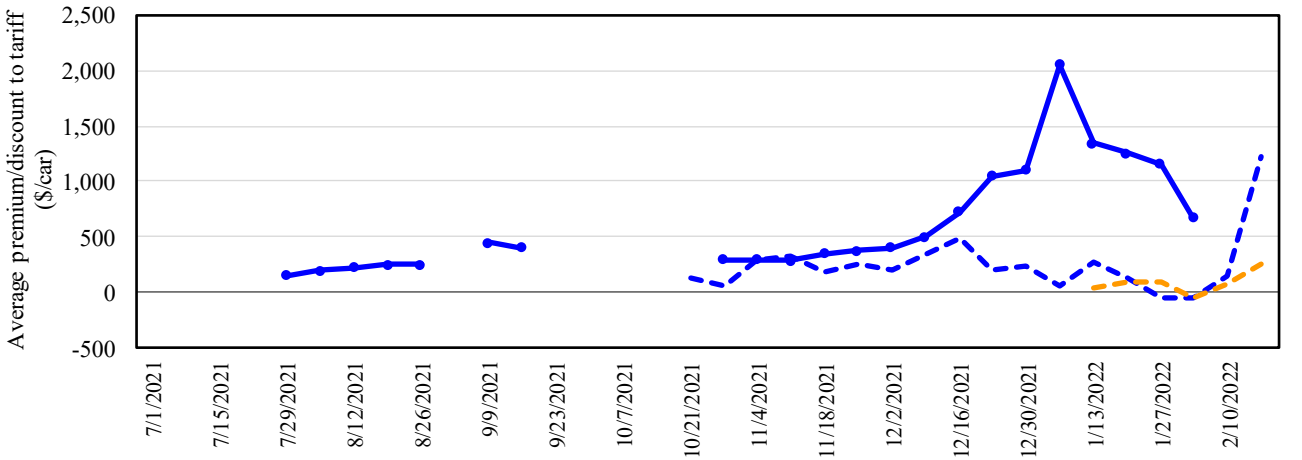
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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 February 2022

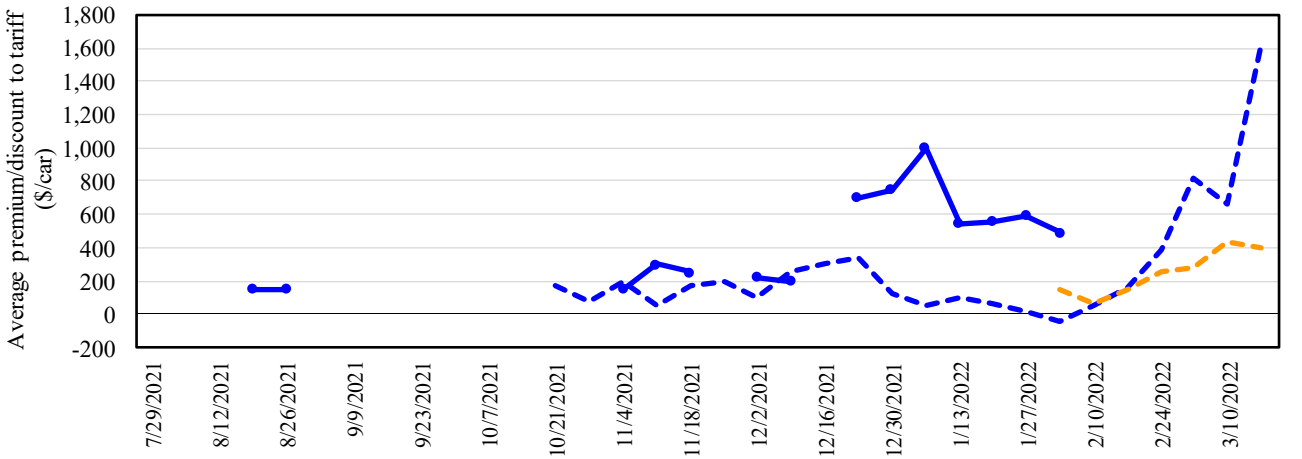


2/3/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$817	$525

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $485 this week and are $1,379 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 March 2022



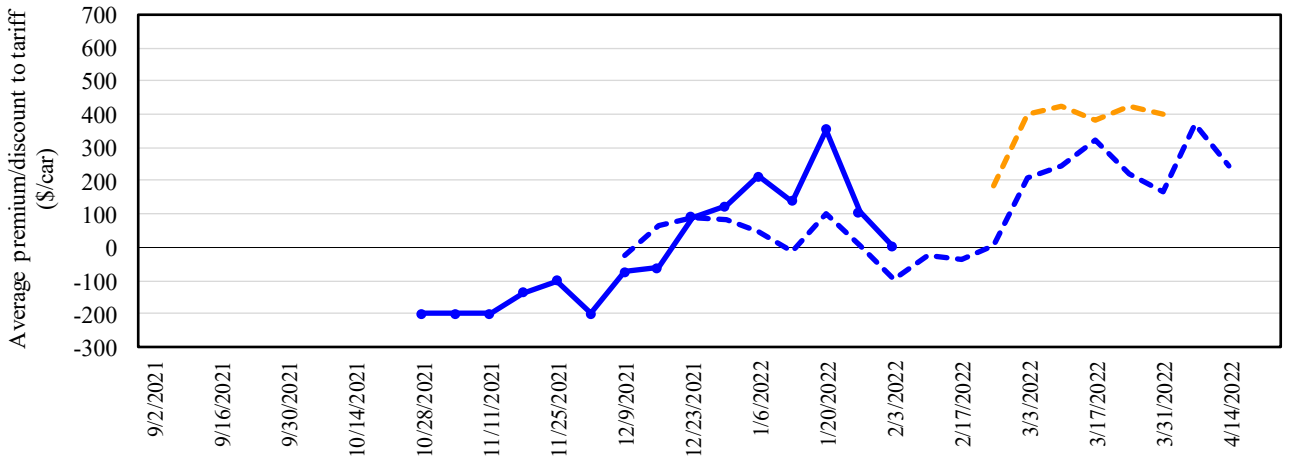
2/3/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$388	$600

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $100 this week and are $504 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 April 2022



2/3/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$0	n/a

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $106 this week and are $353 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: 2/3/2022	Delivery period					
		Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-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**	**817**	**388**	**0**	**(158)**	**n/a**	**n/a**
	Change from last week	(308)	(226)	(106)	(89)	n/a	n/a
	Change from same week 2021	904	444	125	(108)	n/a	n/a
	UP-Pool	**525**	**600**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	(663)	25	n/a	n/a	n/a	n/a
	Change from same week 2021	600	663	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.

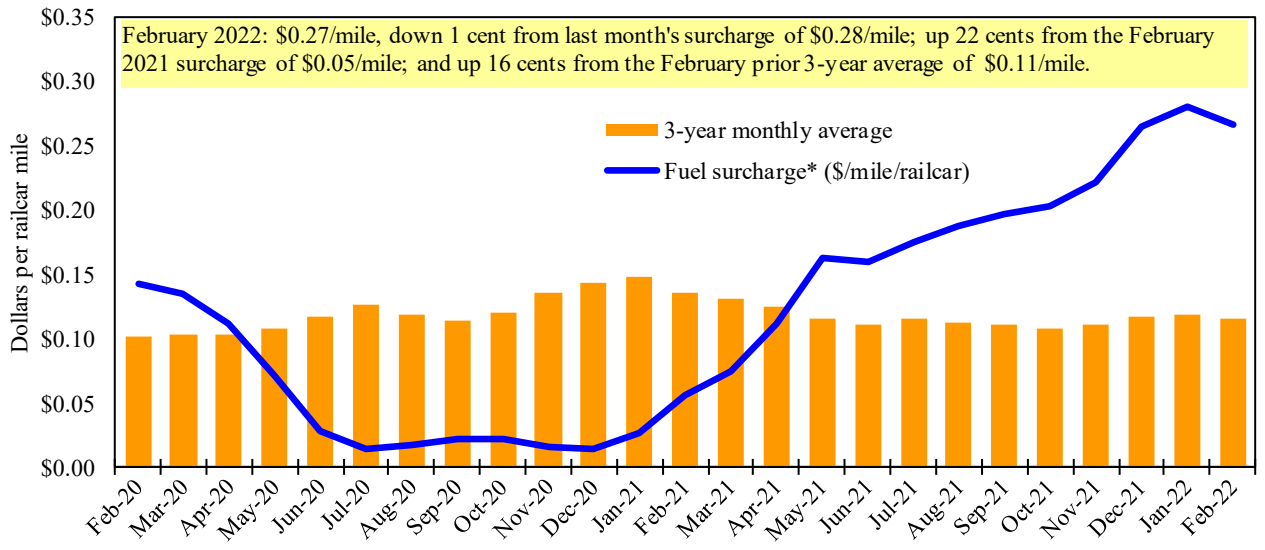
[4]Percentage change calculated using tariff rate plus fuel surchage; Y/Y = year over year.

[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.

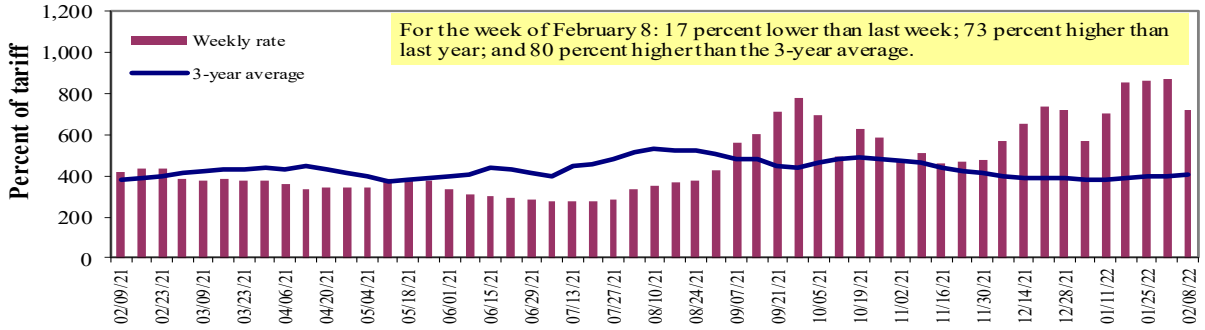
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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

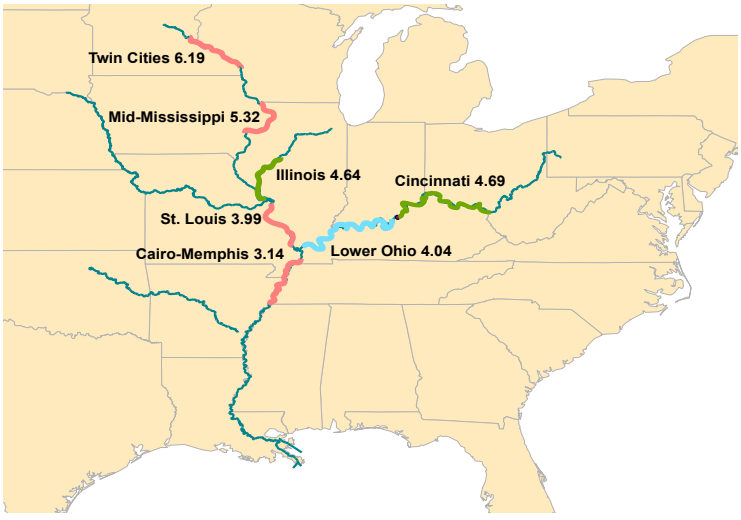
		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	2/8/2022	-	-	721	628	700	700	530
	2/1/2022	-	-	871	721	808	808	617
$/ton	2/8/2022	-	-	33.45	25.06	32.83	28.28	16.64
	2/1/2022	-	-	40.41	28.77	37.90	32.64	19.37
Current week % change from the same week:								
	Last year	-	-	73	125	118	118	114
	3-year avg. [2]	-	-	80	114	112	112	93
Rate[1]	March	-	585	565	477	568	568	391
	May	473	488	460	378	405	405	313

[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

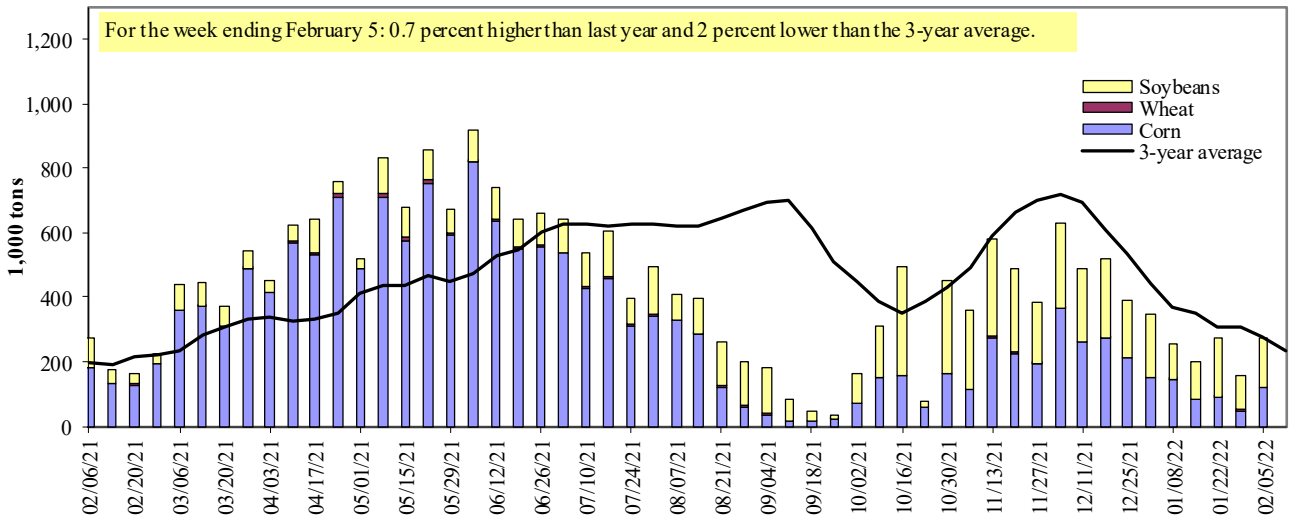
Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.



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 02/05/2022	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	0	0	0	0	0
Winfield, MO (L25)	14	0	17	0	31
Alton, IL (L26)	87	0	126	0	212
Granite City, IL (L27)	119	0	156	0	275
Illinois River (La Grange)	62	0	139	0	201
Ohio River (Olmsted)	180	0	69	5	255
Arkansas River (L1)	6	27	20	0	52
Weekly total - 2022	305	27	245	5	581
Weekly total - 2021	513	19	237	25	793
2022 YTD[1]	1,326	128	1,411	17	2,883
2021 YTD[1]	2,534	70	1,808	85	4,497
2022 as % of 2021 YTD	52	183	78	20	64
Last 4 weeks as % of 2021[2]	48	190	78	9	61
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.

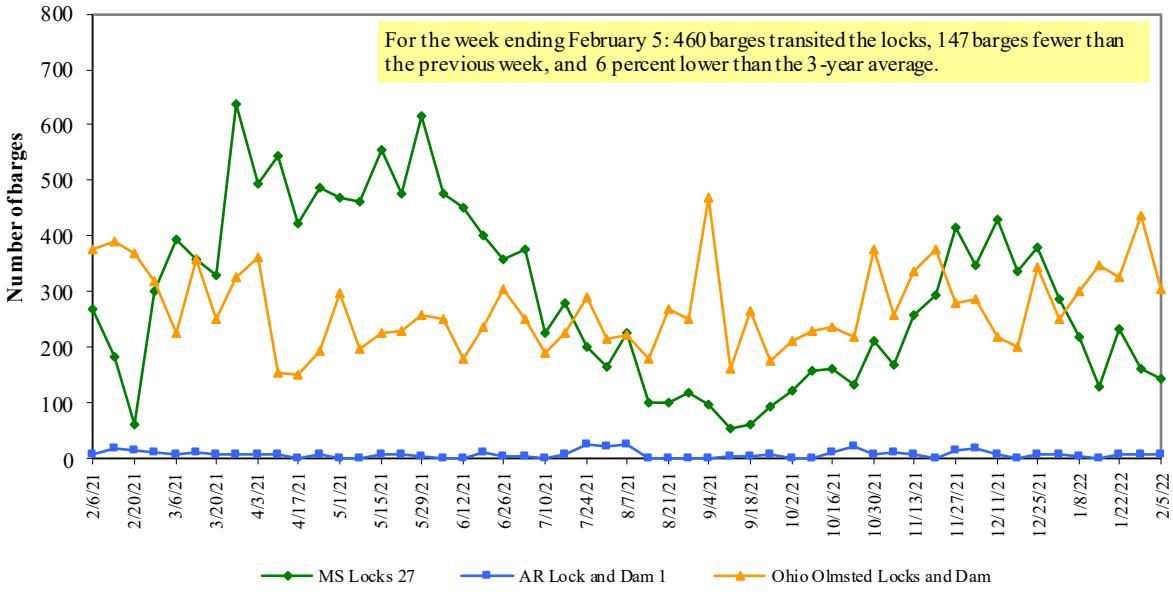
[2] As a percent of same period in 2020.

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

Source: U.S. Army Corps of Engineers.

Figure 11

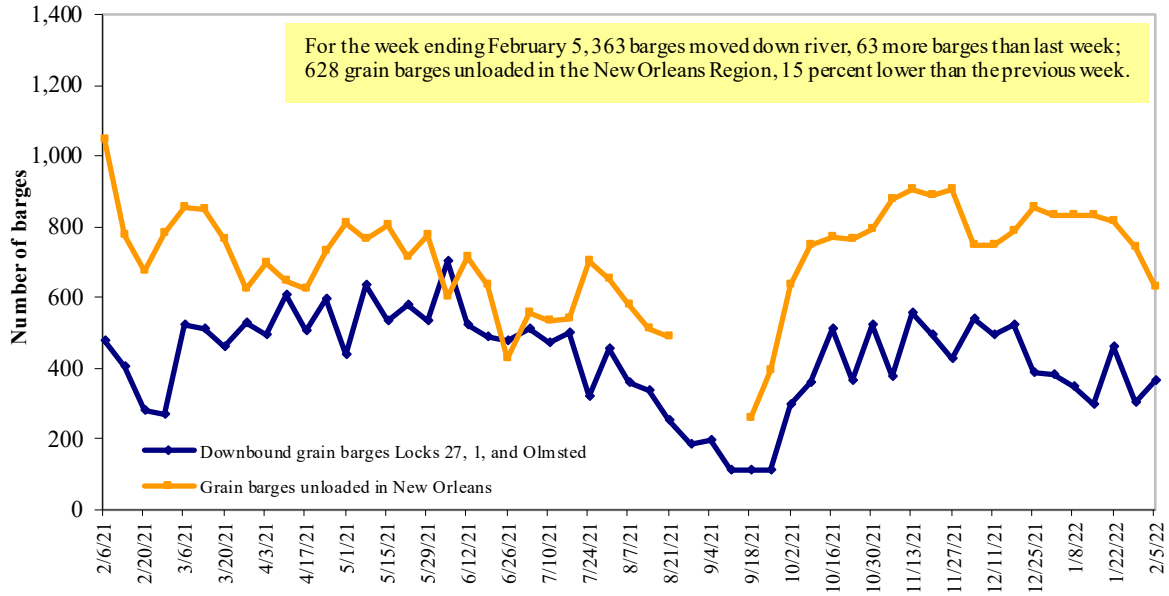
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 2/7/2022 (U.S. $/gallon)

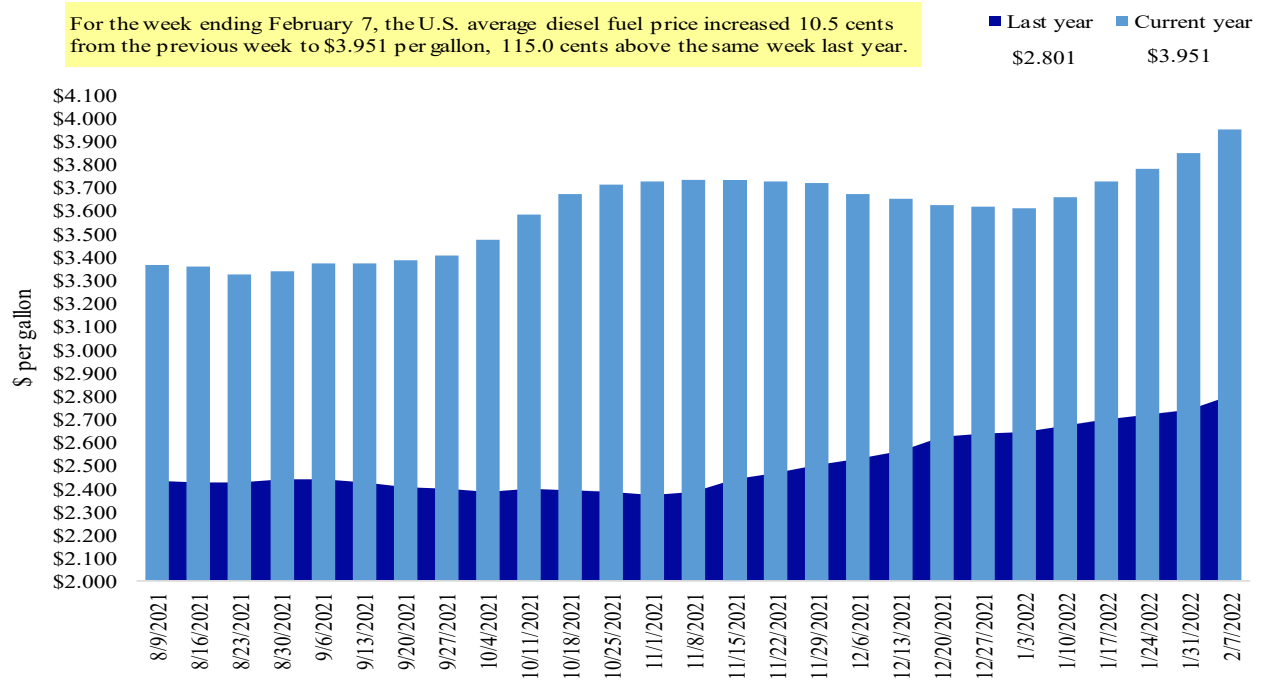
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	3.971	0.119	1.126
	New England	3.947	0.114	1.107
	Central Atlantic	4.098	0.096	1.093
	Lower Atlantic	3.896	0.135	1.156
II	Midwest	3.808	0.094	1.060
III	Gulf Coast	3.730	0.122	1.164
IV	Rocky Mountain	3.861	0.104	1.162
V	West Coast	4.622	0.078	1.364
	West Coast less California	4.250	0.066	1.353
	California	4.949	0.087	1.391
Total	United States	3.951	0.105	1.150

[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]									
1/27/2022	2,037	711	1,267	751	55	4,820	25,558	8,868	39,245
This week year ago	1,358	445	2,019	2,415	167	6,405	36,090	11,132	53,626
Cumulative exports-marketing year[2]									
2021/22 YTD	4,815	1,848	3,366	2,300	113	12,443	19,566	36,361	68,370
2020/21 YTD	6,187	1,208	4,639	3,485	491	16,009	20,017	47,391	83,417
YTD 2021/22 as % of 2020/21	78	153	73	66	23	78	98	77	82
Last 4 wks. as % of same period 2020/21*	152	159	64	33	33	77	71	86	75
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 1/27/2022	2021/22 current MY	Total commitments[2] 2020/21 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
	1,000 mt -			
Mexico	13,026	11,084	18	14,817
Japan	5,604	7,546	(26)	11,082
China	12,445	17,705	(30)	7,920
Columbia	2,760	2,480	11	4,491
Korea	78	1,271	(94)	3,302
Top 5 importers	**33,913**	**40,086**	**(15)**	**41,613**
Total U.S. corn export sales	**45,123**	**56,107**	**(20)**	**53,145**
% of projected exports	73%	80%		
Change from prior week[2]	**1,175**	**7,437**		
Top 5 importers' share of U.S. corn export sales	75%	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 1/27/2022	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	25,395	35,256	(28)	21,666
Mexico	4,216	3,962	6	4,754
Egypt	2,205	2,150	3	3,093
Indonesia	914	1,379	(34)	2,325
Japan	1,518	1,450	5	2,275
Top 5 importers	**34,248**	**44,197**	**(23)**	**34,113**
Total U.S. soybean export sales	**45,230**	**58,523**	**(23)**	**50,758**
% of projected exports	81%	95%		
change from prior week[2]	**1,096**	**767**		
Top 5 importers' share of U.S. soybean export sales	76%	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 1/27/2022	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	2,953	2,948	0	3,388
Philippines	2,510	2,771	(9)	3,121
Japan	2,060	2,078	(1)	2,567
Korea	1,096	1,481	(26)	1,501
Nigeria	1,859	1,170	59	1,490
China	848	2,714	(69)	1,268
Taiwan	765	942	(19)	1,187
Indonesia	67	987	(93)	1,131
Thailand	526	704	(25)	768
Italy	190	545	(65)	681
Top 10 importers	**12,873**	**16,340**	(21)	**17,102**
Total U.S. wheat export sales	**17,262**	**22,414**	(23)	**24,617**
% of projected exports	78%	83%		
change from prior week[2]	**57**	**643**		
Top 10 importers' share of U.S. wheat export sales	75%	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 02/03/22	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	232	255	91	957	1,415	68	73	79	13,243
Corn	254	125	204	980	1,388	71	84	118	13,420
Soybeans	349	643	54	2,195	2,548	86	94	148	14,540
Total	**836**	**1,022**	**82**	**4,132**	**5,351**	**77**	**86**	**117**	**41,203**
Mississippi Gulf									
Wheat	83	20	422	369	201	183	165	97	3,202
Corn	649	684	95	3,408	4,056	84	88	118	38,498
Soybeans	652	611	107	3,743	6,130	61	64	90	27,159
Total	**1,384**	**1,315**	**105**	**7,520**	**10,388**	**72**	**76**	**101**	**68,858**
Texas Gulf									
Wheat	48	72	66	307	300	102	107	101	3,888
Corn	0	42	0	75	51	148	148	165	627
Soybeans	0	0	n/a	0	569	0	0	0	1,611
Total	**48**	**114**	**42**	**382**	**920**	**42**	**45**	**74**	**6,126**
Interior									
Wheat	74	47	157	228	246	93	97	121	2,972
Corn	131	167	79	792	786	101	98	114	10,147
Soybeans	147	177	83	717	855	84	84	96	6,525
Total	**352**	**391**	**90**	**1,736**	**1,887**	**92**	**91**	**107**	**19,644**
Great Lakes									
Wheat	3	3	97	6	16	38	38	49	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	0	592
Total	**3**	**3**	**97**	**6**	**16**	**38**	**38**	**34**	**1,273**
Atlantic									
Wheat	0	0	n/a	4	0	n/a	n/a	n/a	128
Corn	0	0	n/a	18	0	n/a	n/a	220	85
Soybeans	78	56	140	306	474	65	74	131	2,184
Total	**79**	**56**	**141**	**329**	**474**	**69**	**76**	**133**	**2,397**
U.S. total from ports*									
Wheat	440	396	111	1,872	2,179	86	89	89	23,969
Corn	1,035	1,017	102	5,272	6,281	84	89	118	62,921
Soybeans	1,226	1,487	82	6,961	10,577	66	70	103	52,612
Total	**2,701**	**2,901**	**93**	**14,104**	**19,036**	**74**	**79**	**105**	**139,501**

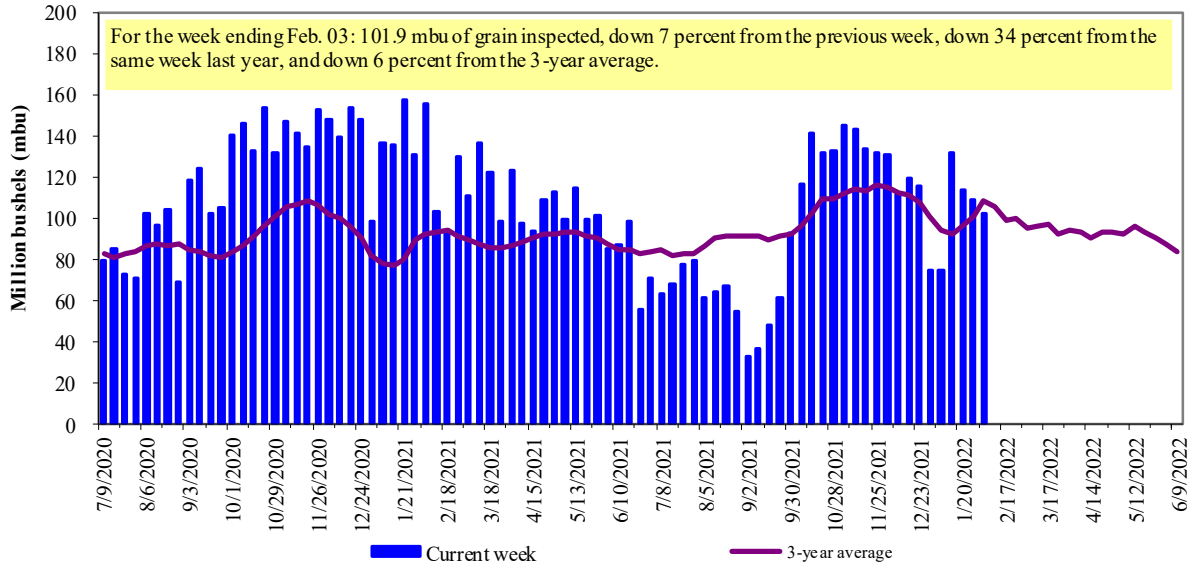
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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)

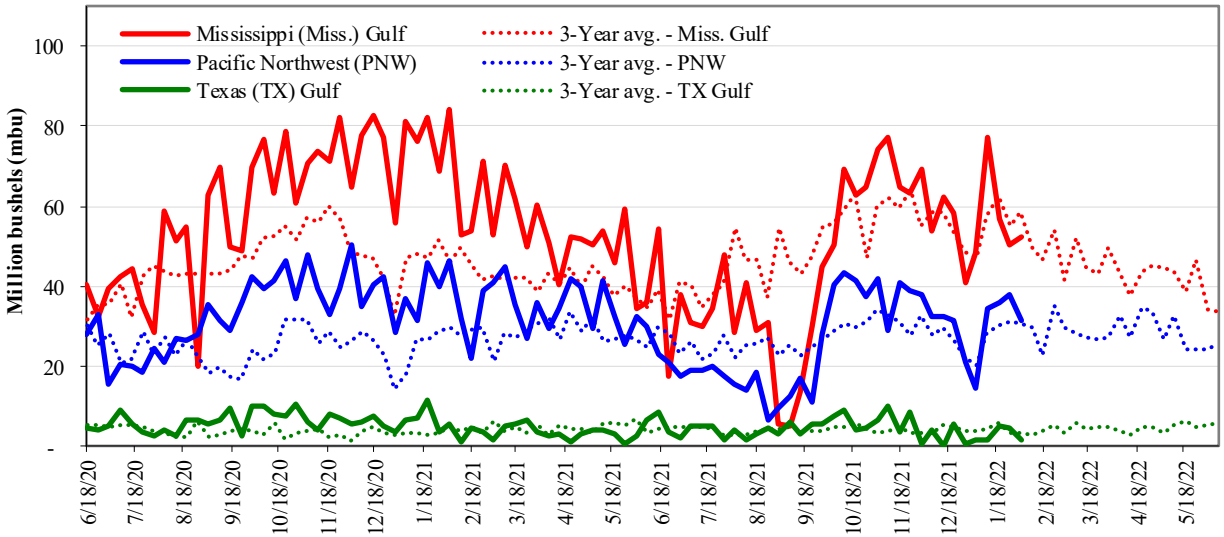


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

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



Week ending 02/03/22 inspections (mbu):	
MS Gulf:	52.6
PNW:	31.4
TX Gulf:	1.8

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last wk:	up 5	down 59	unchanged	down 17
Last Year (same wk):	down 38	down 69	down 40	down 32
3-yr avg. (4-wk. mov. Avg):	down 10	down 58	down 13	up 5

Source: USDA, Federal Grain Inspection Service.

Table 17

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

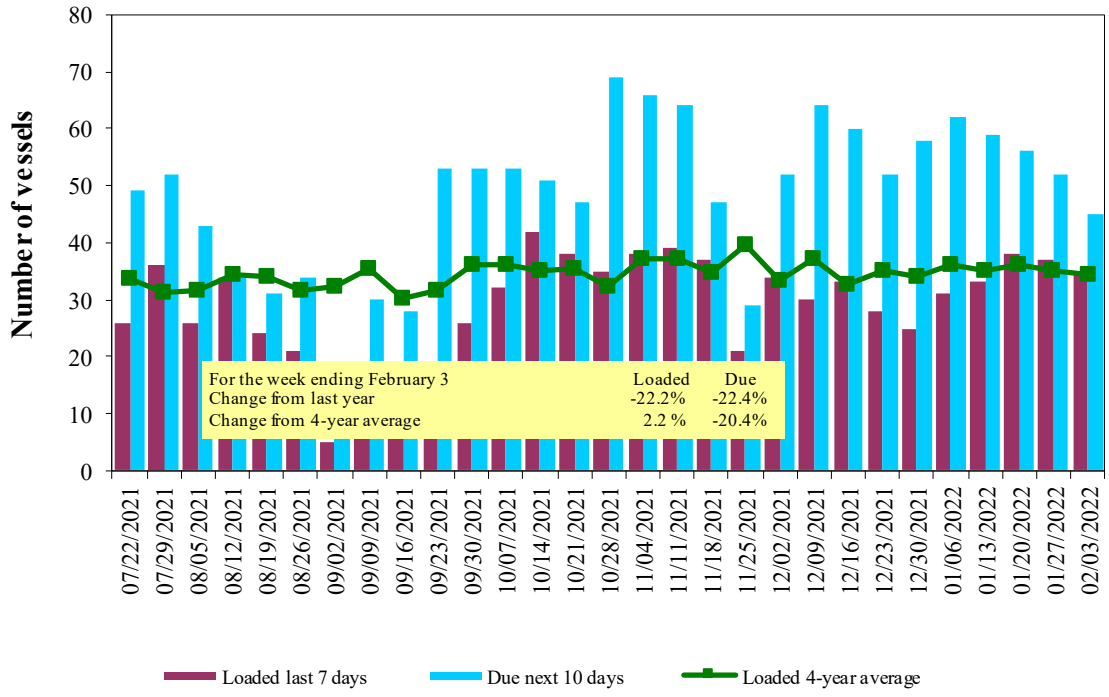
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
2/3/2022	40	35	45	23
1/27/2022	61	37	52	18
2021 range	(10…57)	(5...48)	(15...69)	(4…27)
2021 average	34	32	49	15

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

Source: USDA, Agricultural Marketing Service.

Figure 16

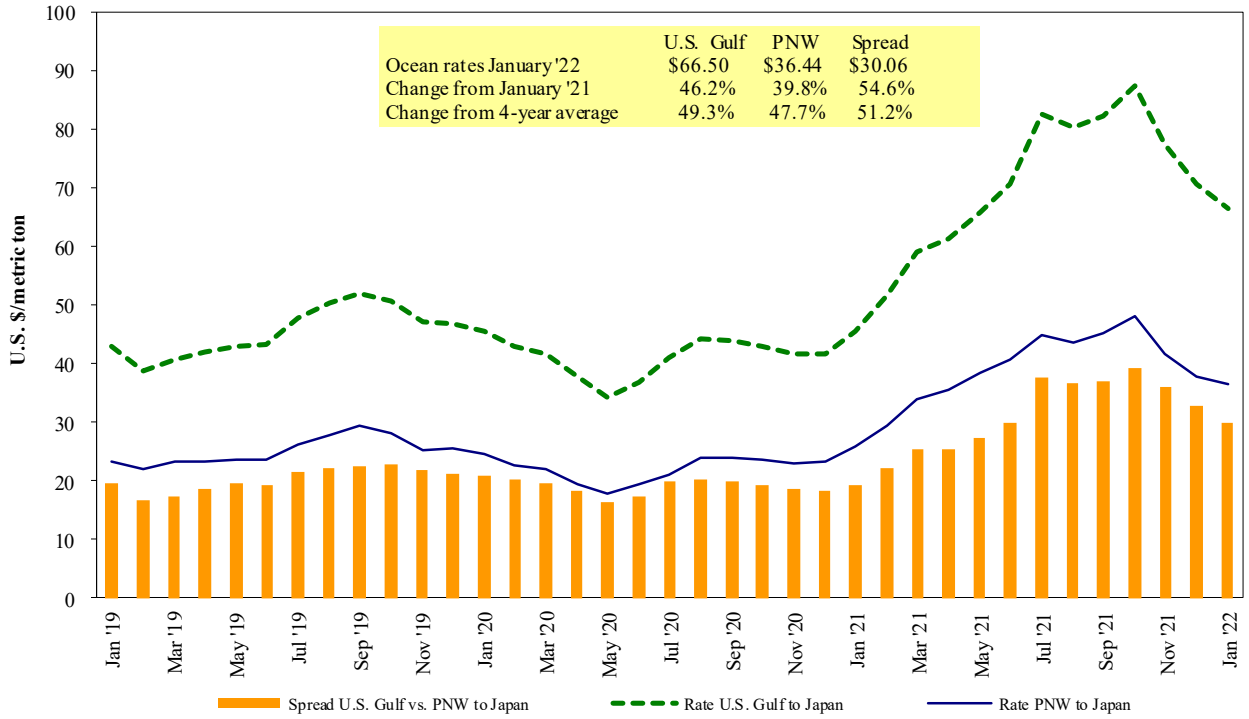
U.S. Gulf[1] vessel loading activity



[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 02/05/2022

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US $/metric ton)
U.S. Gulf	Japan	Heavy grain	Oct 1/10, 2021	48,000	70.10
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	China	Heavy grain	Oct 1/10, 2021	55,000	81.50
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
River Plate	South Korea	Corn	Oct 21, 2021	67,000	79.80

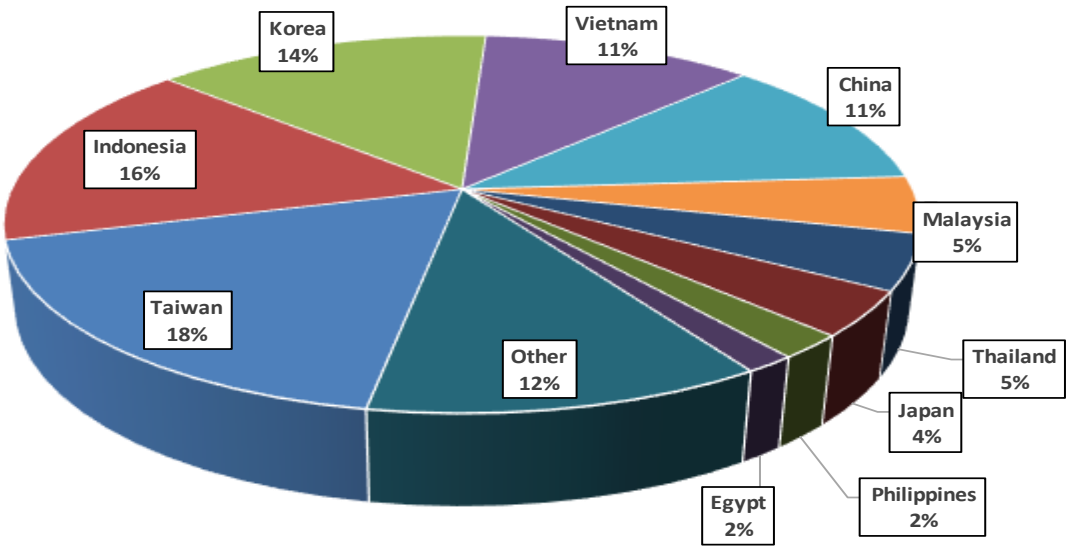
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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.

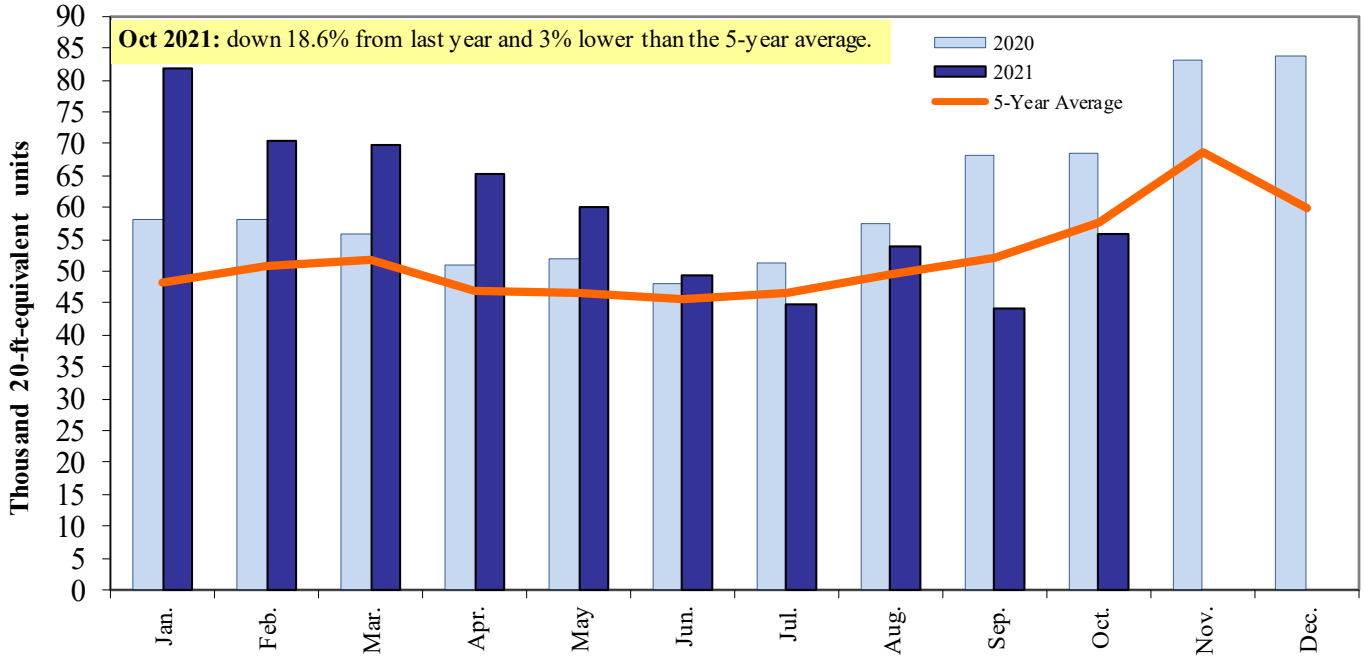
Figure 18
Top 10 destination markets for U.S. containerized grain exports, Jan-Oct 2021



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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