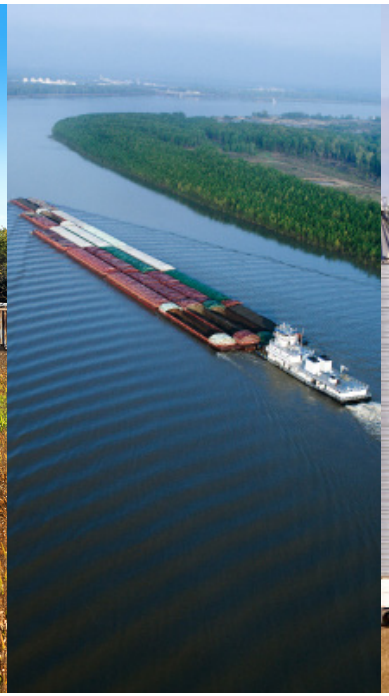
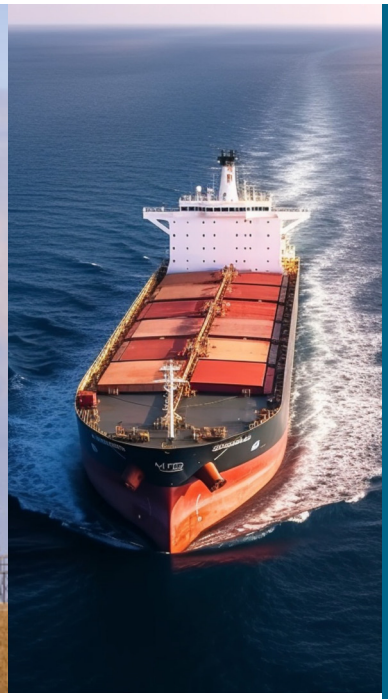
USDA Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE



Grain Transportation Report

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Panama Canal Increases Daily Transits and Maximum Draft. Recent and projected rainfall has prompted the Panama Canal Authority (PCA) to lessen draft and transit restrictions made in response to last year's record drought. Subject to weather conditions, canal operations are expected by PCA to return to normal by 2025.

Beginning May 16, PCA will raise its maximum daily transits in the Panamax locks from 20 to 24, and the maximum allowable daily transits for the Neopanamax Locks will remain at 7—resulting in 31 total daily transits. Beginning June 1, PCA will increase its maximum allowable daily transits for the Neopanamax Locks from 7 to 8—resulting in 32 total daily transits.

Effective June 15, PCA will increase the maximum authorized draft allowed to vessels transiting the Neopanamax locks from 44 feet to 45 feet. (The normal draft level for the Neopanamax locks is 50 feet.)

Rain Causes Major Flooding on Ohio and Monongahela Rivers. On April 3-5, intense rain caused the Pittsburgh, PA, area's largest flood since 2005. On the Ohio and Monongahela Rivers, 11 of the Pittsburgh Engineer District's 23 locks were out of service between 8:30 am on April 3 and 7:30 am on April 4. By April 9, all locks had reopened.

Also, on April 12, during the ongoing flooding, 26 barges broke loose from their moorings on the Ohio River in Pittsburgh; struck the Sewickley Bridge (which was closed at the time); and damaged a marina. Of the 26 loosed barges, 11 were quickly contained by another towing vessel; 9 others were collected at the Emsworth Lock and Dam; and the rest passed through the dam. According to the Coast Guard Marine unit, all barges are currently accounted for.

All bridges that had shut down because of flooding—including a rail bridge to Brunot Island—have now reopened to traffic. However, the Ohio River remains closed between the Emsworth and Dashields dams. The 3-year average of grain moving through the Ohio River at Olmsted (Lock 52) was 10.6 million tons.

FRA's CRISI Program Offers Funding for Short Line Railroad Improvements. The Consolidated Rail Infrastructure and Safety Improvements (CRISI) program, of the Department of Transportation's Federal Railroad Administration (FRA), is accepting grant applications through May 28.

Offering more than $2.4 billion in total available funding, the CRISI program prioritizes investments in short line railroads. The most recent round of CRISI grant awards included over $150 million for grain-related railroad improvements (*Grain Transportation Report, September 28, 2023, first highlight*).

Short line railroads provide rail access for rural grain farmers and reduce overall reliance on trucks, resulting in lower emissions and less road congestion and maintenance. However, government funding is often needed for adequate resources to maintain short line tracks and equipment.

U.S. Grains Council Releases Report on Corn Export Cargo Quality. The U.S. Grains Council (USGC) recently released its *2023/2024 Corn Export Cargo Quality Report* (CECQR), which accompanies USGC's *2023/2024 Corn Harvest Quality Report*. Differences in results between the two reports reflect changes in corn quality during the marketing process—of which transportation is a key component.

CECQR is based on 433 export corn-cargo samples inspected by USDA's Federal Grain Inspection Service. Corn samples were evaluated for grade factors (e.g., test weight, heat damage, etc.); intrinsic quality characteristics (e.g., protein, starch, and oil content); physical quality characteristics (e.g., stress cracks); and sanitary quality characteristics (e.g., mycotoxins).

The results are presented for the whole United States, as well as for the three major export catchment areas: U.S. Gulf, Pacific Northwest, and Southern Rail (i.e., rail exports to Mexico from inland sources). Because of lack of aeration during transport, grain shipments are vulnerable to moisture variation, which can lead to fungal invasions or pest infestations.

Export Sales

For the week ending April 4, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2023/24 totaled 22.86 million metric tons (mmt), down 8 percent from last week and down 3 percent from the same time last year.

Net **corn export sales** for MY 2023/24 were 0.33 mmt, down 66 percent from last week. Net **soybean export sales** were 0.31 mmt, up 57 percent from last week. Net weekly **wheat export sales** were 0.081 mmt, up significantly from last week.

Rail

U.S. Class I railroads originated 26,293 **grain carloads** during the week ending April 6. This was a 6-percent increase from the previous week, 19 percent more than last year, and unchanged from the 3-year average.

Average April **shuttle secondary railcar bids/offers** (per car) were $63 below tariff for the week ending April 11. This was $131 less than last week and $100 more than this week last year. Average non-shuttle secondary railcar bids/offers per car were $375 above tariff. This was $50 less than last week, and $225 more than this week last year.

Barge

For the week ending April 13, **barged grain movements** totaled 499,608 tons. This was 18 percent more than the previous week and 34 percent less than the same period last year.

For the week ending April 13, 338 grain barges **moved down river**—72 more than last week. There were 535 grain barges **unloaded** in the New Orleans region, 7 percent fewer than last week.

Ocean

For the week ending April 11, 22 **oceangoing grain vessels** were loaded in the Gulf—12 percent fewer than the same period last year. Within the next 10 days (starting April 12), 41 vessels were expected to be loaded—32 percent more than the same period last year.

As of April 11, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $59.75. This was 2 percent less than the previous week. The rate from the Pacific Northwest to Japan was $31.25 per mt, 5 percent less than the previous week.

Fuel

For the week ending April 15, the U.S. average **diesel price** decreased 4.6 cents from the previous week to $4.015 per gallon, 10.1 cents below the same week last year.

Rail Transportation of Soybean Oil in the United States

In recent years, the United States has ramped up production of renewable diesel—a hydrocarbon fuel made from animal fats and oilseeds—that has fewer greenhouse gas emissions than the petroleum diesel it replaces. Soybean oil is one of the principal feedstocks for this biomass-based diesel, and the increased demand for soybean oil has led to an expansion of soybean crush facilities in the United States.

The growth in domestic soybean crushing is likely to alter the transportation of soybeans and soybean products. For example, the rise in domestic soybean crushing will likely reduce the share of (whole) soybean exports, and it will likely raise the share of soybean meal exports—a coproduct of the soybean crush process. Rail transportation of soybean meal was discussed in a previous article (***Grain Transportation Report*, January 25, 2024**).

Changes to soybean oil transportation are also likely—as soybean oil used for food manufacturing and exports declines and volumes used for renewable diesel production continue to rise steadily. This article provides background on the rail transportation of soybean oil in the United States. Data on soybean oil production, use, and exports are followed by an analysis of rail movements using the Surface Transportation Board's (STB) public-use Carload Waybill Sample (CWS).

Background on Soybean Oil Production, Use, and Exports

Production. USDA projects that total soybean crush in marketing year (MY) 2023/24 will be 2.3 billion bushels, and soybean oil production will be 27.1 billion pounds.[1] In February, USDA projected the United States would produce a record 28.2 billion pounds of soybean oil in MY 2024/25. According to industry estimates, total U.S. soybean crush capacity has grown 7 percent in the past 3 years, and is expected to grow another 23 percent in the next 3 years. Most crude soybean oil is further refined before it is eventually used.[2] If the crush facility does not refine it, the crude soybean oil must be transported to a refinery.

Use. Soybean oil has three primary uses—food, industrial, and biofuels. Soybean oil has long been used in food manufacturing—particularly, in producing salad dressings, condiments, and sauces and in baking or frying prepared foods. Food use of soybean oil peaked at 16.4 billion pounds in MY 2002/03. In that year, nearly all domestic use of soybean oil (96 percent) was for food. By MY 2022/23, food use of soybean oil had fallen to 11.6 billion pounds—44 percent of domestic soybean oil use that year.

In the early 2000s, soybean oil began to be used in biofuels production—specifically, for fatty acid methyl ester (FAME) biodiesel and renewable diesel.[3] In MY 2015/16, 5.7 billion pounds of soybean oil were used in biofuels production. From MY 2015/16 to MY 2022/23, biofuels use rose from 5.7 billion pounds to 12.5 billion pounds—accounting for 47 percent of domestic soybean oil use in MY 2022/23. Another 10 percent of total domestic use is accounted for by soybean oil's other industrial uses (i.e., producing plastics, paints, inks, etc.).

Exports. In 2010, soybean oil exports peaked at 1.66 million metric tons (approximately, 3.7 billion pounds). Over the next 10 years (2010-19)—when soybean oil exports were at their highest—exports averaged around 1 million metric tons per year. During that decade, 59 percent of total exports left via the New Orleans, LA, customs district. However, by 2023, as soybean oil stocks had been diverted to renewable diesel production, soybean oil exports fell to just 152,000 metric tons.

1 The marketing year for soybean oil is from October 1 to September 30.

2 Refined soybean oil is also referred to as "refined, bleached, deodorized" (RBD) soybean oil.

3 The main difference between FAME biodiesel and renewable diesel is that FAME biodiesel is blended with petroleum diesel, while renewable diesel is a "drop-in" (i.e., replacement) for petroleum diesel. In MY 2022/23, renewable diesel production surpassed FAME biodiesel production for the first time. For more, see "Biodiesel and Renewable Diesel: What's the Difference?" *FarmDoc Daily,* February 8, 2023.

Soybean Oil Transportation by Rail

According to STB's CWS, U.S. railroads originated 6.7 million tons (approximately, 13.4 billion pounds) of soybean oil in 2022, up 8 percent from 2021 and up 26 percent from the prior 5-year average (fig. 1). This total also exceeded the previous record for annual carloads of soybean oil—6.6 million tons in 2006.

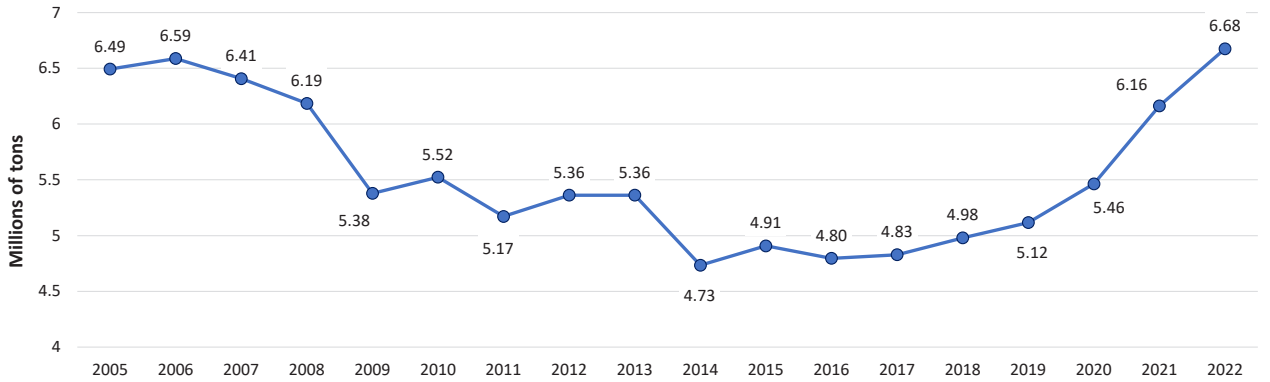
In both 2006 and 2022, most soybean oil originated in the Midwest and, to a lesser degree, the Southeast. This pattern reflects the **locations of soybean crush plants**.

Despite the comparable volumes of soybean oil transported by rail in 2006 and 2022, use of soybean oil shifted from food to fuel. These shifts in use were reflected in the destinations for soybean oil in 2006 vs. 2022 (fig. 2).[4]

2006. In MY 2005/06, the top destinations for soybean oil shipments reflected the high share (82 percent) of soybean oil used for food production. The top destinations for soybean oil rail shipments in 2006 were "Kansas City, MO-KS" (524,000 tons); "Chicago-Gary-Kenosha, IL-IN-WI" (437,000 tons); "New York-No. New Jersey-Long Island, NY-NJ-CT-PA-MA-VT" (426,000 tons); "Los Angeles-Riverside-Orange County, CA-AZ" (396,000 tons), and "Cincinnati-Hamilton, OH-KY-IN" (256,000 tons).

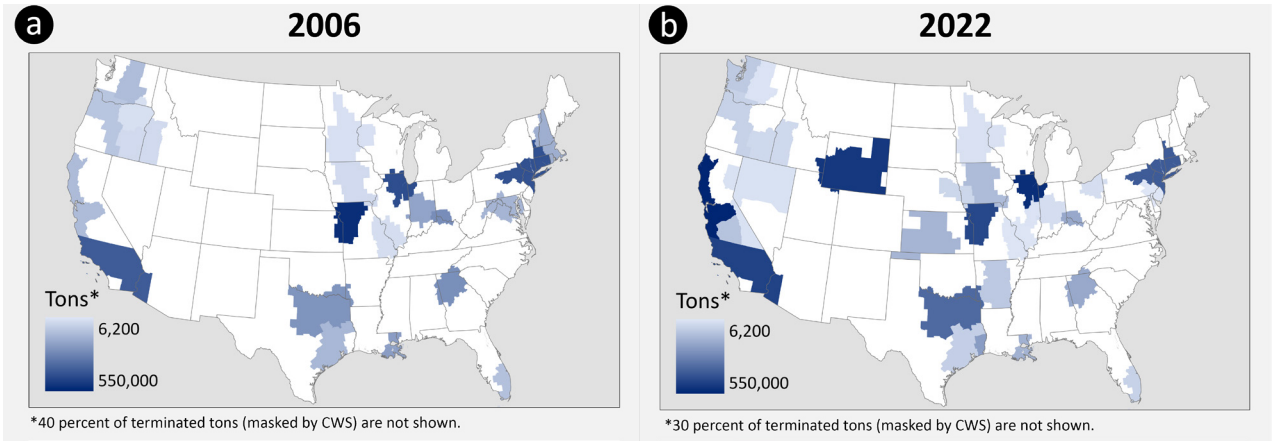
All these destinations were (and continue to be) metropolitan areas with significant food manufacturing plants. For instance,

Figure 1. Soybean oil transportation by rail (million tons), 2005-22



Source: Surface Transportation Board, public-use carload waybill sample.

Figure 2. Destinations for soybean oil rail shipments (tons) in 2006 (a) and 2022 (b)



*40 percent of terminated tons (masked by CWS) are not shown.

*30 percent of terminated tons (masked by CWS) are not shown.

Source: USDA/Agricultural Marketing Service analysis of disclosed volumes in the Surface Transportation Board's public-use Carload Waybill Sample (CWS). Map layer credits: Esri, TomTom, Garmin, DOT, FAO, NOAA, USGS, EPA, USWS.

Ventura Foods (a joint venture between CHS Inc. and Mitsui & Co) is a leading manufacturer of frying oils, sauces, salad dressings, margarines, mayonnaises, pan sprays, etc. Ventura Foods has plants in several of the top soybean oil destinations, including St. Joseph, MO (part of the "Kansas City, MO-KS" BEA region), and Ontario, CA (part of the "Los Angeles-Riverside-Orange County, CA-AZ" BEA region).

4 STB's public-use CWS masks individual shipment information, including volume, the railroads involved, the rate, and the exact origin and destination. It also aggregates locations to Bureau of Economic Analysis (BEA) economic areas (e.g., this map). For additional information, see STB's website.

Another leading manufacturer of oils and sauces, **Stratas Foods,** has a plant in the New York Metropolitan Area. Other notable vegetable oil-based foods include Hellmann's mayonnaise (manufactured in Chicago, IL) and Crisco (manufactured in Cincinnati, OH).

2022. By MY 2021/22, food use had fallen to just 45 percent of total soybean oil use, and biofuels production accounted for 39 percent. The top destinations for soybean oil rail shipments in 2022 were "San Francisco-Oakland-San Jose, CA" (553,000 tons); "Chicago-Gary-Kenosha, IL-IN-WI" (525,000 tons); "Casper, WY-ID-UT" (499,000 tons); "Los Angeles-Riverside-Orange County, CA-AZ" (469,000 tons); and "Kansas City, MO-KS" (454,000 tons). Between 2006 and 2022, New York and Cincinnati had fallen out of the top 5 destinations, but they remained among the top 10 destinations.

As shifts in soybean oil use suggest, some top 2022 destinations for soybean oil shipments are related to the burgeoning renewable diesel industry. For example, Wyoming and the San Francisco Bay Area offer extensive renewable diesel plants. Nonetheless—as evidenced by Chicago and Kansas City's staying power among the top destinations—food manufacturing remains a major use for soybean oil. Los Angeles offers a mix of renewable diesel production and food manufacturing.

As of December 2022, Wyoming and California were the third- and fourth-largest **renewable-diesel-producing States**, respectively. HF Sinclair owns two renewable diesel plants in Wyoming (one in Sinclair and another in Cheyenne)—with a combined capacity of 209 million gallons. Phillips 66 owns a renewable diesel plant in the San Francisco Bay Area (Rodeo, CA), with a total annual capacity of 120 million gallons (as of December 2022). California currently consumes **nearly all U.S.-produced renewable diesel**, because of the State's **Low Carbon Fuel Standard**.

Outlook for Soybean Oil Transportation

Although STB's CWS data are available only through 2022, renewable diesel production has risen significantly since then, and it is likely to increase even more in coming years. According to the Department of Energy's **Energy Information Administration**, U.S. renewable diesel capacity, as of January 1, 2023, was 3 billion gallons per year. **Based on projected plant openings and expansions**, renewable diesel production capacity could nearly double to 5.9 billion gallons per year by the end of 2025.[5]

Many of the projected renewable diesel plant openings/expansions are located in California. Just this month, the Phillips 66 plant in Rodeo, CA, **announced** it now processes only renewable feedstocks (including soybean oil). The plant is on track to produce 800 million gallons of renewable fuels this year. California's rising production of renewable diesel is likely to require more soybean oil transportation to California from soybean crush plants in the Midwest.

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5 For more information on renewable diesel transportation, the U.S. Energy Information Administration began including interregional movement data in their March *Petroleum Supply Monthly.*

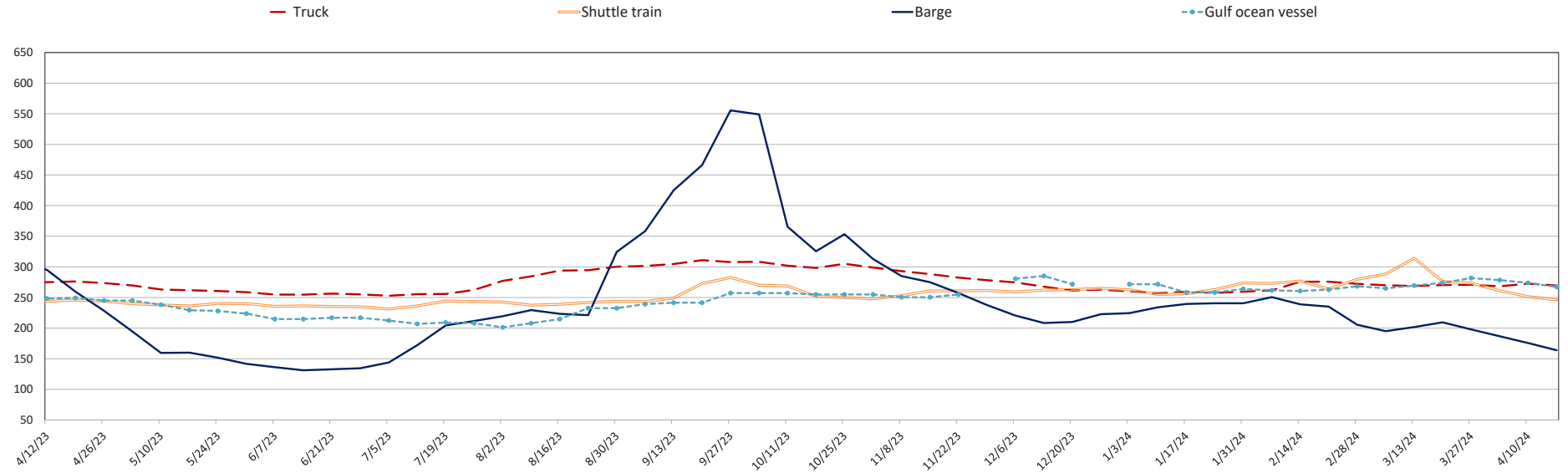
Grains are transported to the domestic and international markets via one or a combination of the following modes: truck, rail, barge and ocean-going vessel. Monitoring the cost of transportation for each mode is vital to the marketing decision making process.

Table 1. Grain transport cost indicators

For the week ending:	Truck	Rail		Barge	Ocean	
		Non-shuttle	Shuttle		Gulf	Pacific
04/17/24	269	337	246	164	267	222
04/10/24	273	340	252	176	274	232
04/19/23	276	326	246	259	249	213

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.

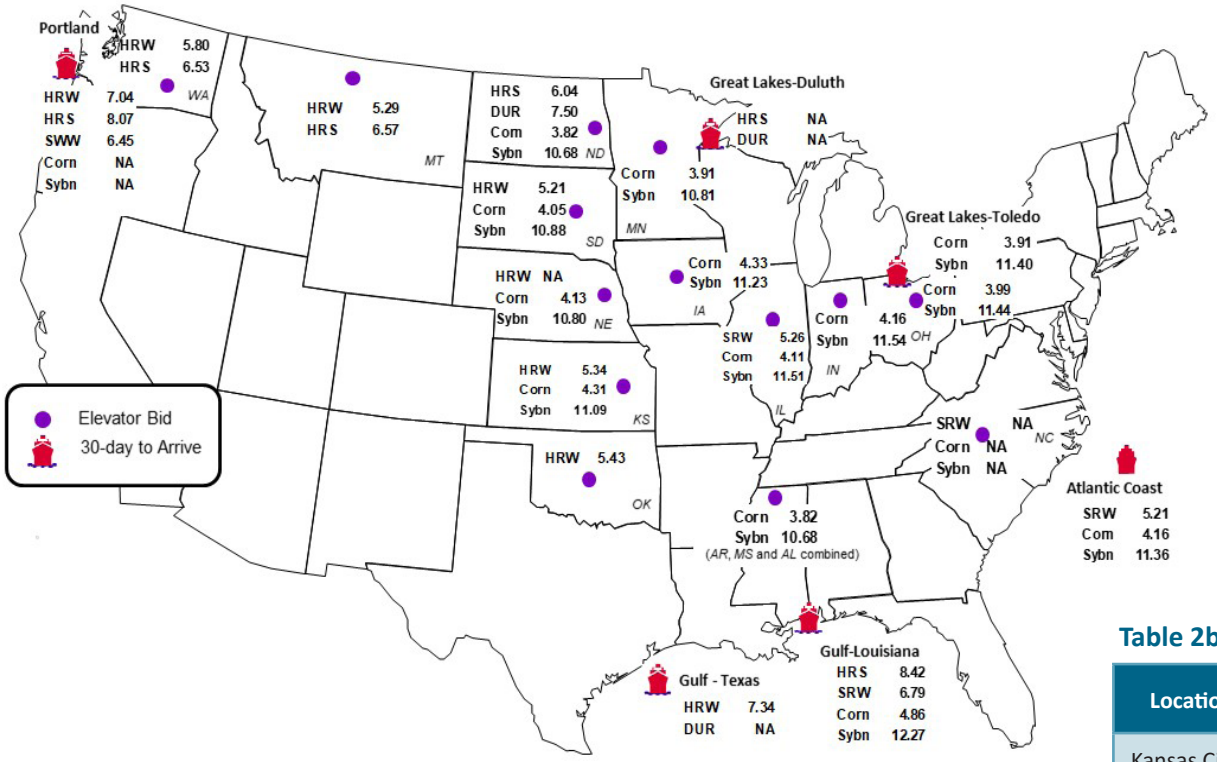
Figure 1. Grain transportation cost indicators as of week ending 4/17/24



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	4/12/2024	4/5/2024
Corn	IL–Gulf	-0.75	-0.75
Corn	NE–Gulf	-0.73	-0.74
Soybean	IA–Gulf	-1.04	-1.08
HRW	KS–Gulf	-2.00	-2.08
HRS	ND–Portland	-2.03	-1.97

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	4/12/2024	Week ago 4/5/2024	Year ago 4/14/2023
Kansas City	Wheat	May	5.866	5.912	8.702
Minneapolis	Wheat	May	6.426	6.480	8.714
Chicago	Wheat	May	5.500	5.690	6.844
Chicago	Corn	May	4.320	4.342	6.634
Chicago	Soybean	May	11.612	11.904	15.096

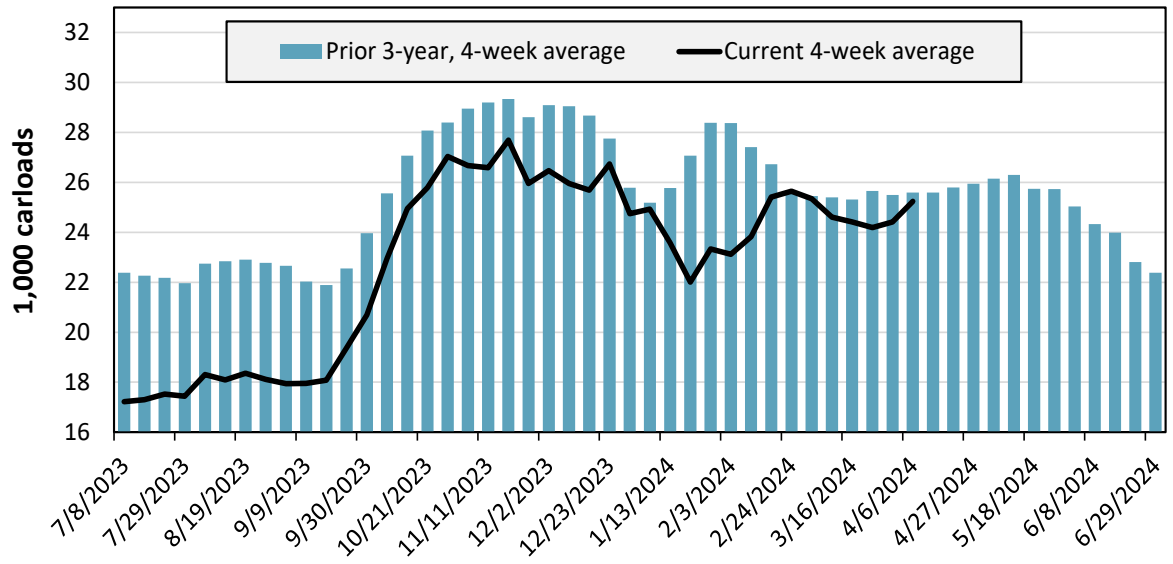
Sources: U.S. Inland: GeoGrain, USDA Weekly Bids, U.S. Export: Corn & Soybean - Export Grain Bids, AMS, USDA Wheat Bids - Weekly Wheat Report, U.S. Wheat Associates, Washington, DC.

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

For the week ending: 4/06/2024	East		West		Central U.S.		U.S. total
	CSXT	NS	BNSF	UP	CPKC	CN	
This week	1,790	2,767	11,842	5,601	3,179	1,114	26,293
This week last year	1,739	2,338	8,800	5,876	1,935	1,483	22,171
2024 YTD	23,379	37,950	150,214	75,051	42,217	14,987	343,798
2023 YTD	28,684	37,337	138,255	79,900	33,182	22,493	339,851
2024 YTD as % of 2023 YTD	82	102	109	94	127	67	101
Last 4 weeks as % of 2023	76	106	132	108	157	60	116
Last 4 weeks as % of 3-yr. avg.	77	105	101	101	120	54	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



For the 4 weeks ending April 6, grain carloads were up 3 percent from the previous week, up 16 percent from last year, and down 1 percent from the 3-year average.

Source: Surface Transportation Board.

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

For the week ending: 4/6/2024		East		West		Central U.S.			U.S. Average
		CSX	NS	BNSF	UP	CN	CP	KCS	
Grain unit train origin dwell times (hours)	This week	32.6	30.7	22.1	17.1	6.5	13.5	23.5	20.9
	Average over last 4 weeks	39.5	38.3	28.8	14.6	6.9	14.9	21.4	23.5
	Average of same 4 weeks last year	29.6	41.8	33.3	22.0	13.9	76.6	9.2	32.4
Grain unit train speeds (miles per hour)	This week	23.3	18.4	25.6	22.7	24.8	24.9	27.5	23.9
	Average over last 4 weeks	23.1	16.6	24.8	22.7	24.8	23.4	26.9	23.2
	Average of same 4 weeks last year	23.9	15.4	25.2	22.1	23.1	21.8	25.6	22.4

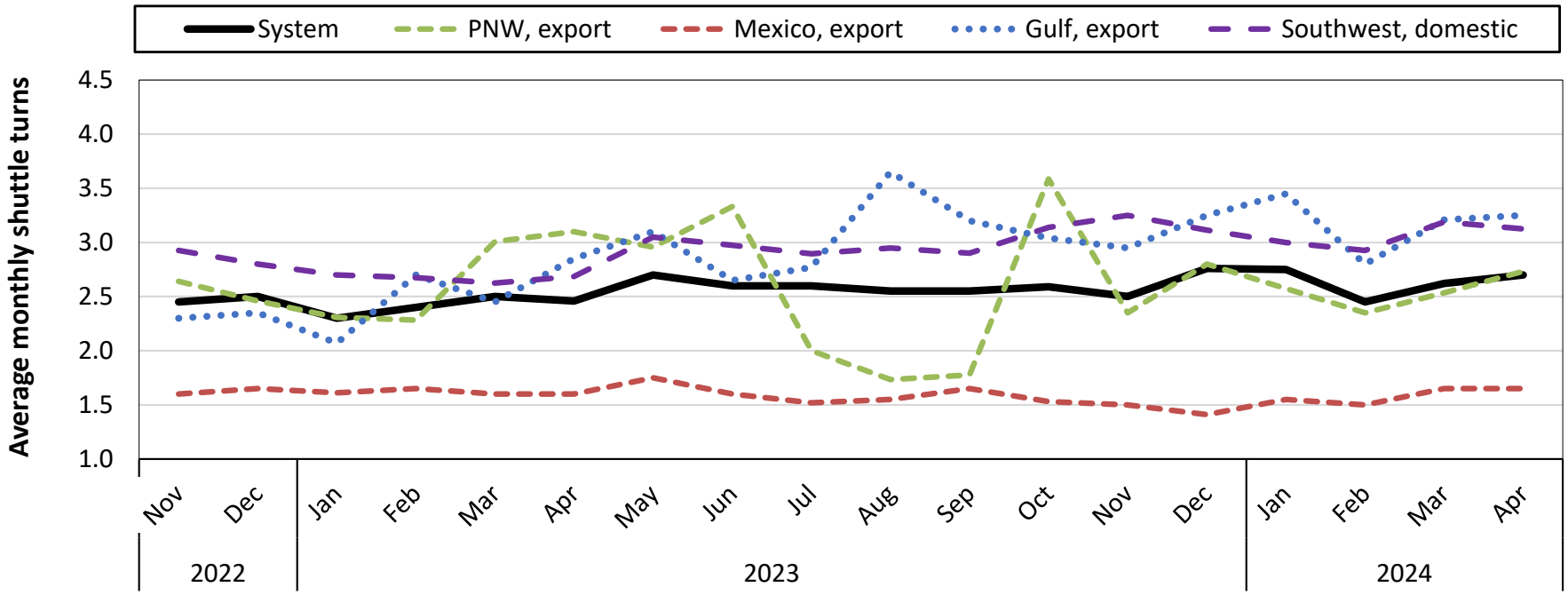
Note: NS = Norfolk Southern; UP = Union Pacific; CN = Canadian National; CP = Canadian Pacific; KCS = Kansas City Southern. Although CP and KCS have merged to form CPKC, the service metrics are reported for two legacy networks that correspond to the old nomenclature (CP and KCS).
These service metrics 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: 4/6/2024		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	23	5	485	113	4	35	28	693
	Average over last 4 weeks	32	8	509	89	2	40	19	698
	Average of same 4 weeks last year	14	16	1,067	148	10	115	43	1,412
Loaded grain cars not moved in over 48 hours (number)	This week	13	287	507	117	6	32	48	1,009
	Average over last 4 weeks	15	339	886	83	3	68	31	1,423
	Average of same 4 weeks last year	18	444	1,242	212	12	372	61	2,360
Grain unit trains held (number)	This week	1	3	14	2	0	1	7	28
	Average over last 4 weeks	1	3	18	2	0	3	6	32
	Average of same 4 weeks last year	1	4	10	16	0	1	3	35
Unfilled grain car orders (number)	This week	3	0	6,775	466	0	228	0	7,472
	Average over last 4 weeks	1	4	6,891	716	0	740	34	8,385
	Average of same 4 weeks last year	7	0	4,078	1,284	0	187	0	5,556

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

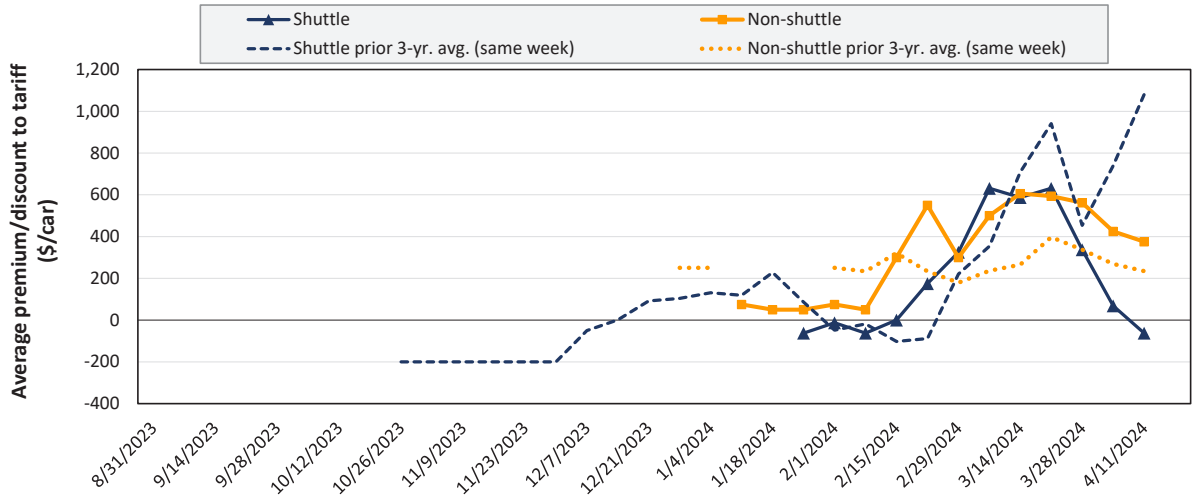


Average monthly system-wide grain shuttle turns reported in the first week of April 2024 were 2.7. By destination region, average monthly grain shuttle turns were 2.73 to PNW, 1.65 to Mexico, 3.25 to the Gulf, and 3.13 to the Southwest.

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 April 2024



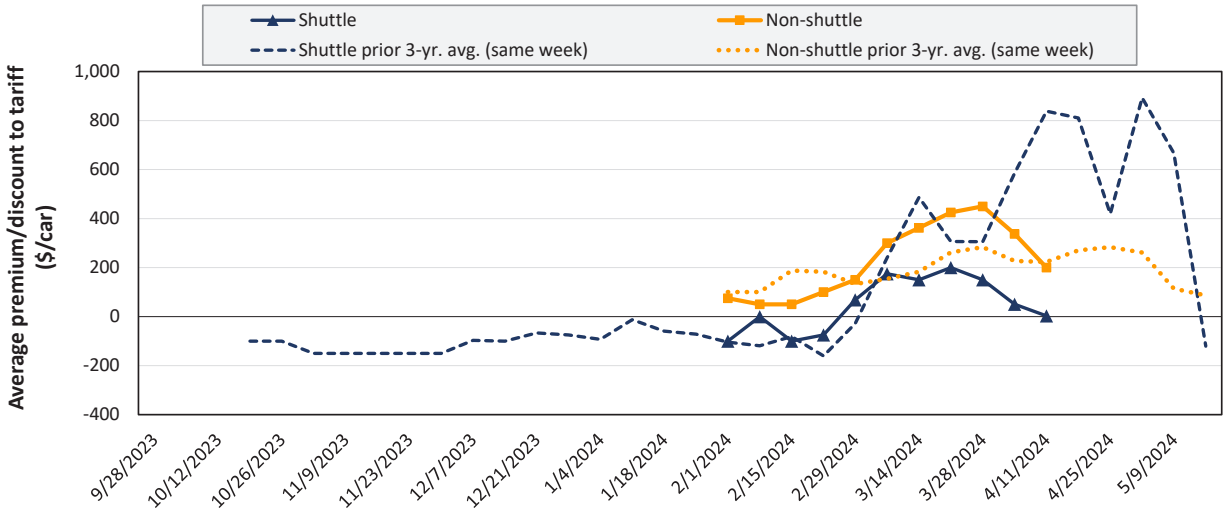
Average non-shuttle bids/offers fell $50 this week, and are $231 below the peak.

Average shuttle bids/offers fell $131 this week and are $694 below the peak.

4/11/2024	BNSF	UP
Non-Shuttle	$375	n/a
Shuttle	$0	-$125

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 May 2024



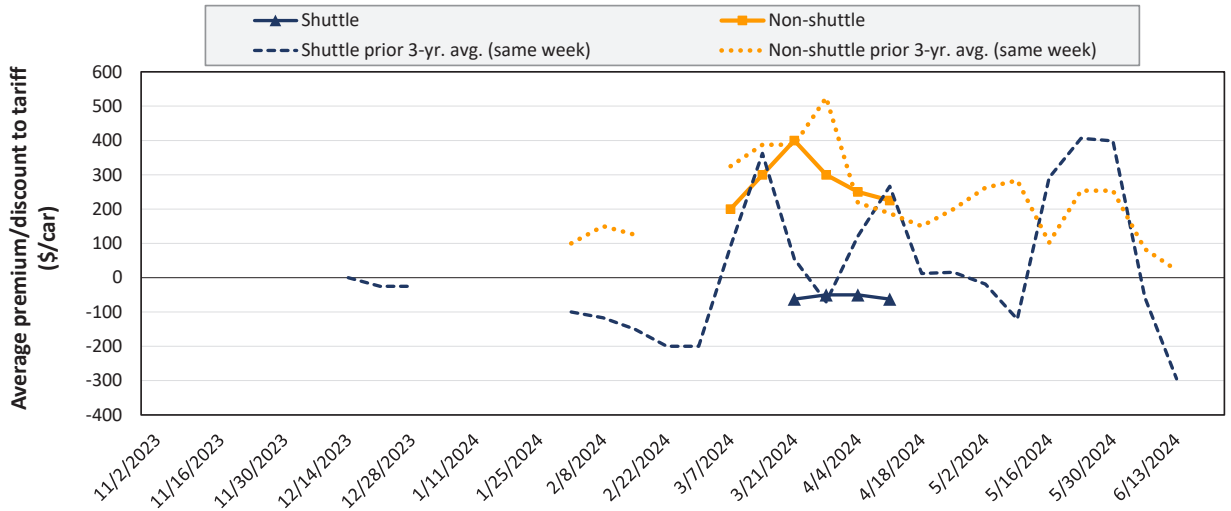
Average non-shuttle bids/offers fell $138 this week, and are $250 below the peak.

Average shuttle bids/offers fell $47 this week and are $197 below the peak.

4/11/2024	BNSF	UP
Non-Shuttle	$200	$200
Shuttle	$6	$0

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 June 2024



Average non-shuttle bids/offers fell $25 this week, and are $175 below the peak.

Average shuttle bids/offers fell $13 this week and are $13 below the peak.

4/11/2024	BNSF	UP
Non-Shuttle	$250	$200
Shuttle	-$63	n/a

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: 4/11/2024		Delivery period					
		Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
Non-shuttle	BNSF	375	200	250	150	n/a	n/a
	Change from last week	-175	-150	-50	0	n/a	n/a
	Change from same week 2023	225	100	150	n/a	n/a	n/a
	UP	n/a	200	200	200	n/a	n/a
	Change from last week	n/a	-125	0	n/a	n/a	n/a
	Change from same week 2023	n/a	-38	0	n/a	n/a	n/a
Shuttle	BNSF	0	6	-63	n/a	-175	-100
	Change from last week	-138	-44	-13	n/a	-12	n/a
	Change from same week 2023	0	88	n/a	n/a	25	-225
	UP	-125	0	n/a	n/a	n/a	n/a
	Change from last week	-125	-50	n/a	n/a	n/a	n/a
	Change from same week 2023	200	300	n/a	n/a	n/a	n/a
	CPKC	-50	-125	50	n/a	n/a	n/a
	Change from last week	-150	-125	0	n/a	n/a	n/a
	Change from same week 2023	50	-25	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

April 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	$197	$42.63	$1.16	4
	Grand Forks, ND	Duluth-Superior, MN	$3,508	$60	$35.43	$0.96	-10
	Wichita, KS	Los Angeles, CA	$6,840	$306	$70.96	$1.93	-10
	Wichita, KS	New Orleans, LA	$4,825	$347	$51.36	$1.40	3
	Sioux Falls, SD	Galveston-Houston, TX	$6,611	$251	$68.14	$1.85	-10
	Colby, KS	Galveston-Houston, TX	$5,075	$380	$54.17	$1.47	3
	Amarillo, TX	Los Angeles, CA	$5,121	$529	$56.11	$1.53	-2
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$392	$43.62	$1.11	-2
	Toledo, OH	Raleigh, NC	$8,877	$0	$88.15	$2.24	4
	Des Moines, IA	Davenport, IA	$2,830	$83	$28.93	$0.73	6
	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	$244	$46.37	$1.18	3
	Des Moines, IA	Los Angeles, CA	$6,305	$711	$69.67	$1.77	0
Soybeans	Minneapolis, MN	New Orleans, LA	$3,156	$580	$37.10	$1.01	-18
	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	$392	$53.95	$1.47	2

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

April 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	$176	$41.90	$1.14	-9
	Wichita, KS	Galveston-Houston, TX	$4,111	$137	$42.18	$1.15	-6
	Chicago, IL	Albany, NY	$7,413	$0	$73.61	$2.00	5
	Grand Forks, ND	Portland, OR	$5,701	$304	$59.63	$1.62	-8
	Grand Forks, ND	Galveston-Houston, TX	$5,146	$312	$54.20	$1.48	-7
	Colby, KS	Portland, OR	$5,923	$624	$65.01	$1.77	-2
Corn	Minneapolis, MN	Portland, OR	$5,660	$370	$59.88	$1.52	-3
	Sioux Falls, SD	Tacoma, WA	$5,620	$339	$59.18	$1.50	-3
	Champaign-Urbana, IL	New Orleans, LA	$4,345	$392	$47.04	$1.20	2
	Lincoln, NE	Galveston-Houston, TX	$4,560	$198	$47.25	$1.20	2
	Des Moines, IA	Amarillo, TX	$4,845	$307	$51.16	$1.30	2
	Minneapolis, MN	Tacoma, WA	$5,660	$367	$59.85	$1.52	-3
	Council Bluffs, IA	Stockton, CA	$5,780	$380	$61.17	$1.55	0
Soybeans	Sioux Falls, SD	Tacoma, WA	$6,335	$339	$66.28	$1.80	-3
	Minneapolis, MN	Portland, OR	$6,385	$370	$67.08	$1.83	-3
	Fargo, ND	Tacoma, WA	$6,235	$301	$64.91	$1.77	-2
	Council Bluffs, IA	New Orleans, LA	$5,270	$452	$56.83	$1.55	1
	Toledo, OH	Huntsville, AL	$5,509	$0	$54.71	$1.49	4
	Grand Island, NE	Portland, OR	$5,905	$638	$64.98	$1.77	1

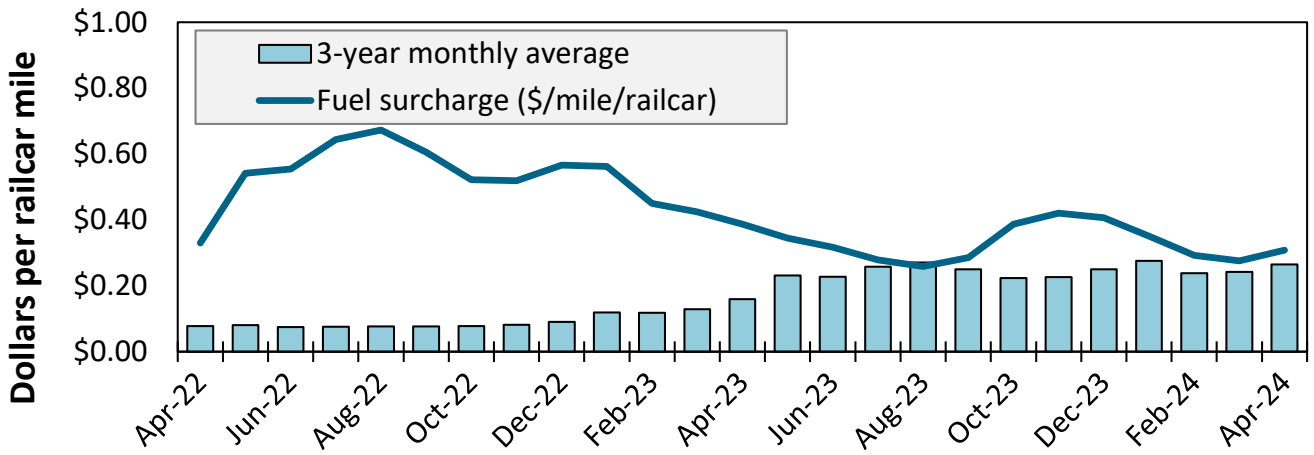
Note: A unit train refers to shipments of at least 25 cars. Shuttle train rates are generally available for qualified shipments of 75-120 cars that meet railroad efficiency requirements. The table assumes 111 short tons (100.7 metric tons) per car, 56 pounds per bushel of corn, and 60 pounds per bushel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

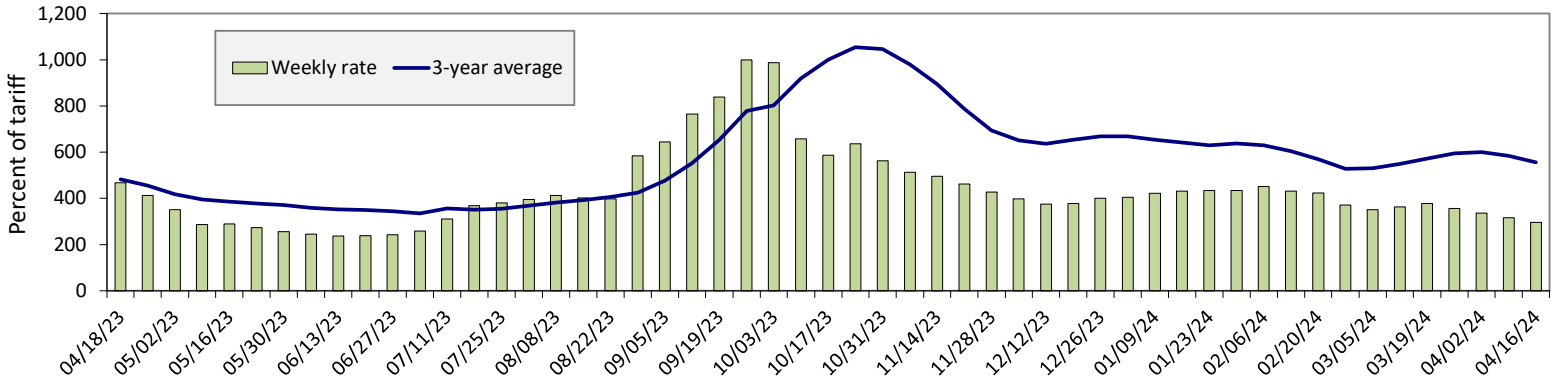
Figure 8. Railroad fuel surcharges, North American weighted average



April 2024: $0.31/mile, up 3 cents from last month's surcharge of $0.28/mile; down 8 cents from the April 2023 surcharge of $0.39/mile; and up 5 cents from the April prior 3-year average of $0.26/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 April 16: 7 percent lower than the previous week; 37 percent lower than last year; and 47 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	4/16/2024	328	303	295	217	246	246	212
	4/9/2024	356	326	316	228	276	276	219
$/ton	4/16/2024	20.30	16.12	13.69	8.66	11.54	9.94	6.66
	4/9/2024	22.04	17.34	14.66	9.10	12.94	11.15	6.88
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	-40	-40	-37	-37	-34	-34	-30
	3-year avg.	-48	-47	-47	-49	-49	-49	-44
Rate	May	324	298	298	217	248	248	212
	July	322	295	298	223	250	250	215

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.

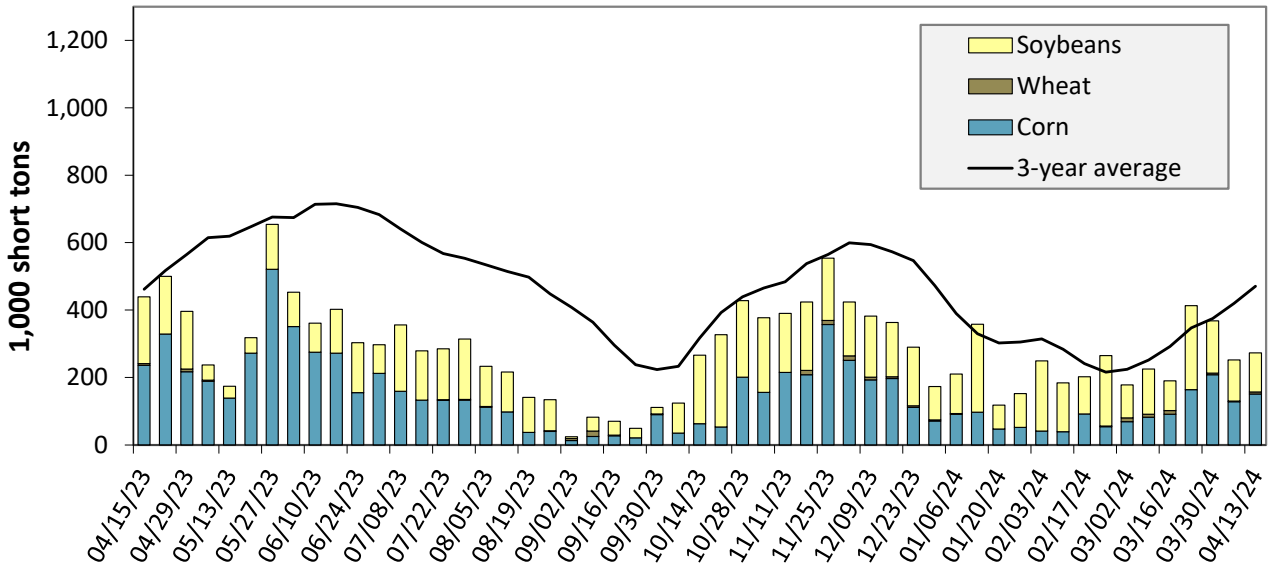
Figure 10. Benchmark tariff rates

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 April 13: 38 percent lower than last year and 42 percent lower than the 3-year average.

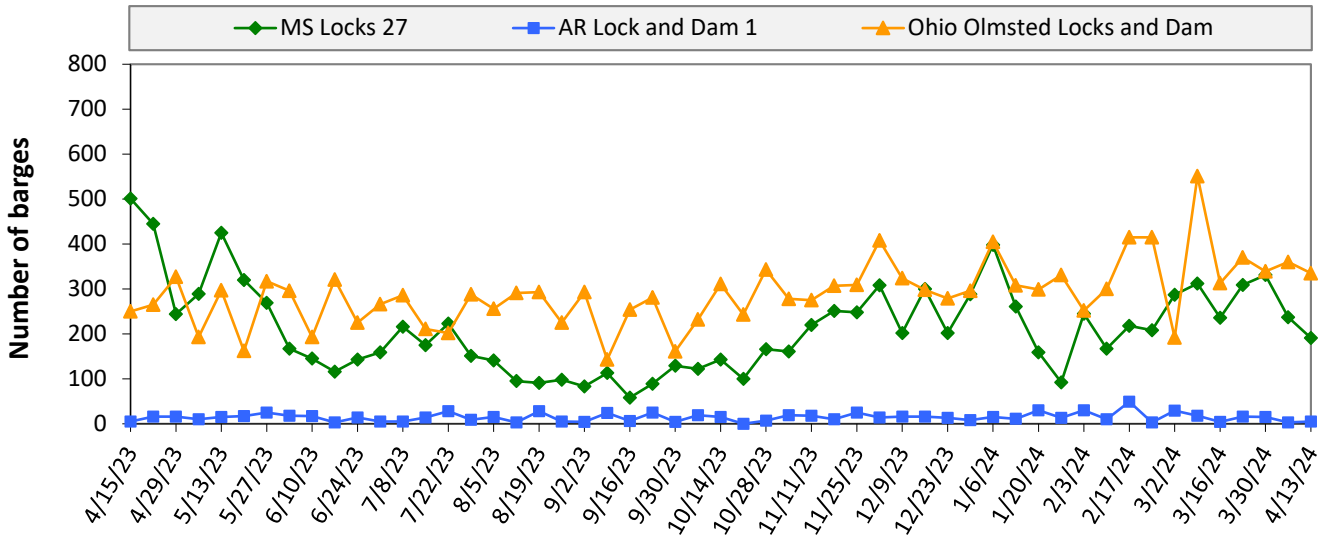
Note: The 3-year average is a 4-week moving average. The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.
Source: U.S. Army Corps of Engineers.

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

For the week ending 04/13/2024	Corn	Wheat	Soybeans	Other	Total
Mississippi River (Rock Island, IL (L15))	41	0	60	0	101
Mississippi River (Winfield, MO (L25))	62	0	75	0	136
Mississippi River (Alton, IL (L26))	159	6	128	2	294
Mississippi River (Granite City, IL (L27))	151	6	116	2	275
Illinois River (La Grange)	84	0	38	0	121
Ohio River (Olmsted)	92	50	44	0	186
Arkansas River (L1)	0	34	6	0	40
Weekly total - 2024	242	90	166	2	500
Weekly total - 2023	423	25	298	10	756
2024 YTD	3,515	531	3,922	68	8,036
2023 YTD	3,827	388	4,306	134	8,656
2024 as % of 2023 YTD	92	137	91	51	93
Last 4 weeks as % of 2023	81	191	86	23	87
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.

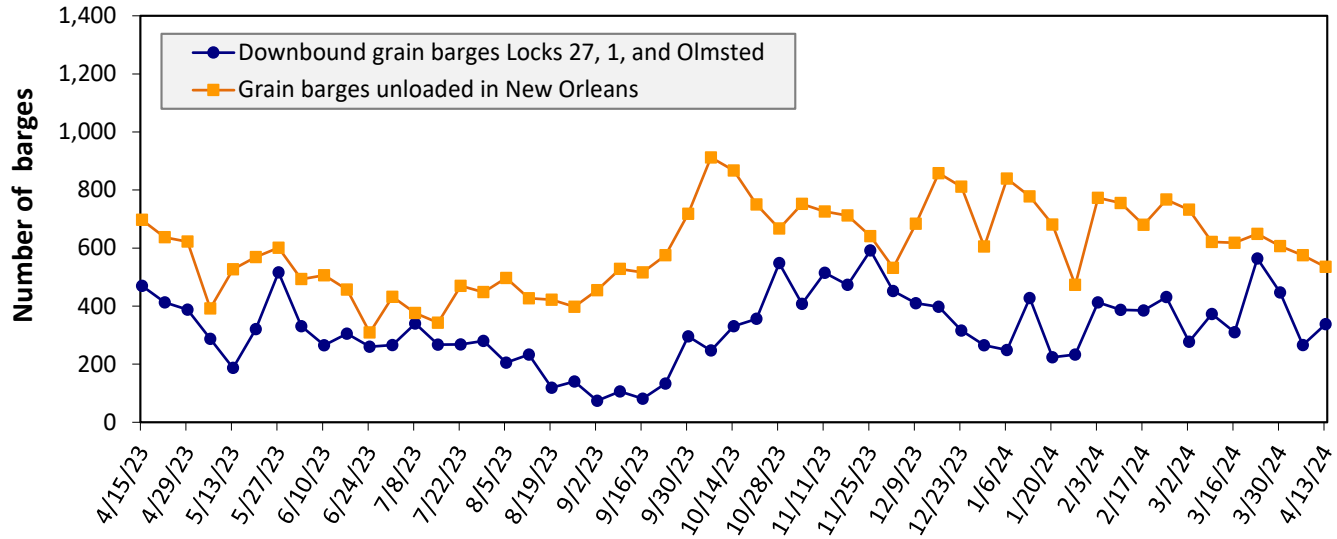
Figure 12. Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



For the week ending April 13: 531 barges transited the locks, 69 barges fewer than the previous week, and 26 percent lower 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 April 13: 338 barges moved down river, 72 more than the previous week; 535 grain barges unloaded in the New Orleans Region, 7 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.

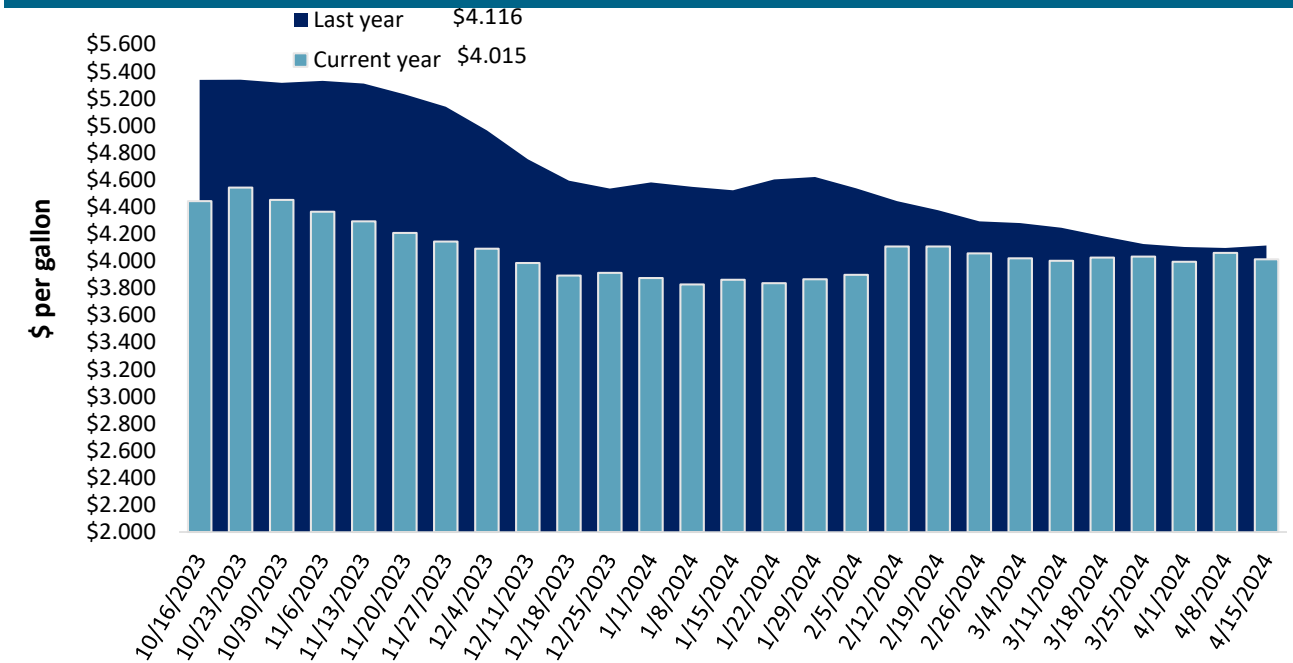
The weekly diesel price provides a proxy for trends in U.S. truck rates as diesel fuel is a significant expense for truck grain movements.

Table 11. Retail on-highway diesel prices, week ending 4/15/2024 (U.S. $/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	4.068	-0.050	-0.130
	New England	4.311	0.006	-0.229
	Central Atlantic	4.241	-0.031	-0.245
	Lower Atlantic	3.979	-0.063	-0.077
II	Midwest	3.965	-0.046	-0.062
III	Gulf Coast	3.710	-0.050	-0.166
IV	Rocky Mountain	3.956	-0.052	-0.148
V	West Coast	4.702	-0.021	0.010
	West Coast less California	4.218	-0.039	-0.238
	California	5.256	-0.003	0.293
Total	United States	4.015	-0.046	-0.101

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 April 15, the U.S. average diesel fuel price decreased 4.6 cents from the previous week to $4.015 per gallon, 10.1 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 4/04/2024	824	929	1,144	743	25	3,664	15,600	3,590	22,855
	This week year ago	596	455	883	603	52	2,589	16,443	4,531	23,562
	Last 4 wks. as % of same period 2022/23	157	248	157	138	101	168	103	89	107
Current shipped (cumulative) exports sales	2023/24 YTD	2,786	3,460	5,266	3,173	479	15,164	28,576	37,264	81,005
	2022/23 YTD	4,374	2,365	4,659	3,971	320	15,688	21,297	45,600	82,585
	YTD 2023/24 as % of 2022/23	64	146	113	80	150	97	134	82	98
	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 4/04/2024	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	18,659	13,843	35	15,227
China	2,060	8,241	-75	12,616
Japan	7,866	5,059	55	10,273
Colombia	4,415	1,710	158	4,398
Korea	1,712	714	140	2,563
Top 5 importers	**34,712**	**29,567**	**17**	**45,077**
Total U.S. corn export sales	**44,177**	**37,740**	**17**	**56,665**
% of YTD current month's export projection	83%	89%	-	-
Change from prior week	326	528	-	-
Top 5 importers' share of U.S. corn export sales	**79%**	**78%**	**-**	**80%**
USDA forecast April 2024	**53,343**	**42,192**	**26**	**-**
Corn use for ethanol USDA forecast, April 2024	**137,160**	**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 4/04/2024	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	23,524	31,005	-24	32,321
Mexico	4,326	4,189	3	4,912
Egypt	664	1,099	-40	2,670
Japan	1,784	1,860	-4	2,259
Indonesia	1,432	1,245	15	1,973
Top 5 importers	**31,730**	**39,397**	**-19**	**44,133**
Total U.S. soybean export sales	**40,854**	**50,131**	**-19**	**56,656**
% of YTD current month's export projection	88%	92%	-	-
Change from prior week	305	214	-	-
Top 5 importers' share of U.S. soybean export sales	**78%**	**79%**	**-**	**78%**
USDA forecast, April 2024	**46,266**	**54,213**	**-15**	**-**

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 04/04/2024	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	3,206	3,189	1	3,397
Philippines	2,824	2,251	25	2,615
Japan	1,953	2,101	-7	2,281
China	2,163	1,098	97	1,740
Korea	1,345	1,259	7	1,426
Nigeria	243	753	-68	1,276
Taiwan	1,099	810	36	944
Thailand	460	627	-27	643
Colombia	295	527	-44	537
Indonesia	434	345	26	469
Top 10 importers	**14,023**	**12,960**	**8**	**15,327**
Total U.S. wheat export sales	**18,828**	**18,277**	**3**	**20,411**
% of YTD current month's export projection	97%	88%	-	-
Change from prior week	81	136	-	-
Top 10 importers' share of U.S. wheat export sales	**74%**	**71%**	**-**	**75%**
USDA forecast, April 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.

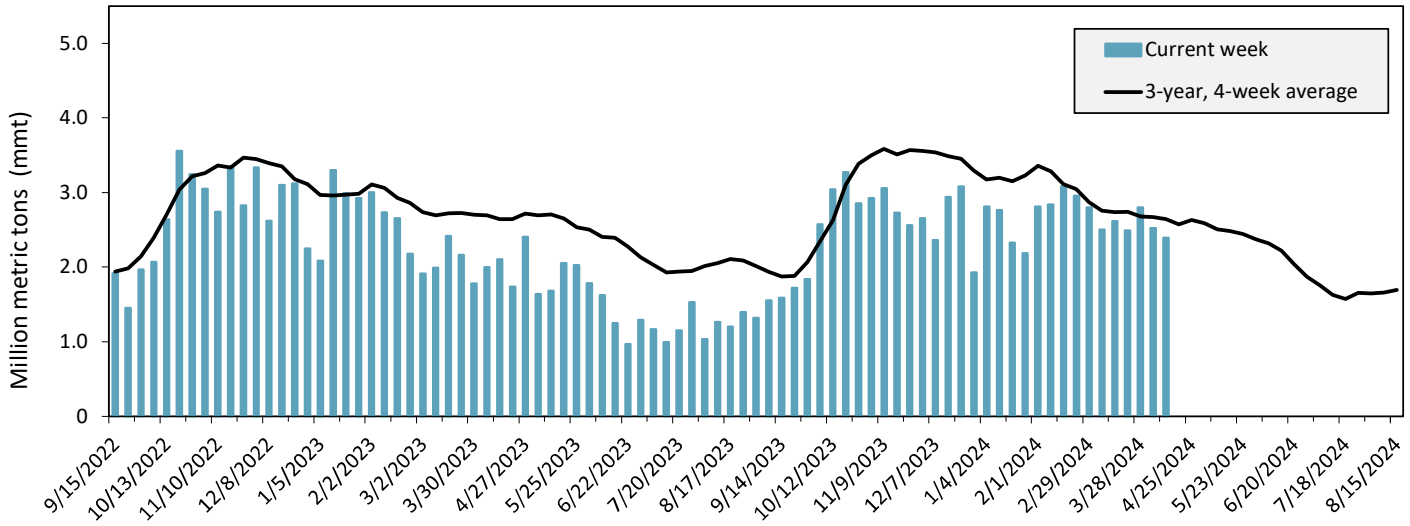
Table 16. Grain inspections for export by U.S. port region (1,000 metric tons)

Port regions	Commodity	For the week ending 04/11/2024	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	501	569	88	5,158	1,163	443	393	169	5,267
	Soybeans	11	0	n/a	2,458	3,200	77	184	58	10,286
	Wheat	376	251	150	3,009	3,240	93	161	123	9,814
	All Grain	**888**	**888**	**100**	**11,287**	**7,799**	**145**	**248**	**132**	**25,913**
Mississippi Gulf	Corn	461	572	81	7,022	7,255	97	85	58	23,630
	Soybeans	307	375	82	9,245	10,643	87	74	104	26,878
	Wheat	98	120	82	1,730	784	221	220	221	3,335
	All Grain	**866**	**1,067**	**81**	**18,052**	**18,683**	**97**	**88**	**78**	**53,843**
Texas Gulf	Corn	11	10	119	143	70	206	n/a	76	397
	Soybeans	0	0	n/a	0	49	0	n/a	n/a	267
	Wheat	0	86	0	456	661	69	71	62	1,593
	All Grain	**83**	**95**	**87**	**1,871**	**1,391**	**134**	**97**	**54**	**5,971**
Interior	Corn	346	281	123	3,766	2,774	136	164	152	10,474
	Soybeans	111	106	105	2,357	2,108	112	144	115	6,508
	Wheat	77	42	184	795	694	115	121	98	2,281
	All Grain	**541**	**434**	**124**	**7,013**	**5,614**	**125**	**153**	**133**	**19,467**
Great Lakes	Corn	0	0	n/a	0	0	n/a	n/a	n/a	57
	Soybeans	0	0	n/a	0	29	0	n/a	n/a	192
	Wheat	0	19	0	49	73	66	74	189	581
	All Grain	**0**	**19**	**0**	**49**	**102**	**47**	**36**	**51**	**831**
Atlantic	Corn	12	10	118	129	44	290	533	173	166
	Soybeans	4	11	34	415	1,035	40	18	12	2,058
	Wheat	0	0	n/a	10	36	29	330	45	101
	All Grain	**16**	**21**	**74**	**554**	**1,116**	**50**	**43**	**26**	**2,325**
All Regions	Corn	1,332	1,443	92	16,218	11,313	143	146	95	40,004
	Soybeans	433	492	88	14,529	17,169	85	84	93	46,459
	Wheat	551	517	107	6,048	5,487	110	153	128	17,738
	All Grain	**2,393**	**2,524**	**95**	**38,879**	**34,815**	**112**	**126**	**97**	**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.

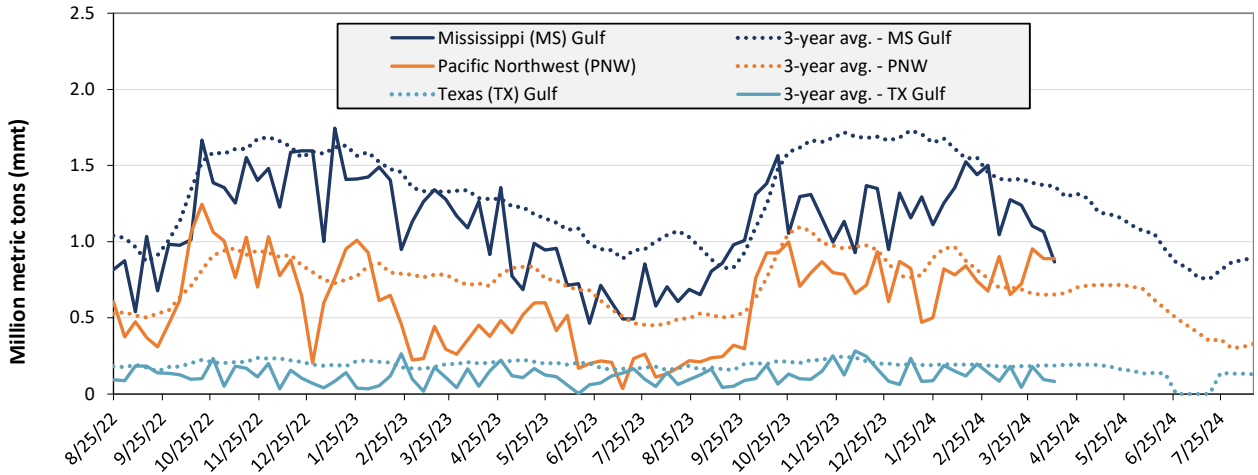
Figure 15. U.S. grain inspected for export (wheat, corn, and soybeans)



For the week ending Apr. 11: 2.4 mmt of grain inspected, down 5 percent from the previous week, up 17 percent from the same week last year, and down 9 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 04/11/24 inspections (mmt):
MS Gulf: 0.87
PNW: 0.89
TX Gulf: 0.08

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last week	down 19	down 13	down 18	un-changed
Last year (same 7 days)	down 29	down 47	down 31	up 150
3-year average (4-week moving average)	down 37	down 56	down 39	up 36

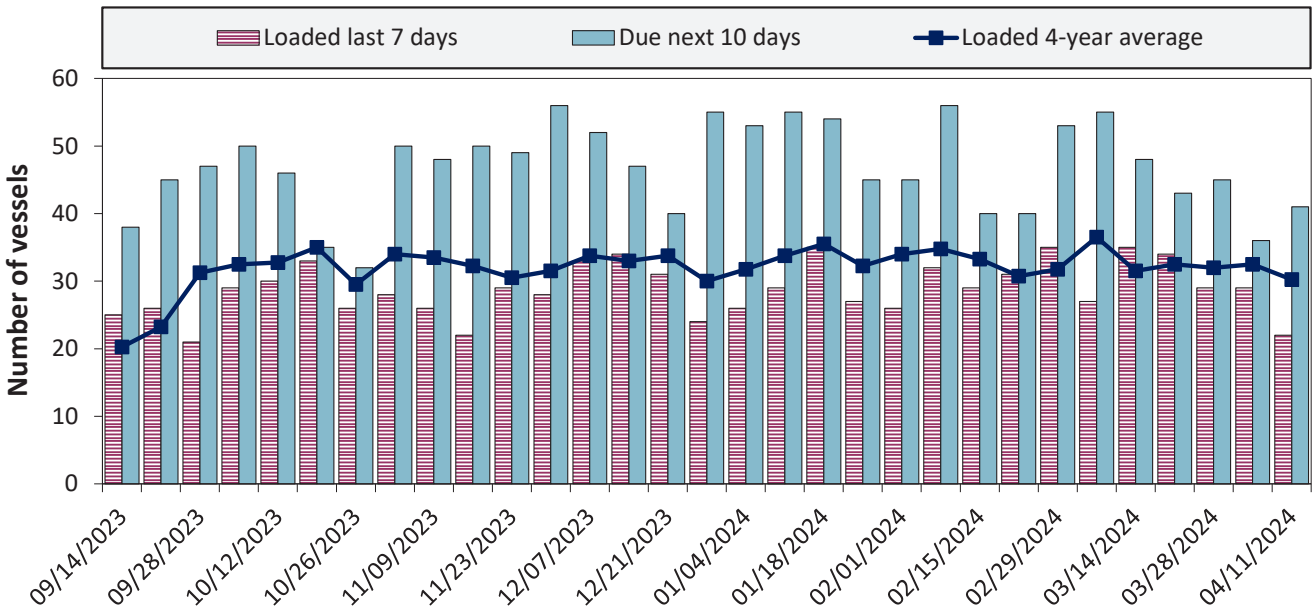
Source: USDA, Federal Grain Inspection Service.

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
4/11/2024	23	22	41	16
4/4/2024	23	29	36	17
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.

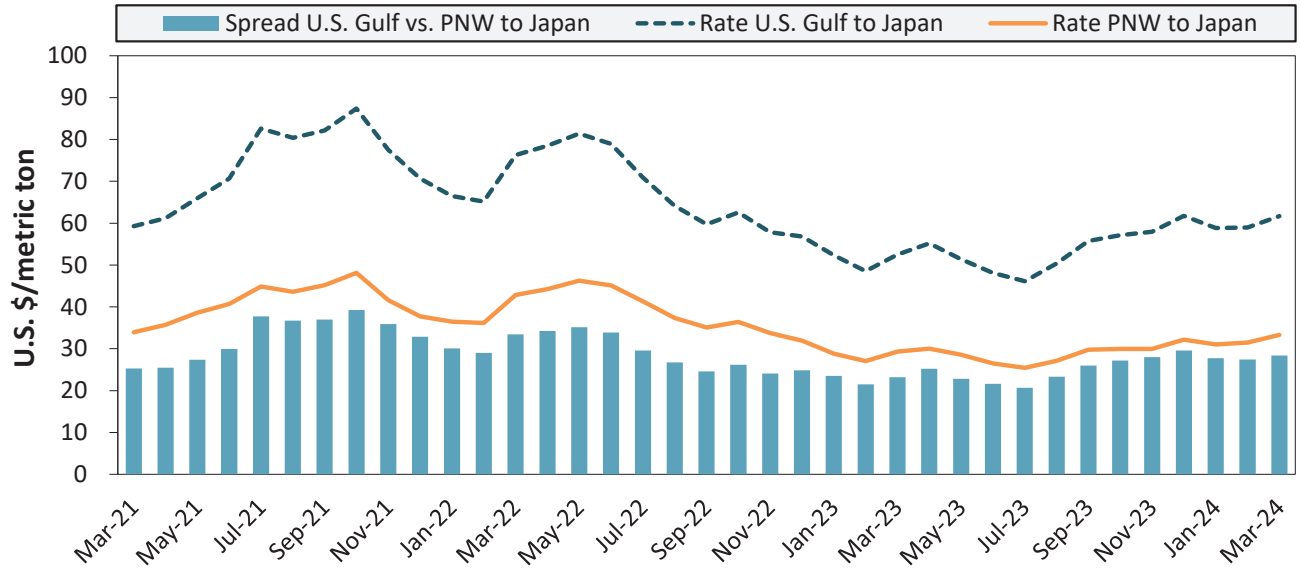
Figure 17. U.S . Gulf vessel loading activity



Week ending 4/11/24, number of vessels	Loaded	Due
Change from last year	-12%	32%
Change from 4-year average	-27%	-8%

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
March 2024	$62	$33	$28
Change from March 2023	18%	14%	22%
Change from 4-year average	7%	4%	12%

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

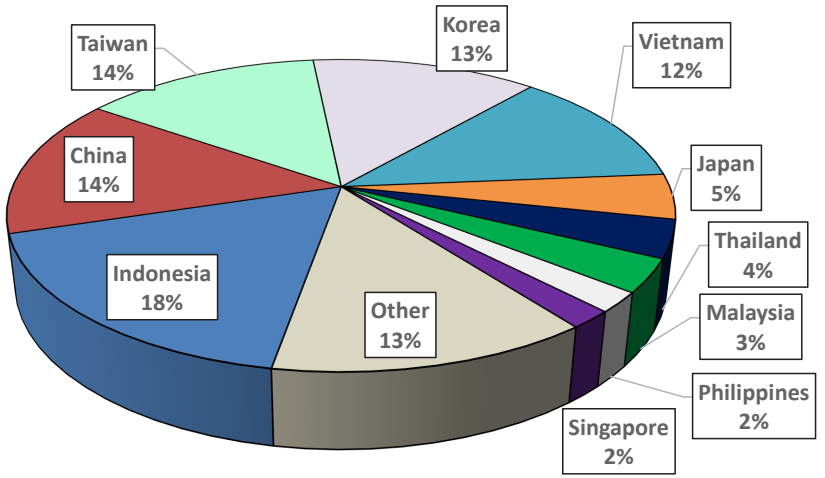
Table 18. Ocean freight rates for selected shipments, week ending 04/13/2024

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 28, 2024	Apr 20/30, 2024	50,000	71.00
U.S. Gulf	Japan	Heavy grain	Mar 9, 2024	Apr 25/May 4, 2024	54,000	67.00
U.S. Gulf	Japan	Heavy grain	Mar 20, 2024	Apr 1/5, 2024	50,000	69.50
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
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
WC US	Thailand	Wheat	Nov 9, 2023	Dec 1/10, 2023	60,500	35.25
Brazil	China	Heavy grain	Mar 28, 2024	Apr 11/21, 2024	66,000	49.00
Brazil	China	Heavy grain	Mar 19, 2024	May 1/30, 2024	63,000	48.40
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
Brazil	Philippines	Soybean Meal	Feb 23, 2024	Apr 15/25, 2024	40,000	61.00
France	Morocco	Wheat	Feb 6, 2024	Feb 10/14, 2024	30,000	16.10
France	Mauritania	Wheat	Feb 6, 2024	Feb 10/14, 2024	30,000	23.50

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.

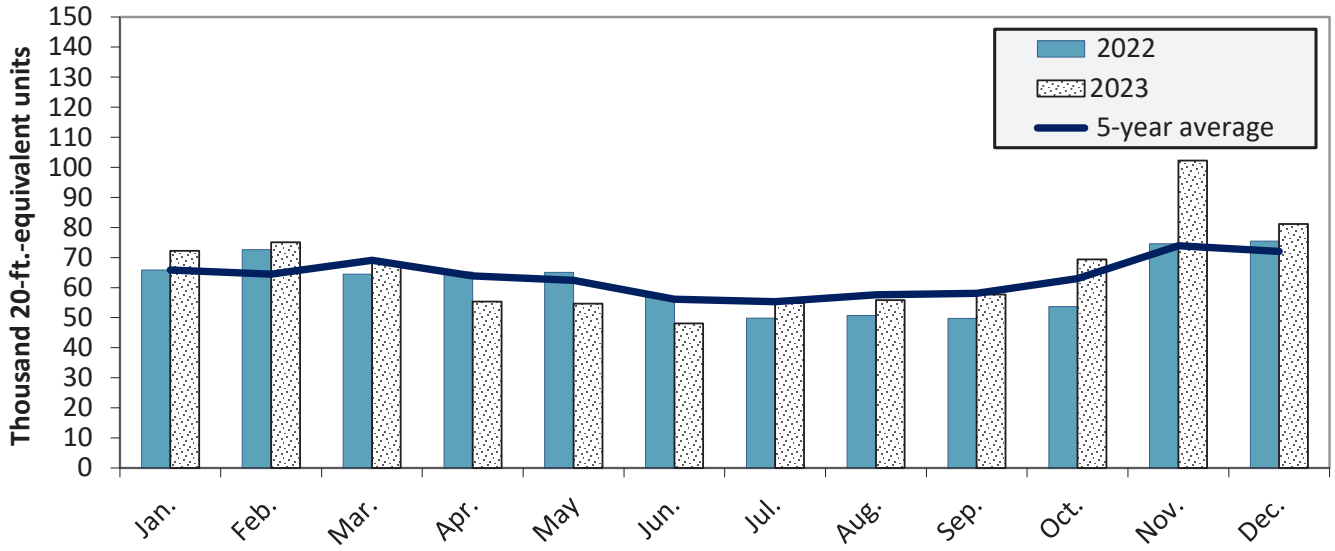
In 2020, containers were used to transport 10 percent of total U.S. waterborne grain exports. Approximately 66 percent of U.S. waterborne grain exports in 2020 went to Asia, of which 14 percent were moved in containers. Approximately 95 percent of U.S. waterborne containerized grain exports were destined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