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Grain Transportation Report

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STB Issues Proposed Rulemaking on Reciprocal Switching. Earlier today (September 7), the Surface Transportation Board (STB) issued a notice of proposed rulemaking (NPRM) on reciprocal switching as a remedy for inadequate rail service ([pdf](#)). Under reciprocal switching, an originating carrier transports a shipper's traffic to an interchange point, where it switches the rail cars over to a competing carrier. The competing carrier pays the originating rail carrier a switching fee for moving the cars from the shipper's facility to the interchange point ([Grain Transportation Report, January 6, 2022](#)).

The proposed rule would provide a streamlined path for STB to prescribe a reciprocal switching remedy. The streamlined process would apply whenever service to a terminal-area shipper failed to meet any of three performance standards, based on measures of (1) service reliability, (2) total transit time, and (3) local service performance. If finalized, these proposed service metrics will be standardized across all Class I railroads and available to shippers on request.

Initial comments on the NPRM are due by October 23, 2023, and reply comments are due by November 21, 2023. STB has been considering reciprocal switching reforms since at least 2010. However, based on the service issues in recent years, [STB Chairman Oberman said](#), "Stakeholders can expect prompt action on this proposal."

New List Announces NVOs at Risk of Losing FMC Licenses Over Tariff Non-Compliance. Last week, the U.S. Federal Maritime Commission (FMC) posted, on its website, a [list of 16 non-vessel-operating common carriers \(NVOs\)](#) that have failed to publish a tariff per agency regulations. The Commission warned that NVOs that are licensed or registered with the FMC—but have not published a tariff—risk having their license revoked or registration terminated. The list will be updated each Friday.

FMC told the *Journal of Commerce* that the list supports the Commission's ongoing efforts to strengthen the oversight of regulated entities through "informed compliance." FMC's efforts are aimed at eliminating unfair or unjustly discriminatory practices used by carriers against shippers.

ILWU Ratifies New Coastwide Contract. On August 31, the International Longshore and Warehouse Union (ILWU) [announced](#) its rank and file had ratified the new West Coast labor contract with a 75-percent approval vote. According to the *Journal of Commerce*, the new 6-year contract includes a 32-percent wage increase, and is retroactive to July 21, 2022, when the previous contract expired. Additionally, the contract includes a bonus, totaling \$70 million, to be spread across the nearly 20,000-person membership for working through the COVID-19 pandemic.

Representing the ocean carriers and marine terminal operators, the [Pacific Maritime Association](#) commended the contract as "an important framework for the hard work ahead to overcome new competitive challenges and to continue to position the West Coast ports as destinations of choice for shippers worldwide."

Brazil Improves Its Grain Transportation System, Bottlenecks Remain. Brazil is a key U.S. competitor in the global grain market. According to USDA's August [World Agricultural Supply and Demand Estimates](#), Brazil will likely export more corn and soybeans than the United States, both in marketing year (MY) 2022/23 and current MY 2023/24. Although, historically, the United States has maintained a logistical edge over Brazil, a [recent Reuters article](#) highlights how that edge has slipped.

The article describes how new barge transshipment stations on tributaries of the Amazon River have allowed corn exports to shift from the Port of Santos in the south to northern ports. The change has resulted in savings of over \$4 per ton of corn. The article also highlights recently completed highway, railroad, and port projects.

However, despite these new logistical assets, Brazil still lacks adequate storage for its grain, which strains the transportation system. Grain production in Mato Grosso, the top grain-producing State, is now double the capacity of its storage space.

Export Sales

For the week ending August 24, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2022/23 totaled 6.87 million metric tons (mmt), down 13 percent from last week and down 34 percent from the same time last year.

Net **corn export sales** for MY 2022/23 were 0.072 mmt, up 416 percent from last week. Net **soybean export sales** were -0.051 mmt, down 113 percent from last week. Net weekly **wheat export sales** for MY 2023/24, were 0.329 mmt, down 19 percent from last week.

Rail

U.S. Class I railroads originated 13,312 **grain carloads** during the week ending August 26. This was a 16-percent decrease from the previous week, 26 percent fewer than last year, and 27 percent fewer than the 3-year average.

Average September **shuttle secondary railcar bids/offers** (per car) were \$134 below tariff for the week ending August 31. This was \$78 less than last week and \$48 lower than this week last year. Average non-shuttle secondary railcar bids/offers per car were \$138 above tariff. This was \$8 less than last week and \$100 lower than this week last year.

Barge

For the week ending September 2, **barged grain movements** totaled 122,300 tons. This was 40 percent less than the previous week and 49 percent less than the same period last year.

For the week ending September 2, 74 grain barges **moved down river**—66 fewer than last week. There were 455 grain barges **unloaded** in the New Orleans region, 14 percent more than last week.

Ocean

For the week ending August 31, 23 **oceangoing grain vessels** were loaded in the Gulf—5 percent more than the same period last year. Within the next 10 days (starting September 1), 42 vessels were expected to be loaded—27 percent more than the same period last year.

As of August 31, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was \$53.50. This was 3 percent more than the previous week. The rate from the Pacific Northwest to Japan was \$28.50 per mt, 4 percent more than the previous week.

Fuel

For the week ending September 4, the U.S. average **diesel fuel price** increased 1.7 cents from the previous week to \$4.492 per gallon, 59.2 cents below the same week last year.



New Research Examines Farm-to-Market Patterns of Central Plains Grain Trucks

The description and findings contained in this article are drawn from recent USDA-sponsored research from Alan Dybing, Kimberly Vachal, and Baishali Rahman.¹The [full report](#) and a [brief summary](#) are available online.²

Trucks are critical for efficiently delivering grain from farm to market. Despite this key role, relatively little is known about grain producers' use of trucks (e.g., types of trucks employed and how far trucks travel to reach buyers). National transport data sources—such as the Commodity Flow Survey and Freight Analysis Framework—do not collect such data.

The little information that exists on truck fleets—available through the U.S. Department of Transportation's (DOT) Vehicle Inventory and Use Survey (VIUS)—was last updated in 2002.³

In partnership with the Upper Great Plains Transportation Institute of North Dakota State University (UGPTI), USDA's National Agricultural Statistics Service (NASS)

conducted a survey of farm operators in the Central Plains Region, including Illinois, Indiana, Iowa, Kansas, and Nebraska.

This article details the study's findings on the Central Region's grain-trucking industry, including trends in the following areas: distances traveled, types of roads most used, on-farm storage capacity, truck types most used, and loads carried (by truck type).⁴

Key Findings

From 2000 to 2019, as both truck ton-miles and grain shippers' reliance on trucking increased, reliable trucking data became even more vital. According to the study, regional increases in grain production (2000-19) contributed to a rise in truck ton-miles.⁵ However, even in the absence of grain-production increases, farm-generated truck movements may have risen because of changes in truck technology, marketing networks, and other factors.

Distance Traveled Has Increased Over Time.

Movement of grains and oilseeds begins with a common factor—the initial farm-to-market or farm-to-storage shipment, referred to as “farm-generated truck movements.” The first market delivery point is typically an elevator, feedlot, or processor, and the move may include an interim transfer to an on-farm storage facility.

The authors found, in the Central Plains region, the average distance of farm-generated movements increased because farm size, and the distance between elevators rose from 2000 to 2019. On average, in transporting 2019 crops, trucks hauled the major crops 14.9 miles to the first-choice delivery point and 21.5 miles to the second choice.

Indiana and Iowa Travel Farthest to First-Choice Delivery Point. Indiana had the longest average trip (16.7 miles) for transporting corn to the first-choice delivery point, though not substantially longer than the other surveyed States.

1 Alan Dybing is a senior research fellow; Kimberly Vachal, a program director; and Baishali Rahman, a graduate research assistant—all at the Upper Great Plains Transportation Institute, North Dakota State University.

2 The Transportation Services Division (TSD) of USDA's Agricultural Marketing Service continually sponsors cooperative research on transportation matters relevant to USDA stakeholders. Visit TSD's [Cooperative Research Summaries page](#) to access the full list of cooperative research reports and summaries. This research investigates issues affecting all major modes of agricultural transportation—truck, rail, barge, and ocean.

3 DOT, along with the Department of Energy and U.S. Census Bureau, has conducted [a new VIUS](#), with results expected in the fall 2023.

4 Unless otherwise specified, all findings are for the 2019 study period.

5 From 2000 to 2019, corn production in the Central Plains region rose 39 percent by volume, and soybean production rose 19 percent. Winter wheat production in Kansas rose 6 percent over the same period.

The first-choice distance for transporting corn was similar among the other Central Plains States (listed in descending order of trip length): Iowa (14.9 miles), Nebraska (14.6 miles), Illinois (14.2 miles), and Kansas (13.7 miles).

Indiana had the longest average first-choice trip not only for corn shipments, but also for soybean shipments—at 17.8 miles. Iowa reported the second-longest first-choice trip for soybean shipments of 15.6 miles.

Local and Unpaved Roads Were Key to Delivery. The largest share of the distance traveled—1 of every 2 miles—was on State roads. Local roads comprised 42 percent of average delivery miles to each of the first- and second-choice points. About 14 percent of miles were on unpaved roads for the first-choice point.

Both Nebraska and Kansas had the largest shares of unpaved road miles: 28 percent of corn shipments from Nebraska and 33 percent of corn shipments from Kansas traveled on local gravel roads. Less than 1 mile of the average trip was logged on interstate highways.

Storage Capacity Volume and Density Vary by Farm Size. On-farm storage provides an option for delaying grain delivery beyond the harvest season. Among the States surveyed, the average on-farm storage capacity for corn, soybeans, and wheat ranged from 41,130 bushels to 110,840 bushels.

Farms with 1,501 acres or more had an average capacity of 196,270 bushels, while the smallest farms averaged only 50,300 bushels for the three commodities.

Thus, storage capacity volume was substantially greater for the large farms than for small farms. However, storage capacity density (i.e., bushels per harvested acre) was greater for small farms than for large farms. According to the survey, 91 percent of wheat, 61 percent of corn, and 72 percent of soybeans bypassed storage and were delivered directly to market.

Five-Axle Semi Is the Most Common Truck Configuration. The five-axle semi was the most owned and operated truck in the five-State area. The five-axle semi made up 56 percent of all trucks, followed by the tandem-axle truck (19 percent) and the single-axle (12 percent).

The survey results also revealed annual time use by truck type. Of the total time multi-axle trucks were used, they were used 90 percent of that time for hauling a producer's own grain. The remaining 3 percent of that time was used for custom hauling (e.g., hauling another farmer's grain), and around 4 percent was used for other uses (e.g., hauling seed or fertilizer).

In contrast, of the total time single-axle trucks were used, they were used 80 percent of that time to haul a producer's own grain, 2 percent for custom hauling, and 18 percent for other uses.

Based on trends revealed by the survey, the researchers projected that single-axle and tandem-axle truck ownership will decline in the future in favor of five-axle and seven-axle configurations.

Large Trucks Carry Heavier Loads. Large trucks were associated with heavier loads than small trucks. Among the most owned and operated

truck, the five-axle semi logged more than half of annual farm truck miles. The five-axle semi carried an average loaded weight of 75,160 pounds of soybeans; 77,360 pounds of corn; or 76,300 pounds of wheat.

The tandem truck carried an average loaded weight of 50,200 pounds of soybeans; 55,130 pounds of corn; or 43,710 pounds of wheat. The single-axle truck carried an average loaded weight of 26,870 pounds of soybeans; 22,800 pounds of corn; or 28,280 pounds of wheat.

Conclusion

Farm-to-market grain serves a number of agricultural industries in the Central Plains region, including feed mills, food processors, and biofuel manufacturers. This study provides a glimpse into the region's grain truck fleet, filling a gap that has existed since the VIUS ended in 2002.

Such information may be useful to farmers in assessing investments and productivity; local, State, and regional planners in calibrating travel demand and freight flow models; and policymakers in making infrastructure and industry related decisions.

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

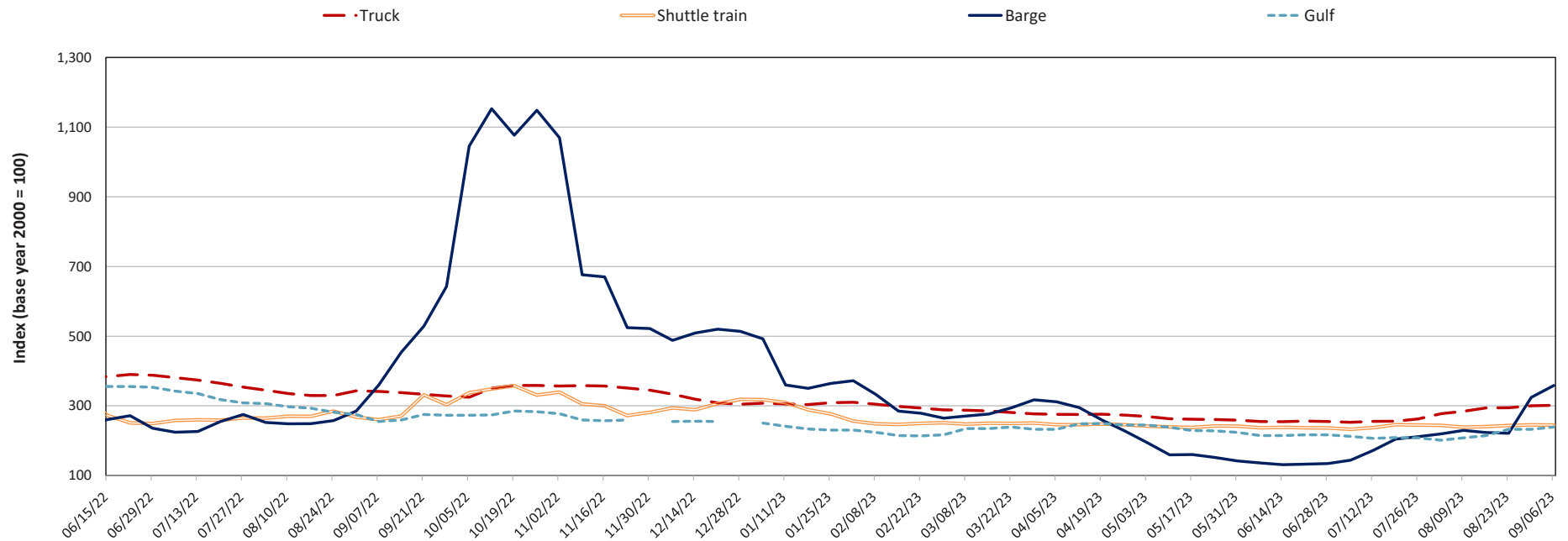
Table 1. Grain transport cost indicators

For the week ending:	Truck	Rail		Barge	Ocean	
		Non-shuttle	Shuttle		Gulf	Pacific
09/06/23	301	326	245	358	239	202
08/30/23	300	326	245	324	233	195
09/07/22	341	343	260	359	255	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.

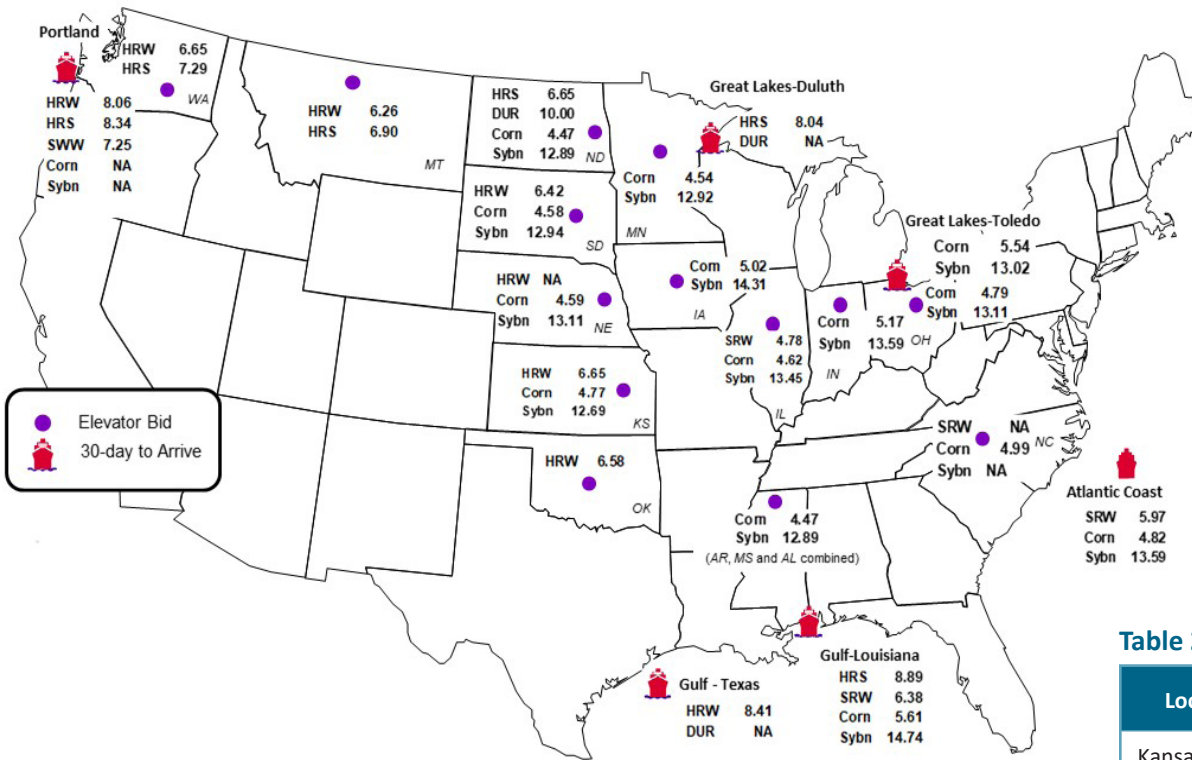
Figure 1. Grain transportation cost indicators as of week ending 09/06/23



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.



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: Data from tables 2a and 2b derived from map information.
 Sources: U.S. Inland: GeoGrain, USDA Weekly Bids, U.S. Export: Corn & Soybean - Export Grain Bids, AMS, USDA Wheat Bids - Weekly Wheat Report, U.S. Wheat Associates, Washington, DC.

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

Commodity	Origin-destination	9/1/2023	8/25/2023
Corn	IL-Gulf	-0.99	-0.38
Corn	NE-Gulf	-1.02	-0.46
Soybean	IA-Gulf	-0.43	-1.12
HRW	KS-Gulf	-1.76	-1.67
HRS	ND-Portland	-1.69	-1.92

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	9/1/2023	Week ago 8/25/2023	Year ago 9/2/2022
Kansas City	Wheat	Dec	7.236	7.540	8.764
Minneapolis	Wheat	Dec	7.630	7.996	8.900
Chicago	Wheat	Dec	6.002	6.176	8.092
Chicago	Corn	Dec	4.814	4.922	6.642
Chicago	Soybean	Nov	13.636	13.994	14.196

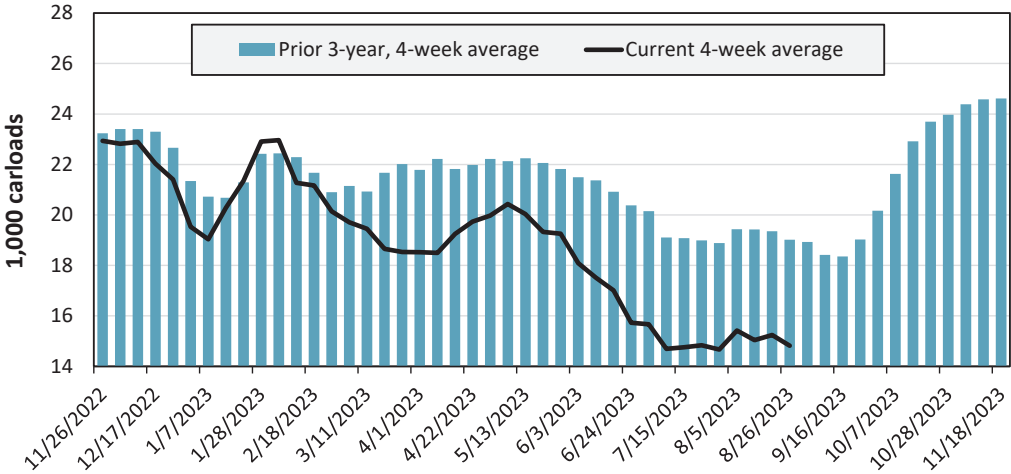
Sources: U.S. Inland: GeoGrain, USDA Weekly Bids, U.S. Export: Corn & Soybean - Export Grain Bids, AMS, USDA Wheat Bids - Weekly Wheat Report, U.S. Wheat Associates, Washington, DC.

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

For the week ending: 8/26/2023	East		West		U.S. total	Central U.S./Canada	
	CSXT	NS	BNSF	UP		CPKC	CN
This week	727	1,592	7,243	3,750	13,312	4,818	3,086
This week last year	1,781	2,158	8,386	5,754	18,079	9,254	2,728
2023 YTD	59,464	89,022	293,639	176,787	618,912	293,335	145,389
2022 YTD	60,994	83,436	370,070	195,732	710,232	300,760	114,966
2023 YTD as % of 2022 YTD	97	107	79	90	87	98	126
Last 4 weeks as % of 2022	71	90	77	74	77	114	111
Last 4 weeks as % of 3-yr. avg.	77	92	74	78	78	105	84
Total 2022	93,428	130,594	570,232	296,945	1,091,199	538,276	213,899

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 August 26, grain carloads were down 3 percent from the previous week, down 23 percent from last year, and down 22 percent from the 3-year average.

Source: Association of American Railroads.

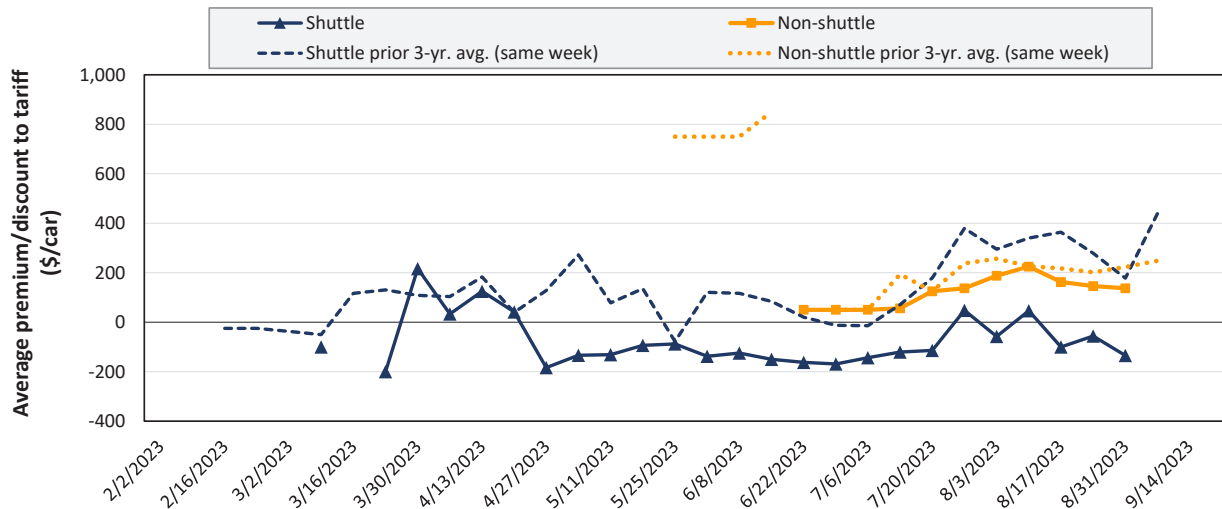
Table 4. Railcar auction offerings (dollars per car)

For the week ending: 8/31/2023		Delivery period							
		Sep-23	Sep-22	Oct-23	Oct-22	Nov-23	Nov-22	Dec-23	Dec-22
BNSF	COT grain units	no offer	0	no offer	0	no offer	0	no offer	0
	COT grain single-car	401	1	38	107	62	205	56	53
UP	GCAS/vouchers	n/a	n/a	10	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.

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 September 2023



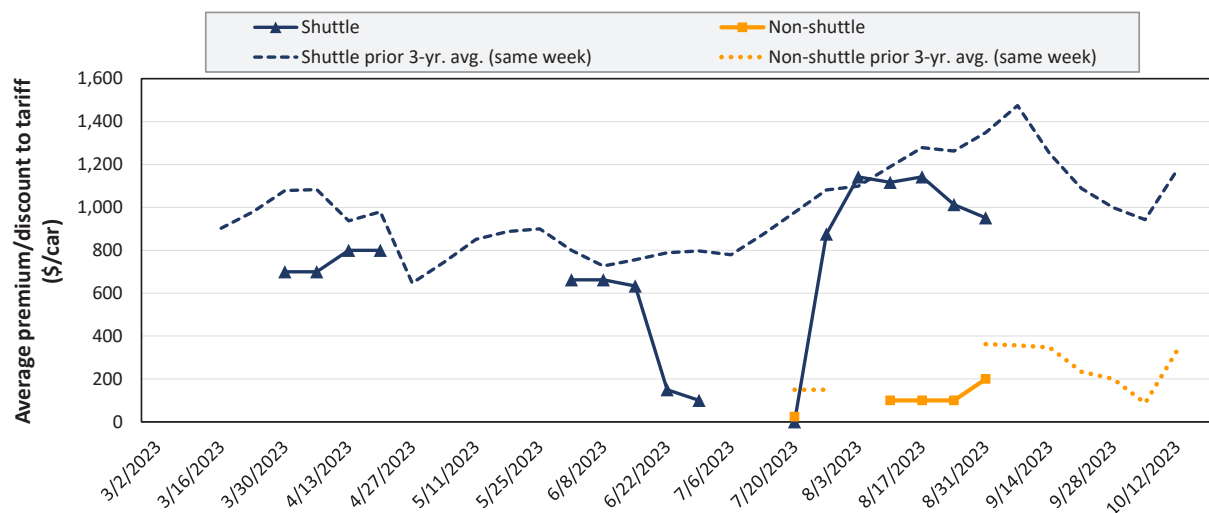
Average non-shuttle bids/offers fell \$8 this week, and are \$88 below the peak.

Average shuttle bids/offers fell \$78 this week and are \$351 below the peak.

8/31/2023	BNSF	UP
Non-Shuttle	\$125	\$150
Shuttle	-\$44	-\$225

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 October 2023



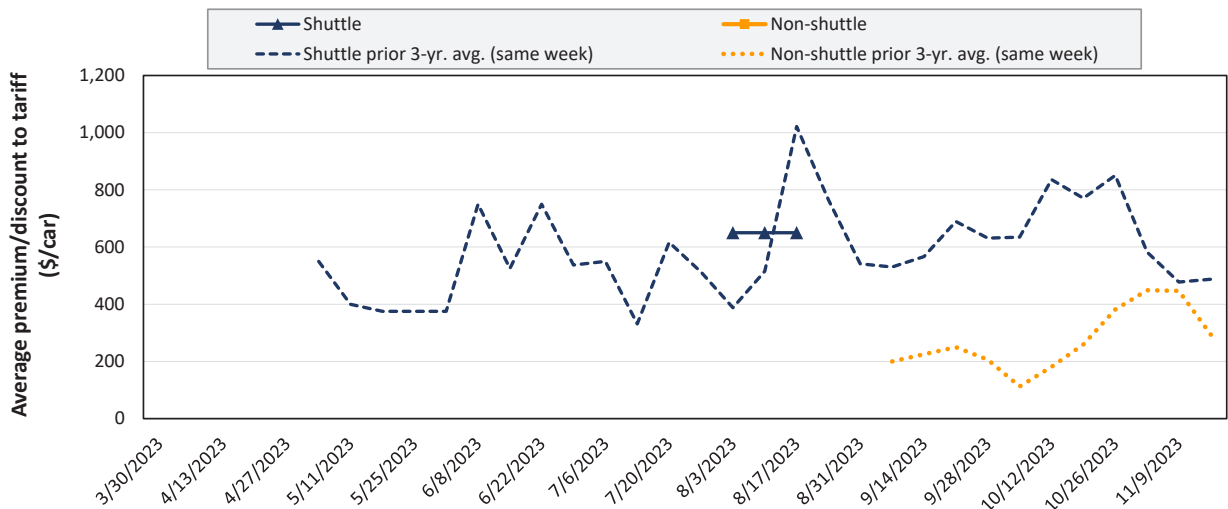
Average non-shuttle bids/offers rose \$100 this week, and are at the peak.

Average shuttle bids/offers fell \$61 this week and are \$191 below the peak.

8/31/2023	BNSF	UP
Non-Shuttle	n/a	\$200
Shuttle	\$1,078	\$825

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 November 2023



Average non-shuttle bids/offers rose \$100 this week, and are at the peak.

Average shuttle bids/offers fell \$61 this week and are \$191 below the peak.

8/31/2023	BNSF	UP
Non-Shuttle	n/a	n/a
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: 8/31/2023		Delivery period					
		Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24
Non-shuttle	BNSF-GF	125	n/a	n/a	n/a	n/a	n/a
	Change from last week	8	n/a	n/a	n/a	n/a	n/a
	Change from same week 2022	-38	n/a	n/a	n/a	n/a	n/a
	UP-Pool	150	200	n/a	n/a	n/a	n/a
	Change from last week	-25	100	n/a	n/a	n/a	n/a
	Change from same week 2022	-163	n/a	n/a	n/a	n/a	n/a
Shuttle	BNSF-GF	-44	1,078	n/a	n/a	n/a	n/a
	Change from last week	-140	53	n/a	n/a	n/a	n/a
	Change from same week 2022	4	-664	n/a	n/a	n/a	n/a
	UP-Pool	-225	825	n/a	n/a	n/a	n/a
	Change from last week	-17	-175	n/a	n/a	n/a	n/a
	Change from same week 2022	-100	-1,100	n/a	n/a	n/a	n/a
	CP-GF	0	800	n/a	n/a	n/a	n/a
	Change from last week	n/a	-150	n/a	n/a	n/a	n/a
Change from same week 2022	-100	300	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

September 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	\$182	\$42.47	\$1.16	1
	Grand Forks, ND	Duluth-Superior, MN	\$4,008	\$48	\$40.27	\$1.10	1
	Wichita, KS	Los Angeles, CA	\$7,340	\$245	\$75.32	\$2.05	-9
	Wichita, KS	New Orleans, LA	\$4,825	\$320	\$51.10	\$1.39	-1
	Sioux Falls, SD	Galveston-Houston, TX	\$7,111	\$201	\$72.61	\$1.98	-8
	Colby, KS	Galveston-Houston, TX	\$5,075	\$351	\$53.88	\$1.47	-2
	Amarillo, TX	Los Angeles, CA	\$5,121	\$489	\$55.71	\$1.52	-7
Corn	Champaign-Urbana, IL	New Orleans, LA	\$4,000	\$362	\$43.32	\$1.10	-7
	Toledo, OH	Raleigh, NC	\$8,551	\$413	\$89.01	\$2.26	1
	Des Moines, IA	Davenport, IA	\$2,655	\$77	\$27.13	\$0.69	3
	Indianapolis, IN	Atlanta, GA	\$6,593	\$310	\$68.55	\$1.74	2
	Indianapolis, IN	Knoxville, TN	\$5,564	\$201	\$57.25	\$1.45	3
	Des Moines, IA	Little Rock, AR	\$4,250	\$225	\$44.44	\$1.13	1
	Des Moines, IA	Los Angeles, CA	\$6,130	\$656	\$67.39	\$1.71	-5
Soybeans	Minneapolis, MN	New Orleans, LA	\$3,156	\$538	\$36.68	\$1.00	-33
	Toledo, OH	Huntsville, AL	\$7,037	\$294	\$72.80	\$1.98	1
	Indianapolis, IN	Raleigh, NC	\$7,843	\$419	\$82.04	\$2.23	1
	Indianapolis, IN	Huntsville, AL	\$5,689	\$199	\$58.47	\$1.59	3
	Champaign-Urbana, IL	New Orleans, LA	\$5,040	\$362	\$53.65	\$1.46	-3

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

September 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	\$141	\$46.51	\$1.27	-4
	Wichita, KS	Galveston-Houston, TX	\$4,611	\$110	\$46.88	\$1.28	-5
	Chicago, IL	Albany, NY	\$7,090	\$390	\$74.28	\$2.02	1
	Grand Forks, ND	Portland, OR	\$6,201	\$243	\$63.99	\$1.74	-7
	Grand Forks, ND	Galveston-Houston, TX	\$5,549	\$253	\$57.62	\$1.57	-8
	Colby, KS	Portland, OR	\$5,923	\$576	\$64.53	\$1.76	-7
Corn	Minneapolis, MN	Portland, OR	\$5,660	\$296	\$59.15	\$1.50	-7
	Sioux Falls, SD	Tacoma, WA	\$5,620	\$271	\$58.50	\$1.49	-6
	Champaign-Urbana, IL	New Orleans, LA	\$4,170	\$362	\$45.01	\$1.14	-2
	Lincoln, NE	Galveston-Houston, TX	\$4,360	\$158	\$44.87	\$1.14	-2
	Des Moines, IA	Amarillo, TX	\$4,670	\$283	\$49.19	\$1.25	-0
	Minneapolis, MN	Tacoma, WA	\$5,660	\$294	\$59.12	\$1.50	-7
Soybeans	Council Bluffs, IA	Stockton, CA	\$5,580	\$304	\$58.43	\$1.48	-8
	Sioux Falls, SD	Tacoma, WA	\$6,535	\$271	\$67.59	\$1.84	-7
	Minneapolis, MN	Portland, OR	\$6,585	\$296	\$68.33	\$1.86	-7
	Fargo, ND	Tacoma, WA	\$6,435	\$241	\$66.30	\$1.80	-6
	Council Bluffs, IA	New Orleans, LA	\$5,270	\$418	\$56.48	\$1.54	-3
	Toledo, OH	Huntsville, AL	\$5,277	\$294	\$55.33	\$1.51	1
	Grand Island, NE	Portland, OR	\$5,905	\$589	\$64.49	\$1.76	-5

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.

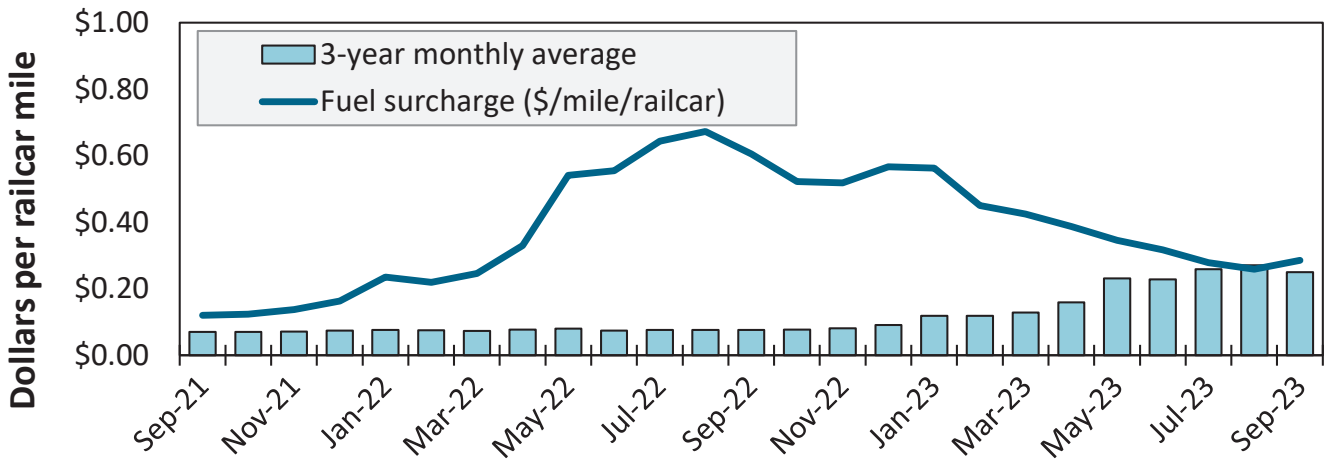
Source: BNSF Railway, Canadian National Railway, CSX Transportation, and Union Pacific Railroad.

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.

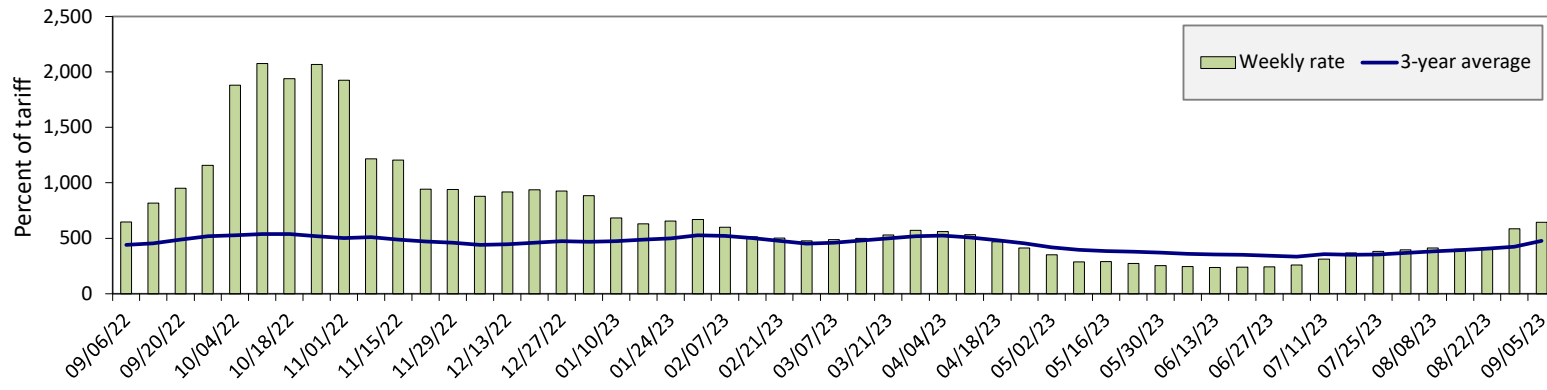
Figure 7. Railroad fuel surcharges, North American weighted average



September 2023: \$0.29/mile, up 3 cents from last month's surcharge of \$0.26/mile; down 32 cents from the September 2022 surcharge of \$0.61/mile; and up 4 cents from the September prior 3-year average of \$0.25/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 September 5: 10 percent higher than the previous week; and there is no change from last year; and 35 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
Rate	9/5/2023	673	641	645	638	641	641	695
	8/29/2023	611	588	584	585	578	578	755
\$/ton	9/5/2023	41.66	34.10	29.93	25.46	30.06	25.90	21.82
	8/29/2023	37.82	31.28	27.10	23.34	27.11	23.35	23.71
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	-4	-5	0	14	5	5	32
	3-year avg.	31	41	-	77	56	56	91
Rate	October	833	824	818	816	827	827	818
	December	-	-	524	470	514	514	435

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



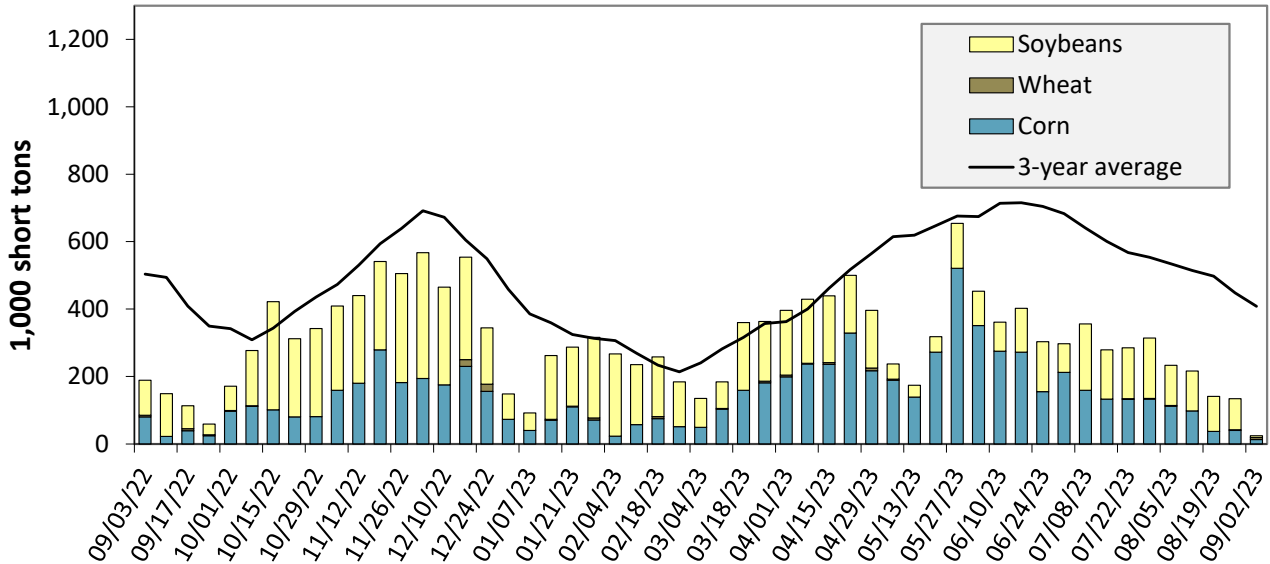
Calculating barge rate per ton:

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

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 September 2: 87 percent lower than last year and 94 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.

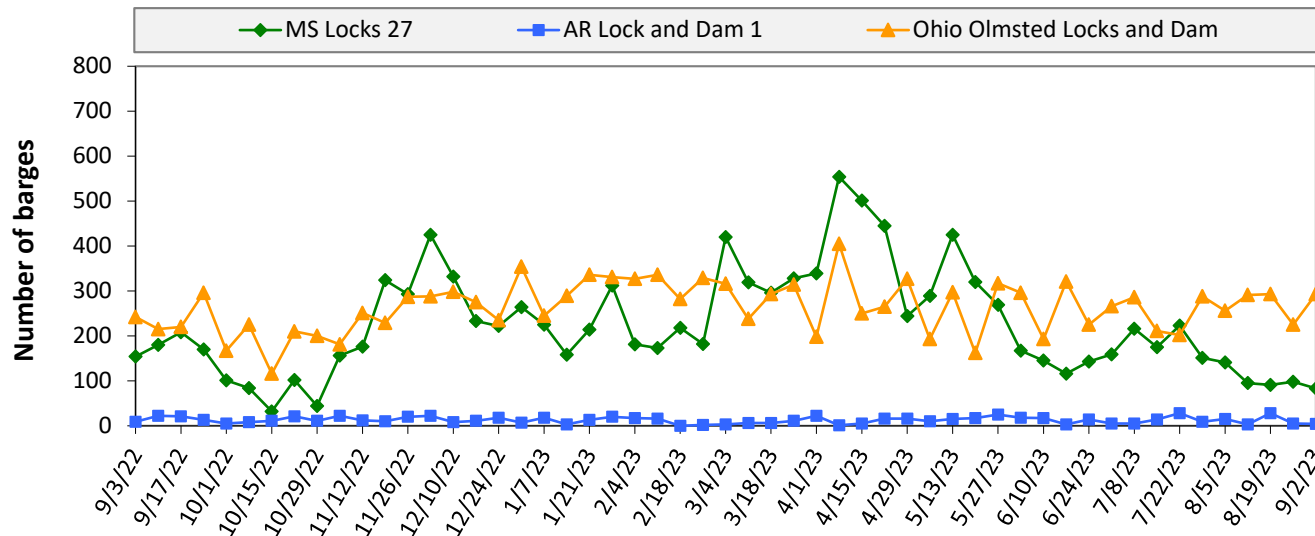
Table 10. Barged grain movements (1,000 tons)

For the week ending 09/02/2023	Corn	Wheat	Soybeans	Other	Total
Mississippi River (Rock Island, IL (L15))	6	0	14	0	20
Mississippi River (Winfield, MO (L25))	10	6	5	0	21
Mississippi River (Alton, IL (L26))	16	6	5	0	27
Mississippi River (Granite City, IL (L27))	13	6	5	0	24
Illinois River (La Grange)	8	0	2	0	9
Ohio River (Olmsted)	14	31	38	0	83
Arkansas River (L1)	0	0	15	0	15
Weekly total - 2023	27	38	58	0	122
Weekly total - 2022	89	24	128	0	241
2023 YTD	8,785	1,032	7,168	200	17,185
2022 YTD	13,065	1,394	8,519	182	23,159
2023 as % of 2022 YTD	67	74	84	110	74
Last 4 weeks as % of 2022	54	74	57	85	59
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.

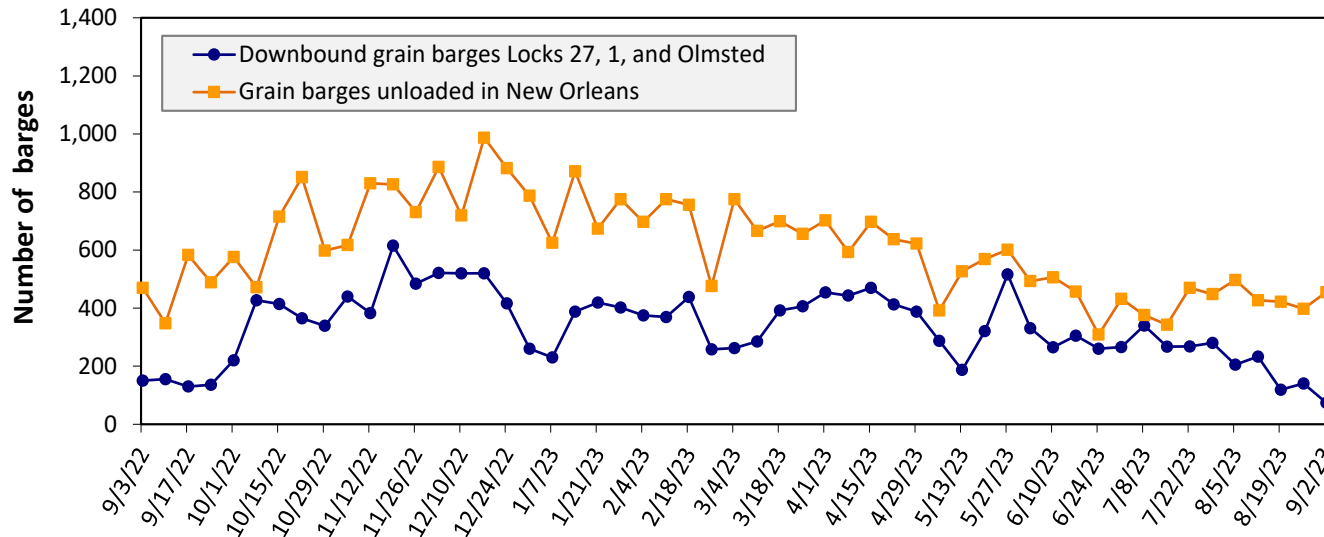
Figure 11. Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



For the week ending September 2: 380 barges transited the locks, 52 barges more than the previous week, and 19 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 September 2: 74 barges moved down river, 66 fewer than the previous week; 455 grain barges unloaded in the New Orleans Region, 14 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.

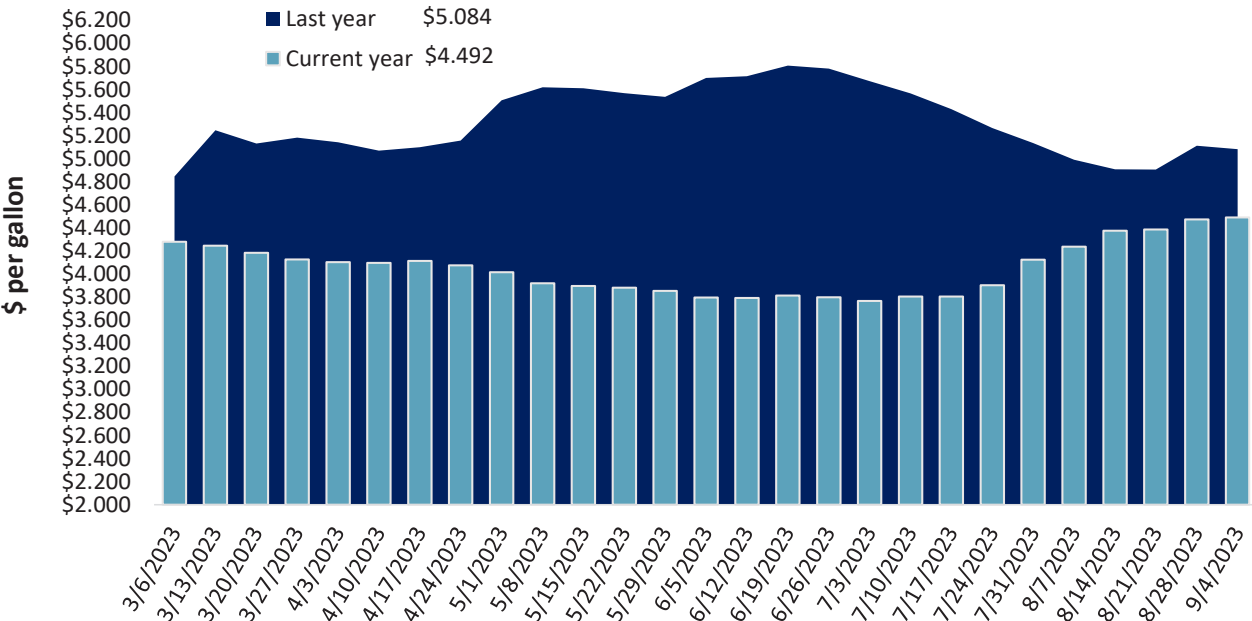
The weekly diesel price provides a proxy for trends in U.S. truck rates as diesel fuel is a significant expense for truck grain movements.

Table 11. Retail on-highway diesel prices, week ending 9/04/2023 (U.S. \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	4.474	-0.001	-0.559
	New England	4.467	0.034	-0.694
	Central Atlantic	4.625	0.009	-0.598
	Lower Atlantic	4.419	-0.010	-0.531
II	Midwest	4.383	-0.002	-0.749
III	Gulf Coast	4.171	0.002	-0.625
IV	Rocky Mountain	4.727	0.069	-0.244
V	West Coast	5.390	0.088	-0.303
	West Coast less California	5.028	0.055	-0.247
	California	5.801	0.123	-0.373
Total	United States	4.492	0.017	-0.592

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 September 4, the U.S. average diesel fuel price increased 1.7 cents from the previous week to \$4.492 per gallon, 59.2 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 (SFW)	Durum				All wheat
Current unshipped (outstanding) export sales	For the week ending 8/24/2023	644	776	1,405	701	116	3,641	1,644	1,581	6,866
	This week year ago	1,450	831	1,421	1,411	94	5,208	2,184	3,016	10,408
	Last 4 wks. as % of same period 2021/22	50	85	101	52	102	72	114	67	79
Current shipped (cumulative) exports sales	2022/23 YTD	721	1,089	1,281	748	24	3,864	38,954	51,837	94,655
	2021/22 YTD	1,441	1,047	1,279	804	34	4,605	58,749	56,765	120,119
	YTD 2022/23 as % of 2021/22	50	104	100	93	71	84	66	91	79
	Total 2021/22	7,172	2,786	5,254	3,261	196	18,669	59,764	57,189	135,622
	Total 2020/21	8,422	1,790	7,500	6,438	656	24,807	66,958	60,571	152,335

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 8/24/2023	Total commitments (1,000 mt)			% change current MY from last MY	Exports 3-year average 2019-21 (1,000 mt)
	YTD MY 2023/24	YTD MY 2022/23	YTD MY 2021/22		
Mexico	4,826	15,350	17,084	-10	15,227
China	272	7,585	14,592	-48	12,616
Japan	989	6,935	10,207	-32	10,273
Columbia	241	2,476	4,403	-44	4,398
Korea	3	822	1,479	-44	2,563
Top 5 importers	6,330	33,168	47,765	-31	45,077
Total U.S. corn export sales	8,344	40,598	60,933	-33	56,665
% of YTD current month's export projection	16%	98%	97%		
Change from prior week	992	72	-16		
Top 5 importers' share of U.S. corn export sales	76%	82%	78%		80%
USDA forecast August 2023	52,163	41,349	62,901	-34	
Corn use for ethanol USDA forecast, August 2023	134,620	132,715	135,281	-2	

Note: The top 5 importers are based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for marketing year (MY) 2021/22 (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 8/24/2023	Total commitments (1,000 mt)			% change current MY from last MY	Exports 3-year average 2019-21 (1,000 mt)
	YTD MY 2023/24	YTD MY 2022/23	YTD MY 2021/22		
China	5500	31,377	30,812	2	27,283
Mexico	1561	4,641	5,478	-15	4,929
Egypt	63	1,150	4,082	-72	3,553
Japan	244	2,358	2,619	-10	2,266
Indonesia	107	1,876	1,875	0	2,116
Top 5 importers	7,474	41,401	44,867	-8	40,147
Total U.S. soybean export sales	12,935	53,418	59,781	-11	54,231
% of YTD current month's export projection	26%	99%	102%		
Change from prior week	1,124	-51	223		
Top 5 importers' share of U.S. soybean export sales	58%	78%	75%		74%
USDA forecast, August 2023	49,728	53,951	58,638	-8	

Note: The top 5 importers are based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for marketing year (MY) 2021/22 (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 8/24/2023	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	1,393	1,662	-16	3,397
Philippines	1,150	1,336	-14	2,615
Japan	883	911	-3	2,281
China	272	345	-21	1,740
Korea	500	666	-25	1,426
Nigeria	104	437	-76	1,276
Taiwan	454	305	49	944
Thailand	156	183	-15	643
Columbia	144	313	-54	537
Indonesia	144	81	78	469
Top 10 importers	5,200	6,239	-17	15,327
Total U.S. wheat export sales	7,505	9,813	-24	20,411
% of YTD current month's export projection	39%	47%		
Change from prior week	329	1,000		
Top 10 importers' share of U.S. wheat export sales	69%	64%		75%
USDA forecast, August 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) 2021/22 (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)

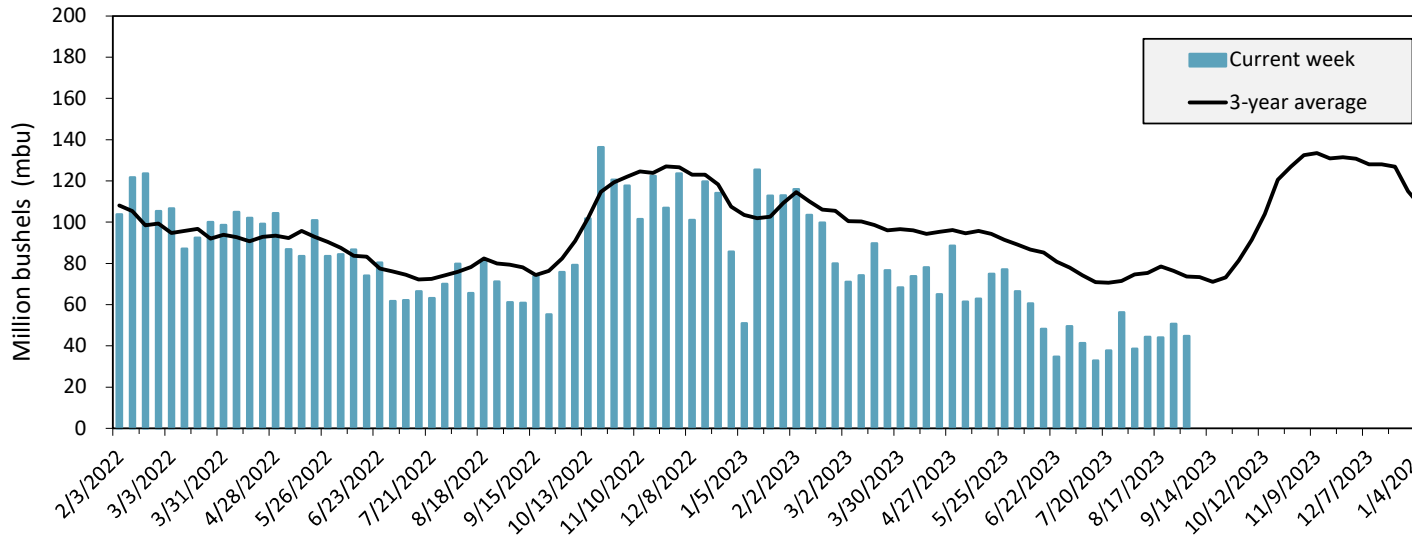
Port regions	Commodity	For the week ending 08/31/2023	Previous week*	Current week as % of previous	2023 YTD*	2022 YTD*	2023 YTD as % of 2022 YTD	Last 4-weeks as % of:		2022 total*
								Last year	Prior 3-yr. avg.	
Pacific Northwest	Wheat	223	231	97	6,870	6,535	105	65	57	9,836
	Corn	0	0	n/a	3,923	8,886	44	0	0	9,615
	Soybeans	0	0	n/a	3,533	5,139	69	0	0	14,178
	Total	223	231	97	14,327	20,559	70	38	36	33,629
Mississippi Gulf	Wheat	15	79	19	2,578	3,255	79	41	55	4,053
	Corn	327	405	81	16,626	25,280	66	81	80	30,781
	Soybeans	321	204	158	15,250	15,525	98	71	63	31,283
	Total	663	688	96	34,454	44,059	78	71	70	66,116
Texas Gulf	Wheat	0	0	n/a	1,319	2,145	61	9	7	3,421
	Corn	0	22	0	225	557	40	51	55	648
	Soybeans	1	0	n/a	52	2	n/a	n/a	1	685
	Total	1	22	3	1,597	2,704	59	25	17	4,754
Interior	Wheat	75	65	115	1,704	2,059	83	92	104	2,912
	Corn	146	162	90	6,150	6,089	101	119	108	8,961
	Soybeans	72	125	57	3,877	4,664	83	87	87	7,109
	Total	293	352	83	11,731	12,811	92	102	101	18,982
Great Lakes	Wheat	0	32	0	202	168	120	130	56	395
	Corn	0	0	n/a	23	141	16	0	0	158
	Soybeans	0	0	n/a	31	239	13	n/a	0	760
	Total	0	32	0	256	548	47	79	24	1,312
Atlantic	Wheat	3	4	71	85	124	68	93	109	169
	Corn	0	0	n/a	81	224	36	36	23	309
	Soybeans	4	8	53	1,251	1,594	78	79	111	2,867
	Total	7	13	59	1,416	1,942	73	76	87	3,345
U.S. total from ports*	Wheat	316	411	77	12,759	14,285	89	59	58	20,786
	Corn	473	589	80	27,028	41,176	66	79	74	50,471
	Soybeans	398	337	118	23,995	27,163	88	58	54	56,882
	Total	1,187	1,338	89	63,781	82,624	77	66	62	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.

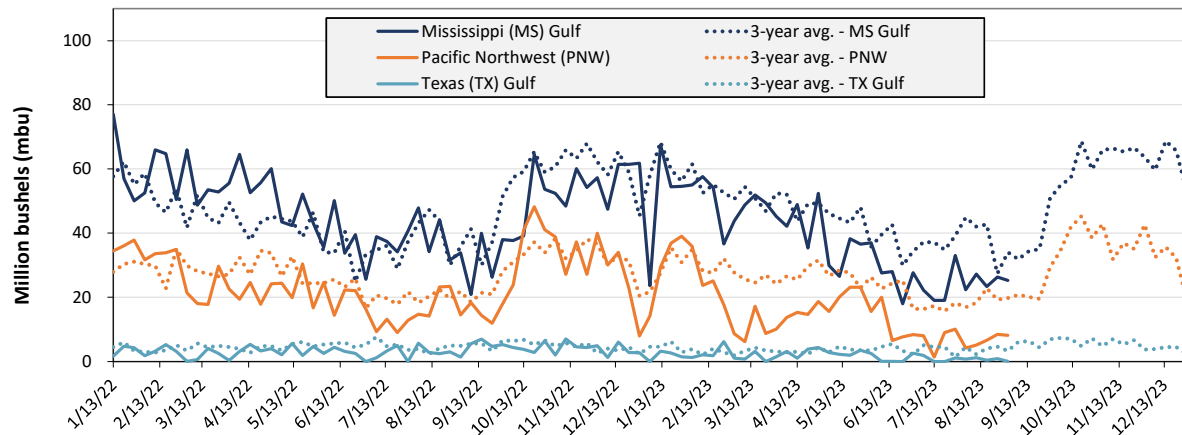
Figure 14. U.S. grain inspected for export (wheat, corn, and soybeans)



For the week ending August 31: 44.9 mbu of grain inspected, down 12 percent from the previous week, down 27 percent from the same week last year, and down 39 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 08/31/23 inspections (mbu):				
MS Gulf: 25.2				
PNW: 8.2				
TX Gulf: 0				

Percent change from	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last week	down 4	down 97	down 7	down 3
Last year (same week)	down 25	down 98	down 28	down 44
3-year average (4-week moving average)	down 31	down 99	down 37	down 59

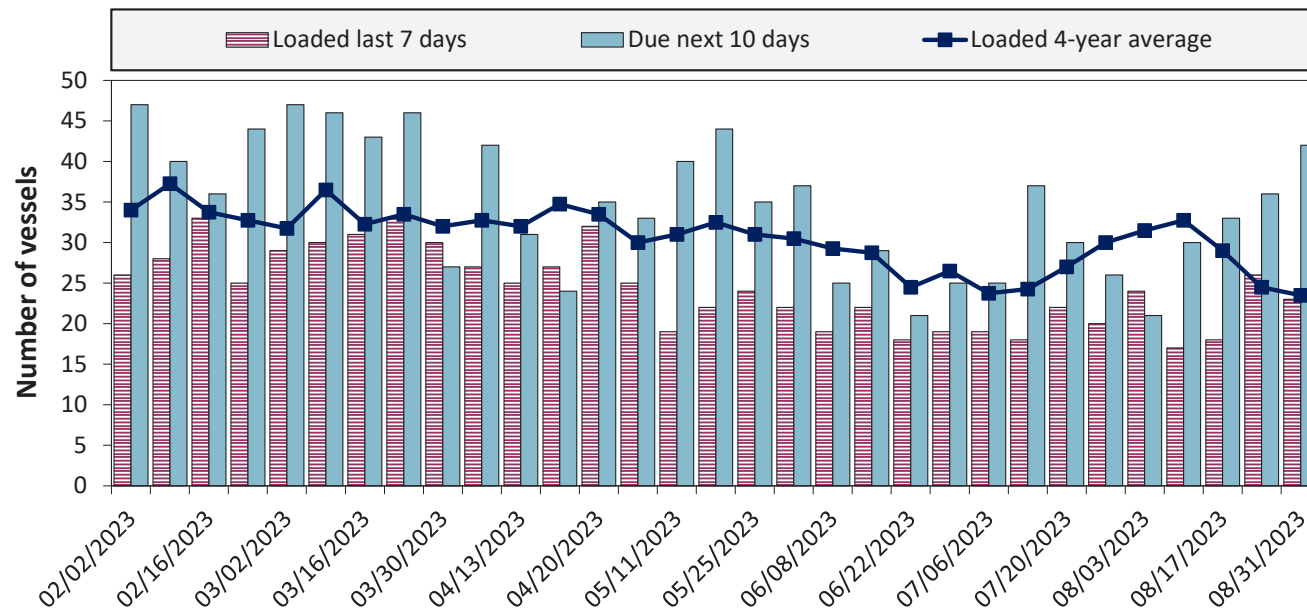
Source: USDA, Federal Grain Inspection Service.

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
8/31/2023	15	23	42	3
8/24/2023	19	26	36	4
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.

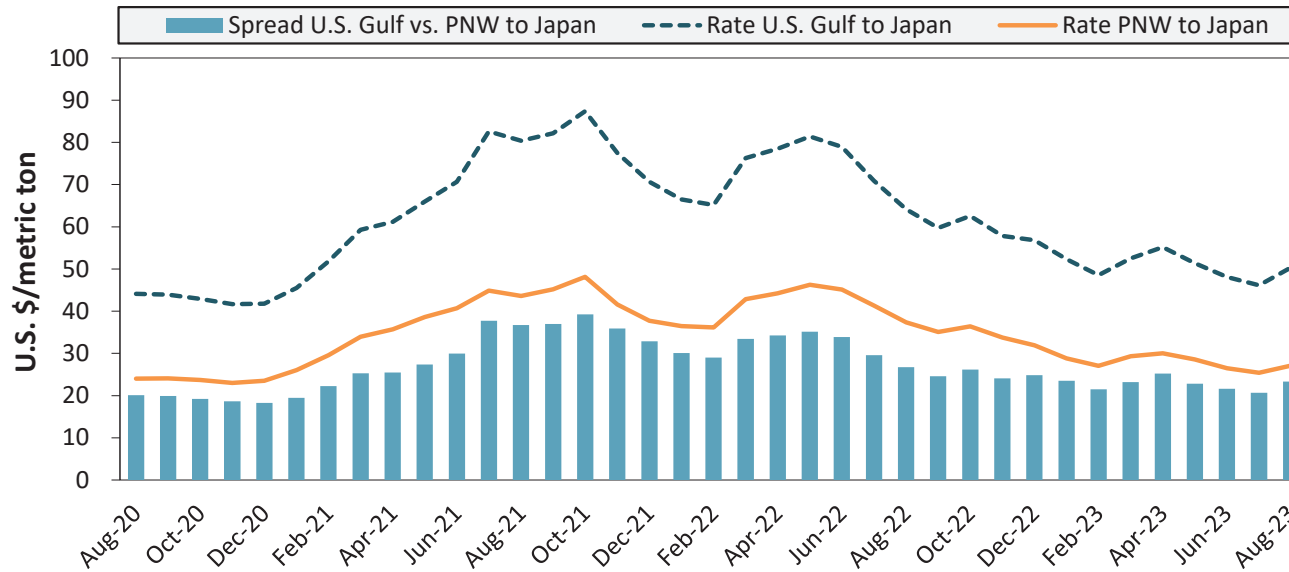
Figure 16. U.S. Gulf vessel loading activity



Week ending 08/31/23, number of vessels	Loaded	Due
Change from last year	5%	27%
Change from 4-year average	-2%	13%

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
August 2023	\$50.40	\$27.10	\$23.30
Change from August 2022	-21.4%	-27.5%	-12.9%
Change from 4-year average	-15.6%	-18.5%	-12.1%

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

Table 18. Ocean freight rates for selected shipments, week ending 09/02/2023

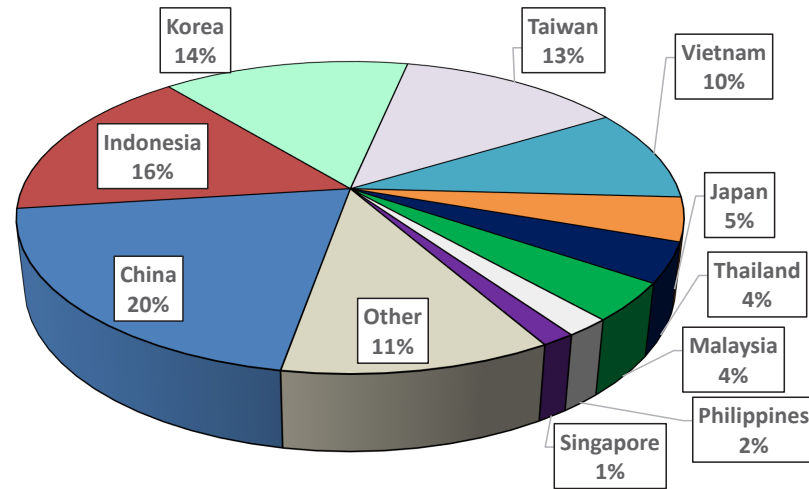
Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	Japan	Heavy grain	May 2, 2023	50,000	56.70
U.S. Gulf	Japan	Heavy grain	May 1, 2023	50,000	54.80
U.S. Gulf	Japan	Heavy grain	Nov 1/10, 2022	50,000	79.25
U.S. Gulf	Jamaica	Wheat	Jun 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 1/20, 2023	57,000	58.30
PNW	Indonesia	Soybean Meal	Jul 21/31, 2023	35,000	106.00
PNW	N. China	Heavy grain	Apr 21/27, 2023	63,000	28.00
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	S. Korea	Soybean Meal	Jun 1, 2023	60,000	53.75
Brazil	China	Heavy grain	Jul 1/31, 2023	63,000	41.50
Brazil	China	Heavy grain	May 5/10, 2023	65,000	36.50

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

Source: Maritime Research, Inc.

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

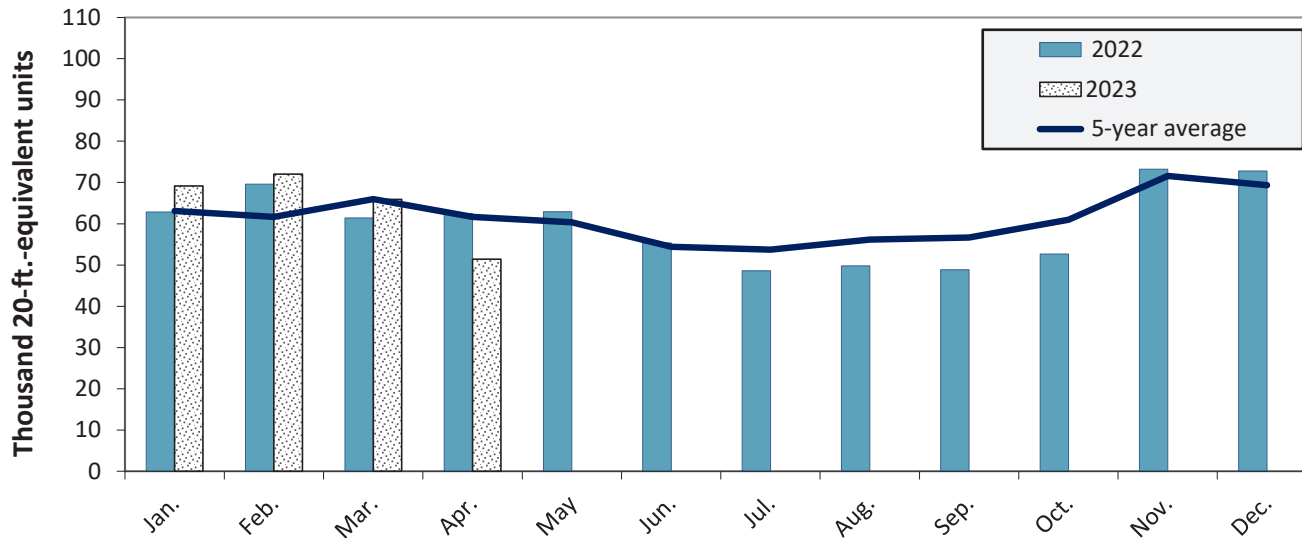
Figure 18. Top 10 destination markets for U.S. containerized grain exports, Jan-Apr 2023



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



April 2023: Containerized grain shipments were down 17.6 percent from last year and down 16.6 percent from the 5-year average.

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

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

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