United States Department of Agriculture

Grain Transportation Report

A weekly publication of the Agricultural Marketing Service
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Contents

The next release is December 1, 2022

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WEEKLY HIGHLIGHTS

Two Largest Rail Unions Tally Votes—One Rejects and One Accepts Agreement with Railroads

On November 21, the two remaining—and largest—unions released vote counts on the tentative agreement made with railroads. The Brotherhood of Locomotive Engineers and Trainmen (BLET) ratified its agreement, while the Transportation Division of the International Association of Sheet Metal, Air, Rail, and Transportation Workers (SMART-TD) rejected its agreement. In total, 8 out of 12 unions have ratified their agreements, and 4 have rejected. According to CNN, the status quo periods for all 4 rejecting railroads currently extend through December 8. A national rail strike would severely impact grain shippers, especially amid high transportation demand from harvest and ongoing rail service problems.

USDA Provides $20 Million To Build On-Farm Grain Storage

USDA's Farm Service Agency (FSA) announced $20 million in assistance rebuild agricultural and grain storage facilities that were damaged by natural disasters in 2021 and 2022. The aid is aimed at producers in Kentucky, Minnesota, South Dakota and surrounding areas, particularly places struggling to provide storage space for the upcoming fall harvest. Like other USDA cost-share arrangements, the funding will cover 75 percent of eligible expenses related to building grain storage capacity or purchasing equipment. Covered equipment includes grain baggers for one producer's use or for a shared-cost arrangement among a group of producers using a common facility. Details on the program and the process to seek cost share will be available in a future *Federal Register* notice. In times of tight transportation supply and elevated demand (such as during transportation disruptions or harvest season), shippers in States with adequate grain storage can flexibly respond to transportation challenges by holding grain.

FHWA Sends States Nearly $60 Billion in Infrastructure Funding

The U.S. Department of Transportation's Federal Highway Administration released $59.9 billion in transportation infrastructure funding for fiscal year (FY) 2023. The money will go directly to States to support investment in critical infrastructure, including roads, bridges, and tunnels. Twelve formula grant programs will disburse the funds, to be allocated based on formulas set by Congress. In the last year, one such program—the Bridge Formula Program (BFP)—has supported repairs on over 2,400 bridges, including the I-270 bridge replacement over the Mississippi River in Illinois. The BFP apportionment is 391 percent greater in FY 2023 than it was in FY 2021, the last year before the Infrastructure Investments and Jobs Act was implemented.

Snapshots by Sector

Export Sales

For the week ending November 10, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2022/23 totaled 36.03 million metric tons (mmt), down 24 percent from the same time last year and up 5 percent from last week. Net **corn export sales** for MY 2022/23 were 1.170 mmt, up significantly from last week. Net **soybean export sales** were 3.030 mmt, up significantly from last week. Net weekly **wheat export sales** were 0.290 mmt, down 10 percent from last week.

Rail

U.S. Class I railroads originated 23,932 **grain carloads** during the week ending November 12. This was a 9-percent decrease from the previous week, 5 percent fewer than last year, and 6 percent fewer than the 3-year average.

Average December shuttle **secondary railcar** bids/offers (per car) were $227 above tariff for the week ending November 17. This was $523 less than last week and $284 lower than this week last year.

Barge

For the week ending November 19, **barged grain movements** totaled 840,794 tons. This was 42 percent more than the previous week and 3.2 percent more than the same period last year.

For the week ending November 19, 615 grain barges **moved down river**—232 more barges than last week. There were 826 grain barges **unloaded** in the New Orleans region, unchanged from last week.

Ocean

For the week ending November 17, 25 **oceangoing grain vessels** were loaded in the Gulf—36 percent fewer than the same period last year. Within the next 10 days (starting November 18), 48 vessels were expected to be loaded—25 percent fewer than the same period last year.

As of November 17, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $58.00. This was 1 percent more than the previous week. The rate from the Pacific Northwest to Japan was $33.25 per mt, down 2 percent from the previous week.

Fuel

For the week ending November 21, the U.S. average **diesel fuel price** decreased 8.0 cents from the previous week to $5.233 per gallon, 150.9 cents above the same week last year.

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Feature Article/Calendar

Transportation and Landed Costs of Grain to Mexico in Third Quarter 2022

The competitiveness of U.S. grain exports to Mexico and elsewhere depends on low transportation and landed costs for U.S.-Mexico routes. Mexico—a long-time major U.S. grain importer (***GTR* tables 12**, **13**, and **14**)—receives U.S. grain either by cross-border land movements or by sea movements to Mexican ports for inland distribution. This article tracks over time the costs of transporting U.S. grain to Mexico over land to Guadalajara (land routes) and by sea to Veracruz (water routes) (table 1).

Table 1. Quarterly costs of transporting U.S. grain to Veracruz and Guadalajara, Mexico

	Water route (to Veracruz) $/metric ton					Land route (to Guadalajara) $/metric ton				
	2021 3rd qtr.	2022 2nd qtr.	2022 3rd qtr.	Percent change Yr. to yr.	Qtr. to qtr.	2021 3rd qtr.	2022 2nd qtr.	2022 3rd qtr.	Percent change Yr. to yr.	Qtr. to qtr.
Corn										
Origin			**IL**					**IA**		
Truck	13.19	23.40	19.07	44.6	-18.5	4.93	7.13	6.27	27.2	-12.1
Rail [1]	-	-	-	-	-	97.06	106.09	109.83	13.2	3.5
Barge	22.10	27.98	29.97	35.6	7.1	-	-	-	-	-
Ocean[2]	27.68	26.27	23.33	-15.7	-11.2	-	-	-	-	-
Total transportation cost	62.97	77.65	72.37	14.9	-6.8	101.99	113.22	116.10	13.8	2.5
Farm value[3]	232.93	290.14	277.81	19.3	-4.2	238.83	287.91	292.11	22.3	1.5
Landed cost[4]	295.90	367.79	350.18	18.3	-4.8	340.82	401.13	408.21	19.8	1.8
Transport % of landed cost	21	21	21	-0.61	-0.45	30	28	28	-1.48	0.2
Soybeans										
Origin			**IL**					**NE**		
Truck	13.19	23.40	19.07	44.6	-18.5	4.93	7.13	6.27	27.2	-12.1
Rail	-	-	-	-	-	99.56	106.88	110.60	11.1	3.5
Barge	22.10	27.98	29.97	35.6	7.1	-	-	-	-	-
Ocean	27.68	26.27	23.33	-15.7	-11.2	-	-	-	-	-
Total transportation cost	62.97	77.65	72.37	14.9	-6.8	104.49	114.01	116.87	11.8	2.5
Farm value	492.37	601.37	564.63	14.7	-6.1	485.02	579.33	542.58	11.9	-6.3
Landed cost	555.34	679.02	637.00	14.7	-6.2	589.51	693.34	659.45	11.9	-4.9
Transport % of landed cost	11	11	11	0.02	-0.07	18	16	18	0.00	1.3
Wheat										
Origin			**KS**					**KS**		
Truck	4.93	7.13	6.27	27.2	-12.1	4.93	7.13	6.27	27.2	-12.1
Rail	42.07	47.05	49.83	18.4	5.9	83.99	90.51	93.49	11.3	3.3
Ocean	27.68	26.27	23.33	-15.7	-11.2	-	-	-	-	-
Total transportation cost	74.68	80.45	79.43	6.4	-1.3	88.92	97.64	99.76	12.2	2.2
Farm value	239.45	370.01	315.51	31.8	-14.7	239.45	370.01	315.51	31.8	-14.7
Landed cost	314.13	450.46	394.94	25.7	-12.3	328.37	467.65	415.27	26.5	-11.2
Transport % of landed cost	24	18	20	-4	2	27	21	24	-3	3.1

[1]Rail rates include U.S. and Mexico portions of the movement. Mexico rail rates are estimated based on actual quoted market rates. BNSF and Union Pacific quoted rail tariff rates are through rates for shuttle trains. Rail rates include fuel surcharges, but do not include the cost of purchasing empty rail cars in the secondary market, which could exceed the rail tariff rate plus fuel surcharge shown in the table. Due to tax changes in Mexico, all three Class I railroads that ship from the U.S. to Mexico (BNSF, Union Pacific, and Kansas City Southern) are only reporting rates to the border for interchange, called Rule 11 rates. Because comparable data were not available, it was assumed rail rates did not change from fourth quarter 2021 to first quarter 2022, and second quarter 2022 but fuel surcharges were still updated. Second quarter rates were revised from what were previously published.
[2]Source for ocean freight rates: O'Neil Commodity Consulting.
[3]Source for farm values: USDA, National Agricultural Statistics Service.
[4]Landed cost is total transportation cost plus farm value.
*The number was revised from what was previously published
Note: "-" indicates data not required or applicable. Total may not add exactly because of rounding.
Source: Compiled by the USDA, Agricultural Marketing Service.

Quarter-to-quarter transportation costs. Reflecting falling truck and ocean freight rates, total costs to transport U.S. corn, soybeans, and wheat by the water routes decreased from second quarter 2022 to third quarter 2022 (quarter to quarter).[1] Land-route shipping costs increased, as rising rail rates (public tariff, plus fuel surcharge) more than offset falling truck rates. In addition to the typical harvest rush, rising barge rates reflected other challenges, including severely low water levels on the Lower Mississippi River (*Grain Transportation Report (GTR)*, October 20, 2022). Ocean freight rates fell, responding to

[1] Water routes typically involve truck transportation to barge to oceangoing vessel, or truck to rail to oceangoing vessel.

weak demand for shipping bulk items. Truck rates also dropped, as the average diesel price fell to $5.15 from its peak of $5.49 per gallon in the second quarter.

Year-to-year transportation costs. From third quarter 2021 to third quarter 2022 (year to year), total costs of shipping all grain (U.S. corn, soybeans, and wheat) to Mexico by the water routes rose because of higher rail, truck, and barge rates. Likewise, by the land routes, total costs of shipping all grain to Mexico rose because of higher truck and rail tariff rates.

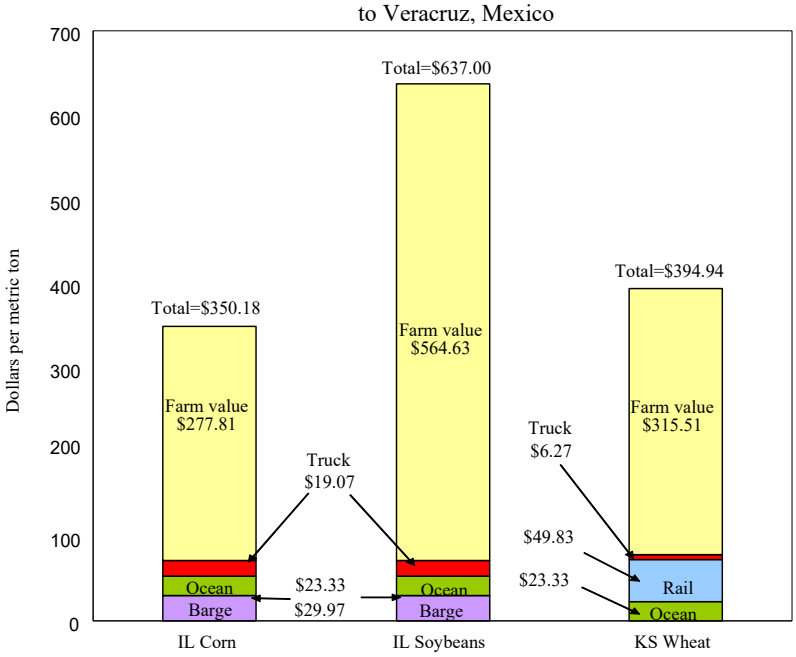
Quarter-to-quarter landed costs. Quarter to quarter, landed costs to Mexico via the water and land routes fell for all grain except corn shipped by the Iowa land route. Decreased landed costs reflected both lower farm values and lower transport costs for grain shipped via the water route (table 1, figs. 1 and 2). Falling farm values pushed down soybean and wheat landed costs shipped via the land route. The share of landed costs comprising transportation ranged from 11 percent to 21 percent for the water routes and from 18 percent to 28 percent for the land routes (see table 1).

Year-to-year landed costs. Year to year, landed costs increased for both waterborne and land-route grains, because of both higher transportation costs and higher farm values.

U.S. Exports to Mexico. According to USDA's Federal Grain Inspection Service, the United States exported 3.22 million metric tons (mmt) of corn, 1.27 mmt of soybeans, and 1.24 mmt of wheat to Mexico in third quarter 2022. Quarter to quarter, U.S. inspections for export to Mexico were down 21 percent for corn, down 1 percent for soybeans, and up 38 percent for wheat. Year to year, U.S. inspections destined to Mexico fell 11 percent for corn, rose 40 percent for soybeans, and rose 1 percent for wheat. Despite the increases in year-to-year landed costs, total U.S. grain shipments to Mexico have been strong, as soybeans and wheat shipments have increased year to year.

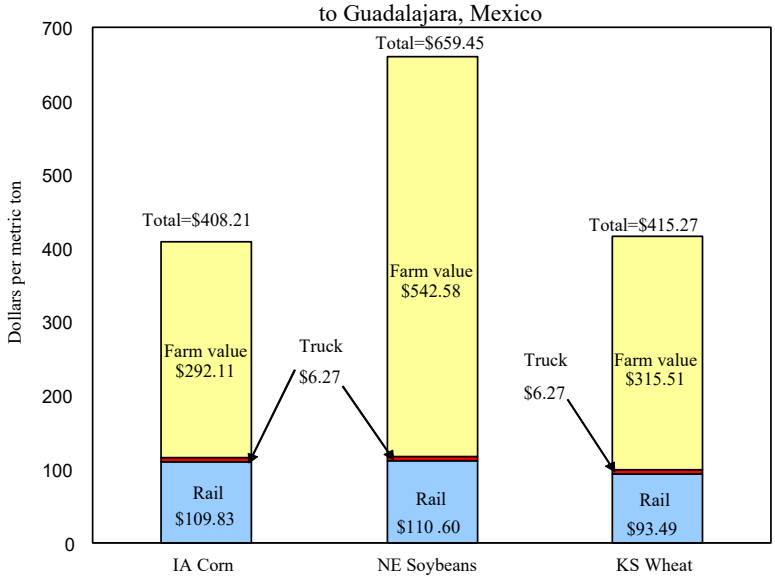
surajudeen.olowolayemo@usda.gov

Figure 1: Third-quarter 2022 water-route landed costs to Veracruz, Mexico



Note: IL = Illinois; KS = Kansas.
Source: USDA, Agricultural Marketing Service

Figure 2. Third-quarter 2022 land-route landed costs to Guadalajara, Mexico



Note: IA = Iowa; NE = Nebraska; KS = Kansas.
Source: USDA, Agricultural Marketing Service.

Grain Transportation Indicators

Table 1
Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Non-Shuttle	Shuttle		Gulf	Pacific
11/23/22	351	335	272	524	259	236
11/16/22	357	335	300	670	257	241

[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.
Source: USDA, Agricultural Marketing Service.

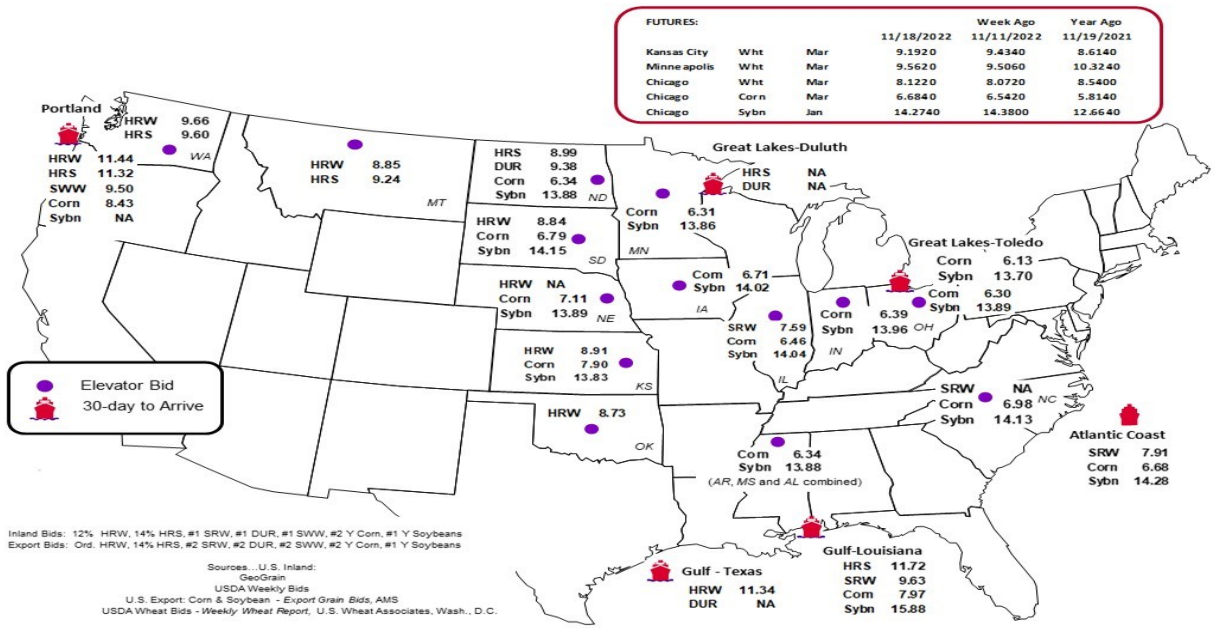
Table 2
Market Update: U.S. origins to export position price spreads ($/bushel)

Commodity	Origin–destination	11/18/2022	11/11/2022
Corn	IL–Gulf	-1.51	-1.82
Corn	NE–Gulf	-0.86	-1.10
Soybean	IA–Gulf	-1.86	-2.41
HRW	KS–Gulf	-2.43	-2.59
HRS	ND–Portland	-2.34	-2.38

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	
11/12/2022	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	2,066	3,148	11,285	1,614	5,819	23,932	6,002	5,136
This week last year	2,309	2,249	13,658	1,123	5,959	25,298	4,509	5,266
2022 YTD	78,996	109,550	495,516	57,060	259,591	1,000,713	173,491	175,295
2021 YTD	80,492	105,665	525,046	54,742	277,054	1,042,999	184,801	214,478
2022 YTD as % of 2021 YTD	98	104	94	104	94	96	94	82
Last 4 weeks as % of 2021*	99	142	93	102	94	99	142	121
Last 4 weeks as % of 3-yr. avg.**	106	124	96	113	99	101	123	114
Total 2021	93,935	120,616	609,890	64,818	318,002	1,207,261	209,993	242,533

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

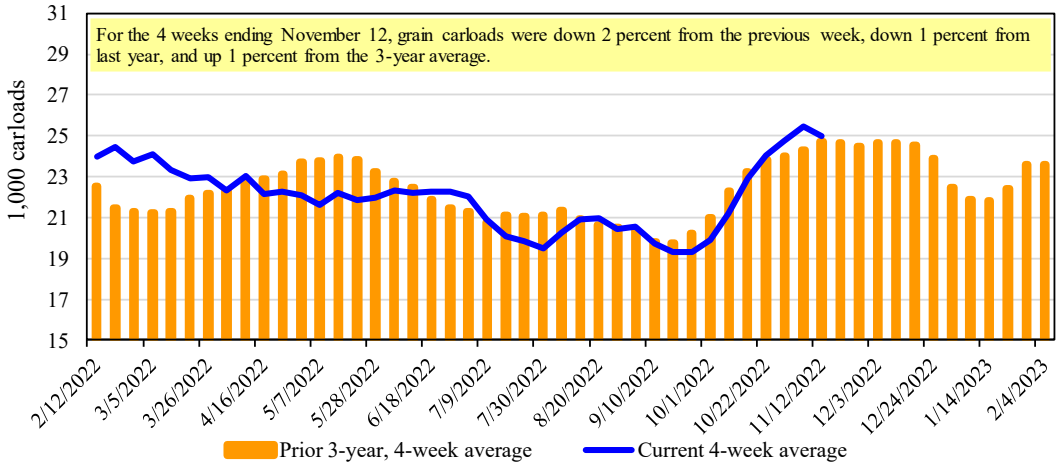
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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							
11/17/2022		Dec-22	Dec-21	Jan-23	Jan-22	Feb-23	Feb-22	Mar-23	Mar-22
BNSF[3]	COT grain units	no bids	0	0	0	0	0	0	0
	COT grain single-car	no bids	40	834	0	385	0	326	0
UP[4]	GCAS/Region 1	no offer	no offer	no offer	no offer	no offer	no offer	n/a	n/a
	GCAS/Region 2	no offer	no offer	no offer	no offer	no offer	no offer	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.

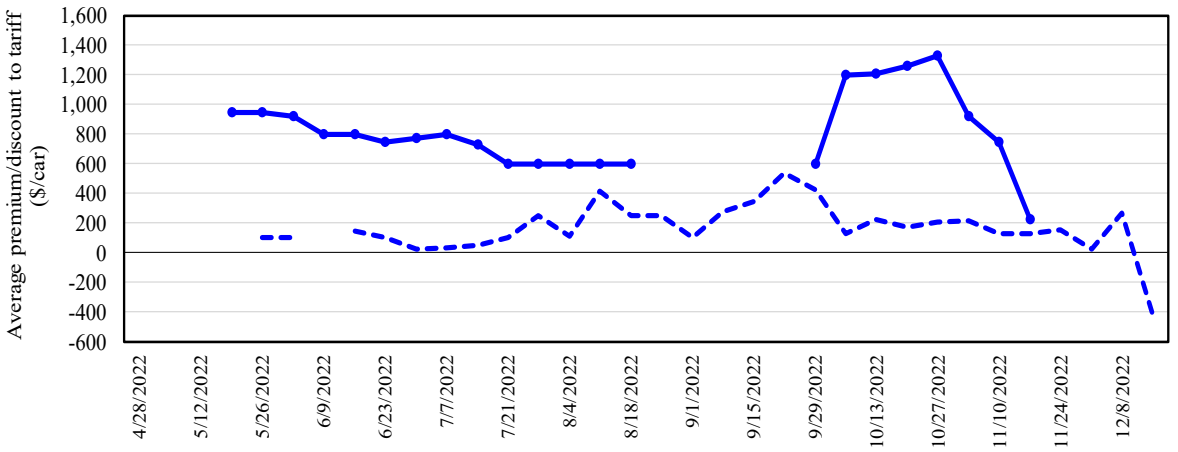
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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 December 2022

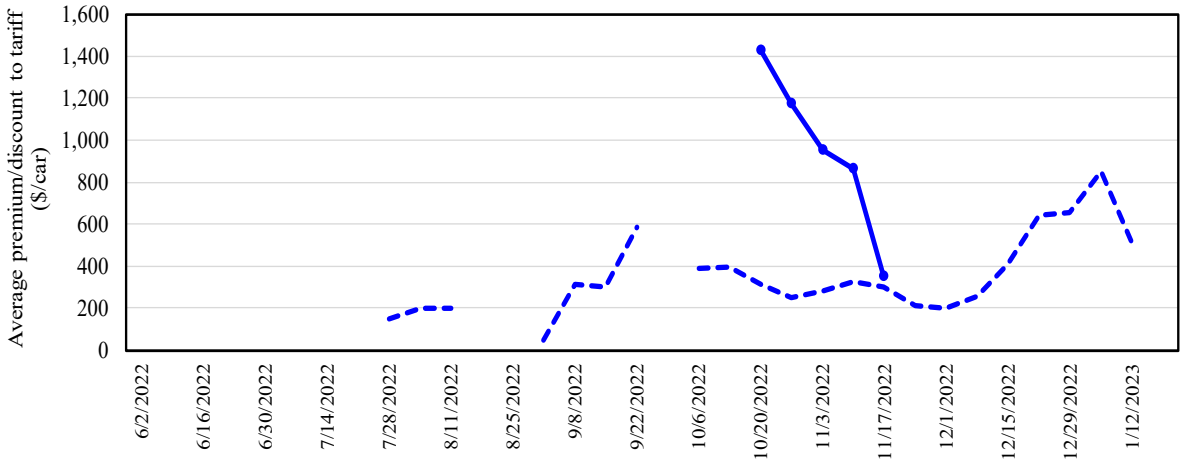


11/17/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$178	$275

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $523 this week and are $1,105 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 January 2023



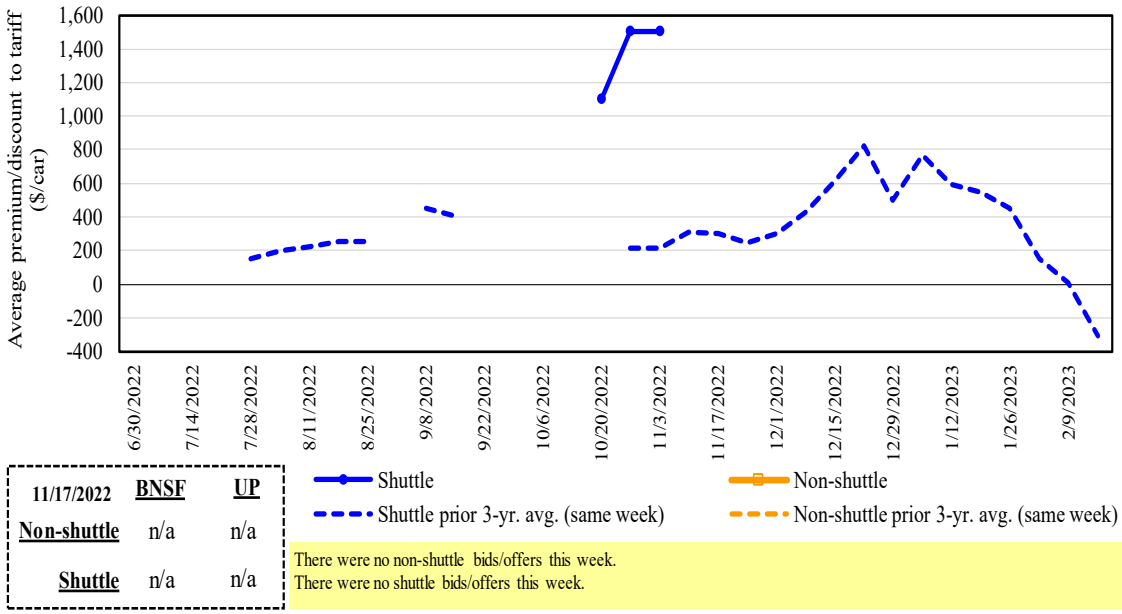
11/17/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$350	n/a

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $517 this week and are $1,075 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 February 2023



11/17/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	n/a	n/a

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

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: 11/17/2022	Delivery period					
		Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-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**	**178**	**350**	**n/a**	**n/a**	**n/a**	**(150)**
	Change from last week	(522)	(517)	n/a	n/a	n/a	0
	Change from same week 2021	(226)	0	n/a	n/a	n/a	n/a
	UP-Pool	**275**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	(525)	n/a	n/a	n/a	n/a	n/a
	Change from same week 2021	(342)	n/a	n/a	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]

November 2022	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	$293	$39.61	$1.08	4
	Grand Forks, ND	Duluth-Superior, MN	$3,858	$131	$39.61	$1.08	9
	Wichita, KS	Los Angeles, CA	$7,490	$673	$81.06	$2.21	12
	Wichita, KS	New Orleans, LA	$4,600	$516	$50.81	$1.38	8
	Sioux Falls, SD	Galveston-Houston, TX	$7,226	$553	$77.25	$2.10	11
	Colby, KS	Galveston-Houston, TX	$4,850	$566	$53.78	$1.46	7
	Amarillo, TX	Los Angeles, CA	$5,121	$787	$58.67	$1.60	8
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$583	$45.52	$1.16	8
	Toledo, OH	Raleigh, NC	$8,551	$645	$91.32	$2.32	13
	Des Moines, IA	Davenport, IA	$2,655	$124	$27.59	$0.70	9
	Indianapolis, IN	Atlanta, GA	$6,593	$485	$70.28	$1.79	14
	Indianapolis, IN	Knoxville, TN	$5,564	$314	$58.37	$1.48	12
	Des Moines, IA	Little Rock, AR	$4,250	$363	$45.81	$1.16	11
	Des Moines, IA	Los Angeles, CA	$6,130	$1,057	$71.37	$1.81	13
Soybeans	Minneapolis, MN	New Orleans, LA	$5,431	$908	$62.95	$1.71	60
	Toledo, OH	Huntsville, AL	$7,037	$460	$74.45	$2.03	12
	Indianapolis, IN	Raleigh, NC	$7,843	$654	$84.38	$2.30	14
	Indianapolis, IN	Huntsville, AL	$5,689	$311	$59.58	$1.62	12
	Champaign-Urbana, IL	New Orleans, LA	$4,865	$583	$54.11	$1.47	9
Shuttle train							
Wheat	Great Falls, MT	Portland, OR	$4,393	$387	$47.47	$1.29	14
	Wichita, KS	Galveston-Houston, TX	$4,311	$301	$45.80	$1.25	5
	Chicago, IL	Albany, NY	$7,090	$609	$76.45	$2.08	15
	Grand Forks, ND	Portland, OR	$6,051	$669	$66.73	$1.82	15
	Grand Forks, ND	Galveston-Houston, TX	$5,399	$697	$60.53	$1.65	7
	Colby, KS	Portland, OR	$5,923	$927	$68.03	$1.85	7
Corn	Minneapolis, MN	Portland, OR	$5,660	$814	$64.29	$1.63	20
	Sioux Falls, SD	Tacoma, WA	$5,620	$746	$63.22	$1.61	19
	Champaign-Urbana, IL	New Orleans, LA	$4,170	$583	$47.20	$1.20	14
	Lincoln, NE	Galveston-Houston, TX	$4,360	$435	$47.61	$1.21	18
	Des Moines, IA	Amarillo, TX	$4,670	$456	$50.91	$1.29	11
	Minneapolis, MN	Tacoma, WA	$5,660	$808	$64.23	$1.63	20
	Council Bluffs, IA	Stockton, CA	$5,580	$836	$63.71	$1.62	21
Soybeans	Sioux Falls, SD	Tacoma, WA	$6,350	$746	$70.46	$1.92	17
	Minneapolis, MN	Portland, OR	$6,400	$814	$71.64	$1.95	18
	Fargo, ND	Tacoma, WA	$6,250	$663	$68.65	$1.87	16
	Council Bluffs, IA	New Orleans, LA	$5,095	$673	$57.28	$1.56	9
	Toledo, OH	Huntsville, AL	$5,277	$460	$56.97	$1.55	16
	Grand Island, NE	Portland, OR	$5,730	$949	$66.33	$1.81	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.

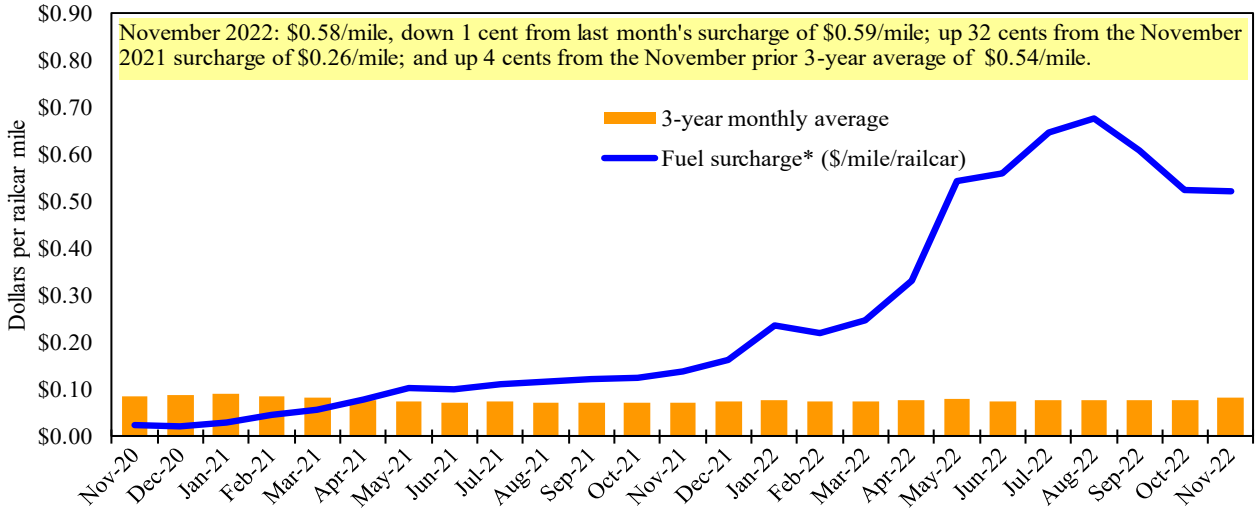
[5] As of January 1, both BNSF and Union Pacific changed their billing and reporting of rates to Mexico.

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.

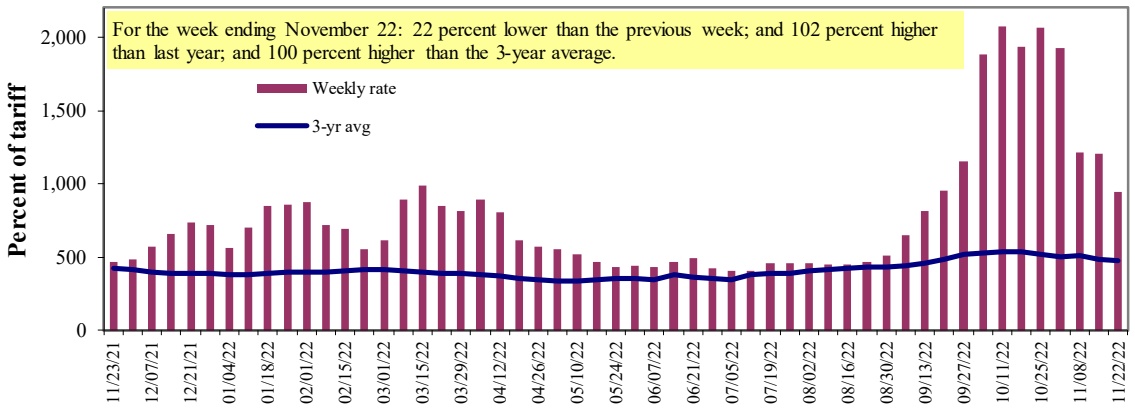
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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

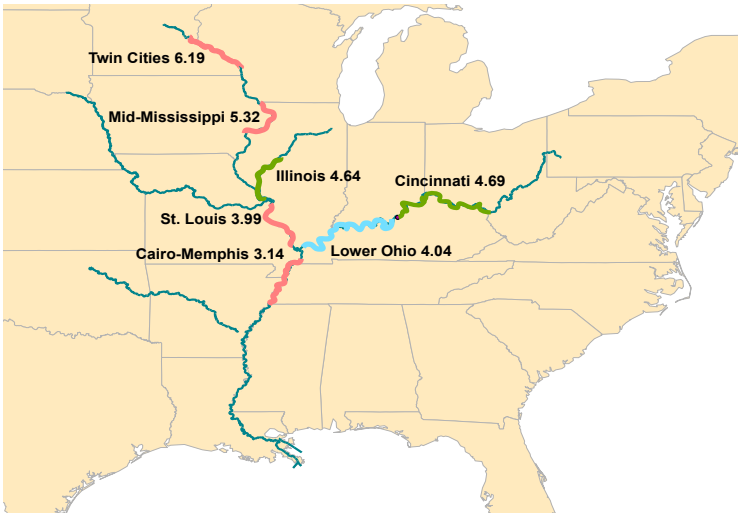
		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	11/22/2022	-	943	944	850	943	943	821
	11/15/2022	1000	1125	1206	1025	1106	1106	952
$/ton	11/22/2022	-	50.17	43.80	33.92	44.23	38.10	25.78
	11/15/2022	61.90	59.85	55.96	40.90	51.87	44.68	29.89
Current week % change from the same week:								
	Last year	-	103	102	128	111	111	147
	3-year avg. [2]	-	97	100	125	115	115	130
Rate[1]	December	-	-	931	804	871	871	756
	February	-	-	847	694	731	731	642

[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

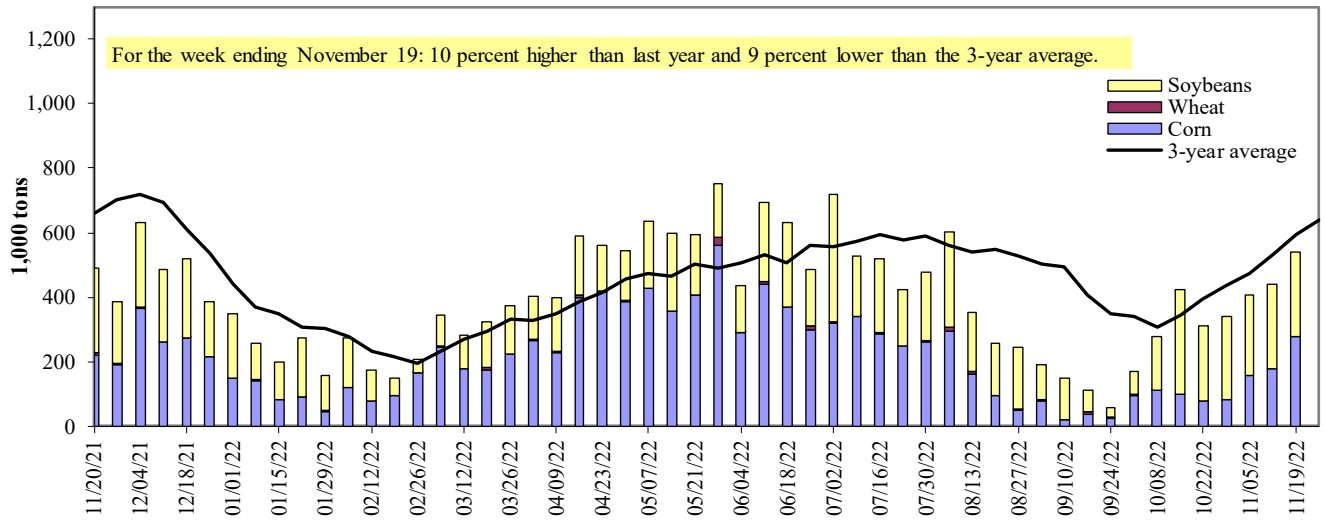
Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.



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 11/19/2022	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	153	0	98	0	251
Winfield, MO (L25)	211	0	196	0	407
Alton, IL (L26)	226	0	216	0	442
Granite City, IL (L27)	279	0	262	0	541
Illinois River (La Grange)	85	0	75	0	160
Ohio River (Olmsted)	84	0	195	0	279
Arkansas River (L1)	1	0	20	0	21
Weekly total - 2022	365	0	476	0	841
Weekly total - 2021	349	10	456	0	814
2022 YTD[1]	14,944	1,499	11,910	227	28,580
2021 YTD[1]	21,438	1,529	9,099	245	32,310
2022 as % of 2021 YTD	70	98	131	93	88
Last 4 weeks as % of 2021[2]	74	0	91	345	83
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.

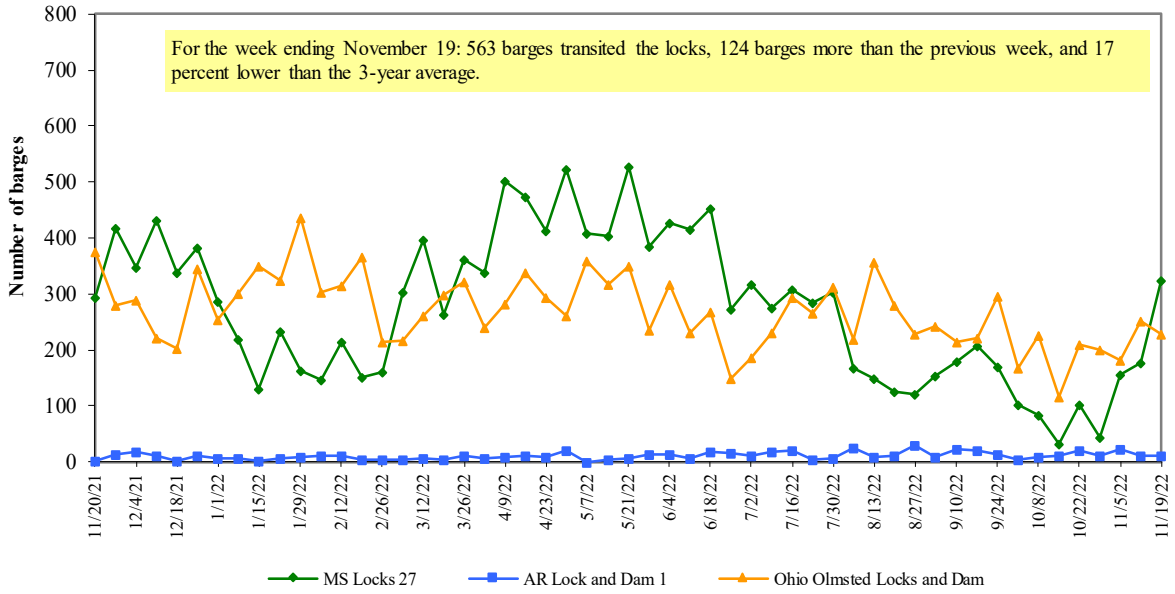
[2] As a percent of same period in 2021.

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

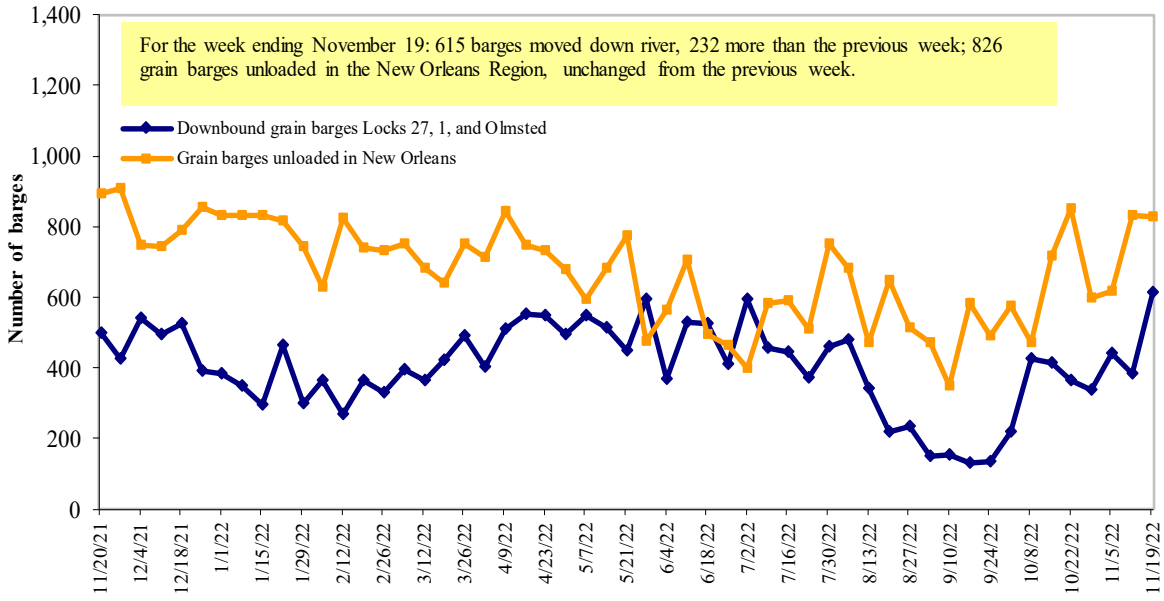


Note: The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.

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 11/21/2022 (U.S. $/gallon)

Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	5.411	-0.063	1.721
	New England	5.963	-0.097	2.297
	Central Atlantic	5.941	-0.048	2.094
	Lower Atlantic	5.178	-0.064	1.583
II	Midwest	5.231	-0.090	1.614
III	Gulf Coast	4.782	-0.104	1.325
IV	Rocky Mountain	5.438	0.037	1.597
V	West Coast	5.744	-0.025	1.323
	West Coast less California	5.430	0.018	1.421
	California	6.105	-0.075	1.321
Total	United States	5.233	-0.080	1.509

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

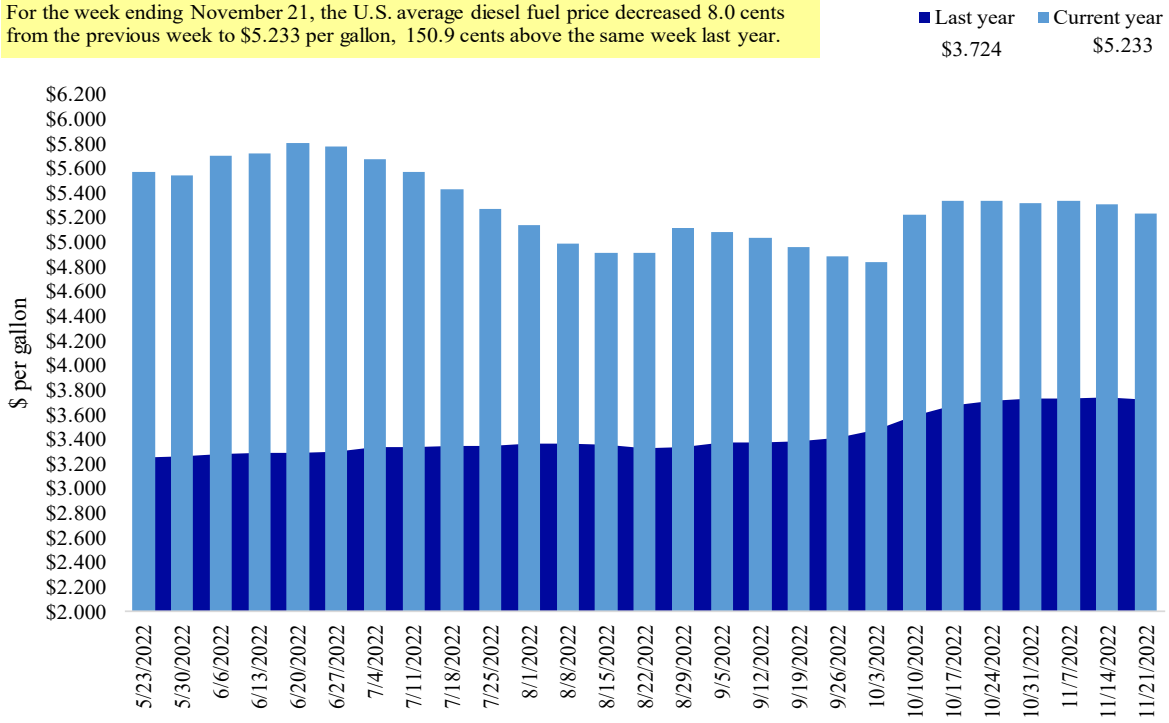
Note: On June 13, the Energy Information Administration implemented a new methodology to estimate weekly on-highway diesel fuel prices.

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

Figure 12

Weekly diesel fuel prices, U.S. average

For the week ending November 21, the U.S. average diesel fuel price decreased 8.0 cents from the previous week to $5.233 per gallon, 150.9 cents above the same week last year.



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)

	Wheat						Corn	Soybeans	Total
For the week ending	HRW	SRW	HRS	SWW	DUR	All wheat			
Export balances[1]									
11/10/2022	919	523	1,153	1,043	62	3,699	10,933	21,398	36,030
This week year ago	1,835	575	1,184	772	52	4,418	25,201	18,049	47,668
Cumulative exports-marketing year[2]									
2022/23 YTD	2,613	1,678	2,616	2,101	78	9,085	4,967	14,586	28,638
2021/22 YTD	3,500	1,449	2,519	1,710	77	9,255	7,779	16,490	33,525
YTD 2022/23 as % of 2021/22	75	116	104	123	101	98	64	88	85
Last 4 wks. as % of same period 2021/22	45	88	94	120	118	78	42	123	76
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 11/10/2022	Total commitments[2] 2022/23 current MY	Total commitments[2] 2021/22 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
		1,000 mt -		
Mexico	6974.4	9,095	(23)	15,227
China	3498	11,925	(71)	12,616
Japan	1447	2,843	(49)	10,273
Columbia	279	1,754	(84)	4,398
Korea	18	72	(76)	2,563
Top 5 importers	**12,216**	**25,690**	(52)	**45,077**
Total U.S. corn export sales	**15,899**	**32,980**	(52)	**56,665**
% of projected exports	29%	52%		
Change from prior week[2]	**1,170**	**905**		
Top 5 importers' share of U.S. corn export sales	77%	78%		80%
USDA forecast November 2022	**54,707**	**62,875**	(13)	
Corn use for ethanol USDA forecast, November 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 11/10/2022	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	20,960	18,849	11	27,283
Mexico	2,794	2,334	20	4,929
Egypt	714	1,271	(44)	3,553
Japan	1,107	889	25	2,266
Indonesia	433	407	6	2,116
Top 5 importers	**26,008**	**23,750**	10	**40,147**
Total U.S. soybean export sales	**35,984**	**34,539**	4	**54,231**
% of projected exports	65%	59%		
change from prior week[2]	**3,030**	**1,316**		
Top 5 importers' share of U.S. soybean export sales	72%	69%		**74%**
USDA forecast, November 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 11/10/2022	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	2,211	2,432	(9)	3,566
Philippines	1,623	2,100	(23)	2,985
Japan	1,373	1,423	(3)	2,453
China	616	848	(27)	1,537
Nigeria	605	1,463	(59)	1,528
Korea	881	818	8	1,459
Taiwan	457	549	(17)	1,106
Indonesia	299	67	345	711
Thailand	499	375	33	703
Colombia	406	400	1	621
Top 10 importers	**8,970**	**10,475**	(14)	**16,669**
Total U.S. wheat export sales	**12,784**	**13,673**	(6)	**22,763**
% of projected exports	61%	63%		
change from prior week[2]	**290**	**399**		
Top 10 importers' share of U.S. wheat export sales	70%	77%		73%
USDA forecast, November 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 11/17/22	Previous week*	Current week as % of previous	2022 YTD*	2021 YTD*	2022 YTD as % of 2021 YTD	Last 4-weeks as % of: Last year	Last 4-weeks as % of: Prior 3-yr. avg.	2021 total*
Pacific Northwest									
Wheat	167	97	172	9,056	12,445	73	148	62	13,243
Corn	0	1	0	8,953	12,430	72	2	1	13,420
Soybeans	847	641	132	11,253	11,129	101	94	122	14,540
Total	**1,014**	**739**	**137**	**29,262**	**36,004**	**81**	**97**	**104**	**41,203**
Mississippi Gulf									
Wheat	0	0	n/a	3,950	3,024	131	10	13	3,202
Corn	320	309	104	28,582	35,916	80	49	58	38,498
Soybeans	1,221	988	124	24,240	20,642	117	89	99	27,159
Total	**1,542**	**1,297**	**119**	**56,771**	**59,581**	**95**	**76**	**86**	**68,858**
Texas Gulf									
Wheat	77	45	169	3,120	3,615	86	91	74	3,888
Corn	0	21	0	593	552	108	63	79	627
Soybeans	35	124	28	432	1,428	30	78	104	1,611
Total	**111**	**190**	**59**	**4,146**	**5,595**	**74**	**81**	**90**	**6,126**
Interior									
Wheat	50	36	138	2,548	2,673	95	78	85	2,973
Corn	167	191	87	7,852	8,855	89	77	93	10,157
Soybeans	179	156	115	6,155	5,655	109	87	91	6,525
Total	**396**	**382**	**104**	**16,555**	**17,183**	**96**	**81**	**91**	**19,656**
Great Lakes									
Wheat	1	1	n/a	287	431	67	7	5	536
Corn	0	0	n/a	148	114	129	0	0	145
Soybeans	26	24	108	542	532	102	52	85	592
Total	**28**	**25**	**110**	**977**	**1,077**	**91**	**43**	**58**	**1,273**
Atlantic									
Wheat	0	0	n/a	168	125	135	n/a	0	128
Corn	0	5	0	286	81	353	68	201	85
Soybeans	88	82	107	2,198	1,637	134	121	149	2,184
Total	**88**	**87**	**102**	**2,652**	**1,842**	**144**	**119**	**149**	**2,397**
U.S. total from ports*									
Wheat	295	179	164	19,129	22,311	86	79	56	23,969
Corn	487	526	93	46,414	57,948	80	57	64	62,932
Soybeans	2,397	2,016	119	44,820	41,022	109	90	107	52,612
Total	**3,179**	**2,721**	**117**	**110,363**	**121,281**	**91**	**83**	**93**	**139,512**

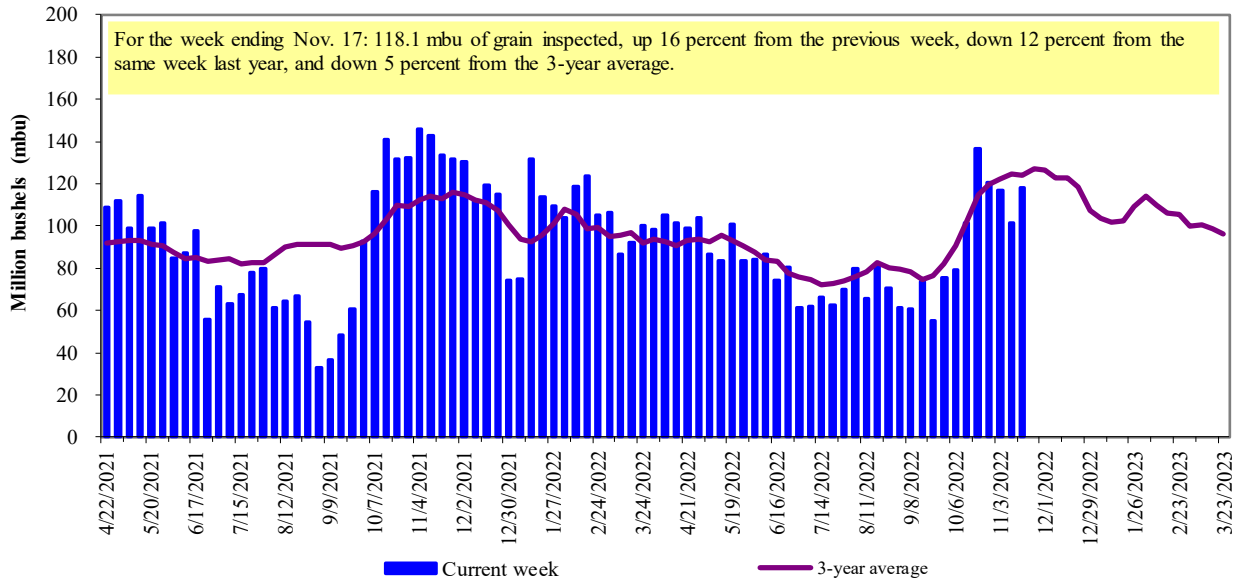
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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)

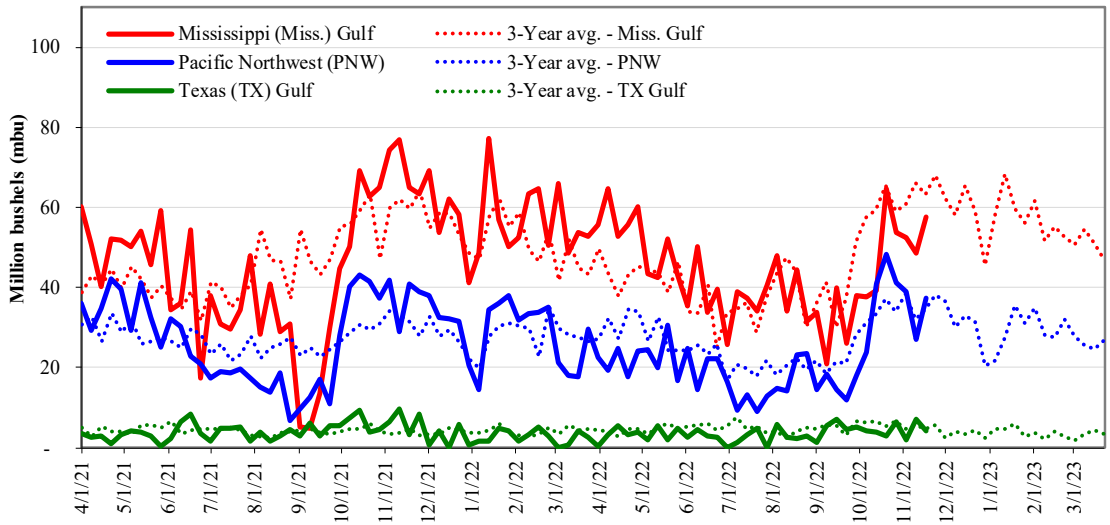


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 14

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



Week ending 11/17/22 inspections (mbu):	
MS Gulf:	57.5
PNW:	37.3
TX Gulf:	4.1

Percent change	MS Gulf	TX	U.S. Gulf	PNW
Last wk:	up 19	down 42	up 11	up 37
Last Year (same wk):	down 11	up 19	down 10	down 8
3-yr avg. (4-wk. mov. Avg):	down 8	down 25	down 9	up 7

Source: USDA, Federal Grain Inspection Service.

Table 16

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

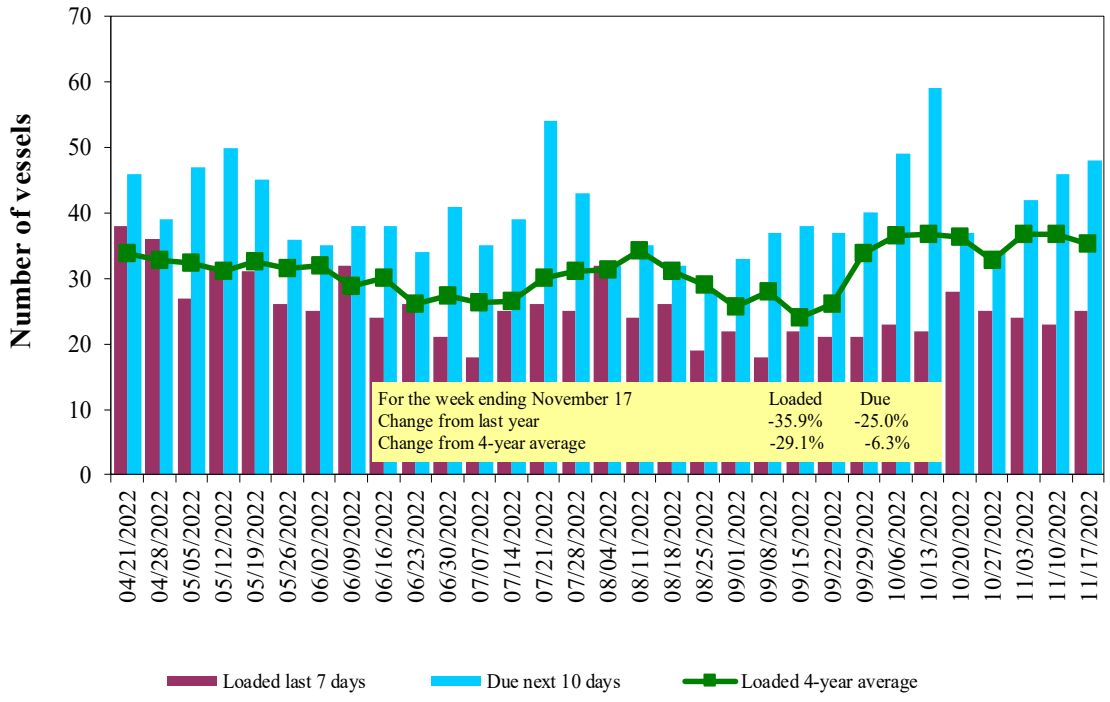
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
11/17/2022	37	25	48	18
11/10/2022	35	23	46	18
2021 range	(10…57)	(5...48)	(15...69)	(4…27)
2021 average	34	32	49	15

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

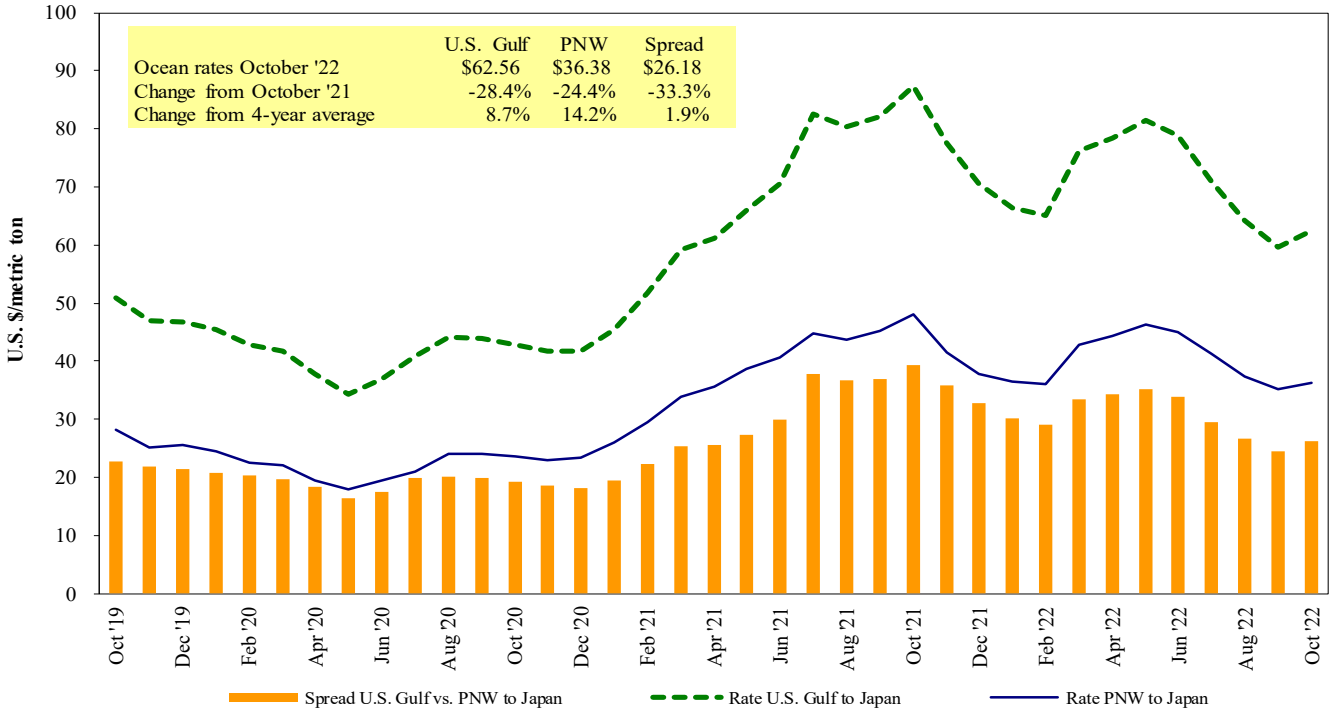


[1]U.S. Gulf includes Mississippi, Texas, and East Gulf.

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 11/19/2022

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

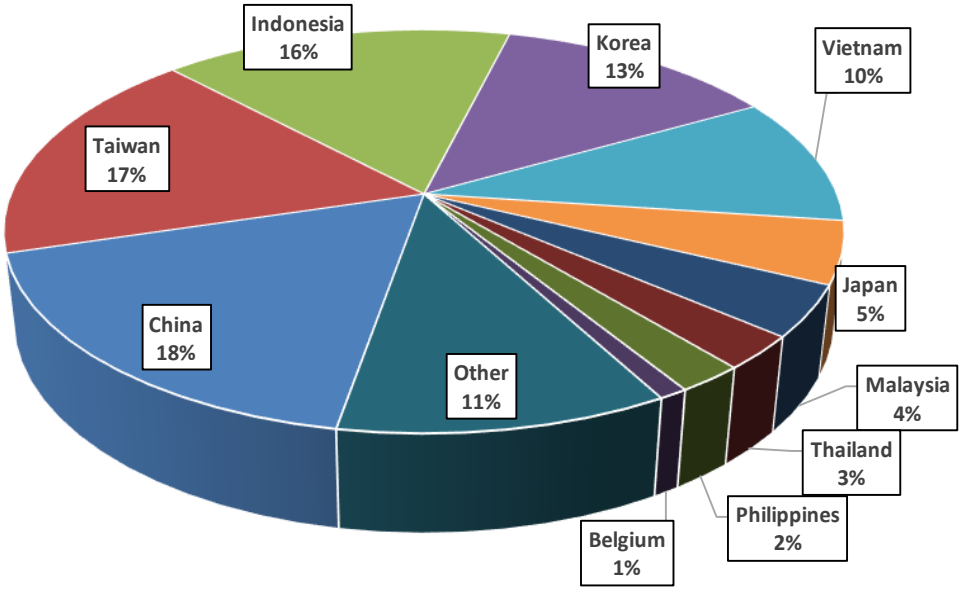
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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.

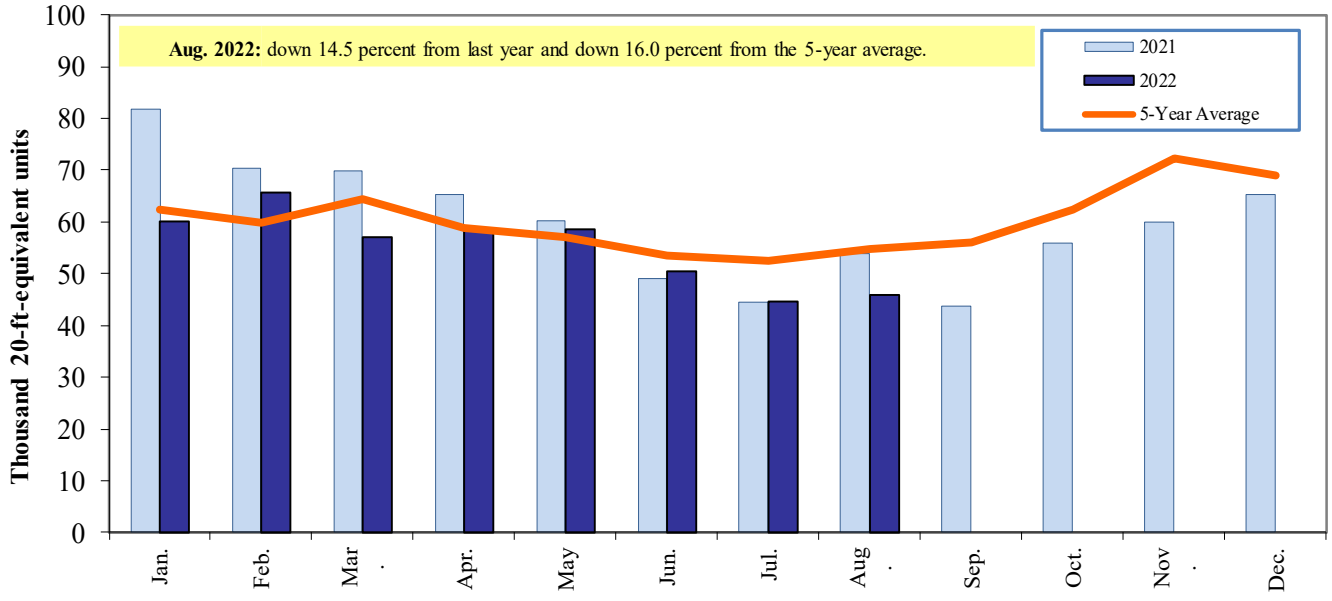
Figure 17
Top 10 destination markets for U.S. containerized grain exports, Jan-Aug 2022



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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