

USDA Agricultural Marketing Service

U.S. DEPARTMENT OF AGRICULTURE







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Grain Transportation Report

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Weekly Highlights

Illinois Locks Reopen. After closing on June 1 for upgrades and repairs, the Brandon Road Lock and Dam, the Dresden Island Lock and Dam, and the Marseilles Lock and Dam on the Illinois River are now open. On the evening of September 30, Brandon Road Lock and Dam and the Marseilles Lock and Dam began locking vessels. On October 1, the Dresden Island Lock and Dam began locking vessels.

Because tow haulage units at Dresden Island may not yet be operational, helper boats will be required to pull vessels through the locks until further notice. According to Waterways Journal, even after the locks' reopening, vessels may be intermittently delayed at the locks as adjustments are made to previous upgrades and repair work.

According to the project manager for the Rock Island Engineer District, no long-term consolidated closures (like the ones that just ended) are scheduled for the foreseeable future.

FMC Reports OSRA-Related Progress.

In a September 21 meeting, the Federal Maritime Commission (FMC) was briefed on progress made toward completing the reforms mandated by the Ocean Shipping Reform Act of 2022 (OSRA). A final rule on detention and demurrage billing practices is nearly completed and ready for FMC to vote on. At the same time, FMC staff is drafting a proposed final rule on "unreasonable refusal to deal with respect to

vessel space accommodations." Further, FMC staff has begun drafting a proposed rulemaking on all remaining topics related to "unfair or unjustly discriminatory methods."

In addition to the rulemakings, three other OSRA-related developments were reported on: first, the Transportation Research Board's study on "best practices for chassis pools" is due to be completed by April 2024. Also, the Office of Management and Budget is reviewing a proposed FMC process for gathering and publishing data on total export weight and volume per vessel.

Lastly, work has progressed on building a section of FMC's website for easily submitting comments, reports of non-compliance, requests for investigations, and requests for alternative dispute resolution services.

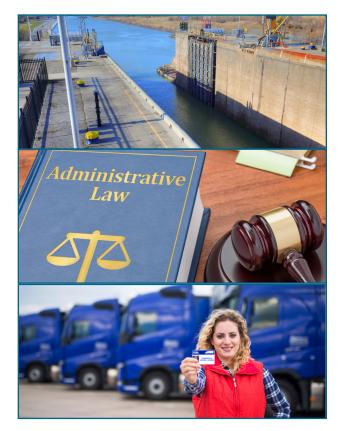
FMCSA Awards \$48 Million To Enlarge Workforce of Commercial Drivers. On

September 14, the Federal Motor Carrier Safety Administration (FMCSA) <u>announced</u> it will award approximately \$48 million in grants to enhance opportunities for commercial driver's license (CDL) driver training. The funding will also continue to improve the licensing process.

More than \$44 million will go to States and other entities to operate national CDL programs through FMCSA's Commercial Driver's License Program Implementation (CDLPI) grant program. The CDLPI funding will help States expedite CDL issuance and

renewals, as well as ensure interstate electronic exchange of conviction and disqualification data.

Examples of funded projects include hiring State personnel to reduce CDL skills testing delays, improving CDL reporting, maintaining accurate driver records, and training CDL skills test examiners. FMCSA intends the funding to improve the resiliency of the national supply chain and strengthen the Nation's trucking workforce.



Snapshots by Sector

Export Sales

For the week ending September 21, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2023/24 totaled 30.46 million metric tons (mmt), down 25 percent from the same time last year.

Net <u>corn export sales</u> for the new MY 2023/24 were 0.842 mmt, up 48 percent from last week. Net <u>soybean export sales</u> were 0.672 mmt, up 55 percent from last week. Net weekly <u>wheat export sales</u> for MY 2023/24 were 0.545 mmt, up 77 percent from last week.

Rail

U.S. Class I railroads originated 18,072 **grain carloads** during the week ending September 23. This was 11 percent more than the previous week, 1 percent fewer than last year, and 13 percent fewer than the 3-year average.

Average October shuttle secondary railcar bids/offers (per car) were \$263 above tariff for the week ending September 28. This was \$517 less than last week and \$1,483 lower than this week last year. Average non-shuttle secondary railcar bids/offers per car were \$275 above tariff. This was \$71 less than last week and \$44 more than this week last year.

Barge

For the week ending September 30, <u>barged</u> grain movements totaled 376,787 tons. This was 92 percent more than the previous week and 19 percent more than the same period last year.

For the week ending September 30, 296 grain barges <u>moved down river</u>—163 more than last week. There were 718 grain barges <u>unloaded</u> in the New Orleans region, 25 percent more than last week.

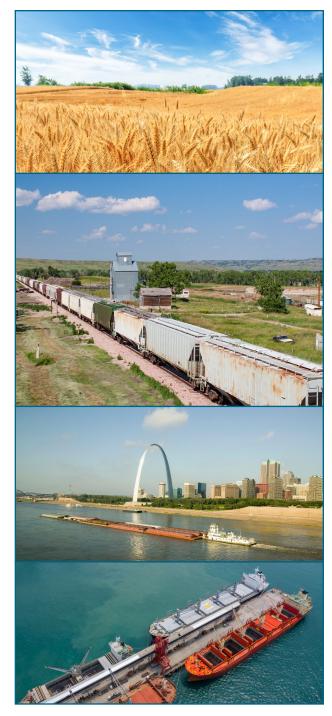
Ocean

For the week ending September 28, 21 oceangoing grain vessels were loaded in the Gulf—unchanged from the same period last year. Within the next 10 days (starting September 29), 47 vessels were expected to be loaded—18 percent more than the same period last year.

As of September 28, 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 2, the U.S. average **diesel fuel price** increased 0.7 cents from the previous week to \$4.593 per gallon, 24.3 cents below the same week last year.



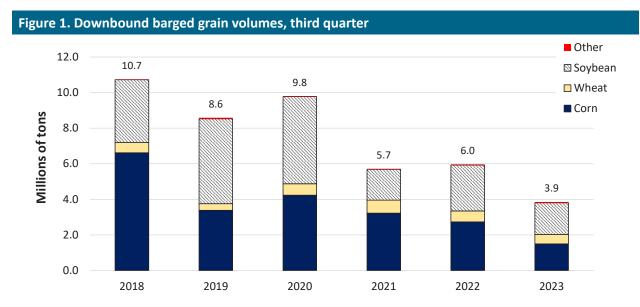
Third-Quarter Barged Grain Movements and Rates

The Mississippi River System (MRS) comprises the Nation's primary waterways for moving grain from Midwest production areas to the U.S. Gulf region for export. Close to 60 percent of U.S. grain exports (wheat, soybeans, and corn) travel this route by barge.

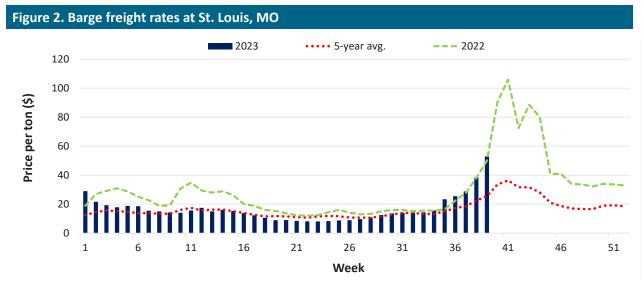
Through most of the year, low export sales kept the demand for barges low, and ample supply kept weekly spot rates below average until July. As of September 30, year-to-date (YTD) downbound barged grain volumes totaled 18.1 million tons—25 percent lower than last year and 29 percent lower than the 5-year average (GTR table 10). In June, low water on the MRS led to draft and tow restrictions on barges, as happened in fall 2022. From the week ending July 8 to the week ending September 30, downbound barged grain volumes on the MRS totaled 3.9 million tons—35 percent lower than the third quarter last year and 53 percent lower than the previous 5-year average (fig. 1).

This article reviews the third-quarter trends in barged grain movements and freight rates. It also explores how the lower-than-normal export sales and low-water issues affected barged grain movements and trends in spot freight rates (fig. 2).

Low Water on the Mississippi River System. In 2022, the MRS saw historic low water levels that stymied barge transportation from late September to early December. This dramatic



Source: U.S. Army Corp of Engineers, Lock Performance Monitoring System.



Source: USDA, Agricultural Marketing Service.

¹ The Mississippi River System comprises the Mississippi, Arkansas, Illinois, Ohio, and Tennessee Rivers, and Gulf Intracoastal Waterway.

reduction in MRS barge traffic resulted in below-average yearly grain volume and record high freight rates. In 2023, low water levels in the MRS became a problem in June, about 2 months earlier than in 2022, and continued for most of third quarter 2023. Since June 2023, increasingly stringent restrictions have governed draft and tow sizes on various sections of the MRS. The most severe restrictions have been on the Lower Mississippi and Ohio Rivers at Cairo, IL.

Current restrictions mandate loading-draft reductions of up to 32 percent (500 to 700 tons per barge) and tow-size reductions of 17 to 38 percent (5 to 10 barges). As of October 3, at Memphis, TN, river gauges show water levels on the Mississippi River close to 2 feet lower than this time last year, and at St. Louis, MO, the river is slightly higher than last year. On October 3, American Commercial Barge Line reported that, over the past week, it had lost over 16 boats per day, because of deteriorating river conditions. However, having learned from last year, the barge industry has taken steps to try to mitigate the impacts of low water. The U.S. Army Corps of Engineers has preemptively dredged, and since June, barge companies have imposed load restrictions to prevent barges from being grounded in low water, as they were last year.

Lower Than Average Grain Volumes. For the first three quarters of 2023, weekly grain volumes moving through the MRS were below last year and the previous 5-year average, for all but 2 weeks in the first quarter and 4 weeks in

the second quarter. Third quarter volumes were especially low: third-quarter weekly volumes were 18-80 percent below the 5-year average (fig. 1).

Also, apart from the week ending September 30, third-quarter weekly grain volumes were 11-57 percent below last year. Grain volumes for the week ending September 30 were up 19 percent from last year, marking only the second time in 2023 (along with the week ending April 1) that volumes were above last year.

Showing the largest declines of all grain, third-quarter 2023 barged corn volumes headed to the Gulf totaled 1.5 million tons—45 percent lower than last year and 63 percent lower than the 5-year average. At 9.1 million tons, YTD corn volumes also showed the greatest drops of all grain—down 32 percent from last year and down 38 percent from the 5-year average.

Mainly, these drops resulted from flagging export sales. From January through July (the most recent available data), exports to 2022's top 10 countries were all down double digits except for Mexico, which was up 7 percent. Exports to Mexico do not rely much on barge transportation because the U.S. shares a land border with Mexico. In 2022, just over one-third of U.S. corn exports to Mexico were shipped from New Orleans. Most exports were shipped over land via rail.

From January to July, exports to China, which had been the largest buyer of U.S. corn, were down 64 percent, and exports to Canada, the

second largest buyer, were down 71 percent. Shipped export sales of corn for marketing year (MY) 2022/23 were 34 percent lower than for MY 2021/22 (GTR table 12). The drop in exports owed to low U.S. corn production, a record harvest crop by Brazil, and the strong U.S. dollar, which made Brazilian corn cheaper than U.S. corn. In early July, Brazil corn offers were \$30 per ton below the United States.

Similar to corn, third-quarter 2023 barged soybeans and wheat volumes, headed to the Gulf, showed sizeable drops. At 1.8 million tons, soybean volumes were 31 percent lower than last year and 49 percent lower than the 5-year average. At 522,000 tons, wheat volumes were 15 percent lower than last year and 11 percent lower than the 5-year average. These volumes were even lower than third quarter 2021, which included weeks-long disruptions of barge traffic on the MRS from Hurricane Ida. MY 2022/23 shipped export sales of soybeans were down 9 percent and, of wheat, down 5 percent from MY 2021/22. Total shipped export sales for MY 2022/23 of corn, soybeans, and wheat were down 19 percent (GTR table 12).

Spot Rates Similar to Last Year. The average third-quarter 2023 spot freight rate on the Mississippi River at St. Louis, MO, was \$15.92 per ton—16 percent higher than last year and 9 percent lower than the 5-year average.

If all else had been normal when low-water navigation restrictions began in early June, then spot rates would have begun to rise because of diminished barge supply. However,

Feature Article

because of below-normal export sales and the ensuing below-normal demand for barges, spot rates did not rise significantly until August. Third-quarter weekly spot rates at St. Louis were below last year, until the week of August 28. In that week, responding to continued low water in the MRS, the U.S. Coast Guard further tightened draft and tow size restrictions that had been active in June and July.

Although partly reflecting the start of harvest, the late-August rise in third quarter 2023 spot rates mostly stemmed from the tightened constraints on barge capacity (fig. 2). As of September 26, spot rates at St. Louis had reached \$52.91/ton, up 6 percent from last year and up 115 percent from the previous 3-year average (GTR table 9).

Further elevating spot rates, September brought dredge work along the MRS and **rolling closures** on the Mississippi River at Stack Island, IL, Merriweather, MS, and Memphis, TN. The closures—along with port delays at Memphis, TN; Vicksburg, MS;

Osceola, MS; and Greenville, MS—increased September transit times by 2-3 days, up from 1-2 day increases in August. According to River Transportation News, several high-horsepower, large-capacity towboats were taken out of service because of draft and tow size restrictions. Also, the available barge supply grew increasingly scarce, because the added restrictions required more barges to move the same amount of grain to the Gulf. These factors—along with seasonally elevated barge demand at the beginning of harvest—contributed to rising spot rates in September.

Looking Ahead. In fourth quarter 2023, barged grain movements should begin to pick up as the corn and soybean harvests progress. However, if low-water conditions in the MRS continue, lack of precipitation may lead to increased restrictions, which would further shrink an already tight barge supply. The rising harvest demand and shrinking barge supply may lead to above average spot rates that approach last year's record rates. However,

lessons learned last year and early preventive measures may help mitigate conditions that created record-high spot rates seen in 2022.

In the longer term, USDA's September <u>World</u> <u>Agricultural Supply and Demand Estimates</u> report projects, for MY 2023/24, 52.1 million metric tons (mmt) of U.S. corn exports (up 23 percent from MY 2022/23) and 48.7 mmt of U.S. soybean exports (down 10 percent from MY 2022/23). While the rise in grain exports could signal a greater demand for barges, over half of corn sales in the current marketing year (<u>GTR</u> <u>table 13</u>) are destined for Mexico, which is less reliant on barge transportation.

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Grain Transportation Indicators

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.

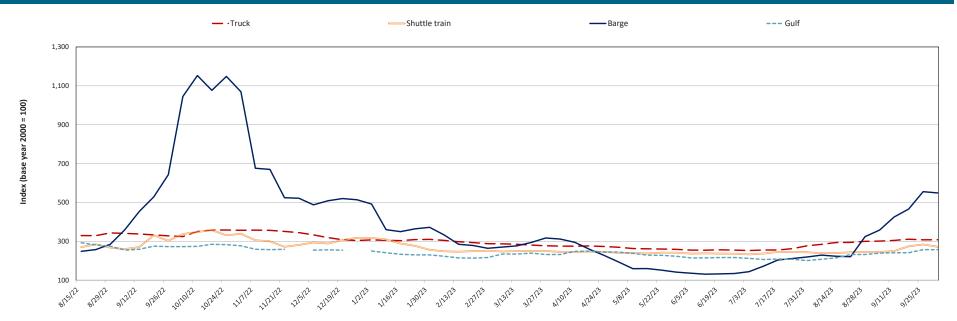
Table 1. Grain transport cost indicators

For the week		Rail			Ocean		
ending:	Truck	Non-shuttle	Shuttle	Barge	Gulf	Pacific	
10/04/23	308	347	272	549	257	216	
09/27/23	308	338	284	556	257	216	
10/05/22	325	345	338	1045	273	303	

Note: Indicator: Base year 2000 = 100. Weekly updates include truck = diesel (\$/gallon); rail = nearmonth 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 10/04/23



Source: USDA, Agricultural Marketing Service.

Grain Transportation Indicators

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.

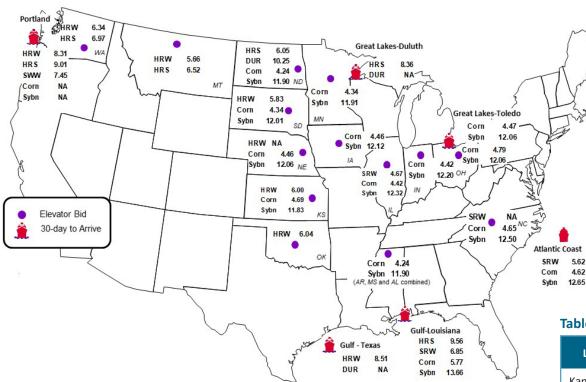


Table 2a. Market update: U.S. origins to export position price spreads (\$/bushel)

Commodity	Origin– destination	9/29/2023	9/22/2023
Corn	IL–Gulf	-1.35	-1.17
Corn	NE-Gulf	-1.31	-1.14
Soybean	IA-Gulf	-1.54	-1.49
HRW	KS–Gulf	-2.51	-1.98
HRS	ND-Portland	-2.96	-2.22

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	9/29/2023	Week ago 9/22/2023	Year ago 9/30/2022
Kansas City	Wheat	Dec	6.694	7.094	10.030
Minneapolis	Wheat	Dec	7.092	7.704	9.904
Chicago	Wheat	Dec	5.484	5.816	9.312
Chicago	Corn	Dec	4.792	4.764	6.834
Chicago	Soybean	Nov	12.700	12.946	13.656

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.

Rail Transportation

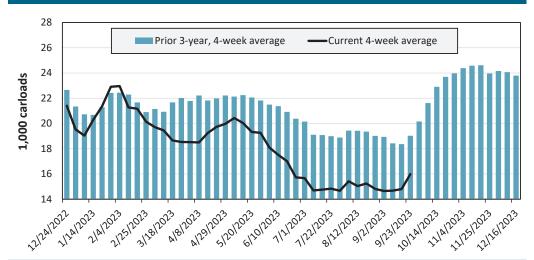
Table 3. Class I rail carrier grain car bulletin (grain carloads originated)

For the week ending:	East		W	est		Central U.S./Canada	
9/23/2023	CSXT	NS	BNSF	UP	U.S. total	СРКС	CN
This week	1,395	1,407	10,290	4,980	18,072	5,535	4,514
This week last year	1,363	1,623	10,305	5,007	18,298	13,130	4,867
2023 YTD	64,469	94,753	329,712	193,931	682,865	315,295	162,310
2022 YTD	65,829	90,797	409,619	216,577	782,822	345,812	131,077
2023 YTD as % of 2022 YTD	98	104	80	90	87	91	124
Last 4 weeks as % of 2022	104	78	91	82	88	97	105
Last 4 weeks as % of 3-yr. avg.	95	83	86	77	84	98	107
Total 2022	93,428	130,606	570,232	296,945	1,091,211	538,276	213,828

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 23, grain carloads were up 8 percent from the previous week, down 12 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: 9/28/2023		Delivery period							
		Oct-23	Oct-22	Nov-23	Nov-22	Dec-23	Dec-22	Jan-24	Jan-23
DNCE	COT grain units	no offer	no bids	no offer	no bids	no offer	0	no offer	0
BNSF	COT grain single-car	n/a	177	n/a	101	0	102	145	0
UP	GCAS/vouchers	n/a	n/a	n/a	n/a	10	n/a	n/a	n/a

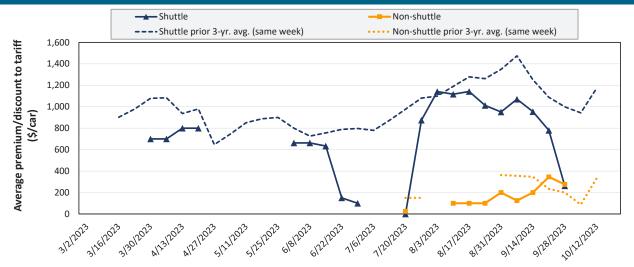
Note: Auction offerings are for single-car and unit train shipments only. Bids and offers represent a premium/discount to tariff rates. n/a = not available. BNSF = BNSF Railway; COT = Certificate of Transportation; UP = Union Pacific Railroad; and GCAS = Grain Car Allocation System. Minimum bids for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

Source: USDA, Agricultural Marketing Service.

Rail Transportation

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



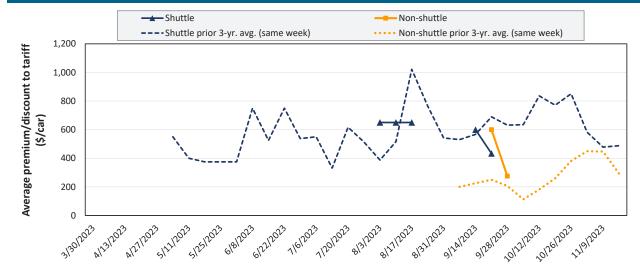
Average non-shuttle bids/offers fell \$71 this week, and are \$71 below the peak.

Average shuttle bids/offers fell \$517 this week and are \$880 below the peak.

9/28/2023	BNSF	UP
Non-Shuttle	\$400	\$150
Shuttle	\$275	\$250

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



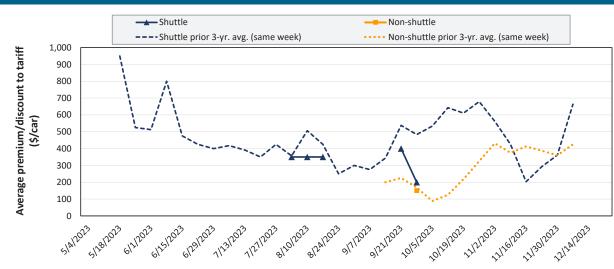
Average non-shuttle bids/offers fell \$325 this week, and are \$325 below the peak.

There were no shuttle bids/offers this week.

9/28/2023	BNSF	UP
Non-Shuttle	\$400	\$150
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



There were no non-shuttle bids/offers last week. Average non-shuttle bids/offers this week are at the peak.

Average shuttle bids/offers fell \$200 this week and are \$200 below the peak.

9/28/2023	BNSF	UP
Non-Shuttle	n/a	\$150
Shuttle	\$200	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:			Delivery period						
	9/28/2023	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24		
	BNSF-GF	400	400	n/a	n/a	n/a	n/a		
	Change from last week	-117	-200	n/a	n/a	n/a	n/a		
Non-shuttle	Change from same week 2022	238	150	n/a	n/a	n/a	n/a		
Non-snuttle	UP-Pool	150	150	150	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 2022	-150	-25	-25	n/a	n/a	n/a		
	BNSF-GF	275	n/a	200	n/a	n/a	n/a		
	Change from last week	-596	n/a	-200	n/a	n/a	n/a		
	Change from same week 2022	-1,317	n/a	-400	n/a	n/a	n/a		
	UP-Pool	250	n/a	n/a	n/a	n/a	n/a		
Shuttle	Change from last week	-438	n/a	n/a	n/a	n/a	n/a		
	Change from same week 2022	-1,650	n/a	n/a	n/a	n/a	n/a		
	CP-GF	n/a	400	n/a	n/a	n/a	n/a		
	Change from last week	n/a	-200	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.

Rail Transportation

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
	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
Wheat	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
	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
Corn	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
	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
Soybeans	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
vvneat	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
	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
Corn	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
	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
Caulagana	Fargo, ND	Tacoma, WA	\$6,435	\$437	\$68.24	\$1.86	-1
Soybeans	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

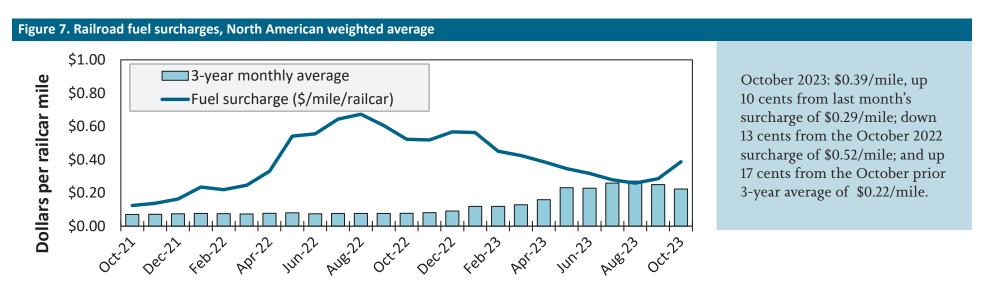
Note: A unit train refers to shipments of at least 25 cars. Shuttle train rates are generally available for qualified shipments of 75-120 cars that meet railroad efficiency requirements. The table assumes 111 short tons (100.7 metric tons) per car, 56 pounds per bushel of corn, and 60 pounds per bushel 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 ra fuel surch		Percent change Y/Y
					metric ton	bushel	
	MT	Chihuahua, CI	\$7,699	\$0	\$78.67	\$2.14	4
Wheat	OK	Cuautitlan, EM	\$6,900	\$230	\$72.85	\$1.98	6
Wheat	KS	Guadalajara, JA	\$7,619	\$719	\$85.19	\$2.32	7
	TX	Salinas Victoria, NL	\$4,420	\$138	\$46.57	\$1.27	4
	IA	Guadalajara, JA	\$9,102	\$663	\$99.77	\$2.53	6
	SD	Celaya, GJ	\$8,300	\$0	\$84.81	\$2.15	2
Comp	NE	Queretaro, QA	\$8,322	\$462	\$89.75	\$2.28	5
Corn	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
	MO	Bojay (Tula), HG	\$8,647	\$614	\$94.63	\$2.57	5
Caulagana	NE	Guadalajara, JA	\$9,207	\$646	\$100.67	\$2.74	5
Soybeans	IA	El Castillo, JA	\$9,510	\$0	\$97.17	\$2.64	1
	KS	Torreon, CU	\$8,109	\$466	\$87.61	\$2.38	5
	NE	Celaya, GJ	\$7,932	\$597	\$87.15	\$2.21	6
Corabiim	KS	Queretaro, QA	\$8,108	\$287	\$85.77	\$2.18	3
Sorghum	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.

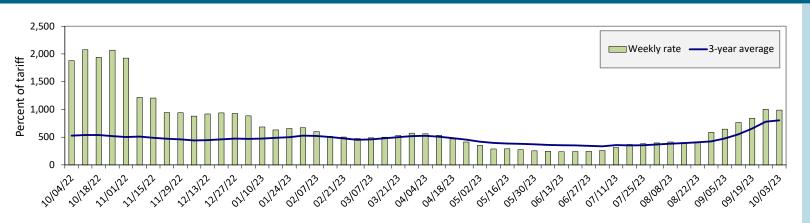


Note: Weighted by each Class I railroad's proportion of grain traffic for the prior year.

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

Barge Transportation

Figure 8. Illinois River barge freight rate



For the week ending October 3: 1 percent lower than the previous week; and 47 percent lower than last year; and 23 percent higher 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
Data	10/3/2023	857	997	988	956	1013	1013	1094
Rate	9/26/2023	903	975	1000	1326	1169	1169	1689
¢/han	10/3/2023	53.05	53.04	45.84	38.14	47.51	40.93	34.35
\$/ton	9/26/2023	55.90	51.87	46.40	52.91	54.83	47.23	53.03
Measure	Time Period	Twin Cities	Mid- Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo- Memphis
Current week %	Last year	-47	-46	-47	-58	-52	-52	-55
change from the same week	3-year avg.	12	25	23	22	24	24	30
Data	November	671	646	636	559	641	641	528
Rate	January	-	-	522	441	468	468	400

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



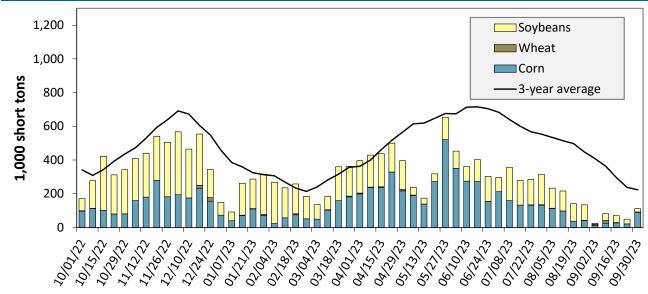
Calculating barge rate per ton:

(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 September 30: 35 percent lower than last year and 50 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.

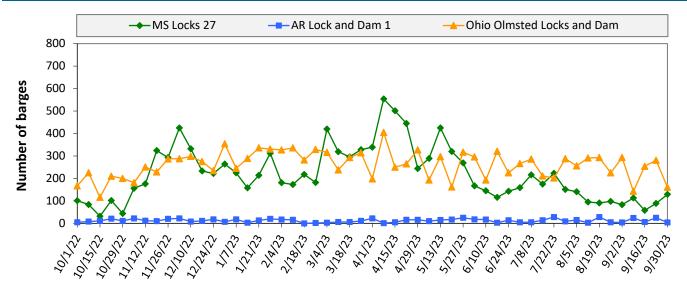
Table 10. Barged grain movements (1,000 tons)

For the week ending 09/30/2023	Corn	Wheat	Soybeans	Other	Total
Mississippi River (Rock Island, IL (L15))	2	0	13	0	14
Mississippi River (Winfield, MO (L25))	58	0	3	0	61
Mississippi River (Alton, IL (L26))	82	2	19	0	103
Mississippi River (Granite City, IL (L27))	90	2	19	0	111
Illinois River (La Grange)	21	0	12	0	33
Ohio River (Olmsted)	119	12	102	0	234
Arkansas River (L1)	0	8	24	0	32
Weekly total - 2023	210	22	145	0	377
Weekly total - 2022	154	23	139	0	317
2023 YTD	9,144	1,140	7,575	202	18,061
2022 YTD	13,451	1,492	9,023	190	24,155
2023 as % of 2022 YTD	68	76	84	106	75
Last 4 weeks as % of 2022	93	110	81	21	88
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.

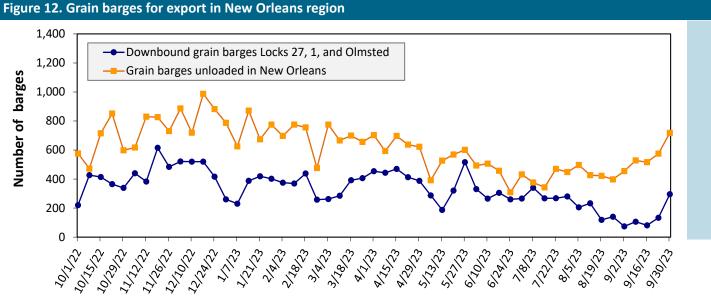
Barge Transportation

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 September 30: 294 barges transited the locks, 101 barges fewer than the previous week, and 29 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.



For the week ending September 30: 296 barges moved down river, 163 more than the previous week; 718 grain barges unloaded in the New Orleans Region, 25 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.

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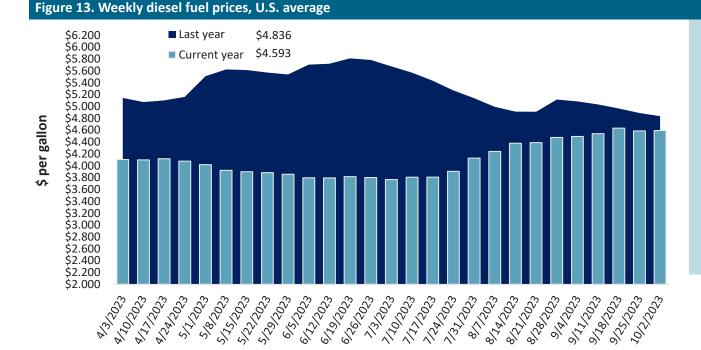
The weekly diesel price provides a proxy for trends in U.S. truck rates as diesel fuel is a significant expense for truck grain movements.

Table 11. Retail on-highway diesel prices, week ending 10/02/2023 (U.S. \$/gallon)

Decien	Laustian	Duine	Change from			
Region	Location	Price	Week ago	Year ago		
	East Coast	4.542	0.017	-0.255		
	New England	4.607	0.000	-0.267		
'	Central Atlantic	4.759	-0.005	-0.235		
	Lower Atlantic	4.455	0.026	-0.261		
П	Midwest	4.449	0.010	-0.370		
III	Gulf Coast	4.279	-0.002	-0.278		
IV	Rocky Mountain	4.778	-0.023	-0.092		
	West Coast	5.694	0.007	0.159		
V	West Coast less California	5.190	-0.039	0.127		
	California	6.269	0.061	0.192		
Total	United States	4.593	0.007	-0.243		

Note: Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel. On June 13, 2022, the Energy Information Administration implemented a new methodology to estimate weekly on-highway diesel fuel prices.

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



For the week ending October 2, the U.S. average diesel fuel price increased 0.7 cents from the previous week to \$4.593 per gallon, 24.3 cents below the same week last year.

Note: On June 13, 2022, the Energy Information Administration implemented a new methodology to estimate weekly on-highway diesel fuel prices. Source: U.S. Department of Energy, Energy Information Administration.

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

			Wheat							
		Hard red winter (HRW)	Soft red winter (SRW)	Hard red spring (HRS)	Soft white wheat (SWW)	Durum	All wheat	Corn	Soybeans	Total
	For the week ending 9/21/2023	619	684	1,294	887	209	3,693	10,510	16,255	30,458
Current unshipped (outstanding) export sales	This week year ago	869	591	1,096	908	94	3,559	11,394	25,516	40,469
export sales	Last 4 wks. as % of same period 2022/23	69	120	128	88	218	104	92	63	75
	2023/24 YTD	1,009	1,336	1,966	1,109	52	5,472	2,059	1,497	9,027
	2022/23 YTD	2,141	1,443	1,994	1,476	74	7,127	1,601	1,214	9,943
Current shipped (cumulative) exports sales	YTD 2023/24 as % of 2022/23	47	93	99	75	70	77	129	123	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 and in a 0 /21 /2022	Total commitm	ents (1,000 mt)	% change current MY from	Exports 3-year average 2020-
For the week ending 9/21/2023	YTD MY 2023/24	YTD MY 2022/23	last MY	22 (1,000 mt)
Mexico	6,372	5,244	22	15,227
China	639	3,372	-81	12,616
Japan	1,492	1,042	43	10,273
Columbia	694	253	175	4,398
Korea	9	7	22	2,563
Top 5 importers	9,206	9,918	-7	45,077
Total U.S. corn export sales	12,569	12,996	-3	56,665
% of YTD current month's export projection	30%	21%		
Change from prior week	842	512		
Top 5 importers' share of U.S. corn export sales	73%	76%		80%
USDA forecast September 2023	42,366	62,901	-33	
Corn use for ethanol USDA forecast, August 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

Footh	Total commitm	ents (1,000 mt)	% change current MY	Exports 3-year average
For the week ending 9/21/2023	YTD MY 2023/24	YTD MY 2022/23	from last MY	2020-22 (1,000 mt)
China	7,458	13,874	-46	32,321
Mexico	1,833	1,852	-1	4,912
Egypt	130	652	-80	2,670
Japan	646	646	-0	2,259
Indonesia	333	244	37	1,973
Top 5 importers	10,400	17,268	-40	44,133
Total U.S. soybean export sales	17,751	26,730	-34	56,656
% of YTD current month's export projection	33%	46%		
Change from prior week	672	1,003		
Top 5 importers' share of U.S. soybean export sales	59%	65%		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 court and in a 0/24 /2022	Total commit	ments (1,000 mt)	% change current MY	Exports 3-year average
For the week ending 9/21/2023	YTD MY 2023/24	YTD MY 2022/23	from last MY	2020-22 (1,000 mt)
Mexico	1,612	1,860	-13	3,397
Philippines	1,342	1,364	-2	2,615
Japan	1,046	1,049	-0	2,281
China	344	614	-44	1,740
Korea	705	607	16	1,426
Nigeria	132	521	-75	1,276
Taiwan	562	363	55	944
Thailand	222	289	-23	643
Columbia	154	383	-60	537
Indonesia	254	231	10	469
Top 10 importers	6,375	7,280	-12	15,327
Total U.S. wheat export sales	9,165	10,686	-14	20,411
% of YTD current month's export projection	48%	52%		
Change from prior week	545	280		
Top 10 importers' share of U.S. wheat export sales	70%	68%		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.

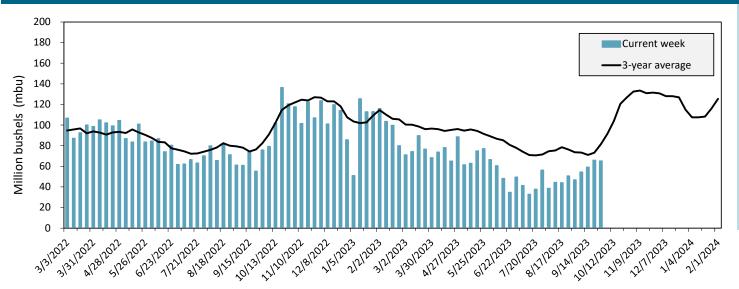
Table 16. Grain inspections for export by U.S. port region (1,000 metric tons)

Danie wardens	Comment of the	For the week ending	Previous	Current week	2022 VTD*	2022 VTD*	2023 YTD as	Last 4-w	eeks as % of:	2022 total*
Port regions	Commodity	09/28/2023	week*	as % of previous	2023 YTD*	2022 YTD*	% of 2022 YTD	Last year	Prior 3-yr. avg.	2022 total*
	Wheat	242	337	72	7,958	8,092	98	70	78	9,836
Pacific	Corn	0	0	n/a	3,924	8,953	44	1	0	9,615
Northwest	Soybeans	71	0	n/a	3,604	5,212	69	96	10	14,178
	Total	313	337	93	15,485	22,256	70	68	48	33,629
	Wheat	82	94	88	2,894	3,675	79	75	97	4,053
Mississippi	Corn	396	413	96	18,297	26,676	69	120	111	30,781
Gulf	Soybeans	555	495	112	16,990	17,015	100	117	79	31,283
	Total	1,033	1,002	103	38,181	47,366	81	113	92	66,116
	Wheat	32	52	61	1,451	2,751	53	19	21	3,421
Texas Gulf	Corn	0	0	n/a	233	564	41	88	16	648
iexas Guii	Soybeans	0	2	14	55	2	n/a	n/a	4	685
	Total	32	54	59	1,739	3,317	52	20	19	4,754
	Wheat	28	25	115	1,923	2,338	82	78	90	2,912
Interior	Corn	214	279	77	7,055	6,782	104	130	127	8,961
interior	Soybeans	71	35	204	4,134	4,943	84	90	70	7,109
	Total	314	339	93	13,111	14,063	93	110	105	18,982
	Wheat	32	0	n/a	254	266	96	53	55	395
Great Lakes	Corn	0	0	n/a	23	148	15	0	0	158
Great Lakes	Soybeans	0	0	n/a	65	239	27	n/a	14	760
	Total	32	0	n/a	342	653	52	57	39	1,312
	Wheat	2	4	50	100	166	60	36	62	169
Atlantic	Corn	5	5	98	91	271	33	21	39	309
Atlantic	Soybeans	1	2	54	1,256	1,608	78	37	10	2,867
	Total	8	11	73	1,447	2,045	71	29	30	3,345
	Wheat	419	511	82	14,580	17,287	84	60	69	20,786
U.S. total from	Corn	615	698	88	29,621	43,394	68	117	100	50,471
ports*	Soybeans	698	534	131	26,104	29,019	90	112	60	56,882
	Total	1,732	1,744	99	70,305	89,700	78	91	75	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.

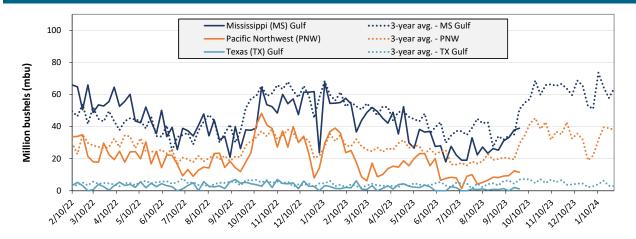
Figure 14. U.S. grain inspected for export (wheat, corn, and soybeans)



For the week ending September 28: 65.2 mbu of grain inspected, unchanged from the previous week, down 14 percent from the same week last year, and down 20 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 09/28/23 inspections (mbu):						
MS Gulf: 39						
PNW: 11.5						
TX Gulf: 1.2						

Percent change from	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last week	up	down	no	down
	3	41	change	7
Last year (same week)	up	down	down	down
	2	78	7	36
3-year average	up	down	down	down
(4-week moving average)	2	80	9	49

Source: USDA, Federal Grain Inspection Service.

Ocean Transportation

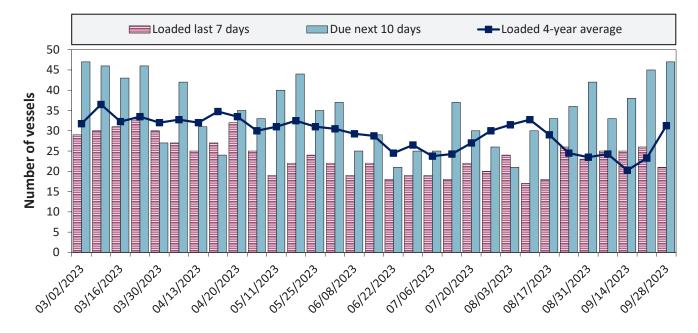
Table 17. Weekly port region grain ocean vessel activity (number of vessels)

Date		Pacific Northwest		
Date	In port	Loaded 7-days	Due next 10-days	In port
9/28/2023	27	21	47	12
9/21/2023	19	26	45	8
2022 range	(1461)	(1839)	(2862)	(523)
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



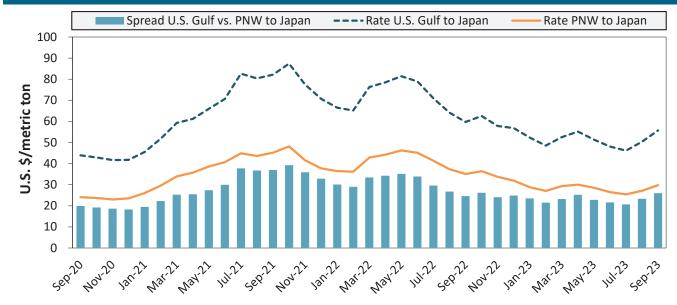
Week ending 09/28/23, number of vessels	Loaded	Due
Change from last year	0%	18%
Change from 4-year average	-33%	-3%

Note: U.S. Gulf includes Mississippi, Texas, and east Gulf

Source: USDA, Agricultural Marketing Service.

Ocean Transportation

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 09/30/2023

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	24,740	91.89
PNW	N. China	Heavy grain	May 1/4, 2023	66,000	29.00
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

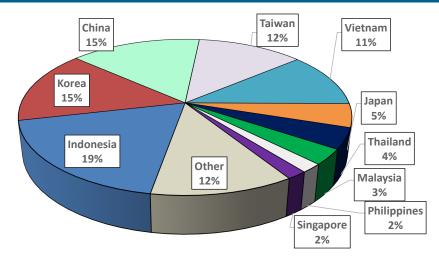
Source: Maritime Research, Inc.

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Ocean Transportation

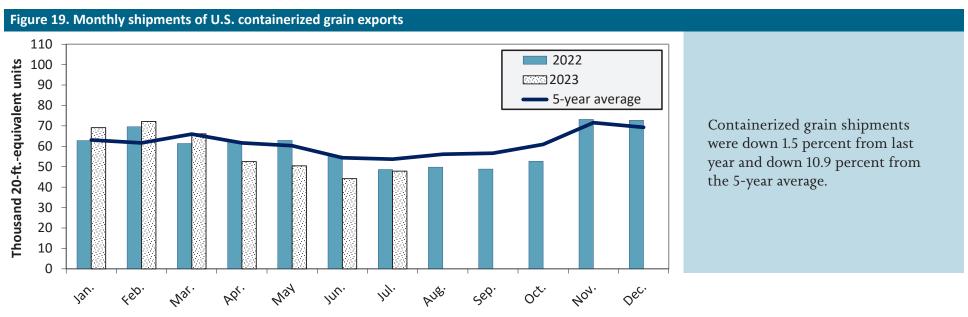
In 2020, containers were used to transport 10 percent of total U.S. waterborne grain exports. Approximately 66 percent of U.S. waterborne grain exports in 2020 went to Asia, of which 14 percent were moved in containers. Approximately 95 percent of U.S. waterborne containerized grain exports were destined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

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



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

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



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 <u>Grain Truck and Ocean Rate Advisory (GTOR)</u>, the <u>Mexico Transport Cost Indicator Report</u>, and the <u>Brazil Soybean Transportation Report</u>.

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