



Grain Transportation Report

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China Purchases Large Quantity of U.S. Wheat.

On October 3, USDA [reported](#) 220,000 metric tons of soft red winter wheat for shipment to China in marketing year (MY) 2023-24. This volume marks the first daily sale of U.S. wheat to any destination since November 2022. (A daily sale is a single U.S. grain or oilseed booking that exceeds 100,000 tons.) High wheat prices and falling U.S. supplies have limited U.S. wheat exports in recent years, such that, between 2021 and 2022, only seven daily sales of U.S. wheat to any destination were confirmed.

Despite falling U.S. wheat exports, China was the fifth-largest importer of U.S. wheat in MY 2022-23, accounting for 7 percent of total U.S. wheat shipments for that year. For the week ending September 28, total U.S. wheat exports were 9.4 mmt, 14 percent behind the same time last year ([GTR table 15](#)).

Grain Inspections Down From Average, Show Shift to PNW.

For the week ending October 5, [total inspections of grain](#) (corn, wheat, and soybeans) for export from all major U.S. export regions totaled 1.91 million metric tons. Total grain inspections were up 4 percent from the previous week, down 10 percent from last year, and down 31 percent from the prior 5-year average.

So far in 2023, 54 percent of total grain inspections have been in the Mississippi Gulf (Gulf) and 23 percent have been in the Pacific

Northwest (PNW). In contrast, for the week ending October 5, 36 percent of total grain inspections were in the Gulf, and 42 percent were in the PNW.

For the week ending October 5, this Gulf-to-PNW shift in shares was most notable for soybeans: only 26 percent of total soybean inspections were in the Gulf, while 59 percent were in PNW. For comparison, in the same week last year, 57 percent of soybean inspections were in the Gulf, versus 28 percent in PNW. According to [Standard Grain \(podcast episode, October 11\)](#), the shift is likely related to low-water conditions and low barge volumes through the Mississippi River System.

New LNG Ship Bunkering Hub Comes to U.S. Gulf.

According to [Reuters](#), a joint venture has announced plans for the first dedicated liquefied natural gas (LNG) bunkering facility for ships near Houston/Galveston, TX. The new facility will produce 300,000 gallons per day (gpd), with capacity for another 150,000 gpd as needed. Estimated to begin operations in early 2026, the project has an initial investment of \$150 million.

Traditionally, bunker fuel has come from petroleum products (i.e., heavy fuel oil), but the shipping industry is moving toward other fuels in an effort to decarbonize. Currently, LNG is the most common alternative fuel, but other fuels for which technology has started to become available include methanol, ammonia,

and hydrogen. A rising number of new vessel orders have “dual fuel” engines, which can burn either LNG or traditional bunker fuel ([Grain Transportation Report, August 10, 2023](#)).

The Houston/Galveston ports are consistently one of the top export gateways for wheat. According to USDA’s Foreign Agricultural Service, Houston-Galveston exported 3.7 million metric tons of wheat in 2022.



Export Sales

For the week ending September 28, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2023/24 totaled 31.68 million metric tons (mmt), up 4 percent from last week and down 20 percent from the same time last year.

Net **corn export sales** for the new MY 2023/24 were 1.816 mmt, up 116 percent from last week. Net **soybean export sales** were 0.809 mmt, up 20 percent from last week. Net weekly **wheat export sales** for MY 2023/24 were 0.273 mmt, down 50 percent from last week.

Rail

U.S. Class I railroads originated 18,501 **grain carloads** during the week ending September 30. This was up 2 percent from the previous week, 12 percent fewer than last year, and 21 percent fewer than the 3-year average.

Average October **shuttle secondary railcar bids/offers** (per car) were \$229 above tariff for the week ending October 5. This was \$33 less than last week and \$1,771 lower than this week last year. Average non-shuttle secondary railcar bids/offers per car were \$150 above tariff. This was \$125 less than last week and \$25 more than this week last year.

Barge

For the week ending October 7, **barged grain movements** totaled 385,700 tons. This was 2 percent more than the previous week and 41 percent less than the same period last year.

For the week ending October 7, 247 grain barges **moved down river**—49 fewer than last week. There were 912 grain barges **unloaded** in the New Orleans region, 27 percent more than last week.

Ocean

For the week ending October 5, 29 **oceangoing grain vessels** were loaded in the Gulf—26 percent more than the same period last year. Within the next 10 days (starting October 6), 50 vessels were expected to be loaded—2 percent more than the same period last year.

As of October 5, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was \$57.50. 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 October 9, the U.S. average **diesel fuel price** decreased 9.5 cents from the previous week to \$4.498 per gallon, 72.6 cents below the same week last year.



A Look at Storage Availability and Transportation for the Fall Grain Harvest

Grain storage is an essential tool to efficiently market grain throughout the year. It can also relieve strains on grain transportation—whether from natural disasters, labor disputes, or market volatility—and keep transportation costs down. By allowing shipments to be deferred until conditions improve, available storage can mitigate transportation bottlenecks, especially during harvest time. This article examines fall grain supplies and storage capacity across the country. The overview identifies where storage seems adequate, where scarce, and how available it is to offset transportation disruptions during this year’s fall harvest and beyond.

Potential Effects of Transportation Disruptions (and High Interest Rates)

As the 2023 corn and soybean harvests gain momentum, concerns surround water levels in the Mississippi River System (MRS) and whether barge supply will suffice to meet the needs of U.S. grain exports ([Grain Transportation Report \(GTR\), October 5, 2023](#)). The MRS’s low water levels reduce barge capacity and the number of barges in tow. River disruptions could add pressure on local storage systems, as farmers hold crop to sell later.

Despite being recently reliable, rail transportation, too, holds uncertainty. In recent months, the strength of grain rail

performance has partly reflected low grain carloads and low grain traffic overall, so the harvest demand poses a test of the system. So far, with rising grain demand, railroads have not shown significant capacity concerns. Still, some shippers are wary of a return to last year’s poor rail service that persisted through the fall harvest ([GTR, January 19, 2023](#)).

Another factor with uncertain effects on transportation is the high-interest-rate environment. Because of the current high interest rates, holding grain in storage will be more expensive than in [recent years](#). In comparison to recent years, higher interest rates—by raising the cost of storage—may increase the supply of grain in the months during and following harvest. The higher supply, in turn, may stimulate additional grain transportation demand. However, other impacts of a high-interest-rate environment, such as a stronger dollar could decrease the demand for export grain and dampen the demand for transportation. Thus, the net effect of high-interest rates is unclear.

National View of Storage: Relatively Abundant for New Production

Combining three data points—[grain stocks](#) (as of September 1), [new grain production](#), and [grain storage capacity](#)—indicates the degree to which the storage and handling

system will face pressure this harvest. Less pressure on storage means less pressure on the transportation system.

Stocks. According to USDA’s National Agricultural Statistics Service (NASS), farmers and commercial grain facilities held 3.69 billion bushels (bbu) of grain in storage (as of September 1, 2023), about the same as last year, but down 20 percent from the prior 5-year average.¹ On-farm stocks were 1.4 bbu, down 5 percent from average. On-farm grain stocks comprised 39 percent of total grain stocks—up from the average of 33 percent.

Production and Supplies. Adding to existing stocks, NASS projects U.S. farmers to harvest 19.66 bbu of corn, soybeans, and grain sorghum—8 percent higher than last year and 5 percent more than average.² If USDA’s September projection is realized, this year’s U.S. corn crop will be the second-largest on record. Although soybean production is projected down slightly from last year and average, it is largely offset by a greater sorghum production. (As of [October 8](#), farmers are 34 percent complete with the corn harvest and 43 percent complete with the soybean harvest—both ahead of schedule.)

Combined, total fall grain supplies—i.e., September 1 grain stocks, plus new production of corn, soybeans, and sorghum—are expected to be 23.35 bbu, 6 percent more than last year, but on par with the average.

1 In this calculation, “grain” includes barley; (old crop) corn; oats; (old crop) sorghum; (old crop) soybeans; and wheat. Throughout the article, “average” refers to the prior 5-year average.

2 These numbers come from NASS’ September *Crop Production* report. NASS’ October *Crop Production* report was released today, October 12.

Storage. NASS publishes annual data on grain storage capacity for both on-farm (e.g., bins, cribs, and sheds used to store grains and oilseeds on farms) and off-farm facilities (e.g., elevators, warehouses, terminals, mills, and crushers). As of December 1, 2022, there was 25.4 bbu of total grain storage capacity, 11.8 bbu of off-farm storage capacity, and 13.58 bbu of on-farm storage capacity—all up slightly from the same date in 2021.

Comparing fall grain supplies to total storage capacity suggests a storage surplus of 2.05 bbu across the United States—a 1.44-bbu smaller surplus than last year (down 41 percent), but 290 million bushels (mbu) more than the 5-year average (up 17 percent). With production higher than last year, more grain may be shipped this fall than last, but with an above-par storage surplus, storage is expected to be fairly abundant—and a useful hedge against potential transportation bottlenecks.³

State-Level View: Low Supplies in Southern Plains; Storage Concern for River States

Production and Supplies—by State.

The projected fall grain harvest (19.66 bbu) is 0.94 bbu above average. Of this 0.94 bbu growth in production, 52 percent

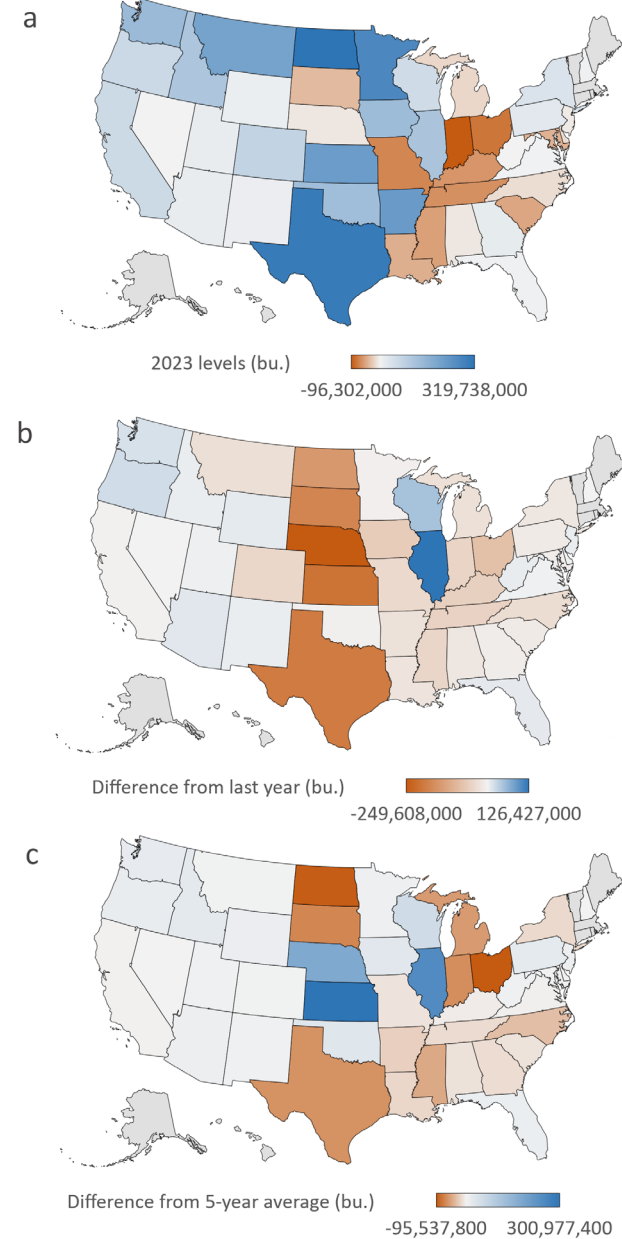
comes from just three States: Minnesota, North Dakota, and South Dakota. In Kansas and Nebraska, as drought-stunted grain harvests in 2022 led to low supplies, other States helped to fill the gap ([GTR, August 31, 2023, third highlight](#)).

This year, in Kansas, grain production is up 35 percent from last year and down 7 percent from the average. In Nebraska, production is up 15 percent from last year and down 2 percent from the average. Despite importing grain from other States over the last year, Kansas and Nebraska's September 1 stocks were still down. Grain supplies (September 1 stocks, plus new production) are down 16 percent in Kansas and down 7 percent in Nebraska.

Grain Storage Surplus and Deficit—by State. For insights across U.S. geography and across time, figure 1 shows three snapshots of storage availability by State: the estimated surplus (or deficit) for 2023; this year compared to last year; and 2023 compared to the average.

By and large, the 2023 distribution of estimated surpluses and deficits (map a in fig. 1) reveals abundant storage across the United States. Storage is most short in Indiana (−96.3 mbu), Ohio (−78.6 mbu), and Missouri (−68.6 mbu)—all States with some reliance on the MRS.

Figure 1. Storage surplus/deficit for 2023 (a) compared to last year (b) and the prior 5-year average (c) (bushels).



Source: USDA/Agricultural Marketing Service analysis of USDA/National Agricultural Statistics Service data.

³ In comparison, fall grain supplies exceeded storage by an average 0.13 bbu from 2016 to 2018.

As figure 1's map **b** shows, most States are more storage-constrained this year than last. However, last year was fairly unique. Apart from 2012 (a year of historic drought), 2022 had the largest autumn storage surplus in at least the past 20 years. Thus, map **c** (5-year average) is better for approximating a "normal" year. Some States (e.g., Texas and North Dakota) with large projected storage surpluses in 2023 have smaller surpluses than in years past (signified by red shading in maps **b** and **c**). The smaller surpluses could result in above-average transportation demand during harvest.

Estimated to be short on storage, Ohio, Indiana, and South Dakota may ship even more grain than usual in the near term. Along with North Dakota, those States show the largest drops in storage availability: relative to the average, Ohio's estimated storage deficit is down 95.5 mbu; South Dakota, down 67.5 mbu; and Indiana, down 63.1 mbu. Notably, several MRS States—such as Ohio, Indiana, Missouri, and Arkansas—have below-average storage availability this year, which coincides with the ongoing low-water issues. If low water continues to be a problem, those areas may use more rail and truck transportation this year.

Looking at on-farm storage availability can shed light on farm-to-elevator transportation: the less on-farm storage is available, the more farmers are pressed to deliver their grain as soon as it is harvested.⁴ Most States have an on-farm storage deficit each year. For instance, although the top two grain-producing States,

Iowa and Illinois, show surpluses for overall (on-farm and off-farm) storage, both States show large deficits for on-farm storage (over 1 bbu each), and they are not alone. Many key-grain producing States have greater-than-average on-farm storage deficits this year.

For example, compared to the average deficit, South Dakota's 393 mbu on-farm storage deficit is up 109-mbu (i.e., *more severe*), and Ohio's 428 mbu on-farm storage deficit is up 106 mbu. Other States with larger-than-average reductions in on-farm storage availability—include Indiana (with a 91.3 mbu higher deficit) and Texas (with an 89.0 mbu higher deficit). After having had an on-farm storage surplus for the past 4 years, North Dakota will run a slight deficit this year of 15.3 mbu. These additional on-farm storage deficits may increase pressure on local truck demand. Recent [research funded by USDA's Agricultural Marketing Service](#) suggests total truck ton-miles have risen over the last two decades.

Conclusion

Heading into harvest, grain stocks (as of September 1) were below average. However, mainly because a large corn harvest is anticipated, total fall grain supplies are projected to be about average. Combined with the grain storage capacity added in recent years, the roughly average fall grain supplies suggest storage will be less constrained than in many years (though not as available as

last year). If storage is sufficient as expected, then the harvest will not unduly stress the transportation system across most of the Nation this fall.

In forecasting storage availability and transportation demand, one wildcard is whether low water levels in the MRS—like those which stymied barge traffic last year—will continue. Storage availability could be an issue in States such as Ohio and Indiana that rely heavily on the MRS and also face above-average storage deficits. Grain rail performance is so far reliable, but shippers and other stakeholders are watchful for signs of deteriorated service that persisted through last year's harvest. Likewise, another factor of unknown effect—the high-interest-rate environment—could either stimulate transportation or quell it, depending on how the contradictory effects of high interest rates play out.

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⁴ This analysis compares on-farm stocks (plus new production) to on-farm storage capacity.

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.

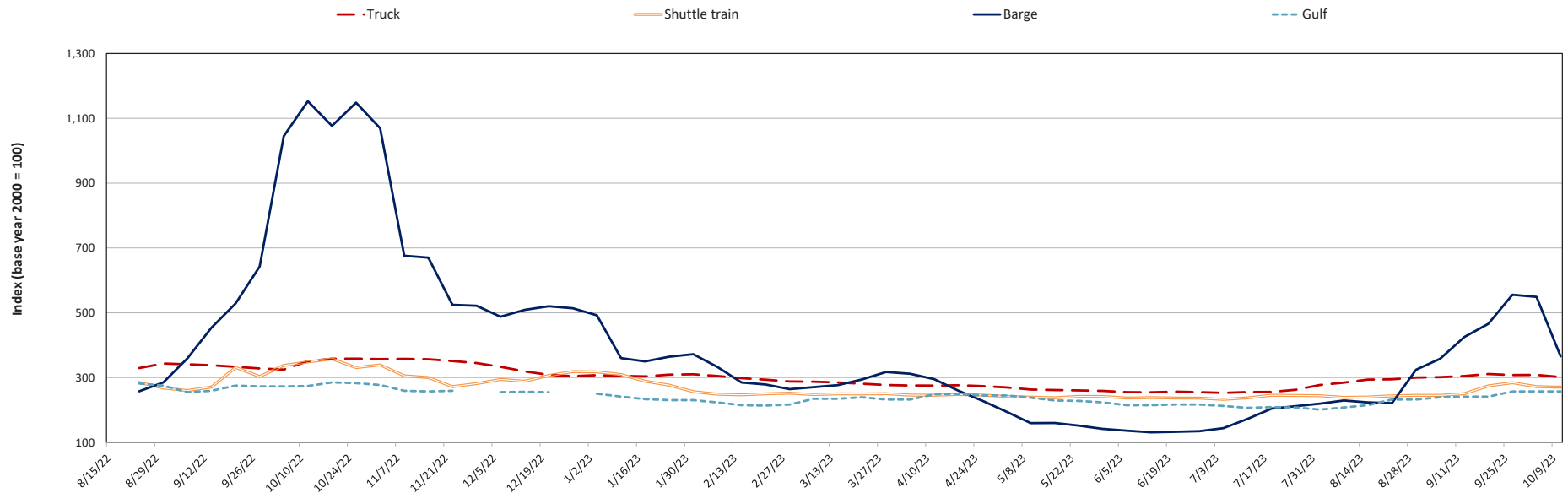
Table 1. Grain transport cost indicators

For the week ending:	Truck	Rail		Barge	Ocean	
		Non-shuttle	Shuttle		Gulf	Pacific
10/11/23	302	340	271	366	257	216
10/04/23	308	347	272	549	257	216
10/12/22	351	340	348	1153	274	303

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 10/11/23



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.

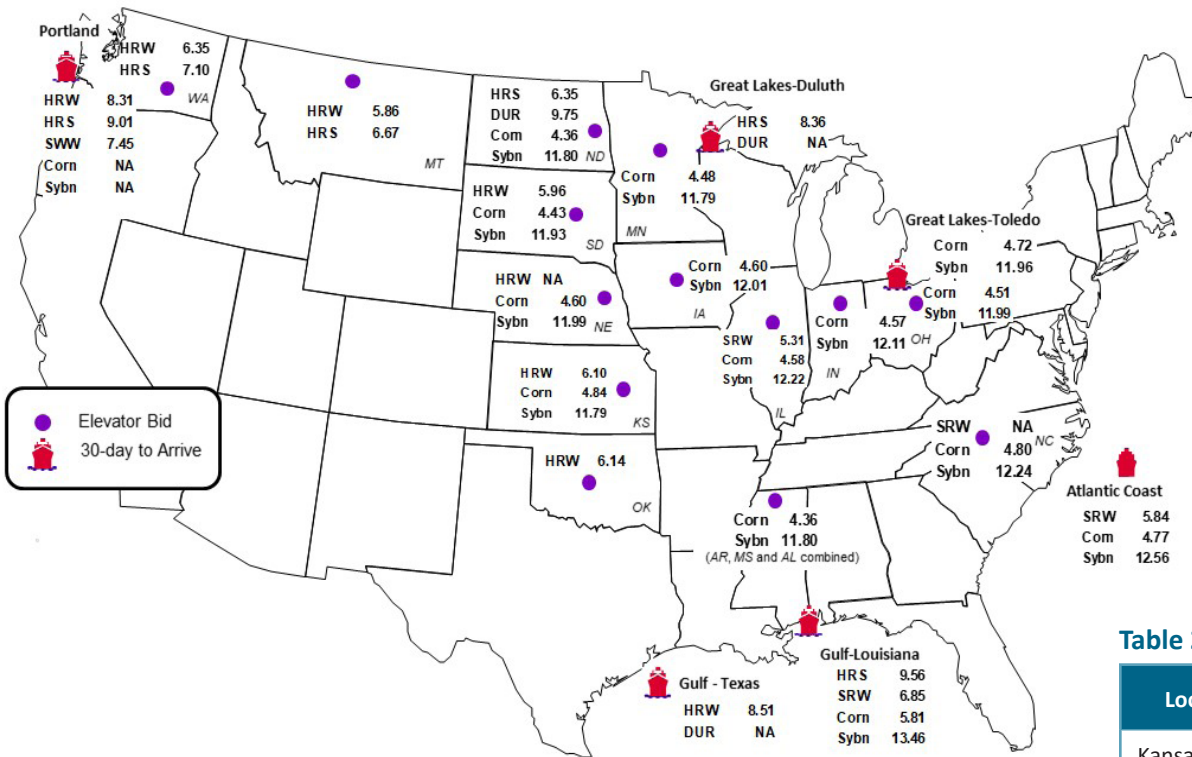


Table 2a. Market update: U.S. origins to export position price spreads (\$/bushel)

Commodity	Origin-destination	10/6/2023	9/29/2023
Corn	IL-Gulf	-1.23	-1.35
Corn	NE-Gulf	-1.21	-1.31
Soybean	IA-Gulf	-1.45	-1.54
HRW	KS-Gulf	-2.41	-2.51
HRS	ND-Portland	-2.66	-2.96

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	10/6/2023	Week ago 9/29/2023	Year ago 10/07/2022
Kansas City	Wheat	Dec	6.810	6.694	10.026
Minneapolis	Wheat	Dec	7.204	7.092	9.950
Chicago	Wheat	Dec	5.766	5.484	9.184
Chicago	Corn	Dec	4.940	4.792	6.932
Chicago	Soybean	Nov	12.706	12.700	13.940

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.

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.

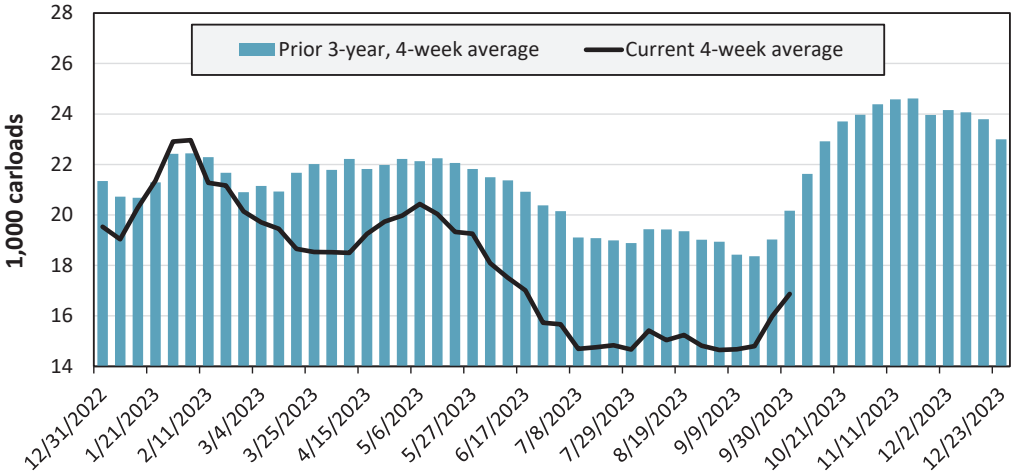
Sources: U.S. Inland: GeoGrain, USDA Weekly Bids, U.S. Export: Corn & Soybean - Export Grain Bids, AMS, USDA Wheat Bids - Weekly Wheat Report, U.S. Wheat Associates, Washington, DC.

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

For the week ending: 9/30/2023	East		West		U.S. total	Central U.S./Canada	
	CSXT	NS	BNSF	UP		CPKC	CN
This week	1,413	1,770	9,202	6,116	18,501	7,347	5,490
This week last year	1,207	2,176	11,250	6,285	20,918	13,766	5,665
2023 YTD	65,882	96,523	338,914	200,047	701,366	322,642	167,800
2022 YTD	67,036	92,973	420,869	222,862	803,740	359,578	136,742
2023 YTD as % of 2022 YTD	98	104	81	90	87	90	123
Last 4 weeks as % of 2022	109	77	92	90	91	96	98
Last 4 weeks as % of 3-yr. avg.	92	81	82	85	84	100	110
Total 2022	93,428	130,712	570,232	296,945	1,091,317	538,276	213,829

Note: The last 4-week percentages compare the last 4 weeks of this year to the closest 4 weeks last year, and to the average across the prior 3 years. The U.S. total column excludes CPKC. NS = Norfolk Southern; UP = Union Pacific; CN = Canadian National; CPKC = Canadian Pacific Kansas City; YTD = year-to-date; avg. = average; yr. = year.
Source: Association of American Railroads.

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



For the 4 weeks ending September 30, grain carloads were up 6 percent from the previous week, down 9 percent from last year, and down 16 percent from the 3-year average.

Source: Association of American Railroads.

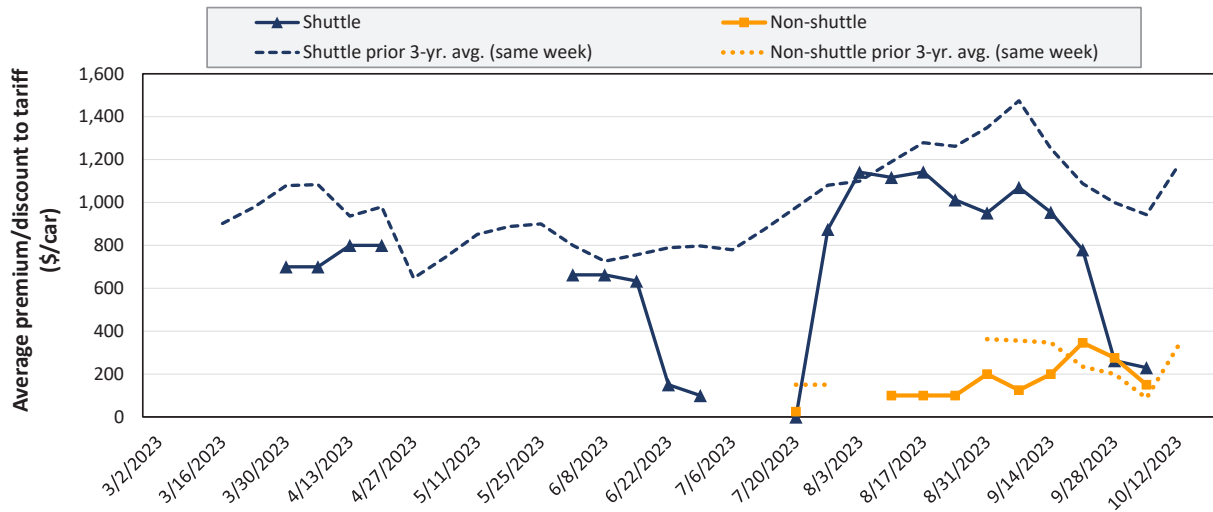
Table 4. Railcar auction offerings (dollars per car)

For the week ending: 10/5/2023		Delivery period							
		Oct-23	Oct-22	Nov-23	Nov-22	Dec-23	Dec-22	Jan-24	Jan-23
BNSF	COT grain units	no offer	no bids	no offer	0	no offer	0	no offer	0
	COT grain single-car	n/a	no bids	n/a	194	0	87	79	11
UP	GCAS/vouchers	n/a	n/a	no offer	n/a	no offer	n/a	n/a	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 October 2023



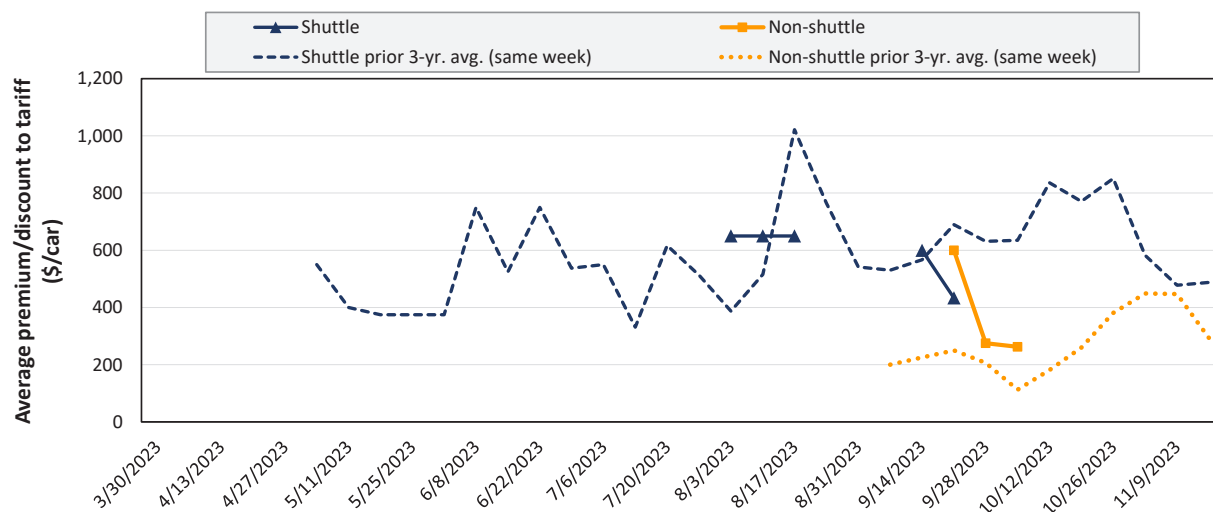
Average non-shuttle bids/offers fell \$125 this week, and are \$196 below the peak.

Average shuttle bids/offers fell \$33 this week and are \$913 below the peak.

10/5/2023	BNSF	UP
Non-Shuttle	\$200	\$100
Shuttle	\$275	\$183

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 November 2023



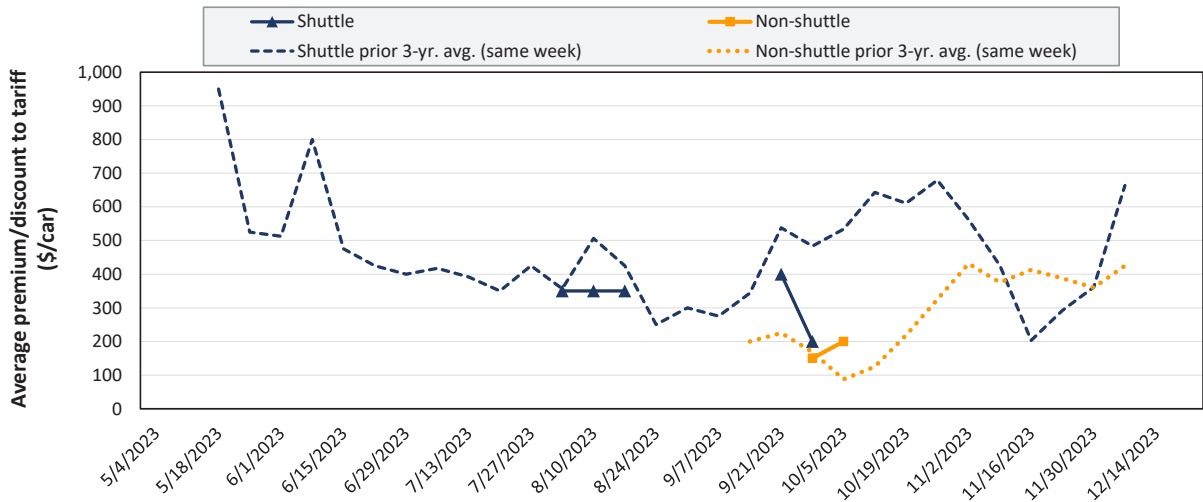
Average non-shuttle bids/offers fell \$13 this week, and are \$338 below the peak.

There were no shuttle bids/offers this week.

10/5/2023	BNSF	UP
Non-Shuttle	\$350	\$175
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.

Figure 6: Secondary market bids/offers for railcars to be delivered in December 2023



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

There were no shuttle bids/offers this week.

10/5/2023	BNSF	UP
Non-Shuttle	n/a	\$200
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: 10/5/2023		Delivery period					
		Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
Non-shuttle	BNSF-GF	200	350	n/a	n/a	n/a	n/a
	Change from last week	-200	-50	n/a	n/a	n/a	n/a
	Change from same week 2022	0	100	n/a	n/a	n/a	n/a
	UP-Pool	100	175	200	n/a	n/a	n/a
	Change from last week	-50	25	50	n/a	n/a	n/a
	Change from same week 2022	50	125	150	n/a	n/a	n/a
Shuttle	BNSF-GF	275	n/a	n/a	n/a	n/a	n/a
	Change from last week	0	n/a	n/a	n/a	n/a	n/a
	Change from same week 2022	-1,725	n/a	n/a	n/a	n/a	n/a
	UP-Pool	183	n/a	n/a	n/a	n/a	n/a
	Change from last week	-67	n/a	n/a	n/a	n/a	n/a
	Change from same week 2022	-1,817	n/a	n/a	n/a	n/a	n/a
	CP-GF	n/a	400	400	n/a	n/a	n/a
	Change from last week	n/a	0	n/a	n/a	n/a	n/a
Change from same week 2022	n/a	n/a	n/a	n/a	n/a	n/a	

Note: Bids and offers represent a premium/discount to tariff rates; n/a = not available; GF = guaranteed freight; Pool = guaranteed pool; BNSF = BNSF Railway; UP = Union Pacific Railroad; CP = Canadian Pacific Railway.
 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

October 2023	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	\$233	\$42.98	\$1.17	4
	Grand Forks, ND	Duluth-Superior, MN	\$4,008	\$86	\$40.66	\$1.11	3
	Wichita, KS	Los Angeles, CA	\$7,340	\$444	\$77.30	\$2.10	-5
	Wichita, KS	New Orleans, LA	\$4,825	\$409	\$51.98	\$1.41	2
	Sioux Falls, SD	Galveston-Houston, TX	\$7,111	\$364	\$74.23	\$2.02	-4
	Colby, KS	Galveston-Houston, TX	\$5,075	\$449	\$54.85	\$1.49	2
	Amarillo, TX	Los Angeles, CA	\$5,121	\$624	\$57.05	\$1.55	-3
Corn	Champaign-Urbana, IL	New Orleans, LA	\$4,000	\$463	\$44.32	\$1.13	-3
	Toledo, OH	Raleigh, NC	\$8,877	\$516	\$93.28	\$2.37	2
	Des Moines, IA	Davenport, IA	\$2,830	\$98	\$29.08	\$0.74	5
	Indianapolis, IN	Atlanta, GA	\$6,866	\$388	\$72.03	\$1.83	2
	Indianapolis, IN	Knoxville, TN	\$5,790	\$251	\$59.99	\$1.52	3
	Des Moines, IA	Little Rock, AR	\$4,425	\$288	\$46.80	\$1.19	2
	Des Moines, IA	Los Angeles, CA	\$6,305	\$839	\$70.94	\$1.80	-1
Soybeans	Minneapolis, MN	New Orleans, LA	\$3,556	\$698	\$42.24	\$1.15	-20
	Toledo, OH	Huntsville, AL	\$7,269	\$368	\$75.84	\$2.06	2
	Indianapolis, IN	Raleigh, NC	\$8,169	\$523	\$86.32	\$2.35	2
	Indianapolis, IN	Huntsville, AL	\$5,921	\$248	\$61.27	\$1.67	3
	Champaign-Urbana, IL	New Orleans, LA	\$5,040	\$463	\$54.65	\$1.49	1

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

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

Table 7. Tariff rail rates for shuttle train shipments

October 2023	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	\$4,543	\$255	\$47.65	\$1.30	0
	Wichita, KS	Galveston-Houston, TX	\$4,611	\$199	\$47.76	\$1.30	4
	Chicago, IL	Albany, NY	\$7,413	\$487	\$78.45	\$2.14	3
	Grand Forks, ND	Portland, OR	\$6,201	\$441	\$65.96	\$1.80	-1
	Grand Forks, ND	Galveston-Houston, TX	\$5,549	\$459	\$59.66	\$1.62	-2
	Colby, KS	Portland, OR	\$5,923	\$736	\$66.12	\$1.80	-3
Corn	Minneapolis, MN	Portland, OR	\$5,660	\$537	\$61.54	\$1.56	-5
	Sioux Falls, SD	Tacoma, WA	\$5,620	\$492	\$60.69	\$1.54	-4
	Champaign-Urbana, IL	New Orleans, LA	\$4,345	\$463	\$47.74	\$1.21	1
	Lincoln, NE	Galveston-Houston, TX	\$4,560	\$287	\$48.13	\$1.22	1
	Des Moines, IA	Amarillo, TX	\$4,845	\$362	\$51.71	\$1.31	1
	Minneapolis, MN	Tacoma, WA	\$5,660	\$532	\$61.49	\$1.56	-5
Soybeans	Council Bluffs, IA	Stockton, CA	\$5,780	\$551	\$62.87	\$1.60	-2
	Sioux Falls, SD	Tacoma, WA	\$6,535	\$492	\$69.78	\$1.90	-1
	Minneapolis, MN	Portland, OR	\$6,585	\$537	\$70.72	\$1.92	-2
	Fargo, ND	Tacoma, WA	\$6,435	\$437	\$68.24	\$1.86	-1
	Council Bluffs, IA	New Orleans, LA	\$5,270	\$534	\$57.63	\$1.57	0
	Toledo, OH	Huntsville, AL	\$5,509	\$368	\$58.36	\$1.59	2
	Grand Island, NE	Portland, OR	\$5,905	\$753	\$66.12	\$1.80	-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.

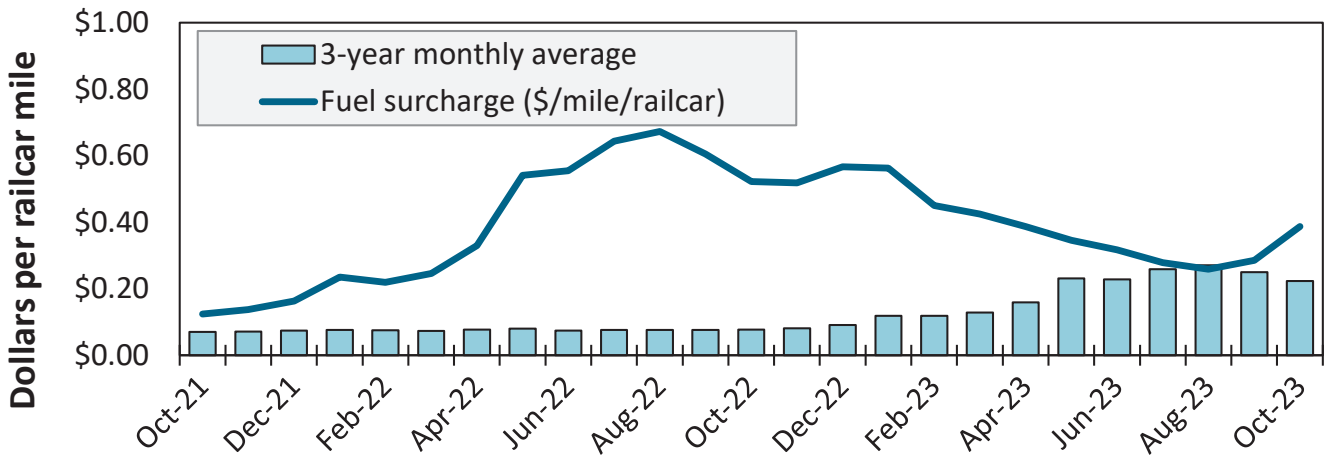
Source: BNSF Railway, Canadian National Railway, CSX Transportation, and Union Pacific Railroad.

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	Torreón, 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	Torreón, 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	Torreón, 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.

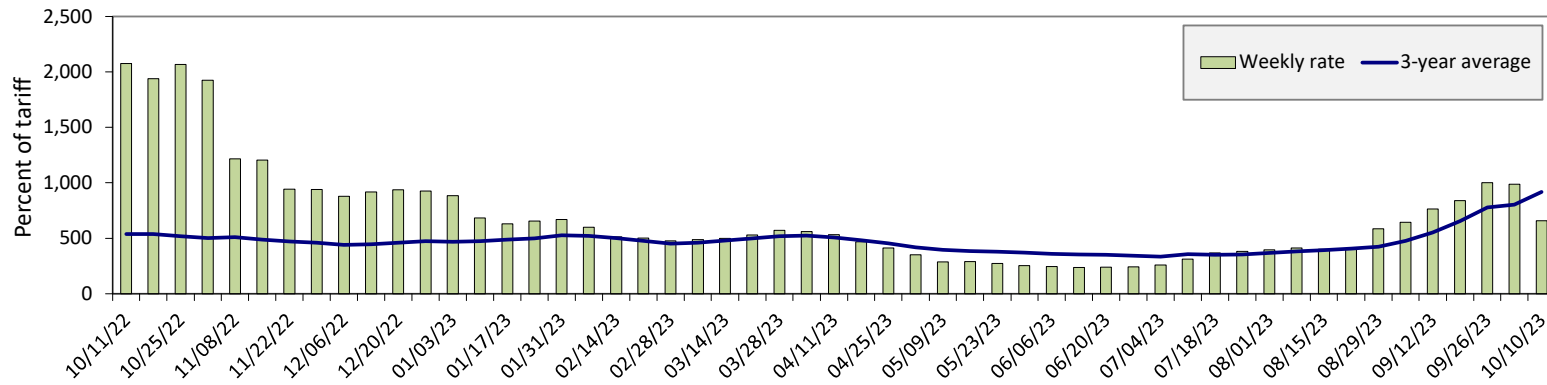
Figure 7. Railroad fuel surcharges, North American weighted average



October 2023: \$0.39/mile, up 10 cents from last month's surcharge of \$0.29/mile; down 13 cents from the October 2022 surcharge of \$0.52/mile; and up 17 cents from the October prior 3-year average of \$0.22/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 October 10: 33 percent lower than the previous week; and 68 percent lower than last year; and 28 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	10/10/2023	619	650	658	642	693	693	624
	10/3/2023	857	997	988	956	1013	1013	1094
\$/ton	10/10/2023	38.32	34.58	30.53	25.62	32.50	28.00	19.59
	10/3/2023	53.05	53.04	45.84	38.14	47.51	40.93	34.35
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	-64	-68	-68	-76	-73	-73	-78
	3-year avg.	-27	-29	-28	-34	-28	-28	-39
Rate	November	598	570	558	508	554	554	471
	January	-	-	504	421	454	454	391

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



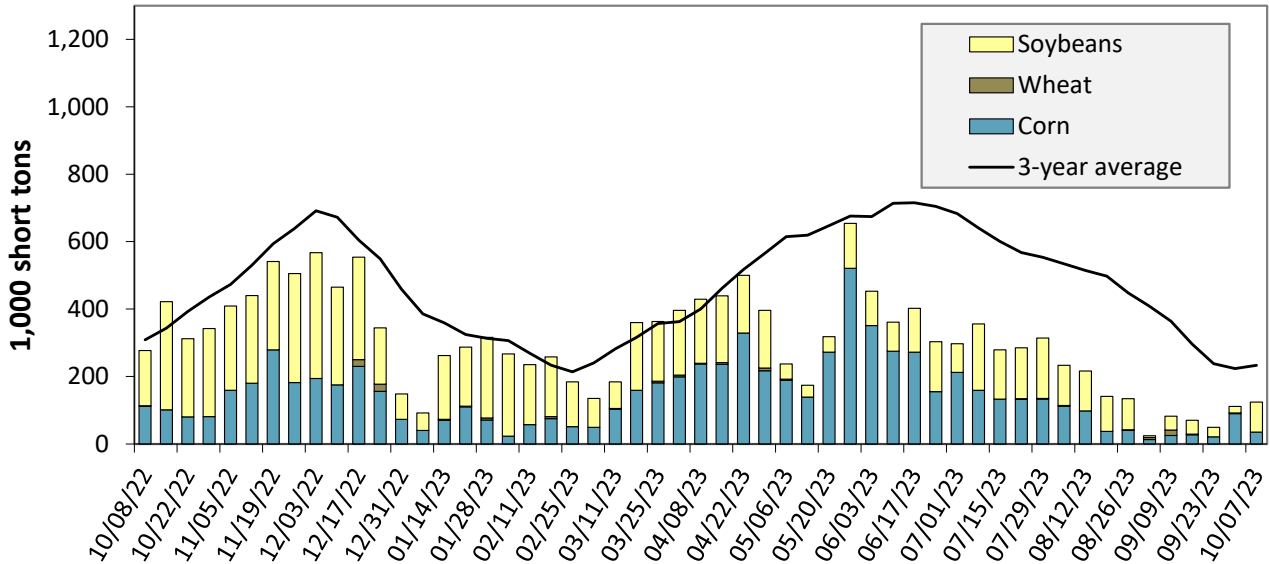
Calculating barge rate per ton:

$$\text{Rate} \times \text{1976 tariff benchmark rate per ton} / 100$$

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 October 7: 55 percent lower than last year and 47 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.

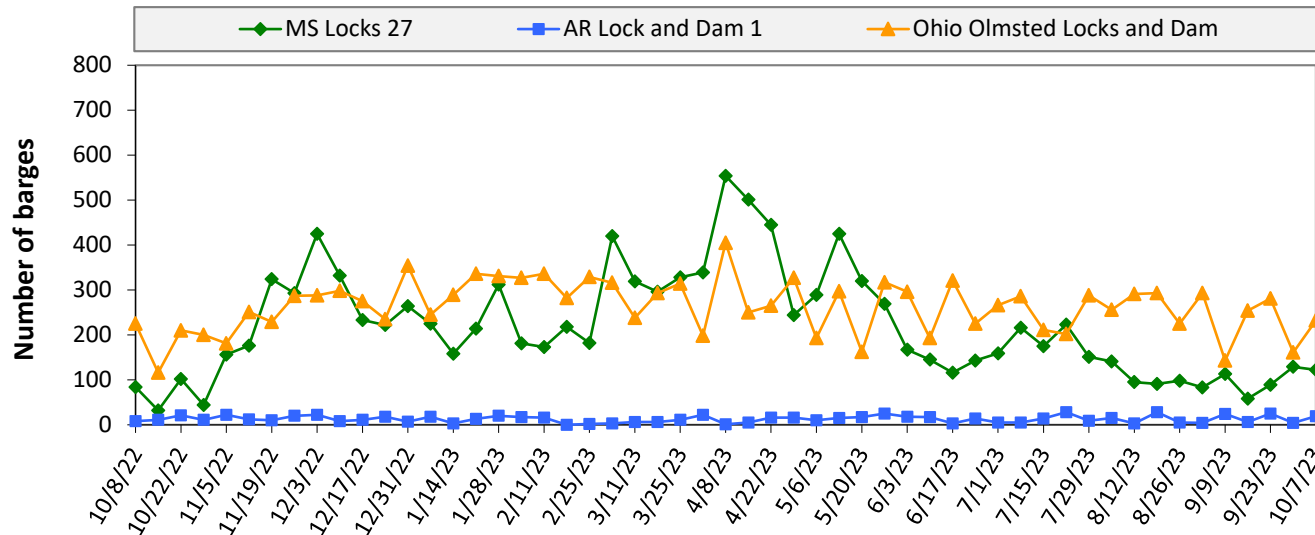
Table 10. Barged grain movements (1,000 tons)

For the week ending 10/07/2023	Corn	Wheat	Soybeans	Other	Total
Mississippi River (Rock Island, IL (L15))	3	0	25	0	28
Mississippi River (Winfield, MO (L25))	16	0	48	0	64
Mississippi River (Alton, IL (L26))	36	0	71	0	108
Mississippi River (Granite City, IL (L27))	35	0	89	0	124
Illinois River (La Grange)	11	0	22	0	33
Ohio River (Olmsted)	119	6	101	0	226
Arkansas River (L1)	0	4	32	0	36
Weekly total - 2023	154	10	222	0	386
Weekly total - 2022	243	3	402	0	648
2023 YTD	9,298	1,149	7,798	202	18,447
2022 YTD	13,693	1,495	9,425	190	24,803
2023 as % of 2022 YTD	68	77	83	106	74
Last 4 weeks as % of 2022	81	96	74	36	78
Total 2022	16,437	1,594	14,464	232	32,727

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.

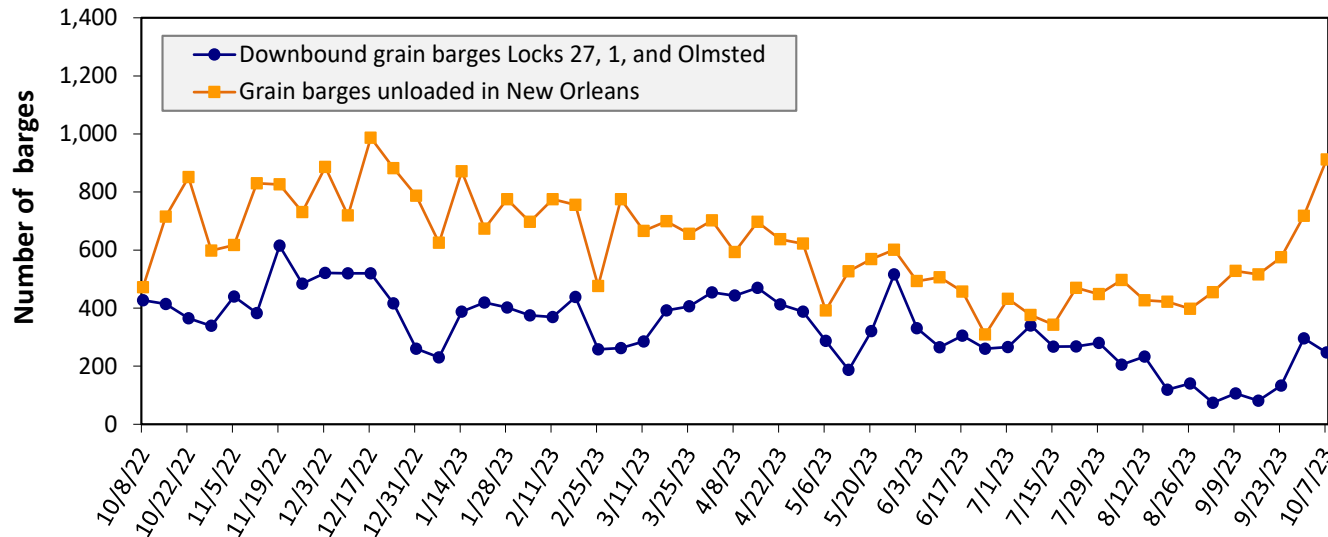
Figure 11. Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



For the week ending October 7: 373 barges transited the locks, 79 barges more than the previous week, and 11 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 October 7: 247 barges moved down river, 49 fewer than the previous week; 912 grain barges unloaded in the New Orleans Region, 27 percent more 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.

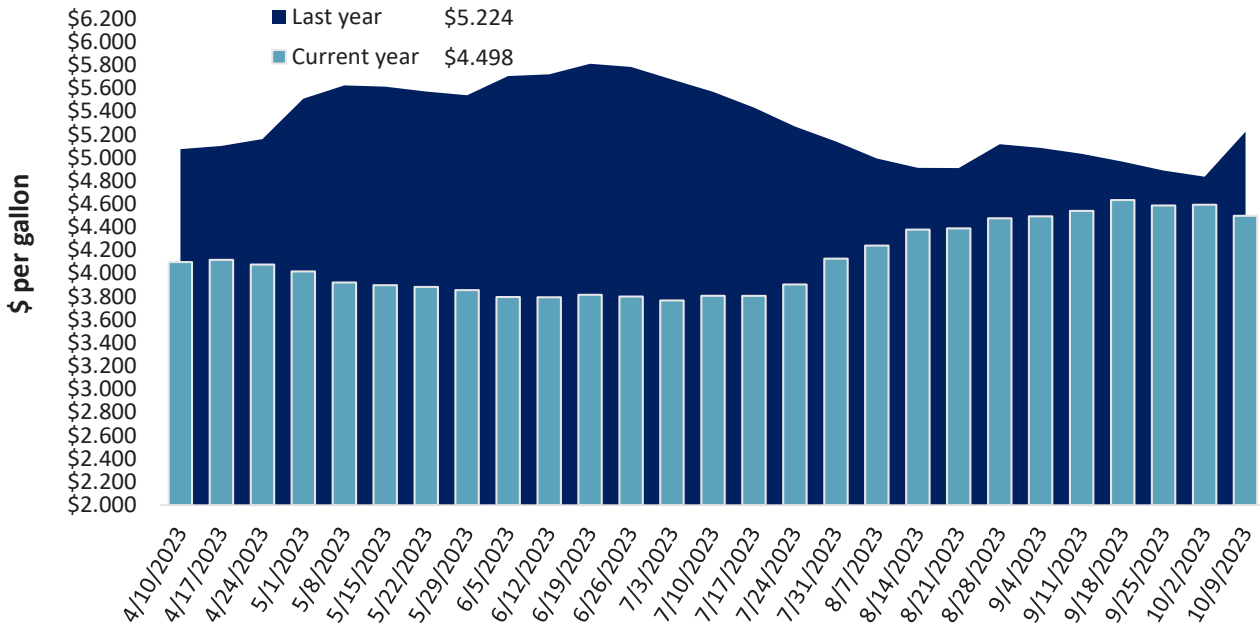
The weekly diesel price provides a proxy for trends in U.S. truck rates as diesel fuel is a significant expense for truck grain movements.

Table 11. Retail on-highway diesel prices, week ending 10/09/2023 (U.S. \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	4.458	-0.084	-0.672
	New England	4.577	-0.030	-0.572
	Central Atlantic	4.721	-0.038	-0.605
	Lower Atlantic	4.349	-0.106	-0.707
II	Midwest	4.376	-0.073	-0.894
III	Gulf Coast	4.139	-0.140	-0.758
IV	Rocky Mountain	4.717	-0.061	-0.482
V	West Coast	5.600	-0.094	-0.372
	West Coast less California	5.093	-0.097	-0.428
	California	6.178	-0.091	-0.311
Total	United States	4.498	-0.095	-0.726

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 October 9, the U.S. average diesel fuel price decreased 9.5 cents from the previous week to \$4.498 per gallon, 72.6 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 9/28/2023	620	618	1,293	878	170	3,579	11,714	16,392	31,684
	This week year ago	793	540	1,005	730	90	3,158	10,976	25,676	39,810
	Last 4 wks. as % of same period 2022/23	76	126	135	115	224	117	98	63	77
Current shipped (cumulative) exports sales	2023/24 YTD	1,044	1,430	2,134	1,141	111	5,860	2,671	2,168	10,699
	2022/23 YTD	2,275	1,500	2,184	1,721	78	7,757	2,247	1,788	11,792
	YTD 2023/24 as % of 2022/23	46	95	98	66	143	76	119	121	91
	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 9/28/2023	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	7,520	5,392	39	15,227
China	779	3,386	-77	12,616
Japan	1,596	1,034	54	10,273
Columbia	835	260	221	4,398
Korea	61	7	769	2,563
Top 5 importers	10,790	10,079	7	45,077
Total U.S. corn export sales	14,385	13,223	9	56,665
% of YTD current month's export projection	34%	21%		
Change from prior week	1,816	227		
Top 5 importers' share of U.S. corn export sales	75%	76%		80%
USDA forecast September 2023	42,366	62,901	-33	
Corn use for ethanol USDA forecast, September 2023	131,953	135,128	-2	

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 9/28/2023	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	8,047	14,031	-43	32,321
Mexico	1,846	2,085	-11	4,912
Egypt	130	652	-80	2,670
Japan	657	640	3	2,259
Indonesia	348	251	39	1,973
Top 5 importers	11,027	17,660	-38	44,133
Total U.S. soybean export sales	18,560	27,464	-32	56,656
% of YTD current month's export projection	34%	47%		
Change from prior week	809	734		
Top 5 importers' share of U.S. soybean export sales	59%	64%		78%
USDA forecast, September 2023	54,223	58,638	-8	

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 9/28/2023	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	1,654	1,888	-12	3,397
Philippines	1,436	1,449	-1	2,615
Japan	1,047	1,077	-3	2,281
China	346	613	-44	1,740
Korea	709	614	15	1,426
Nigeria	133	573	-77	1,276
Taiwan	653	414	58	944
Thailand	222	289	-23	643
Columbia	178	383	-54	537
Indonesia	235	236	-0	469
Top 10 importers	6,615	7,537	-12	15,327
Total U.S. wheat export sales	9,439	10,915	-14	20,411
% of YTD current month's export projection	49%	53%		
Change from prior week	273	229		
Top 10 importers' share of U.S. wheat export sales	70%	69%		75%
USDA forecast, September 2023	19,074	20,681	-8	

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)

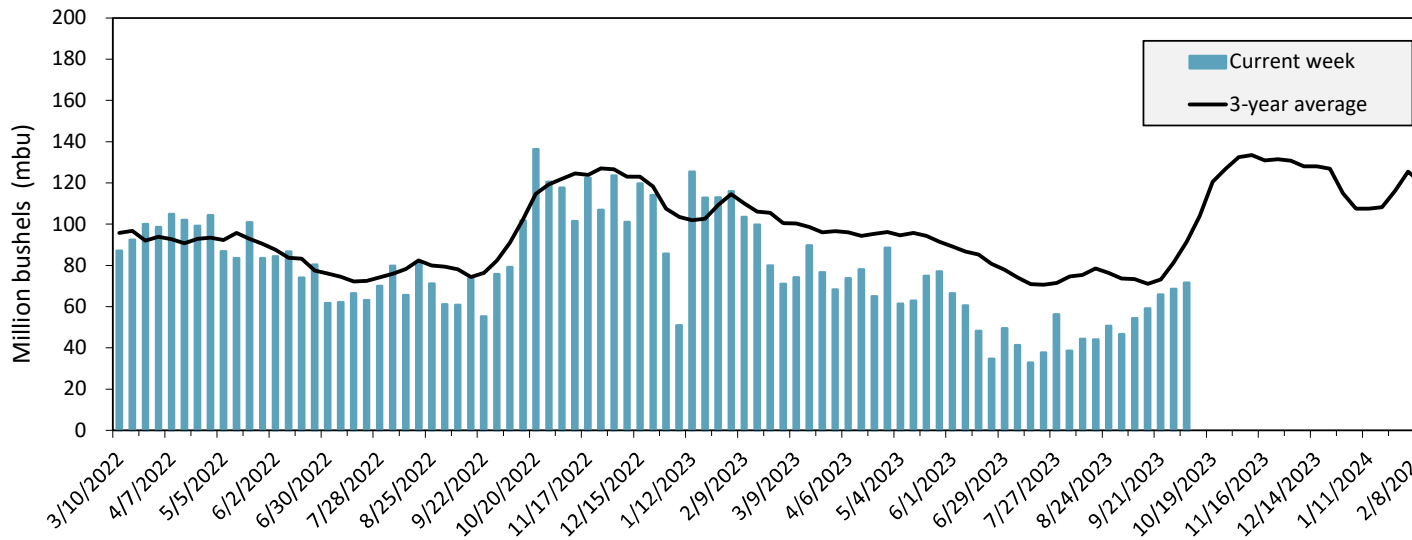
Port regions	Commodity	For the week ending 10/05/2023	Previous week*	Current week as % of previous	2023 YTD*	2022 YTD*	2023 YTD as % of 2022 YTD	Last 4-weeks as % of:		2022 total*
								Last year	Prior 3-yr. avg.	
Pacific Northwest	Wheat	164	242	68	8,122	8,453	96	64	76	9,836
	Corn	1	0	n/a	3,925	8,953	44	n/a	1	9,615
	Soybeans	639	71	905	4,243	5,500	77	246	56	14,178
	Total	804	313	257	16,289	22,907	71	92	61	33,629
Mississippi Gulf	Wheat	69	82	83	2,962	3,803	78	72	89	4,053
	Corn	337	396	85	18,634	26,972	69	107	91	30,781
	Soybeans	285	555	51	17,275	17,597	98	93	67	31,283
	Total	691	1,033	67	38,871	48,372	80	96	78	66,116
Texas Gulf	Wheat	35	32	109	1,486	2,870	52	21	22	3,421
	Corn	11	0	n/a	244	564	43	151	21	648
	Soybeans	0	0	n/a	55	2	n/a	n/a	3	685
	Total	46	32	142	1,785	3,436	52	23	19	4,754
Interior	Wheat	11	29	38	1,934	2,374	81	77	89	2,912
	Corn	181	257	70	7,279	6,932	105	145	128	8,961
	Soybeans	165	85	193	4,313	5,075	85	99	81	7,109
	Total	357	372	96	13,527	14,381	94	120	108	18,982
Great Lakes	Wheat	0	64	0	287	268	107	240	157	395
	Corn	0	0	n/a	23	148	15	0	0	158
	Soybeans	0	0	n/a	63	261	24	35	13	760
	Total	0	64	0	373	676	55	144	82	1,312
Atlantic	Wheat	1	2	58	101	168	60	33	54	169
	Corn	11	5	216	101	274	37	44	86	309
	Soybeans	2	1	133	1,258	1,613	78	41	6	2,867
	Total	13	8	168	1,460	2,055	71	39	26	3,345
U.S. total from ports*	Wheat	279	451	62	14,892	17,936	83	59	69	20,786
	Corn	541	658	82	30,206	43,843	69	116	92	50,471
	Soybeans	1,091	712	153	27,207	30,048	91	110	62	56,882
	Total	1,911	1,822	105	72,305	91,827	79	93	72	128,139

*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.

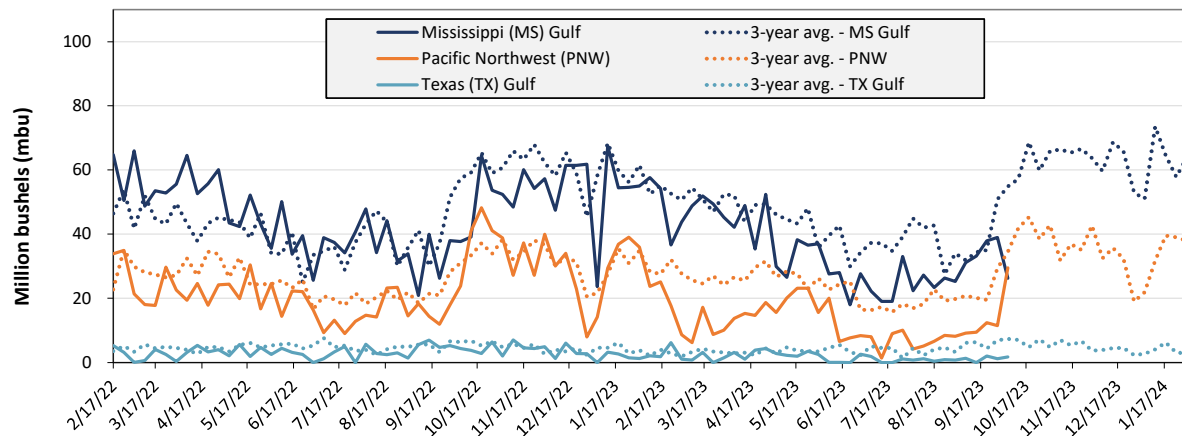
Figure 14. U.S. grain inspected for export (wheat, corn, and soybeans)



For the week ending October 5: 71.6 mbu of grain inspected, up 4 percent from the previous week, down 10 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 10/05/23 inspections (mbu):

MS Gulf: 26.3

PNW: 29.5

TX Gulf: 1.7

Percent change from	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last week	down 33	up 44	down 30	up 157
Last year (same week)	down 30	down 61	down 34	up 24
3-year average (4-week moving average)	down 40	down 73	down 44	up 14

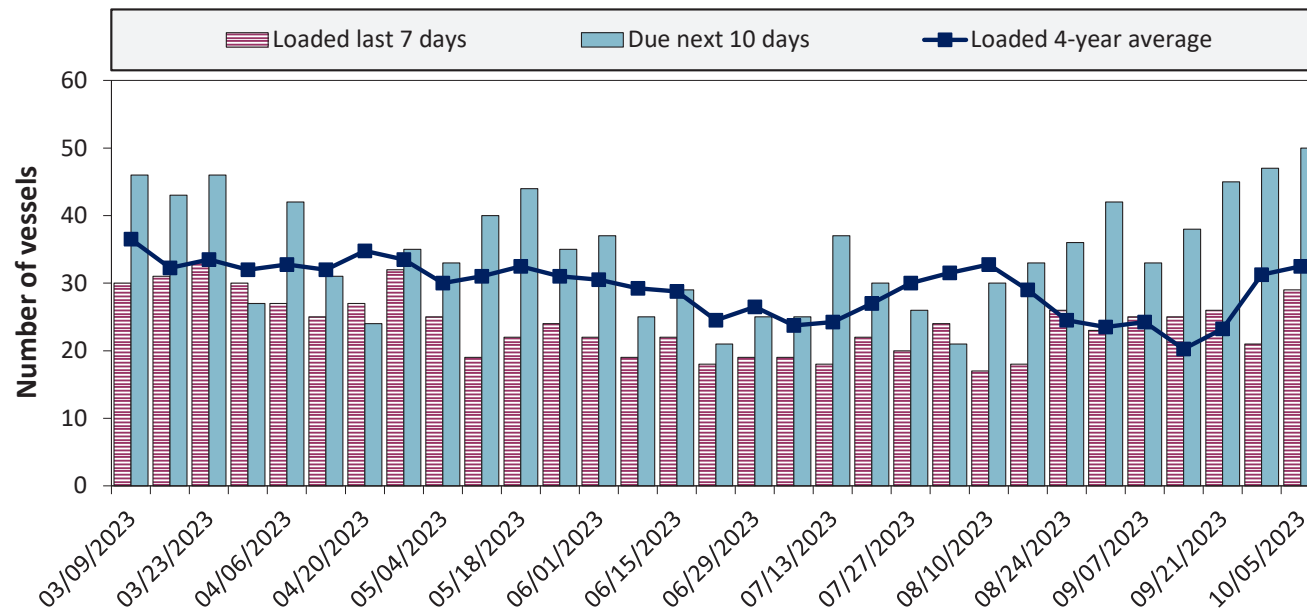
Source: USDA, Federal Grain Inspection Service.

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
10/5/2023	30	29	50	19
9/28/2023	27	21	47	12
2022 range	(14...61)	(18...39)	(28...62)	(5...23)
2022 average	30	28	44	13

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

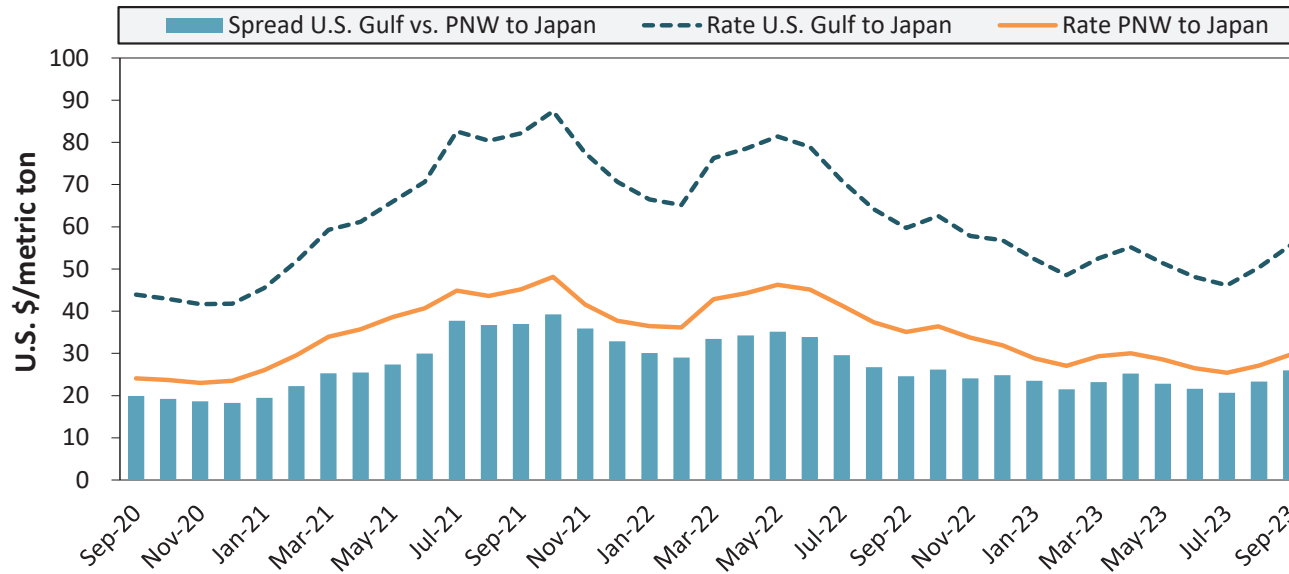
Figure 16. U.S . Gulf vessel loading activity



Week ending 10/05/23, number of vessels	Loaded	Due
Change from last year	26.1%	2.0%
Change from 4-year average	-10.8%	-2.0%

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
September 2023	\$55.75	\$29.75	\$26.00
Change from September 2022	-6.6%	-15.2%	5.7%
Change from 4-year average	-6.2%	-11.1%	0.0%

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

Table 18. Ocean freight rates for selected shipments, week ending 10/07/2023

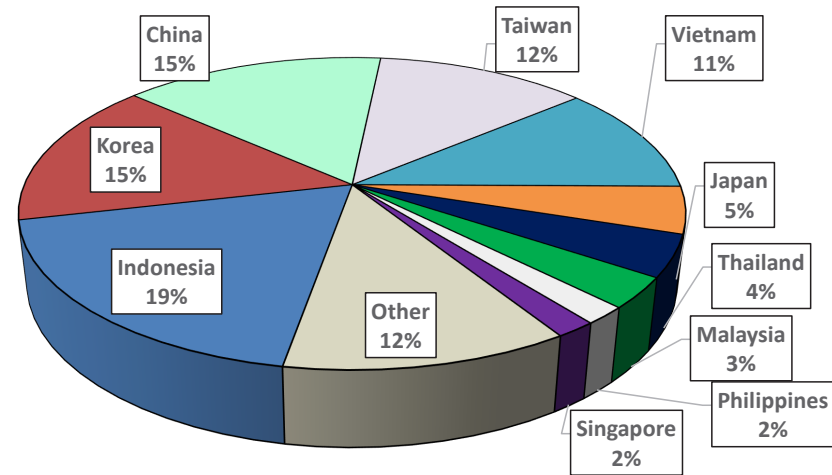
Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	Japan	Heavy grain	May 2, 2023	50,000	56.70
U.S. Gulf	China	Heavy grain	Oct 1/Nov 1, 2023	66,000	54.50
U.S. Gulf	China	Heavy grain	Oct 1/10, 2023	68,000	55.00
U.S. Gulf	Jamaica	Wheat	Jun 20/30, 2023	4,400	63.00 op 66.00
U.S. Gulf	Mexico	Soybean Meal	Oct 1/10, 2023	17,250	87.13
U.S. Gulf	Dominican Republic	Soybean Meal	Oct 1/10, 2023	17,250	87.13
U.S. Gulf	S. Korea	Heavy grain	Oct 25/Nov 5, 2023	57,000	64.85
U.S. Gulf	S. Korea	Heavy grain	Nov 1/15	58,000	64.50
U.S. Gulf	S. Korea	Heavy grain	Oct 1/20, 2023	57,000	58.30
PNW	Yemen	Wheat	Nov 5/15, 2023	30,000	74.43
PNW	Yemen	Wheat	Nov 5/15, 2023	24,740	91.89
Brazil	S. Korea	Heavy grain	Jun 15/Jul 15, 2023	68,000	45.15
Brazil	China	Heavy grain	Jul 1/31, 2023	63,000	41.50
River Plate	China	Soybeans	Oct 15/30, 2023	65,000	46.75

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.

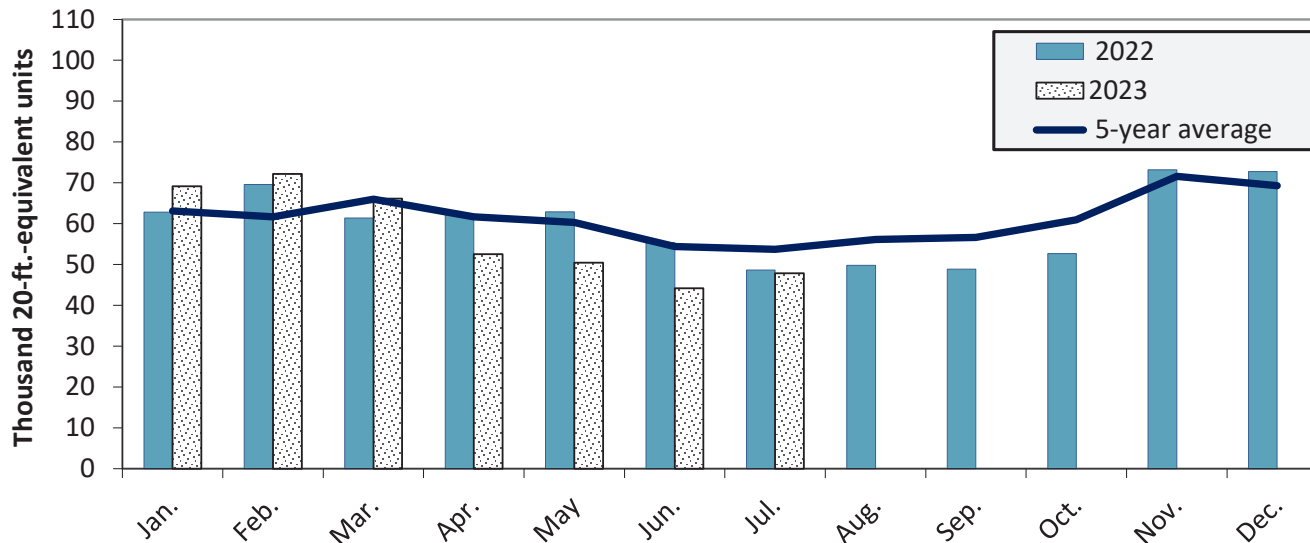
Figure 18. Top 10 destination markets for U.S. containerized grain exports, Jan-Jul 2023



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

Source: 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 were down 1.5 percent from last year and down 10.9 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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