United States Department of Agriculture

Grain Transportation Report

A weekly publication of the Agricultural Marketing Service
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Contact Us

February 23, 2023

Contents

The next release is March 2, 2023

WEEKLY HIGHLIGHTS

FMC Rules in Favor of Truckers in Chassis Lawsuit

On February 6, a Federal Maritime Commission (FMC) chief administrative law judge ruled that ocean carriers could not lawfully require motor carriers to use specific intermodal chassis providers to move containers: such requirements were ruled to be in violation of the U.S. Shipping Act. The ruling represents a first step toward granting trucking companies and shippers more autonomy in choosing chassis providers, and if upheld, would help reduce delays and cut costs for trucking firms and shippers, including agricultural exporters. The ruling applies to four regions—Chicago, IL; Los Angeles/Long Beach, CA; Memphis, TN; and Savannah, GA. The decision follows a complaint filed in August 2020 by the American Trucking Associations' Intermodal Motor Carriers Conference. The complaint alleged that a national chassis pool operator and 11 ocean carriers had denied motor carriers the right to choose by requiring them—upon paying for chassis—to use specific default chassis providers. Parties in the case have 22 days (from February 6) to file an appeal to deny all or part of the motions included in the decision.

Diesel Price Drops for Fourth Week in a Row

For the week ending February 20, the U.S. average **diesel fuel price** decreased 6.8 cents from the previous week to $4.376 per gallon—32.1 cents above the same week last year. This latest drop marks the 4th consecutive week of decline. The diesel price dropped by 16.3 cents a gallon in the past 2 weeks and 24.6 cents since January 30. According to the Energy Information Administration's February *Short-Term Energy Outlook*, the diesel price is projected to average $4.23 per gallon in 2023 and $3.70 per gallon in 2024.

Wisconsin Grants $5.3 Million to Ports

On February 2, Wisconsin's Department of Transportation announced it has awarded grants totaling $5.4 million for seven harbor maintenance and improvement projects. Intended to promote waterborne freight and economic development, the grants will help maintain harbors and ensure ports are secure and reliable, while strengthening the supply chain. Newly funded dredging and dock work are expected to improve agricultural freight transportation. Hanke Terminals in La Crosse, WI, will receive $200,000 to repair a failing dock wall that is used to export agricultural commodities. FJ Robers (also, in La Crosse) will receive $1.17 million to repair and construct a new dock wall for its bulk commodity transload facility, which will handle the transfer of corn and soybeans for export.

FMCSA Extends Multi-Regional Waiver for Transporting Fuel

On February 14, the Federal Motor Carrier Safety Administration (FMCSA) extended a multi-regional emergency declaration that waived hours of-service (HOS) regulations for drivers transporting fuel. The declaration extension applies to several States that are key to grain transportation: Kansas and Nebraska (Midwest) and Oklahoma (South Central). The HOS waiver will stay in effect until March 17 or the end of the emergency, whichever comes first.

Snapshots by Sector

Export Sales

For the week ending February 9, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2022/23 totaled 26.61 million metric tons (mmt), down 29 percent from the same time last year and down 5 percent from last week. Net **corn export sales** for MY 2022/23 were 1.025 mmt, down 12 percent from last week. Net **soybean export sales** were 0.513 mmt, up 37 percent from last week. Net weekly **wheat export sales** were 0.210 mmt, up 60 percent from last week.

Rail

U.S. Class I railroads originated 21,241 **grain carloads** during the week ending February 11. This was a 5-percent decrease from the previous week, 13 percent fewer than last year, and 6 percent fewer than the 3-year average.

Average March **shuttle secondary railcar bids/offers** (per car) were $203 below tariff for the week ending February 16. This was $72 more than last week and $224 lower than this week last year.

Barge

For the week ending February 18, **barged grain movements** totaled 714,911 tons. This was 33 percent higher than the previous week and 32 percent higher than the same period last year.

For the week ending February 18, 438 grain barges **moved down river**—69 more than last week. There were 756 grain barges **unloaded** in the New Orleans region, 2 percent fewer than last week.

Ocean

For the week ending February 16, 33 **oceangoing grain vessels** were loaded in the Gulf—15 percent fewer than the same period last year. Within the next 10 days (starting February 17), 36 vessels were expected to be loaded—25 percent fewer than the same period last year.

As of February 16, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $47.75. This was 1 percent less than the previous week. The rate from the Pacific Northwest to Japan was $26.00 per mt, 5 percent less than the previous week.

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Feature Article/Calendar

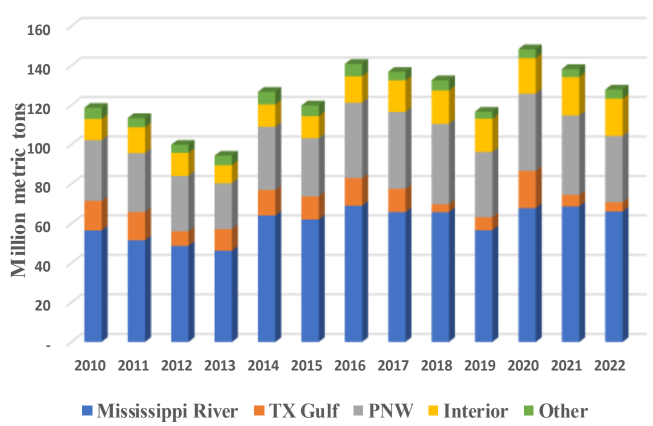
Grain-Export Transportation Demand: Review of 2022 and Look Ahead

The United States exports approximately one-quarter of the grain it produces. In 2022, 55 percent of U.S. export grain shipments left through the U.S. Gulf region; 26 percent, through the Pacific Northwest (PNW); and 19 percent, through other port regions. Seaborne grain exports arrive at export facilities by barge and rail (and farm-to-elevator truck moves), before moving to final destinations by ocean vessels. Grain exports to Mexico and Canada typically move by rail. Demand for all grain transportation modes is influenced by such factors as the amount of grain being exported, grain supply and demand issues, economic volatility, and logistical challenges that may arise from extreme weather and other events (like pandemics and war). This article considers some of these factors, as it reports the amount of grain inspected for export in 2022 and how each mode fared in the grain export market. The 2023 outlook is also examined.

Synopsis of 2022

With regard to grain transportation, 2022 was a tumultuous year, marked by numerous challenges: the resurgence of Covid-19 (and lockdowns in some parts of China); record-low water levels in the Mississippi River; the Russia-Ukraine war; worldwide inflation; and continued widespread supply-chain problems. Reflecting these challenges, a total 127.9 million metric tons (mmt) of U.S. grain was inspected for export in 2022 in all export regions: this was 9 percent less than in 2021 and 14 percent less than 2020 (fig. 1).

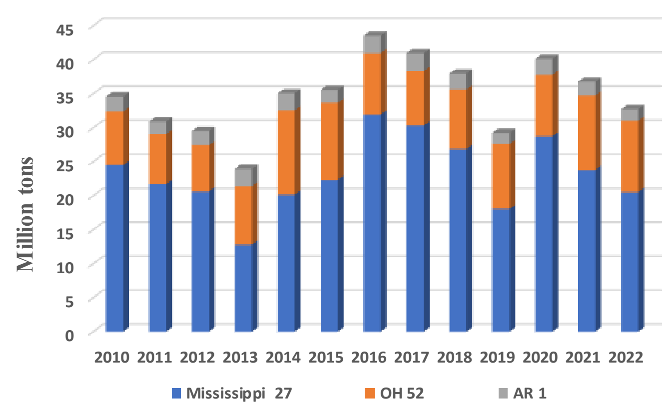
Figure 1. Total grain inspected for export



Source: USDA, Agricultural Marketing Service.

In 2022, barges moved 32.73 million tons of grain on the Mississippi River to New Orleans for export—11 percent less than 2021 and 18 percent less than 2020 (fig. 2). Additionally, in 2022, weekly barged grain movements on the Mississippi never exceeded 1 million tons. In contrast, that benchmark was surpassed five times in 2021 and seven times in 2020. The 2021-22 dip in barged grain movements was the combined outcome of severe winter weather, limited barge and labor supplies, and low water levels on the Mississippi River, which kept barges from being fully loaded.

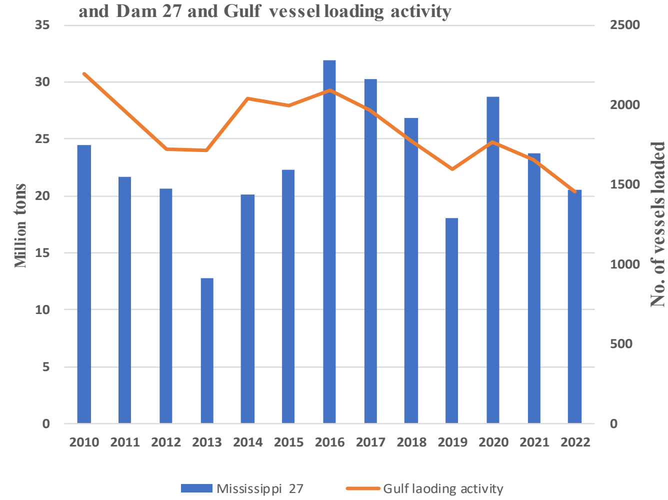
Figure 2. Total grain movements by barge



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

In 2022, the average number of oceangoing grain vessels loaded per week in the U.S. Gulf was 28, compared to 32 in 2021. Historically, the total tonnages of barged grain transiting the Mississippi River (at Lock and Dam 27) have 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 2022 (fig. 3).

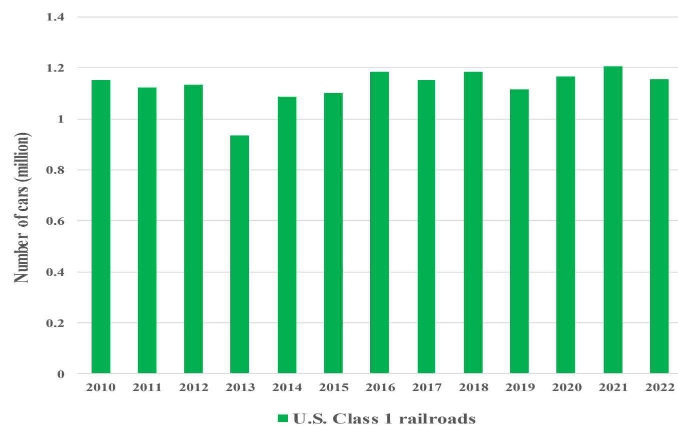
Figure 3. Grain movements by barge through Mississippi Locks and Dam 27 and Gulf vessel loading activity



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

Inundated with many service challenges, U.S. Class I railroads originated 4 percent fewer carloads of grain in 2022 than in 2021 (fig. 4). In the Pacific Northwest (PNW)—a key destination for grain exports by rail—the average number of vessels at berth per week was 13 in 2022, versus 15 in 2021.

Figure 4. Originated grain carloadings



Source: Association of American Railroads.

A Look at 2023 and Beyond

In the beginning of the year, like all other bulk items, the demand for grain transportation was constrained mainly by the typical new year holidays and Chinese Lunar year (*Transportation and Export Report* by O'Neil Commodity Consulting, January 26). As of February 16, 2023, year-to-date (YTD) grain inspected for export in all port regions was 6 percent lower than for the same period in 2022 (***GTR* table 15**).

As of February 18, 2023, YTD barged grain movements down the Mississippi River were 4 percent above the same period in 2022 (***GTR* table 9**). As of February 16, 2023, a YTD weekly average of 27 grain vessels were loaded in the U.S. Gulf, compared to 35 vessels in 2022. In PNW, a weekly average of 17 grain vessels were at berth in 2023, compared to 21 vessels in 2022. Also, as of February 11, 2023, YTD grain carloads originated by U.S. Class I railroads were 1 percent less than the same period in 2022 (***GTR* table 3**).

According to USDA's February *World Agricultural Supply and Demand Estimates (WASDE)*, total U.S. exports and domestic use of the three major grains (corn, soybeans, and wheat) are expected to fall from marketing year (MY) 2021/22 to MY 2022/23—suggesting a decrease in grain transportation for export. Additionally, outstanding (unshipped) export balances of grain (***GTR* table 11**), as of February 9, were 29 percent lower than in 2022. These data suggest demand for future grain transportation will be relatively low at least through the next few months.

However, grain transportation supply issues show some potential signs of easing. For example, the water levels on the Mississippi River have risen, and navigation conditions have returned to normal. Also, railroads have stated their intentions to hire more personnel and focus on service and volume growth, as opposed to lower operating ratios.[2] While transportation disruptions may persist, reduced demand—combined with some improvements in supply for grain transportation—could improve capacity and lessen the chance of additional disruptions in 2023. *surajudeen.olowolayemo@usda.gov*

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[1] Lock and Dam 27 (also known as "Chain of Rocks Lock and Dam")—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. Lock and Dam 27 are the southernmost locks on the Mississippi River.

[2] For example, CSX Transportation and Union Pacific Railroad recently reached agreements with unions to expand paid sick leave.

Grain Transportation Indicators

Table 1
Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Non-Shuttle	Shuttle		Gulf	Pacific
02/22/23	294	327	250	279	214	184
02/15/23	298	327	247	285	215	195

[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 due to holiday.
Source: USDA, Agricultural Marketing Service.

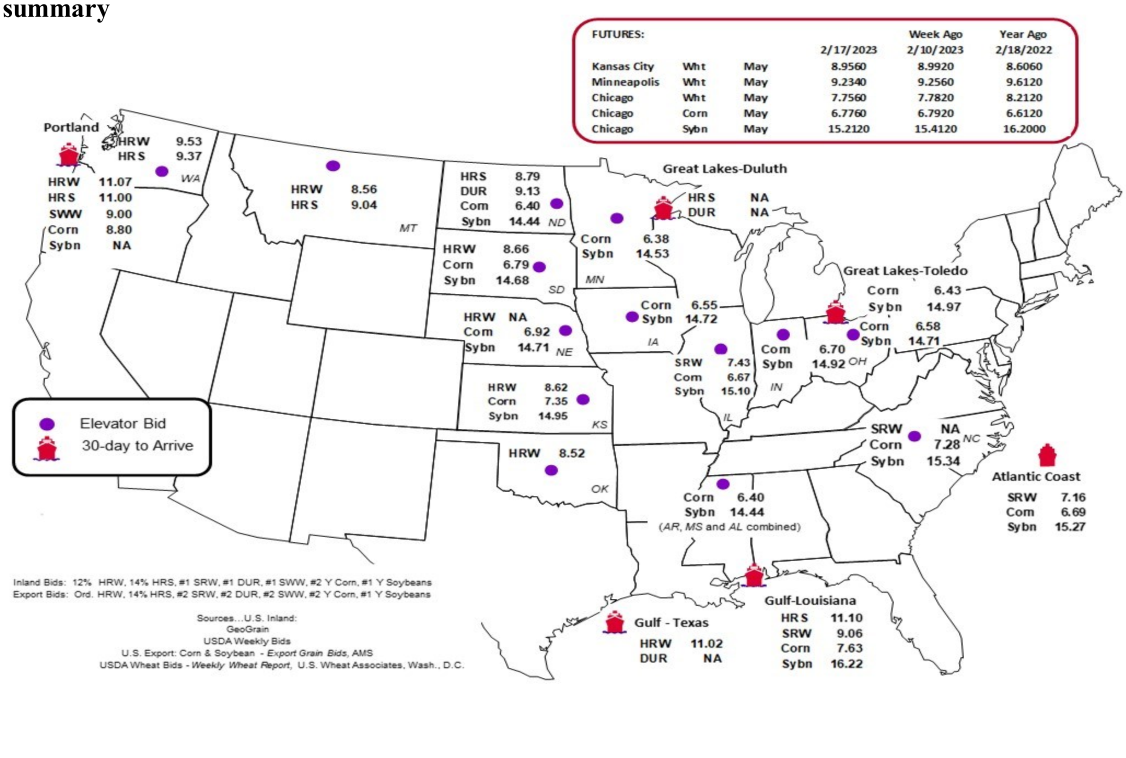
Table 2
Market Update: U.S. origins to export position price spreads ($/bushel)

Commodity	Origin–destination	2/17/2023	2/10/2023
Corn	IL–Gulf	-0.96	-1.00
Corn	NE–Gulf	-0.71	-0.72
Soybean	IA–Gulf	-1.50	-1.67
HRW	KS–Gulf	-2.40	-2.38
HRS	ND–Portland	-2.21	-2.13

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

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

For the week ending:	East		West			U.S. total	Canada	
2/11/2023	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	2,379	2,812	9,431	1,324	5,295	21,241	4,354	4,440
This week last year	2,142	2,438	11,921	1,366	6,547	24,414	3,612	4,325
2023 YTD	12,553	17,397	67,594	8,011	34,853	140,408	31,781	28,901
2022 YTD	10,912	13,464	70,981	8,308	38,796	142,461	20,080	21,091
2023 YTD as % of 2022 YTD	115	129	95	96	90	99	158	137
Last 4 weeks as % of 2022*	107	139	88	92	87	94	142	125
Last 4 weeks as % of 3-yr. avg.**	103	123	88	116	97	96	129	118
Total 2022	93,313	130,394	570,232	66,338	296,945	1,157,222	214,477	214,010

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

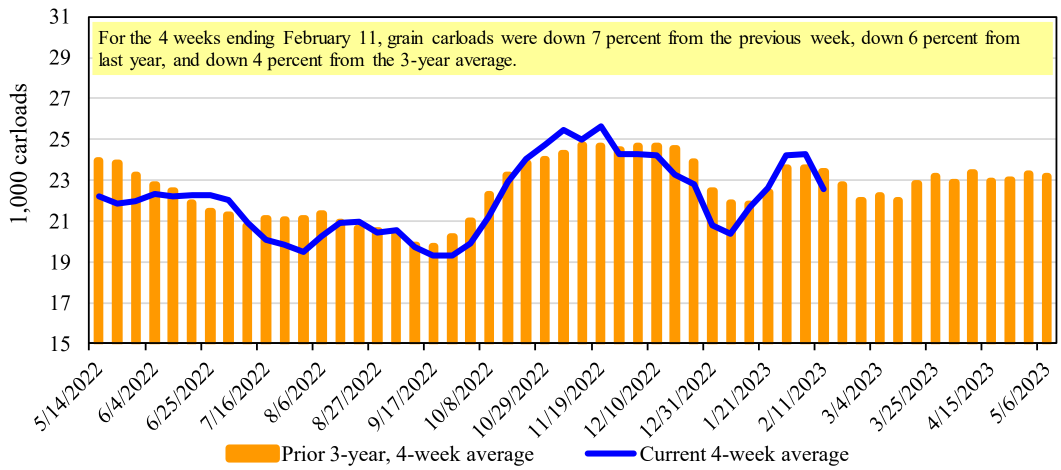
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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

Source: Association of American Railroads.

Figure 2

Total weekly U.S. Class I railroad grain carloads



Source: Association of American Railroads.

Table 4

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

For the week ending:		Delivery period							
2/16/2023		Mar-23	Mar-22	Apr-23	Apr-22	May-23	May-22	Jun-23	Jun-22
BNSF[3]	COT grain units	no offer	no bids	no offer	no bids	no offer	no bids	no offer	no bids
	COT grain single-car	no offer	0	187	0	123	0	107	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.

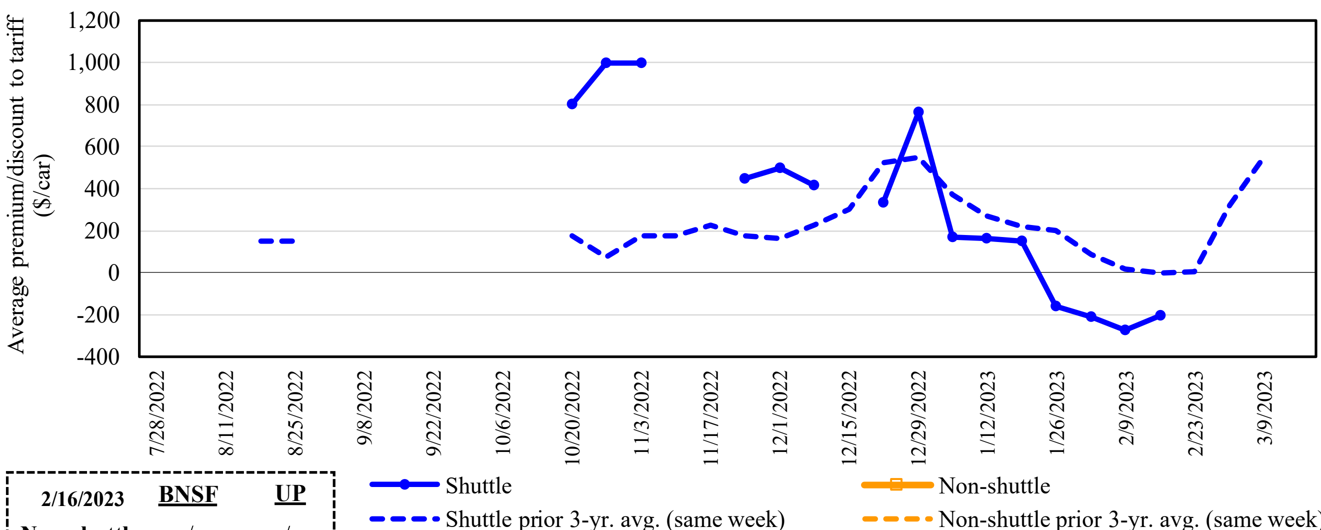
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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 3
Secondary market bids/offers for railcars to be delivered in March 2023

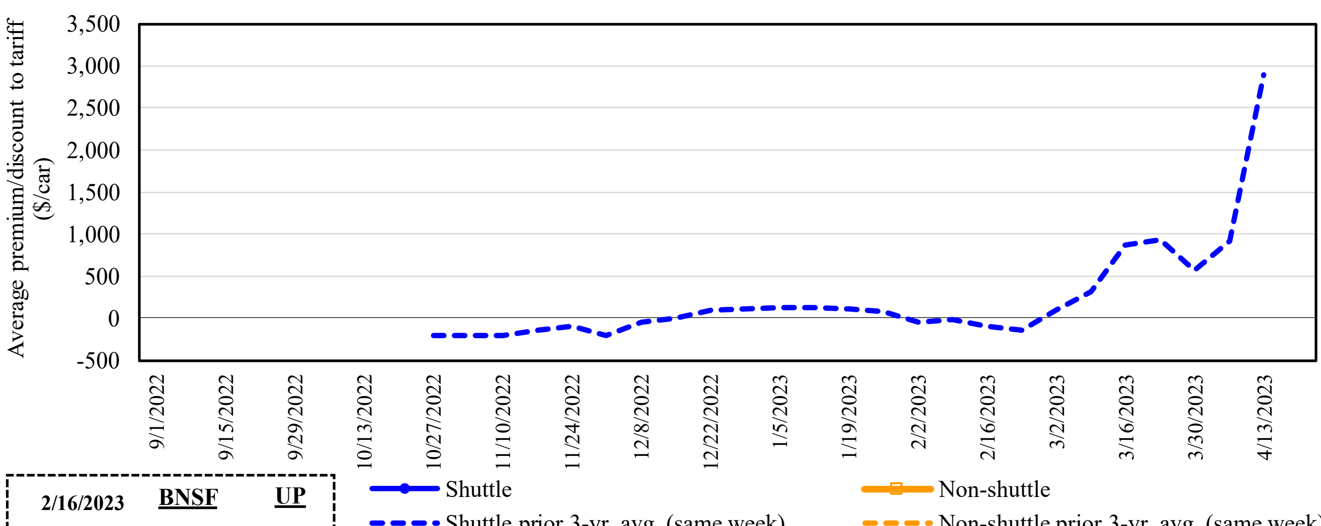


2/16/2023	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	-$200	-$206

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $72 this week and are $1,203 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 4
Secondary market bids/offers for railcars to be delivered in April 2023



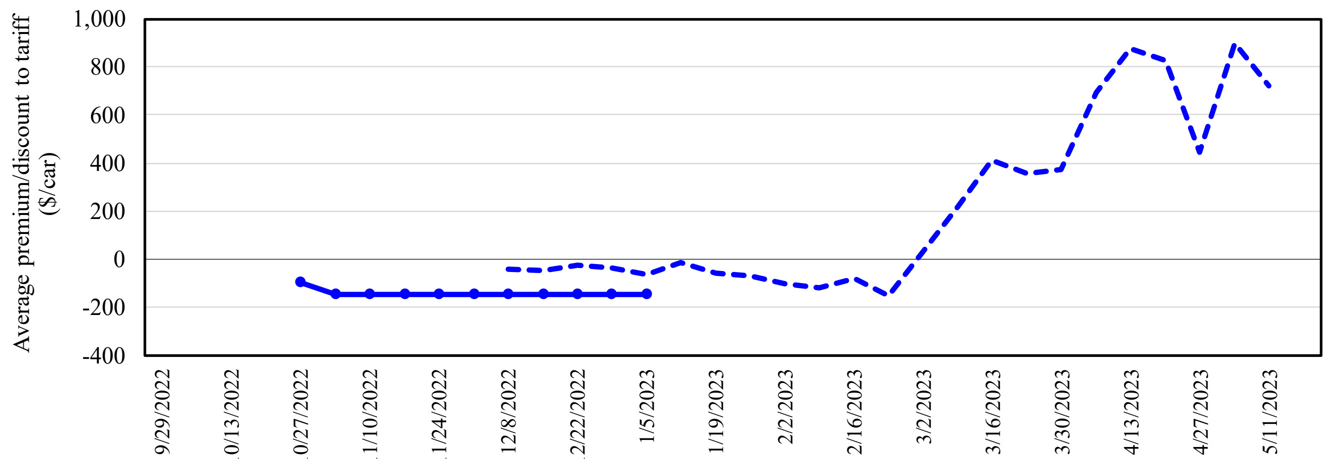
2/16/2023	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	n/a	n/a

There were no non-shuttle bids/offers this week.
There were no shuttle bids/offers this week.

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 May 2023



Shuttle — Non-shuttle — Shuttle prior 3-yr. avg. (same week) — Non-shuttle prior 3-yr. avg. (same week)

2/16/2023	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	n/a	n/a

There were no non-shuttle bids/offers this week.
There were no shuttle bids/offers this week.

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 5

Weekly secondary railcar market ($/car)[1]

For the week ending: 2/16/2023		Delivery period: Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23
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 2022	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 2022	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**(200)**	**n/a**	**n/a**	**n/a**	**n/a**	**(150)**
	Change from last week	63	n/a	n/a	n/a	n/a	0
	Change from same week 2022	(150)	n/a	n/a	n/a	n/a	0
	UP-Pool	**(206)**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	82	n/a	n/a	n/a	n/a	n/a
	Change from same week 2022	(298)	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 6

Tariff rail rates for unit and shuttle train shipments[1]

February 2023	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	$268	$39.36	$1.07	3
	Grand Forks, ND	Duluth-Superior, MN	$3,858	$110	$39.41	$1.07	8
	Wichita, KS	Los Angeles, CA	$7,490	$566	$80.00	$2.18	8
	Wichita, KS	New Orleans, LA	$4,600	$472	$50.36	$1.37	8
	Sioux Falls, SD	Galveston-Houston, TX	$7,226	$465	$76.37	$2.08	8
	Colby, KS	Galveston-Houston, TX	$4,850	$517	$53.29	$1.45	7
	Amarillo, TX	Los Angeles, CA	$5,121	$719	$58.00	$1.58	5
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$533	$45.02	$1.14	5
	Toledo, OH	Raleigh, NC	$8,551	$585	$90.72	$2.30	8
	Des Moines, IA	Davenport, IA	$2,655	$113	$27.49	$0.70	8
	Indianapolis, IN	Atlanta, GA	$6,593	$439	$69.83	$1.77	8
	Indianapolis, IN	Knoxville, TN	$5,564	$284	$58.08	$1.48	8
	Des Moines, IA	Little Rock, AR	$4,250	$332	$45.50	$1.16	9
	Des Moines, IA	Los Angeles, CA	$6,130	$966	$70.47	$1.79	10
Soybeans	Minneapolis, MN	New Orleans, LA	$3,856	$816	$46.39	$1.26	15
	Toledo, OH	Huntsville, AL	$7,037	$417	$74.02	$2.01	7
	Indianapolis, IN	Raleigh, NC	$7,843	$593	$83.77	$2.28	8
	Indianapolis, IN	Huntsville, AL	$5,689	$282	$59.29	$1.61	8
	Champaign-Urbana, IL	New Orleans, LA	$4,865	$533	$53.61	$1.46	8
Shuttle train							
Wheat	Great Falls, MT	Portland, OR	$4,393	$326	$46.86	$1.28	10
	Wichita, KS	Galveston-Houston, TX	$4,311	$253	$45.33	$1.23	2
	Chicago, IL	Albany, NY	$7,090	$552	$75.89	$2.07	9
	Grand Forks, ND	Portland, OR	$6,051	$562	$65.67	$1.79	10
	Grand Forks, ND	Galveston-Houston, TX	$5,399	$586	$59.43	$1.62	12
	Colby, KS	Portland, OR	$5,923	$847	$67.23	$1.83	4
Corn	Minneapolis, MN	Portland, OR	$5,660	$685	$63.01	$1.60	14
	Sioux Falls, SD	Tacoma, WA	$5,620	$627	$62.04	$1.58	13
	Champaign-Urbana, IL	New Orleans, LA	$4,170	$533	$46.70	$1.19	11
	Lincoln, NE	Galveston-Houston, TX	$4,360	$366	$46.93	$1.19	13
	Des Moines, IA	Amarillo, TX	$4,670	$417	$50.52	$1.28	9
	Minneapolis, MN	Tacoma, WA	$5,660	$679	$62.95	$1.60	14
	Council Bluffs, IA	Stockton, CA	$5,580	$703	$62.39	$1.58	14
Soybeans	Sioux Falls, SD	Tacoma, WA	$6,350	$627	$69.29	$1.89	12
	Minneapolis, MN	Portland, OR	$6,400	$685	$70.36	$1.91	13
	Fargo, ND	Tacoma, WA	$6,250	$558	$67.60	$1.84	12
	Council Bluffs, IA	New Orleans, LA	$5,095	$615	$56.70	$1.54	9
	Toledo, OH	Huntsville, AL	$5,277	$417	$56.54	$1.54	9
	Grand Island, NE	Portland, OR	$5,730	$868	$65.52	$1.78	14

[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 7

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

Date: December 2021					Tariff rate plus fuel surcharge per:		Percent change[4]
Commodity	**Origin state**	**Destination region**	**Tariff rate per car[1]**	**Fuel surcharge per car[2]**	**metric ton[3]**	**bushel[3]**	**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.

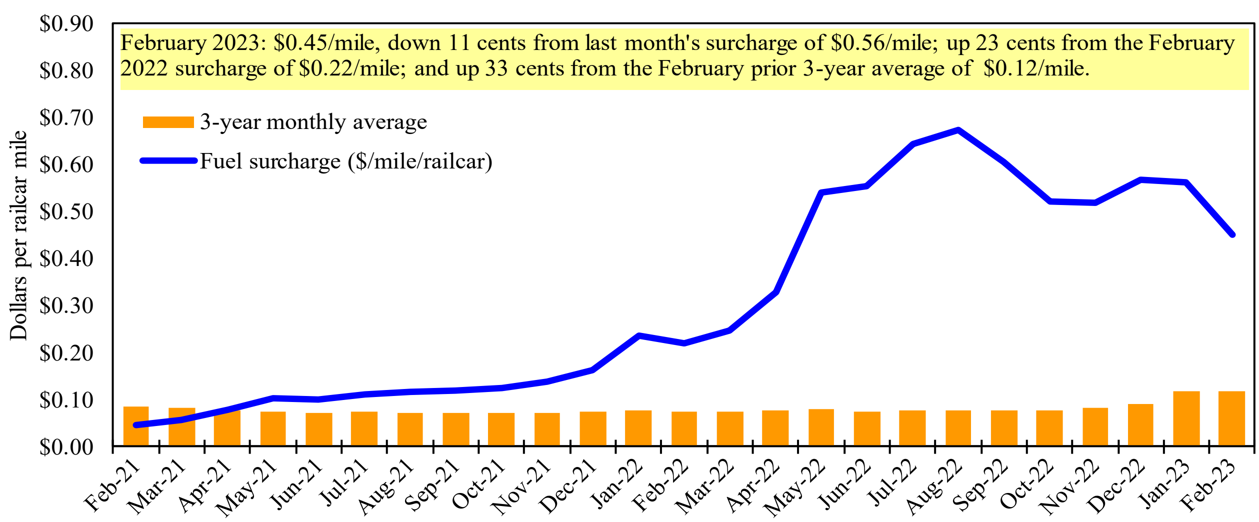
[4]Percentage change calculated using tariff rate plus fuel surchage; Y/Y = year over year.

[5] As of January 1, 2022, both BNSF and Union Pacific changed their billing and reporting of rates to Mexico. As we incorporate the change, Table 7 updates will be delayed.

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

Figure 6

Railroad fuel surcharges, North American weighted average[1]



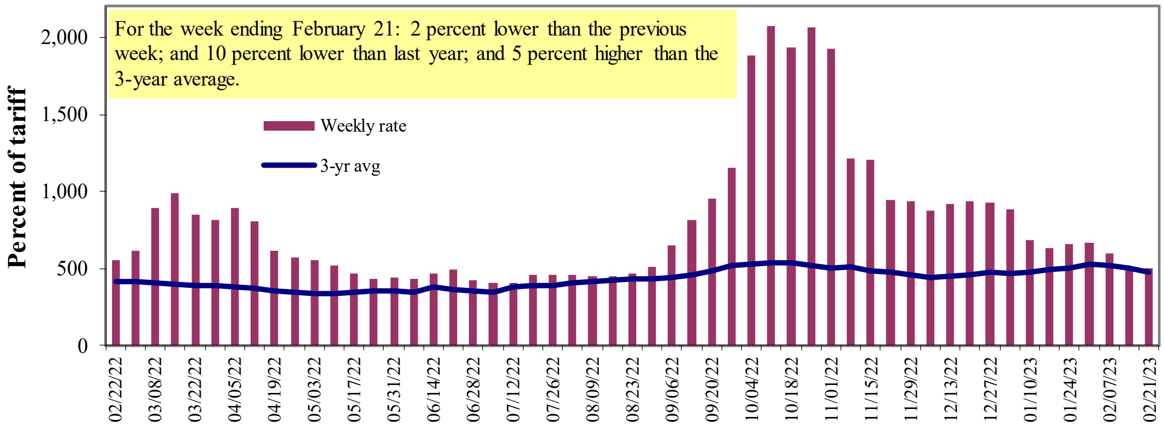
[1] Weighted by each Class I railroad's proportion of grain traffic for the prior year.

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

Barge Transportation

Figure 7

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 8

Weekly barge freight rates: Southbound only

		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	2/21/2023	-	-	502	375	453	453	305
	2/14/2023	-	-	513	388	488	488	316
$/ton	2/21/2023	-	-	23.29	14.96	21.25	18.30	9.58
	2/14/2023	-	-	23.80	15.48	22.89	19.72	9.92
Current week % change from the same week:								
	Last year	-	-	-10	-20	-10	-10	-26
	3-year avg. [2]	-	-	5	5	14	14	-3
Rate[1]	March	-	550	503	373	448	448	299
	May	541	512	493	363	420	420	298

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

Figure 8
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

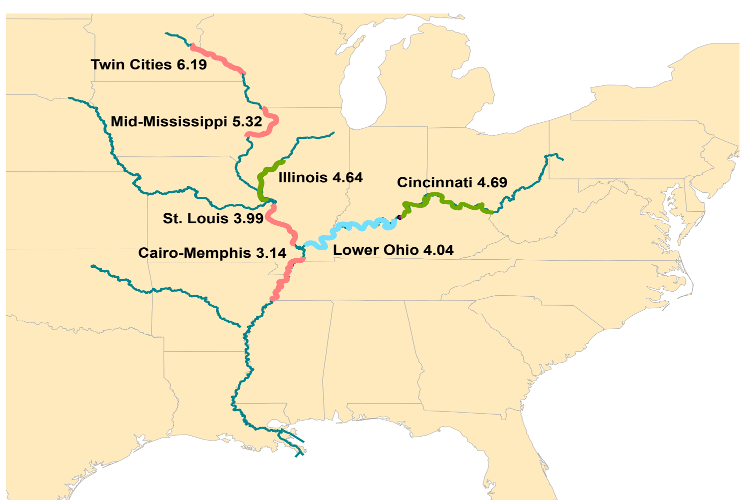
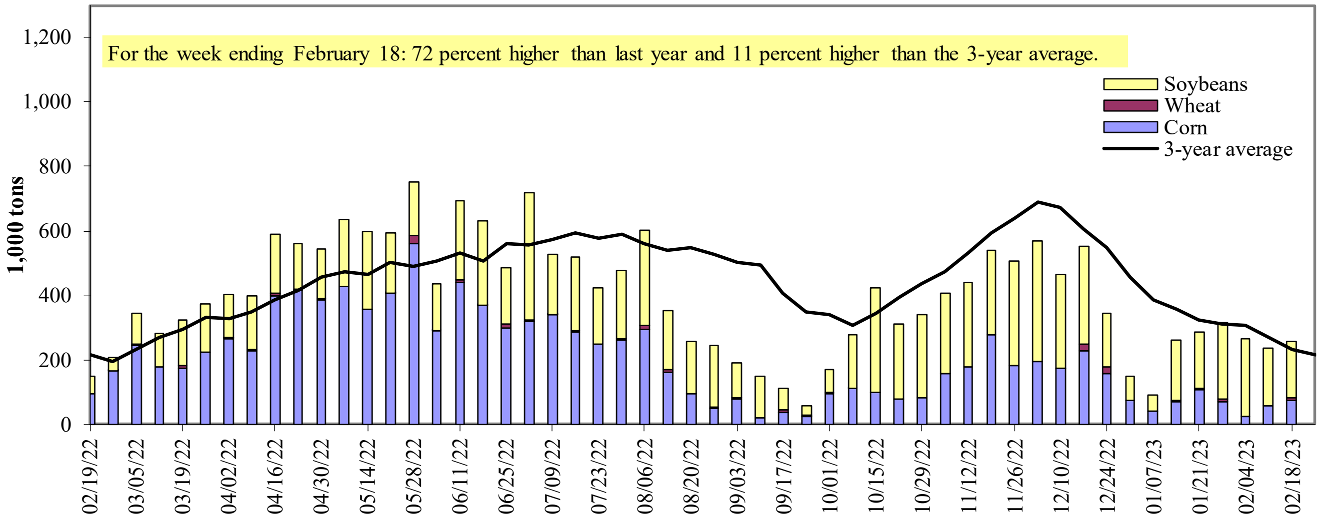


Figure 9

Barge movements on the Mississippi River[1] (Locks 27 - Granite City, IL)



[1] The 3-year average is a 4-week moving average.

Note: The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.

Source: U.S. Army Corps of Engineers.

Table 9

Barge grain movements (1,000 tons)

For the week ending 02/18/2023	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	0	0	0	0	0
Winfield, MO (L25)	0	0	0	0	0
Alton, IL (L26)	62	0	171	0	233
Granite City, IL (L27)	75	6	177	0	259
Illinois River (La Grange)	46	0	128	0	175
Ohio River (Olmsted)	290	0	124	2	416
Arkansas River (L1)	0	32	8	0	41
Weekly total - 2023	365	39	310	2	715
Weekly total - 2022	364	16	160	1	540
2023 YTD[1]	1,343	145	2,468	64	4,019
2022 YTD[1]	1,898	166	1,759	27	3,849
2023 as % of 2022 YTD	71	87	140	240	104
Last 4 weeks as % of 2022[2]	76	135	175	128	120
Total 2022	16,437	1,594	14,464	232	32,727

[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.

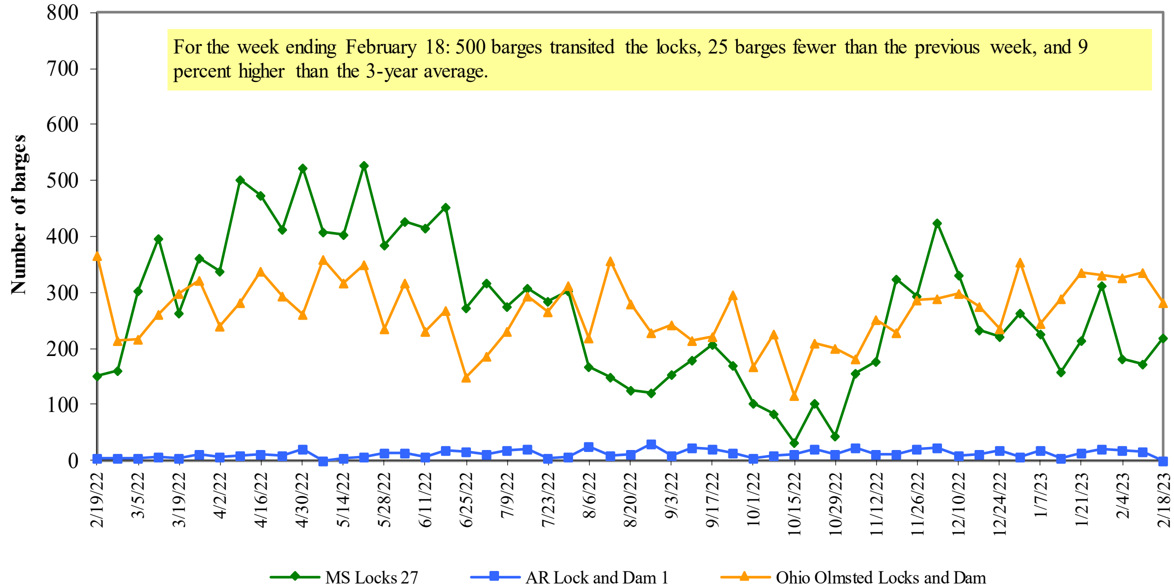
[2] As a percent of same period in 2022.

Note: L (as in "L15") refers to a lock, locks, or locks and dam facility. The U.S. Army Corps of Engineers has recently migrated its lock and vessel database database and has noted the latest data may be revised in coming weeks.

Source: U.S. Army Corps of Engineers.

Figure 10

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

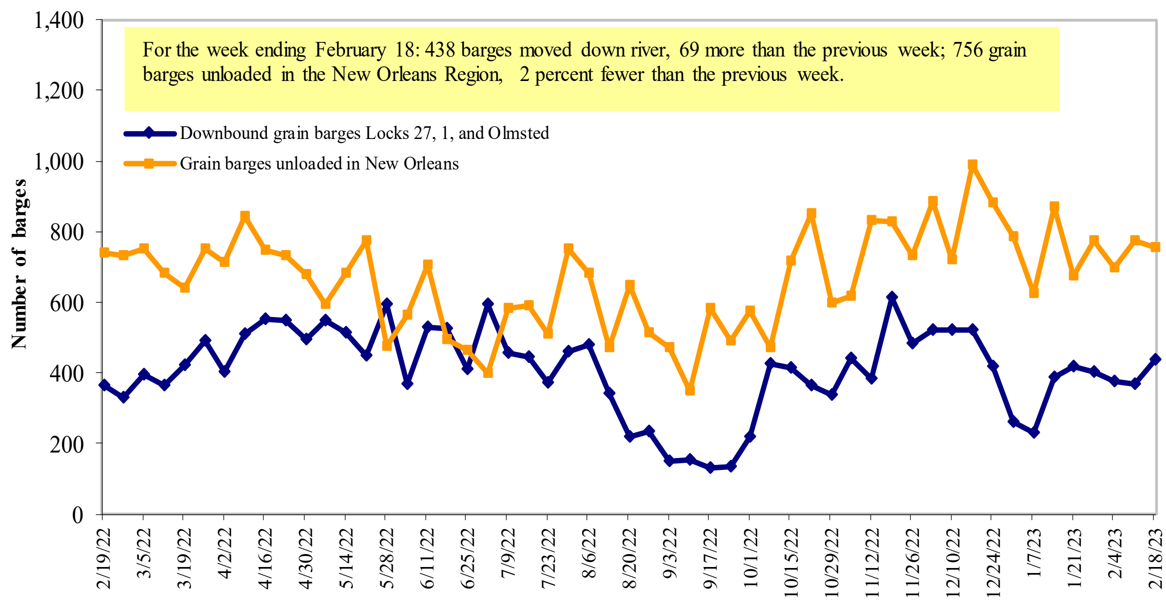


Note: The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.

Source: U.S. Army Corps of Engineers.

Figure 11

Grain barges for export in New Orleans region



Note: Olmsted = Olmsted Locks and Dam. The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.

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 10

Retail on-highway diesel prices, week ending 2/20/2023 (U.S. $/gallon)

Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	4.572	-0.081	0.460
	New England	4.961	-0.093	0.885
	Central Atlantic	4.870	-0.078	0.592
	Lower Atlantic	4.421	-0.082	0.407
II	Midwest	4.194	-0.080	0.289
III	Gulf Coast	4.100	-0.050	0.270
IV	Rocky Mountain	4.621	-0.039	0.690
V	West Coast	4.972	-0.061	0.293
	West Coast less California	4.593	-0.081	0.337
	California	5.407	-0.038	0.356
Total	United States	4.376	-0.068	0.321

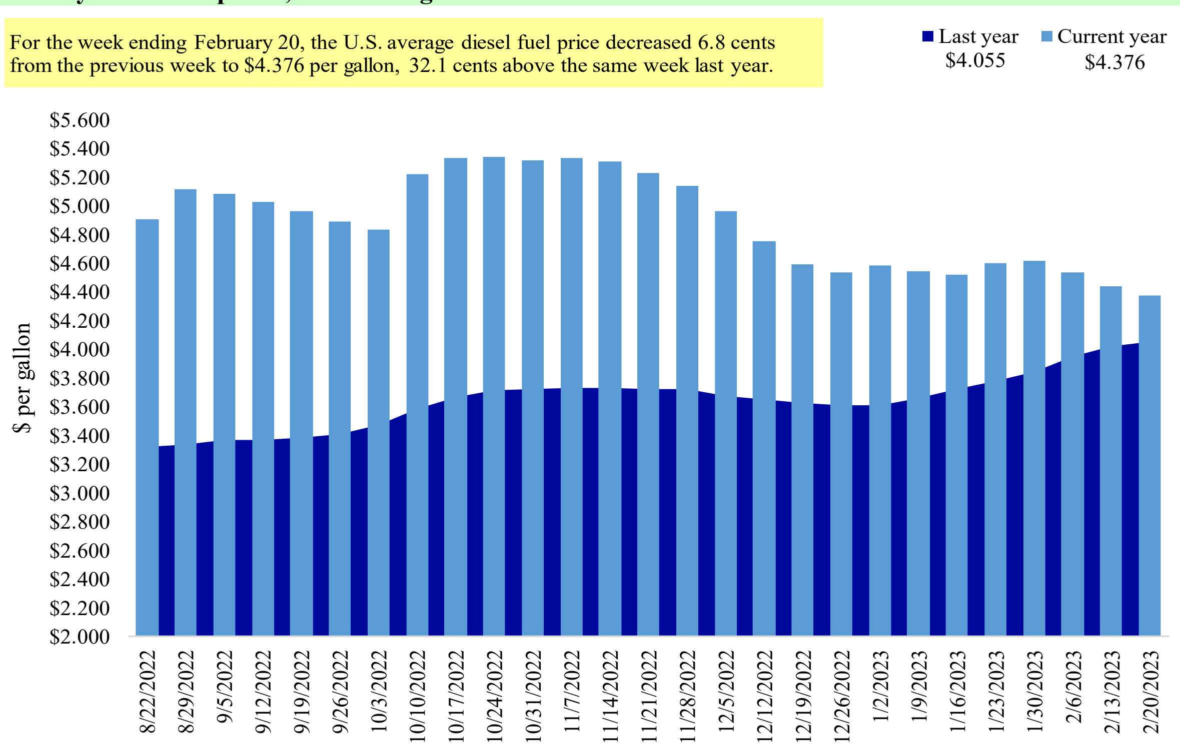
[1]Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

Note: On June 13, the Energy Information Administration implemented a new methodology to estimate weekly on-highway diesel fuel prices.

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

Figure 12

Weekly diesel fuel prices, U.S. average



Note: On June 13, the Energy Information Administration implemented a new methodology to estimate weekly on-highway diesel fuel prices.

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

Grain Exports

Table 11

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

For the week ending	HRW	SRW	HRS	SWW	DUR	All wheat	Corn	Soybeans	Total
	Wheat								
Export balances[1]									
2/9/2023	748	608	1,051	1,058	84	3,549	14,141	8,924	26,613
This week year ago	1,825	611	1,120	618	56	4,230	24,200	9,312	37,741
Cumulative exports-marketing year[2]									
2022/23 YTD	3,761	1,984	3,897	3,092	229	12,963	13,676	39,167	65,806
2021/22 YTD	5,141	1,963	3,554	2,464	113	13,235	22,333	38,765	74,333
YTD 2022/23 as % of 2021/22	73	101	110	125	202	98	61	101	89
Last 4 wks. as % of same period 2021/22	49	110	109	189	191	96	55	118	75
Total 2021/22	7,172	2,786	5,254	3,261	196	18,669	59,764	57,189	135,622
Total 2020/21	8,422	1,790	7,500	6,438	656	24,807	66,958	60,571	152,335

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

[2] Shipped export sales to date.

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 12

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

For the week ending 2/9/2023	Total commitments[2] 2022/23 current MY	2021/22 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
	1,000 mt -			
Mexico	12,264	13,500	(9)	15,227
China	4,481	12,075	(63)	12,616
Japan	2,537	6,552	(61)	10,273
Columbia	1,046	2,928	(64)	4,398
Korea	266	83	221	2,563
Top 5 importers	**20,594**	**35,138**	(41)	**45,077**
Total U.S. corn export sales	**27,817**	**46,533**	(40)	**56,665**
% of projected exports	57%	74%		
Change from prior week[2]	**1,025**	**820**		
Top 5 importers' share of U.S. corn export sales	74%	76%		80%
USDA forecast February 2023	**48,982**	**62,875**	(22)	
Corn use for ethanol USDA forecast, February 2023	**133,350**	**135,281**	(1)	

[1]Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2021/22; 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 13

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

For the week ending 2/9/2023	Total commitments[2] 2022/23 current MY	2021/22 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
				- 1,000 mt -
China	29,826	25,918	15	27,283
Mexico	3,923	4,450	(12)	4,929
Egypt	836	2,370	(65)	3,553
Japan	1,672	1,589	5	2,266
Indonesia	876	1,038	(16)	2,116
Top 5 importers	**37,132**	**35,365**	5	**40,147**
Total U.S. soybean export sales	**48,090**	**48,077**	0	**54,231**
% of projected exports	89%	82%		
change from prior week[2]	**513**	**1,317**		
Top 5 importers' share of U.S. soybean export sales	77%	74%		**74%**
USDA forecast, February 2023	**54,223**	**58,801**	(8)	

[1]Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2021/22; 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 14

Top 10 importers[1] of all U.S. wheat

For the week ending 2/9/2023	Total Commitments[2] 2022/23 current MY	2021/22 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
		1,000 mt -		- 1,000 mt -
Mexico	2,832	3,014	(6)	3,566
Philippines	1,805	2,548	(29)	2,985
Japan	1,930	2,063	(6)	2,453
China	750	848	(12)	1,537
Nigeria	739	1,861	(60)	1,528
Korea	1,132	1,107	2	1,459
Taiwan	692	767	(10)	1,106
Indonesia	299	67	346	711
Thailand	593	536	11	703
Colombia	461	580	(20)	621
Top 10 importers	**11,234**	**13,388**	(16)	**16,669**
Total U.S. wheat export sales	**16,512**	**17,465**	(5)	**22,763**
% of projected exports	78%	80%		
change from prior week[2]	**210**	**118**		
Top 10 importers' share of U.S. wheat export sales	68%	77%		73%
USDA forecast, February 2023	**21,117**	**21,798**	(3)	

[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 15

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

Port regions	For the week ending 02/16/23	Previous week*	Current week as % of previous	2023 YTD*	2022 YTD*	2023 YTD as % of 2022 YTD	Last 4-weeks as % of: Last year	Prior 3-yr. avg.	2022 total*
Pacific Northwest									
Wheat	254	298	85	1,812	1,586	114	114	107	9,836
Corn	0	1	n/a	485	1,600	30	15	21	9,615
Soybeans	429	346	124	3,227	2,748	117	126	143	14,178
Total	**683**	**645**	**106**	**5,525**	**5,935**	**93**	**92**	**103**	**33,629**
Mississippi Gulf									
Wheat	61	43	143	334	523	64	102	117	4,053
Corn	399	345	116	2,128	5,330	40	38	43	30,781
Soybeans	990	1,156	86	7,382	5,089	145	170	161	31,283
Total	**1,449**	**1,543**	**94**	**9,844**	**10,942**	**90**	**97**	**100**	**66,116**
Texas Gulf									
Wheat	25	57	43	234	498	47	50	71	3,421
Corn	24	0	n/a	52	114	45	30	40	648
Soybeans	0	0	n/a	52	0	n/a	0	0	685
Total	**48**	**57**	**85**	**338**	**612**	**55**	**46**	**52**	**4,754**
Interior									
Wheat	42	60	70	392	362	108	98	119	2,912
Corn	185	208	89	1,253	1,196	105	107	121	8,961
Soybeans	101	166	61	1,254	1,061	118	105	113	7,109
Total	**328**	**434**	**76**	**2,899**	**2,620**	**111**	**105**	**117**	**18,982**
Great Lakes									
Wheat	12	12	100	27	6	421	362	622	395
Corn	0	0	n/a	0	0	n/a	n/a	n/a	158
Soybeans	0	0	n/a	2	0	n/a	n/a	n/a	760
Total	**12**	**12**	**100**	**29**	**6**	**455**	**362**	**622**	**1,312**
Atlantic									
Wheat	0	28	0	35	4	781	n/a	n/a	169
Corn	5	0	n/a	21	25	83	117	350	309
Soybeans	141	59	239	658	486	136	117	141	2,867
Total	**146**	**87**	**167**	**714**	**515**	**139**	**127**	**154**	**3,345**
U.S. total from ports*									
Wheat	393	497	79	2,834	2,980	95	102	108	20,786
Corn	612	553	111	3,939	8,266	48	43	50	50,471
Soybeans	1,661	1,728	96	12,575	9,384	134	145	147	56,882
Total	**2,666**	**2,778**	**96**	**19,349**	**20,630**	**94**	**96**	**103**	**128,139**

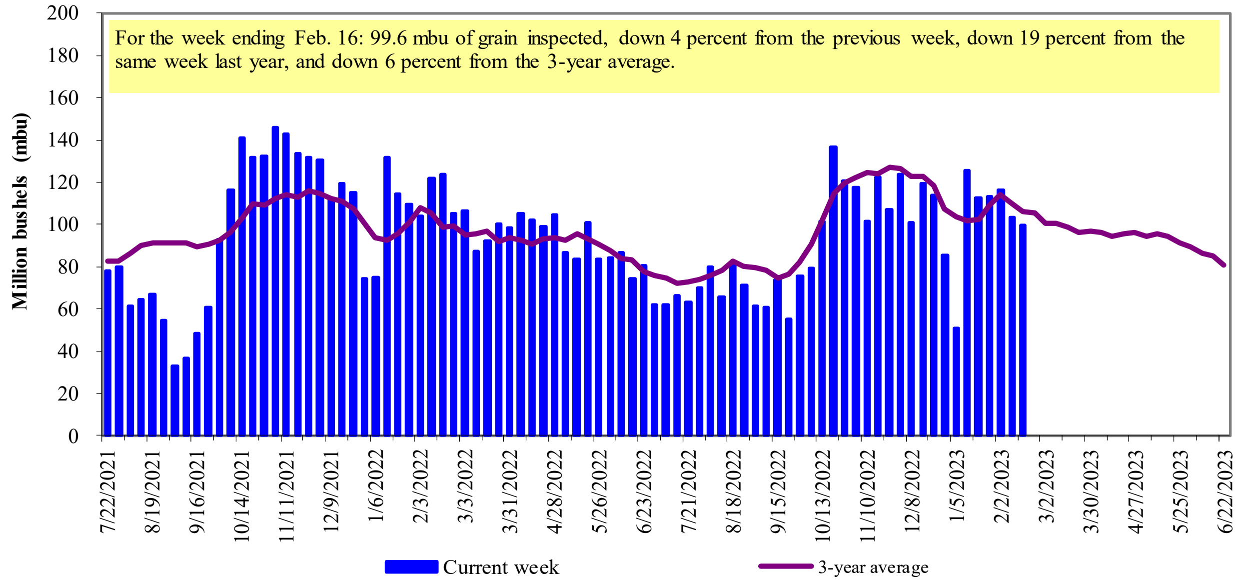
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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 13

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

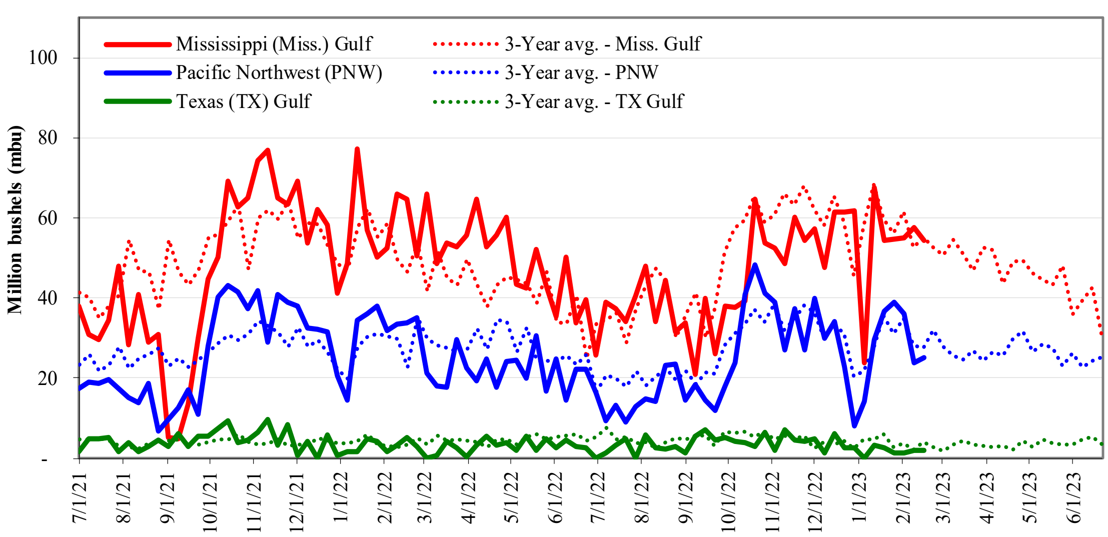


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 14

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



Week ending 02/16/23 inspections (mbu):		Percent change	MS Gulf	TX	U.S. Gulf	PNW
MS Gulf:	54.3	Last wk:	down 6	down 12	down 6	up 6
PNW:	25.1	Last Year (same wk):	down 16	down 65	down 20	down 26
TX Gulf:	1.8	3-yr avg. (4-wk. mov. Avg):	down 4	down 42	down 6	down 18

Source: USDA, Federal Grain Inspection Service.

Ocean Transportation

Table 16

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

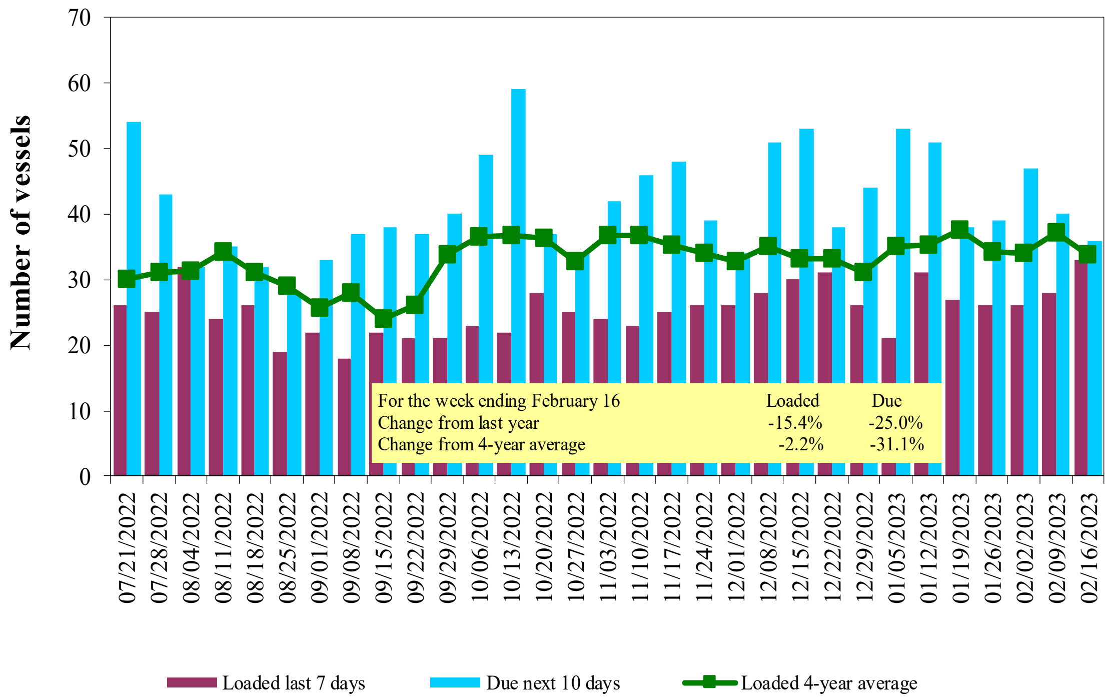
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
2/16/2023	22	33	36	12
2/9/2023	24	28	40	13
2022 range	(14…61)	(18…39)	(28...62)	(5…23)
2022 average	30	28	44	13

Note: The data is voluntarily collected and may not be complete.

Source: USDA, Agricultural Marketing Service.

Figure 15

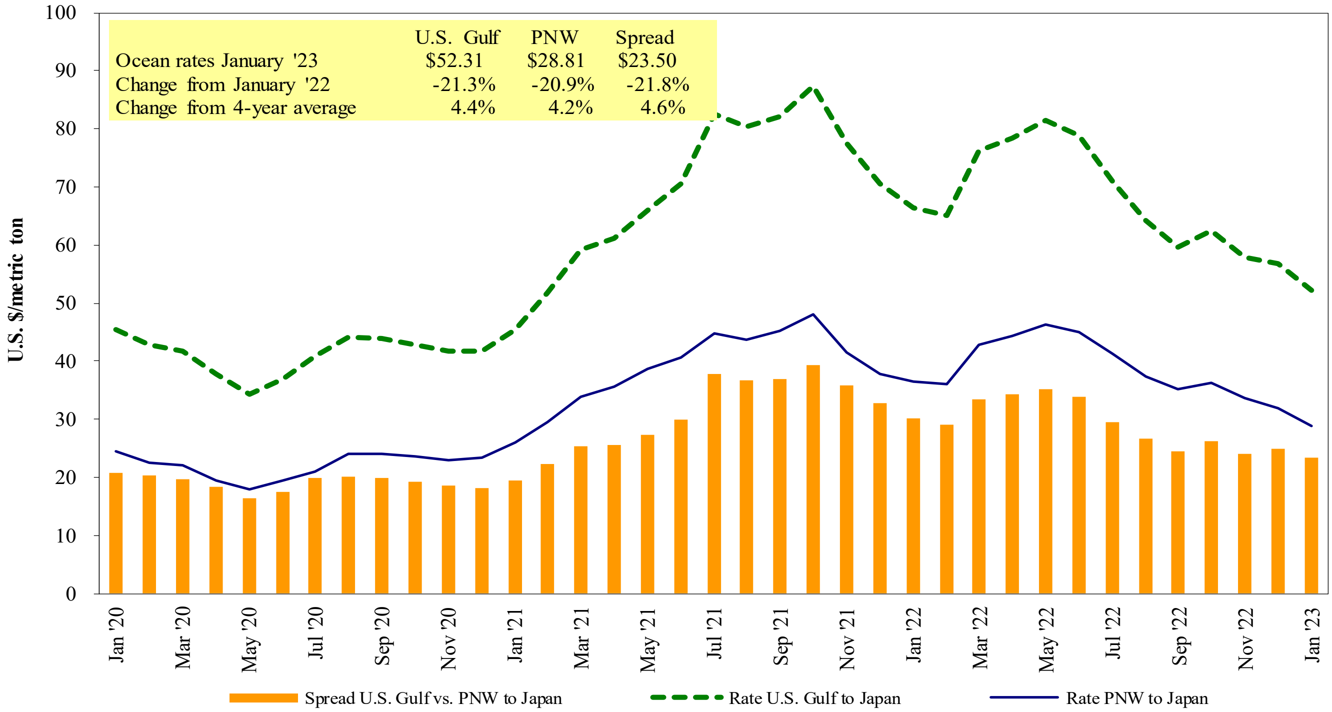
U.S. Gulf[1] vessel loading activity



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

Figure 16

Grain vessel rates, U.S. to Japan



Note: PNW = Pacific Northwest.

Source: O'Neil Commodity Consulting.

Table 17

Ocean freight rates for selected shipments, week ending 02/18/2023

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	Japan	Heavy grain	Nov 1/10, 2022	50,000	79.25
U.S. Gulf	Japan	Heavy grain	Jul 20/30, 2022	50,000	81.50
U.S. Gulf	Japan	Heavy grain	Jun 1/10, 2022	50,000	89.65
U.S. Gulf	Japan	Heavy grain	May 1/20, 2022	50,000	78.90
U.S. Gulf	S. China	Corn	Aug 1/10, 2022	68,000	71.00
U.S. Gulf	Kenya	Sorghum	Feb 15/25, 2023	22,820	63.30*
U.S. Gulf	Djibouti	Wheat	Nov 5/15, 2022	22,500	102.88*
U.S. Gulf	S. Korea	Heavy grain	Jun 1/Jul, 2022	55,000	82.75
WC US	Japan	Wheat	Feb 1/Mar 1, 2023	34,500	47.75
Brazil	China	Heavy grain	Feb 4/11	63,000	36.00
Brazil	N. China	Heavy grain	Mar 18/27, 2022	64,000	56.85
Argentina	Taiwan	Corn	May 1/Jun, 2022	65,000	85.00
Australia	Vietnam	Heavy grain	Feb 24/Apr 9, 2023	60,000	20.80

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

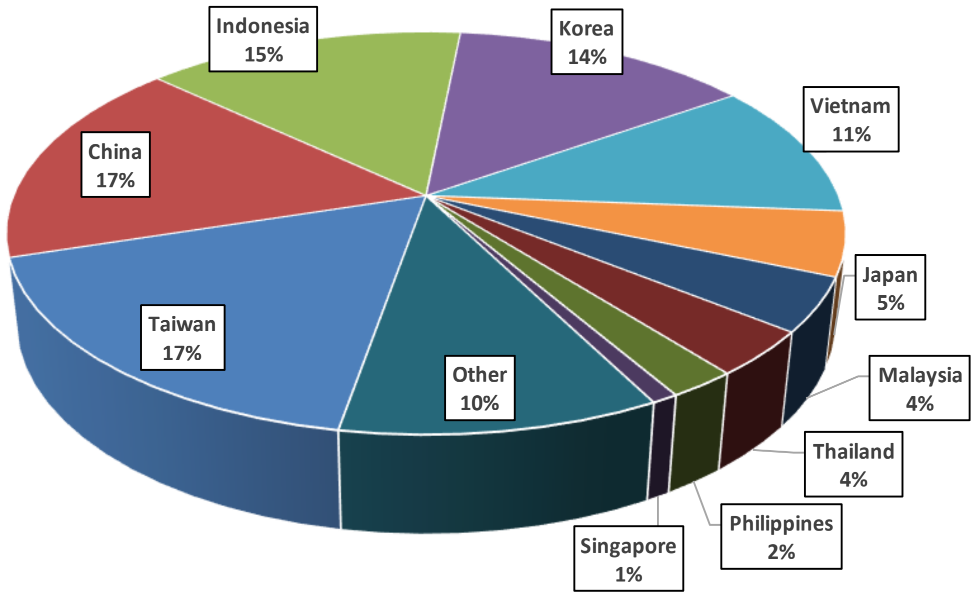
Note: Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), free on board (F.O.B), except where otherwise indicated; op = option.

Source: Maritime Research, Inc.

In 2020, containers were used to transport 10 percent of total U.S. waterborne grain exports. Approximately 66 percent of U.S. waterborne grain exports in 2020 went to Asia, of which 14 percent were moved in containers. Approximately 95 percent of U.S. waterborne containerized grain exports were destined for Asia.

Figure 17

Top 10 destination markets for U.S. containerized grain exports, Jan-Nov 2022

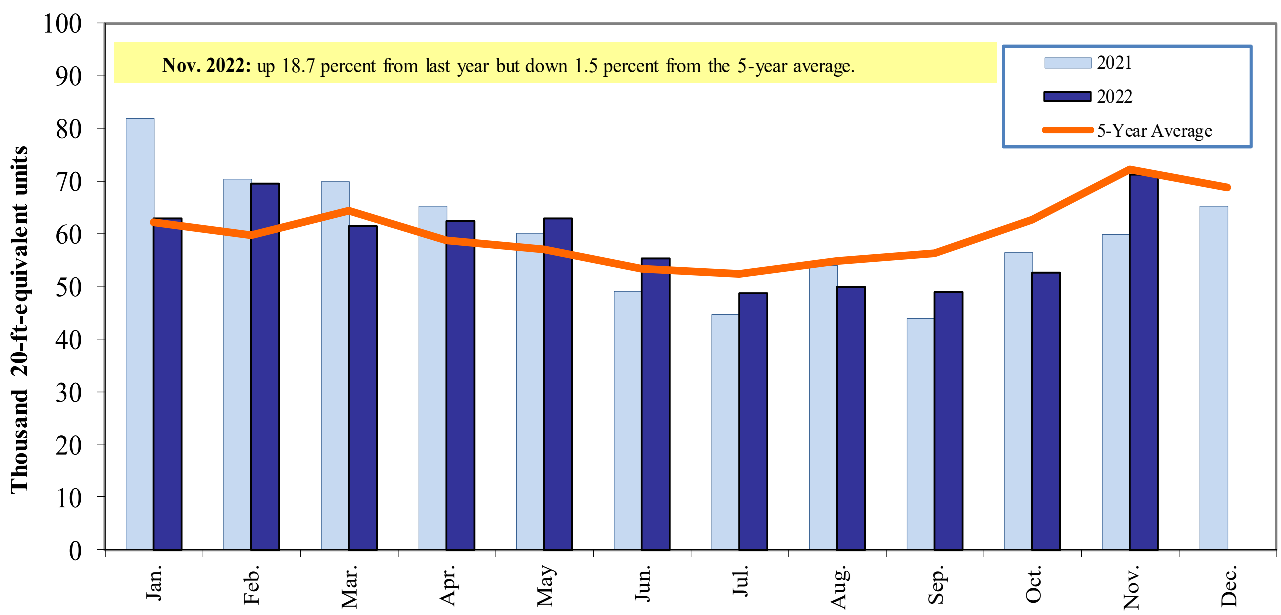


Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: '1001', '100190', '1002', '100200', '1003', '100300', '1004', '100400', '1005', '100590', '1007', '100700', '110100', '1102', '110220', '110290', '1201', '120100', '120190', '120810', '230210', '230310', '230330', '2304', and '230990'.

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

Figure 18

Monthly shipments of U.S. containerized grain exports



Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: '1001', '100190', '1002', '100200', '1003', '100300', '1004', '100400', '1005', '100590', '1007', '100700', '110100', '1102', '110220', '110290', '1201', '120100', '120190', '120810', '230210', '230310', '230330', '2304', and '230990'.

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

Contacts and Links

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