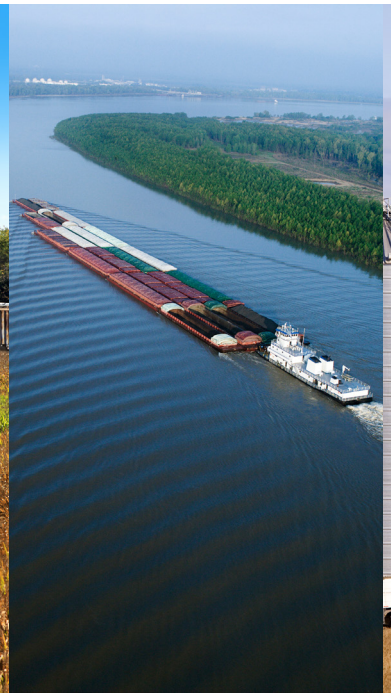
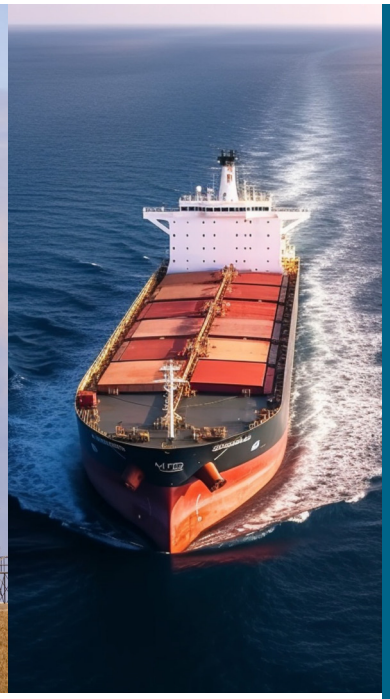
USDA Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE



Grain Transportation Report

Contents

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Panama Canal Increases Daily Transit Slots. By March 25, the Panama Canal Authority (PCA) will increase its maximum allowable daily transits in the Panamax Locks from 17 to 20. (PCA has maintained its maximum allowable daily transits for the Neopanamax Locks at 7—resulting in 27 total daily transits.)

Since at least mid-October 2023, bulk grain vessels originating in the U.S. Gulf have avoided the Panama Canal, because of PCA restrictions. Likewise, since mid-December 2023 carriers have avoided the Suez Canal, because of conflict in the Red Sea. Instead, to reach East Asian buyers, most grain vessels persist in routing around Africa (*Grain Transportation Report (GTR), January 18, 2024*).

Although Panama is currently in its "dry season," the "rainy season" typically begins in April or May. If rain returns in the coming months, PCA has stated it will progressively raise the number of daily transit slots to about 36 daily transits—close to the long-term average (GTR, February 15, 2024, fourth highlight).

Container Shipping Approaches Maximum Capacity. At S&P Global's annual Transpacific Maritime Conference (TPM 24) last week, shipping executives spoke about how the Red Sea conflict has affected containerized ocean shipping. To avoid the Red Sea's dangers, shipping lines have rerouted around the southern tip of Africa since mid-December 2023. This extra mileage increases transit time and operational costs; puts upward pressure on freight rates; and forces carriers to use every possible vessel to maintain weekly service in major trade lanes.

At TPM 24, one chief executive officer (CEO) of a supply-chain consulting firm described the situation as a "challenge," but not a "crisis." The ocean container carriers entered 2024 with a surplus of vessel capacity that was quickly absorbed by the challenges currently facing the system. The same CEO noted, "We are at maximum capacity right now. Another major problem could launch us into pandemic-like problems."

On average, approximately 9 percent of U.S. grain exports are moved in containers each year—of that amount, distillers' dried grains and soybeans make up the majority.

Diesel Price Drops for 3 Consecutive Weeks. For the week ending March 11, the U.S. average diesel fuel price fell 1.8 cents, from the previous week, to $4.004 per gallon—24.3 cents below the same week last year. From the week ending February 19 to the week ending March 11, the U.S. average diesel price dropped 10.5 cents per gallon. The current diesel price is below $4 per gallon in the Midwest ($3.913), the Gulf Coast ($3.702) and the Rocky Mountain region ($3.992).

According to the Energy Information Administration's (EIA's) February *Short-Term Energy Outlook*, retail on-highway diesel prices per gallon are expected to average $4.01 in 2024—down 20 cents from 2023, but up 9 cents from EIA's February forecast.

DOE and EPA Offer Funding To Advance Biofuels. An agreement between the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA) will make available up to $9.4 million in funding for developing advanced biofuels. Funded by the Inflation Reduction Act of 2022, the grants will support projects that improve the performance and reduce the cost of biofuel production technologies; expand production systems in partnership with industry; and accelerate the Nation's "bioeconomy."

According to DOE, one or more financial assistance awards will be in the form of cooperative agreements lasting approximately 36 months.

Entities eligible for funding include domestic businesses, educational institutions, and nonprofits. Grant applications should explain how proposed projects meet EPA's Renewable Fuel Standard definition of an advanced biofuel. The "concept paper" deadline is 5 pm ET on March 22, and full applications are due at 5 pm ET on May 24.

Export Sales

For the week ending February 29, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2023/24 totaled 29.04 million metric tons (mmt), down 3 percent from last week and up 20 percent from the same time last year.

Net **corn export sales** for MY 2023/24 were 1.11 mmt, up 3 percent from last week. Net **soybean export sales** were 0.61 mmt, up 285 percent from last week. Net weekly **wheat export sales** were 0.27 mmt, down 17 percent from last week.

Rail

U.S. Class I railroads originated 23,918 **grain carloads** during the week ending March 2. This was an 8-percent decrease from the previous week, 6 percent more than last year, and 8 percent fewer than the 3-year average.

Average March **shuttle secondary railcar bids/offers** (per car) were $1,577 above tariff for the week ending March 7. This was $602 more than last week and $1,736 more than this week last year. Average non-shuttle secondary railcar bids/offers per car were $800 above tariff. This was $183 more than last week and $763 more than this week last year.

Barge

For the week ending March 9, **barged grain movements** totaled 593,000 tons. This was 38 percent more than the previous week and 35 percent more than the same period last year.

For the week ending March 9, 373 grain barges **moved down river**—96 more than last week. There were 621 grain barges **unloaded** in the New Orleans region, 15 percent fewer than last week.

Ocean

For the week ending March 7, 18 **oceangoing grain vessels** were loaded in the Gulf—40 percent fewer than the same period last year. Within the next 10 days (starting March 8), 31 vessels were expected to be loaded—33 percent fewer than the same period last year.

As of March 7, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $60.25. This was 2 percent more than the previous week. The rate from the Pacific Northwest to Japan was $33.00 per mt, 3 percent more than the previous week.

Extreme Low Water in the Mississippi River System: A Look at What Changed From 2022 to 2023

In recent years, extreme weather on the Mississippi River System (MRS) caused major disruptions for barge transportation. In 2022 and 2023, abnormally high-water levels from spring floods were followed by historically low water levels from drought. In both years, too, the drought began in the summer and did not begin to subside until early winter.

Yet, despite the similar weather conditions and MRS water levels in 2022 and 2023, MRS barged grain movements and spot rates between the 2 years differed widely. This article gives a brief overview of the 2 years and explores reasons for the differences in outcomes.

Background

2022. In spring 2022, high water levels on the Ohio River and Lower Mississippi River reduced barge supply by 12-16 percent from the prior 5-year average. Because of the low barge supply, grain shippers had to compete with shippers of other commodities (coal and steel) for available barges, and spot freight rates rose above their prior 5-year average.

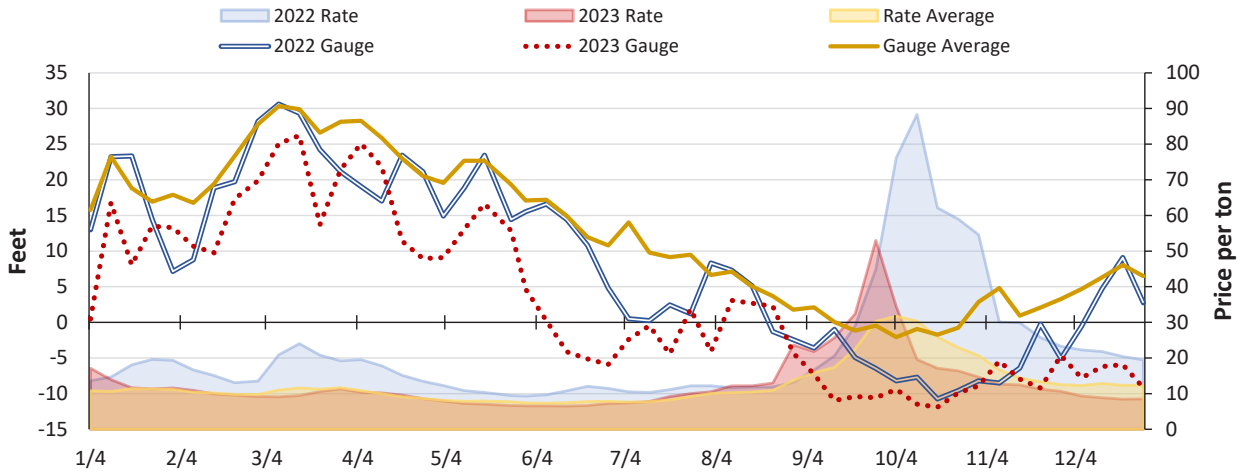
Within a month of when the high water receded in summer 2022, low water levels began causing problems throughout the MRS, and continued to complicate barge transport into December 2022. Through mid-October, barge supply tightened and spot freight rates rose further, because of significant draft and tow restrictions, delays, and closures. When the river gauge fell to negative levels at Memphis, TN, spot freight rates rose to record levels.[1] The spot freight rate at Memphis, TN, reached an all-time high of $88.31 per ton for the week of October 11, and the water gauge at Memphis, TN, reached an all-time low (at that time) of –10.81 feet on October 21 (fig. 1).

Consistent with the navigational challenges on the MRS, 32.7 million tons of grain were able to move through the locks in 2022, down 11 percent from 2021 (GTR table 10).

2023. Beginning in 2023, water levels were up from their historic lows of fall 2022. However, in winter 2023, MRS barge supply was again limited—this time, by such setbacks as a winter storm (that froze a portion of the Illinois River), lock closures, and a barge crash. In early spring, snow melt in the upper Midwest led to river flooding, which moved south down the MRS, such that high water closed all locks north of St. Louis, MO, from mid-April to mid-May.

Despite the closures and navigation issues, lower-than-normal export demand—combined with barge oversupply where the MRS was open—kept

Figure 1. Memphis river gauge and spot rate 2022, 2023



Note: Rate and gauge averages are of the previous 5 years.
Source: USDA, Agricultural Marketing Services and National Atmospheric Administration.

1 River gauge zero levels are usually set according to benchmarks near a gauge site or a historical level that may not have changed for 100 years or more. A below-zero gauge reading does not mean the river has run totally dry or is running below ground.

spot freight rates close to average for most of the spring. In fall 2023, spot freight rates rose somewhat, but much more modestly than the year before. Even though 2023 had persistently falling water levels and similar navigation restrictions to 2022, 2023's spot rates were below 2022 levels in early October and below the prior 5-year average. Despite a new record low (**–12.04** feet) for the water gauge at Memphis, spot barge rates were well below their 2022 peak.

Even with the lower spot freight rates and shorter barge delays in 2023 (2 to 3 days, versus 2 to 7 days in 2022), only 26.3 million tons of grain moved through the locks to the Gulf, down 19 percent from 2022 (**GTR table 10**).

Differences Between 2022 and 2023

Although river conditions were similar in 2022 and 2023, both export sales and acquired knowledge (in dealing with low water) varied notably from year to year. These changes produced very different barge freight rates and volumes from one year to the next.

Exports Fell From 2022. One striking difference between 2022 and 2023 was 2023's lower-than-normal export sales. According to USDA's ***Modal Share Analysis***, from 2016 to 2020, 51 percent of corn exports and 55 percent of soybean exports were shipped via barge to the Gulf. In marketing year (MY) 2022/23, total grain exports were down 20 percent from MY 2021/22, and down 17 percent from the previous 5-year average. Corn exports were down 34 percent from MY 2021/22, and down 28 percent from the previous 5-year average (**GTR table 13**).

Shipped export sales of corn to China (formerly, a large buyer of U.S. corn), dropped 48 percent—from 14.6 million metric tons (mmt) in MY 2021/22 to 7.6 mmt in MY 2022/23 (**GTR table 13**). The biggest reason for the sharp drop was an **export agreement** made between Brazil and China in 2022, which effectively diverted China's corn purchases from U.S. to Brazilian producers. Also, in July 2023, Brazil corn offers were **$30 per ton below** U.S. offers, as a result of Brazil's **record harvest crop**.

Another factor that reduced demand for export-grain barge shipments on the MRS—and helped keep spot freight rates below 2022 and the average—related to **low water at the Panama Canal**. To avoid bottlenecks spawned by MRS draft and tow restrictions and Panama Canal transit restrictions, some Gulf-bound grain shipments were diverted to the Pacific Northwest.

At 31,672, the number of grain barges unloaded in the Gulf was down 9 percent from 2022 and down 13 percent from the 5-year average (**GTR fig. 13**). Given the depths of the river gauge readings, if 2023 grain export demand had not plummeted from 2022, then barge spot freight rates possibly would have risen even higher than those of 2022.

Lessons from 2022. The U.S. Army Corps of Engineers (USACE), barge operators, and shippers learned several valuable lessons from the MRS low-water situation in 2022 and were better prepared for low water in 2023.

Because USACE began dredging earlier in 2023 than in 2022, a deeper channel was sustained along several portions of the MRS. The early dredging allowed for a draft of 9.5 feet (versus 9.0 feet in 2022) during at least some days when the river gauge at Memphis was below –6.0 feet. The deeper draft allowed barges to carry more grain than they would have been able to in 2022 and caused fewer travel delays. Thus, USACE's early dredging mitigated what was actually a more severe drought in 2023.

Also, because barge operators instituted draft and tow restrictions earlier in 2023 than in 2022, fewer barges were grounded in 2023. The earlier dredging and fewer grounded barges necessitated fewer closures and minimized navigational disruptions in the MRS.

Looking Ahead

According to March's ***World Agricultural Supply and Demand Estimates (WASDE)*** report, from MY 2022/23 to MY 2023/24, corn exports are expected to increase 26 percent, while soybean exports are expected to decrease 14 percent. Marketing year to date, 40 percent of projected corn exports and 72 percent of soybean exports have been shipped. A rise in grain exports to Japan and Colombia (through the Gulf) is expected to raise the demand for barges and help normalize spot rates.

In USDA's **first projection for MY 2024/25**, the United States is expected to export 4.0 billion bushels of corn and soybeans, up 5 percent from the previous year and similar to the prior 3-year average. However, given the past 2 consecutive years of extreme weather conditions and the two very different outcomes, 2024 barged grain movements and spot rates may hold yet more surprises in store.

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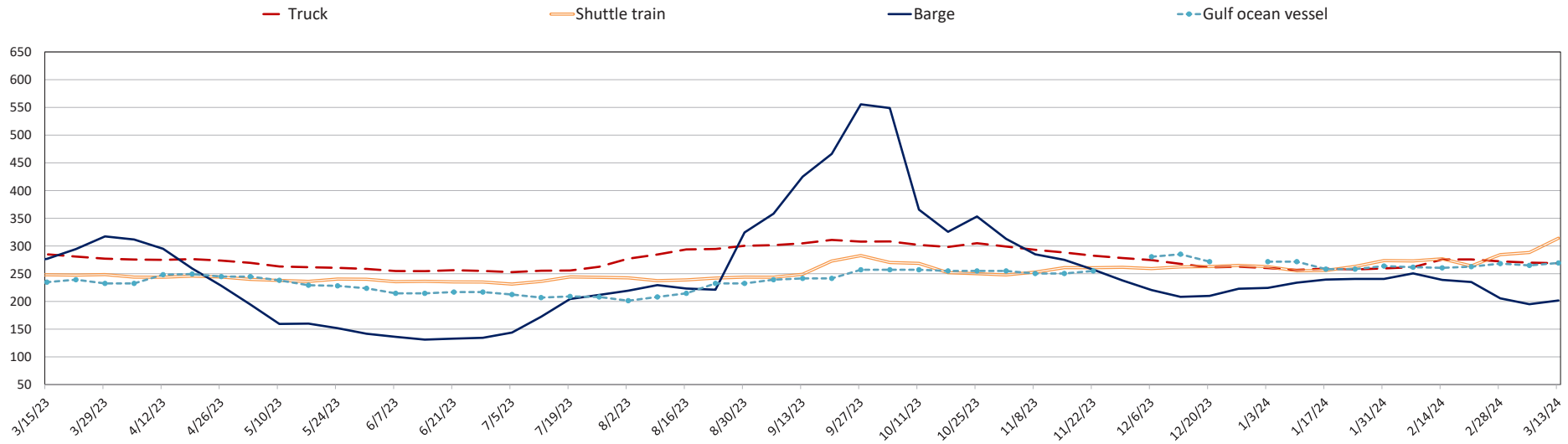
Grains are transported to the domestic and international markets via one or a combination of the following modes: truck, rail, barge and ocean-going vessel. Monitoring the cost of transportation for each mode is vital to the marketing decision making process.

Table 1. Grain transport cost indicators

For the week ending:	Truck	Rail		Barge	Ocean	
		Non-shuttle	Shuttle		Gulf	Pacific
03/13/24	269	359	314	202	269	234
03/06/24	270	349	288	195	265	227
03/15/23	285	321	248	277	235	209

Note: 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.

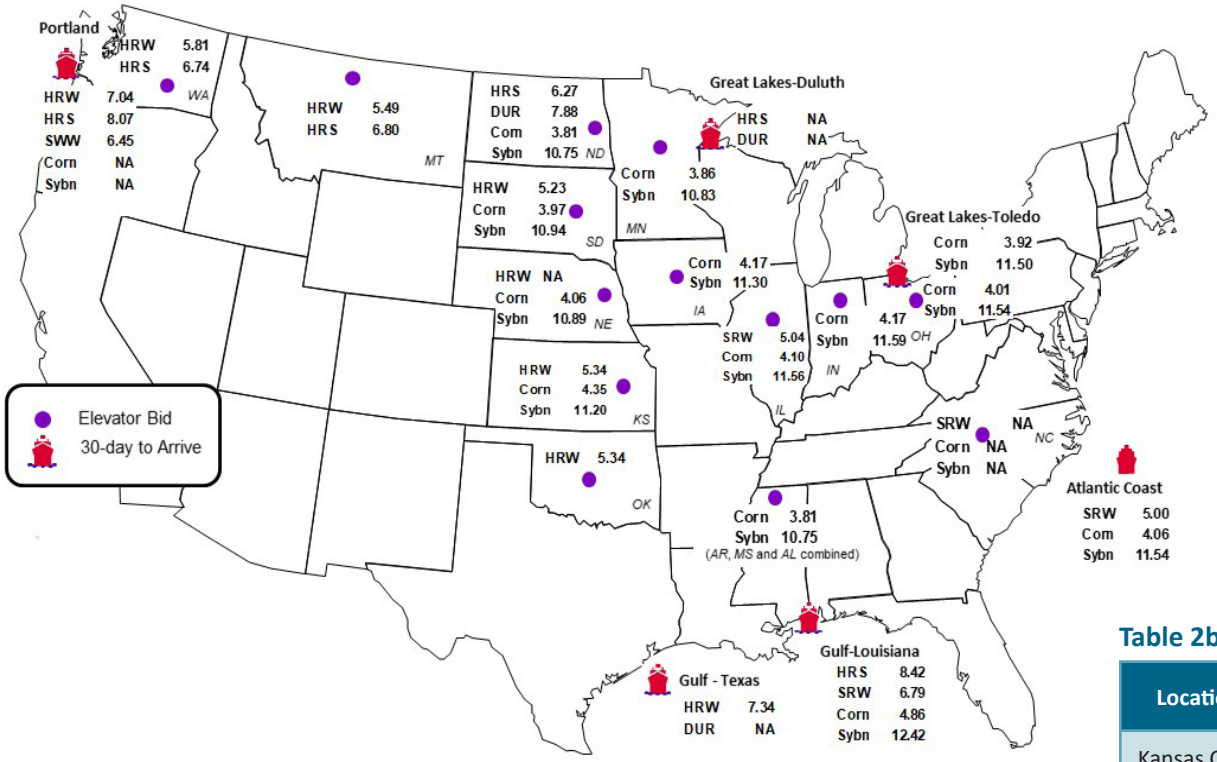
Figure 1. Grain transportation cost indicators as of week ending 3/13/24



Source: USDA, Agricultural Marketing Service.

Figure 2. Grain bid summary

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.



Inland bids: 12% HRW, 14% HRS, #1 SRW, #1 DUR, #1 SWW, #2 Y Corn, #1 Y Soybeans
Export bids: Ord HRW, 14% HRS, #2 SRW, #2 DUR, #2 SWW, #2 Y Corn, #1 Soybeans
Note: HRW = Hard red winter wheat, HRS = Hard red spring wheat, SRW = Soft red winter wheat, DUR = Durum, SWW = Soft white winter wheat, Y = Yellow, Ord = Ordinary. Data from tables 2a and 2b derived from map information.
Sources: U.S. Inland: GeoGrain, USDA Weekly Bids, U.S. Export: Corn & Soybean - Export Grain Bids, AMS, USDA Wheat Bids - Weekly Wheat Report, U.S. Wheat Associates, Washington, DC.

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

Commodity	Origin–destination	3/8/2024	3/1/2024
Corn	IL–Gulf	-0.76	-0.77
Corn	NE–Gulf	-0.80	-0.81
Soybean	IA–Gulf	-1.12	-1.23
HRW	KS–Gulf	-2.00	-2.17
HRS	ND–Portland	-1.80	-1.98

Note: nq = no quote; n/a = not available; HRW = hard red winter wheat; HRS = hard red spring wheat.
Source: USDA, Agricultural Marketing Service.

Table 2b. Futures

Location	Grain	Month	3/8/2024	Week ago 3/1/2024	Year ago 3/10/2023
Kansas City	Wheat	May	5.866	5.750	8.032
Minneapolis	Wheat	May	6.626	6.436	8.244
Chicago	Wheat	May	5.340	5.636	6.832
Chicago	Corn	May	4.370	4.320	6.182
Chicago	Soybean	May	11.850	11.650	15.070

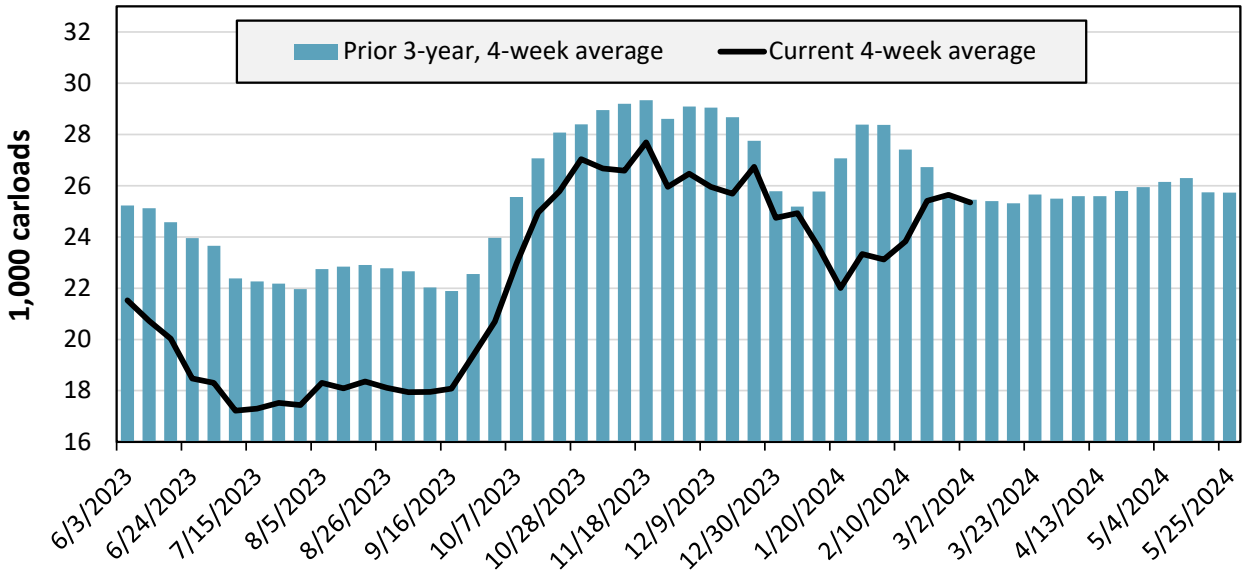
Sources: U.S. Inland: GeoGrain, USDA Weekly Bids, U.S. Export: Corn & Soybean - Export Grain Bids, AMS, USDA Wheat Bids - Weekly Wheat Report, U.S. Wheat Associates, Washington, DC.

Table 3. Class I rail carrier grain car bulletin (grain carloads originated)

For the week ending: 3/02/2024	East		West		Central U.S.		U.S. total
	CSXT	NS	BNSF	UP	CPKC	CN	
This week	1,649	2,886	10,278	4,671	3,531	903	23,918
This week last year	1,774	2,909	8,285	6,161	1,996	1,390	22,515
2024 YTD	15,693	25,301	94,053	46,751	27,689	10,357	219,844
2023 YTD	18,647	25,329	95,137	52,202	23,443	15,323	230,081
2024 YTD as % of 2023 YTD	84	100	99	90	118	68	96
Last 4 weeks as % of 2023	75	102	121	96	157	72	108
Last 4 weeks as % of 3-yr. avg.	80	111	101	91	125	71	99
Total 2023	92,754	130,762	499,462	278,079	131,352	66,535	1,198,944

Note: The last 4-week percentages compare the last 4 weeks of this year to the closest 4 weeks of last year, and to the average across the prior 3 years. NS = Norfolk Southern; UP = Union Pacific; CN = Canadian National; CPKC = Canadian Pacific Kansas City; YTD = year-to-date; avg. = average; yr. = year. CPKC and CN report carloads for their U.S.-operations only, so the U.S. total reflects originated carloads for all six Class I railroads.
Source: Surface Transportation Board.

Figure 3. Total weekly U.S. Class I railroad grain carloads



Source: Surface Transportation Board.

For the 4 weeks ending March 2, grain carloads were down 1 percent from the previous week, up 8 percent from last year, and unchanged from the 3-year average

Table 4a. Rail service metrics—grain unit train origin dwell times and train speeds

For the week ending: 3/2/2024		East		West		Central U.S.			U.S. Average
		CSX	NS	BNSF	UP	CN	CP	KCS	
Grain unit train origin dwell times (hours)	This week	21.7	31.5	33.2	22.2	7.8	13.9	12.7	20.4
	Average over last 4 weeks	24.1	34.2	28.1	19.1	7.2	15.9	12.0	20.1
	Average of same 4 weeks last year	23.5	36.0	23.7	21.9	15.9	45.9	10.0	25.3
Grain unit train speeds (miles per hour)	This week	23.7	18.1	23.9	22.2	24.9	23.2	26.8	23.3
	Average over last 4 weeks	23.4	17.4	24.3	22.5	25.6	23.4	27.2	23.4
	Average of same 4 weeks last year	24.1	16.7	24.8	22.0	24.9	22.0	25.6	22.9

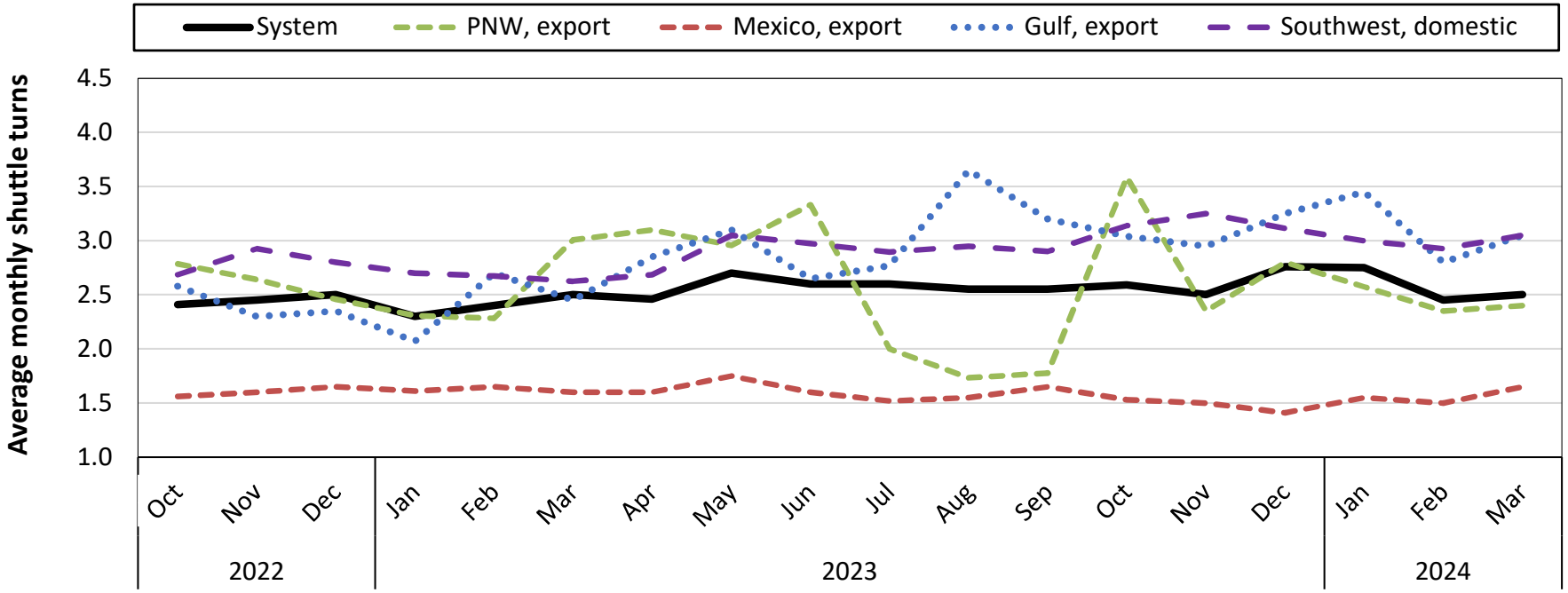
Note: NS = Norfolk Southern; UP = Union Pacific; CN = Canadian National; CP = Canadian Pacific; KCS = Kansas City Southern. Although CP and KCS have merged to form CPKC, the service metrics are reported for two legacy networks that correspond to the old nomenclature (CP and KCS).
These service metrics are published weekly on the Surface Transportation Board's website and on AgTransport. For more information on each service metric, see 49 CFR § 1250.2.
Source: Surface Transportation Board.

Table 4b. Rail service metrics—unfilled grain car orders and delays

For the week ending: 3/2/2024		East		West		Central U.S.			U.S. Total
		CSX	NS	BNSF	UP	CN	CP	KCS	
Empty grain cars not moved in over 48 hours (number)	This week	20	10	760	115	7	17	23	951
	Average over last 4 weeks	27	11	600	109	4	38	35	822
	Average of same 4 weeks last year	16	10	862	185	14	123	39	1,249
Loaded grain cars not moved in over 48 hours (number)	This week	38	346	980	99	6	59	23	1,551
	Average over last 4 weeks	39	271	857	101	5	63	22	1,358
	Average of same 4 weeks last year	21	256	1,032	252	6	207	17	1,791
Grain unit trains held (number)	This week	1	5	24	0	0	2	8	40
	Average over last 4 weeks	1	5	24	1	0	3	7	40
	Average of same 4 weeks last year	1	4	11	18	0	2	5	41
Unfilled grain car orders (number)	This week	2	0	6,159	876	0	837	0	7,874
	Average over last 4 weeks	3	0	6,070	497	0	849	32	7,450
	Average of same 4 weeks last year	19	101	9,187	1,195	0	133	25	10,659

Note: NS = Norfolk Southern; UP = Union Pacific; CN = Canadian National; CP = Canadian Pacific; KCS = Kansas City Southern. Although CP and KCS have merged to form CPKC, the service metrics are reported for two legacy networks that correspond to the old nomenclature (CP and KCS).
These service metrics are published weekly on the Surface Transportation Board's website and on AgTransport. For more information on each service metric, see 49 CFR § 1250.2.
Source: Surface Transportation Board.

Figure 4. Average monthly turns for grain shuttle trains, by region

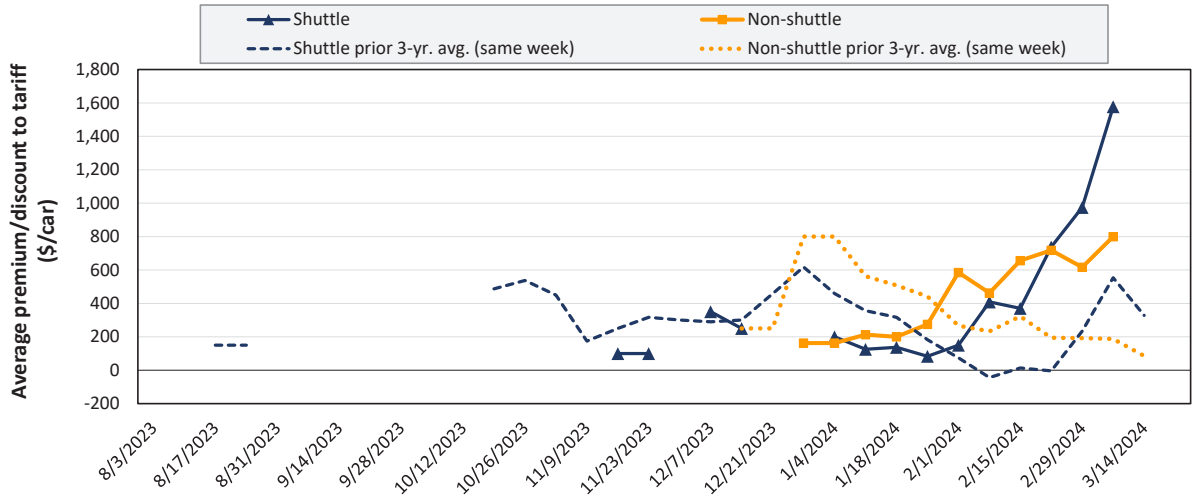


Average monthly system-wide grain shuttle turns reported in the first week of March 2024 were 2.5. By destination region, average monthly grain shuttle turns were 2.4 to PNW, 1.65 to Mexico, 3.05 to the Gulf, and 3.05 to the Southwest.

Note: Data is submitted in the first weekly report of each month, covering the previous month. A "shuttle turn" refers to the number of trips completed per month by a single train. Numbers reflect averages of the three railroads with a shuttle train program: BNSF Railway, Union Pacific Railroad; and CPKC. CPKC only reports values for the Pacific Northwest (PNW). Regions are not standardized and vary across railroads. "Southwest" refers to domestic destinations and includes: "West Texas, Arkansas/Texas, California/Arizona, and California."
Source: Surface Transportation Board.

Railroads periodically auction guaranteed grain car service for an individual trip or a period of time (e.g., one year). This ordering system is referred to as the "primary market." Once grain shippers acquire guaranteed freight on the primary market, they can trade that freight with other shippers through a broker. These transactions are referred to as the "secondary market." Secondary rail values are indicators of rail service quality and demand/supply. The values published herein are market indicators only and do not represent guaranteed prices.

Figure 5. Secondary market bids/offers for railcars to be delivered in March 2024



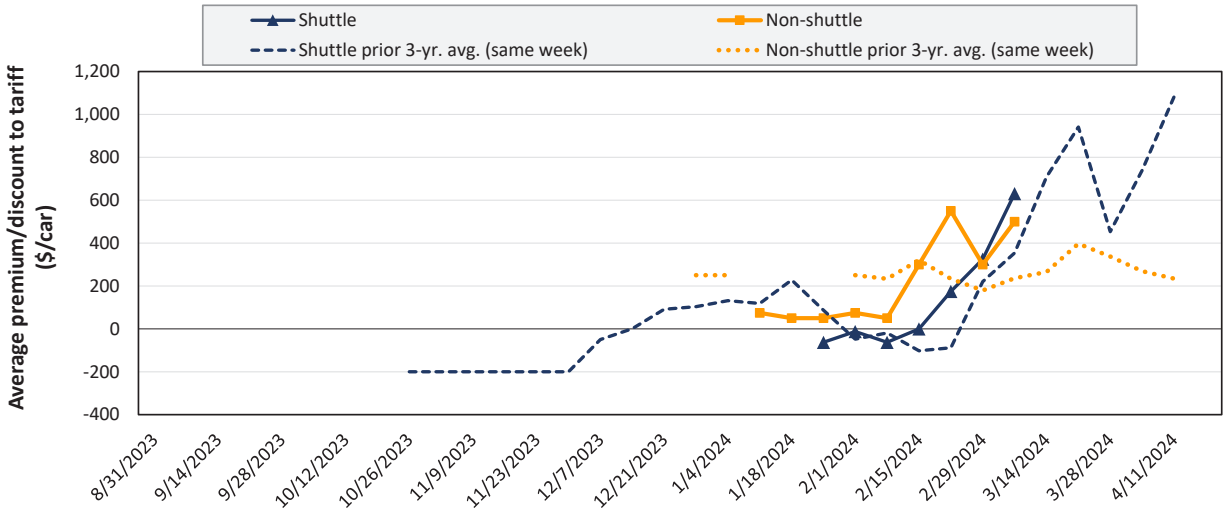
Average non-shuttle bids/offers rose $183 this week, and are at the peak.

Average shuttle bids/offers rose $602 this week and are at the peak.

3/7/2024	BNSF	UP
Non-Shuttle	$800	n/a
Shuttle	$1,938	$1,217

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 analysis of data from Tradewest Brokerage Company and the Malsam Company.

Figure 6. Secondary market bids/offers for railcars to be delivered in April 2024



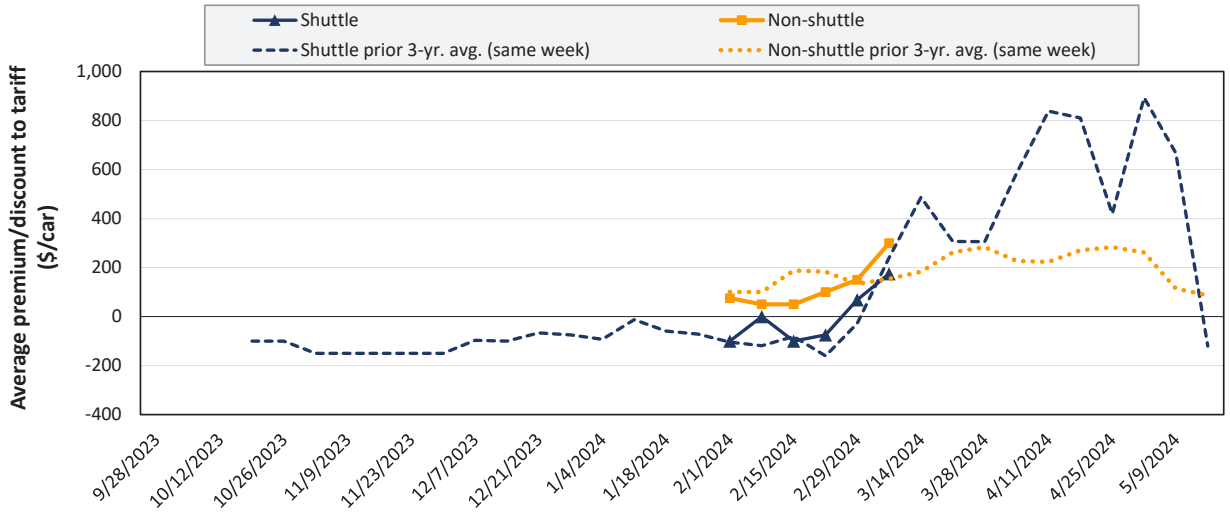
Average non-shuttle bids/offers rose $200 this week, and are $50 below the peak.

Average shuttle bids/offers rose $306 this week and are at the peak.

3/7/2024	BNSF	UP
Non-Shuttle	$500	$500
Shuttle	$750	$513

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 analysis of data from Tradewest Brokerage Company and the Malsam Company.

Figure 7. Secondary market bids/offers for railcars to be delivered in May 2024



Average non-shuttle bids/offers rose $150 this week, and are at the peak.

Average shuttle bids/offers rose $106 this week and are at the peak.

3/7/2024	BNSF	UP
Non-Shuttle	$200	$400
Shuttle	$150	$200

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 analysis of data from Tradewest Brokerage Company and the Malsam Company.

Table 5. Weekly secondary railcar market (dollars per car)

For the week ending: 3/7/2024		Delivery period					
		Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Non-shuttle	BNSF	800	500	200	200	n/a	n/a
	Change from last week	17	50	n/a	n/a	n/a	n/a
	Change from same week 2023	763	425	150	n/a	n/a	n/a
	UP	n/a	500	400	n/a	n/a	n/a
	Change from last week	n/a	350	250	n/a	n/a	n/a
	Change from same week 2023	n/a	256	175	n/a	n/a	n/a
Shuttle	BNSF	1,938	750	150	n/a	n/a	-150
	Change from last week	700	300	112	n/a	n/a	-50
	Change from same week 2023	1,969	809	250	n/a	n/a	0
	UP	1,217	513	200	n/a	n/a	n/a
	Change from last week	504	313	100	n/a	n/a	n/a
	Change from same week 2023	1,504	738	n/a	n/a	n/a	n/a
	CPKC	500	100	200	n/a	n/a	n/a
	Change from last week	50	0	0	n/a	n/a	n/a
	Change from same week 2023	600	n/a	n/a	n/a	n/a	n/a

Note: Bids and offers represent a premium/discount to tariff rates; n/a = not available; BNSF = BNSF Railway; UP = Union Pacific Railroad; CPKC = Canadian Pacific Kansas City.
Source: USDA, Agricultural Marketing Service analysis of data from Tradewest Brokerage Company and the Malsam Company.

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 train shipments

March 2024	Origin region	Destination region	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per metric ton	Tariff plus surcharge per bushel	Percent Change Y/Y
Wheat	Wichita, KS	St. Louis, MO	$4,095	$182	$42.47	$1.16	4
	Grand Forks, ND	Duluth-Superior, MN	$3,508	$48	$35.31	$0.96	-10
	Wichita, KS	Los Angeles, CA	$6,840	$245	$70.36	$1.91	-12
	Wichita, KS	New Orleans, LA	$4,825	$320	$51.10	$1.39	2
	Sioux Falls, SD	Galveston-Houston, TX	$6,611	$201	$67.65	$1.84	-11
	Colby, KS	Galveston-Houston, TX	$5,075	$351	$53.88	$1.47	2
	Amarillo, TX	Los Angeles, CA	$5,121	$489	$55.71	$1.52	-3
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$362	$43.32	$1.10	-3
	Toledo, OH	Raleigh, NC	$8,877	$0	$88.15	$2.24	4
	Des Moines, IA	Davenport, IA	$2,830	$77	$28.86	$0.73	5
	Indianapolis, IN	Atlanta, GA	$6,866	$0	$68.18	$1.73	4
	Indianapolis, IN	Knoxville, TN	$5,790	$0	$57.50	$1.46	4
	Des Moines, IA	Little Rock, AR	$4,425	$225	$46.18	$1.17	2
	Des Moines, IA	Los Angeles, CA	$6,305	$656	$69.13	$1.76	-1
Soybeans	Minneapolis, MN	New Orleans, LA	$3,156	$522	$36.53	$0.99	-20
	Toledo, OH	Huntsville, AL	$7,269	$0	$72.18	$1.96	3
	Indianapolis, IN	Raleigh, NC	$8,169	$0	$81.12	$2.21	4
	Indianapolis, IN	Huntsville, AL	$5,921	$0	$58.80	$1.60	4
	Champaign-Urbana, IL	New Orleans, LA	$5,040	$362	$53.65	$1.46	1

Note: 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. The table assumes 111 short tons (100.7 metric tons) per car, 56 pounds per bushel of corn, and 60 pounds per bushel of wheat and soybeans. Percentage change year to year (Y/Y) is calculated using the tariff rate plus fuel surcharge

Source: BNSF Railway, Canadian National Railway, CSX Transportation, and Union Pacific Railroad.

Table 7. Tariff rail rates for shuttle train shipments

March 2024	Origin region	Destination region	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per metric ton	Tariff plus surcharge per bushel	Percent Change Y/Y
Wheat	Great Falls, MT	Portland, OR	$4,043	$141	$41.55	$1.13	-11
	Wichita, KS	Galveston-Houston, TX	$4,111	$110	$41.91	$1.14	-7
	Chicago, IL	Albany, NY	$7,413	$0	$73.61	$2.00	5
	Grand Forks, ND	Portland, OR	$5,701	$243	$59.03	$1.61	-9
	Grand Forks, ND	Galveston-Houston, TX	$5,146	$249	$53.58	$1.46	-9
	Colby, KS	Portland, OR	$5,923	$576	$64.53	$1.76	-3
Corn	Minneapolis, MN	Portland, OR	$5,660	$296	$59.15	$1.50	-5
	Sioux Falls, SD	Tacoma, WA	$5,620	$271	$58.50	$1.49	-5
	Champaign-Urbana, IL	New Orleans, LA	$4,345	$362	$46.74	$1.19	1
	Lincoln, NE	Galveston-Houston, TX	$4,560	$158	$46.85	$1.19	0
	Des Moines, IA	Amarillo, TX	$4,845	$283	$50.93	$1.29	1
	Minneapolis, MN	Tacoma, WA	$5,660	$294	$59.12	$1.50	-5
	Council Bluffs, IA	Stockton, CA	$5,780	$304	$60.42	$1.53	-2
Soybeans	Sioux Falls, SD	Tacoma, WA	$6,335	$271	$65.60	$1.79	-5
	Minneapolis, MN	Portland, OR	$6,385	$296	$66.35	$1.81	-5
	Fargo, ND	Tacoma, WA	$6,235	$241	$64.31	$1.75	-4
	Council Bluffs, IA	New Orleans, LA	$5,270	$418	$56.48	$1.54	0
	Toledo, OH	Huntsville, AL	$5,509	$0	$54.71	$1.49	4
	Grand Island, NE	Portland, OR	$5,905	$589	$64.49	$1.76	-1

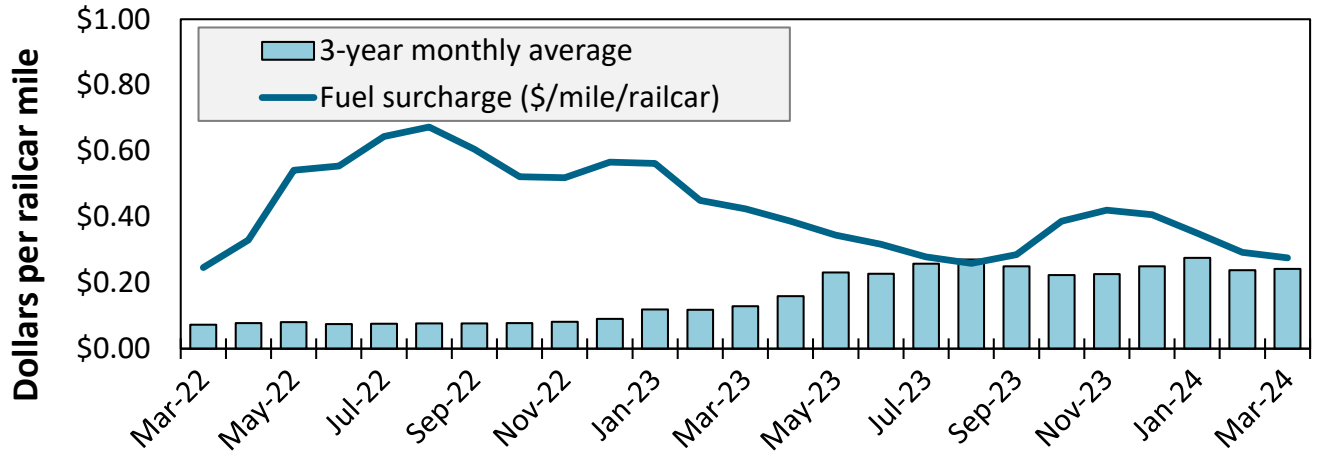
Note: A unit train refers to shipments of at least 25 cars. Shuttle train rates are generally available for qualified shipments of 75-120 cars that meet railroad efficiency requirements. The table assumes 111 short tons (100.7 metric tons) per car, 56 pounds per bushel of corn, and 60 pounds per bushel of wheat and soybeans. Percentage change year to year (Y/Y) is calculated using the 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

December 2021	Origin state	Destination region	Tariff rate per car	Fuel surcharge per car	Tariff rate plus fuel surcharge per:		Percent change Y/Y
					metric ton	bushel	
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

Note: Rates are based on published tariff rates for high-capacity shuttle trains. Shuttle trains are available for qualified shipments of 75-110 cars that meet railroad efficiency requirements. The table assumes 97.87 metric tons per car, 56 pounds per bushel for corn and sorghum, and 60 pounds per bushel for wheat and soybeans. Percentage change year over year (Y/Y) is calculated using the tariff rate plus fuel surcharge. **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.**
Source: BNSF Railway, Union Pacific Railroad, Kansas City Southern.

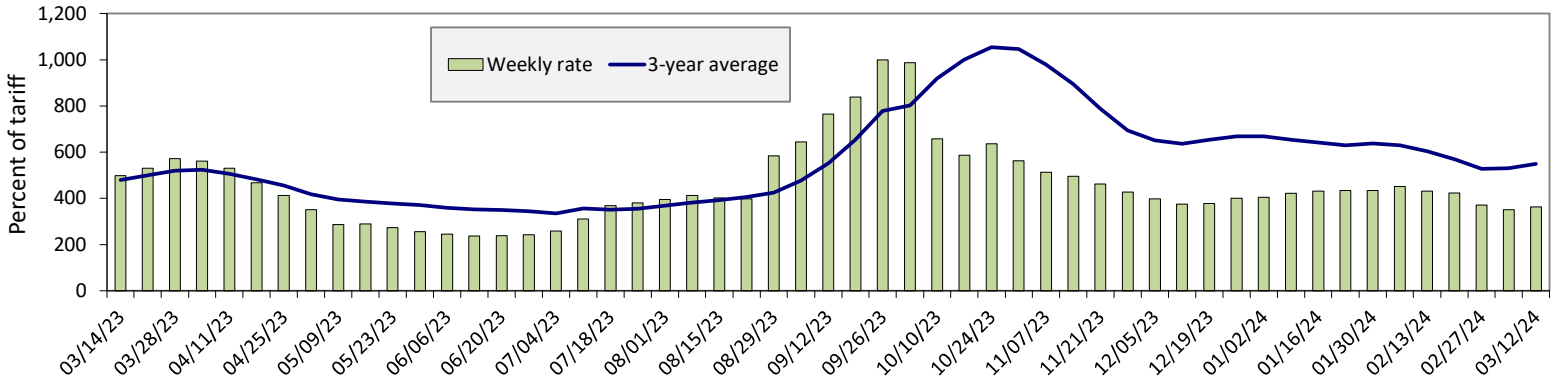
Figure 8. Railroad fuel surcharges, North American weighted average



March 2024: $0.28/mile, down 1 cent from last month's surcharge of $0.29/mile; down 14 cents from the March 2023 surcharge of $0.42/mile; and up 4 cents from the March prior 3-year average of $0.24/mile.

Note: Weighted by each Class I railroad's proportion of grain traffic for the prior year.
Source: BNSF Railway, Canadian National Railway, CSX Transportation, Canadian Pacific Railway, Union Pacific Railroad, Kansas City Southern Railway, Norfolk Southern Corporation.

Figure 9. Illinois River barge freight rate



For the week ending March 12: 4 percent higher than the previous week; 27 percent lower than last year; and 34 percent lower than the 3-year average.

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

Table 9. Weekly barge freight rates: southbound only

Measure	Date	Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate	3/12/2024	n/a	384	363	264	314	314	247
	3/5/2024	n/a	363	351	268	310	310	250
$/ton	3/12/2024	n/a	20.43	16.84	10.53	14.73	12.69	7.76
	3/5/2024	n/a	19.31	16.29	10.69	14.54	12.52	7.85
Measure	**Time Period**	**Twin Cities**	**Mid-Mississippi**	**Lower Illinois River**	**St. Louis**	**Cincinnati**	**Lower Ohio**	**Cairo-Memphis**
Current week % change from the same week	Last year	n/a	-25	-27	-33	-23	-23	-18
	3-year avg.	n/a	n/a	-34	-38	-36	-36	-33
Rate	April	383	358	345	253	290	290	241
	June	359	344	337	248	286	286	238

Note: Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); 3-year avg. = 4-week moving average of the 3-year avg.; ton = 2,000 pounds; n/a = data not available.
Source: USDA, Agricultural Marketing Service.

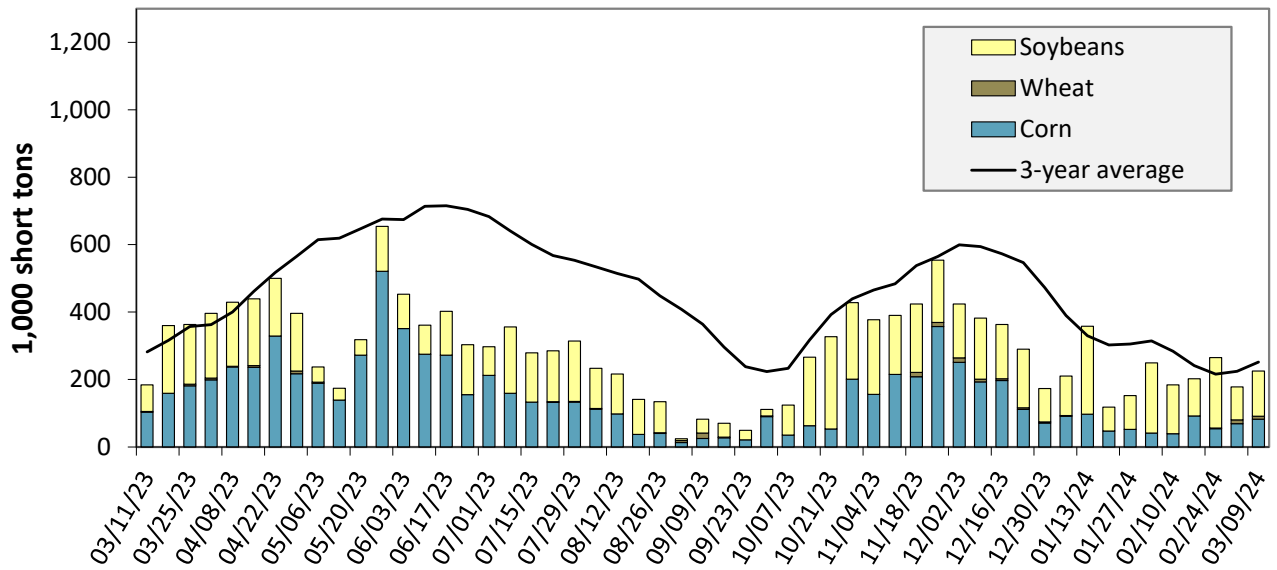
Figure 10. Benchmark tariff rates

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.

Source: USDA, Agricultural Marketing Service.

Figure 11. Barge movements on the Mississippi River (Locks 27-Granite City, IL)



For the week ending March 9: 22 percent higher than last year and 11 percent lower than the 3-year average.

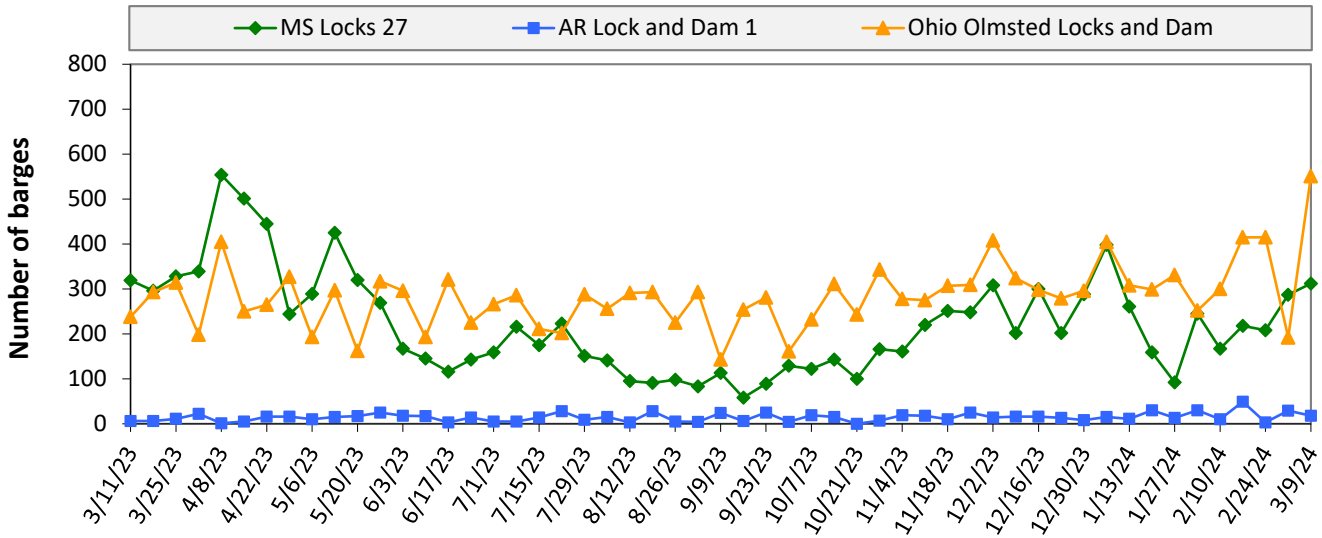
Note: The 3-year average is a 4-week moving average. The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.
Source: U.S. Army Corps of Engineers.

Table 10. Barged grain movements (1,000 tons)

For the week ending 03/09/2024	Corn	Wheat	Soybeans	Other	Total
Mississippi River (Rock Island, IL (L15))	15	0	12	0	28
Mississippi River (Winfield, MO (L25))	25	5	30	0	60
Mississippi River (Alton, IL (L26))	76	9	126	0	211
Mississippi River (Granite City, IL (L27))	82	9	134	0	225
Illinois River (La Grange)	27	0	59	0	86
Ohio River (Olmsted)	221	33	86	0	341
Arkansas River (L1)	0	20	7	0	27
Weekly total - 2024	303	62	227	0	593
Weekly total - 2023	282	15	138	4	438
2024 YTD	1,998	260	2,839	48	5,146
2023 YTD	1,979	239	2,975	80	5,272
2024 as % of 2023 YTD	101	109	95	60	98
Last 4 weeks as % of 2023	101	123	122	188	112
Total 2023	12,857	1,346	11,824	267	26,294

Note: “Other” refers to oats, barely, sorghum, and rye. Total may not add up due to rounding. YTD = year to date. Weekly total, YTD, and calendar year total include Mississippi River lock 27, Ohio River Olmsted lock, and Arkansas Lock 1. “L” (as in "L15") refers to a lock, locks, or lock and dam facility. 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.

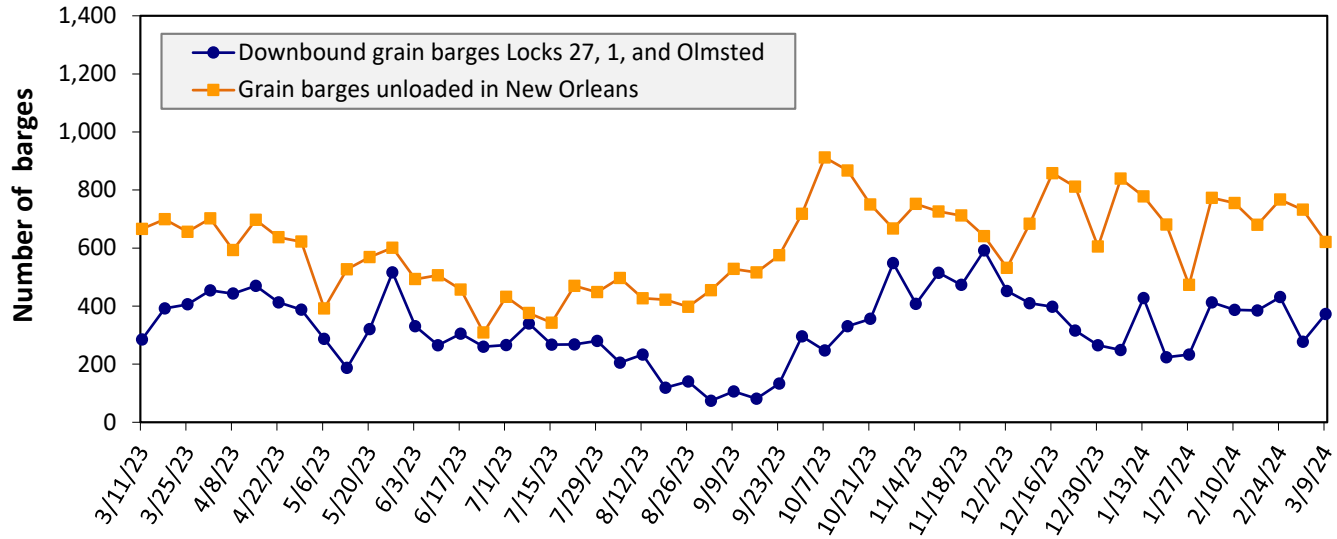
Figure 12. Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



For the week ending March 9: 881 barges transited the locks, 373 barges more than the previous week, and 35 percent higher than the 3-year 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.

Figure 13. Grain barges for export in New Orleans region



For the week ending March 9: 373 barges moved down river, 96 more than the previous week; 621 grain barges unloaded in the New Orleans Region, 15 percent fewer than the previous week.

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.

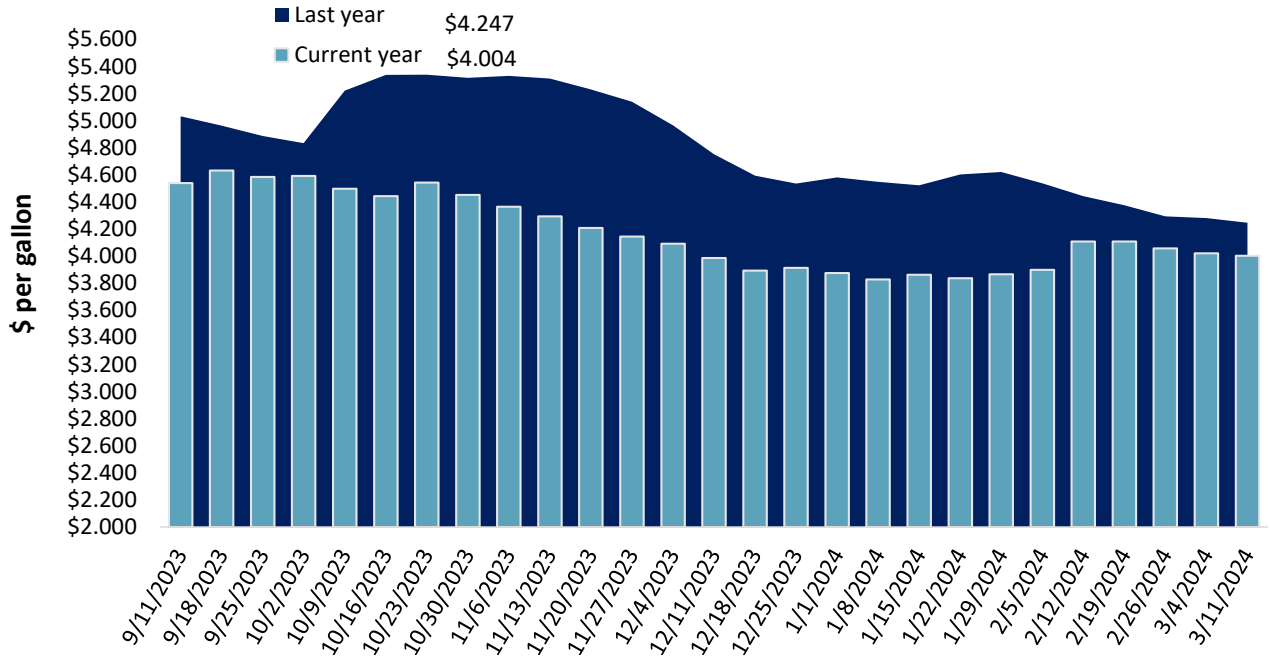
The weekly diesel price provides a proxy for trends in U.S. truck rates as diesel fuel is a significant expense for truck grain movements.

Table 11. Retail on-highway diesel prices, week ending 3/11/2024 (U.S. $/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	4.120	-0.031	-0.240
	New England	4.287	-0.009	-0.444
	Central Atlantic	4.309	-0.002	-0.390
	Lower Atlantic	4.033	-0.044	-0.163
II	Midwest	3.913	-0.006	-0.181
III	Gulf Coast	3.702	-0.029	-0.296
IV	Rocky Mountain	3.992	-0.014	-0.439
V	West Coast	4.651	-0.002	-0.247
	West Coast less California	4.166	0.014	-0.372
	California	5.207	-0.021	-0.105
Total	United States	4.004	-0.018	-0.243

Note: Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel. On June 13, 2022, 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 14. Weekly diesel fuel prices, U.S. average



For the week ending March 11, the U.S. average diesel fuel decreased 1.8 cents from the previous week to $4.004 per gallon, 24.3 cents below the same week last year.

Note: On June 13, 2022, 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.

Table 12. U.S. export balances and cumulative exports (1,000 metric tons)

Grain Exports		Wheat						Corn	Soybeans	Total
		Hard red winter (HRW)	Soft red winter (SRW)	Hard red spring (HRS)	Soft white wheat (SWW)	Durum	All wheat			
Current unshipped (outstanding) export sales	For the week ending 2/29/2024	955	1,969	1,686	937	110	5,656	17,871	5,516	29,043
	This week year ago	683	581	954	852	44	3,113	14,568	6,604	24,286
	Last 4 wks. as % of same period 2022/23	144	359	179	112	298	189	124	104	127
Current shipped (cumulative) exports sales	2023/24 YTD	2,355	2,663	4,529	2,880	351	12,778	21,357	33,917	68,052
	2022/23 YTD	4,058	2,117	4,313	3,529	272	14,289	16,081	42,066	72,435
	YTD 2023/24 as % of 2022/23	58	126	105	82	129	89	133	81	94
	Total 2022/23	4,872	2,695	5,382	4,414	395	17,759	39,469	52,208	109,435
	Total 2021/22	7,172	2,786	5,254	3,261	196	18,669	59,764	57,189	135,622

Note: The marketing year for wheat is Jun. 1 to May 31 and, for corn and soybeans, Sep. 1 to Aug. 31. YTD = year-to-date; wks. = weeks.
Source: USDA, Foreign Agricultural Service.

Table 13. Top 5 importers of U.S. corn

For the week ending 2/29/2024	Total commitments (1,000 mt)		% change current MY from last MY	Exports 3-year average 2020-22 (1,000 mt)
	YTD MY 2023/24	YTD MY 2022/23		
Mexico	17,291	12,892	34	15,227
China	1,781	4,487	-60	12,616
Japan	6,323	3,430	84	10,273
Colombia	3,944	1,306	202	4,398
Korea	1,220	644	89	2,563
Top 5 importers	**30,558**	**22,759**	**34**	**45,077**
Total U.S. corn export sales	**39,228**	**30,649**	**28**	**56,665**
% of YTD current month's export projection	74%	73%	-	-
Change from prior week	1,110	1,411	-	-
Top 5 importers' share of U.S. corn export sales	**78%**	**74%**	**-**	**80%**
USDA forecast March 2024	**53,343**	**42,192**	**26**	**-**
Corn use for ethanol USDA forecast, March 2024	**136,525**	**131,471**	**4**	**-**

Note: The top 5 importers are based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for marketing year (MY) 2022/23 (Sep. 1 – Aug. 31). "Total commitments" = cumulative exports (shipped) + outstanding sales (unshipped), from 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. In rightmost column, "Exports" = carryover plus accumulated exports (as defined in FAS marketing year ranking reports).
mt = metric ton; yr. = year; avg. = average; YTD = year to date; "-" = not applicable.
Source: USDA, Foreign Agricultural Service.

Table 14. Top 5 importers of U.S. soybeans

For the week ending 2/29/2024	Total commitments (1,000 mt)		% change current MY from last MY	Exports 3-year average 2020-22 (1,000 mt)
	YTD MY 2023/24	YTD MY 2022/23		
China	22,393	30,331	-26	32,321
Mexico	3,949	4,116	-4	4,912
Egypt	482	978	-51	2,670
Japan	1,695	1,763	-4	2,259
Indonesia	1,259	1,017	24	1,973
Top 5 importers	**29,778**	**38,204**	**-22**	**44,133**
Total U.S. soybean export sales	**39,433**	**48,670**	**-19**	**56,656**
% of YTD current month's export projection	84%	90%	-	-
Change from prior week	614	-23	-	-
Top 5 importers' share of U.S. soybean export sales	**76%**	**78%**	**-**	**78%**
USDA forecast, March 2024	**46,811**	**54,213**	**-14**	**-**

Note: The top 5 importers are based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for marketing year (MY) 2022/23 (Sep. 1 – Aug. 31). "Total commitments" = cumulative exports (shipped) + outstanding sales (unshipped), from 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. In rightmost column, "Exports" = carryover plus accumulated export (as defined in FAS marketing year ranking reports). mt = metric ton; yr. = year; avg. = average; YTD = year to date; "-" = not applicable.
Source: USDA, Foreign Agricultural Service.

Table 15. Top 10 importers of all U.S. wheat

For the week ending 2/29/2024	Total commitments (1,000 mt)		% change current MY from last MY	Exports 3-year average 2020-22 (1,000 mt)
	YTD MY 2023/24	YTD MY 2022/23		
Mexico	2,930	2,952	-1	3,397
Philippines	2,722	2,020	35	2,615
Japan	1,827	2,009	-9	2,281
China	2,472	956	159	1,740
Korea	1,347	1,252	8	1,426
Nigeria	243	765	-68	1,276
Taiwan	997	751	33	944
Thailand	452	624	-28	643
Colombia	274	501	-45	537
Indonesia	446	324	37	469
Top 10 importers	**13,709**	**12,153**	**13**	**15,327**
Total U.S. wheat export sales	**18,434**	**17,402**	**6**	**20,411**
% of YTD current month's export projection	95%	84%	-	-
Change from prior week	271	267	-	-
Top 10 importers' share of U.S. wheat export sales	**74%**	**70%**	**-**	**75%**
USDA forecast, March 2024	**19,323**	**20,657**	**-6**	**-**

Note: The top 5 importers are based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for marketing year (MY) 2022/23 (Sep. 1 – Aug. 31). "Total commitments" = cumulative exports (shipped) + outstanding sales (unshipped), from 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. In rightmost column, "Exports" = carryover plus accumulated export (as defined in FAS marketing year ranking reports). mt = metric ton; yr. = year; avg. = average; YTD = year to date; "-" = not applicable.
Source: USDA, Foreign Agricultural Service.

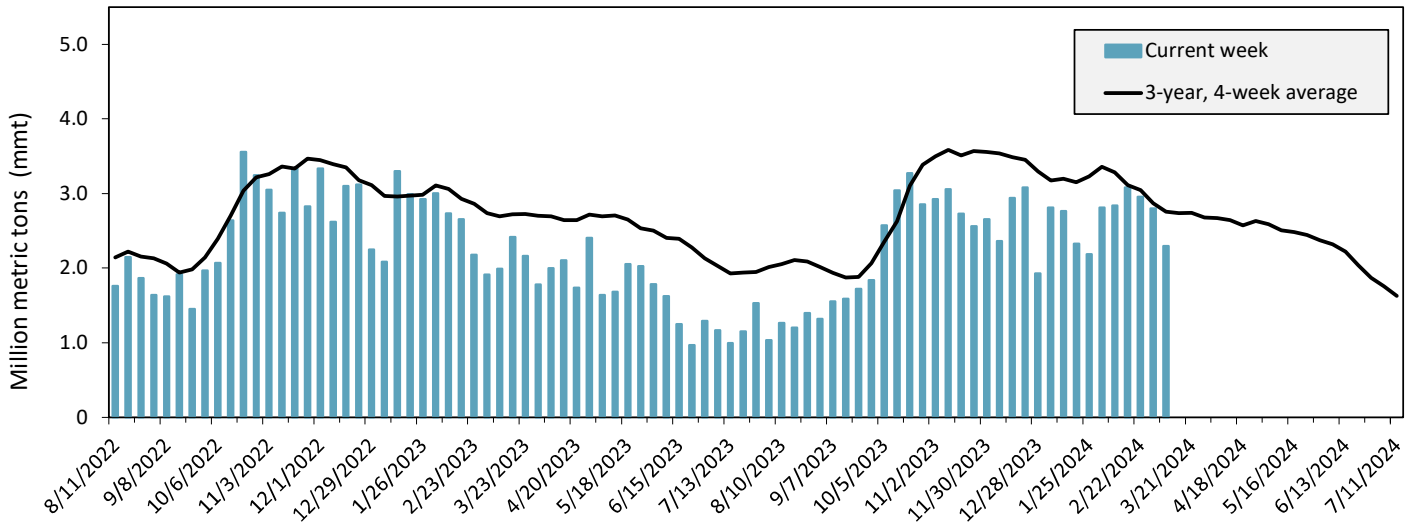
Table 16. Grain inspections for export by U.S. port region (1,000 metric tons)

Port regions	Commodity	For the week ending 03/07/2024	Previous week*	Current week as % of previous	2024 YTD*	2023 YTD*	2024 YTD as % of 2023 YTD	Last 4-weeks as % of:		2023 total*
								Last year	Prior 3-yr. avg.	
Pacific Northwest	Corn	485	300	162	2,644	497	532	27437	154	5,267
	Soybeans	189	202	94	2,251	3,133	72	111	86	10,286
	Wheat	229	112	205	1,829	2,424	75	78	79	9,814
	All Grain	**903**	**677**	**133**	**7,181**	**6,063**	**118**	**194**	**109**	**25,913**
Mississippi Gulf	Corn	422	566	75	4,234	3,970	107	91	58	23,630
	Soybeans	392	794	49	7,156	8,218	87	112	146	26,878
	Wheat	57	141	41	882	473	186	214	221	3,335
	All Grain	**872**	**1,501**	**58**	**12,326**	**12,662**	**97**	**107**	**94**	**53,843**
Texas Gulf	Corn	11	12	95	91	54	170	158	97	397
	Soybeans	0	0	n/a	0	49	0	n/a	n/a	267
	Wheat	12	69	18	250	427	59	58	70	1,593
	All Grain	**84**	**141**	**60**	**1,288**	**850**	**152**	**101**	**74**	**5,971**
Interior	Corn	191	248	77	2,282	1,788	128	129	138	10,474
	Soybeans	121	162	75	1,643	1,572	104	122	122	6,508
	Wheat	93	30	309	506	506	100	106	98	2,281
	All Grain	**410**	**448**	**91**	**4,485**	**3,889**	**115**	**124**	**126**	**19,467**
Great Lakes	Corn	0	0	n/a	0	0	n/a	n/a	n/a	57
	Soybeans	0	0	n/a	0	2	0	n/a	n/a	192
	Wheat	11	6	177	30	47	62	55	117	581
	All Grain	**11**	**6**	**177**	**30**	**49**	**60**	**55**	**117**	**831**
Atlantic	Corn	12	20	59	94	39	240	340	705	166
	Soybeans	5	3	152	388	851	46	18	23	2,058
	Wheat	0	0	n/a	5	34	14	n/a	n/a	101
	All Grain	**17**	**23**	**72**	**488**	**925**	**53**	**37**	**45**	**2,325**
All Regions	Corn	1,122	1,146	98	9,346	6,352	147	149	87	40,004
	Soybeans	706	1,160	61	11,492	13,930	82	104	118	46,459
	Wheat	403	358	112	3,501	3,911	90	96	98	17,738
	All Grain	**2,296**	**2,797**	**82**	**25,851**	**24,546**	**105**	**122**	**99**	**108,664**

*Note: Data includes revisions from prior weeks; "All grain" includes corn, soybeans, wheat, sorghum, oats, barley, rye, sunflower, flaxseed, and mixed grains; "All regions" includes listed regions and other minor regions not listed; YTD= year-to-date; n/a = not available or no change.
Source: USDA, Federal Grain Inspection Service.

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.

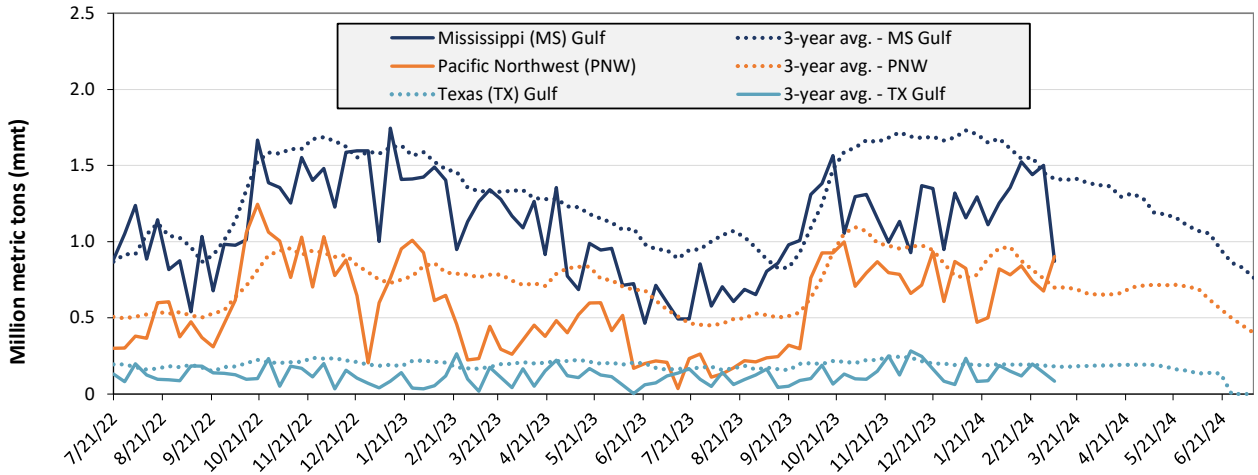
Figure 15. U.S. grain inspected for export (wheat, corn, and soybeans)



For the week ending Mar. 7: 2.3 mmt of grain inspected, down 18 percent from the previous week, up 12 percent from the same week last year, and down 17 percent from the 3-year, 4-week average.

Notes: 3-year average consists of 4-week running average.
Source: USDA, Federal Grain Inspection Service.

Figure 16. U.S. grain inspections for U.S. Gulf and PNW (wheat, corn, and soybeans)



Week ending 03/07/24 inspections (mmt):
MS Gulf: 0.87
PNW: 0.9
TX Gulf: 0.08

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last week	down 42	down 40	down 42	up 33
Last year (same 7 days)	down 35	down 11	down 33	up 432
3-year average (4-week moving average)	down 38	down 54	down 40	up 29

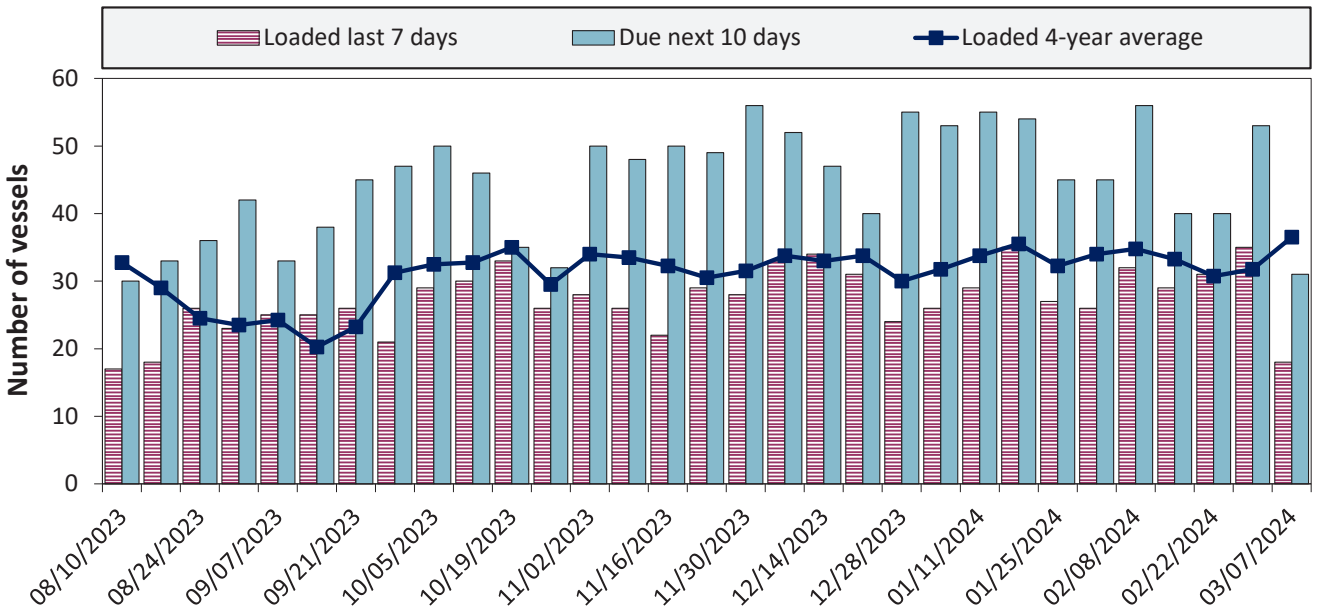
Source: USDA, Federal Grain Inspection Service.

Table 17. Weekly port region grain ocean vessel activity (number of vessels)

Date	Gulf			Pacific Northwest
	In port	Loaded 7-days	Due next 10-days	In port
3/7/2024	22	18	31	19
2/29/2024	25	35	53	24
2023 range	(8…38)	(17…34)	(21…56)	(1…24)
2023 average	22	26	39	10

Note: The data are voluntarily submitted and may not be complete.
Source: USDA, Agricultural Marketing Service.

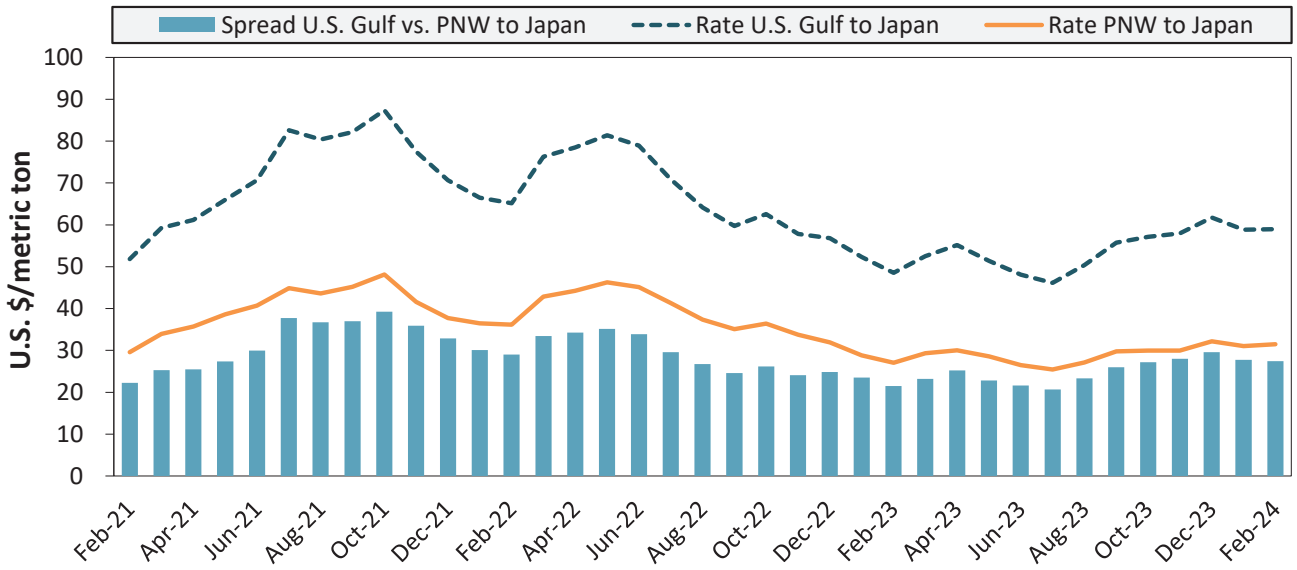
Figure 17. U.S . Gulf vessel loading activity



Week ending 3/7/24, number of vessels	Loaded	Due
Change from last year	-40%	-33%
Change from 4-year average	-51%	-38%

Note: U.S. Gulf includes Mississippi, Texas, and the East Gulf region.
Source: USDA, Agricultural Marketing Service.

Figure 18. U.S. Grain vessel rates, U.S. to Japan



Ocean rates	U.S. Gulf	PNW	Spread
February 2024	$59	$32	$27
Change from February 2023	21%	16%	28%
Change from 4-year average	13%	9%	18%

Note: PNW = Pacific Northwest
Source: O'Neil Commodity Consulting.

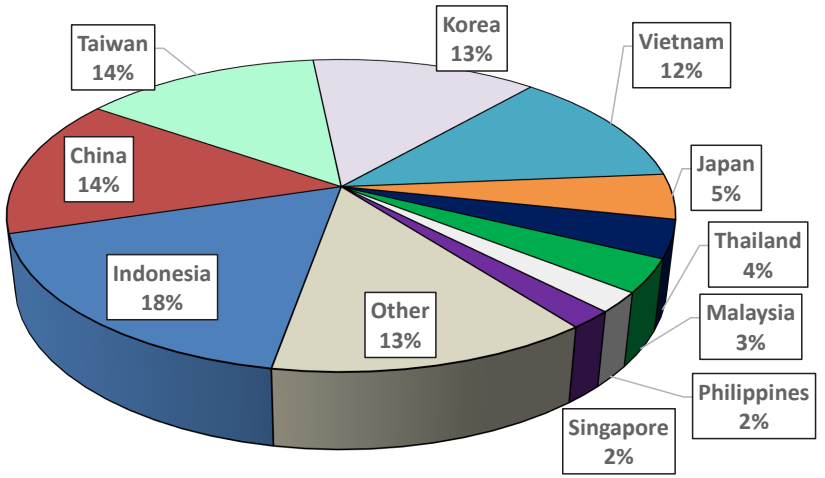
Table 18. Ocean freight rates for selected shipments, week ending 3/9/2024

Export region	Import region	Grain types	Entry date	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	Japan	Heavy grain	Mar 9, 2024	Apr 25/May 4, 2024	54,000	67.00
U.S. Gulf	China	Corn	Feb 28, 2024	Mar 1/10, 2024	66,000	61.50
U.S. Gulf	China	Heavy grain	Sep 12, 2023	Oct 1/ Nov 1, 2023	66,000	54.50
U.S. Gulf	Jamaica	Wheat	Nov 2, 2023	Dec 1/10, 2023	9,460	63.50
U.S. Gulf	Guyana	Wheat	Nov 2, 2023	Dec 1/10, 2023	8,250	84.00
U.S. Gulf	S. Korea	Heavy grain	Oct 10, 2023	Nov 25/Dec 5, 2023	58,000	65.35
U.S. Gulf	S. Korea	Heavy grain	Sep 27, 2023	Oct 25/Nov 5, 2023	57,000	64.85
U.S. Gulf	S. Korea	Heavy grain	Sep 19, 2023	Nov 1/15, 2023	58,000	64.50
U.S. Gulf	S. Korea	Heavy grain	Aug 1, 2023	Oct 1/20, 2023	57,000	58.30
PNW	N. China	Heavy grain	Oct 19, 2023	Nov 16/22, 2023	66,000	28.00
PNW	Thailand	Heavy grain	Oct 20, 2023	Dec 5/15, 2023	66,000	22.50
PNW	Yemen	Wheat	Oct 6, 2023	Nov 5/15, 2023	30,000	74.43
WC US	Thailand	Wheat	Nov 9, 2023	Dec 1/10, 2023	60,500	35.25
Brazil	China	Soybean	Feb 23, 2024	Apr 5/20, 2024	55,000	55.00
Brazil	China	Heavy grain	Jan 20, 2024	Feb 2/8, 2024	63,000	40.50

Note: 50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels. Rates shown are per metric ton (1 metric ton = 2,204.62 pounds), free on board (F.O.B), except where otherwise indicated. op = option
Source: Maritime Research, Inc.

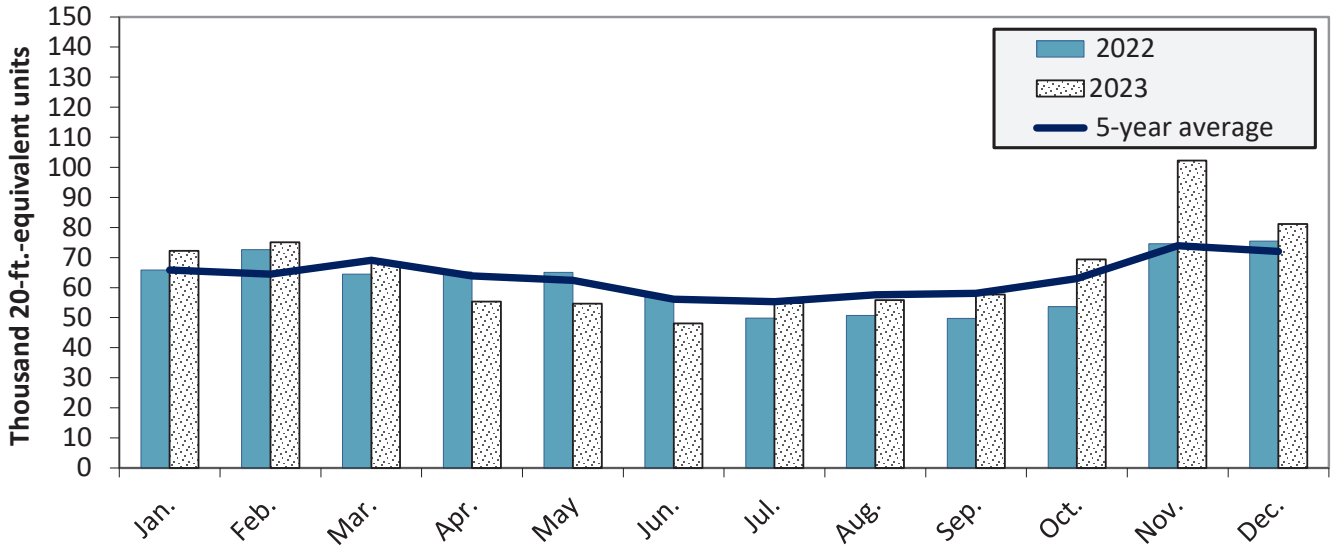
In 2020, containers were used to transport 10 percent of total U.S. waterborne grain exports. Approximately 66 percent of U.S. waterborne grain exports in 2020 went to Asia, of which 14 percent were moved in containers. Approximately 95 percent of U.S. waterborne containerized grain exports were destined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

Figure 19. Top 10 destination markets for U.S. containerized grain exports, Jan-Dec 2023



Note: The following harmonized rariff 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: Source: USDA, Agricultural Marketing Service analysis of PIERS data, S&P Global.

Figure 20. Monthly shipments of U.S. containerized grain exports



Containerized grain shipments in Dec. 2023 were up 7.6 percent from last year and up 12.7 percent from the 5-year average.

Note: ft. = foot. 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: Source: USDA, Agricultural Marketing Service analysis of PIERS data, S&P Global.

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Additional Transportation Research and Analysis resources include the ***Grain Truck and Ocean Rate Advisory (GTOR)***, the ***Mexico Transport Cost Indicator Report***, and the ***Brazil Soybean Transportation Report***.

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