USDA 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 November 24, 2022

WEEKLY HIGHLIGHTS

National Academy of Science To Conduct OSRA-Mandated Chassis Study

With a $500,000 contract, the Federal Maritime Commission (FMC) recently commissioned the National Academies of Science (NAS) to study intermodal chassis pools and recommend best practices for managing them. As mandated by Section 19 of the Ocean Shipping Reform Act of 2022 (OSRA), a committee of independent experts will examine different approaches used by motor carriers, railroads, marine terminal operators, and other stakeholders to supply chassis to transport intermodal ocean containers. The research aims to determine which approaches and chassis models support maximum efficiency. For each model, the committee will identify best practices, necessary conditions, and practical obstacles (as well as possible solutions) to implementation. Chassis constraints have caused problems at several ports this year, even closing part of the Port of Oakland in May. Over the next few weeks, NAS will assemble the committee by consensus, and then the public will have an opportunity to comment on the makeup of the committee.

New FHWA Handbook Aims To Resolve Truck Parking Issues

A new Federal Highway Administration (FHWA) handbook gives States detailed procedures on how to assess demand for truck parking and boost their parking capacity. Truck parking shortages have been a national concern for some time and affect the safety of commercial motor vehicle drivers, as well as the efficiency of U.S. supply chains. Intended for use by private industry and local planning groups, the 80-page *Truck Parking Development Handbook* describes what determines parking demand and how to integrate truck parking where it is most needed. The publication also advises on how to conduct benefit-cost and economic-impact analyses of truck parking projects and how to develop such projects. To compose the handbook, FHWA worked in concert with the National Coalition of Truck Parking (NCTP), a group of stakeholders assembled by the agency. NCTP members hail from the public sector, transportation organizations, the freight industry, and other groups.

Department of Transportation Funding Alleviates Port Congestion

The U.S. Department of Transportation (DOT) recently awarded grants—under America's Marine Highway Program (AMHP)—to several marine highway projects that are key to grain transportation. The funding will expand marine highway services to U.S. waterways and help alleviate supply chain issues and congestion at ports. Grant funds can be used to purchase low-emission U.S. manufactured equipment. DOT/AMHP-funded projects that are key to grain transportation include the following: Helena Harbor Container on Barge Project ($2.3 million) in Arkansas; M-5 Coastal Connection ($5.6 million) in California and Washington; M-55/M-35 Marine Highway Barge Projects ($2.4 million) in Illinois and Missouri; Baton Rouge-New Orleans Shuttle Barge Expansion Project ($1.1 million) in Louisiana; New York Harbor Container and Trailer-on-Barge Service ($5.2 million) in New York; Richmond Marine Terminal ($3.7 million) in Virginia; M-90 Transby Marine Highway ($3.3 million) in Wisconsin; and Tidewater M-84 Barge Service Expansion ($4.2 million) in Washington and Oregon.

Snapshots by Sector

Export Sales

For the week ending November 3, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2022/23 totaled 34.31 million metric tons (mmt), down 30 percent from the same time last year and down 5 percent from last week. Net **corn export sales** for MY 2022/23 were 0.265 mmt, down 29 percent from last week. Net **soybean export sales** were 0.795 mmt, down 4 percent from last week. Net weekly **wheat export sales** were 0.323 mmt, down 7 percent from last week.

Rail

U.S. Class I railroads originated 26,322 **grain carloads** during the week ending November 5. This was a 3-percent increase from the previous week, 4 percent more than last year, and 6 percent more than the 3-year average.

Average November shuttle **secondary railcar** bids/offers (per car) were $883 above tariff for the week ending November 10. This was $123 less than last week and $396 more than this week last year.

Barge

For the week ending November 12, **barged grain movements** totaled 592,000 tons. This was 7 percent less than the previous week and 33 percent less than the same period last year.

For the week ending November 12, 383 grain barges **moved down river**—57 fewer barges than last week. There were 830 grain barges **unloaded** in the New Orleans region, 35 percent more than last week.

Ocean

For the week ending November 10, 23 **oceangoing grain vessels** were loaded in the Gulf—40 percent fewer than the same period last year. Within the next 10 days (starting November 11), 46 vessels were expected to be loaded—30 percent fewer than the same period last year.

As of November 10, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $57.50. This was 1 percent less than the previous week. The rate from the Pacific Northwest to Japan was $34.00 per mt, unchanged from the previous week.

Fuel

For the week ending November 14, the U.S. average **diesel fuel price** decreased 2.0 cents from the previous week to $5.313 per gallon, 157.9 cents above the same week last year.

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Feature Article/Calendar

Third-Quarter 2022 Corn and Soybean Transportation Costs

From second quarter 2022 to third quarter 2022 (quarter to quarter), transportation costs for shipping corn and soybeans from Minneapolis, MN, to Japan decreased moderately through both the U.S. Gulf (Gulf route) and the Pacific Northwest (PNW route). From third quarter 2021 to third quarter 2022 (year to year), transportation costs increased slightly for shipping corn and soybeans by the two major routes, primarily because of higher truck and barge freight rates.

Quarter to quarter and year to year, ocean freight rates decreased for both routes, mainly because of falling global trade and shrinking demand from Asia for bulk grain products (*Grain Transportation Report (GTR)*, November 10, 2022).

Table 1: Cost of shipping corn and soybeans from Minneapolis to Japan through the U.S. Gulf

	Corn					Soybeans				
	$/metric ton			Percent change		$/metric ton			Percent Change	
	3rd qtr. '21	2nd qtr. '22	3rd qtr. '22	Yr. to Yr.	Qtr to Qtr	3rdqtr. '21	2nd qtr. '22	3rdqtr. '22	Yr. to Yr.	Qtr to Qtr
Truck	13.19	23.40	19.07	44.58	-18.50	13.19	23.40	19.07	44.58	-18.50
Barge[1]	32.61	44.56	46.33	42.07	3.97	32.61	44.56	46.33	42.07	3.97
Ocean	81.71	79.61	64.90	-20.57	-18.48	81.71	79.61	64.90	-20.57	-18.48
Total transportation cost	127.51	147.57	130.30	2.19	-11.70	127.51	147.57	130.30	2.19	-11.70
Farm value[3]	228.33	270.33	277.81	21.67	2.77	482.57	589.12	531.56	10.15	-9.77
Total landed cost	355.84	417.9	408.11	14.69	-2.34	610.08	736.69	661.86	8.49	-10.16
Transportation % landed cost	35.83	35.31	31.93			20.90	20.03	19.69		

[1] Barge rates are from Minneapolis, MN to the U.S. Gulf.

[2] All rail tariffs include fuel surcharges and revisions for heavy axle rail cars and shuttle trains. The rail tariff rate is a base price of rail freight rates, but during periods of high rail demand or car shortages, high auction and secondary market rates could exceed the base rail tariffs per car.

[3] USDA, National Agricultural Statistics Service is the source for corn and soybean prices.

Note: qtr. = quarter; yr. = year.

Source: USDA, Agricultural Marketing Service.

U.S. Gulf Costs

Quarter-to-quarter transportation costs. Quarter to quarter, Gulf-route transportation costs fell 12 percent each, mainly because of decreasing truck and ocean freight rates (table 1). Trucking rates decreased 19 percent (for moving corn and soybeans from Minnesota farms to local, truck-served grain elevators). Ocean rates fell 18 percent. Barge rates for the Gulf route slightly rose because of the tight supply of barges and higher fuel costs.

Year-to-year exports. Third-quarter 2022 corn inspections through the Gulf route totaled 5.8 million metric tons (mmt) (down 16 percent year to year), accounting for 64 percent of total corn exports. Gulf-route soybean shipments totaled 4.9 mmt (up 120 percent), accounting for 71 percent of total soybean exports (*GTR*, November 3, 2022).

Landed costs. Quarter to quarter, Gulf-route landed costs for corn fell 2 percent, with lower transportation costs, while landed costs for soybeans decreased 10 percent, as both transportation costs and farm values fell (table 1). As a share of landed costs, transportation costs were 32 percent for shipping corn and 20 percent for shipping soybeans. Farm values for corn increased 22 percent from year to year and rose 3 percent quarter to quarter. Soybean farm values increased 10 percent year to year, but dropped 10 percent quarter to quarter.

Table 2: Cost of shipping corn and soybeans from Minneapolis to Japan through the Pacific Northwest

	Corn					Soybeans				
			$/metric ton	Percent change				$/metric ton	Percent Change	
	3rd qtr. '21	2nd qtr. '22	3rd qtr. '22	Yr. to Yr.	Qtr to Qtr	3rd qtr. '21	2nd qtr. '22	3rd qtr. '22	Yr. to Yr.	Qtr to Qtr
Truck	13.19	23.40	19.07	44.58	-18.50	13.19	23.40	19.07	44.58	-18.50
Rail[1]	51.44	53.43	53.43	3.87	0.00	59.25	60.58	61.57	3.92	1.63
Ocean	44.56	45.20	37.93	-14.88	-16.08	44.56	45.20	37.93	-14.88	-16.08
Total Transportation Cost	109.19	122.03	110.43	1.14	-9.51	117.00	129.18	118.57	1.34	-8.21
Farm Value[3]	228.33	270.33	277.81	21.67	2.77	482.57	589.12	531.56	10.15	-9.77
Total Landed Cost	337.52	392.36	388.24	15.03	-1.05	599.57	718.30	650.13	8.43	-9.49
Transportation % Landed Cost	32.35	31.10	28.44			19.51	17.98	18.24		

[1] All rail tariffs include fuel surcharges and revisions for heavy axle rail cars and shuttle trains. The rail tariff rate is a base price of rail freight rates, but during periods of high rail demand or car shortages, high auction and secondary market rates could exceed the base rail tariffs per car.

[2] USDA, National Agricultural Statistics Service is the source for corn and soybean prices.

Note: qtr. = quarter; yr. = year.

Source: USDA, Agricultural Marketing Service.

Pacific Northwest Costs

Quarter-to-quarter transportation costs. With lower truck and ocean rates, total transportation costs via PNW route fell 10 percent for corn and fell 8 percent for soybeans quarter to quarter (table 2). Rail rates were unchanged for corn, but up 2 percent for soybeans.

Year-to-year transportation costs and exports. PNW transportation costs rose 1 percent for both corn and soybeans from year to year, mainly responding to a sizeable increase in truck rates. Rail rates rose 4 percent for both corn and soybeans.

Third-quarter 2022 PNW corn inspections totaled 1.1 mmt (12 percent of total third-quarter U.S. corn exports). This was down 31 percent, mainly because of lower demand from Asia (*GTR,* November 3, 2022). Soybean inspections were 0.681 mmt, up 22 percent. Soybean inspections were 10 percent of total third-quarter 2022 soybean inspections.

Landed costs. Quarter to quarter, PNW-route landed costs for corn fell 1 percent, with lower transportation costs, while landed costs for soybeans fell 9 percent because of lower transportation costs and lower farm values (table 2). As a share of landed costs, transportation costs were 28 percent for shipping corn and 18 percent for shipping soybeans. Farm values for corn increased 22 percent from year to year and rose 3 percent quarter to quarter. Soybean farm values increased 10 percent year to year, but dropped 10 percent quarter to quarter.

WASDE *Projections*

According to USDA's November 2022 *World Agricultural Supply and Demand Estimates (WASDE)*, total U.S. corn exports for marketing year (MY) 2022/23 are expected to decrease 13 percent from MY 2021/22, with lower global trade and a decline in foreign demand for U.S. corn. In MY 2022/23, soybean exports are also expected to decrease 5 percent from MY 2021/22, with shipments to Asia expected to decline from MY 2021/22.

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Grain Transportation Indicators

Table 1

Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Non-Shuttle	Shuttle		Gulf	Pacific
11/16/22	357	335	300	670	257	241
11/09/22	358	335	305	676	259	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	11/11/2022	11/4/2022
Corn	IL–Gulf	-1.82	-1.94
Corn	NE–Gulf	-1.10	-1.27
Soybean	IA–Gulf	-2.41	-2.54
HRW	KS–Gulf	-2.59	-2.55
HRS	ND–Portland	-2.38	-2.40

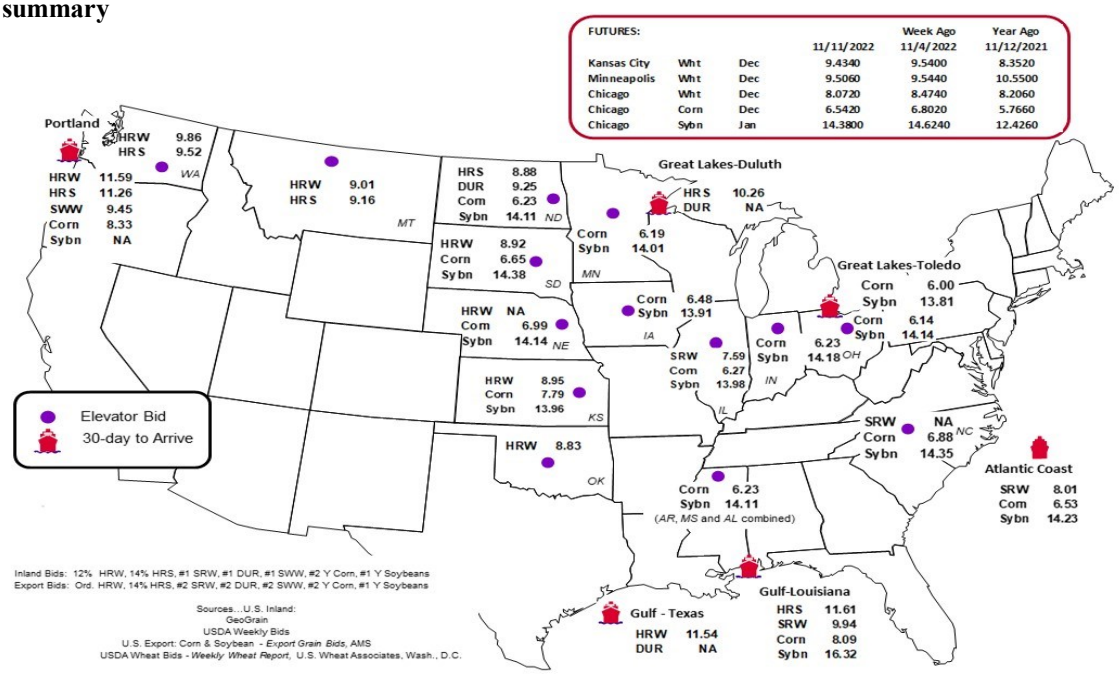
Note: nq = no quote; n/a = not available; HRW = hard red winter wheat; HRS = hard red spring wheat.

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	
11/5/2022	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	2,594	3,122	13,109	1,253	6,244	26,322	5,731	6,144
This week last year	1,992	2,065	13,126	1,306	6,891	25,380	3,979	5,080
2022 YTD	76,930	106,402	484,231	55,446	253,772	976,781	167,489	170,159
2021 YTD	78,183	103,416	511,388	53,619	271,095	1,017,701	180,292	209,212
2022 YTD as % of 2021 YTD	98	103	95	103	94	96	93	81
Last 4 weeks as % of 2021*	100	136	99	94	95	101	143	129
Last 4 weeks as % of 3-yr. avg.**	108	121	102	109	103	105	127	119
Total 2021	93,935	120,654	609,890	64,818	318,002	1,207,299	209,993	242,533

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

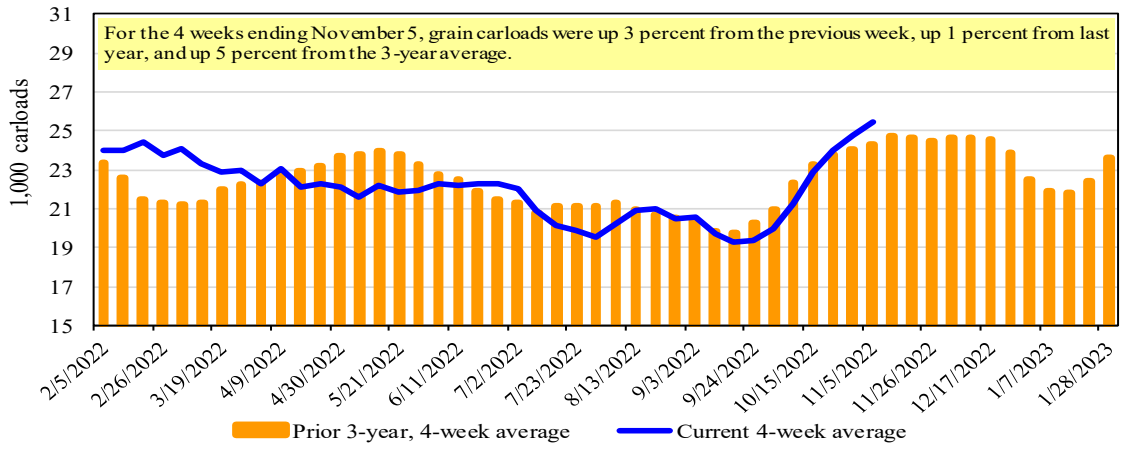
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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							
11/10/2022		Nov-22	Nov-21	Dec-22	Dec-21	Jan-23	Jan-22	Feb-23	Feb-22
BNSF[3]	COT grain units	no bids	n/a	no bids	0	54	0	0	n/a
	COT grain single-car	no bids	n/a	308	100	451	0	375	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.

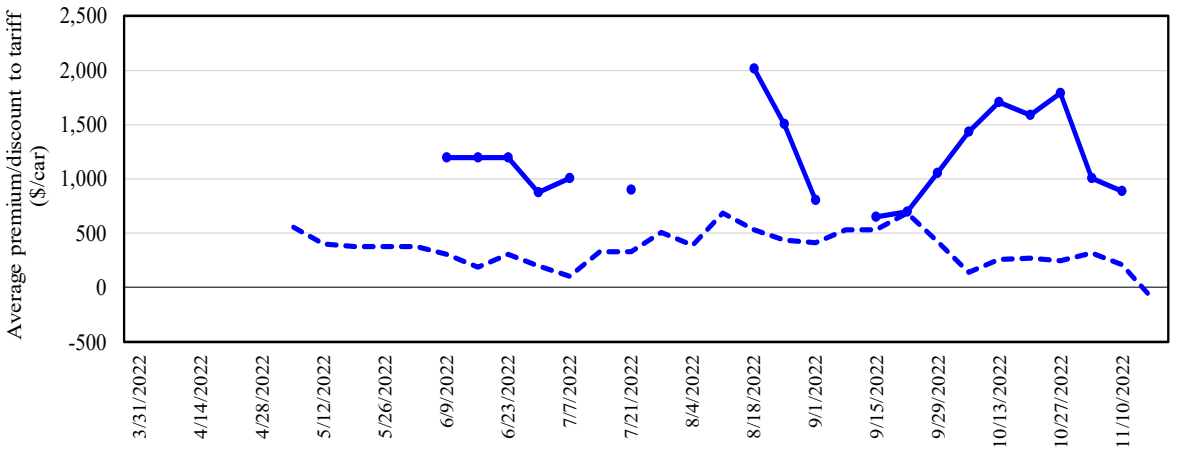
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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 November 2022

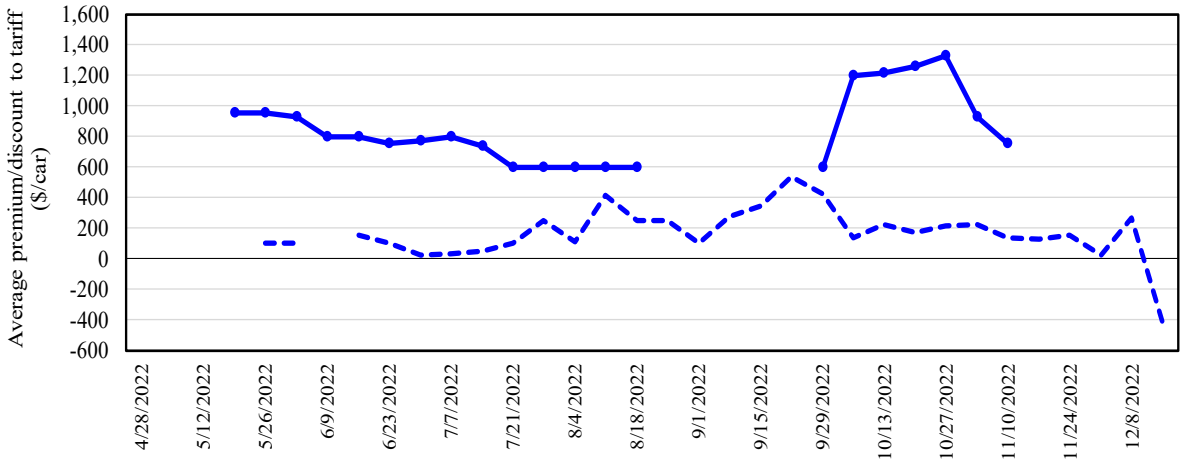


11/10/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$888	$879

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $123 this week and are $1,125 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 December 2022



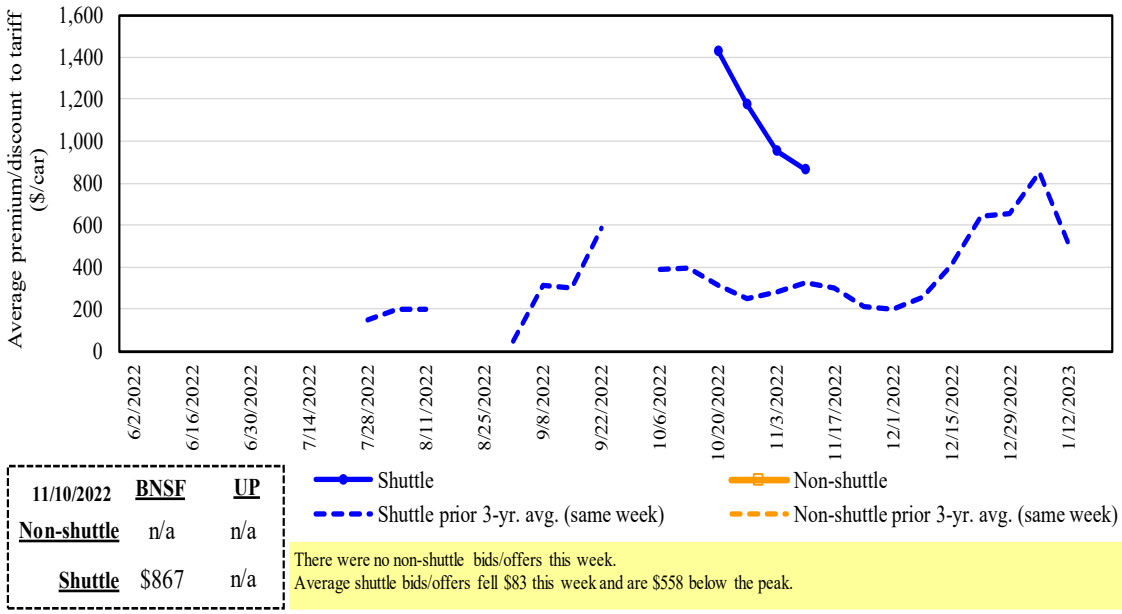
11/10/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$700	$800

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $175 this week and are $581 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 January 2023



11/10/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$867	n/a

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $83 this week and are $558 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: 11/10/2022	Delivery period					
		Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-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**	**888**	**700**	**867**	**n/a**	**n/a**	**n/a**
	Change from last week	63	(150)	(83)	n/a	n/a	n/a
	Change from same week 2021	469	378	542	n/a	n/a	n/a
	UP-Pool	**879**	**800**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	(309)	(200)	n/a	n/a	n/a	n/a
	Change from same week 2021	323	369	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							
Commodity	Origin state	Destination region	Tariff rate per car[1]	Fuel surcharge per car[2]	Tariff rate plus fuel surcharge per: metric ton[3]	bushel[3]	Percent change[4] 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.

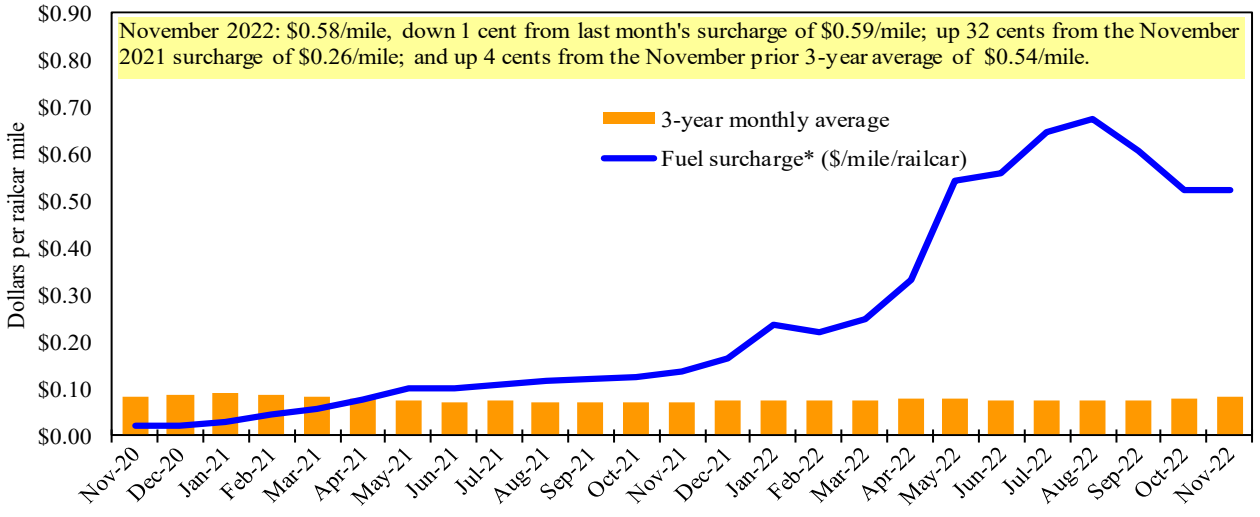
[4]Percentage change calculated using tariff rate plus fuel surchage; Y/Y = year over year.

[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.

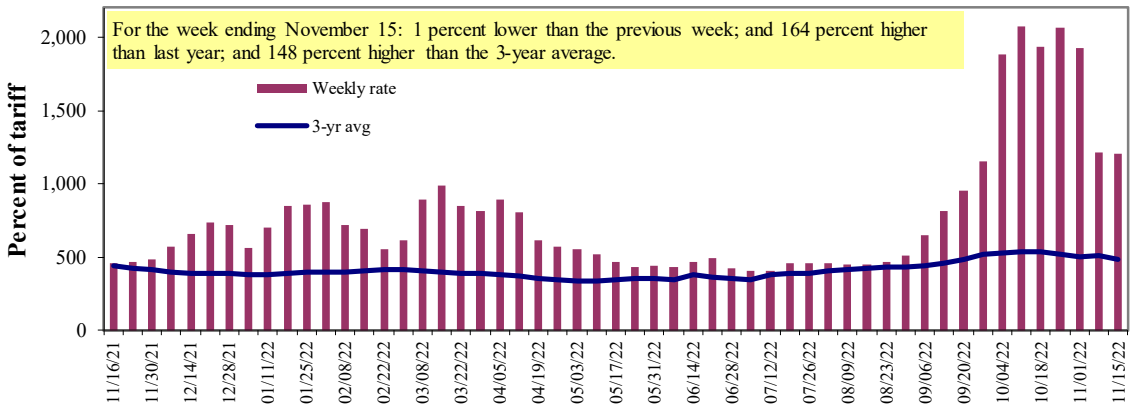
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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

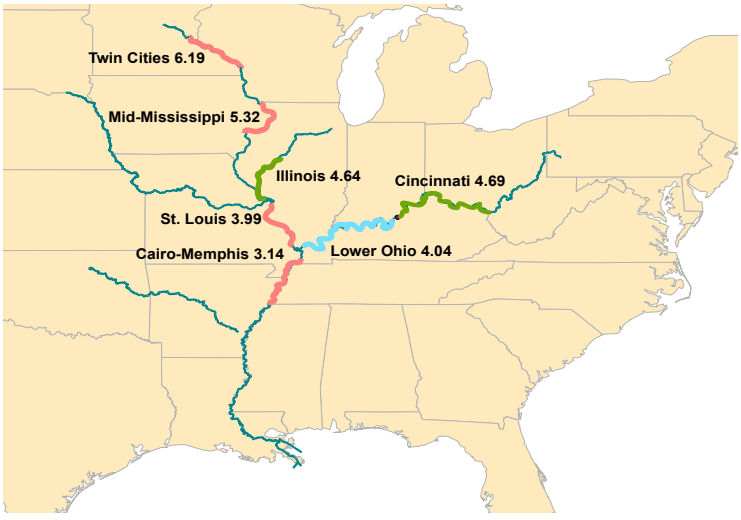
		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	11/15/2022	1000	1125	1206	1025	1106	1106	952
	11/8/2022	945	1067	1217	1021	1108	1108	958
$/ton	11/15/2022	61.90	59.85	55.96	40.90	51.87	44.68	29.89
	11/8/2022	58.50	56.76	56.47	40.74	51.97	44.76	30.08
Current week % change from the same week:								
	Last year	128	144	164	183	140	140	191
	3-year avg. [2]	96	124	148	155	143	143	146
Rate[1]	December	-	-	1047	919	947	947	841
	February	-	-	906	734	731	731	663

[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

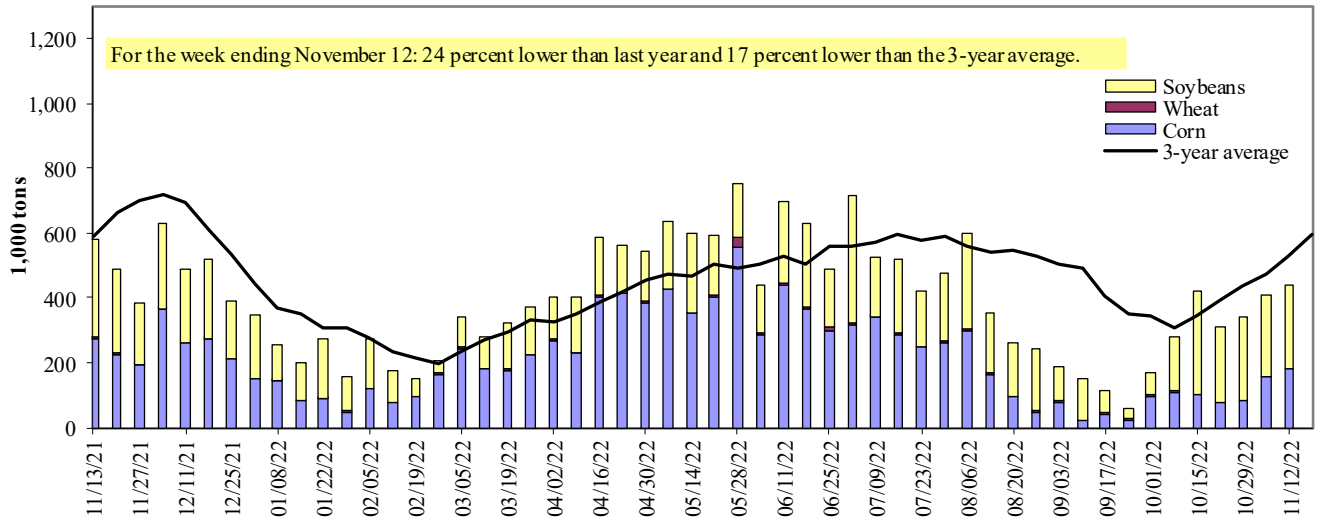
Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.



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

Source: U.S. Army Corps of Engineers.

Table 9

Barge grain movements (1,000 tons)

For the week ending 11/12/2022	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	88	0	88	0	176
Winfield, MO (L25)	130	0	204	0	335
Alton, IL (L26)	178	0	230	0	407
Granite City, IL (L27)	180	0	260	0	440
Illinois River (La Grange)	44	0	22	0	66
Ohio River (Olmsted)	59	0	79	0	138
Arkansas River (L1)	0	0	14	0	14
Weekly total - 2022	239	0	353	0	592
Weekly total - 2021	361	17	511	0	889
2022 YTD[1]	14,579	1,499	11,434	227	27,740
2021 YTD[1]	21,089	1,518	8,643	245	31,496
2022 as % of 2021 YTD	69	99	132	93	88
Last 4 weeks as % of 2021[2]	58	3	96	136	79
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.

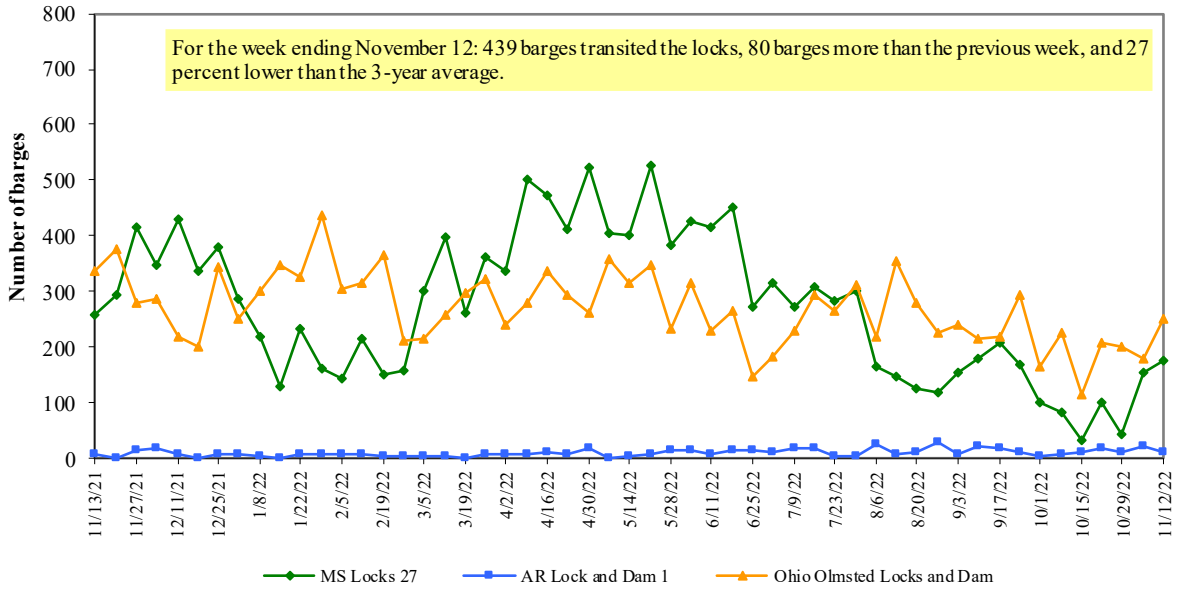
[2] As a percent of same period in 2021.

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 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

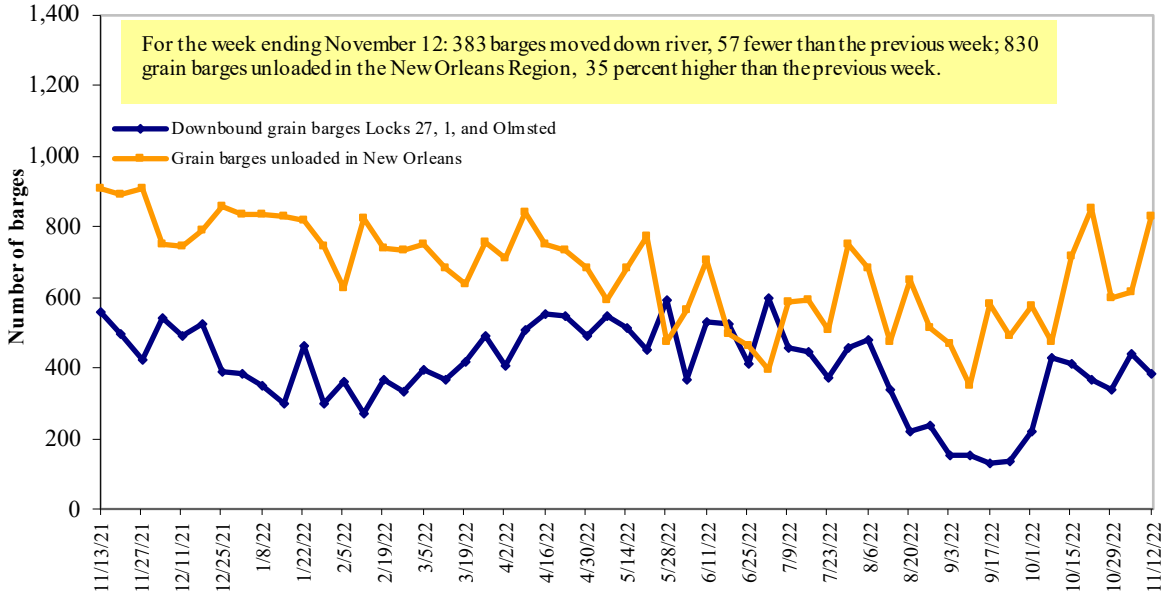


Note: The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.

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 11/14/2022 (U.S. $/gallon)

Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	5.474	0.001	1.767
	New England	6.060	0.095	2.403
	Central Atlantic	5.989	0.012	2.137
	Lower Atlantic	5.242	0.000	1.622
II	Midwest	5.321	-0.030	1.690
III	Gulf Coast	4.886	-0.051	1.412
IV	Rocky Mountain	5.401	0.063	1.563
V	West Coast	5.769	0.005	1.345
	West Coast less California	5.412	0.019	1.403
	California	6.180	-0.011	1.411
Total	United States	5.313	-0.020	1.579

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

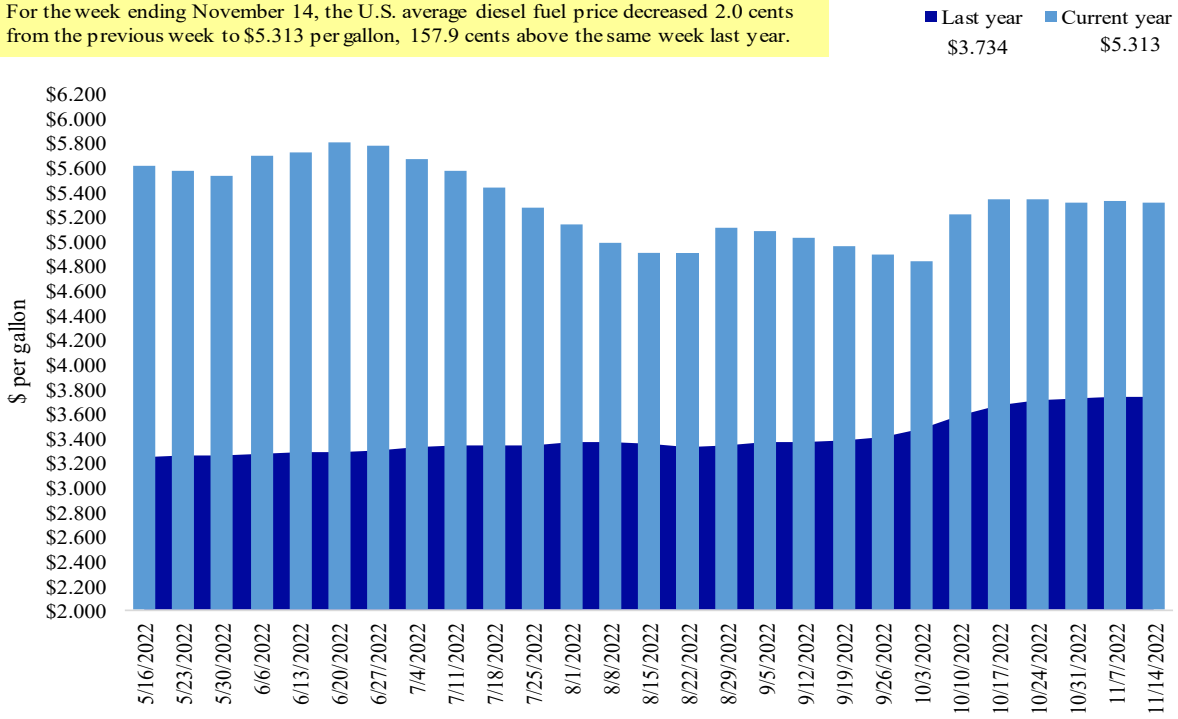
Note: On June 13, the Energy Information Administration implemented a new methodology to estimate weekly on-highway diesel fuel prices.

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

Figure 12

Weekly diesel fuel prices, U.S. average

For the week ending November 14, the U.S. average diesel fuel price decreased 2.0 cents from the previous week to $5.313 per gallon, 157.9 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]									
11/3/2022	874	503	1,158	932	62	3,527	10,328	20,450	34,305
This week year ago	1,854	533	1,142	748	52	4,330	25,464	19,010	48,804
Cumulative exports-marketing year[2]									
2022/23 YTD	2,597	1,677	2,537	2,079	78	8,967	4,402	12,643	26,012
2021/22 YTD	3,366	1,383	2,468	1,650	77	8,944	6,612	14,213	29,769
YTD 2022/23 as % of 2021/22	77	121	103	126	101	100	67	89	87
Last 4 wks. as % of same period 2021/22	42	92	92	108	118	74	41	122	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 11/03/2022	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	6054.7	8,884	(32)	15,227
China	3488	11,925	(71)	12,616
Japan	1400	2,642	(47)	10,273
Columbia	299	1,685	(82)	4,398
Korea	16	72	(78)	2,563
Top 5 importers	**11,257**	**25,208**	(55)	**45,077**
Total U.S. corn export sales	**14,730**	**32,076**	(54)	**56,665**
% of projected exports	27%	51%		
Change from prior week[2]	**265**	**1,067**		
Top 5 importers' share of U.S. corn export sales	76%	79%		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 11/03/2022	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	19,417	18,121	7	27,283
Mexico	2,338	2,299	2	4,929
Egypt	714	1,216	(41)	3,553
Japan	1,010	836	21	2,266
Indonesia	342	402	(15)	2,116
Top 5 importers	**23,822**	**22,874**	4	**40,147**
Total U.S. soybean export sales	**33,093**	**33,223**	(0)	**54,231**
% of projected exports	59%	57%		
change from prior week[2]	**795**	**1,219**		
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 11/03/2022	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	2,143	2,392	(10)	3,566
Philippines	1,590	2,039	(22)	2,985
Japan	1,311	1,360	(4)	2,453
China	616	848	(27)	1,537
Nigeria	617	1,379	(55)	1,528
Korea	881	818	8	1,459
Taiwan	457	549	(17)	1,106
Indonesia	299	59	405	711
Thailand	448	375	19	703
Colombia	405	399	1	621
Top 10 importers	**8,766**	**10,219**	(14)	**16,669**
Total U.S. wheat export sales	**12,494**	**13,274**	(6)	**22,763**
% of projected exports	59%	61%		
change from prior week[2]	**323**	**267**		
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 11/10/22	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	43	140	30	8,835	12,324	72	101	33	13,243
Corn	1	0	n/a	8,953	12,369	72	127	1	13,420
Soybeans	641	918	70	10,406	10,206	102	103	134	14,540
Total	**685**	**1,058**	**65**	**28,194**	**34,899**	**81**	**103**	**109**	**41,203**
Mississippi Gulf									
Wheat	0	29	0	3,950	2,996	132	20	30	3,202
Corn	309	41	758	28,261	35,410	80	53	60	38,498
Soybeans	925	1,353	68	22,955	19,446	118	91	98	27,159
Total	**1,234**	**1,423**	**87**	**55,166**	**57,852**	**95**	**78**	**87**	**68,858**
Texas Gulf									
Wheat	13	0	n/a	3,012	3,615	83	45	37	3,888
Corn	21	0	n/a	593	532	111	96	141	627
Soybeans	124	54	228	398	1,356	29	79	103	1,611
Total	**158**	**54**	**290**	**4,003**	**5,503**	**73**	**69**	**76**	**6,126**
Interior									
Wheat	24	21	111	2,486	2,619	95	72	72	2,973
Corn	140	183	77	7,635	8,630	88	68	81	10,157
Soybeans	108	161	67	5,926	5,464	108	84	93	6,525
Total	**272**	**365**	**74**	**16,047**	**16,713**	**96**	**76**	**86**	**19,656**
Great Lakes									
Wheat	1	1	57	286	431	66	28	27	536
Corn	0	0	n/a	148	114	129	0	0	145
Soybeans	24	72	34	515	424	122	63	92	592
Total	**25**	**73**	**34**	**949**	**969**	**98**	**53**	**72**	**1,273**
Atlantic									
Wheat	0	0	n/a	168	125	135	n/a	0	128
Corn	5	5	99	286	81	353	78	219	85
Soybeans	81	184	44	2,109	1,558	135	126	154	2,184
Total	**86**	**189**	**45**	**2,562**	**1,764**	**145**	**123**	**155**	**2,397**
U.S. total from ports*									
Wheat	80	192	42	18,735	22,108	85	54	37	23,969
Corn	476	228	208	45,877	57,137	80	58	64	62,932
Soybeans	1,904	2,743	69	42,309	38,454	110	94	111	52,612
Total	**2,460**	**3,163**	**78**	**106,921**	**117,699**	**91**	**85**	**94**	**139,512**

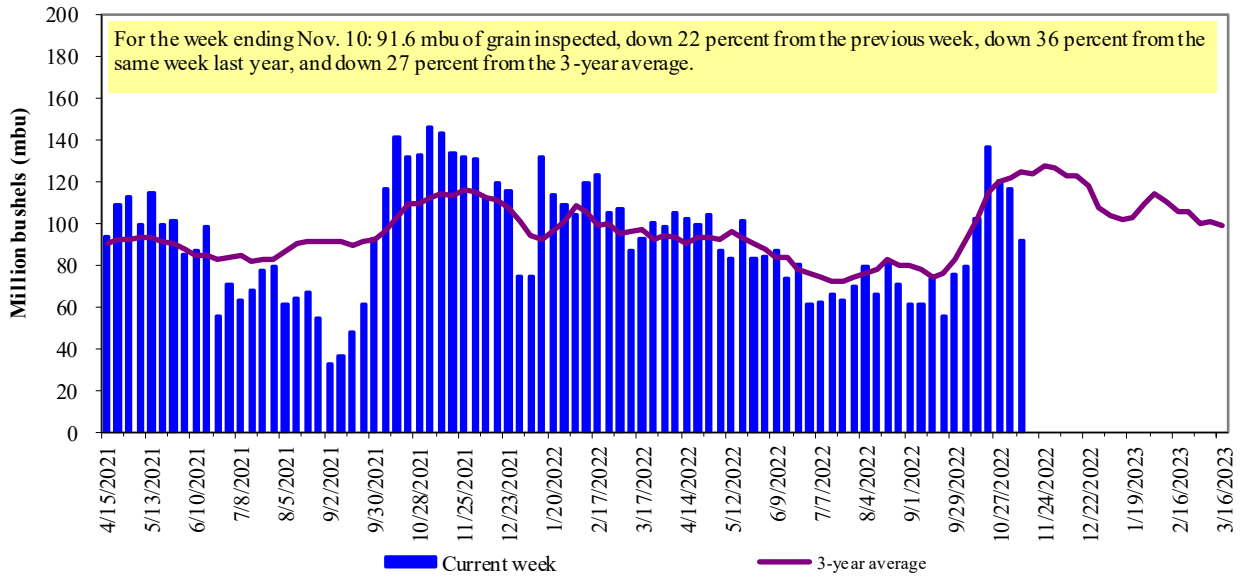
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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)

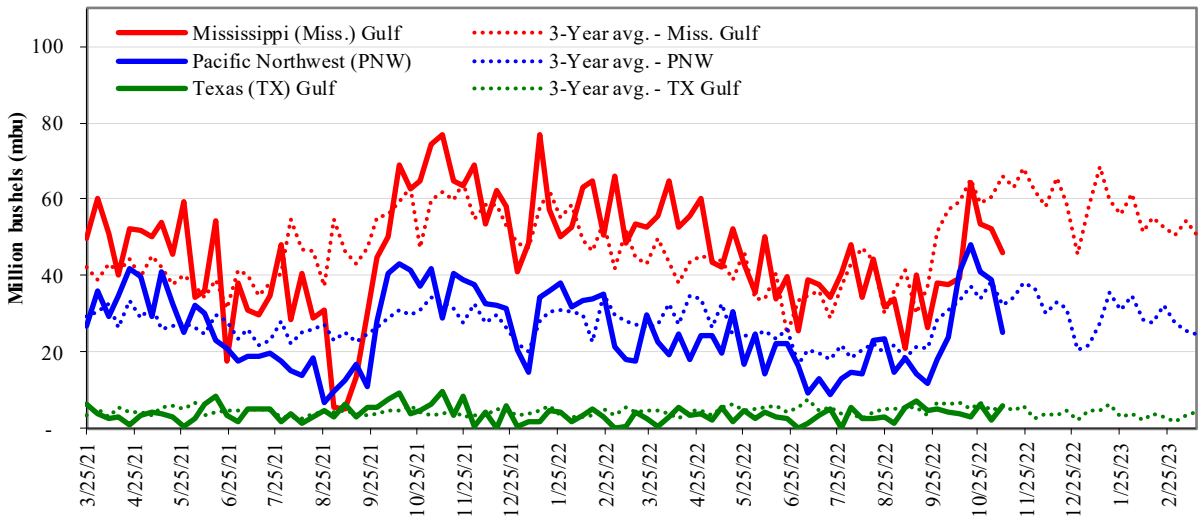


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 14

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



Week ending 11/10/22 inspections (mbu):	
MS Gulf:	46.1
PNW:	25.2
TX Gulf:	5.9

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last wk:	down 12	up 193	down 4	down 35
Last Year (same wk):	down 40	down 40	down 40	down 13
3-yr avg. (4-wk. mov. Avg):	down 26	up 5	down 24	down 29

Source: USDA, Federal Grain Inspection Service.

Table 16

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

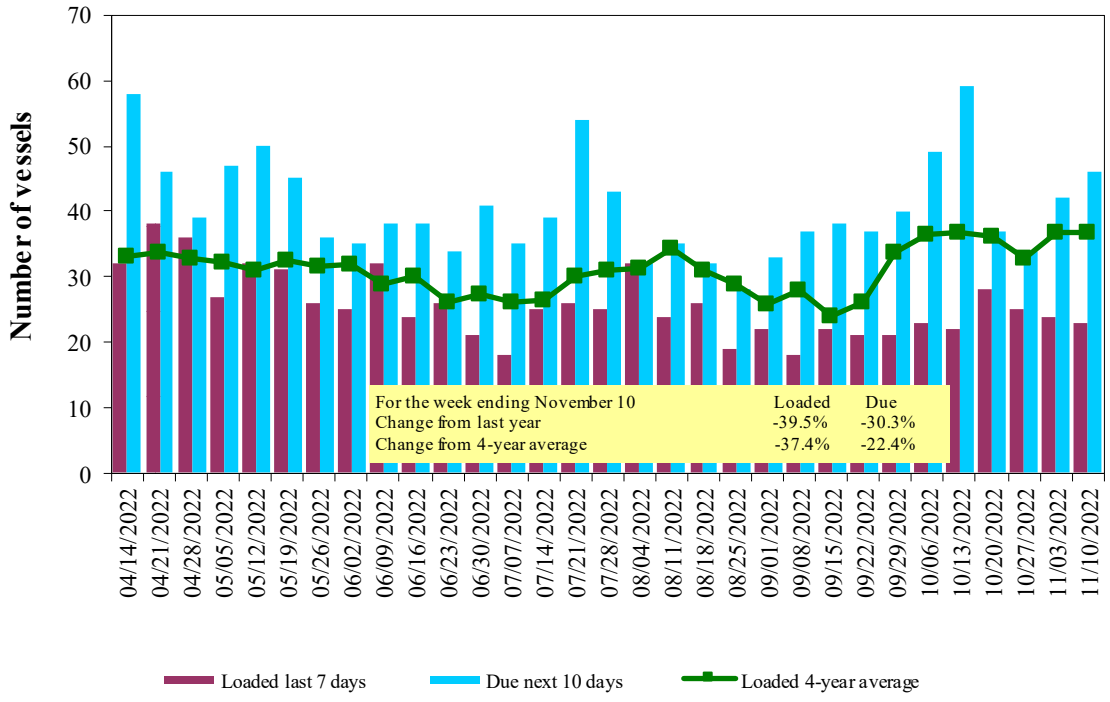
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
11/10/2022	35	23	46	18
11/3/2022	33	24	42	17
2021 range	(10…57)	(5...48)	(15...69)	(4…27)
2021 average	34	32	49	15

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

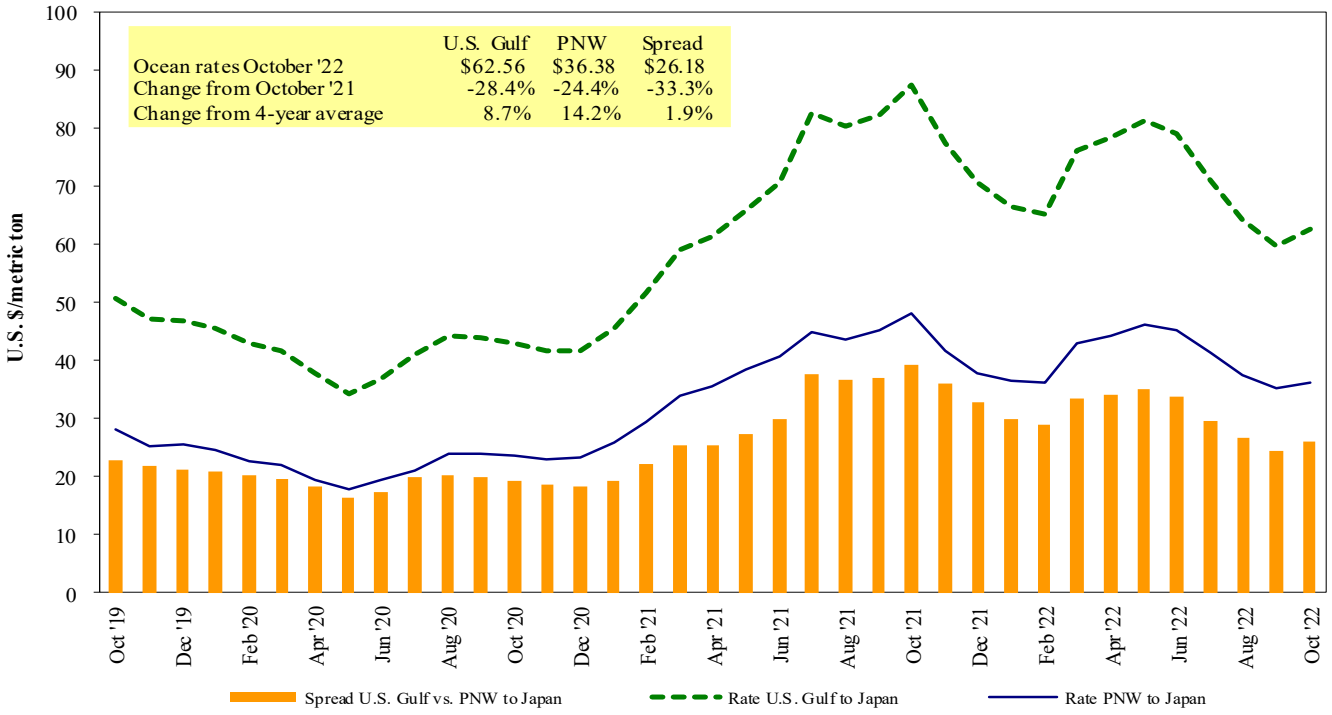


[1]U.S. Gulf includes Mississippi, Texas, and East Gulf.

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 11/12/2022

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.

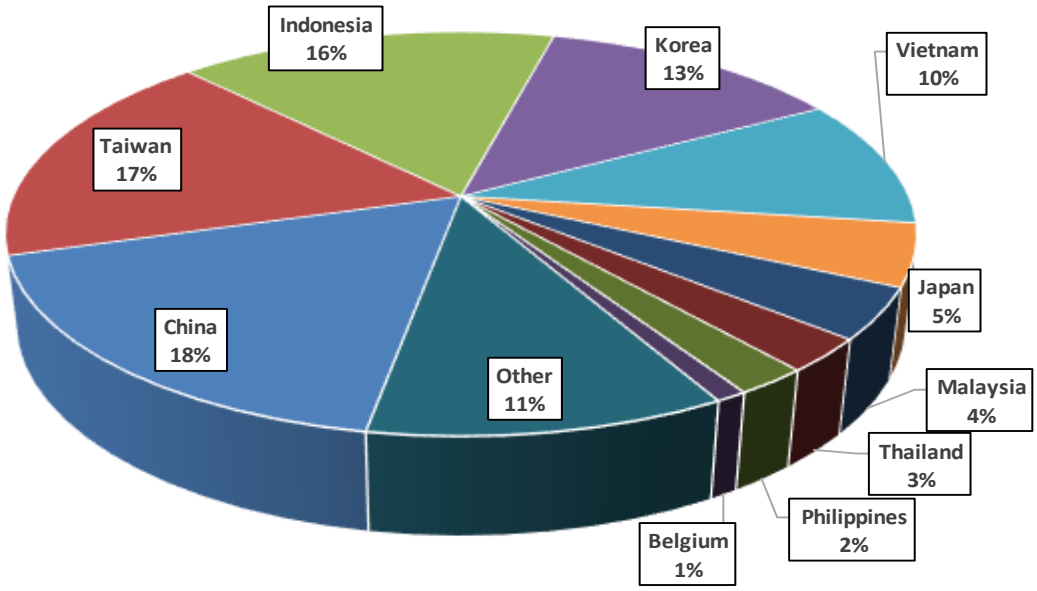
Note: Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), free on board (F.O.B), except where otherwise indicated; op = option.

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

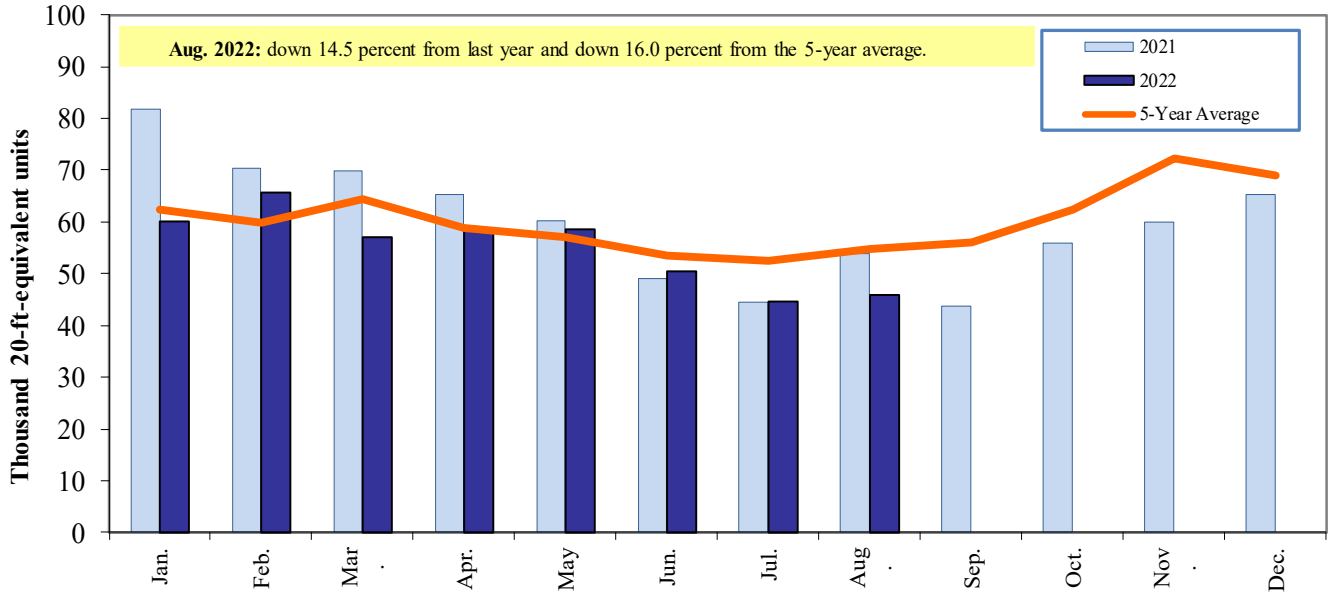


Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: '1001', '100190', '1002', '100200', '1003', '100300', '1004', '100400', '1005', '100590', '1007', '100700', '110100', '1102', '110220', '110290', '1201', '120100', '120190', '120810', '230210',

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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