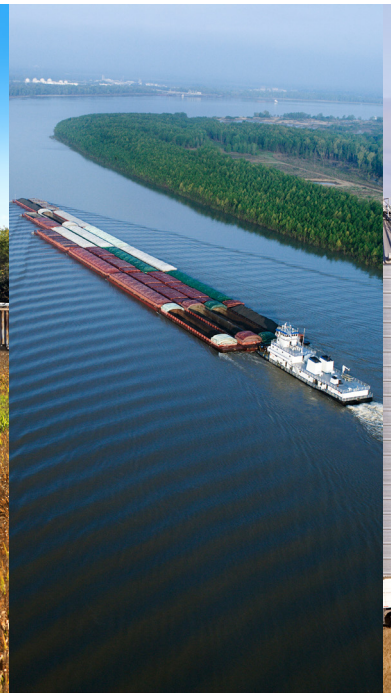
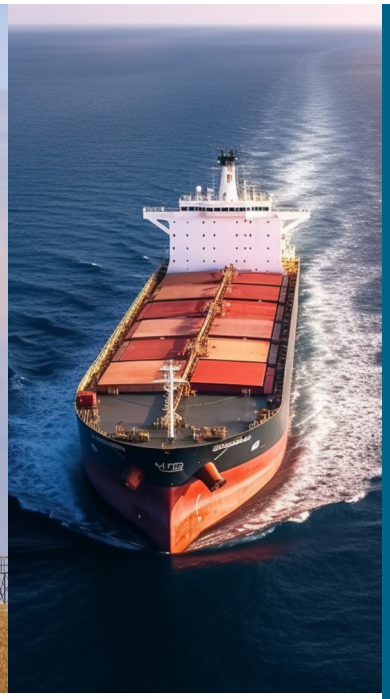
USDA Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE



Grain Transportation Report

Contents

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USDA Adds New Dataset on Soybean Meal Rail Tariffs. This week, USDA's Agricultural Marketing Service published a new dataset on soybean meal rail tariffs on its Agricultural Transportation Open Data Platform. Updated quarterly, the dataset includes tariff rates for 15 major rail corridors for soybean meal shipments. Of this total, 11 routes are for manifest movements (i.e., shipments of less than 100 cars), and 4 routes are for unit train shipments (i.e., shipments of 100 cars or more). Additionally, the dataset provides rates and fuel surcharges for both privately owned and railroad-owned railcars.

Soybean meal is the fourth top grain and oilseed commodity moved by rail. In 2021, railroads originated almost 20 million tons, up 2 percent from the prior 5-year average. For more information on rail transportation of soybean meal in the United States, see this week's feature article.

December Grain Stocks About Average, But Above 2022. According to USDA's National Agricultural Statistics Service's (NASS) quarterly *Grain Stocks* report, as of December 1, 2023, U.S. farmers and commercial facilities nationwide held 17.0 billion bushels of grain (corn, soybeans, wheat, barley, grain sorghum, and oats). This total was up 10 percent from the same time the year before, but unchanged from the prior 5-year average.

High stocks represent potential future grain transportation demand. As of December 1, 2023, several States had high on-farm stocks (i.e., volumes that had yet to enter transportation channels). Compared to the same time in 2022, Nebraska was up 316 million bushels (mbu) (47 percent); Minnesota, up 152 mbu (14 percent); and North Dakota, up 135 mbu (36 percent).

Per the report, national storage capacity changed little from December 1, 2022, to December 1, 2023. At the State-level, Illinois added 30 mbu of off-farm storage (2 percent); Kansas, 20 mbu (2 percent); and Iowa, 10 mbu (1 percent). Missouri farmers added 10 mbu of storage, or 2 percent, since last year. Sufficient storage can mitigate challenges during harvest, including from transportation disruptions.

STB Issues Final Rule Amending Emergency Service Regulations. On January 24, the Surface Transportation Board (STB) issued a final rule (effective February 23) that amends STB emergency service regulations. This decision follows a notice of proposed rulemaking (NPRM) issued in April 2022 (*Grain Transportation Report, April 28, 2022*, first highlight). Shippers, railroads, and other stakeholders commented on the NPRM, and USDA sent STB a letter in support of the rule change.

Despite various service challenges in recent years, STB received relatively few emergency service applications before the rule change. Shippers were discouraged by the difficult application process. Changes to the emergency service regulations eliminate the need for a commitment from an alternative carrier to petition for relief.

Also, STB clarifies that it can act on its own initiative or from a shipper or railroad petition. Additionally, the final rule shortens the procedural schedule and establishes an accelerated process for acute service emergencies (such as a clear and present threat to food security).

Iowa Waives Hours-of-Service Rules for Hauling Fuel. Effective through February 9, Iowa has waived hours-of-service (HOS) regulations for drivers hauling diesel, propane, natural gas, and other fuels. In issuing the waiver, the Governor of Iowa cited a high demand for fuel and "challenging driving conditions, with ice- and snow-covered roads."

While extending drivers' work hours to haul fuel, the order stipulates that a motor carrier should not allow an ill or fatigued driver to operate a motor vehicle. Likewise, when a driver notifies a motor carrier of a need for immediate rest, the person must be given at least 10 consecutive off-duty hours before returning to drive.

Export Sales

For the week ending January 11, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2023/24 totaled 35.17 million metric tons (mmt), unchanged from last week and up 17 percent from the same time last year.

Net **corn export sales** for MY 2023/24 were 1.251 mmt, up 157 percent from last week. Net **soybean export sales** were 0.781 mmt, up 179 percent from last week. Net weekly **wheat export sales** were 0.708 mmt, up 453 percent from last week.

Rail

U.S. Class I railroads originated 23,128 **grain carloads** during the week ending January 13. This was an 11-percent decrease from the previous week, 28 percent fewer than last year, and 23 percent fewer than the 3-year average.

Average February **shuttle secondary railcar bids/offers** (per car) were $263 above tariff for the week ending January 18. This was $225 less than last week and $15 more than this week last year. Average non-shuttle secondary railcar bids/offers per car were $338 above tariff. This was $13 more than last week and $100 lower than this week last year.

Barge

For the week ending January 20, **barged grain movements** totaled 333,942 tons. This was 52 percent less than the previous week and 50 percent less than the same period last year.

For the week ending January 20, 224 grain barges **moved down river**—204 fewer than last week. There were 681 grain barges **unloaded** in the New Orleans region, 12 percent fewer than last week.

Ocean

For the week ending January 18, 35 **oceangoing grain vessels** were loaded in the Gulf—30 percent more than the same period last year. Within the next 10 days (starting January 19), 54 vessels were expected to be loaded—42 percent more than the same period last year.

As of January 18, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $57.75. This was unchanged from the previous week. The rate from the Pacific Northwest to Japan was $30.50 per mt, unchanged from the previous week.

Fuel

For the week ending January 22, the U.S. average **diesel price** decreased 2.5 cents from the previous week to $3.838 per gallon, 76.6 cents below the same week last year.

Rail Transportation of Soybean Meal in the United States

Soybean meal production is expected to rise with increased renewable diesel demand. Soybean oil is one of the principal feedstocks for renewable diesel, and soybean meal is a byproduct of the soybean oil production process (i.e., soybean crushing). A potential rise in domestic soybean crushing over the next several years could lead to diminishing (whole) soybean exports and expanding soybean meal exports. That shift has implications for rail transport of soybeans, because soybean meal has different physical characteristics that make it more difficult to transport than whole soybeans.

This article provides background on the rail transportation of soybean meal in the United States. Data on soybean meal production and exports is followed by an analysis of rail movements using the Surface Transportation Board's (STB) public-use Carload Waybill Sample (CWS). A future article will examine rail transportation of soybean oil.

Background on Soybean Meal Production and Exports

Production. USDA estimates that total soybean crush in marketing year (MY) 2022/23 was 2.2 billion bushels (bbu). Based on industry estimates, total crush capacity could rise 32 percent to nearly 2.9 bbu by 2026. Soybean meal production in MY 2022/23 was 52.5 million short tons (mst).

As an animal feed, soybean meal is either consumed by U.S. livestock and poultry or exported abroad. About half of soybean meal in the United States is used by the poultry industry. Much future production of U.S. soybean meal will likely be exported, as U.S. per capita poultry and meat consumption is expected to rise modestly (4 percent)—much less than the 32-percent projected rise in soybean meal production.

Exports. According to USDA's November 2023 *Outlook for U.S. Agricultural Trade*, soybean meal exports for fiscal year (FY) 2023 set an all-time record of 13.3 million metric tons (mmt) valued at nearly $7 billion.[1] For perspective, the value of soybean meal exports was about $500 million more than the value of wheat exports for the same period. Over the past 10 years, the United States has exported about one-fourth of its total soybean meal production. In 2022, the United States exported a total of 11.78 mmt. The top export destinations were Philippines (1.98 mmt); Mexico (1.69 mmt); Columbia (1.40 mmt); and Canada (1.23 mmt).

About half (47 percent) of total exports leave via the New Orleans, LA, customs district. The next highest customs districts are Seattle, WA (16 percent); El Paso, TX (6 percent); Detroit, MI (6 percent); and Norfolk, VA (5 percent). According to U.S. Census Bureau trade statistics, 11 percent of waterborne soybean meal exports are containerized.

Soybean Meal Transportation by Rail

According to STB's CWS, U.S. railroads originated almost 20 mst of soybean meal in 2021, up 1 percent from 2020 and up 2 percent from the prior 5-year average. (From 2005 to 2021, soybean meal rail tonnage grew about 1 percent per year.)

Based on STB's CWS, the top two destination regions for soybean meal shipped by rail (receiving over 2 mst each) are Washington State and the St. Louis, MO, metropolitan region (see fig. 1, panel b, on page 5).[2] The next-highest receiving destinations are areas with large poultry populations—primarily, the Southeast and Texas.

PNW Shipments. The largest soybean meal export port on the West Coast is Port of Grays Harbor in Aberdeen, WA. For bulk exports out

1 The 2023 fiscal year spans October 1, 2022, to September 30, 2023.

2 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). By tonnage, 26 percent of soybean meal origin locations and 9 percent of destination locations are masked. For additional information, see STB's website.

of its Terminal 2, the Port partners with Ag Processing Inc. (AGP). Soybean meal is also exported from EGT LLC's export grain terminal in Longview, WA. Last year, EGT **announced plans** to expand soybean meal storage capacity.

According to STB's CWS, Pacific Northwest (PNW) export terminals draw soybean meal from the western Corn Belt—primarily Nebraska—but a large portion (58 percent) of the origins for shipments to Washington State are masked (see footnote 2). Likely Nebraskan sources for PNW exports of soybean meal are soybean crush facilities in Lincoln, Fremont, and Hastings. Based on internal analysis of rail tariff data, Aberdeen, SD, is another potential source for PNW exports. An AGP plant that opened in Aberdeen in 2019 crushes from 50 to 60 million bushels (mbu) annually. However, soybean meal shipments from Aberdeen, SD, are masked in the public waybill data, so exact rail volumes are not available.

In December 2023, rail tariff rates to PNW export terminals were $4,900 per car from Hastings, NE, and $5,000 per car from Aberdeen, SD, for unit train shipments (i.e., those of 100 or more cars) of soybean meal in privately owned, covered hoppers. Using the average of 100 tons of soybean meal per car—the per ton prices to PNW were $49 from Hastings and $50 from Aberdeen. (For additional rail rates, see a new dataset, **"U.S. Rail Tariff Rates for Soybean Meal," on AgTransport**.)

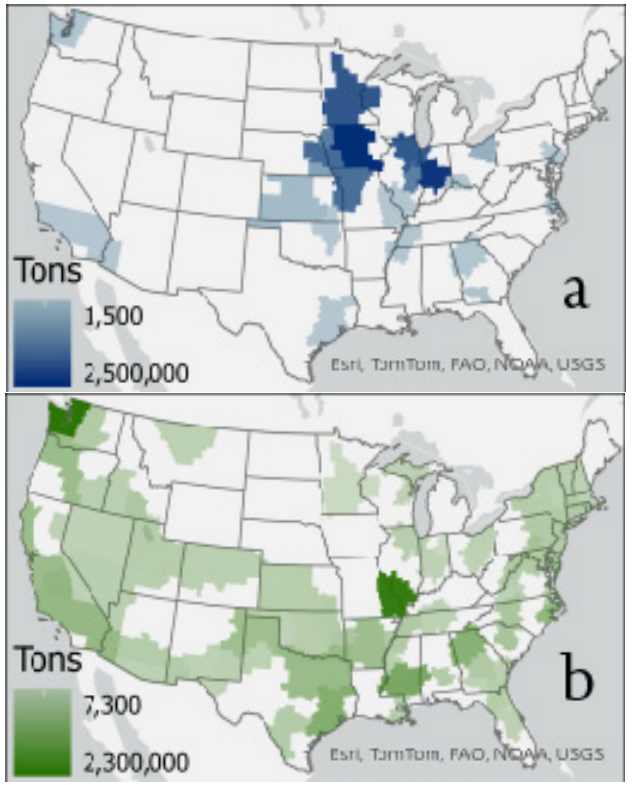
Possible future sources for PNW exports include planned **additional Nebraskan soybean crush facilities** in Norfolk, David City, and North Platte, as well as recently opened and future North Dakotan crush facilities. Before 2022, North Dakota had minimal soybean crush capacity, but three new projects are expected to raise the State's annual crush capacity to nearly 150 mbu.[3] For perspective, North Dakotan farmers harvested about 210 mbu of soybeans in 2023.

St. Louis Shipments. Although St. Louis is not an export gateway itself, the **Port of Metropolitan St. Louis** includes barge-transfer facilities that convey soybean meal from trains onto barges bound for New Orleans—the top soybean meal export gateway. St. Louis draws soybean meal from areas in the eastern Corn Belt—Iowa, Indiana, Illinois, and Missouri.

Manifest trains (i.e., shipments of less than 100 cars) to St. Louis from Des Moines, IA, and Lincoln, NE, were about $3,415 per car in December 2023. A unit train from Hastings, NE, to St. Louis was about $200 cheaper per car.

Domestic Feed Shipments. After export movements (via PNW ports and St. Louis barge-transfer facilities), the next highest rail movements of soybean meal are to areas with high feed requirements—particularly, poultry. However, as noted previously, domestic use of soybean meal is not anticipated to expand significantly.

Figure 1. Origins (a) and destinations (b) for 2021 soybean meal rail carloads (tons)



Source: USDA/Agricultural Marketing Service analysis of disclosed volumes in the Surface Transportation Board's 2021 public-use Carload Waybill Sample. Also, a shapefile of Bureau of Economic Analysis economic areas from the U.S. Department of Transportation.

Top destinations include east Texas (1.44 mst); California's Central Valley (1.2 mst); North Carolina (1.2 mst); Georgia (1.1 mst); Mississippi (1 mst); and Arkansas (0.7 mst)—all regions with large livestock and poultry industries.

3 The Green Bison Soybean Processing plant in Spiritwood, ND, opened in September 2023. The North Dakota Soybean Processors plant in Casselton, ND, is expected to be fully operational this year. The Epitome Energy plant in Grand Forks, ND, is expected to be fully operational in spring 2026.

Similar to St. Louis's Midwest sourcing, poultry and livestock areas in the Southeast primarily draw from soybean crush facilities in Iowa, Minnesota, Illinois, and Indiana.

Rail tariff rates for delivery to major feed areas vary substantially and correspond to the distance of the route.[4]

Railcar Use. Growth in soybean meal exports at the expense of (whole) soybean exports would change transportation patterns, in part, because soybean meal's **physical characteristics** make it more difficult to transfer than whole soybeans. One practical example is the use of privately owned railcars. Between 2018 and 2021, 58 percent of whole-soybean shipments moved in railroad-owned cars. In contrast, over the same period, 91 percent of soybean meal was transported by **privately owned railcars**.

A rise in soybean meal exports and a corresponding fall in whole-soybean exports would likely cause railroads to invest less in railcars and cause shippers to invest more in privately owned railcars. Lease rates for privately owned covered hopper railcars have been high in recent years because of tight supplies. In fall 2023, lease rates for covered hoppers were in the low $600s (per car per month)—about 50 percent higher than in early 2020 (**GTR, November 9, 2023, second highlight**).

Shipment Distances and Sizes. Most (39 percent in 2021, on a tonnage basis) soybean meal shipments by rail travel 500 to 1,000 miles. For reference, a rail trip from Aberdeen, SD, to the PNW is about 1,600 miles. This 500-1,000-mile share was stable from 2005 to 2019, ranging from 39 percent in 2010 to 47 percent in 2014 (before dropping to 36 percent in 2020). One notable trend has been the increase in shipments traveling over 1,500 miles. In 2013, the share of shipments of 1,500 miles or more was 17 percent; in 2020, it was 27 percent.

In 2021, a majority (66 percent, on a tonnage basis) of soybean meal shipments moved in carload quantities of 1 to 5 cars, with 20 percent in sets of 75 or more cars and 14 percent in sets of 6 to 49 cars. From 2018 to 2021, the tonnage moved in 1-5-car sets increased by 12 percentage points (pp), and shipments of 75 or more cars decreased by 12 pp.

Outlook

Investments are underway to expand soybean processing. Soybean meal, a byproduct of the crush process, has a growing role in the transportation of grains and oilseeds—in part, because of increasing demand for renewable diesel. According to USDA's January ***World Agricultural and Supply and Demand Estimates (WASDE) report***, the United States is expected to produce 54.2 mst of soybean meal in MY 2023/24, up 3 percent from the year before.

WASDE projects the United States will consume 39.4 mst domestically and export a record 15.3 mst in MY 2023/24, up 3 percent and 4 percent, respectively, from 2022/23. These increases would likely boost the soybean meal tonnage shipped by rail while continuing to influence changes in the sizes and distances of rail shipments.

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4 Manifest shipments to Fresno, CA, from Lincoln, NE, and Des Moines, IA, were about $7,300 and $7,800 per car, respectively. For shorter distances, such as from Gilman, IL, to Jackson, MS, rail tariffs were $3,345 per car. Manifest shipments from Indianapolis, IN, to Gainesville, GA, ($5,260 per car) and to Warsaw, NC, ($5,520 per car) were in the middle.

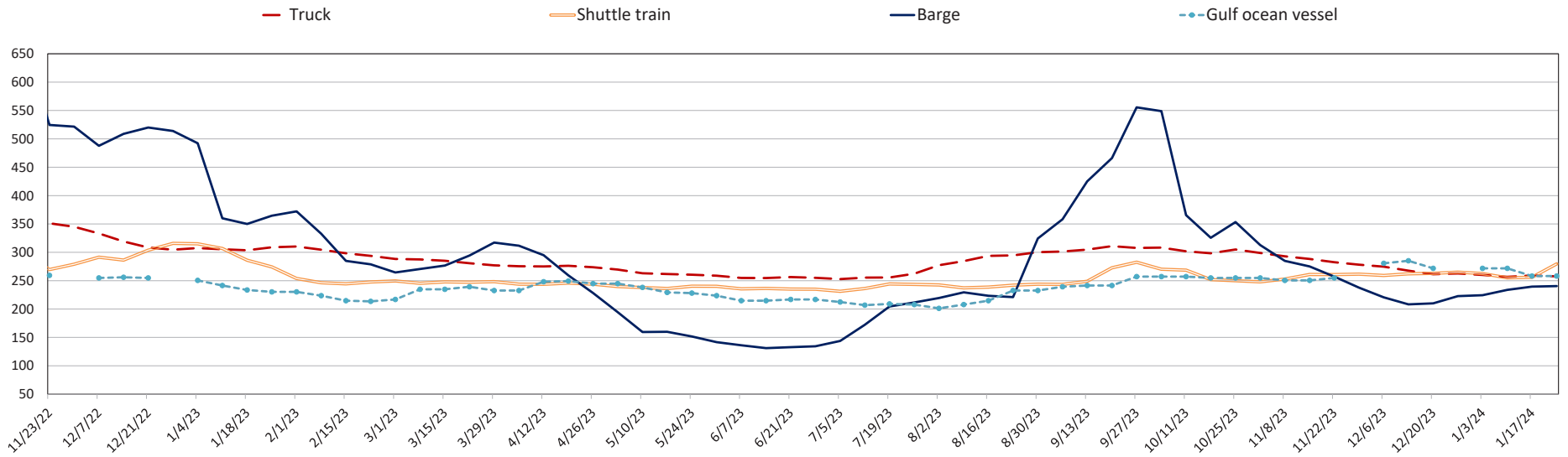
Grains are transported to the domestic and international markets via one or a combination of the following modes: truck, rail, barge and ocean-going vessel. Monitoring the cost of transportation for each mode is vital to the marketing decision making process.

Table 1. Grain transport cost indicators

For the week ending:	Truck	Rail		Barge	Ocean	
		Non-shuttle	Shuttle		Gulf	Pacific
01/24/24	258	337	263	241	258	216
01/17/24	259	353	256	239	258	216
01/25/23	309	349	274	364	230	200

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

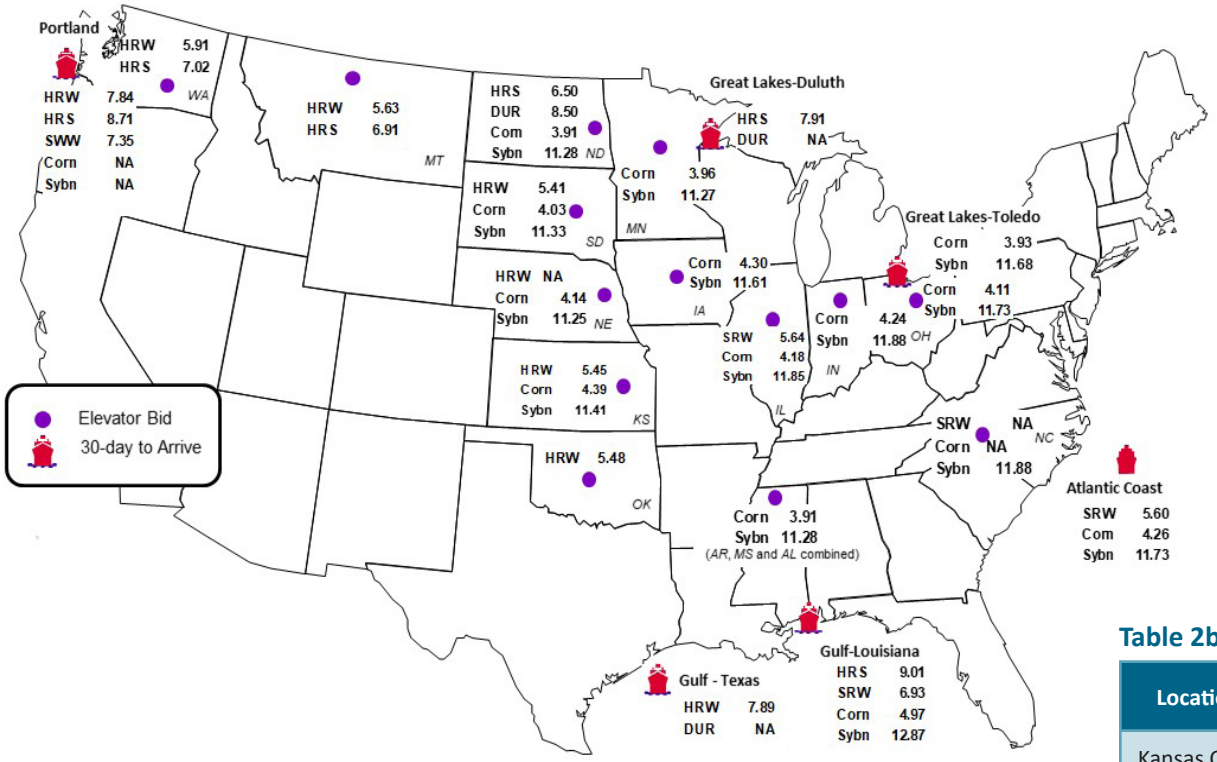
Figure 1. Grain transportation cost indicators as of week ending 1/24/24



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	1/19/2024	1/12/2024
Corn	IL–Gulf	-0.79	-0.81
Corn	NE–Gulf	-0.83	-0.86
Soybean	IA–Gulf	-1.26	-1.27
HRW	KS–Gulf	-2.44	-2.34
HRS	ND–Portland	-2.21	-2.16

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	1/19/2024	Week ago 1/12/2024	Year ago 1/20/2023
Kansas City	Wheat	Dec	6.040	6.162	8.490
Minneapolis	Wheat	Dec	6.954	6.994	9.126
Chicago	Wheat	Dec	5.890	5.962	7.426
Chicago	Corn	Dec	4.456	4.474	6.770
Chicago	Soybean	Jan	12.134	12.314	15.090

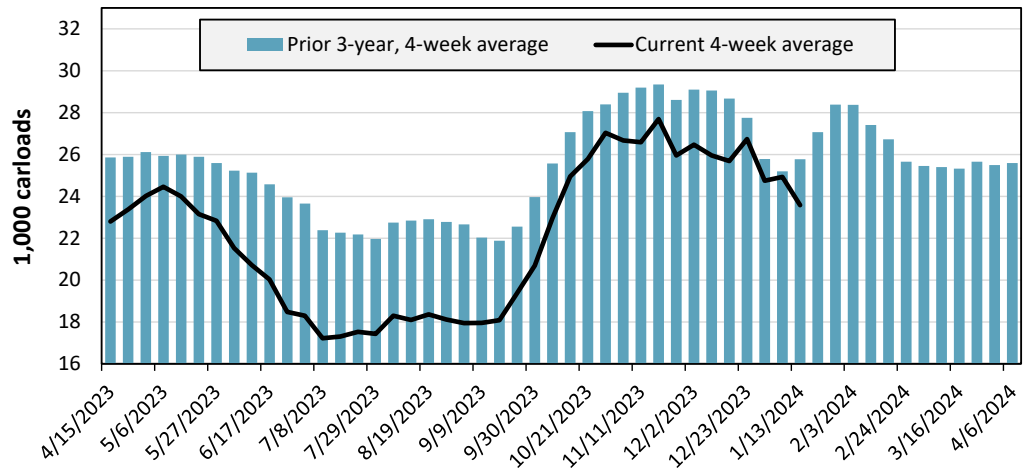
Sources: U.S. Inland: GeoGrain, USDA Weekly Bids, U.S. Export: Corn & Soybean - Export Grain Bids, AMS, USDA Wheat Bids - Weekly Wheat Report, U.S. Wheat Associates, Washington, DC.

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

For the week ending: 1/13/2024	East		West		Central U.S.		U.S. total
	CSXT	NS	BNSF	UP	CPKC	CN	
This week	2,174	3,139	8,990	4,473	2,863	1,489	23,128
This week last year	2,306	3,100	14,471	6,797	3,680	1,800	32,154
2024 YTD	4,267	6,011	20,394	9,771	6,062	2,619	49,124
2023 YTD	4,631	5,789	25,173	11,710	6,086	3,640	57,029
2024 YTD as % of 2023 YTD	92	104	81	83	100	72	86
Last 4 weeks as % of 2023	91	98	101	94	100	61	95
Last 4 weeks as % of 3-yr. avg.	96	104	93	83	103	66	91
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 January 13, grain carloads were down 5 percent from the previous week, down 5 percent from last year, and down 9 percent from the 3-year average.

Source: Surface Transportation Board.

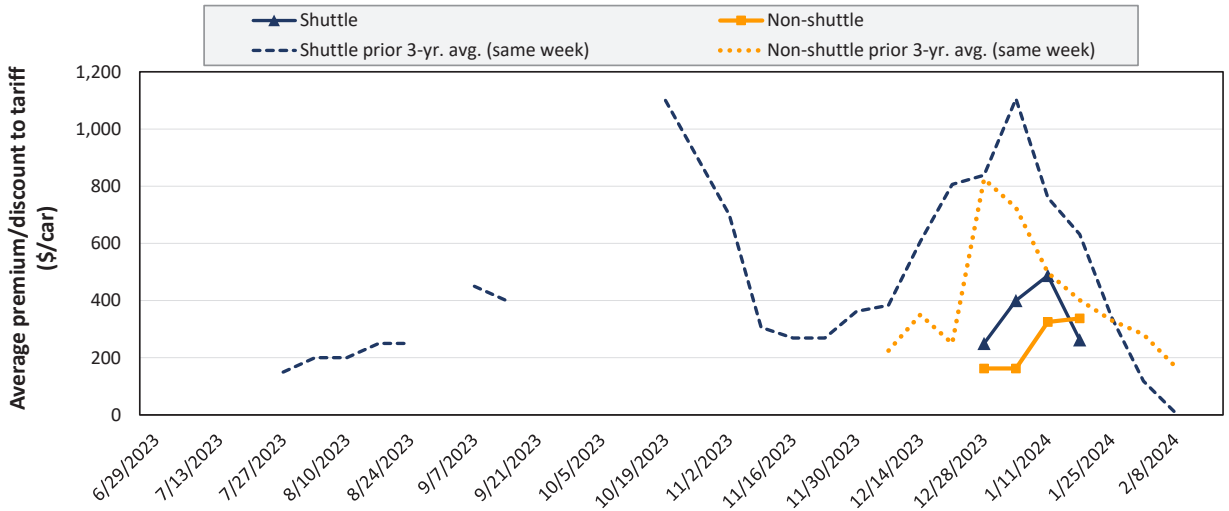
Table 4. Railcar auction offerings (dollars per car)

For the week ending: 1/18/2024		Delivery period							
		Feb-24	Feb-23	Mar-24	Mar-23	Apr-24	Apr-23	May-24	May-23
BNSF	COT grain units	no offer	no offer	no offer	no offer	no offer	0	no offer	0
	COT grain single-car	no offer	no offer	no offer	no offer	101	28	3	28
UP	GCAS/vouchers	10	n/a	10	n/a	no bid	n/a	no bid	n/a

Note: Auction offerings are for single-car and unit train shipments only. Bids and offers represent a premium/discount to tariff rates. n/a = not available. BNSF = BNSF Railway; COT = Certificate of Transportation; UP = Union Pacific Railroad; and GCAS = Grain Car Allocation System. Minimum bids for UP GCAS/vouchers are $10.
Source: USDA, Agricultural Marketing Service.

Primary auction market rates reflect offers and bids made between railroads and shippers for guaranteed car service. The secondary rail market information reflects trade values for service agreements traded between shippers that were originally purchased from the railroad carrier. The auction and secondary rail values are indicators of rail service quality and demand/supply. Bids and offers listed in the primary and secondary auctions are market indicators only and are not guaranteed prices.

Figure 4: Secondary market bids/offers for railcars to be delivered in February 2024



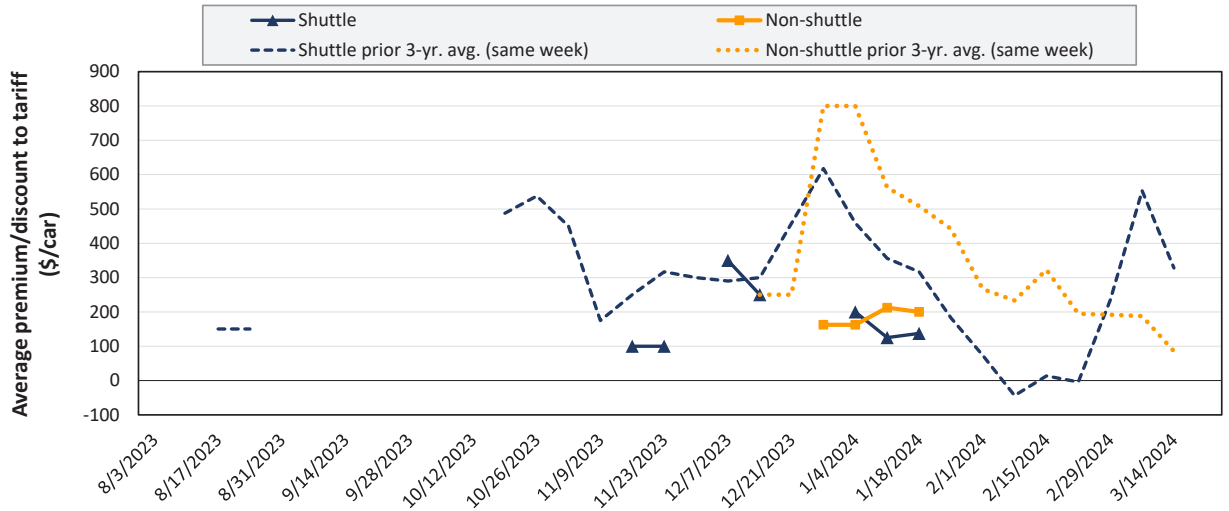
Average non-shuttle bids/offers rose $13 this week, and are at the peak.

Average shuttle bids/offers fell $225 this week and are $225 below the peak.

1/18/2024	BNSF	UP
Non-Shuttle	$600	$75
Shuttle	$650	-$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 5: Secondary market bids/offers for railcars to be delivered in March 2024



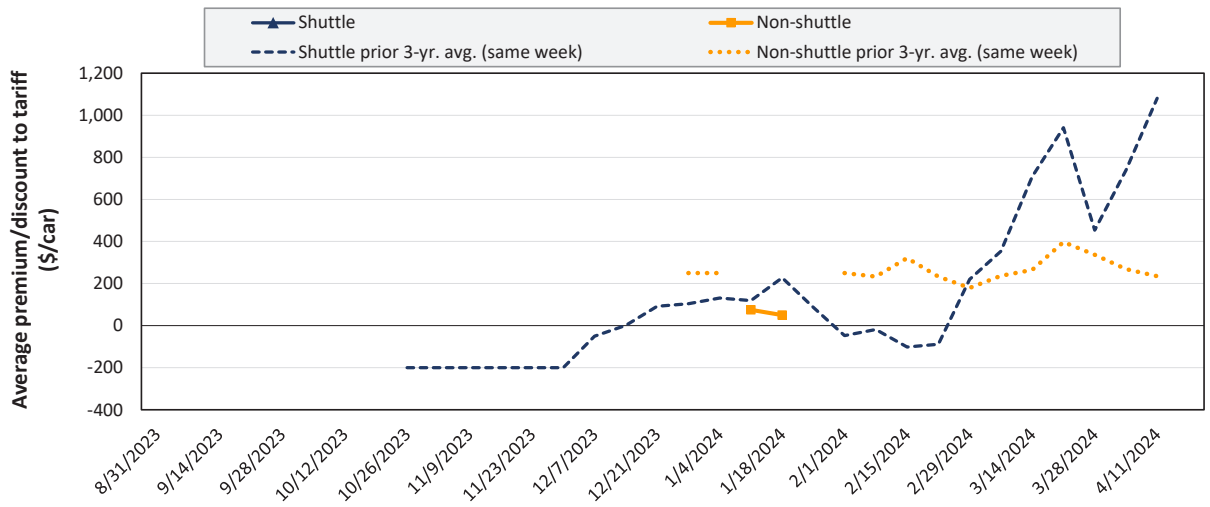
Average non-shuttle bids/offers fell $13 this week, and are $13 below the peak.

Average shuttle bids/offers rose $13 this week and are $213 below the peak.

1/18/2024	BNSF	UP
Non-Shuttle	$350	$50
Shuttle	$325	-$50

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 fell $25 this week, and are $25 below the peak.

There were no shuttle bids/offers this week.

1/18/2024	BNSF	UP
Non-Shuttle	n/a	$50
Shuttle	n/a	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: 1/18/2024		Delivery period					
		Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24
Non-shuttle	BNSF	600	350	n/a	n/a	n/a	n/a
	Change from last week	50	0	n/a	n/a	n/a	n/a
	Change from same week 2023	100	-250	n/a	n/a	n/a	n/a
	UP	75	50	50	n/a	n/a	n/a
	Change from last week	-25	-25	-25	n/a	n/a	n/a
	Change from same week 2023	-300	-450	n/a	n/a	n/a	n/a
Shuttle	BNSF	650	325	n/a	n/a	n/a	n/a
	Change from last week	162	200	n/a	n/a	n/a	n/a
	Change from same week 2023	417	225	n/a	n/a	n/a	n/a
	UP	-125	-50	n/a	n/a	n/a	n/a
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2023	-388	-250	n/a	n/a	n/a	n/a
	CPKC	100	0	n/a	n/a	n/a	n/a
	Change from last week	-25	n/a	n/a	n/a	n/a	n/a
	Change from same week 2023	n/a	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

January 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	$223	$42.88	$1.17	3
	Grand Forks, ND	Duluth-Superior, MN	$3,508	$77	$35.61	$0.97	-11
	Wichita, KS	Los Angeles, CA	$6,840	$398	$71.87	$1.96	-12
	Wichita, KS	New Orleans, LA	$4,825	$392	$51.80	$1.41	1
	Sioux Falls, SD	Galveston-Houston, TX	$6,611	$327	$68.89	$1.88	-12
	Colby, KS	Galveston-Houston, TX	$5,075	$429	$54.66	$1.49	1
	Amarillo, TX	Los Angeles, CA	$5,121	$597	$56.78	$1.55	-5
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$443	$44.12	$1.12	-4
	Toledo, OH	Raleigh, NC	$8,877	$0	$88.15	$2.24	4
	Des Moines, IA	Davenport, IA	$2,830	$94	$29.03	$0.74	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	$275	$46.68	$1.19	1
	Des Moines, IA	Los Angeles, CA	$6,305	$802	$70.58	$1.79	-3
Soybeans	Minneapolis, MN	New Orleans, LA	$3,156	$655	$37.85	$1.03	-21
	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	$443	$54.45	$1.48	-0

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

January 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	$229	$42.42	$1.15	-12
	Wichita, KS	Galveston-Houston, TX	$4,111	$178	$42.59	$1.16	-8
	Chicago, IL	Albany, NY	$7,413	$0	$73.61	$2.00	5
	Grand Forks, ND	Portland, OR	$5,701	$395	$60.54	$1.65	-11
	Grand Forks, ND	Galveston-Houston, TX	$5,146	$405	$55.13	$1.50	-11
	Colby, KS	Portland, OR	$5,923	$704	$65.80	$1.79	-5
Corn	Minneapolis, MN	Portland, OR	$5,660	$481	$60.99	$1.55	-7
	Sioux Falls, SD	Tacoma, WA	$5,620	$441	$60.19	$1.53	-7
	Champaign-Urbana, IL	New Orleans, LA	$4,345	$443	$47.54	$1.21	-1
	Lincoln, NE	Galveston-Houston, TX	$4,560	$257	$47.83	$1.22	-1
	Des Moines, IA	Amarillo, TX	$4,845	$346	$51.55	$1.31	0
	Minneapolis, MN	Tacoma, WA	$5,660	$477	$60.95	$1.55	-7
	Council Bluffs, IA	Stockton, CA	$5,780	$494	$62.30	$1.58	-4
Soybeans	Sioux Falls, SD	Tacoma, WA	$6,335	$441	$67.29	$1.83	-6
	Minneapolis, MN	Portland, OR	$6,385	$481	$68.19	$1.86	-7
	Fargo, ND	Tacoma, WA	$6,235	$392	$65.81	$1.79	-6
	Council Bluffs, IA	New Orleans, LA	$5,270	$510	$57.40	$1.56	-1
	Toledo, OH	Huntsville, AL	$5,509	$0	$54.71	$1.49	4
	Grand Island, NE	Portland, OR	$5,905	$720	$65.79	$1.79	-2

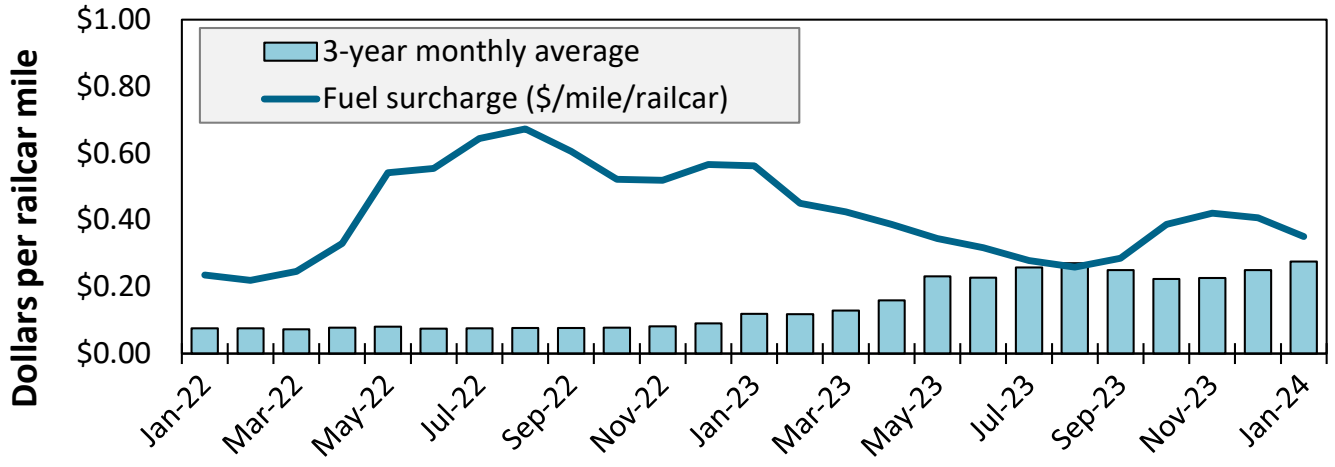
Note: A unit train refers to shipments of at least 25 cars. Shuttle train rates are generally available for qualified shipments of 75-120 cars that meet railroad efficiency requirements. The table assumes 111 short tons (100.7 metric tons) per car, 56 pounds per bushel of corn, and 60 pounds per bushel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

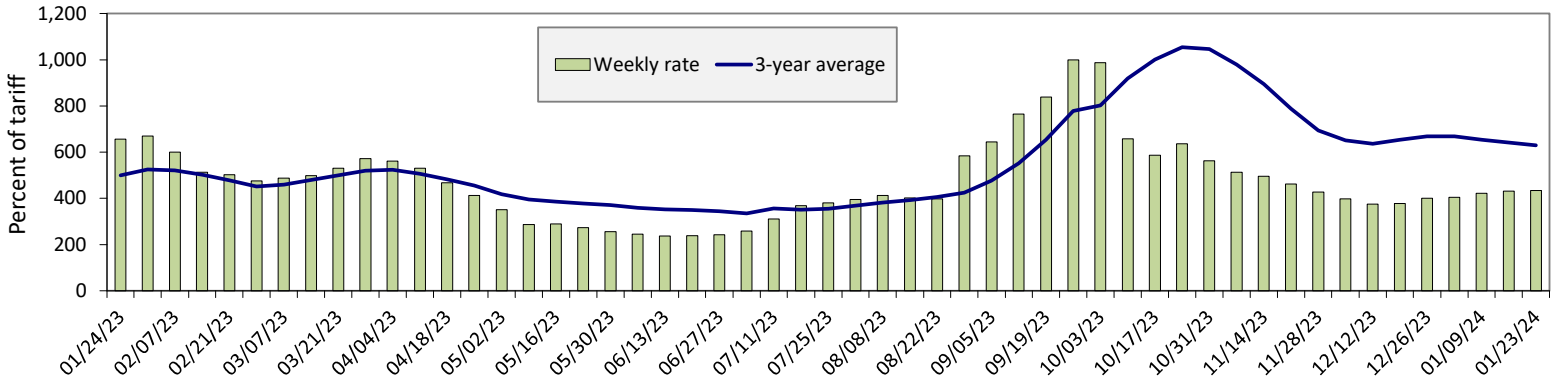
Figure 7. Railroad fuel surcharges, North American weighted average



January 2024: $0.35/mile, down 6 cents from last month's surcharge of $0.41/mile; down 21 cents from the January 2023 surcharge of $0.56/mile; and up 7 cents from the January prior 3-year average of $0.28/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 8. Illinois River barge freight rate



For the week ending January 23: there is no change from the previous week; 34 percent lower than last year; and 31 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	1/23/2024	-	-	433	323	343	343	270
	1/16/2024	-	-	431	328	352	352	274
$/ton	1/23/2024	-	-	20.09	12.89	16.09	13.86	8.48
	1/16/2024	-	-	20.00	13.09	16.51	14.22	8.60
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	-	-	-34	-28	-35	-35	-25
	3-year avg.	-	-	-31	-36	-37	-37	-34
Rate	February	-	-	411	313	324	324	266
	April	404	379	369	300	311	311	254

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; "-" = data not available.
Source: USDA, Agricultural Marketing Service.

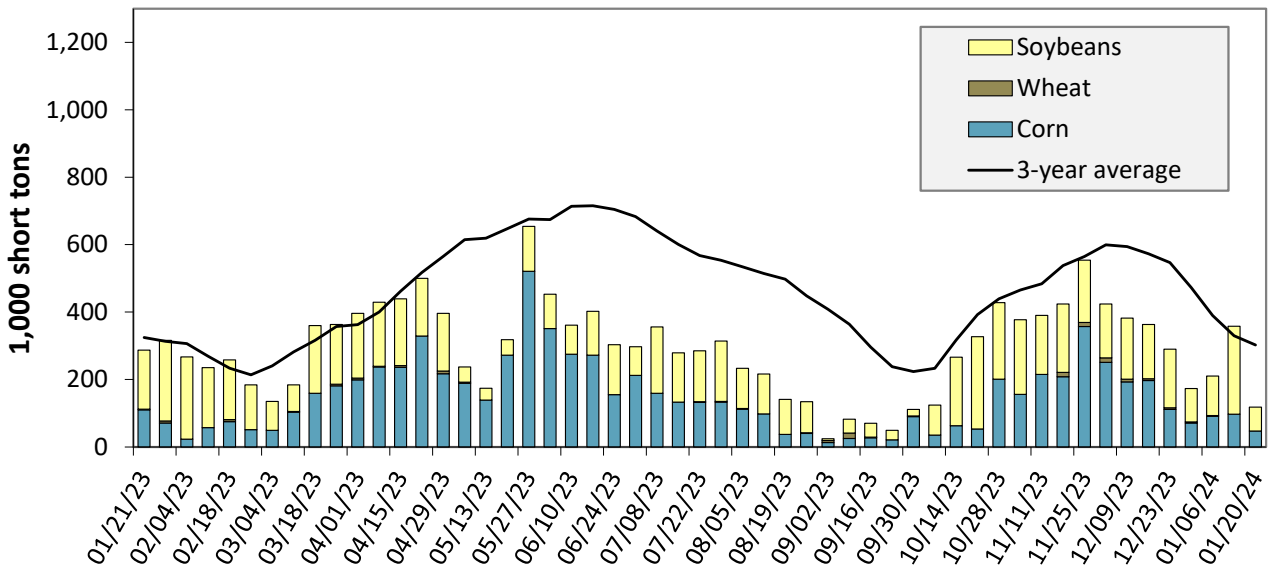
Figure 9. Benchmark tariff rates

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

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

Source: USDA, Agricultural Marketing Service.

Figure 10. Barge movements on the Mississippi River (Locks 27-Granite City, IL)



For the week ending January 20: 59 percent lower than last year and 61 percent lower than the 3-year average.

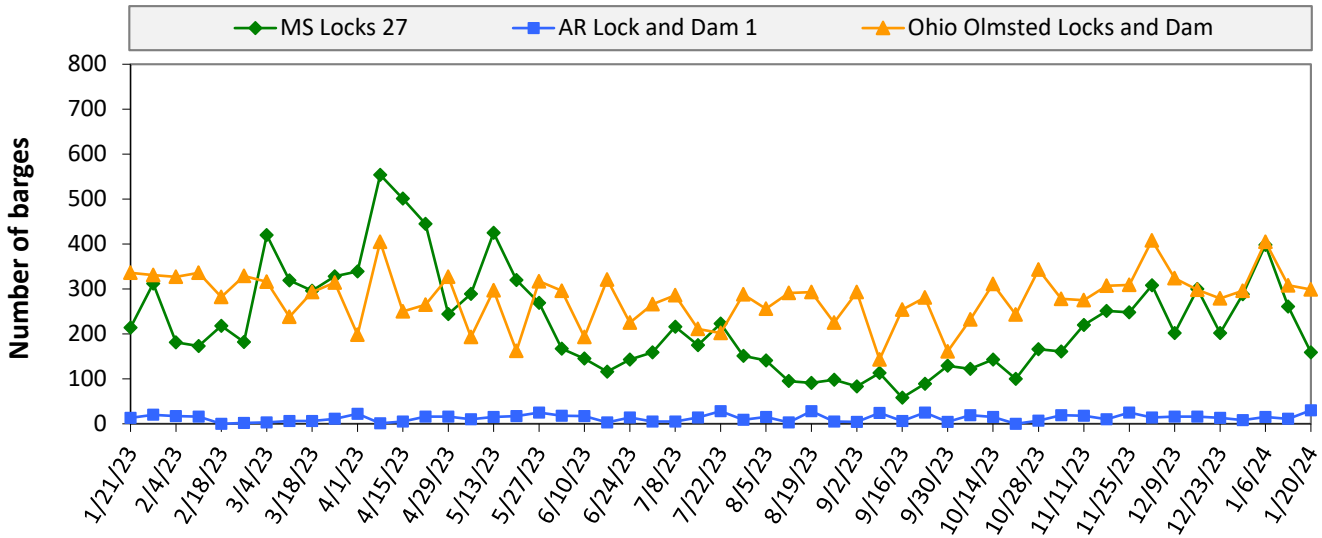
Note: The 3-year average is a 4-week moving average. The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.
Source: U.S. Army Corps of Engineers.

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

For the week ending 01/20/2024	Corn	Wheat	Soybeans	Other	Total
Mississippi River (Rock Island, IL (L15))	0	0	0	0	0
Mississippi River (Winfield, MO (L25))	8	0	5	0	13
Mississippi River (Alton, IL (L26))	55	0	58	0	113
Mississippi River (Granite City, IL (L27))	47	0	71	0	117
Illinois River (La Grange)	26	0	33	0	58
Ohio River (Olmsted)	59	0	125	0	184
Arkansas River (L1)	0	8	24	0	32
Weekly total - 2024	106	8	220	0	334
Weekly total - 2023	261	13	368	26	669
2024 YTD	335	16	681	0	1,032
2023 YTD	525	29	971	45	1,570
2024 as % of 2023 YTD	64	55	70	0	66
Last 4 weeks as % of 2023	101	151	90	56	94
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.

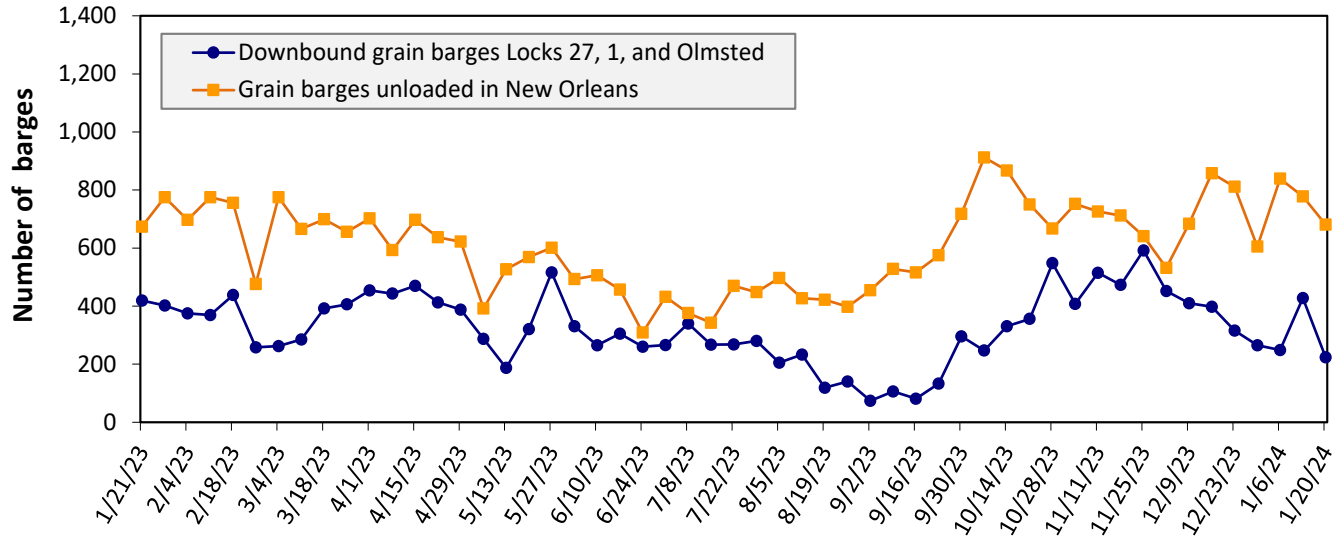
Figure 11. Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



For the week ending January 20: 488 barges transited the locks, 92 barges fewer than the previous week, and 17 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 12. Grain barges for export in New Orleans region



For the week ending January 20: 224 barges moved down river, 204 fewer than the previous week; 681 grain barges unloaded in the New Orleans Region, 12 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.

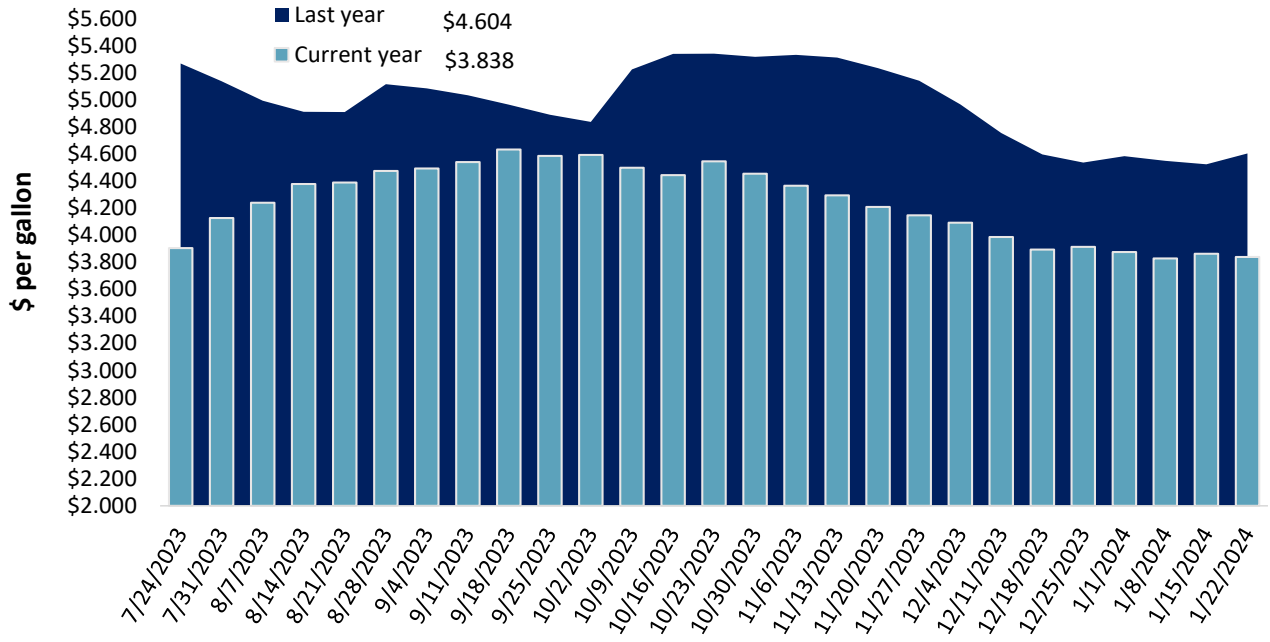
The weekly diesel price provides a proxy for trends in U.S. truck rates as diesel fuel is a significant expense for truck grain movements.

Table 11. Retail on-highway diesel prices, week ending 1/22/2024 (U.S. $/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	3.979	-0.013	-0.831
	New England	4.288	-0.008	-0.816
	Central Atlantic	4.232	-0.017	-0.837
	Lower Atlantic	3.853	-0.012	-0.833
II	Midwest	3.704	-0.025	-0.769
III	Gulf Coast	3.584	-0.008	-0.736
IV	Rocky Mountain	3.696	-0.059	-1.040
V	West Coast	4.504	-0.072	-0.591
	West Coast less California	3.992	-0.091	-0.765
	California	5.092	-0.050	-0.392
Total	United States	3.838	-0.025	-0.766

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 13. Weekly diesel fuel prices, U.S. average



For the week ending January 22, the U.S. average diesel fuel price decreased 2.5 cents from the previous week to $3.838 per gallon, 76.6 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 1/11/2024	847	2,384	1,583	977	123	5,913	17,100	12,159	35,172
	This week year ago	985	644	1,390	1,232	120	4,369	12,029	13,661	30,059
	Last 4 wks. as % of same period 2022/23	92	374	108	76	69	134	144	97	121
Current shipped (cumulative) exports sales	2023/24 YTD	1,945	1,968	3,675	2,309	291	10,188	14,428	25,229	49,844
	2022/23 YTD	3,270	1,781	3,314	2,631	168	11,165	11,100	31,660	53,924
	YTD 2023/24 as % of 2022/23	59	111	111	88	173	91	130	80	92
	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 1/11/2024	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	14,724	11,158	32	15,227
China	1,819	3,935	-54	12,616
Japan	4,451	2,068	115	10,273
Columbia	2,772	461	502	4,398
Korea	562	158	257	2,563
Top 5 importers	**24,327**	**17,779**	**37**	**45,077**
Total U.S. corn export sales	**31,527**	**23,128**	**36**	**56,665**
% of YTD current month's export projection	59%	55%		
Change from prior week	1,251	1,132		
Top 5 importers' share of U.S. corn export sales	**77%**	**77%**		**80%**
USDA forecast January 2024	**53,343**	**42,192**	**26**	
Corn use for ethanol USDA forecast, January 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.
Source: USDA, Foreign Agricultural Service.

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

For the week ending 1/11/2024	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	20,157	27,232	-26	32,321
Mexico	3,268	3,637	-10	4,912
Egypt	358	782	-54	2,670
Japan	1,419	1,541	-8	2,259
Indonesia	919	695	32	1,973
Top 5 importers	**26,121**	**33,888**	**-23**	**44,133**
Total U.S. soybean export sales	**37,388**	**45,321**	**-18**	**56,656**
% of YTD current month's export projection	78%	84%		
Change from prior week	**781**	**986**		
Top 5 importers' share of U.S. soybean export sales	**70%**	**75%**		**78%**
USDA forecast, January 2024	**47,763**	**54,213**	**-12**	

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.
Source: USDA, Foreign Agricultural Service.

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

For the week ending 1/11/2024	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	2,478	2,645	-6	3,397
Philippines	2,162	1,765	23	2,615
Japan	1,498	1,768	-15	2,281
China	2,398	750	220	1,740
Korea	1,115	1,117	-0	1,426
Nigeria	202	692	-71	1,276
Taiwan	910	605	50	944
Thailand	387	610	-37	643
Columbia	218	412	-47	537
Indonesia	379	299	27	469
Top 10 importers	**11,745**	**10,663**	**10**	**15,327**
Total U.S. wheat export sales	**16,101**	**15,534**	**4**	**20,411**
% of YTD current month's export projection	82%	75%		
Change from prior week	708	473		
Top 10 importers' share of U.S. wheat export sales	**73%**	**69%**		**75%**
USDA forecast, January 2024	**19,731**	**20,657**	**-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 export (as defined in FAS marketing year ranking reports). mt = metric ton; yr. = year; avg. = average; YTD = year to date.
Source: USDA, Foreign Agricultural Service.

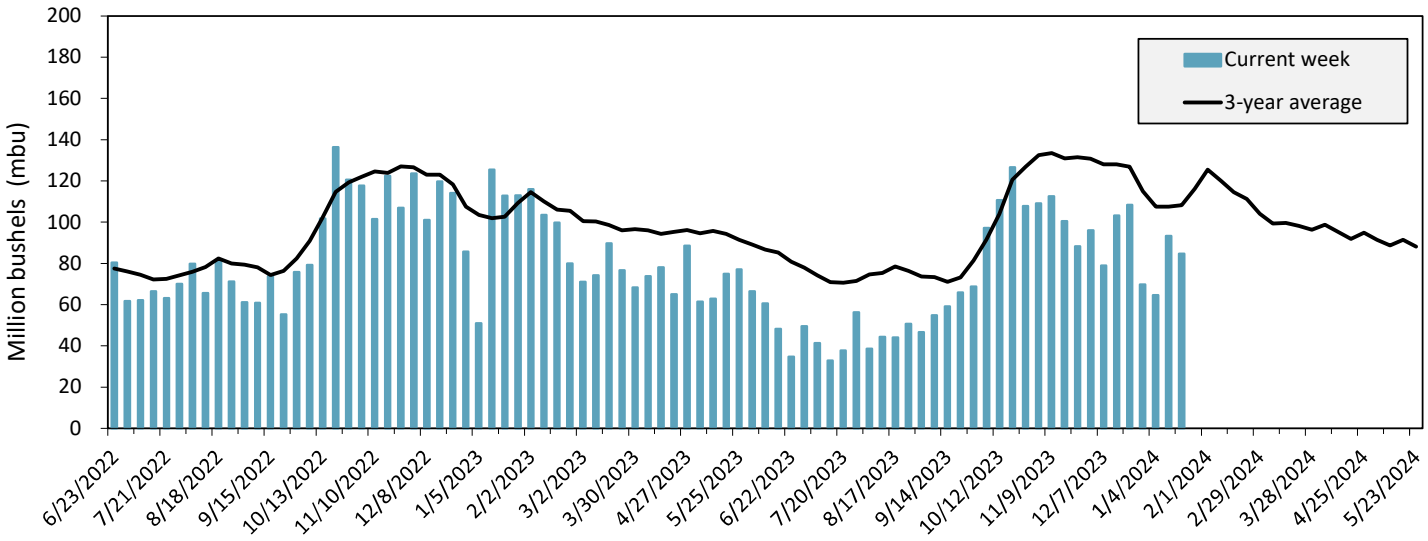
Table 16. Grain inspections for export by U.S. port region (1,000 metric tons)

Port regions	Commodity	For the week ending 01/18/2024	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	Wheat	132	168	79	551	544	101	140	112	10,155
	Corn	66	392	17	574	337	170	176	97	5,187
	Soybeans	282	212	133	702	1,286	55	66	60	10,649
	Total	**480**	**772**	**62**	**1,827**	**2,167**	**84**	**102**	**81**	**25,991**
Mississippi Gulf	Wheat	164	21	784	210	73	289	303	132	3,465
	Corn	429	314	137	1,042	875	119	99	61	22,787
	Soybeans	715	857	83	2,032	2,955	69	65	66	28,233
	Total	**1,309**	**1,192**	**110**	**3,284**	**3,902**	**84**	**77**	**66**	**54,485**
Texas Gulf	Wheat	0	0	n/a	0	79	0	3	2	1,649
	Corn	8	10	74	23	27	84	110	128	388
	Soybeans	0	0	n/a	0	52	0	0	0	281
	Total	**8**	**10**	**74**	**23**	**159**	**15**	**14**	**8**	**2,319**
Interior	Wheat	35	54	65	122	147	83	69	85	2,358
	Corn	198	209	95	551	504	109	109	109	10,191
	Soybeans	129	160	80	457	554	82	85	94	6,788
	Total	**362**	**423**	**86**	**1,130**	**1,206**	**94**	**93**	**100**	**19,337**
Great Lakes	Wheat	0	12	0	12	4	322	901	644	637
	Corn	0	0	n/a	0	0	n/a	n/a	n/a	56
	Soybeans	0	0	n/a	0	2	0	0	0	200
	Total	**0**	**12**	**0**	**12**	**6**	**204**	**524**	**550**	**892**
Atlantic	Wheat	0	0	n/a	0	6	0	0	0	106
	Corn	0	5	0	9	12	79	79	95	159
	Soybeans	96	58	167	161	290	55	47	62	2,106
	Total	**96**	**62**	**155**	**170**	**307**	**55**	**47**	**62**	**2,371**
U.S. total from ports*	Wheat	331	255	130	895	853	105	125	97	18,369
	Corn	701	930	75	2,199	1,755	125	114	77	38,769
	Soybeans	1,222	1,286	95	3,352	5,139	65	65	65	48,256
	Total	**2,254**	**2,471**	**91**	**6,446**	**7,747**	**83**	**83**	**72**	**105,394**

*Note: Data include revisions from prior weeks; some regional totals may not add exactly because of rounding. YTD = year-to-date; n/a = not applicable 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.

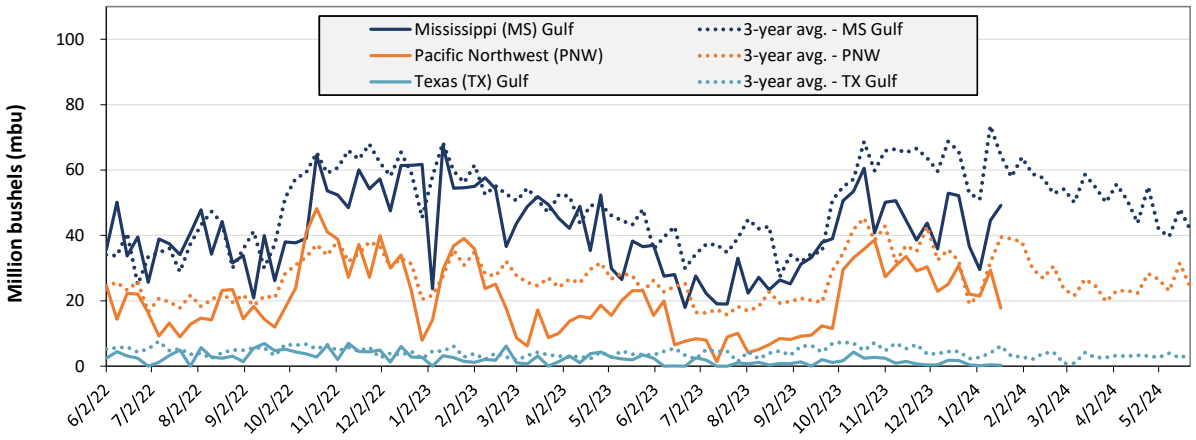
Figure 14. U.S. grain inspected for export (wheat, corn, and soybeans)



For the week ending January 18: 84.7 mbu of grain inspected, down 9 percent from the previous week, down 25 percent from the same week last year, and down 22 percent from the 3-year average.

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

Figure 15. U.S. grain inspections for U.S. Gulf and PNW (wheat, corn, and soybeans)



Week ending 01/18/24 inspections (mbu):
MS Gulf: 49.2
PNW: 17.8
TX Gulf: 0.3

Percent change from	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last week	up 10	down 26	up 10	down 39
Last year (same week)	down 10	down 89	down 13	down 52
3-year average (4-week moving average)	down 19	down 92	down 23	down 37

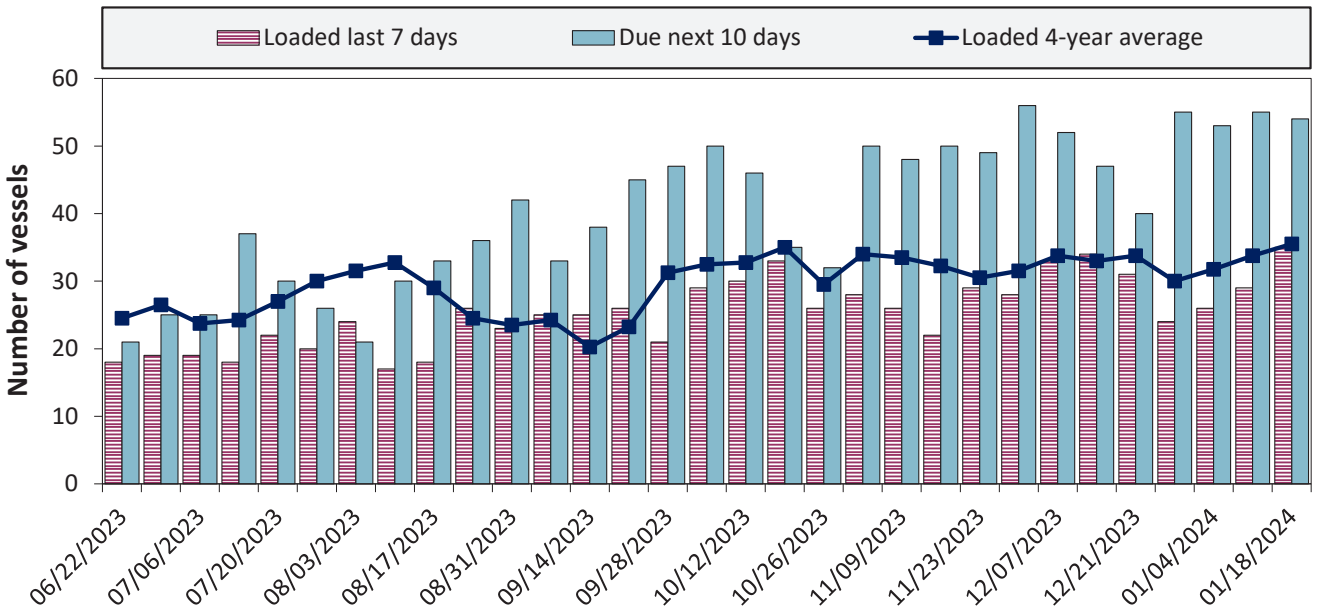
Source: USDA, Federal Grain Inspection Service.

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
1/18/2024	35	35	54	15
1/11/2024	29	29	55	11
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.

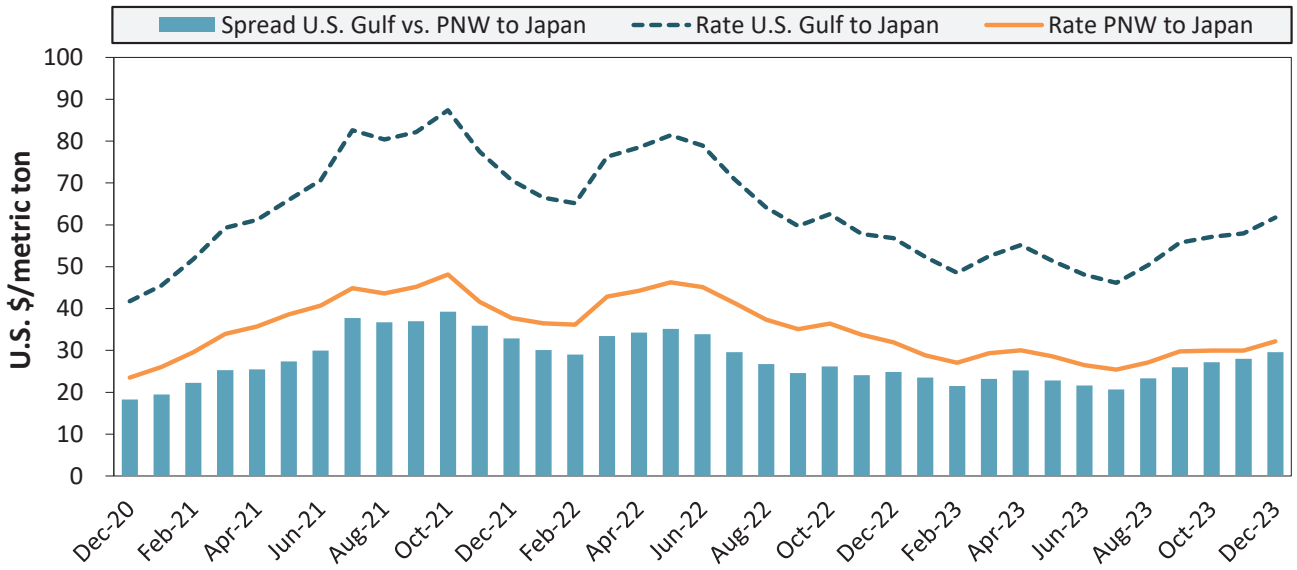
Figure 16. U.S . Gulf vessel loading activity



Week ending 1/18/24, number of vessels	Loaded	Due
Change from last year	29.6%	42.1%
Change from 4-year average	-1.4%	11.9%

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

Figure 17. U.S. Grain vessel rates, U.S. to Japan



Ocean rates	U.S. Gulf	PNW	Spread
December 2023	$61.75	$32.17	$29.58
Change from December 2022	8.7%	0.7%	18.9%
Change from 4-year average	14.3%	8.4%	21.6%

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

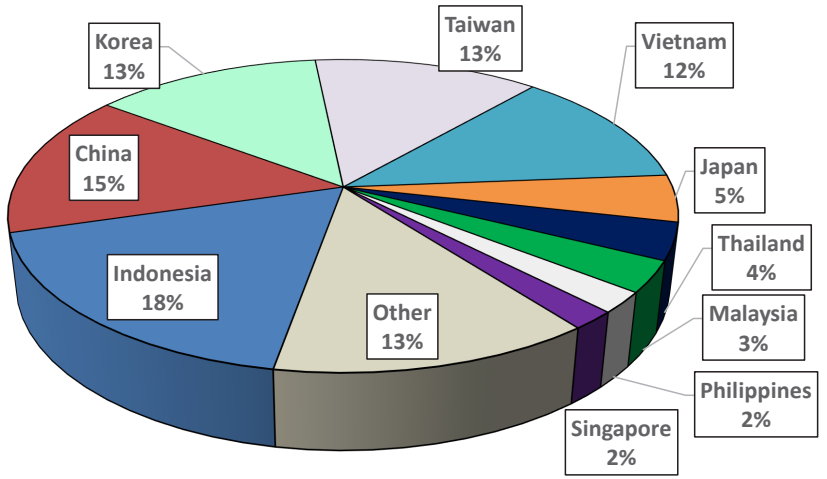
Table 18. Ocean freight rates for selected shipments, week ending 1/20/2024

Export region	Import region	Grain types	Entry date	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	China	Heavy grain	Sep 12, 2023	Oct 1/ Nov 1, 2023	66,000	54.50
U.S. Gulf	China	Heavy grain	Sep 6, 2023	Oct 1/10, 2023	68,000	55.00
U.S. Gulf	Jamaica	Wheat	Nov 2, 2023	Dec 1/10, 2023	9,460	63.50
U.S. Gulf	Colombia	Wheat	Oct 26, 2023	Dec 15/25, 2023	27,500	99.00
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
PNW	Yemen	Wheat	Sep 26, 2023	Nov 5/15, 2023	24,740	91.89
WC US	Thailand	Wheat	Nov 9, 2023	Dec 1/10, 2023	60,500	35.25
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.

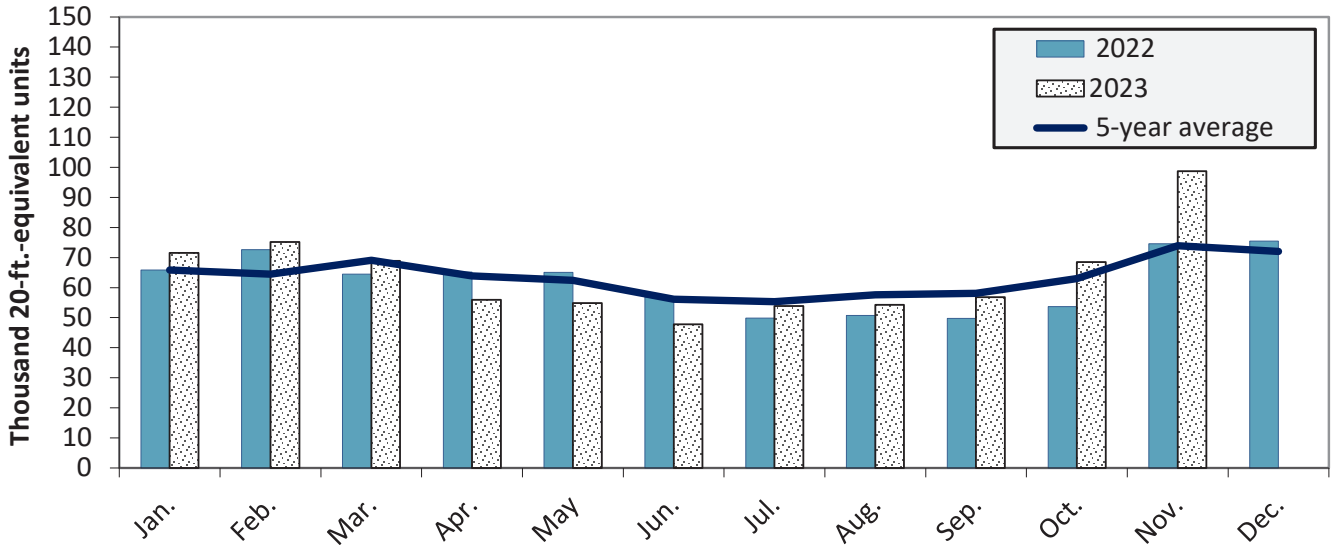
In 2020, containers were used to transport 10 percent of total U.S. waterborne grain exports. Approximately 66 percent of U.S. waterborne grain exports in 2020 went to Asia, of which 14 percent were moved in containers. Approximately 95 percent of U.S. waterborne containerized grain exports were destined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

Figure 18. Top 10 destination markets for U.S. containerized grain exports, Jan-Nov 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: USDA, Agricultural Marketing Service analysis of PIERS data, S&P Global.

Figure 19. Monthly shipments of U.S. containerized grain exports



Containerized grain shipments in Nov. 2023 were up 32.5 percent from last year and up 33.6 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: 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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