USDA United States Department of Agriculture

Grain Transportation Report

A weekly publication of the Agricultural Marketing Service
www.ams.usda.gov/GTR

Contact Us

January 5, 2023

Contents

The next release is January 12, 2023

WEEKLY HIGHLIGHTS

Surface Transportation Board Orders UP To Move Trains to Foster Farms

On December 30, 2022, the Surface Transportation Board (STB) directed Union Pacific (UP) to make rail deliveries of corn to Foster Poultry Farms (Foster Farms) facilities in California. According to Foster Farms, UP corn deliveries are vital to feeding "hundreds of thousands of cattle and millions of chickens." However, insufficient deliveries in October and November had brought feed stocks to critically low levels, the company said. As a result, to supplement low UP deliveries, Foster Farms has relied on BNSF Railway shipments and truck transloads and has also resorted to cutting off feed to dairy cattle. UP attributed the current crisis mainly to the "extreme winter weather that has affected many rail shippers." The railroad initially expected to have five loaded trains delivered to Foster Farms by January 3. However, as of UP's January 3 status update, only two of the trains had arrived on time, while the remaining three were delayed and expected to be delivered by January 5.

Low-Interest DOT Loan for $21.7 Million Replaces Bridges in Rural Louisiana

The U.S. Department of Transportation (DOT) recently provided a $21.7 million low-interest loan to the Louisiana Department of Transportation and Development's Statewide Bridge Program. The Louisiana projects that will benefit from the loan include replacements of 11 structurally deficient bridges in rural areas of central and eastern parts of the State. The projects qualified for the Rural Project Initiative of DOT's Transportation Infrastructure Finance and Innovation Act credit assistance program. The Rural Project Initiative offers loans for up to 49 percent of a project's eligible costs, as well as fixed interest rates that are half the U.S. Treasury rate. According to USDA's National Agricultural Statistics Service, Louisiana produced a combined total of over 4 million metric tons of corn and soybeans in 2021.

Diesel Price Rises 4.6 Cents—Ending 7-Week Decline

For the week ending January 2, the U.S. average **diesel fuel price** increased 4.6 cents from the previous week to $4.583 per gallon—97.0 cents above the same week last year. This drop comes after 7 consecutive weeks of falling prices, including double-digit drops for 3 of those weeks. Diesel prices increased in every region except the Rocky Mountain region, which saw a decline of 1.5 cents. In the Midwest, diesel prices were up 2.1 cents from last week—94.6 cents higher than the same time last year.

Kentucky Issues HOS Waiver for Transporting Feed Products

Effective until January 20, the Kentucky Governor has issued an hours-of-service (HOS) exemption for transporting feed products. The exemption is intended to mitigate the effects of extreme cold and icy conditions across the Nation, which have caused distribution and delivery problems for livestock feed—especially, poultry feed.

Iowa Extends Weight Limits for Grain Transportation

Effective until January 20, the Iowa Governor has extended an exemption from weight limits for vehicles transporting corn, soybeans, hay, straw, silage, stover, fertilizer (dry, liquid, and gas), and manure (dry and liquid). During the exemption period, weight limits and permits are waived for vehicles up to 90,000 pounds gross weight. Besides expanding the gross weight limit, the waiver also covers vehicles that do not exceed the maximum axle weight limit (of 20,000 pounds) by more than 12.5 percent—as long as they comply with posted limits on roads and bridges. The waiver applies to loads transported on all highways within Iowa (except the interstate highway system).

Snapshots by Sector

Export Sales

For the week ending December 22, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2022/23 totaled 32.93 million metric tons (mmt), down 26 percent from the same time last year and down 4 percent from last week. Net **corn export sales** for MY 2022/23 were 0.782 mmt, up 23 percent from last week. Net **soybean export sales** were 0.706 mmt, up 6 percent from last week. Net weekly **wheat export sales** were 0.478 mmt, down 43 percent from last week.

Rail

U.S. Class I railroads originated 18,198 **grain carloads** during the week ending December 24. This was a 20-percent decrease from the previous week, 5 percent fewer than last year, and 13 percent fewer than the 3-year average.

Average January shuttle **secondary railcar bids/offers** (per car) were $1,203 above tariff for the week ending December 29. This was $31 less than last week and $641 lower than this week last year.

Barge

For the week ending December 31, **barged grain movements** totaled 402,300 tons. This was 36 percent lower than the previous week and 36 percent lower than the same period last year.

For the week ending December 31, 260 grain barges **moved down river**—156 fewer than last week. There were 787 grain barges **unloaded** in the New Orleans region, 11 percent fewer than last week.

Ocean

For the week ending December 29, 26 **oceangoing grain vessels** were loaded in the Gulf—4 percent more than the same period last year. Within the next 10 days (starting December 30), 44 vessels were expected to be loaded—24 percent fewer than the same period last year.

As of December 29, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $56.00, 2 percent less than the available rate on December 15. The rate from the Pacific Northwest to Japan was $31.50 per mt, 2 percent less than December 15.

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Feature Article/Calendar

Date	Event	Location	Website for More Information
	The following list contains information and links to upcoming events in early 2023.		
Jan. 6-11	**American Farm Bureau Convention** This event offers educational workshops to advance leadership skills, expand business acumen, and gain insight into the trends and realities affecting food production.	San Juan, Puerto Rico	https://annualconvention.fb.org/
Jan. 8-12	**Transportation Research Board (TRB) 2023 Annual Meeting** Expected to attract thousands of transportation professionals from around the world, the meeting covers all transportation modes. TRB's topical sessions and workshops marshal expertise from government, industry, and academic institutions.	Washington, DC	https://www.trb.org/AnnualMeeting/AnnualMeeting.aspx
Jan. 17-19	**Midwest Association of Rail Shippers 2023 Winter Meeting** The meeting's open forum explores solutions to car-supply and other issues. Presentations include "Railroads and Government: Approaching Our Third Century," "Railroad Freight Equipment Update," "Fleet Management 101," and more.	Lombard, IL	https://www.mwrailshippers.com/event/2023-winter-meeting/
Jan. 18-20	**TEGMA 2023 Annual Meeting** At its annual meeting, the Transportation, Elevator and Grain Merchants Association (TEGMA) invites the grain-based agribusiness industry to debate, discuss, and facilitate resolution of operational and business issues. Presentations from CSX, U.S. Soybean Export Council, and Cargill are featured.	Scottsdale, AZ	https://www.tegma.org/2023-annual-meeting
Jan. 24-26	**AAPA 2023 POWERS Summit and Expo** The Port Opportunities with Energy, Resilience, and Sustainability (POWERS) Summit and Exposition is a newly created event of the American Association of Port Authorities (AAPA). The POWERS Summit and Expo will convene port executives, energy leaders, environmental experts, and other key stakeholders in port operations and development.	Tampa, FL	https://my.aapa-ports.org/Public/Events/Event_Display.aspx?EventKey=22POWER
Feb. 20-24	**2023 *Freight Waves* Global Supply Chain Week** *Freight Waves* publication will host a virtual global supply chain week, diving deep into the logistics of transportation supply chains for various industries, including retail, consumer packaged goods, automotive, and heavy industries.	Online	https://live.freightwaves.com/global-supply-chain-week-2023
Feb. 23-24	**USDA 2023 Agricultural Outlook Forum** The USDA 99th annual Agricultural Outlook Forum offers opportunities for exchanging ideas, information, and best practices among producers, processors, policymakers, government officials, and nongovernmental organizations (both domestic and foreign).	Arlington, VA and Online	https://www.usda.gov/oce/ag-outlook-forum
Mar. 6-8	**The 2023 NWC Legislative Summit** This event of the National Waterways Conference (NWC) explores congressional, regulatory, and administrative policies within the water resources realm. The summit is attended by NWC members and other waterways-infrastructure stakeholders, as well as staff from the U.S. Army Corps of Engineers and congressional offices.	Washington, DC	https://waterways.org/future-meetings/
Mar. 21-23	**National Grain and Feed Association - 127th Annual Convention 2023** As a premier educational event for agribusiness leaders, the convention seeks to leverage upcoming opportunities for grain, feed processing, and export markets.	La Quinta, CA	https://imis.ngfa.org/convention
Apr. 27-28	**64th Transportation Research Forum** The Transportation Research Forum (TRF) convenes transportation practitioners, regulators, and academics from multiple modes and sectors to share ideas, explore current research and policy issues, and build networks. TRF offers an abundance of notable speakers, research presentations, and policy discussions.	Chicago, IL	https://trforum.org/about-the-annual-meeting/
May 31 - Jun. 2	**IMX 2023** Produced by the *Waterways Journal*, the Inland Marine Expo 2023 (IMX 2023) is targeted specifically to the inland and intracoastal marine industry. IMX 2023 sessions will address trends in barge and vessel data, alternative fuels and decarbonization, modernization of dredge fleets, and more.	Nashville, TN	https://s4.goeshow.com/ime/annual/2023/Attendee_register.cfm

Grain Transportation Indicators

Table 1
Grain transport cost indicators[1]

For the week ending	Truck	Rail: Non-Shuttle	Rail: Shuttle	Barge	Ocean: Gulf	Ocean: Pacific
01/04/23	308	333	313	492	250	223
12/28/22	304	337	314	514	n/a	n/a

[1]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.

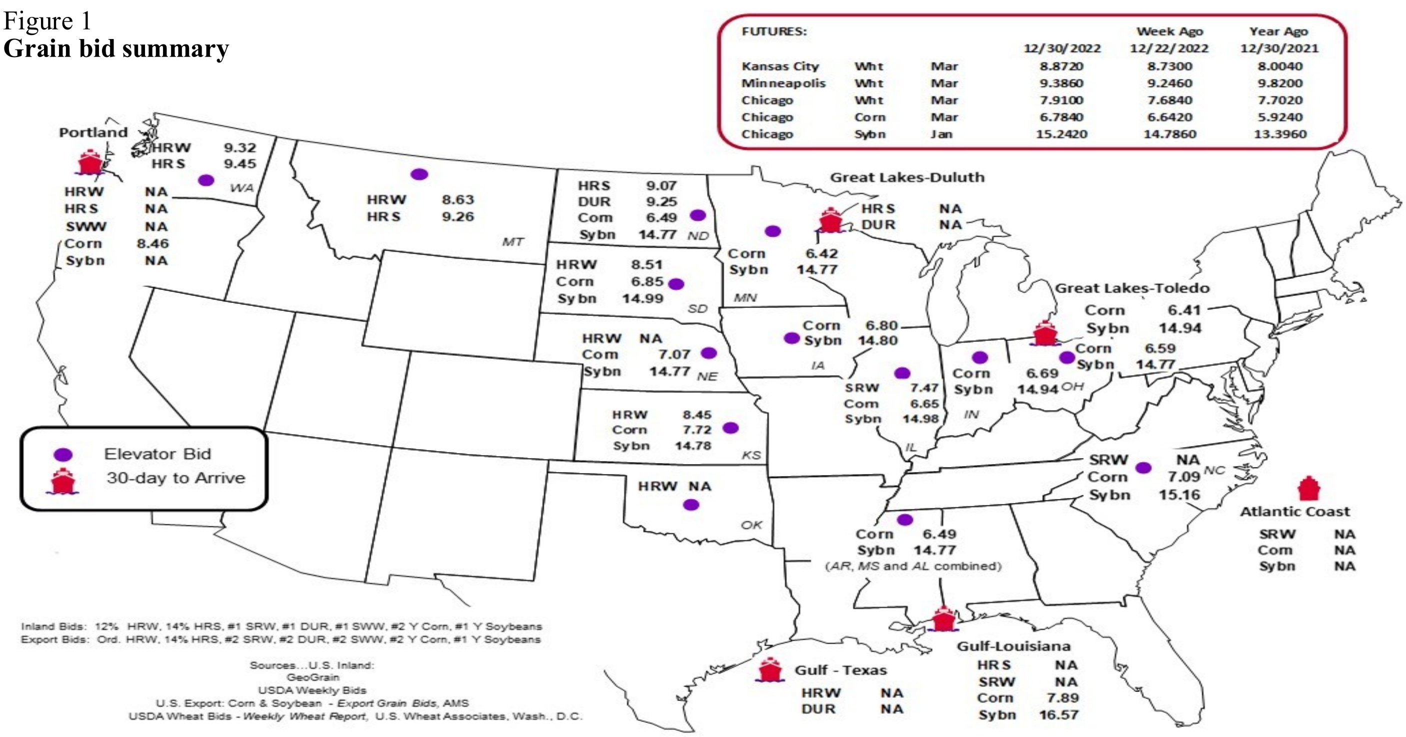
Table 2
Market Update: U.S. origins to export position price spreads ($/bushel)

Commodity	Origin–destination	12/30/2022	12/22/2022
Corn	IL–Gulf	-1.24	-1.23
Corn	NE–Gulf	-0.82	-0.74
Soybean	IA–Gulf	-1.77	-1.68
HRW	KS–Gulf	n/a	-2.36
HRS	ND–Portland	n/a	-2.34

Note: nq = no quote; n/a = not available; HRW = hard red winter wheat; HRS = hard red spring wheat.
Source: USDA, Agricultural Marketing Service.

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.

Figure 1
Grain bid summary



Rail Transportation

Table 3

Class I rail carrier grain car bulletin (grain carloads originated)

For the week ending:	East		West			U.S. total	Canada	
12/24/2022	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,609	2,138	8,316	1,436	4,699	18,198	4,990	5,165
This week last year	1,654	1,845	10,152	1,058	4,486	19,195	3,837	4,070
2022 YTD	91,711	127,504	561,899	65,022	292,538	1,138,674	210,687	210,846
2021 YTD	92,254	118,833	600,413	63,304	312,765	1,187,569	207,445	239,285
2022 YTD as % of 2021 YTD	99	107	94	103	94	96	102	88
Last 4 weeks as % of 2021*	106	128	87	92	93	95	153	138
Last 4 weeks as % of 3-yr. avg.**	116	119	86	113	94	95	132	112
Total 2021	93,935	120,622	609,890	64,818	318,002	1,207,267	209,561	242,533

*The past 4 weeks of this year as a percent of the same 4 weeks last year.

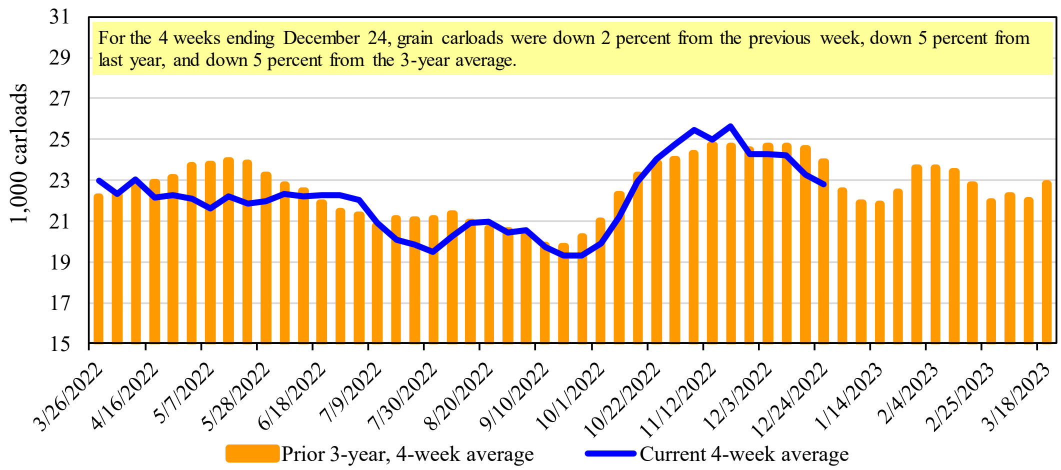
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

Note: NS = Norfolk Southern; KCS = Kansas City Southern; UP = Union Pacific; CN = Canadian National; CP = Canadian Pacific.

Source: Association of American Railroads.

Figure 2

Total weekly U.S. Class I railroad grain carloads



Source: Association of American Railroads.

Table 4

Railcar auction offerings[1] ($/car)[2]

For the week ending:		Delivery period							
12/29/2022		Feb-23	Feb-22	Mar-23	Mar-22	Apr-23	Apr-22	May-23	May-22
BNSF[3]	COT grain units	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	COT grain single-car	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
UP[4]	GCAS/Region 1	n/a	no offer	n/a	no offer	n/a	n/a	n/a	n/a
	GCAS/Region 2	n/a	no offer	n/a	no offer	n/a	n/a	n/a	n/a

[1]Auction offerings are for single-car and unit train shipments only.

[2]Average premium/discount to tariff, last auction. n/a = not available.

[3]BNSF - COT = BNSF Railway Certificate of Transportation; north grain and south grain bids were combined effective the week ending 6/24/06.

[4]UP - GCAS = Union Pacific Railroad Grain Car Allocation System.

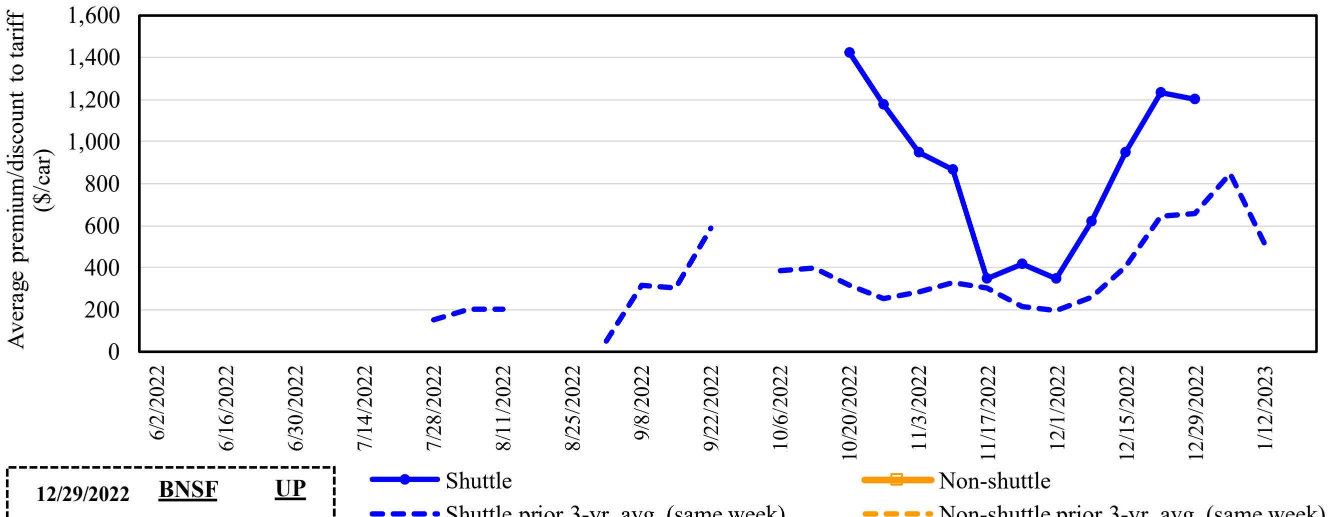
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

Source: USDA, Agricultural Marketing Service.

The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/ supply.

Figure 3
Secondary market bids/offers for railcars to be delivered in January 2023

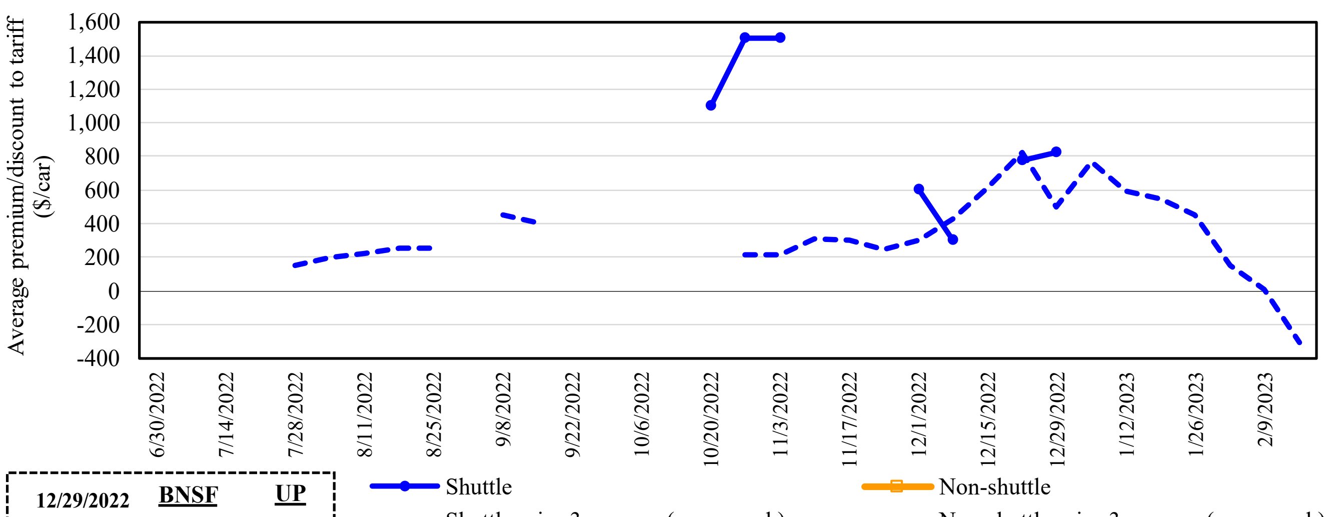


12/29/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$1,306	$1,100

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $31 this week and are $222 below the peak.

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.

Figure 4
Secondary market bids/offers for railcars to be delivered in February 2023



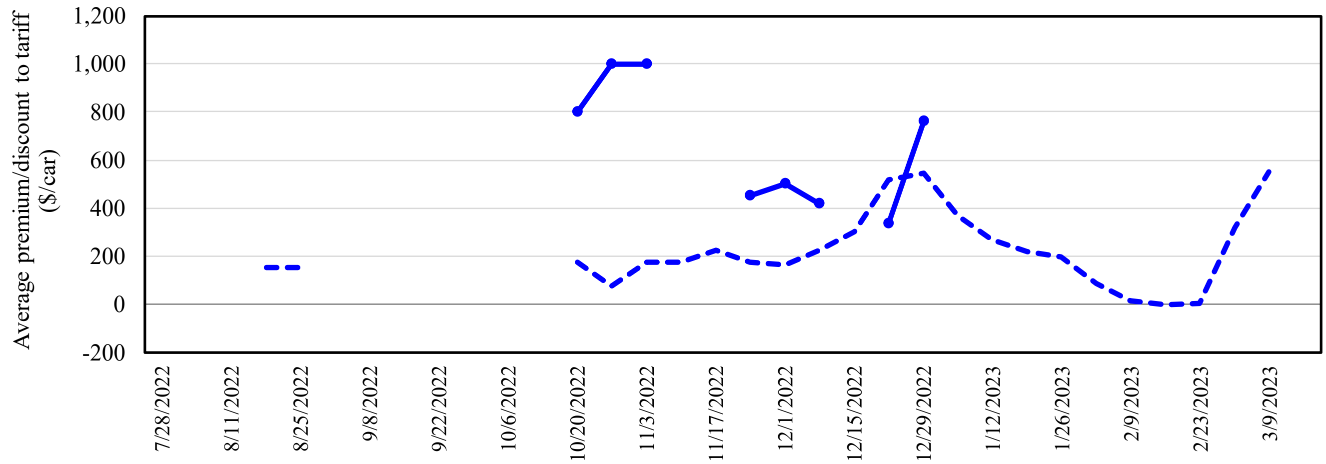
12/29/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$825	n/a

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $50 this week and are $675 below the peak.

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.

Figure 5

Secondary market bids/offers for railcars to be delivered in March 2023



12/29/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$325	$1,200

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $429 this week and are $238 below the peak.

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.

Table 5

Weekly secondary railcar market ($/car)[1]

For the week ending:		Delivery period					
12/29/2022		Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
Non-shuttle	**BNSF-GF**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2021	n/a	n/a	n/a	n/a	n/a	n/a
	UP-Pool	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2021	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**1,306**	**825**	**325**	**n/a**	**(150)**	**n/a**
	Change from last week	39	50	(8)	n/a	0	n/a
	Change from same week 2021	(378)	(275)	(475)	n/a	(100)	n/a
	UP-Pool	**1,100**	**n/a**	**1,200**	**n/a**	**n/a**	**n/a**
	Change from last week	(100)	n/a	n/a	n/a	n/a	n/a
	Change from same week 2021	(904)	n/a	500	n/a	n/a	n/a

[1]Average premium/discount to tariff, $/car-last week.

Note: Bids listed are market indicators only and are not guaranteed prices. n/a = not available; GF = guaranteed freight; Pool = guaranteed pool;
BNSF = BNSF Railway; UP = Union Pacific Railroad.

Data from James B. Joiner Co., Tradewest Brokerage Co.

Source: USDA, Agricultural Marketing Service.

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 and shuttle train shipments[1]

January 2023	Origin region[3]	Destination region[3]	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per: metric ton	Tariff plus surcharge per: bushel[2]	Percent change Y/Y[4]
Unit train							
Wheat	Wichita, KS	St. Louis, MO	$3,695	$324	$39.91	$1.09	4
	Grand Forks, ND	Duluth-Superior, MN	$3,858	$152	$39.82	$1.08	9
	Wichita, KS	Los Angeles, CA	$7,490	$780	$82.13	$2.24	11
	Wichita, KS	New Orleans, LA	$4,600	$570	$51.34	$1.40	7
	Sioux Falls, SD	Galveston-Houston, TX	$7,226	$641	$78.12	$2.13	10
	Colby, KS	Galveston-Houston, TX	$4,850	$624	$54.36	$1.48	7
	Amarillo, TX	Los Angeles, CA	$5,121	$868	$59.48	$1.62	8
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$644	$46.12	$1.17	7
	Toledo, OH	Raleigh, NC	$8,551	$705	$91.92	$2.33	9
	Des Moines, IA	Davenport, IA	$2,655	$136	$27.72	$0.70	8
	Indianapolis, IN	Atlanta, GA	$6,593	$530	$70.73	$1.80	9
	Indianapolis, IN	Knoxville, TN	$5,564	$343	$58.66	$1.49	9
	Des Moines, IA	Little Rock, AR	$4,250	$401	$46.18	$1.17	11
	Des Moines, IA	Los Angeles, CA	$6,130	$1,167	$72.46	$1.84	13
Soybeans	Minneapolis, MN	New Orleans, LA	$3,856	$1,001	$48.23	$1.31	19
	Toledo, OH	Huntsville, AL	$7,037	$503	$74.87	$2.04	8
	Indianapolis, IN	Raleigh, NC	$7,843	$715	$84.99	$2.31	10
	Indianapolis, IN	Huntsville, AL	$5,689	$339	$59.87	$1.63	9
	Champaign-Urbana, IL	New Orleans, LA	$4,865	$644	$54.71	$1.49	9
Shuttle train							
Wheat	Great Falls, MT	Portland, OR	$4,393	$449	$48.08	$1.31	13
	Wichita, KS	Galveston-Houston, TX	$4,311	$349	$46.28	$1.26	4
	Chicago, IL	Albany, NY	$7,090	$666	$77.02	$2.10	10
	Grand Forks, ND	Portland, OR	$6,051	$775	$67.79	$1.84	13
	Grand Forks, ND	Galveston-Houston, TX	$5,399	$807	$61.63	$1.68	15
	Colby, KS	Portland, OR	$5,923	$1,023	$68.98	$1.88	6
Corn	Minneapolis, MN	Portland, OR	$5,660	$944	$65.58	$1.67	18
	Sioux Falls, SD	Tacoma, WA	$5,620	$864	$64.39	$1.64	17
	Champaign-Urbana, IL	New Orleans, LA	$4,170	$644	$47.80	$1.21	13
	Lincoln, NE	Galveston-Houston, TX	$4,360	$504	$48.30	$1.23	16
	Des Moines, IA	Amarillo, TX	$4,670	$504	$51.38	$1.31	11
	Minneapolis, MN	Tacoma, WA	$5,660	$936	$65.51	$1.66	18
	Council Bluffs, IA	Stockton, CA	$5,580	$968	$65.03	$1.65	18
Soybeans	Sioux Falls, SD	Tacoma, WA	$6,350	$864	$71.64	$1.95	15
	Minneapolis, MN	Portland, OR	$6,400	$944	$72.93	$1.98	16
	Fargo, ND	Tacoma, WA	$6,250	$769	$69.70	$1.90	14
	Council Bluffs, IA	New Orleans, LA	$5,095	$742	$57.97	$1.58	9
	Toledo, OH	Huntsville, AL	$5,277	$503	$57.39	$1.56	11
	Grand Island, NE	Portland, OR	$5,730	$1,048	$67.31	$1.83	15

[1] 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.

[2] Approximate load per car = 111 short tons (100.7 metric tons): corn 56 pounds per bushel (lbs/bu), wheat and soybeans 60 lbs/bu.

[3] Regional economic areas are defined by the Bureau of Economic Analysis (BEA).

[4] Percentage change year over year (Y/Y) calculated using tariff rate plus fuel surcharge.

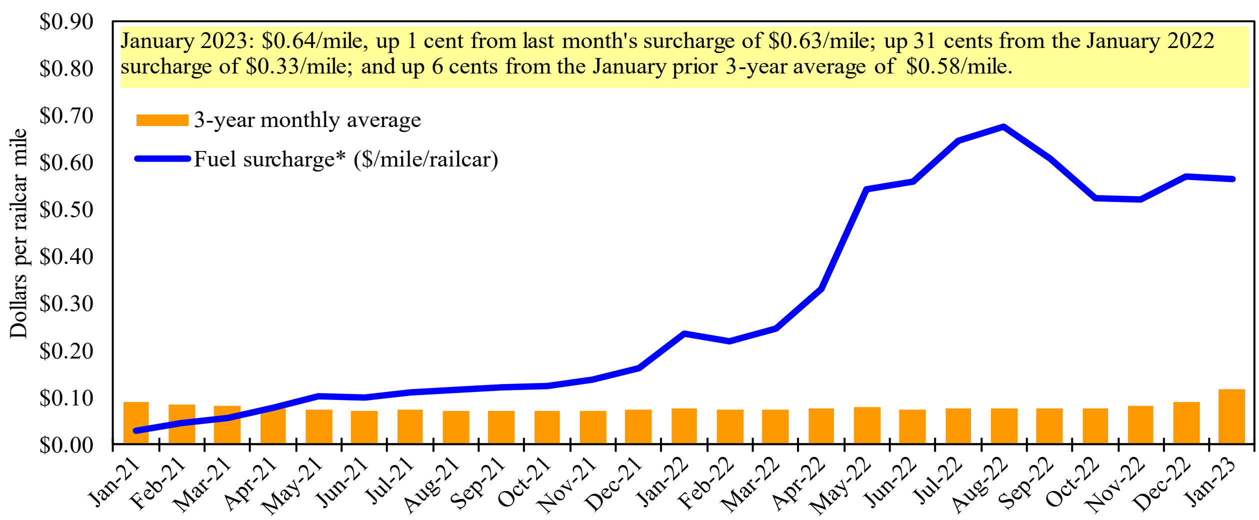
Source: BNSF Railway, Canadian National Railway, CSX Transportation, and Union Pacific Railroad.

Table 7
Tariff rail rates for U.S. bulk grain shipments to Mexico

Date: December 2021					Tariff rate plus fuel surcharge per:		Percent change[4]
Commodity	**Origin state**	**Destination region**	**Tariff rate per car[1]**	**Fuel surcharge per car[2]**	**metric ton[3]**	**bushel[3]**	**Y/Y**
Wheat	MT	Chihuahua, CI	$7,699	$0	$78.67	$2.14	4
	OK	Cuautitlan, EM	$6,900	$230	$72.85	$1.98	6
	KS	Guadalajara, JA	$7,619	$719	$85.19	$2.32	7
	TX	Salinas Victoria, NL	$4,420	$138	$46.57	$1.27	4
Corn	IA	Guadalajara, JA	$9,102	$663	$99.77	$2.53	6
	SD	Celaya, GJ	$8,300	$0	$84.81	$2.15	2
	NE	Queretaro, QA	$8,322	$462	$89.75	$2.28	5
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	0
	MO	Tlalnepantla, EM	$7,687	$450	$83.14	$2.11	5
	SD	Torreon, CU	$7,825	$0	$79.95	$2.03	2
Soybeans	MO	Bojay (Tula), HG	$8,647	$614	$94.63	$2.57	5
	NE	Guadalajara, JA	$9,207	$646	$100.67	$2.74	5
	IA	El Castillo, JA	$9,510	$0	$97.17	$2.64	1
	KS	Torreon, CU	$8,109	$466	$87.61	$2.38	5
Sorghum	NE	Celaya, GJ	$7,932	$597	$87.15	$2.21	6
	KS	Queretaro, QA	$8,108	$287	$85.77	$2.18	3
	NE	Salinas Victoria, NL	$6,713	$231	$70.94	$1.80	3
	NE	Torreon, CU	$7,225	$438	$78.29	$1.99	6

[1]Rates are based upon published tariff rates for high-capacity shuttle trains. Shuttle trains are available for qualified shipments of 75-110 cars that meet railroad efficiency requirements.
[2]Fuel surcharge adjusted to reflect the change in Ferrocarril Mexicano, S.A. de C.V railroad fuel surcharge policy as of 10/01/2009.
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu.
[4]Percentage change calculated using tariff rate plus fuel surchage; Y/Y = year over year.
[5] As of January 1, 2022, 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.
Sources: BNSF Railway, Union Pacific Railroad, Kansas City Southern.

Figure 6
Railroad fuel surcharges, North American weighted average[1]

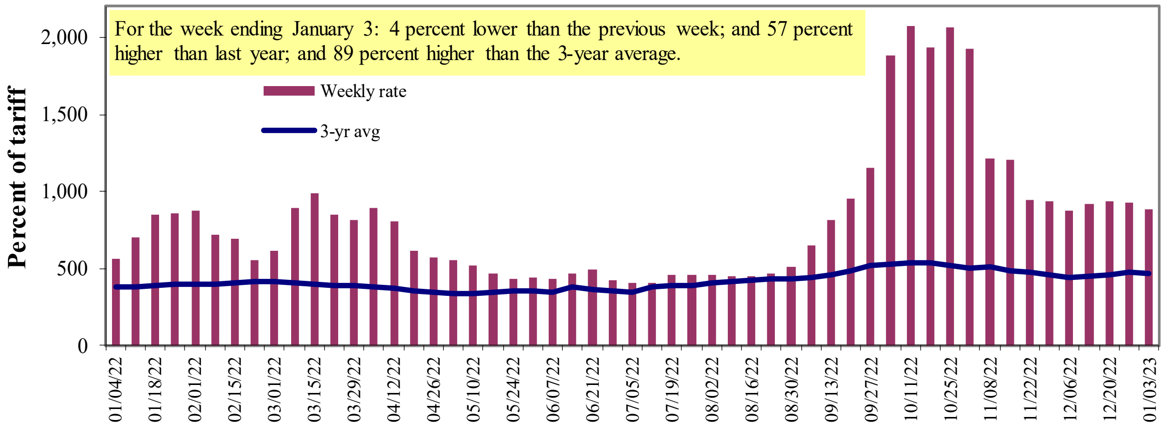


[1] Weighted by each Class I railroad's proportion of grain traffic for the prior year.
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.
**CSX strike price changed from $2.00/gal. to $3.75/gal. starting January 1, 2015.
Sources: BNSF Railway, Canadian National Railway, CSX Transportation, Canadian Pacific Railway, Union Pacific Railroad, Kansas City Southern Railway, Norfolk Southern Corporation.

Barge Transportation

Figure 7

Illinois River barge freight rate[1,2]



[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average of the 3-year average.
*Source: USDA, Agricultural Marketing Service.

Table 8

Weekly barge freight rates: Southbound only

		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	1/3/2023	-	-	886	725	741	741	545
	12/27/2022	-	-	925	825	796	796	621
$/ton	1/3/2023	-	-	41.11	28.93	34.75	29.94	17.11
	12/27/2022	-	-	42.92	32.92	37.33	32.16	19.50
Current week % change from the same week:								
	Last year	-	-	57	53	19	19	26
	3-year avg. [2]	-	-	89	88	79	79	60
Rate[1]	February	-	-	767	574	600	600	478
	April	608	538	544	452	483	483	406

[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average; ton = 2,000 pounds; "-" data not available.
Source: USDA, Agricultural Marketing Service.

Figure 8
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.

Map Credit: USDA, Agricultural Marketing Service

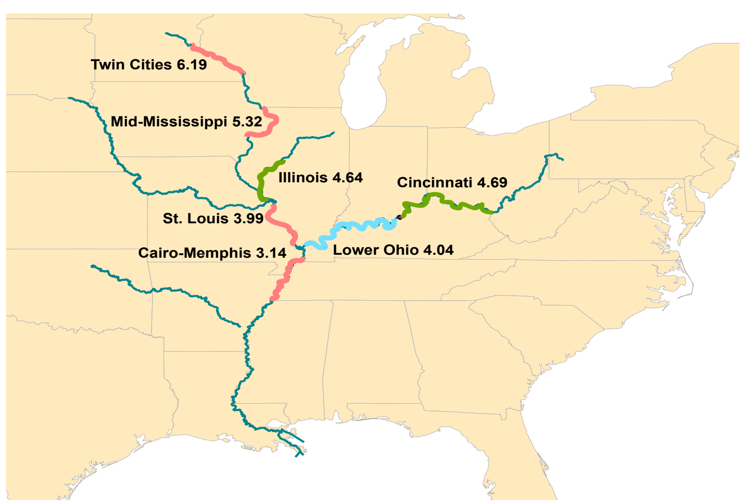
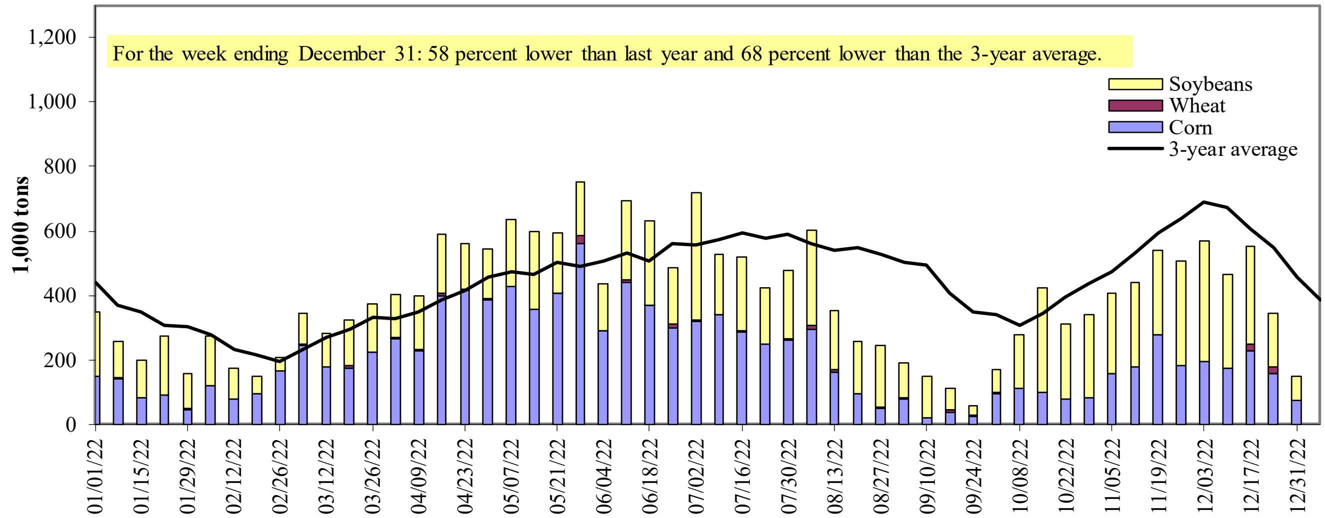


Figure 9

Barge movements on the Mississippi River[1] (Locks 27 - Granite City, IL)



[1] The 3-year average is a 4-week moving 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.

Table 9

Barge grain movements (1,000 tons)

For the week ending 12/31/2022	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	0	0	0	0	0
Winfield, MO (L25)	3	0	3	0	6
Alton, IL (L26)	64	0	71	0	135
Granite City, IL (L27)	73	0	75	0	148
Illinois River (La Grange)	30	0	35	0	65
Ohio River (Olmsted)	78	2	148	0	228
Arkansas River (L1)	0	10	15	1	27
Weekly total - 2022	151	12	238	1	402
Weekly total - 2021	232	16	371	8	626
2022 YTD[1]	16,437	1,594	14,464	232	32,727
2021 YTD[1]	23,516	1,634	11,325	297	36,772
2022 as % of 2021 YTD	70	98	128	78	89
Last 4 weeks as % of 2021[2]	71	116	105	24	89
Total 2021	23,516	1,634	11,325	297	36,772

[1] Weekly total, YTD (year-to-date), and calendar year total include MI/27, OH/Olmsted, and AR/1; Other refers to oats, barley, sorghum, and rye. Total may not add exactly due to rounding.

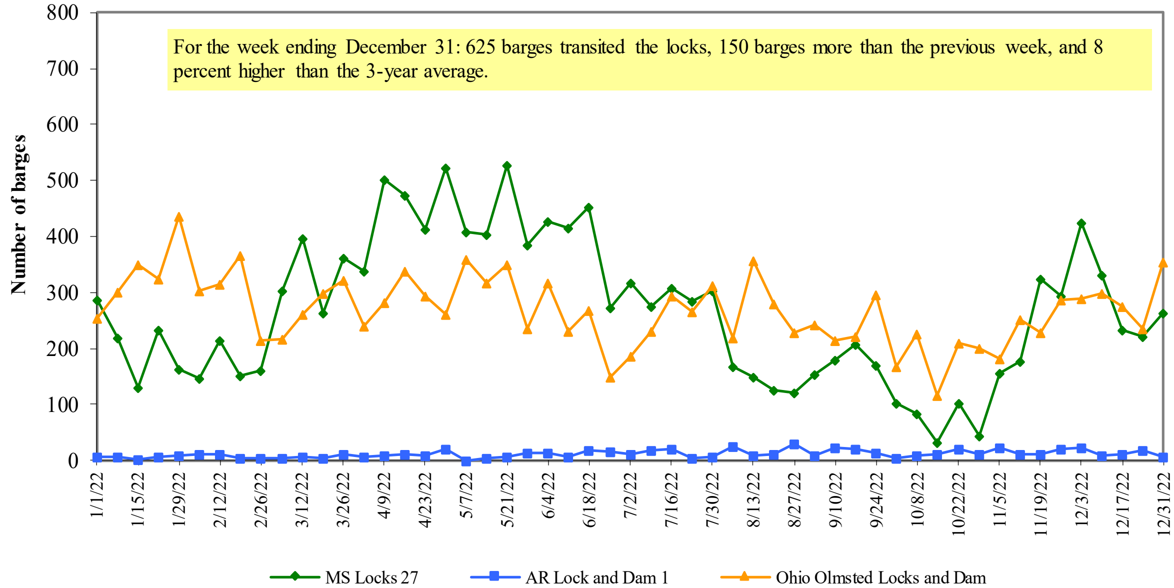
[2] As a percent of same period in 2021.

Note: L (as in "L15") refers to a lock, locks, or locks and dam facility. The U.S. Army Corps of Engineers has recently migrated its lock and vessel database database and has noted the latest data may be revised in coming weeks.

Source: U.S. Army Corps of Engineers.

Figure 10

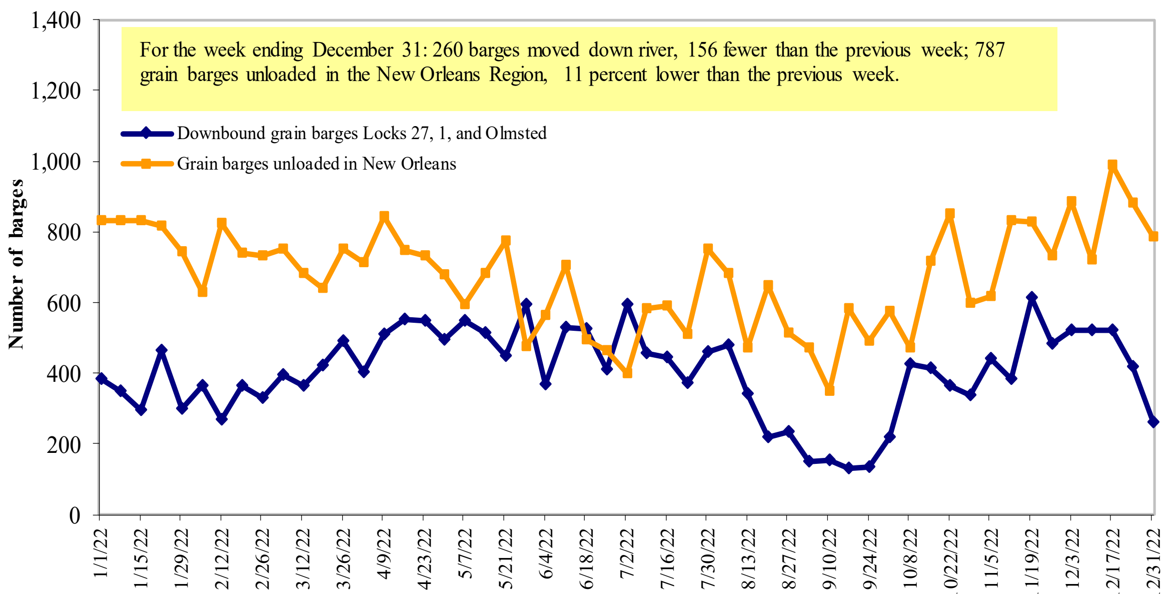
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 11

Grain barges for export in New Orleans region



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.

Table 10

Retail on-highway diesel prices, week ending 1/2/2023 (U.S. $/gallon)

Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	4.852	0.044	1.248
	New England	5.118	-0.028	1.496
	Central Atlantic	5.235	-0.051	1.454
	Lower Atlantic	4.689	0.085	1.199
II	Midwest	4.423	0.021	0.946
III	Gulf Coast	4.267	0.103	0.939
IV	Rocky Mountain	4.730	-0.015	1.043
V	West Coast	5.091	0.023	0.722
	West Coast less California	4.765	-0.001	0.838
	California	5.466	0.051	0.708
Total	United States	4.583	0.046	0.970

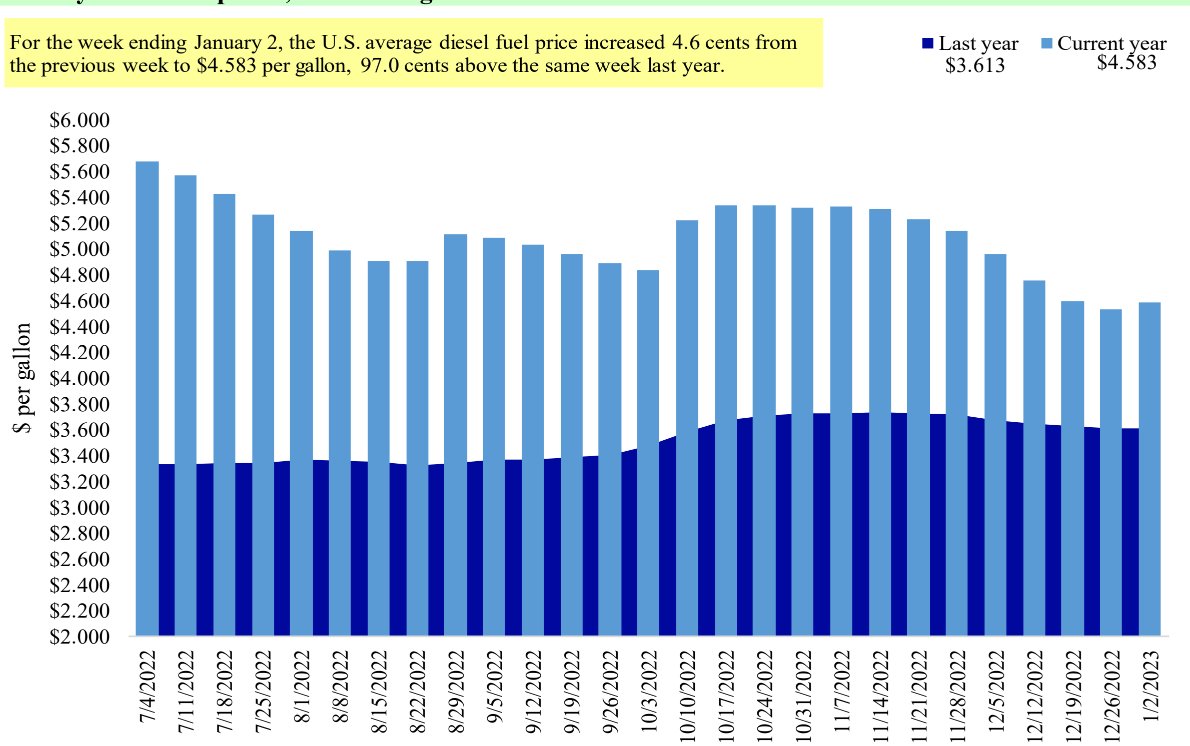
[1]Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

Note: On June 13, 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 12

Weekly diesel fuel prices, U.S. average



Note: On June 13, 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, Retail On-Highway Diesel Prices.

Grain Exports

Table 11

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

For the week ending	Wheat HRW	SRW	HRS	SWW	DUR	All wheat	Corn	Soybeans	Total
Export balances[1]									
12/22/2022	1,002	649	1,358	1,217	117	4,342	12,186	16,402	32,930
This week year ago	2,106	739	1,270	845	36	4,997	27,073	12,448	44,518
Cumulative exports-marketing year[2]									
2022/23 YTD	3,128	1,735	3,153	2,415	150	10,581	9,235	26,706	46,521
2021/22 YTD	4,173	1,573	2,969	2,026	97	10,838	13,668	28,871	53,376
YTD 2022/23 as % of 2021/22	75	110	106	119	154	98	68	93	87
Last 4 wks. as % of same period 2021/22	44	81	106	137	285	83	46	141	77
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

[1] Current unshipped (outstanding) export sales to date.

[2] Shipped export sales to date.

Note: marketing year: wheat = 6/01-5/31, corn and soybeans = 9/01-8/31. YTD = year-to-date; wks. = weeks; HRW= hard red winter; SRW = soft red winter; HRS= hard red spring; SWW= soft white wheat; DUR= durum.

Source: USDA, Foreign Agricultural Service.

Table 12

Top 5 importers[1] of U.S. corn

For the week ending 12/22/2022	Total commitments[2] 2022/23 current MY	2021/22 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
		1,000 mt -		
Mexico	10518.1	11,910	(12)	15,227
China	3716	12,288	(70)	12,616
Japan	1678	3,880	(57)	10,273
Columbia	389	2,340	(83)	4,398
Korea	21	78	(74)	2,563
Top 5 importers	**16,322**	**30,495**	(46)	**45,077**
Total U.S. corn export sales	**21,421**	**40,741**	(47)	**56,665**
% of projected exports	41%	65%		
Change from prior week[2]	**782**	**1,246**		
Top 5 importers' share of U.S. corn export sales	76%	75%		80%
USDA forecast December 2022	**52,799**	**62,875**	(16)	
Corn use for ethanol USDA forecast, December 2022	**133,985**	**135,281**	(1)	

[1]Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2021/22; marketing year (MY) = Sep 1 - Aug 31.

[2]Cumulative exports (shipped) + outstanding sales (unshipped), 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.

[3]FAS marketing year ranking reports (carryover plus accumulated export); yr. = year; avg. = average.

Note: A red number in parentheses indicates a negative number; mt = metric ton.

Source: USDA, Foreign Agricultural Service.

Table 13

Top 5 importers[1] of U.S. soybeans

For the week ending 12/22/2022	Total commitments[2] 2022/23 current MY	2021/22 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
				- 1,000 mt -
China	25,695	23,431	10	27,283
Mexico	3,187	2,789	14	4,929
Egypt	746	1,852	(60)	3,553
Japan	1,447	1,221	19	2,266
Indonesia	638	705	(10)	2,116
Top 5 importers	**31,713**	**29,998**	6	**40,147**
Total U.S. soybean export sales	**43,108**	**41,319**	4	**54,231**
% of projected exports	77%	70%		
change from prior week[2]	**706**	**524**		
Top 5 importers' share of U.S. soybean export sales	74%	73%		**74%**
USDA forecast, December 2022	**55,722**	**58,801**	(5)	

[1]Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2021/22; marketing year (MY) = Sep 1 - Aug 31.

[2]Cumulative exports (shipped) + outstanding sales (unshipped), FAS weekly export sales report, or export sales query. The total commitments change (net sales) from prior week could include revisions from previous week's outstanding sales and/or accumulated sales.

[3]FAS marketing year ranking reports (carryover plus accumulated export); yr. = year; avg. = average.

Note: A red number in parentheses indicates a negative number; mt = metric ton.

Source: USDA, Foreign Agricultural Service.

Table 14

Top 10 importers[1] of all U.S. wheat

For the week ending 12/22/2022	Total Commitments[2] 2022/23 current MY	2021/22 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
	1,000 mt -			- 1,000 mt -
Mexico	2,522	2,806	(10)	3,566
Philippines	1,715	2,395	(28)	2,985
Japan	1,719	1,872	(8)	2,453
China	616	848	(27)	1,537
Nigeria	687	1,595	(57)	1,528
Korea	1,005	978	3	1,459
Taiwan	603	712	(15)	1,106
Indonesia	299	66	355	711
Thailand	560	436	29	703
Colombia	412	489	(16)	621
Top 10 importers	**10,138**	**12,197**	(17)	**16,669**
Total U.S. wheat export sales	**14,923**	**15,835**	(6)	**22,763**
% of projected exports	71%	73%		
change from prior week[2]	**478**	**200**		
Top 10 importers' share of U.S. wheat export sales	68%	77%		73%
USDA forecast, December 2022	**21,117**	**21,798**	(3)	

[1] Based on USDA, Foreign Agricultural Service(FAS) marketing year ranking reports for 2020/21; Marketing year (MY) = Jun 1 - May 31.

[2] Cumulative exports (shipped) + outstanding sales (unshipped), FAS weekly export sales report, or export sales query. The total commitments change (net sales) from prior week could include revisions from the previous week's outstanding and/or accumulated sales.

[3] FAS marketing year final reports (carryover plus accumulated export); yr. = year; avg. = average.

Note: A red number in parentheses indicates a negative number.

Source: USDA, Foreign Agricultural Service.

Table 15

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

Port regions	For the week ending 12/29/22	Previous week*	Current week as % of previous	2022 YTD*	2021 YTD*	2022 YTD as % of 2021 YTD	Last 4-weeks as % of: Last year	Prior 3-yr. avg.	2021 total*
Pacific Northwest									
Wheat	0	122	0	9,836	13,243	74	124	52	13,243
Corn	67	202	33	9,614	13,420	72	61	86	13,420
Soybeans	144	287	50	14,178	14,540	98	83	97	14,540
Total	**211**	**611**	**35**	**33,628**	**41,203**	**82**	**82**	**83**	**41,203**
Mississippi Gulf									
Wheat	6	28	23	4,051	3,202	127	57	58	3,202
Corn	467	445	105	30,780	38,498	80	94	94	38,498
Soybeans	1,174	1,169	100	31,208	27,159	115	116	106	27,159
Total	**1,648**	**1,641**	**100**	**66,040**	**68,858**	**96**	**108**	**102**	**68,858**
Texas Gulf									
Wheat	20	41	49	3,421	3,888	88	72	96	3,888
Corn	0	0	n/a	648	627	103	109	97	627
Soybeans	54	35	155	685	1,611	43	471	82	1,611
Total	**73**	**75**	**98**	**4,754**	**6,126**	**78**	**119**	**90**	**6,126**
Interior									
Wheat	64	85	76	2,900	2,973	98	131	124	2,973
Corn	121	254	47	8,914	10,157	88	86	101	10,157
Soybeans	97	182	53	7,034	6,525	108	107	105	6,525
Total	**281**	**520**	**54**	**18,848**	**19,656**	**96**	**99**	**106**	**19,656**
Great Lakes									
Wheat	0	56	0	395	536	74	56	49	536
Corn	0	0	n/a	158	145	109	42	40	145
Soybeans	1	0	n/a	760	592	128	229	145	592
Total	**1**	**56**	**1**	**1,312**	**1,273**	**103**	**96**	**78**	**1,273**
Atlantic									
Wheat	0	0	n/a	168	128	131	n/a	n/a	128
Corn	0	5	0	302	85	356	349	n/a	85
Soybeans	71	134	53	2,857	2,184	131	125	163	2,184
Total	**71**	**138**	**51**	**3,327**	**2,397**	**139**	**127**	**166**	**2,397**
U.S. total from ports*									
Wheat	90	330	27	20,772	23,969	87	99	67	23,969
Corn	655	906	72	50,416	62,932	80	84	94	62,932
Soybeans	1,540	1,805	85	56,722	52,612	108	108	106	52,612
Total	**2,285**	**3,041**	**75**	**127,910**	**139,512**	**92**	**100**	**98**	**139,512**

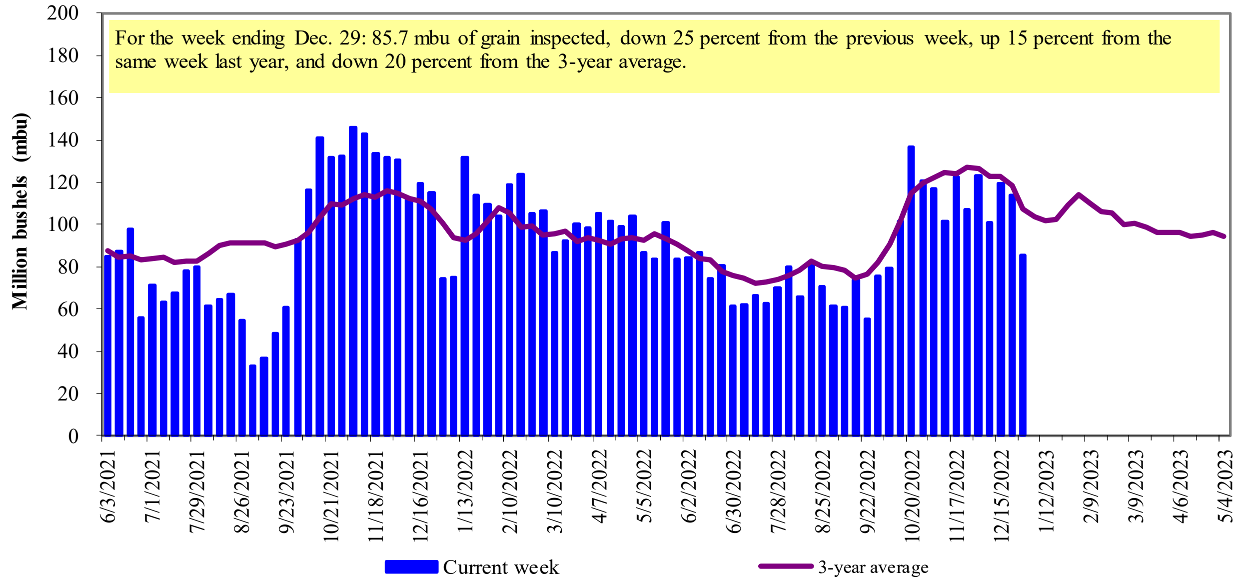
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

Source: USDA, Federal Grain Inspection Service; YTD= year-to-date; n/a = not applicable or no change.

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 13

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

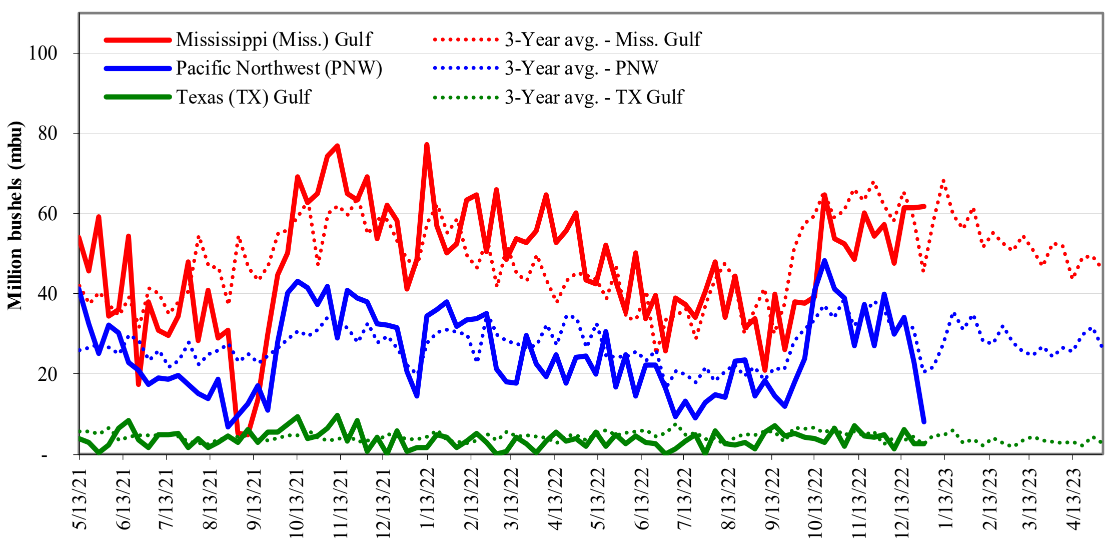


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 14

U.S. Grain inspections: U.S. Gulf and PNW[1] (wheat, corn, and soybeans)



Week ending 12/29/22 inspections (mbu):		Percent change	MS Gulf	TX	U.S. Gulf	PNW
MS Gulf:	61.8	Last wk:	unchanged	down 2	unchanged	down 65
PNW:	7.9	Last Year (same wk):	up 50	up 289	up 54	down 62
TX Gulf:	2.7	3-yr avg. (4-wk. mov. Avg):	up 8	down 24	up 6	down 72

Source: USDA, Federal Grain Inspection Service.

Ocean Transportation

Table 16

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

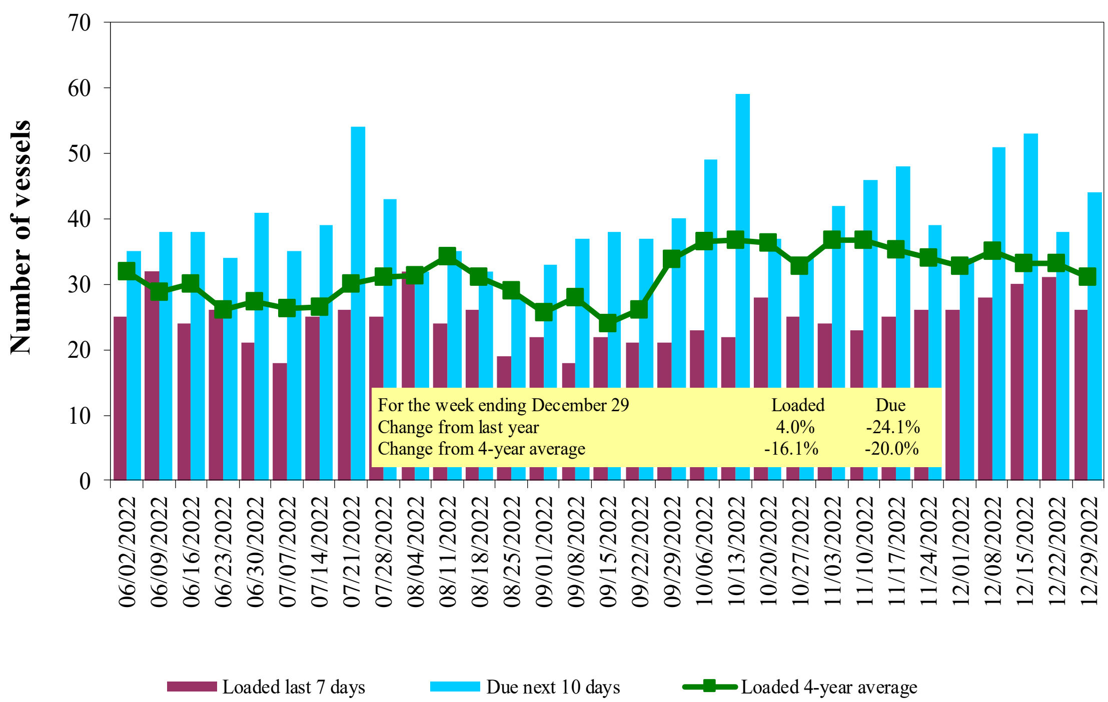
Date	Gulf			Pacific Northwest
	In port	Loaded 7-days	Due next 10-days	In port
12/29/2022	27	26	44	12
12/22/2022	33	31	38	7
2021 range	(10…57)	(5...48)	(15...69)	(4…27)
2021 average	34	32	49	15

Note: The data is voluntarily collected and may not be complete.

Source: USDA, Agricultural Marketing Service.

Figure 15

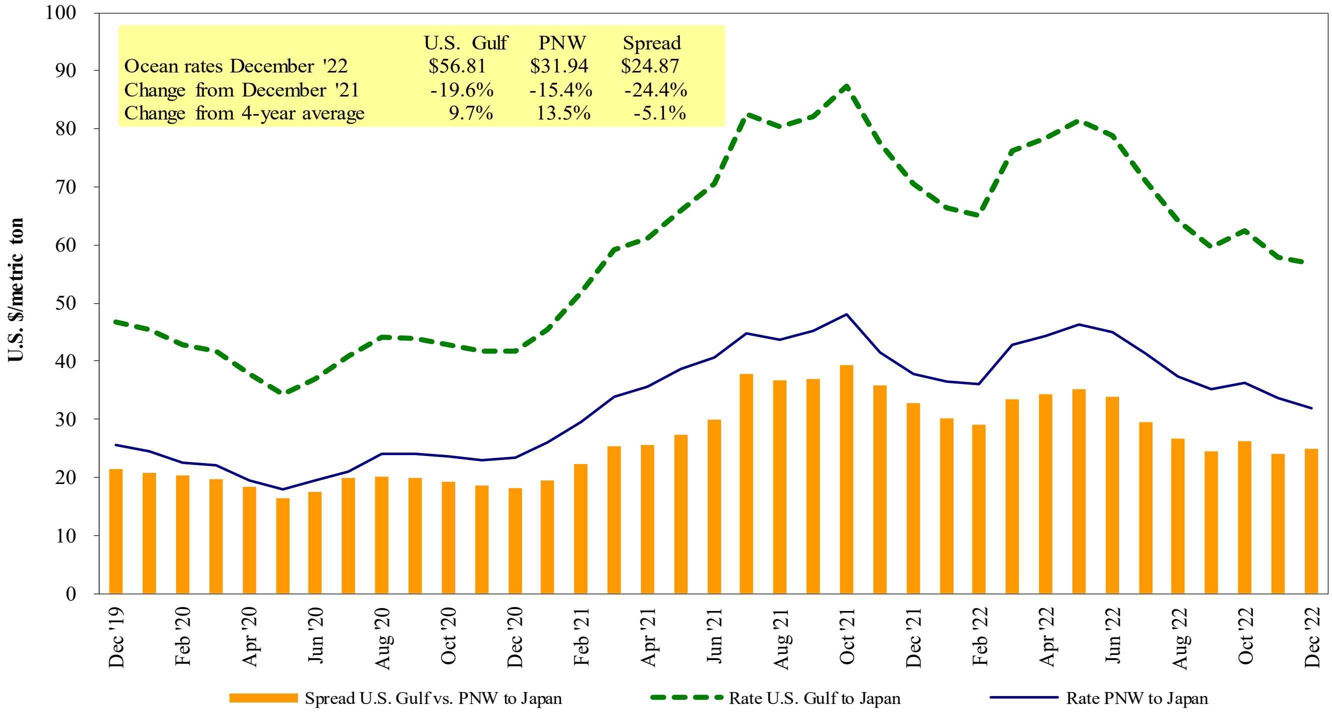
U.S. Gulf[1] vessel loading activity



[1]U.S. Gulf includes Mississippi, Texas, and East Gulf.
Source: USDA, Agricultural Marketing Service.

Figure 16

Grain vessel rates, U.S. to Japan



Note: PNW = Pacific Northwest.

Source: O'Neil Commodity Consulting.

Table 17

Ocean freight rates for selected shipments, week ending 12/31/2022

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	Japan	Heavy grain	Nov 1/10, 2022	50,000	79.25
U.S. Gulf	Japan	Heavy grain	Jul 20/30, 2022	50,000	81.50
U.S. Gulf	Japan	Heavy grain	Jun 1/10, 2022	50,000	89.65
U.S. Gulf	Japan	Heavy grain	May 1/20, 2022	50,000	78.90
U.S. Gulf	S. China	Corn	Aug 1/10, 2022	68,000	71.00
U.S. Gulf	Djibouti	Sorghum	Oct 5/15, 2022	13,920	94.08*
U.S. Gulf	Djibouti	Wheat	Nov 5/15, 2022	22,500	102.88*
U.S. Gulf	Honduras	Soybean Meal	Feb 18/28, 2022	7,820	57.15*
U.S. Gulf	S. Korea	Heavy grain	Jun 1/Jul, 2022	55,000	82.75
U.S. Gulf	Sudan	Sorghum	Mar 1/10, 2022	35,790	149.97*
PNW	Yemen	Wheat	Jul 10/20, 2022	27,000	169.50*
Brazil	N. China	Heavy grain	Mar 18/27, 2022	64,000	56.85
Argentina	Taiwan	Corn	May 1/Jun, 2022	65,000	85.00

*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

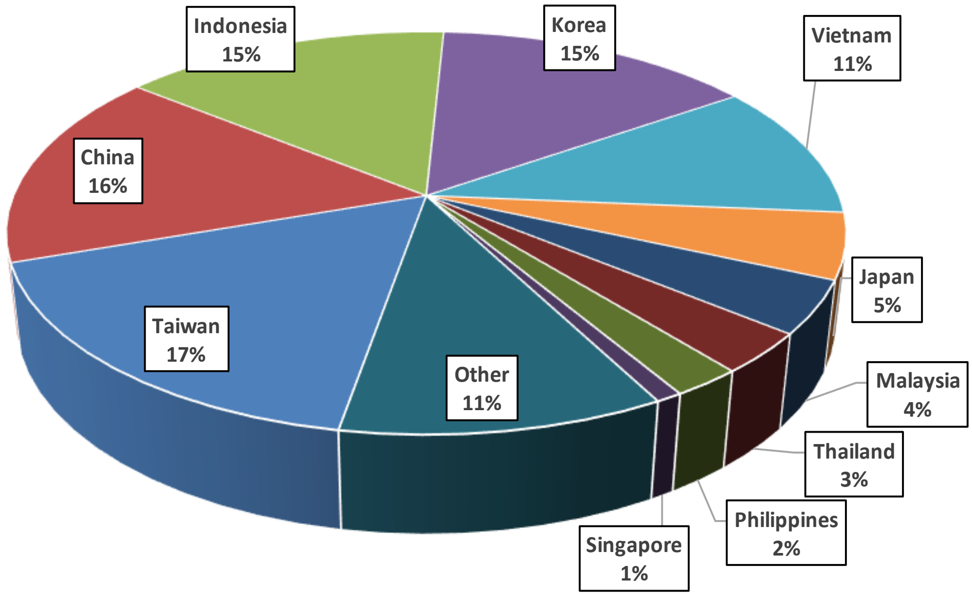
Note: Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), free on board (F.O.B), except where otherwise indicated; op = option.

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 17

Top 10 destination markets for U.S. containerized grain exports, Jan-Oct 2022

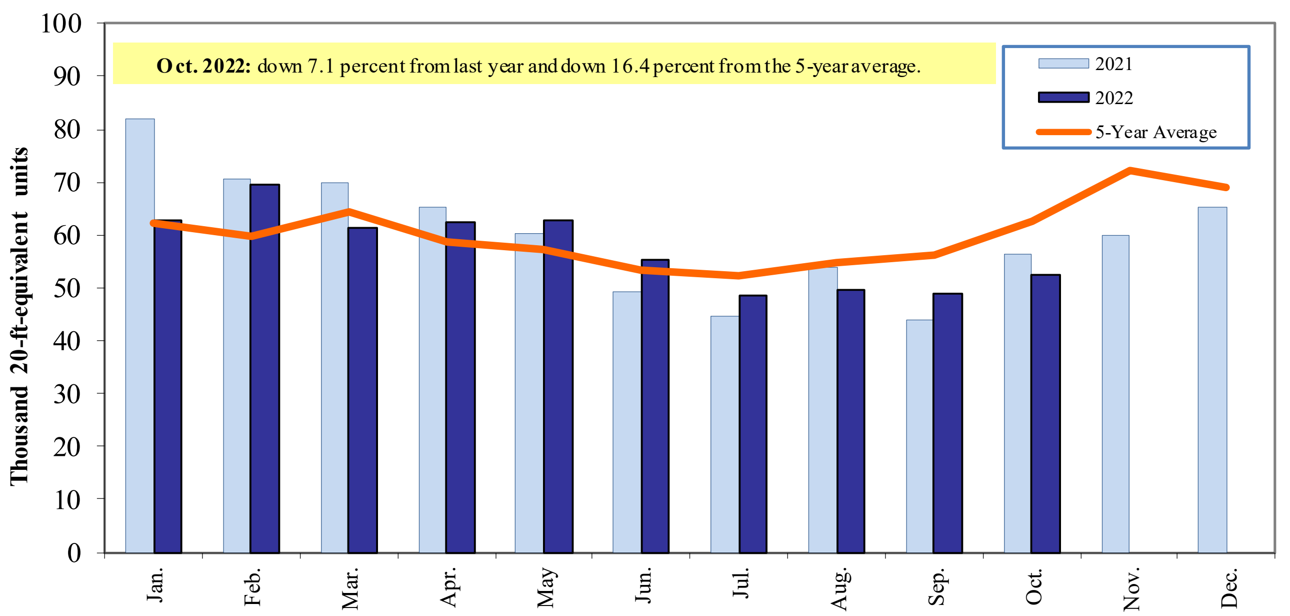


Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: '1001', '100190', '1002', '100200', '1003', '100300', '1004', '100400', '1005', '100590', '1007', '100700', '110100', '1102', '110220', '110290', '1201', '120100', '120190', '120810', '230210', '230310',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

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

Figure 18

Monthly shipments of U.S. containerized grain exports



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: USDA, Agricultural Marketing Service, Transportation Services Division analysis of PIERS data.

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