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# Grain Transportation Report

December 21, 2023 A weekly publication of the Agricultural Marketing Service www.ams.usda.gov/GTR

### Weekly Highlights

#### **CBP Closes Key Grain Export Gateways to all Rail Traffic**. On

December 18, U.S. Customs and Border Protection (CBP) suspended operations at the international railway crossing bridges in Eagle Pass and El Paso, TX. <u>CBP's action</u> follows a "recent resurgence of smuggling organizations moving migrants through Mexico on freight trains." CBP personnel have been redirected from crossing operations to assist the U.S. Border Patrol with processing migrants.

The border closure follows previous railrelated disruptions (such as an **embargo** issued by Ferromex for all agricultural products). Additionally, CBP previously suspended all rail traffic at the Eagle Pass gateway in late September (see **December 2023: Mexico Transport Cost Indicator Report**).

In 2022, the United States exported 25.2 million metric tons of corn, soybeans, and wheat to Mexico. Two-thirds of that total traveled by rail, and one-third went by ocean vessel (mostly, from New Orleans). For rail shipments, the three primary export gateways are Eagle Pass, TX; El Paso, TX; and Laredo, TX. Hence, CBP's closure affects two of the three major grain gateways, and Union Pacific Railroad has <u>indicated</u> that its "other gateways cannot handle the extra traffic." New Short Line Planned for Eagle Pass Border Crossing Cross Eagle Pailroad

**Border Crossing**. Green Eagle Railroad (GER) seeks permission from the Surface Transportation Board to build a new short line railroad and bridge at the Eagle Pass, TX, gateway to Mexico. According to plans recently submitted to STB (**pdf**), GER's new 1.3-mile, double-tracked line would connect Union Pacific's Clark's Park Yard to a new bridge over the Rio Grande River—the U.S.-Mexico border. From there, in Mexico, GER proposes to build 17.8 miles of single-track line to the Rio Escondido rail yard of the Mexican railroad Ferromex.

GER intends the new construction to ease congestion at the Eagle Pass gateway, which currently utilizes one bridge, handling about **15 to 18 trains per day**. According to a study by the Texas Department of Transportation, Eagle Pass northbound traffic grew from 61,600 rail cars in 1996 to 336,500 in 2019. By 2050, there are expected to be 943,700 northbound rail cars per year.

Eagle Pass is a major gateway for U.S. grain exports to Mexico, where operations have recently been suspended (see previous highlight). California Announces More than \$90 Million for Zero-Emission Trucks. The

California Air Resources Board (CARB)—a California government agency aimed at reducing air pollution—<u>has approved</u> more than \$90 million for incentives to transition diesel-powered trucks in California to zeroemission alternatives.

CARB's largest set-aside, \$80 million for drayage fleet operators, anticipates the start of California's mandated transition toward zeroemission options for drayage trucks in 2024. The Ports of Los Angeles and Long Beach also recently allocated \$60 million for vouchers toward purchasing zero-emission Class 8 drayage trucks for use at the ports (see <u>Grain</u> <u>Transportation Report, November 23, fourth</u> <u>highlight</u>).

Another \$14.3 million of CARB funding is available for a finance assistance program that targets operators and owners of small fleets of trucks. Past CARB investments have included projects to help small-business fleet owners affected by CARB's "In-Use Truck and Bus" regulation to finance upgrades of their fleets to new trucks of any fuel type.







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### Snapshots by Sector

#### **Export Sales**

For the week ending December 7, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2023/24 totaled 37.75 million metric tons (mmt), up 5 percent from last week and up 6 percent from the same time last year.

Net <u>corn export sales</u> for MY 2023/24 were 1.419 mmt, up 10 percent from last week. Net <u>soybean export sales</u> were 1.084 mmt, down 23 percent from last week. Net weekly <u>wheat</u> <u>export sales</u> were 1.490 mmt, up 318 percent from last week.

#### Rail

U.S. Class I railroads originated 25,251 grain carloads during the week ending December 9. This was a 9-percent decrease from the previous week, 9 percent fewer than last year, and 14 percent fewer than the 3-year average.

Average December <u>shuttle secondary railcar</u> <u>bids/offers</u> (per car) were \$88 above tariff for the week ending December 14. This was \$17 more than last week. There were no shuttle bids/offers this week last year. Average nonshuttle secondary railcar bids/offers per car were \$275 above tariff. This was \$25 more than last week. There were no non-shuttle bids/ offers this week last year.

#### Barge

For the week ending December 16, <u>barged</u> grain movements totaled 656,958 tons. This was 9 percent more than the previous week and 17 percent less than the same period last year.

For the week ending December 16, 398 grain barges <u>moved down river</u>—12 fewer than last week. There were 858 grain barges <u>unloaded</u> in the New Orleans region, 25 percent more than last week.

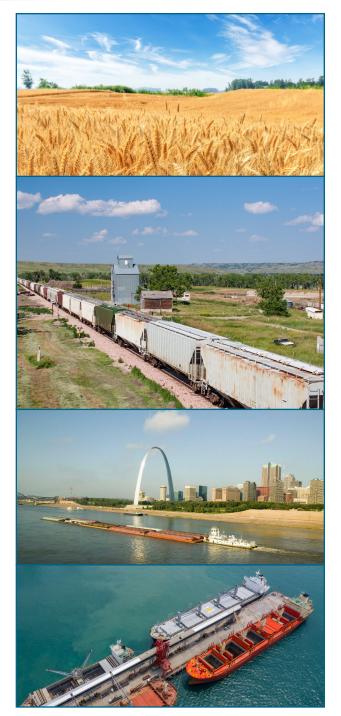
#### Ocean

For the week ending December 14, 34 <u>oceangoing grain vessels</u> were loaded in the Gulf—13 percent more than the same period last year. Within the next 10 days (starting December 15), 47 vessels were expected to be loaded—11 percent fewer than the same period last year.

As of December 14, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was \$60.75. This was 5 percent lower than last week. The rate from the Pacific Northwest to Japan was \$31.75 per mt, 4 percent lower than last week.

#### Fuel

For the week ending December 18, the U.S. average <u>diesel price</u> decreased 9.3 cents from the previous week to \$3.894 per gallon, 70.2 cents below the same week last year.



## Containerized Grain Update: Exports Rise Slightly Over Last Year As Container-Supply and Other Challenges Persist

Although supply-chain conditions in 2023 improved over last year, U.S. exporters continue to grapple with insufficient service, delays in securing containers, and difficulty finding vessel space with steamship lines. This article examines the past year's trends, current containerized grain market, and some of the most salient issues on the horizon in 2024 facing agricultural shippers.

#### **Overview of Containerized Grain Market in 2023**

The container market's tumult of last year—with vessel capacity constraints and spiking container rates—subsided in 2023 as capacity increased and container rates declined. Still, ongoing issues have kept operational costs for shippers high and caused ongoing delays to containerized shipments, complicating shippers' ability to meet scheduled bookings.

From 2020-22, despite record numbers of containerized imports, exporters nonetheless encountered container shortages because carriers quickly moved empty containers back to Asia in order to meet import demand. But even with lower import demand in 2023, vessel service and container availability for exporters have remained erratic. The drop in imports has substantially reduced container pools—particularly, inland where agricultural exporters are most affected (Grain Transportation Report (GTR), December 7, 2023, third highlight).

#### Table 1. Table 1. U.S. Containerized Grain Exports, January-August 2023

HTS code	Commmodity description	Metric tons	TEU	Share
120100	Soybeans	2,720,263	202,482	44%
230330	Distiller Dried Grains With Solubles (DDGS)	1,931,220	154,553	31%
230990	Animal Feed	574,972	50,158	9%
100590	Corn	418,971	32,924	7%
120810	Soybean Meal	371,780	28,127	6%
	Other	173,010	14,305	3%
	Total	6,190,216	482,549	100%

Note: TEU = 20-foot equivalent units.

Source: USDA, Agricultural Marketing Service analysis of PIERS data.

Blank sailings have fallen since the supply chain disruptions in 2022. However, the world's largest container carriers started canceling a significant number of sailings (a practice known as blank sailing) on certain routes, such as from China to the U.S. West Coast in October. For example, according to **Sea Intelligence Maritime** analysis, the most recent data available show carriers blanked 23 percent of their sailings between Asia and North America in October.

Overall, Drewry expects blank sailings to fall in the coming weeks. According to Drewry's most recent December 15 "**Cancelled Sailings Tracker,**" across the major East-West trades lanes (Trans-Pacific, Trans-Atlantic and Asia-North Europe and Mediterranean), 8 percent of ships are expected to blank sail over the next 5 weeks. During this period, 41 percent of blank sailings will occur on the Trans-Atlantic Westbound trade; 33 percent on the Trans-Pacific Eastbound trade; and 26 percent, on Asia-North Europe and Mediterranean trade.

#### Containerized Grain Exports January-August 2023

According to IHS Markit's PIERS data, as of the end of August 2023 (the latest data available), year-to-date (YTD) containerized grain exports were unchanged from the same period last year, but down 3 percent from the 5-year average. Soybeans remained the top containerized grain export, followed closely by distillers' dried grains with solubles (DDGS) (table 1).

Soybean exports fell 7 percent from the same period last year, mainly because of reduced exports to China and Taiwan—the top importers of containerized U.S. soybeans.<sup>1</sup> As of August 2023, containerized soybean exports to China

<sup>1</sup> Historically, before 2022, Indonesia and Taiwan were the largest importers of U.S. containerized soybeans. Since 2022, China has been the largest importer of U.S. containerized soybeans.

and Taiwan were 14 and 48 percent behind the same time last year, respectively. This lower demand was reflected in the cost to ship a 40foot container to Shanghai, China, which fell 24 percent from Los Angeles, CA, and 44 percent from Chicago, IL, between November 2022 and November 2023.

Offsetting the decline in U.S. soybean exports, YTD U.S. containerized DDGS exports rose 19 percent from the same period last year, mainly because of a 17-percent rise in shipments to Vietnam and a 39-percent rise to Indonesia.

#### Outlook

Agricultural transportation stakeholders expressed some of their top concerns affecting the containerized export industry for 2024 summarized here.

#### Inadequate Communication by Carriers.

During the supply-chain crisis spawned by the COVID-19 pandemic, the lack of accurate data from ocean carriers created major problems for shippers. According to shippers, although container import and export volumes are back to near normal, increased costs and delays persist because of a lack of accurate data about earliest return dates, last receiving dates, loading windows, and arrival and departure dates for ships.<sup>2</sup> Carriers' failure to communicate key details—such as which terminal a container should be delivered to or whether the terminal is open—continues to challenge exporters and elevate costs.

Insufficient communication by carriers forces exporters to spend more on storage, trucking, rebooking, and detention and demurrage.

**Reduced Vessel Capacity and Scarcity of Empty Containers.** A sharp drop in demand for imports has prompted ocean carriers to reduce capacity by increasing blank sailings (as noted previously), slowing ships, or taking ships out of service. Agricultural shippers have faced challenges in meeting overseas demand because of carriers' reduced service and a lack of empty containers—forcing shippers to delay bookings.

**Panama Canal**. To manage the Panama Canal's low-water conditions from extreme drought in 2023, the Panama Canal Authority reduced vessel draft levels (requiring container ships to carry less cargo) and restricted daily vessel transits (GTR, November 23, 2023). Both the Panama Canal and Suez Canal have raised transit fees, which some container carriers have offset with surcharges. Shippers are concerned about additional costs and delays in 2024, as further reductions on daily transits at the Panama Canal are scheduled to take effect next month.

#### California Truck Emissions Mandate.

Starting January 1, 2024, California will start phasing out diesel trucks to implement **the State's zero-emission plan**. California manufacturers and operators must phase out the sale and use of combustion engines by 2045 for heavy-duty trucks and by earlier deadlines for short-haul trucks, such as port drayage trucks. Any shipper hauling freight in California will have to invest in electric trucks.

However, some shippers are concerned about electric trucks' limited range, given the long distances required for international cargo movement. Some shippers are also concerned about the trucks' limited cargo capacity; significant battery weight (further reducing cargo capacity); and battery-charging time being counted toward hours-of-service limits on drivers, thereby impacting truck and driver availability.

International Longshoremen's Association (ILA) Possible Strike. ILA is a union representing 45,000 East and Gulf Coast dockworkers whose contracts are set to expire in September 2024. ILA has pledged not to extend the contracts beyond September. ILA has asked for the same terms for pay and benefits as the International Longshore and Warehouse Union (ILWU), the labor union that represents longshore labor at West Coast container ports.

ILA also seeks to end the hybrid-union and non-union longshore model at the Gulf and East Coast ports in favor of a top-to-bottom ILA labor union agreement. A potential strike in 2024 could impact container shipping flows.

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<sup>2</sup> The *earliest return date* is the first day the shipper's container can arrive at the terminal. If it arrives any earlier, the carrier will incur fees, which may be passed on to the shipper. The *last receiving date* is the last date the shippers' container needs to be at the terminal in time for loading. The *loading window* is the period during which shippers must deliver their containers to the port, or else incur extra storage and equipment fees.

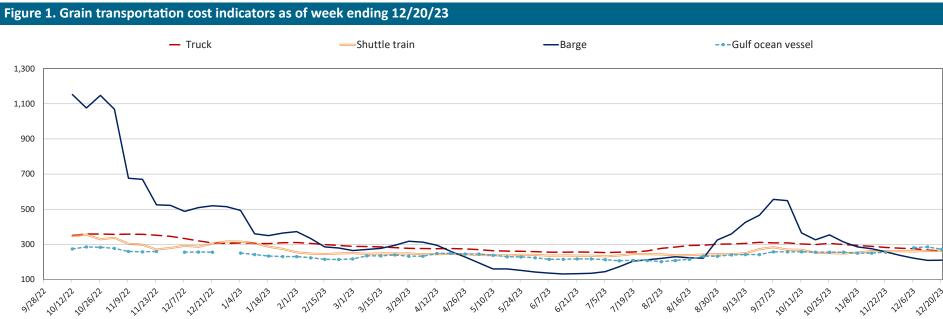
### **Grain Transportation Indicators**

#### Table 1. Grain transport cost indicators

For the week		Rail			Ocean	
ending:	Truck	Non-shuttle	Shuttle	Barge	Gulf	Pacific
12/20/23	261	340	263	210	272	225
12/13/23	268	339	262	208	285	234
12/21/22	308	371	304	520	255	227

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.



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

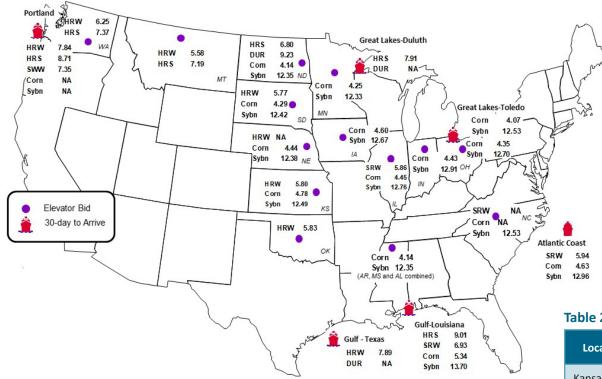
marketing decision making process.

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.



Inland bids: 12% HRW, 14% HRS, #1 SRW, #1 DUR, #1 SWW, #2 Y Corn, #1 Y Soybeans Export bids: Ord HRW, 14% HRS, #2 SRW, #2 DUR, #2 SWW, #2 Y Corn, #1 Soybeans Note: HRW = Hard red winter wheat, HRS = Hard red spring wheat, SRW = Soft red winter wheat, DUR = Durum, SWW = Soft white winter wheat, Y = Yellow, Ord = Ordinary. Data from tables 2a and 2b derived from map information.

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

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

Commodity	Origin– destination	12/15/2023	12/8/2023
Corn	IL–Gulf	-0.88	-0.78
Corn	NE–Gulf	-0.89	-0.77
Soybean	IA–Gulf	-1.03	-1.04
HRW	KS–Gulf	-2.09	-1.91
HRS	ND–Portland	-1.91	-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	12/15/2023	Week ago 12/8/2023	Year ago 12/16/2022
Kansas City	Wheat	Dec	6.326	6.514	8.470
Minneapolis	Wheat	Dec	7.306	7.294	9.094
Chicago	Wheat	Dec	6.222	6.252	7.580
Chicago	Corn	Dec	4.790	4.862	6.534
Chicago	Soybean	Jan	13.300	13.214	14.830

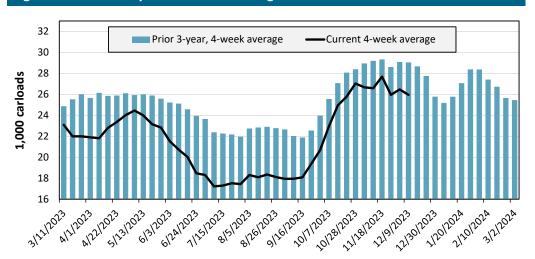
Sources: U.S. Inland: GeoGrain, USDA Weekly Bids, U.S. Export: Corn & Soybean - Export Grain Bids, AMS, USDA Wheat Bids - Weekly Wheat Report, U.S. Wheat Associates, Washington, DC.

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

•								
For the week ending:	E	ast	West		Centra	I U.S.		
12/09/2023	СЅХТ	NS	BNSF	UP	СРКС	CN	U.S. total	
This week	1,723	2,802	11,506	4,670	3,198	1,352	25,251	
This week last year	2,346	3,140	11,620	5,513	2,977	2,087	27,683	
2023 YTD	85,813	120,834	457,310	256,900	121,307	62,622	1,104,786	
2022 YTD	87,782	121,968	542,979	282,487	131,775	78,599	1,245,590	
2023 YTD as % of 2022 YTD	98	99	84	91	92	80	89	
Last 4 weeks as % of 2022	77	87	101	91	93	65	92	
Last 4 weeks as % of 3-yr. avg.	81	98	93	83	94	73	89	
Total 2022	93,392	129,293	571,376	297,775	140,039	83,680	1,315,555	

Note: The last 4-week percentages compare the last 4 weeks of this year to the closest 4 weeks of last year, and to the average across the prior 3 years. NS = Norfolk Southern; UP = Union Pacific; CN = Canadian National; CPKC = Canadian Pacific Kansas City; YTD = year-to-date; avg. = average; yr. = year. CPKC and CN report carloads for their U.S.-operations only, so the U.S. total reflects originated carloads for all six Class I railroads.

Source: Surface Transportation Board.



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

For the 4 weeks ending December 9, grain carloads were down 2 percent from the previous week, down 8 percent from last year, and down 11 percent from the 3-year average.

#### Table 4. Railcar auction offerings (dollars per car)

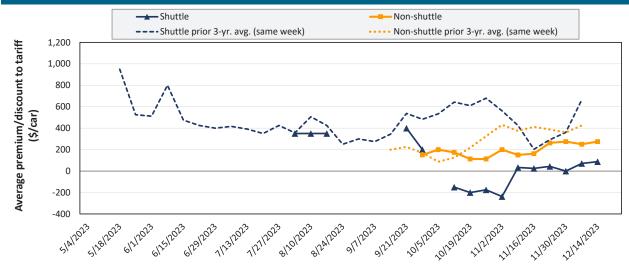
F	For the week ending: 12/14/2023		Delivery period							
			Dec-23	Dec-22	Jan-24	Jan-23	Feb-24	Feb-23	Mar-24	Mar-23
		COT grain units	no offer	n/a	no offer	199	no offer	142	no offer	54
Br	BNSF	COT grain single-car	n/a	n/a	no offer	811	no offer	684	no offer	243
UF	D	GCAS/vouchers	n/a	n/a	10	n/a	10	n/a	10	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.

Source: Surface Transportation Board.

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 December 2023



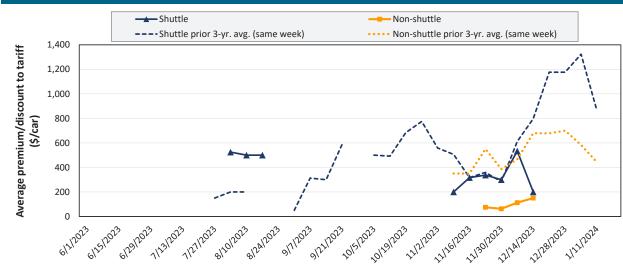
Average non-shuttle bids/offers rose \$25 this week, and are at the peak.

Average shuttle bids/offers rose \$17 this week and are \$313 below the peak.

12/14/2023	BNSF	UP
Non-Shuttle	\$275	n/a
Shuttle	\$450	-\$275

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 January 2024



Average non-shuttle bids/offers rose \$38 this week, and are at the peak.

Average shuttle bids/offers fell \$333 this week and are \$333 below the peak.

12/14/2023	BNSF	UP
Non-Shuttle	\$325	-\$25
Shuttle	\$600	-\$200

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 February 2024



There were no non-shuttle bids/offers this week.

There were no shuttle bids/offers this week.

12/14/2023	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: 12/14/2023			Delivery period					
		Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	
	BNSF	275	325	n/a	n/a	n/a	n/a	
	Change from last week	25	100	n/a	n/a	n/a	n/a	
Non-shuttle	Change from same week 2022	n/a	-500	n/a	n/a	n/a	n/a	
Non-snuttle	UP	n/a	-25	n/a	n/a	n/a	n/a	
	Change from last week	n/a	-25	n/a	n/a	n/a	n/a	
	Change from same week 2022	n/a	-725	n/a	n/a	n/a	n/a	
	BNSF	450	600	n/a	250	n/a	n/a	
	Change from last week	33	67	n/a	-100	n/a	n/a	
	Change from same week 2022	n/a	-200	n/a	n/a	n/a	n/a	
	UP	-275	-200	n/a	n/a	n/a	n/a	
Shuttle	Change from last week	0	n/a	n/a	n/a	n/a	n/a	
	Change from same week 2022	n/a	-1,300	n/a	n/a	n/a	n/a	
	СРКС	100	100	n/a	n/a	n/a	n/a	
	Change from last week	0	n/a	n/a	n/a	n/a	n/a	
	Change from same week 2022	n/a	-200	n/a	n/a	n/a	n/a	

Note: Bids and offers represent a premium/discount to tariff rates; n/a = not available; BNSF = BNSF Railway; UP = Union Pacific Railroad; CPKC = Canadian Pacific Kansas City. Source: USDA, Agricultural Marketing Service analysis of data from Tradewest Brokerage Company and the Malsam Company.

The tariff rail rate is the base price of freight rail service. Together with fuel surcharges and any auction and secondary rail values, the tariff rail rate constitutes the full cost of shipping by rail. Typically, auction and secondary rail values are a small fraction of the full cost of shipping by rail relative to the tariff rate. However, during times of high rail demand or short supply, high auction and secondary rail values can exceed the cost of the tariff rate plus fuel surcharge.

#### Table 6. Tariff rail rates for unit train shipments

December 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	\$248	\$43.13	\$1.17	4
	Grand Forks, ND	Duluth-Superior, MN	\$4,008	\$95	\$40.75	\$1.11	2
	Wichita, KS	Los Angeles, CA	\$7,340	\$490	\$77.75	\$2.12	-5
Wheat	Wichita, KS	New Orleans, LA	\$4,825	\$436	\$52.25	\$1.42	2
	Sioux Falls, SD	Galveston-Houston, TX	\$7,111	\$402	\$74.61	\$2.03	-4
	Colby, KS	Galveston-Houston, TX	\$5,075	\$478	\$55.14	\$1.50	2
	Amarillo, TX	Los Angeles, CA	\$5,121	\$665	\$57.46	\$1.56	-3
	Champaign-Urbana, IL	New Orleans, LA	\$4,000	\$493	\$44.62	\$1.13	-3
	Toledo, OH	Raleigh, NC	\$8,877	\$0	\$88.15	\$2.24	4
	Des Moines, IA	Davenport, IA	\$2,830	\$104	\$29.14	\$0.74	5
Corn	Indianapolis, IN	Atlanta, GA	\$6,866	\$0	\$68.18	\$1.73	4
	Indianapolis, IN	Knoxville, TN	\$5,790	\$0	\$57.50	\$1.46	4
	Des Moines, IA	Little Rock, AR	\$4,425	\$307	\$46.99	\$1.19	2
	Des Moines, IA	Los Angeles, CA	\$6,305	\$893	\$71.48	\$1.82	-1
	Minneapolis, MN	New Orleans, LA	\$3,156	\$738	\$38.67	\$1.05	-39
	Toledo, OH	Huntsville, AL	\$7,269	\$0	\$72.18	\$1.96	3
Soybeans	Indianapolis, IN	Raleigh, NC	\$8,169	\$0	\$81.12	\$2.21	4
	Indianapolis, IN	Huntsville, AL	\$5,921	\$0	\$58.80	\$1.60	4
	Champaign-Urbana, IL	New Orleans, LA	\$5,040	\$493	\$54.94	\$1.50	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

December 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
	Great Falls, MT	Portland, OR	\$4,543	\$282	\$47.91	\$1.30	-0
	Wichita, KS	Galveston-Houston, TX	\$4,611	\$219	\$47.97	\$1.31	4
	Chicago, IL	Albany, NY	\$7,413	\$0	\$73.61	\$2.00	5
Wheat	Grand Forks, ND	Portland, OR	\$6,201	\$486	\$66.41	\$1.81	-2
	Grand Forks, ND	Galveston-Houston, TX	\$5,549	\$507	\$60.13	\$1.64	-2
	Colby, KS	Portland, OR	\$5,923	\$784	\$66.60	\$1.81	-3
	Minneapolis, MN	Portland, OR	\$5,660	\$592	\$62.09	\$1.58	-5
	Sioux Falls, SD	Tacoma, WA	\$5,620	\$542	\$61.20	\$1.55	-5
	Champaign-Urbana, IL	New Orleans, LA	\$4,345	\$493	\$48.04	\$1.22	1
Corn	Lincoln, NE	Galveston-Houston, TX	\$4,560	\$316	\$48.42	\$1.23	0
	Des Moines, IA	Amarillo, TX	\$4,845	\$386	\$51.94	\$1.32	1
	Minneapolis, MN	Tacoma, WA	\$5,660	\$588	\$62.04	\$1.58	-5
	Council Bluffs, IA	Stockton, CA	\$5,780	\$608	\$63.43	\$1.61	-2
	Sioux Falls, SD	Tacoma, WA	\$6,335	\$542	\$68.30	\$1.86	-4
	Minneapolis, MN	Portland, OR	\$6,385	\$592	\$69.29	\$1.89	-5
Caulagana	Fargo, ND	Tacoma, WA	\$6,235	\$482	\$66.71	\$1.82	-4
Soybeans	Council Bluffs, IA	New Orleans, LA	\$5,270	\$568	\$57.98	\$1.58	0
	Toledo, OH	Huntsville, AL	\$5,509	\$0	\$54.71	\$1.49	4
	Grand Island, NE	Portland, OR	\$5,905	\$802	\$66.61	\$1.81	-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.

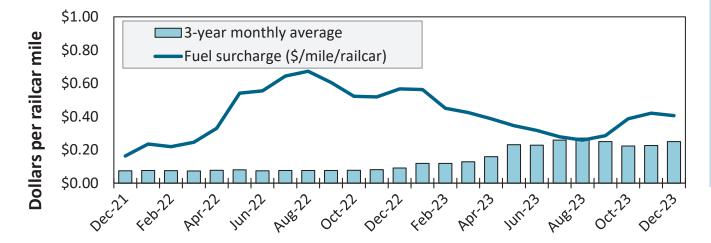
Source: BNSF Railway, Canadian National Railway, CSX Transportation, and Union Pacific Railroad.

#### 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, Cl	\$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
	ТХ	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
Carro	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 <i>,</i> 825	\$0	\$79.95	\$2.03	2
	MO	Bojay (Tula), HG	\$8,647	\$614	\$94.63	\$2.57	5
Couloose	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
Conchune	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.

#### Figure 7. Railroad fuel surcharges, North American weighted average



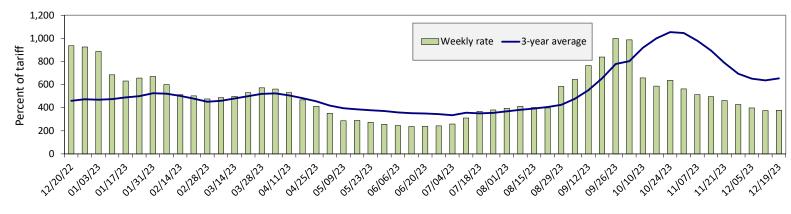
December 2023: \$0.41/mile, down 1 cent from last month's surcharge of \$0.42/mile; down 16 cents from the December 2022 surcharge of \$0.57/mile; and up 16 cents from the December prior 3-year average of \$0.25/mile.

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.

### **Barge Transportation**

#### Figure 8. Illinois River barge freight rate



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. For the week ending December 19: 1 percent higher than the previous week; and 60 percent lower than last year; and 42 percent lower than the 3-year average.

#### 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	12/19/2023	-	-	378	322	333	333	270
Rate	12/12/2023	-	378	375	327	358	358	281
\$/ton	12/19/2023	-	-	17.54	12.85	15.62	13.45	8.48
\$71011	12/12/2023	-	20.11	17.40	13.05	16.79	14.46	8.82
Measure	Time Period	Twin Cities	Mid- Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo- Memphis
Current week %	Last year	-	-	-60	-62	-59	-59	-58
change from the same week	3-year avg.	-	-	-42	-43	-46	-46	-45
Pata	January	-	-	403	319	334	334	275
Rate	March	-	-	387	312	323	323	270

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



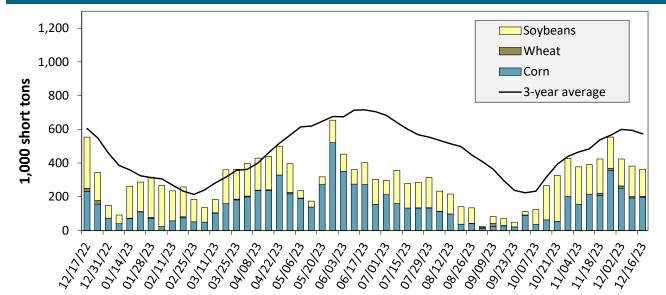
#### Calculating barge rate per ton: (Rate\* 1976 tariff benchmark rate per ton)/100

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.

### **Barge Transportation**

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



For the week ending December 16: 34 percent lower than last year and 37 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)

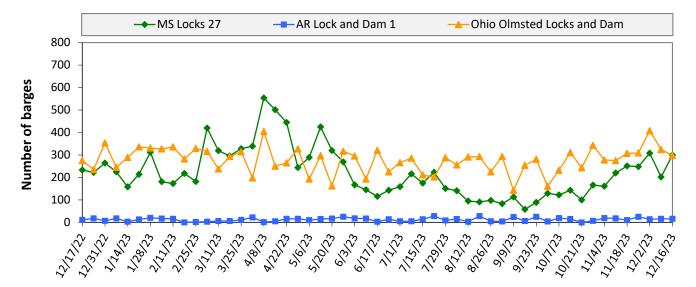
For the week ending 12/16/2023	Corn	Wheat	Soybeans	Other	Total
Mississippi River (Rock Island, IL (L15))	6	0	5	0	11
Mississippi River (Winfield, MO (L25))	39	5	43	0	86
Mississippi River (Alton, IL (L26))	171	5	132	0	308
Mississippi River (Granite City, IL (L27))	197	5	161	0	363
Illinois River (La Grange)	129	0	101	0	230
Ohio River (Olmsted)	150	13	109	0	272
Arkansas River (L1)	0	17	6	0	22
Weekly total - 2023	347	34	276	0	657
Weekly total - 2022	309	32	450	0	790
2023 YTD	12,473	1,306	11,321	247	25,348
2022 YTD	16,041	1,556	13,872	229	31,699
2023 as % of 2022 YTD	78	84	82	108	80
Last 4 weeks as % of 2022	143	174	61	1,928	93
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.

### **Barge Transportation**

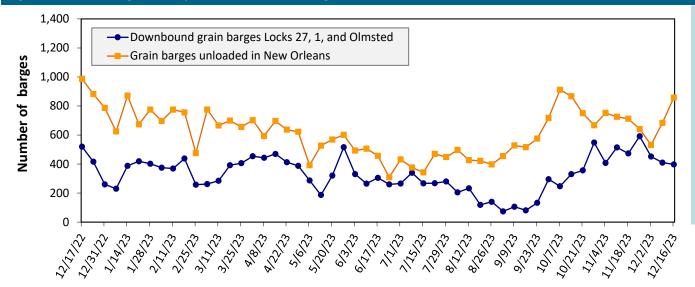
#### Figure 11. Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



For the week ending December 16: 614 barges transited the locks, 72 barges more than the previous week, and 1 percent higher 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 December 16: 398 barges moved down river, 12 fewer than the previous week; 858 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.

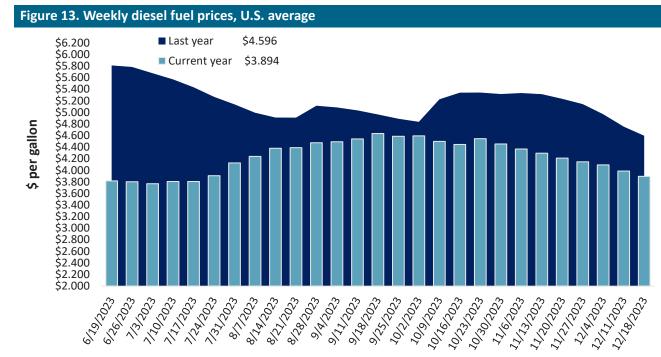
### **Truck Transportation**

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.

Pagion	Location	Price	Change	from
Region	LUCATION	Price	Week ago	Year ago
	East Coast	3.969	-0.081	-0.878
	New England	4.362	-0.056	-0.895
1	Central Atlantic	4.336	-0.070	-0.980
	Lower Atlantic	3.793	-0.087	-0.844
П	Midwest	3.806	-0.094	-0.671
Ш	Gulf Coast	3.569	-0.071	-0.636
IV	Rocky Mountain	3.933	-0.116	-0.927
	West Coast	4.655	-0.147	-0.483
V	West Coast less California	4.153	-0.157	-0.724
	California	5.231	-0.136	-0.206
Total	United States	3.894	-0.093	-0.702

Table 11. Retail on-highway diesel prices, week ending 12/18/2023 (U.S. \$/gallon)

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 December 18, the U.S. average diesel fuel price decreased 9.3 cents from the previous week to \$3.894 per gallon, 70.2 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)

		Wheat								
Grain Exports			Soft red winter (SRW)	Hard red spring (HRS)	Soft white wheat (SWW)	Durum	All wheat	Corn	Soybeans	Total
	For the week ending 12/07/2023	985	2,359	1,606	1,068	124	6,143	17,608	14,001	37,752
Current unshipped (outstanding) export sales	This week year ago	890	594	1,371	1,156	92	4,102	12,739	18,798	35,639
	Last 4 wks. as % of same period 2022/23	107	247	112	87	135	124	131	74	100
	2023/24 YTD	1,521	1,787	3,035	1,845	204	8,392	9,558	19,369	37,320
	2022/23 YTD	2,971	1,698	2,928	2,283	129	10,008	7,264	22,870	40,142
Current shipped (cumulative) exports sales	YTD 2023/24 as % of 2022/23	51	105	104	81	158	84	132	85	93
	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

	Total commitm	ients (1,000 mt)	% change current MY from	Exports 3-year average 2020-	
For the week ending 12/07/2023	YTD MY 2023/24	YTD MY 2022/23	last MY	22 (1,000 mt)	
Mexico	12,902	9,570	35	15,227	
China	1,549	3,717	-58	12,616	
Japan	3,696	1,570	135	10,273	
Columbia	2,015	318	535	4,398	
Korea	401	20	1903	2,563	
Top 5 importers	20,562	15,195	35	45,077	
Total U.S. corn export sales	27,166	20,003	36	56,665	
% of YTD current month's export projection	51%	47%			
Change from prior week	1,419	959			
Top 5 importers' share of U.S. corn export sales	76%	76%		80%	
USDA forecast December 2023	53,343	42,192	26		
Corn use for ethanol USDA forecast, December 2023	135,255	131,471	3		

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

	Total commitm	ients (1,000 mt)	% change current MY	Exports 3-year average 2020-22 (1,000 mt)	
For the week ending 12/07/2023	YTD MY 2023/24	YTD MY 2022/23	from last MY		
China	18,261	24,626	-26	32,321	
Mexico	3,002	3,164	-5	4,912	
Egypt	271	746	-64	2,670	
Japan	1,131	1,317	-14	2,259	
Indonesia	598	619	-4	1,973	
Top 5 importers	23,263	30,472	-24	44,133	
Total U.S. soybean export sales	33,371	41,669	-20	56,656	
% of YTD current month's export projection	70%	77%			
Change from prior week	1,084	2,875			
Top 5 importers' share of U.S. soybean export sales	70%	73%		78%	
USDA forecast, December 2023	47,763	54,213	-12		

Note: The top 5 importers are based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for marketing year (MY) 2022/23 (Sep. 1 – Aug. 31). "Total commitments" = cumulative exports (shipped) + outstanding sales (unshipped), from FAS weekly export sales report, or export sales query. Total commitments' change (net sales) from prior week could include revisions from previous week's outstanding sales or accumulated sales. In rightmost column, "Exports" = carryover plus accumulated export (as defined in FAS marketing year ranking reports). mt = metric ton; yr. = year; avg. = average; YTD = year to date.

Source: USDA, Foreign Agricultural Service.

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

	Total commitm	ents (1,000 mt)	% change current MY	Exports 3-year average	
For the week ending 12/07/2023	YTD MY 2023/24	YTD MY 2022/23	from last MY	2020-22 (1,000 mt)	
Mexico	2,162	2,386	-9	3,397	
Philippines	2,003	1,686	19	2,615	
Japan	1,363	1,515	-10	2,281	
China	2,195	616	256	1,740	
Korea	954	976	-2	1,426	
Nigeria	189	663	-71	1,276	
Taiwan	824	547	51	944	
Thailand	309	502	-39	643	
Columbia	211	406	-48	537	
Indonesia	330	299	10	469	
Top 10 importers	10,540	9,595	10	15,327	
Total U.S. wheat export sales	14,534	14,110	3	20,411	
% of YTD current month's export projection	74%	68%			
Change from prior week	1,490	469			
Top 10 importers' share of U.S. wheat export sales	73%	68%		75%	
USDA forecast, December 2023	19,731	20,657	-4		

Note: The top 5 importers are based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for marketing year (MY) 2022/23 (Sep. 1 – Aug. 31). "Total commitments" = cumulative exports (shipped) + outstanding sales (unshipped), from FAS weekly export sales report, or export sales query. Total commitments' change (net sales) from prior week could include revisions from previous week's outstanding sales or accumulated sales. In rightmost column, "Exports" = carryover plus accumulated export (as defined in FAS marketing year ranking reports). mt = metric ton; yr. = year; avg. = average; YTD = year to date.

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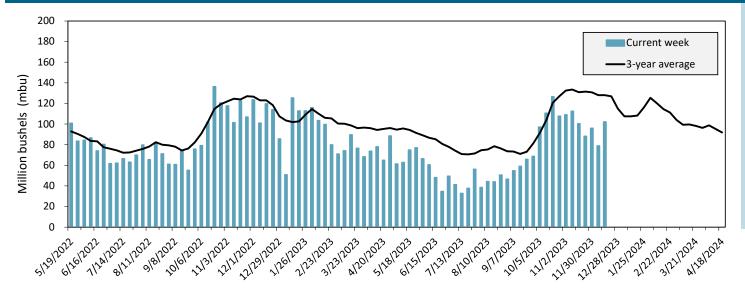
### Table 16. Grain inspections for export by U.S. port region (1,000 metric tons)

	<b>.</b>	For the week ending	Previous	Current week			2023 YTD as	Last 4-w	eeks as % of:	
Port regions	Commodity	12/14/2023	week*	as % of previous	2023 YTD*	2022 YTD*	% of 2022 YTD	Last year	Prior 3-yr. avg.	2022 total*
	Wheat	122	176	70	9,652	9,715	99	97	76	9,836
Pacific	Corn	243	139	175	4,769	9,345	51	198	134	9,615
Northwest	Soybeans	301	300	100	10,161	13,747	74	58	58	14,178
	Total	666	614	108	24,582	32,807	75	81	73	33,629
	Wheat	38	67	57	3,397	4,019	85	234	178	4,053
Mississippi	Corn	440	378	116	21,870	29,868	73	113	87	30,781
Gulf	Soybeans	930	505	184	26,867	28,940	93	65	57	31,283
	Total	1,408	950	148	52,134	62,827	83	77	66	66,116
	Wheat	29	1	n/a	1,609	3,361	48	18	24	3,421
Towas Culf	Corn	20	11	189	373	648	57	90	119	648
Texas Gulf	Soybeans	0	0	n/a	281	597	47	0	0	685
	Total	49	11	433	2,262	4,605	49	20	18	4,754
	Wheat	41	30	137	2,261	2,763	82	65	60	2,912
Interior	Corn	228	180	127	9,792	8,586	114	134	118	8,961
interior	Soybeans	186	183	102	6,489	6,831	95	116	110	7,109
	Total	455	393	116	18,542	18,181	102	117	107	18,982
	Wheat	69	61	114	571	339	168	314	190	395
Great Lakes	Corn	0	0	n/a	56	158	36	0	0	158
Great Lakes	Soybeans	0	0	n/a	200	759	26	0	0	760
	Total	69	61	114	827	1,256	66	58	57	1,312
	Wheat	0	0	n/a	106	169	63	n/a	0	169
Atlantic	Corn	0	5	0	133	304	44	101	238	309
Adantic	Soybeans	67	64	105	2,058	2,662	77	67	68	2,867
	Total	67	69	98	2,296	3,136	73	68	68	3,345
	Wheat	300	334	90	17,595	20,366	86	94	80	20,786
J.S. total from	Corn	931	712	131	36,992	48,910	76	131	103	50,471
ports*	Soybeans	1,485	1,052	141	46,056	53,537	86	64	58	56,882
	Total	2,716	2,098	129	100,643	122,812	82	80	71	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.

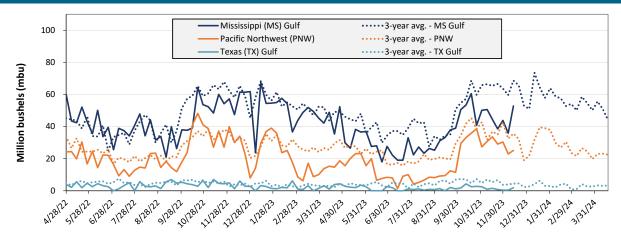
#### Figure 14. U.S. grain inspected for export (wheat, corn, and soybeans)



For the week ending December 14: 102.2 mbu of grain inspected, up 29 percent from the previous week, down 15 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)



Source: U	SDA, Federa	Grain	Inspection	Service.
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Week ending 12/14/23 inspections (mbu):	
MS Gulf: 52.9	
PNW: 25.1	
TX Gulf: 1.9	

Percent change from	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last week	up	up	up	up
	47	318	51	10
Last year (same week)	down	down	down	down
	14	69	19	26
3-year average	down	down	down	down
(4-week moving average)	18	60	21	31

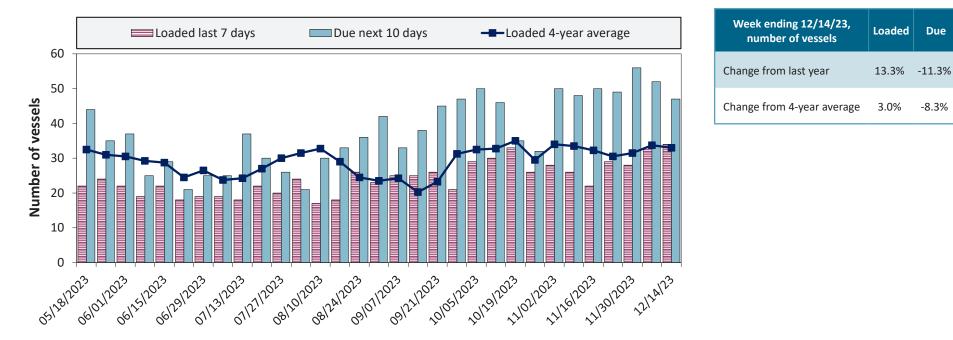
### **Ocean Transportation**

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

Date		Pacific Northwest		
	In port	Loaded 7-days	Due next 10-days	In port
12/14/2023	19	34	47	18
12/7/2023	22	33	52	13
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.

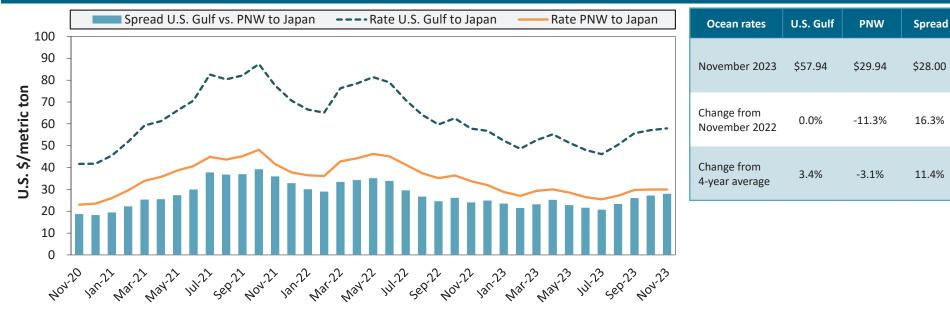
#### Figure 16. U.S . Gulf vessel loading activity



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



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

#### Table 18. Ocean freight rates for selected shipments, week ending 12/16/2023

Export region	Import region	Grain types	Entry date	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	China	Heavy grain	Sep 12, 2023	Oct 1/ Nov 1, 2023	66,000	54.50
U.S. Gulf	China	Heavy grain	Sep 6, 2023	Oct 1/10, 2023	68,000	55.00
U.S. Gulf	Jamaica	Wheat	Nov 2, 2023	Dec 1/10, 2023	9,460	63.50
U.S. Gulf	Colombia	Wheat	Oct 26, 2023	Dec 15/25, 2023	27,500	99.00
U.S. Gulf	Guyana	Wheat	Nov 2, 2023	Dec 1/10, 2023	8,250	84.00
U.S. Gulf	S. Korea	Heavy grain	Oct 10, 2023	Nov 25/Dec 5, 2023	58,000	65.35
U.S. Gulf	S. Korea	Heavy grain	Sep 27, 2023	Oct 25/Nov 5, 2023	57,000	64.85
U.S. Gulf	S. Korea	Heavy grain	Sep 19, 2023	Nov 1/15, 2023	58,000	64.50
U.S. Gulf	S. Korea	Heavy grain	Aug 1, 2023	Oct 1/20, 2023	57,000	58.30
PNW	N. China	Heavy grain	Oct 19, 2023	Nov 16/22, 2023	66,000	28.00
PNW	Thailand	Heavy grain	Oct 20, 2023	Dec 5/15, 2023	66,000	22.50
PNW	Yemen	Wheat	Oct 6, 2023	Nov 5/15, 2023	30,000	74.43
PNW	Yemen	Wheat	Sep 26, 2023	Nov 5/15, 2023	24,740	91.89
WC US	Thailand	Wheat	Nov 9, 2023	Dec 1/10, 2023	60,500	35.25
Brazil	China	Heavy grain	Oct 26, 2023	Dec 1/3, 2023	64,000	39.25

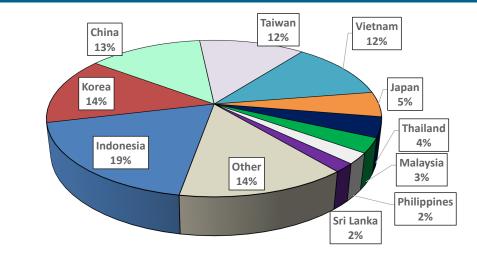
Note: 50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels. Rates shown are per metric ton (1 metric ton = 2,204.62 pounds), free on board (F.O.B), except where otherwise indicated. op = option

Source: Maritime Research, Inc.

### **Ocean Transportation**

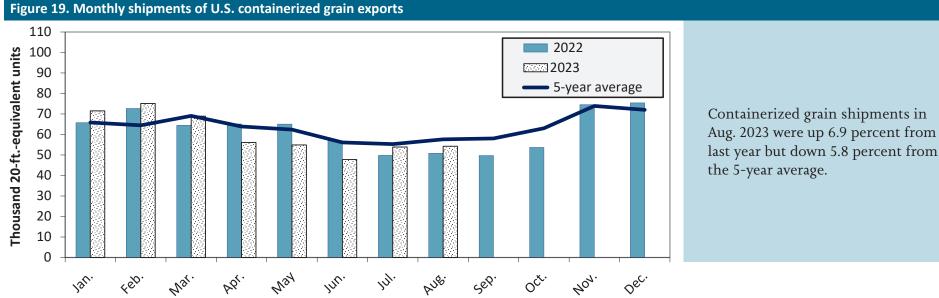
#### Figure 18. Top 10 destination markets for U.S. containerized grain exports, Jan-Aug 2023

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.



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.



the 5-year average.

Note: ft. = foot. The following harmonized tariff codes are used to calculate containerized grains movements: 1001, 100190, 1002, 100200, 1003, 100300, 1004, 100400, 1005, 100590, 1007, 100700, 110100, 1102, 110220, 110290, 1201, 120100, 120190, 120810, 230210, 230310, 230330, 2304, and 230990. Source: Source: USDA, Agricultural Marketing Service analysis of PIERS data, S&P Global.

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

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