



Grain Transportation Report

A weekly publication of the Agricultural Marketing Service
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June 8, 2023

WEEKLY HIGHLIGHTS

Labor Disruptions Cause Closures and Delays at West Coast Ports

Since last Friday (June 2), container terminals at several key West Coast Ports have experienced intermittent closures and other delays due to insufficient labor. According to the *Journal of Commerce*, the port disruptions at the Ports of Los Angeles, Long Beach, Oakland, Tacoma, and Seattle stemmed from a breakdown in labor contract negotiations between the Pacific Maritime Association (PMA) and the International Longshore Warehouse Union (ILWU). The breakdown reportedly involved a dispute in wage increases for longshoremen, and the port disruptions marked the latest such incidents since April. (The previous labor contract expired last July.) PMA represents West Coast ocean carriers, terminal operators, and stevedores. ILWU represents West Coast dockworkers. After a 4-day hiatus, labor negotiations briefly resumed on Tuesday (June 6), but halted to honor the death of a longshore worker, and were expected to resume on Wednesday. West Coast ports are key agricultural export terminals. For June, between 2018 and 2022, West Coast ports handled around 41 percent of total U.S. containerized agricultural exports. Distillers' dried grains and soybeans are the top containerized grain products.

China's Additional Inspections of Its Imported Soybeans Lead to Delays

In recent weeks, China has inspected a growing share of its imported soybeans—according to several soybean traders (as reported by *Reuters*). In at least one port—the Port of Rizhao—all arriving vessels have been inspected, rather than the port's previous average of only one-in-five arriving vessels. (As China's top soybean-import port, the Port of Rizhao handled more than 10 million metric tons (mmt) of soybeans in 2022.) Delays caused by more inspections can lead to increased demurrage costs for U.S. shippers. As of May 25, accumulated U.S. soybean exports to China are 9 percent higher in marketing year (MY) 2022/23 than last year. However, for the rest of MY 2022/23, China is expected to buy more soybeans from Brazil than from the United States, leveraging Brazil's large supplies and low prices (*Grain Transportation Report, May 11, 2023*). According to USDA's May *World Agricultural Supply and Demand Estimates* report, China is expected to import a total of 98 mmt of soybeans in MY 2022/23, which would be 7 percent more than last year.

Federal Reserve Notes Weakness in Transportation Sector

The Federal Reserve noted in the *latest Beige Book*, released in May, that "economic activity was little changed overall in April and early May...[however] demand for transportation services was down, especially in trucking, where contacts reported there was a 'freight recession.'" This decline in the transportation sector overall is consistent with trends in grain transportation. Since the start of the year, grain transport cost indicators (*GTR table 1*) have declined 15 percent for trucking, 23 percent for shuttle trains, 69 percent for barge, 9 percent for ocean vessels departing the U.S. Gulf Coast, and 10 percent for ocean vessels departing the Pacific Northwest. *The Beige Book* contains qualitative information on current economic conditions based on surveys and interviews with key business contacts, economists, and market experts.

Snapshots by Sector

Export Sales

For the week ending May 25, **unshipped balances** of wheat, corn, and soybeans for marketing year (MY) 2022/23 totaled 11.42 million metric tons (mmt), down 15 percent from last week and down 52 percent from the same time last year. Net **corn export sales** for MY 2022/23 were 0.187, up significantly from last week. Net **soybean export sales** were 0.123 mmt, up 7 percent from last week. Net weekly **wheat export sales** were -0.211 mmt, down significantly from last week.

Rail

U.S. Class I railroads originated 19,798 **grain carloads** during the week ending May 27. This was an 11-percent increase from the previous week, 4 percent less than last year, and 10 percent lower than the 3-year average.

Average June **shuttle secondary railcar bids/offers** (per car) were \$321 below tariff for the week ending June 1. This was \$83 less than last week and \$2,119 lower than this week last year. Average non-shuttle secondary railcar bids/offers per car were \$66 below tariff. This was \$16 less than last week and \$824 lower than this week last year.

Barge

For the week ending June 3, **barge grain movements** totaled 524,550 tons. This was 35 percent less than the previous week and 10 percent less than the same period last year.

For the week ending June 3, 331 grain barges **moved down river**—185 fewer than last week. There were 493 grain barges **unloaded** in the New Orleans region, 18 percent fewer than last week.

Ocean

For the week ending June 1, 22 **oceangoing grain vessels** were loaded in the Gulf—12 percent fewer than the same period last year. Within the next 10 days (starting June 2), 37 vessels were expected to be loaded—6 percent more than the same period last year.

As of June 1, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was \$48.00. This was 4 percent less than the previous week. The rate from the Pacific Northwest to Japan was \$26.50 per mt, 4 percent less than the previous week.

Fuel

For the week ending June 5, the U.S. average **diesel fuel price** decreased 5.8 cents from the previous week to \$3.797 per gallon, 190.6 cents below the same week last year.

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Feature Article/Calendar

U.S. and Brazilian Soybean Transportation Costs Fell From Fourth Quarter 2022 to First Quarter 2023

As the world's two leading producers of soybeans, the United States and Brazil compete for the same overseas markets, including China and Europe. Low transportation and landed costs are key to remaining competitive on the global market. This article compares quarterly and yearly changes in the costs of moving soybeans from the United States and Brazil to Shanghai, China (table 1) and to Hamburg, Germany (table 2).

Table 1-Quarterly costs of transporting soybeans from United States and Brazil to Shanghai, China

	United States (via U.S. Gulf)					Brazil				
	2022 1 st qtr.	2022 4 th qtr.	2023 1 st qtr.	Percent change		2022 1 st qtr.	2022 4 th qtr.	2023 1 st qtr.	Percent change	
				Yr. to yr.	Qtr. to qtr.				Yr. to yr.	Qtr. to qtr.
	United States (via U.S. Gulf)									
	Minneapolis, MN					Davenport, IA				
	--\$/mt--									
Truck	16.67	16.31	14.75	-11.52	-9.56	16.67	16.31	14.75	-11.52	-9.56
Rail ¹	38.04	-	42.67	-	-	34.81	-	37.93	-	-
Barge ²	29.07	94.50	19.88	-31.61	-78.96	29.07	78.46	19.88	-31.61	-74.66
Ocean ³	68.22	58.11	50.46	-26.03	-13.16	68.22	58.11	50.46	-26.03	-13.16
Total transportation	152.00	168.92	127.76	-15.95	-24.37	148.77	152.88	123.02	-17.31	-19.53
Farm value ⁴	527.88	509.51	541.36	2.55	6.25	519.31	515.64	545.03	4.95	5.70
Landed cost ⁵	679.88	678.43	669.12	-1.58	-1.37	668.08	668.52	668.05	0.00	-0.07
Transport % of landed cost ⁶	22.36	24.90	19.09	-3.26	-5.80	22.27	22.87	18.41	-3.85	-4.45
	Via PNW									
	Fargo, ND					Sioux Falls, SD				
Truck	16.67	16.31	14.75	-11.52	-9.56	16.67	16.31	14.75	-11.52	-9.56
Rail ¹	59.09	69.00	68.15	15.33	-1.23	60.08	70.86	69.90	16.34	-1.35
Ocean	37.68	33.53	28.09	-25.45	-16.22	37.68	33.53	28.09	-25.45	-16.22
Total transportation	113.44	118.84	110.99	-2.16	-6.61	114.43	120.70	112.74	-1.48	-6.59
Farm value	516.86	500.94	518.09	0.24	3.42	531.56	516.86	540.13	1.61	4.50
Landed cost	630.30	619.78	629.08	-0.19	1.50	645.99	637.56	652.87	1.07	2.40
Transport % of landed cost	18.00	19.17	17.64	-0.35	-1.53	17.71	18.93	17.27	-0.45	-1.66
	Brazil									
	North MT⁷ - Santos⁸					South GO⁷ - Paranagua⁸				
	--\$/mt--									
Truck	83.64	90.13	96.25	15.08	6.79	49.26	52.88	57.77	17.28	9.25
Ocean ⁹	62.00	47.70	33.50	-45.97	-29.77	64.00	48.60	35.00	-45.31	-27.98
Total transportation	145.64	137.83	129.75	-10.91	-5.86	113.26	101.48	92.77	-18.09	-8.58
Farm Value ¹⁰	550.71	515.89	472.04	-14.29	-8.50	553.47	511.31	479.17	-13.42	-6.29
Landed Cost	696.35	653.72	601.79	-13.58	-7.94	666.73	612.79	571.94	-14.22	-6.67
Transport % of landed cost	20.91	21.08	21.56	0.65	0.48	16.99	16.56	16.22	-0.77	-0.34

¹Rail rates include fuel surcharges, but do not include the cost of purchasing empty rail cars in the secondary rail markets, which could exceed the rail tariff rate plus fuel surcharge shown in the table. Second quarter rates were revised from what were previously published.

²Quarter-to-quarter changes in the barge rates reflect the differences between Twin Cities (4th qtr.) and St. Louis (1st qtr.) barge rates.

³Source for the U.S. Ocean freight rates: O'Neil Commodity Consulting.

⁴Source for the U.S. farm values: USDA, National Agricultural Statistics Service.

⁵Landed cost is transportation cost plus farm value.

⁶For transportation as a percentage of landed costs, the year-to-year and quarter-to-quarter columns record percentage-point differences.

⁷Producing regions: MT= Mato Grosso, GO = Goiás.

⁸Export ports.

⁹Source for Brazil's ocean freight rates: University of São Paulo, Brazil, and USDA, Agricultural Marketing Service.

¹⁰Source for Brazil's farm values: Companhia Nacional de Abastecimento.

Note: qtr. = quarter; yr. = year; mt = metric ton; "-" indicates data not required or applicable. Totals may not add up exactly because of rounding. Source: Compiled by USDA, Agricultural Marketing Service.

Quarter-to-quarter transportation costs. From fourth quarter 2022 to first quarter 2023 (quarter to quarter), costs fell for exporting soybeans through the U.S. Gulf and Pacific Northwest (PNW) to China (table 1) and Germany (table 2). The decreases were due to falling truck, barge, rail (public tariff, plus fuel surcharge), and ocean freight rates. Truck rates fell partly because of lower diesel fuel prices (*GTR* fig. 13). Rail rates fell because of a decline in fuel surcharges. In calculating transportation costs that account for the winter closure of the Upper Mississippi River, northern soybeans are assumed to have shipped by rail before being transferred to barge farther downriver in St. Louis. For these rail-detoured barge shipments, lower barge rates and lower rail rates combined to decrease transportation costs. Lower barge rates were caused by soft demand for barge and navigation conditions that had recovered from

fourth quarter 2022. Ocean freight rates fell from fourth quarter 2022 because of seasonally low shipping demand caused by various holidays around the world ([GTR, May 4, 2023](#)). In Brazil, transportation costs generally fell in response to lower ocean freight rates.

Table 2-Quarterly costs of transporting soybeans from United States and Brazil to Hamburg, Germany

	2022	2022	2023	Percent change		2022	2022	2023	Percent change	
	1 st qtr.	4 th qtr.	1 st qtr.	Yr. to yr.	Qtr. to qtr.	1 st qtr.	4 th qtr.	1 st qtr.	Yr. to yr.	Qtr. to qtr.
United States (via U.S. Gulf)										
Minneapolis, MN						Davenport, IA				
	--\$/mt--					--\$/mt--				
Truck	16.67	16.31	14.75	-11.52	-9.56	16.67	16.31	14.75	-11.52	-9.56
Rail ¹	38.04	-	42.67	-	-	34.81	-	37.93	-	-
Barge ²	29.07	94.50	19.88	-31.61	-78.96	29.07	78.46	19.88	-31.61	-74.66
Ocean ³	25.88	29.17	26.09	0.81	-10.56	25.88	29.17	26.09	0.81	-10.56
Total transportation	109.66	139.98	103.39	-5.72	-26.14	106.43	123.94	98.65	-7.31	-20.41
Farm value ⁴	527.88	509.51	541.36	2.55	6.25	519.31	515.64	545.03	4.95	5.70
Landed cost ⁵	637.54	649.49	644.75	1.13	-0.73	625.74	639.58	643.68	2.87	0.64
Transport % of landed cost ⁶	17.20	21.55	16.04	-1.16	-5.52	17.01	19.38	15.33	-1.68	-4.05
Brazil										
North MT⁷ - Santos⁸						South GO⁷ - Paranagua⁸				
	--\$/mt--					--\$/mt--				
Truck	83.64	90.13	96.25	15.08	6.79	49.26	52.88	57.77	17.28	9.25
Ocean ⁹	52.70	42.20	31.65	-39.94	-25.00	51.50	41.20	31.00	-39.81	-24.76
Total transportation	136.34	132.33	127.90	-6.19	-3.35	100.76	94.08	88.77	-11.90	-5.64
Farm value ¹⁰	550.71	515.89	472.04	-14.29	-8.50	553.47	511.31	479.17	-13.42	-6.29
Landed cost	687.05	648.22	599.94	-12.68	-7.45	654.23	605.39	567.94	-13.19	-6.19
Transport % of landed cost	19.84	20.41	21.32	1.47	0.90	15.40	15.54	15.63	0.23	0.09

¹Rail rates include fuel surcharges, but do not include the cost of purchasing empty rail cars in the

secondary rail markets, which could exceed the rail tariff rate plus fuel surcharge shown in the table. Second quarter rates were revised from what were previously published.

²Quarter-to-quarter changes in the barge rates reflect the differences between Twin Cities (4th qtr.) and St. Louis (1st qtr.) barge rates.

³Source for the U.S. ocean rates: O'Neil Commodity Consulting.

⁴Source for the U.S. farm values: USDA, National Agricultural Statistics Service.

⁵Landed cost is total cost plus farm value.

⁶For transportation as a percentage of landed costs, the year-to-year and quarter-to-quarter columns record percentage-point differences.

⁷Producing regions: MT= Mato Grosso, GO = Goiás.

⁸Export ports.

⁹Source for Brazil's ocean rates: University of São Paulo, Brazil, and USDA, Agricultural Marketing Service.

¹⁰Source for Brazil's farm values: Companhia Nacional de Abastecimento.

Note: qtr. = quarter; yr. = year; mt = metric ton; "-" indicates data not required or applicable. Totals may not add up exactly because of rounding.

Year-to-year transportation costs. From first quarter 2022 to first quarter 2023 (year to year), transportation costs decreased in the United States and Brazil. In the United States, lower truck, barge, and ocean freight rates pushed down transportation costs. In Brazil, lower ocean freight rates caused transportation costs to fall.

Quarter-to-quarter landed costs. Quarter to quarter, landed costs decreased in the United States for shipments through the Gulf destined to China (table 1). Landed costs increased for shipments passing through the Pacific Northwest (PNW) to China. For shipments through the U.S. Gulf, landed-cost decreases reflected falling transportation costs. For shipments through PNW, rising farm values elevated landed costs. Landed costs from the United States to Europe varied, as the costs rose for shipments originating from Minneapolis, MN, and fell for those originating from Davenport, IA. In Brazil, landed costs fell because of lower transportation costs and farm values. In first quarter 2023, transportation's share of U.S. landed costs was 17-19 percent for shipments to China, and 15-16 percent for shipments to Germany (table 1 and 2). Transportation's share of Brazil's total landed costs was 16-22 percent for shipments to China, and 16-21 percent for shipments to Germany (tables 1 and 2).

Year-to-year landed costs. Year to year, changes in landed costs varied in the United States, but fell in Brazil. In Brazil, the decreases reflected falling transportation costs and falling soybean farm values.

U.S. exports to China. According to [USDA's Federal Grain Inspection Service](#), China imported 9.99 million metric tons (mmt) of U.S. soybeans in first quarter 2023, versus 19.51 mmt in the previous quarter and 6.74 mmt in first quarter 2022. According to USDA's May [World Agriculture Supply and Demand Estimates \(WASDE\)](#) report, in marketing year (MY) 2023/24, Brazil's soybean exports were projected to be 96.50 mmt, while U.S. soybean exports were projected to be 53.75 mmt. In MY 2022/23, Brazil's soybean exports were estimated at 93.00 mmt, while U.S. soybean exports were estimated at 54.84 mmt. However, these projections could change in the June WASDE report—to be released on June 9. For more on soybean transportation, see [Brazil Soybean Transportation](#). surajudeen.olowolayemo@usda.gov

Grain Transportation Indicators

Table 1

Grain transport cost indicators¹

For the week ending	Truck		Rail		Barge	Ocean	
		Non-Shuttle	Shuttle			Gulf	Pacific
06/07/23	255	321	237		136	215	188
05/31/23	259	321	242		142	224	195

¹Indicator: 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)

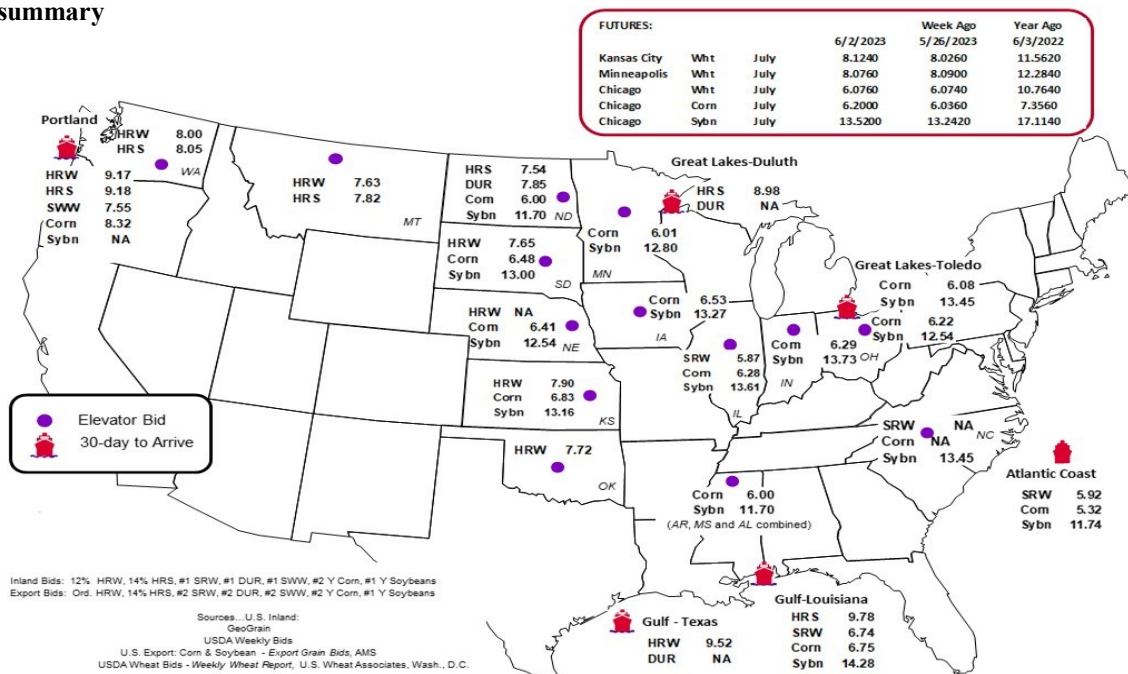
Commodity	Origin-destination	6/2/2023	5/26/2023
Corn	IL-Gulf	-0.47	-0.63
Corn	NE-Gulf	-0.34	-0.35
Soybean	IA-Gulf	-1.01	-0.97
HRW	KS-Gulf	-1.62	-1.80
HRS	ND-Portland	-1.64	-1.84

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)

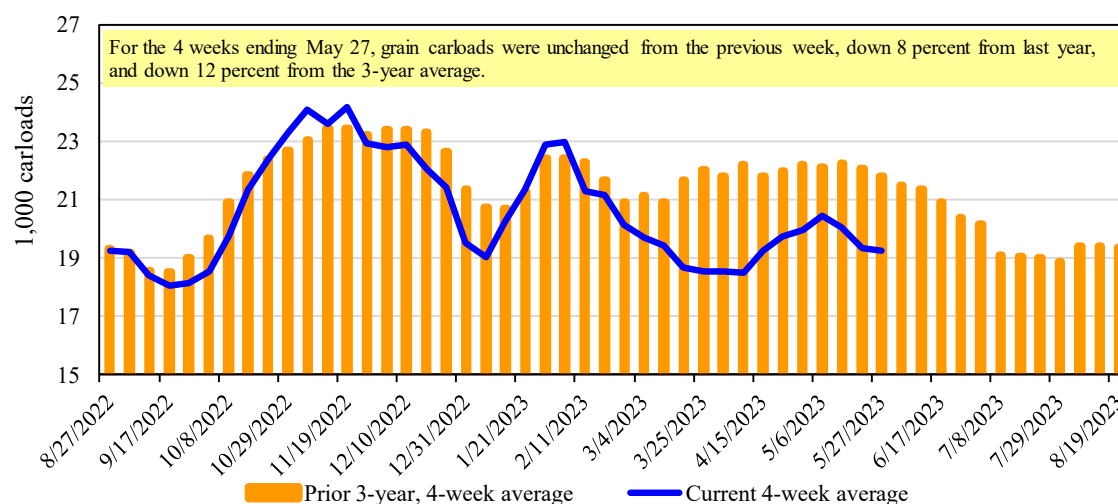
For the week ending: 5/27/2023	East		West		U.S. total	Central U.S./Canada	
	CSXT	NS	BNSF	UP		CPKC	CN
This week	2,015	3,033	9,764	4,986	19,798	3,816	3,836
This week last year	2,009	2,761	11,010	4,787	20,567	4,971	3,097
2023 YTD	41,344	56,618	204,690	119,693	422,345	118,678	101,718
2022 YTD	38,745	49,938	242,953	122,435	454,071	98,392	72,571
2023 YTD as % of 2022 YTD	107	113	84	98	93	121	140
Last 4 weeks as % of 2022	96	108	82	107	92	99	112
Last 4 weeks as % of 3-yr. avg.	97	111	79	93	88	99	94
Total 2022	93,313	130,494	570,232	296,945	1,090,984	269,138	214,102

Note: The last 4-week percentages compare the last 4 weeks of this year to the closest 4 weeks last year, and to the average across the prior 3 years. The U.S. total column excludes CPKC. NS = Norfolk Southern; UP = Union Pacific; CN = Canadian National; CPKC = Canadian Pacific Kansas City; YTD = year-to-date; avg. = average; yr. = year.

Source: Association of American Railroads.

Figure 2

Total weekly U.S. Class I railroad grain carloads



Note: U.S. total excludes Canadian Pacific Kansas City
Source: Association of American Railroads.

Table 4

Railcar auction offerings¹ (\$/car)²

For the week ending: 6/01/2023		Delivery period							
		Jun-23	Jun-22	Jul-23	Jul-22	Aug-23	Aug-22	Sep-23	Sep-22
BNSF	COT grain units	no offer	no offer	0	0	no offer	0	no offer	no offer
	COT grain single-car	0	no offer	2	17	0	16	0	no offer
UP	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

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

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

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

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

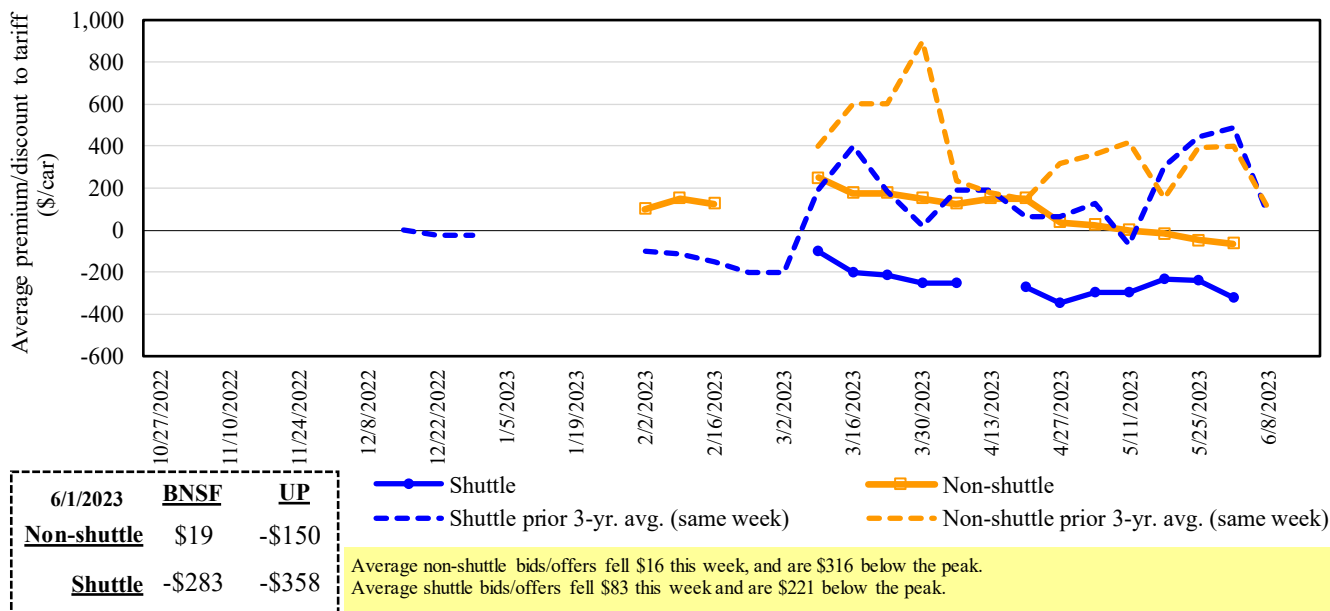
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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

Source: USDA, Agricultural Marketing Service.

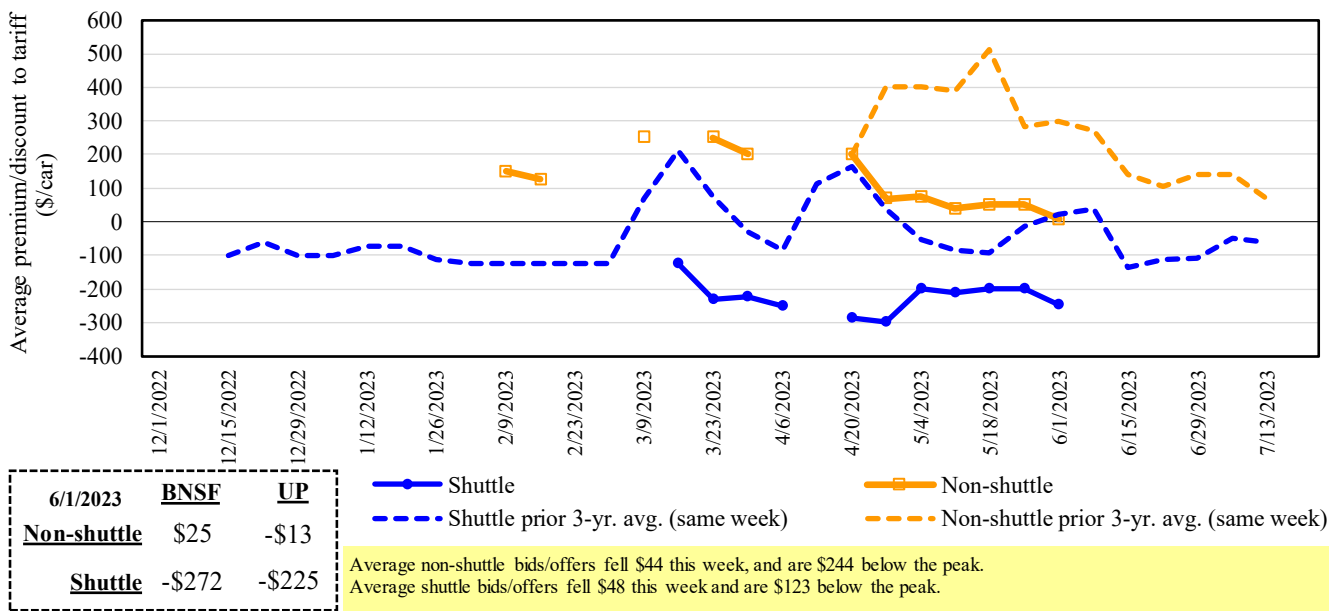
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

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



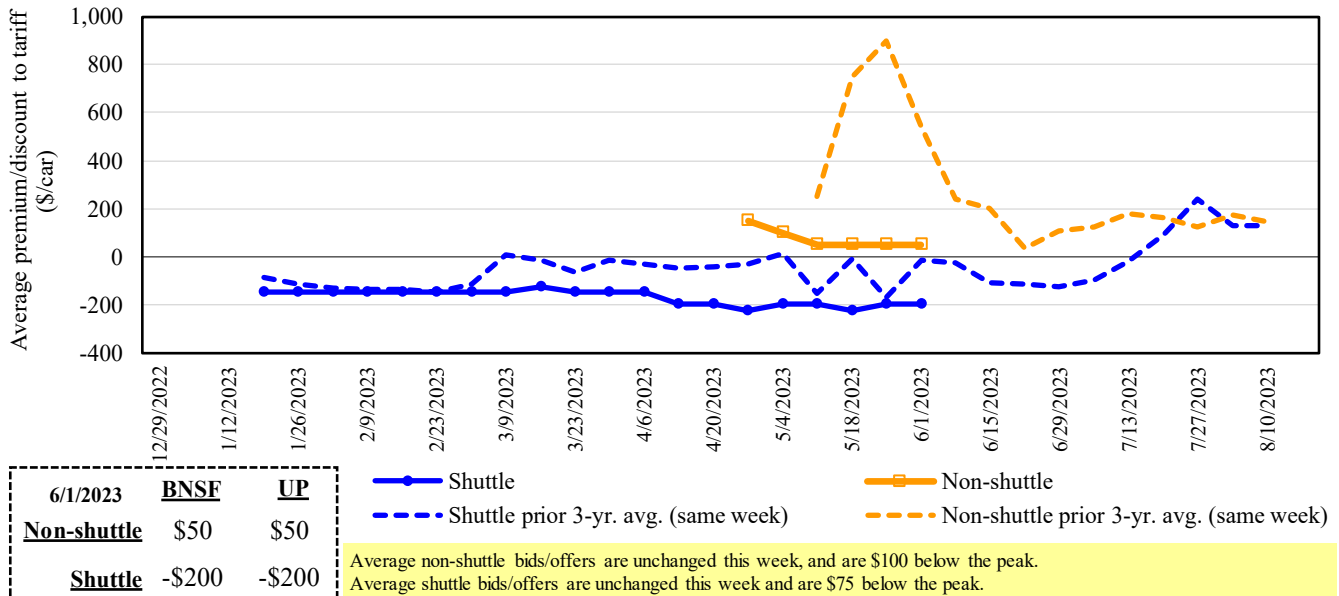
Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = year; BNSF = BNSF Railway; UP = Union Pacific Railroad
 Source: USDA, Agricultural Marketing Service.

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



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 August 2023



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: 6/01/2023		Delivery period					
		Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23
Non-shuttle	BNSF-GF	19	25	50	n/a	n/a	n/a
	Change from last week	(6)	(25)	n/a	n/a	n/a	n/a
	Change from same week 1899	(198)	(25)	n/a	n/a	n/a	n/a
	UP-Pool	(150)	(13)	50	n/a	n/a	n/a
	Change from last week	(25)	(63)	0	n/a	n/a	n/a
	Change from same week 1899	(1,450)	(950)	(875)	n/a	n/a	n/a
Shuttle	BNSF-GF	(283)	(272)	(200)	(175)	750	n/a
	Change from last week	(8)	(72)	0	0	n/a	n/a
	Change from same week 1899	(817)	(247)	(100)	(92)	(825)	n/a
	UP-Pool	(358)	(225)	(200)	(100)	575	n/a
	Change from last week	(158)	(25)	0	(100)	n/a	n/a
	Change from same week 1899	(3,421)	(1,192)	(700)	(900)	(625)	n/a
	CP-GF	(100)	(100)	n/a	n/a	n/a	n/a
	Change from last week	0	n/a	n/a	n/a	n/a	n/a
Change from same week 1899	(100)	(100)	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; a red number in parentheses indicates a negative number;

GF = guaranteed freight; Pool = guaranteed pool; BNSF = BNSF Railway; UP = Union Pacific Railroad; CP = Canadian Pacific Railway.

Data from The Malsam Co., Tradewest Brokerage Co.

Source: USDA, Agricultural Marketing Service.

Table 6

Tariff rail rates for unit and shuttle train shipments¹

June 2023	Origin region ³	Destination region ³	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per:		Percent change Y/Y ⁴
					metric ton	bushel ²	
Unit train							
Wheat	Wichita, KS	St. Louis, MO	\$4,095	\$202	\$42.68	\$1.16	3
	Grand Forks, ND	Duluth-Superior, MN	\$3,858	\$66	\$38.96	\$1.06	3
	Wichita, KS	Los Angeles, CA	\$7,640	\$337	\$79.21	\$2.16	-3
	Wichita, KS	New Orleans, LA	\$4,825	\$356	\$51.45	\$1.40	1
	Sioux Falls, SD	Galveston-Houston, TX	\$7,376	\$276	\$75.99	\$2.07	-2
	Colby, KS	Galveston-Houston, TX	\$5,075	\$390	\$54.27	\$1.48	0
	Amarillo, TX	Los Angeles, CA	\$5,121	\$543	\$56.24	\$1.53	-5
Corn	Champaign-Urbana, IL	New Orleans, LA	\$4,000	\$402	\$43.72	\$1.11	-5
	Toledo, OH	Raleigh, NC	\$8,551	\$456	\$89.44	\$2.27	2
	Des Moines, IA	Davenport, IA	\$2,655	\$85	\$27.21	\$0.69	4
	Indianapolis, IN	Atlanta, GA	\$6,593	\$342	\$68.87	\$1.75	3
	Indianapolis, IN	Knoxville, TN	\$5,564	\$222	\$57.45	\$1.46	4
	Des Moines, IA	Little Rock, AR	\$4,250	\$250	\$44.69	\$1.14	3
	Des Moines, IA	Los Angeles, CA	\$6,130	\$729	\$68.12	\$1.73	-2
Soybeans	Minneapolis, MN	New Orleans, LA	\$4,242	\$605	\$48.14	\$1.31	-10
	Toledo, OH	Huntsville, AL	\$7,037	\$325	\$73.11	\$1.99	2
	Indianapolis, IN	Raleigh, NC	\$7,843	\$462	\$82.47	\$2.24	2
	Indianapolis, IN	Huntsville, AL	\$5,689	\$219	\$58.67	\$1.60	4
	Champaign-Urbana, IL	New Orleans, LA	\$4,865	\$402	\$52.31	\$1.42	0
Shuttle train							
Wheat	Great Falls, MT	Portland, OR	\$4,393	\$194	\$45.55	\$1.24	0
	Wichita, KS	Galveston-Houston, TX	\$4,611	\$151	\$47.29	\$1.29	-3
	Chicago, IL	Albany, NY	\$7,090	\$430	\$74.68	\$2.03	3
	Grand Forks, ND	Portland, OR	\$6,051	\$334	\$63.41	\$1.73	-3
	Grand Forks, ND	Galveston-Houston, TX	\$5,399	\$348	\$57.07	\$1.55	-3
	Colby, KS	Portland, OR	\$5,923	\$640	\$65.17	\$1.77	-5
	Corn	Minneapolis, MN	Portland, OR	\$5,660	\$407	\$60.25	\$1.53
Sioux Falls, SD		Tacoma, WA	\$5,620	\$373	\$59.51	\$1.51	-2
Champaign-Urbana, IL		New Orleans, LA	\$4,170	\$402	\$45.41	\$1.15	1
Lincoln, NE		Galveston-Houston, TX	\$4,360	\$217	\$45.46	\$1.15	1
Des Moines, IA		Amarillo, TX	\$4,670	\$315	\$49.50	\$1.26	2
Minneapolis, MN		Tacoma, WA	\$5,660	\$404	\$60.22	\$1.53	-3
Council Bluffs, IA		Stockton, CA	\$5,580	\$418	\$59.56	\$1.51	-3
Soybeans		Sioux Falls, SD	Tacoma, WA	\$6,350	\$373	\$66.76	\$1.82
	Minneapolis, MN	Portland, OR	\$6,400	\$407	\$67.60	\$1.84	-2
	Fargo, ND	Tacoma, WA	\$6,250	\$332	\$65.36	\$1.78	-1
	Council Bluffs, IA	New Orleans, LA	\$5,095	\$464	\$55.20	\$1.50	-1
	Toledo, OH	Huntsville, AL	\$5,277	\$325	\$55.63	\$1.51	3
Grand Island, NE	Portland, OR	\$5,730	\$655	\$63.40	\$1.73	2	

¹A 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.

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

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

⁴Percentage 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	Tariff rate plus fuel surcharge per:		Y/Y
					metric ton ³	bushel ³	
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

¹Rates 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.

²Fuel surcharge adjusted to reflect the change in Ferrocarril Mexicano, S.A. de C.V railroad fuel surcharge policy as of 10/01/2009.

³Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu.

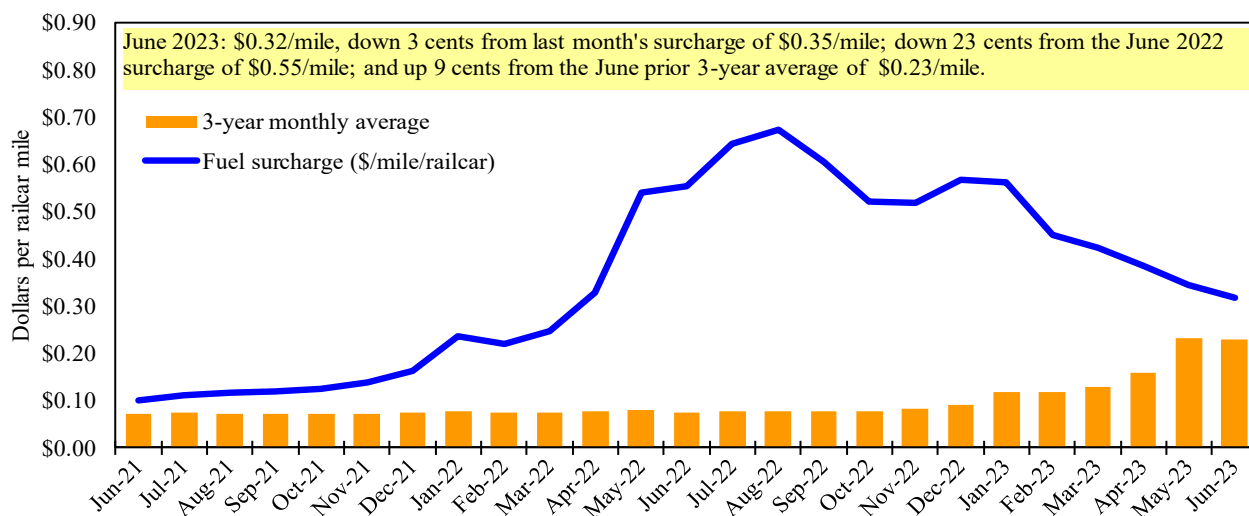
⁴Percentage change calculated using tariff rate plus fuel surcharge; Y/Y = year over year.

⁵As of January 1, 2022, both BNSF and Union Pacific changed their billing and reporting of rates to Mexico.

As we incorporate the change, Table 7 updates will be delayed.

Sources: BNSF Railway, Union Pacific Railroad, Kansas City Southern.

Figure 6

Railroad fuel surcharges, North American weighted average¹

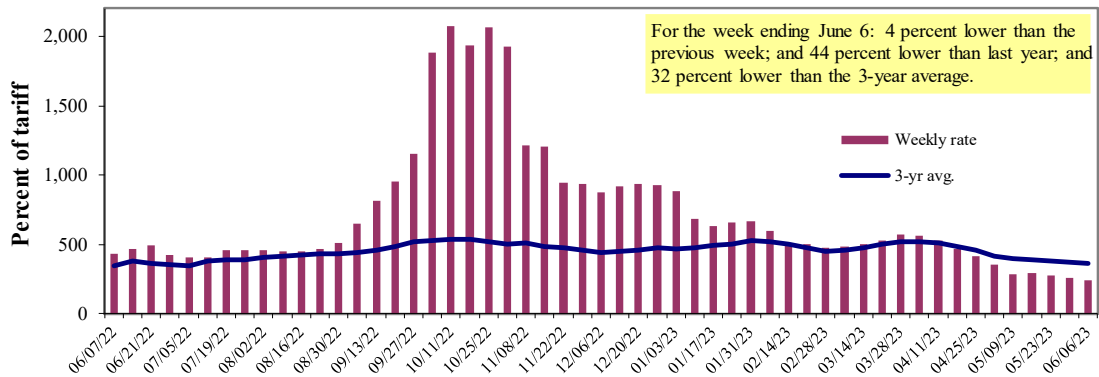
¹Weighted by each Class I railroad's proportion of grain traffic for the prior year.

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}



¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-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	6/6/2023	351	281	245	202	220	220	209
	5/30/2023	361	289	255	203	223	223	210
\$/ton	6/6/2023	21.73	14.95	11.37	8.06	10.32	8.89	6.56
	5/30/2023	22.35	15.37	11.83	8.10	10.46	9.01	6.59
Current week % change from the same week:								
	Last year	-37	-43	-44	-35	-47	-47	-32
	3-year avg. ²	-22	-26	-32	-20	-23	-23	-13
Rate ¹	July	382	291	266	217	234	234	212
	September	561	538	532	502	530	530	499

¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-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

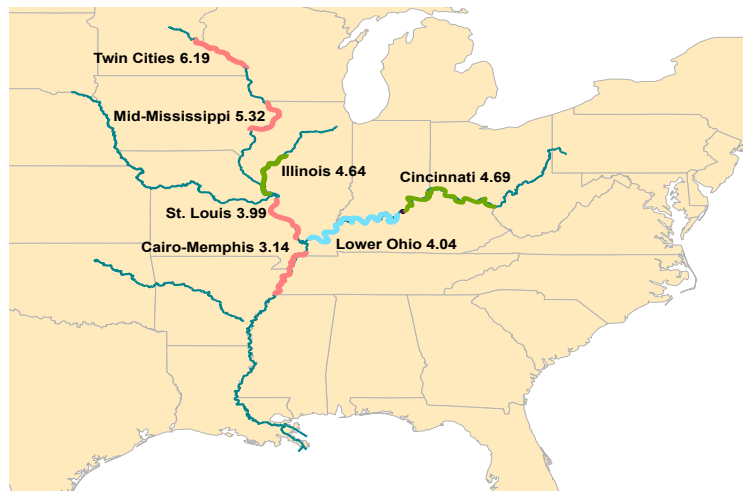
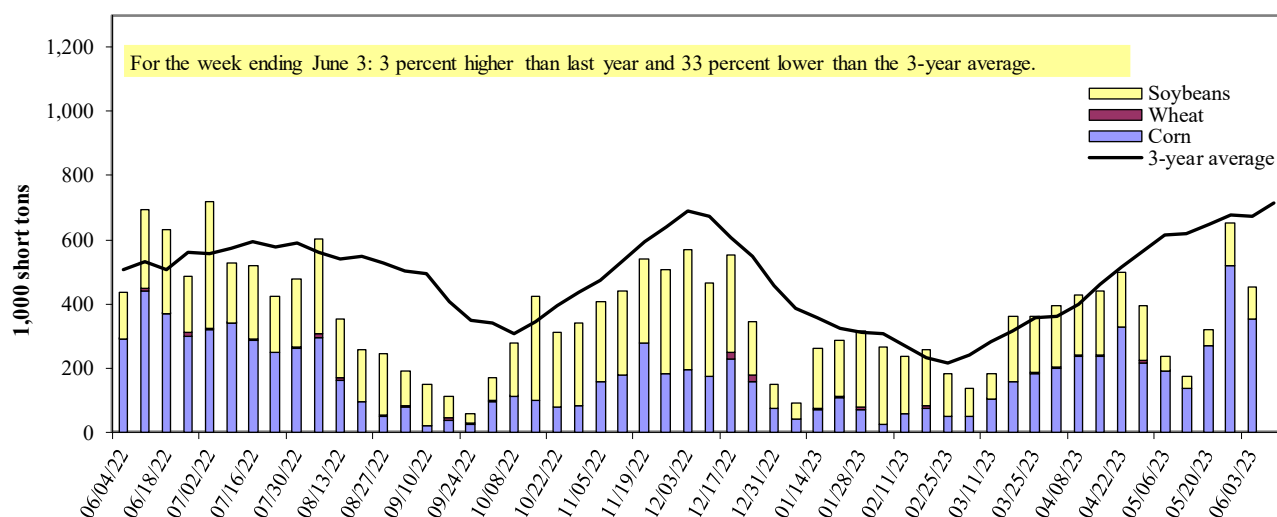


Figure 9

Barge movements on the Mississippi River¹ (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

Barged grain movements (1,000 tons)

For the week ending 06/03/2023	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	82	0	49	0	131
Winfield, MO (L25)	242	0	71	0	313
Alton, IL (L26)	361	0	100	0	461
Granite City, IL (L27)	351	0	102	0	453
Illinois River (La Grange)	140	0	23	0	163
Ohio River (Olmsted)	48	0	17	0	64
Arkansas River (L1)	0	7	0	0	7
Weekly total - 2023	399	7	118	0	525
Weekly total - 2022	381	30	173	0	584
2023 YTD ¹	6,571	538	5,237	152	12,498
2022 YTD ¹	8,976	718	5,219	125	15,037
2023 as % of 2022 YTD	73	75	100	122	83
Last 4 weeks as % of 2022 ²	84	40	42	0	69
Total 2022	16,437	1,594	14,464	232	32,727

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.

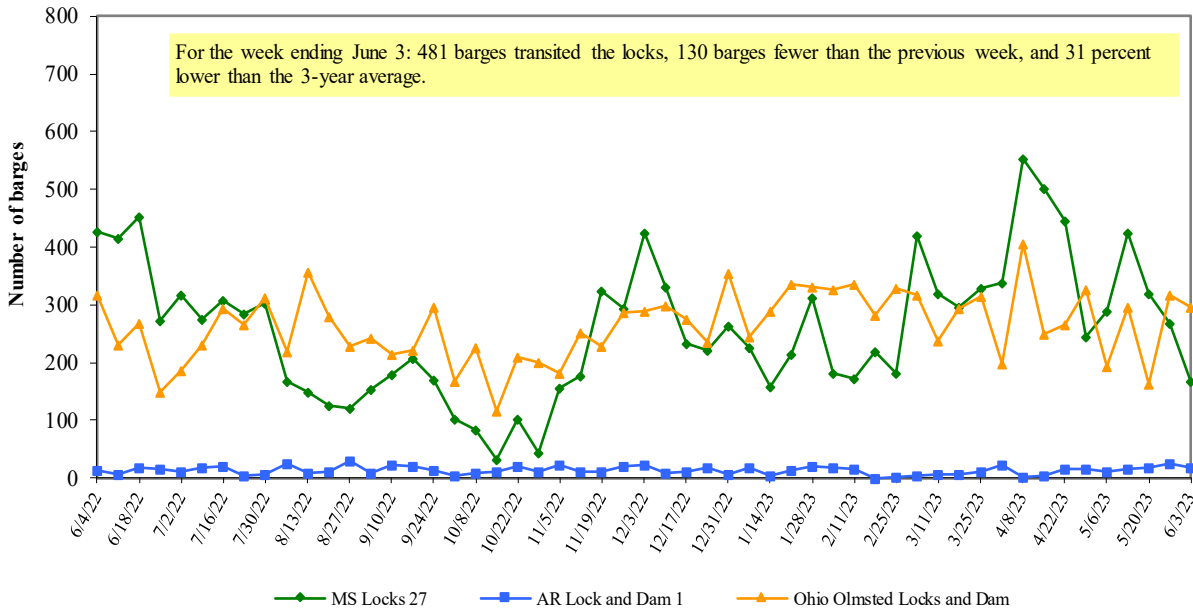
² As a percent of same period in 2022.

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 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

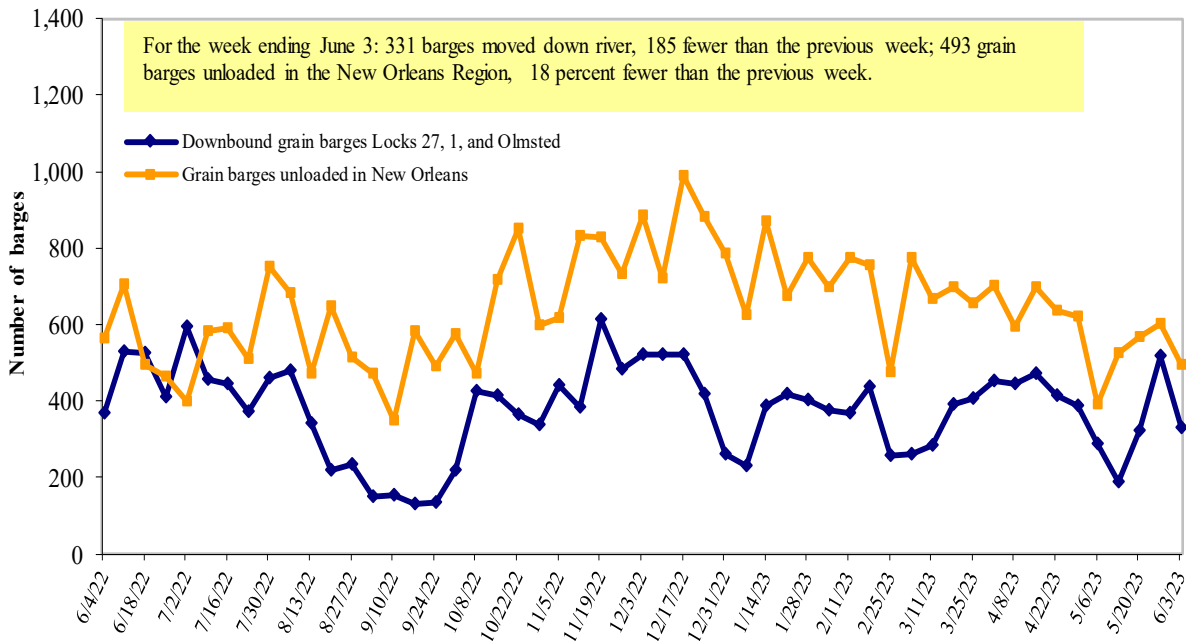


Note: The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.

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 6/5/2023 (U.S. \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	3.847	-0.039	-2.075
	New England	4.124	-0.020	-2.071
	Central Atlantic	4.164	-0.026	-2.032
	Lower Atlantic	3.702	-0.045	-2.005
II	Midwest	3.732	-0.049	-1.736
III	Gulf Coast	3.469	-0.086	-1.840
IV	Rocky Mountain	4.044	-0.033	-1.547
	West Coast	4.470	-0.070	-1.971
V	West Coast less California	4.214	-0.091	-1.785
	California	4.765	-0.045	-2.066
	Total	United States	3.797	-0.058

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

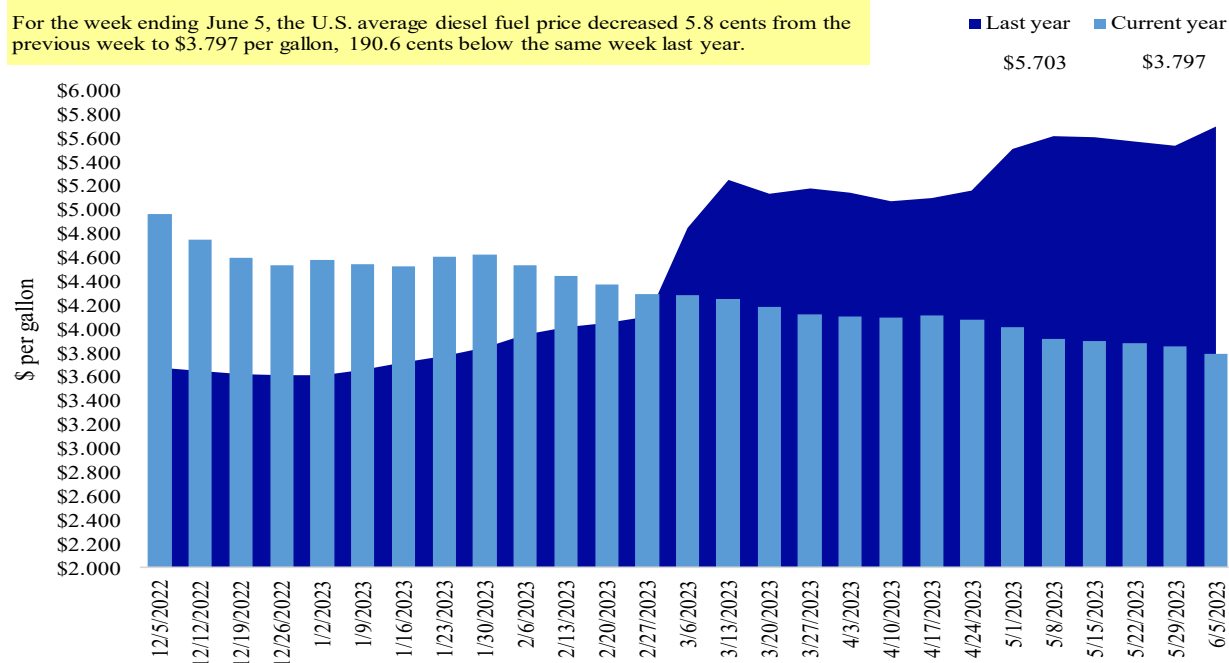
Note: On June 13, the Energy Information Administration implemented a new methodology to estimate weekly on-highway diesel fuel prices.

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

Figure 12

Weekly diesel fuel prices, U.S. average

For the week ending June 5, the U.S. average diesel fuel price decreased 5.8 cents from the previous week to \$3.797 per gallon, 190.6 cents below the same week last year.



Note: On June 13, 2022 the Energy Information Administration implemented a new methodology to estimate weekly on-highway diesel fuel prices.

Source: U.S. Department of Energy, Energy Information Administration, 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					All wheat	Corn	Soybeans	Total
	HRW	SRW	HRS	SWW	DUR				
Export balances¹									
5/25/2023	273	170	337	163	16	960	7,625	2,833	11,418
This week year ago	368	112	303	123	0	907	12,941	9,930	23,778
Cumulative exports-marketing year²									
2022/23 YTD	4,844	2,676	5,354	4,404	394	17,671	30,541	48,130	96,342
2021/22 YTD	7,107	2,760	5,219	3,248	196	18,530	46,300	49,532	114,363
YTD 2022/23 as % of 2021/22	68	97	103	136	201	95	66	97	84
Last 4 wks. as % of same period 2021/22	92	244	143	286	18,805	160	77	32	63
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 importers¹ of U.S. corn

For the week ending 5/25/2023	Total commitments ²			% change current MY from last MY	Exports ³ 3-yr. avg. 2019-21
	2023/24	2022/23	2021/22		
	next MY	current MY	last MY		
		1,000 mt -			-1,000 mt -
Mexico	2,097	14,324	15,812	(9)	15,227
China	272	7,504	14,735	(49)	12,616
Japan	523	5,910	9,156	(35)	10,273
Columbia	0	2,067	4,260	(51)	4,398
Korea	0	784	1,332	(41)	2,563
Top 5 importers	2,892	30,588	45,295	(32)	45,077
Total U.S. corn export sales	3,065	38,166	59,242	(36)	56,665
% of YTD current month's export projection	6%	85%	94%		
Change from prior week ²	313	187	186		
Top 5 importers' share of U.S. corn export sales	94%	80%	76%		80%
USDA forecast May 2023	53,435	45,165	62,875	(28)	
Corn use for ethanol USDA forecast, May 2023	134,620	133,350	135,281	(1)	

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

²Cumulative 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.

³FAS marketing year ranking reports (carryover plus accumulated export); yr. = year; avg. = average; YTD = year to date.

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

Source: USDA, Foreign Agricultural Service.

Table 13

Top 5 importers¹ of U.S. soybeans

For the week ending 5/25/2023	Total commitments ²			% change current MY from last MY	Exports ³ 3-yr. avg. 2019-21
	2023/24 next MY	2022/23 current MY	2021/22 last MY		
	1,000 mt -				-1,000 mt -
China	1,316	31,086	30,263	3	27,283
Mexico	124	4,406	5,236	(16)	4,929
Egypt	0	1,109	3,969	(72)	3,553
Japan	95	2,156	2,253	(4)	2,266
Indonesia	0	1,445	1,589	(9)	2,116
Top 5 importers	1,535	40,202	43,310	(7)	40,147
Total U.S. soybean export sales	2,853	50,963	59,462	(14)	54,231
% of projected exports	5%	93%	101%		
change from prior week ²	301	123	43		
Top 5 importers' share of U.S. soybean export sales	54%	79%	73%		74%
USDA forecast, May 2023	53,815	54,905	58,801	(7)	

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

²Cumulative 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.

³FAS marketing year ranking reports (carryover plus accumulated export); yr. = year; avg. = average; YTD = year to date.

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

Source: USDA, Foreign Agricultural Service.

Table 14

Top 10 importers¹ of all U.S. wheat

For the week ending 5/25/2023	Total commitments ²			% change current MY from last MY	Exports ³ 3-yr. avg. 2019-21
	2023/24 next MY	2022/23 current MY	2021/22 last MY		
	1,000 mt -				-1,000 mt -
Mexico	497	3,212	3,768	(15)	3,566
Philippines	382	2,196	2,791	(21)	2,985
Japan	271	2,185	2,353	(7)	2,453
China	0	1,167	848	38	1,537
Nigeria	50	808	1,773	(54)	1,528
Korea	229	1,314	1,231	7	1,459
Taiwan	72	851	956	(11)	1,106
Indonesia	0	345	122	183	711
Thailand	48	645	559	15	703
Colombia	24	536	675	(21)	621
Top 10 importers	1,571	13,258	15,076	(12)	16,669
Total U.S. wheat export sales	2,674	18,631	19,437	(4)	22,763
% of projected exports	14%	88%	89%		
change from prior week ²	467	(211)	1		
Top 10 importers' share of U.S. wheat export sales	59%	71%	78%		73%
USDA forecast, May 2023	19,755	21,117	21,798	(3)	

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

²Cumulative 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.

³FAS marketing year ranking 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)

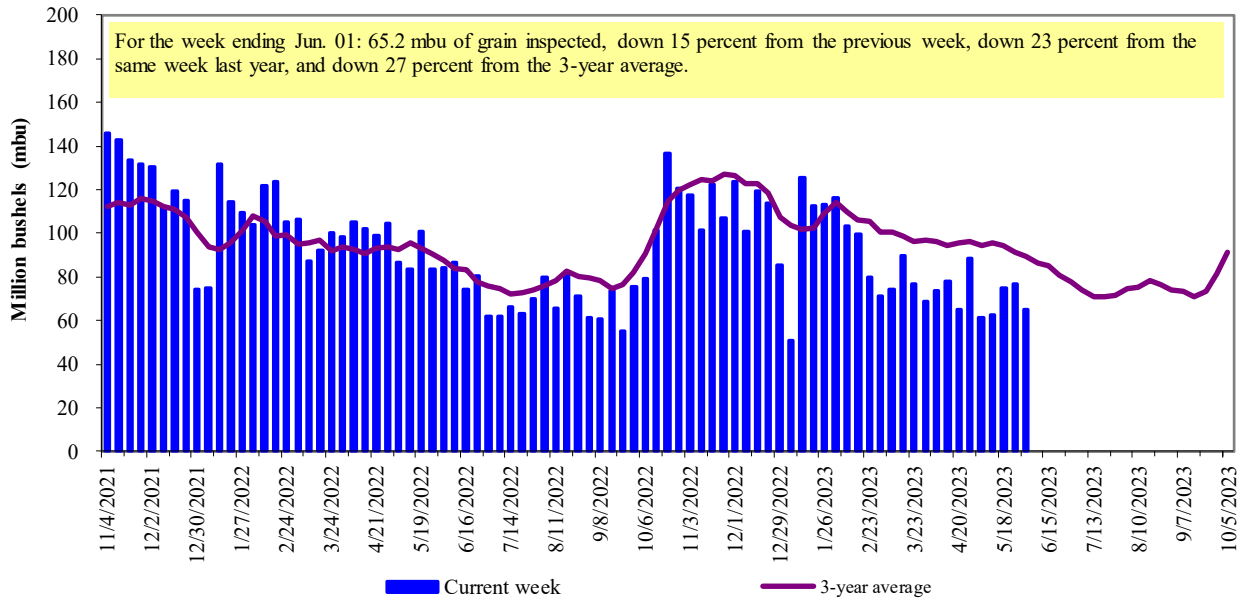
Port regions	For the week ending 06/01/23	Previous week*	Current week as % of previous	2023 YTD*	2022 YTD*	2023 YTD as % of 2022 YTD	Last 4-weeks as % of:		2022 total*
							Last year	Prior 3-yr. avg.	
Pacific Northwest									
Wheat	142	218	65	4,557	4,030	113	119	72	9,836
Corn	263	385	68	3,458	6,648	52	82	83	9,615
Soybeans	0	0	n/a	3,521	4,337	81	16	20	14,178
Total	405	603	67	11,536	15,015	77	90	78	33,629
Mississippi Gulf									
Wheat	43	82	52	1,244	1,711	73	92	89	4,053
Corn	766	699	110	12,195	18,806	65	96	88	30,781
Soybeans	143	164	87	12,643	10,610	119	37	51	31,283
Total	952	945	101	26,082	31,127	84	79	80	66,116
Texas Gulf									
Wheat	56	85	66	1,202	1,422	84	92	76	3,421
Corn	11	10	103	110	347	32	19	28	648
Soybeans	0	0	n/a	52	2	n/a	n/a	n/a	685
Total	67	96	70	1,363	1,771	77	71	67	4,754
Interior									
Wheat	65	24	271	1,110	1,220	91	85	89	2,912
Corn	118	222	53	3,974	3,994	99	90	85	8,961
Soybeans	77	84	92	2,820	3,250	87	59	69	7,109
Total	260	330	79	7,904	8,464	93	77	80	18,982
Great Lakes									
Wheat	0	2	19	123	111	111	163	55	395
Corn	0	0	n/a	23	83	27	52	135	158
Soybeans	0	0	n/a	31	195	16	0	0	760
Total	0	2	19	176	389	45	41	51	1,312
Atlantic									
Wheat	0	0	n/a	45	37	122	n/a	176	169
Corn	3	7	40	68	118	58	40	120	309
Soybeans	6	8	73	1,168	1,355	86	16	37	2,867
Total	9	16	57	1,281	1,510	85	20	47	3,345
U.S. total from ports*									
Wheat	307	412	75	8,281	8,529	97	105	76	20,786
Corn	1,160	1,323	88	19,828	29,997	66	89	86	50,471
Soybeans	225	256	88	20,235	19,749	102	39	53	56,882
Total	1,693	1,991	85	48,343	58,276	83	79	78	128,139

*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.

Figure 13

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

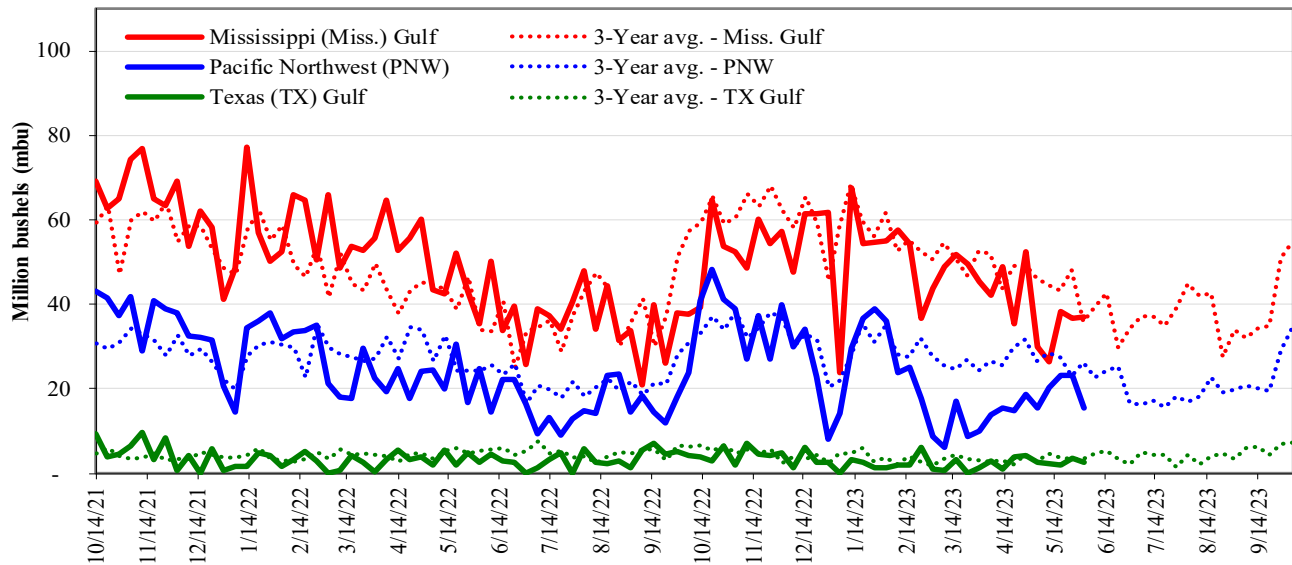


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 14

U.S. Grain inspections: U.S. Gulf and PNW¹ (wheat, corn, and soybeans)



Week ending 06/01/23 inspections (mbu):		Percent change	MS Gulf	TX	U.S. Gulf	PNW
MS Gulf:	37.0	Last wk:	up 1	down 30	down 2	down 33
PNW:	15.6	Last Year (same wk):	up 4	unchanged	up 4	down 37
TX Gulf:	2.5	3-yr avg. (4-wk. mov. Avg):	down 14	down 35	down 16	down 41

Source: USDA, Federal Grain Inspection Service.

Ocean Transportation

Table 16

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

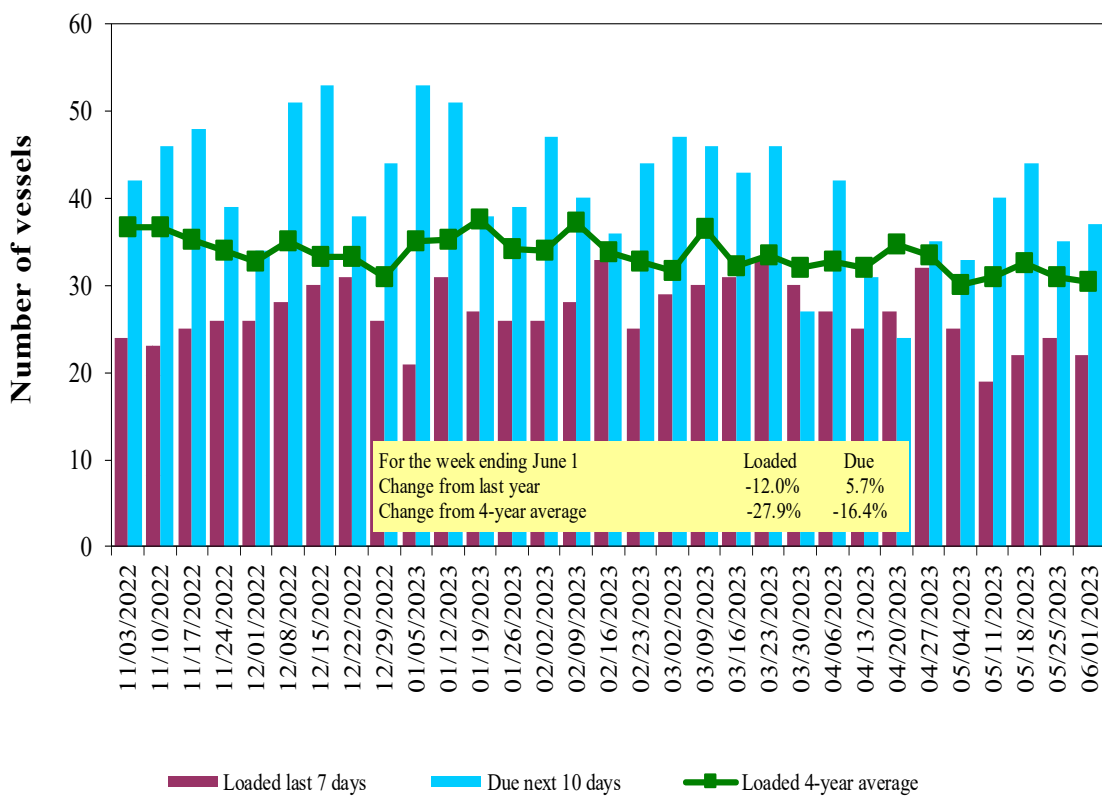
Date	Gulf			Pacific Northwest
	In port	Loaded 7-days	Due next 10-days	In port
6/1/2023	15	22	37	10
5/25/2023	17	24	35	15
2022 range	(14...61)	(18...39)	(28...62)	(5...23)
2022 average	30	28	44	13

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

Source: USDA, Agricultural Marketing Service.

Figure 15

U.S. Gulf¹ vessel loading activity

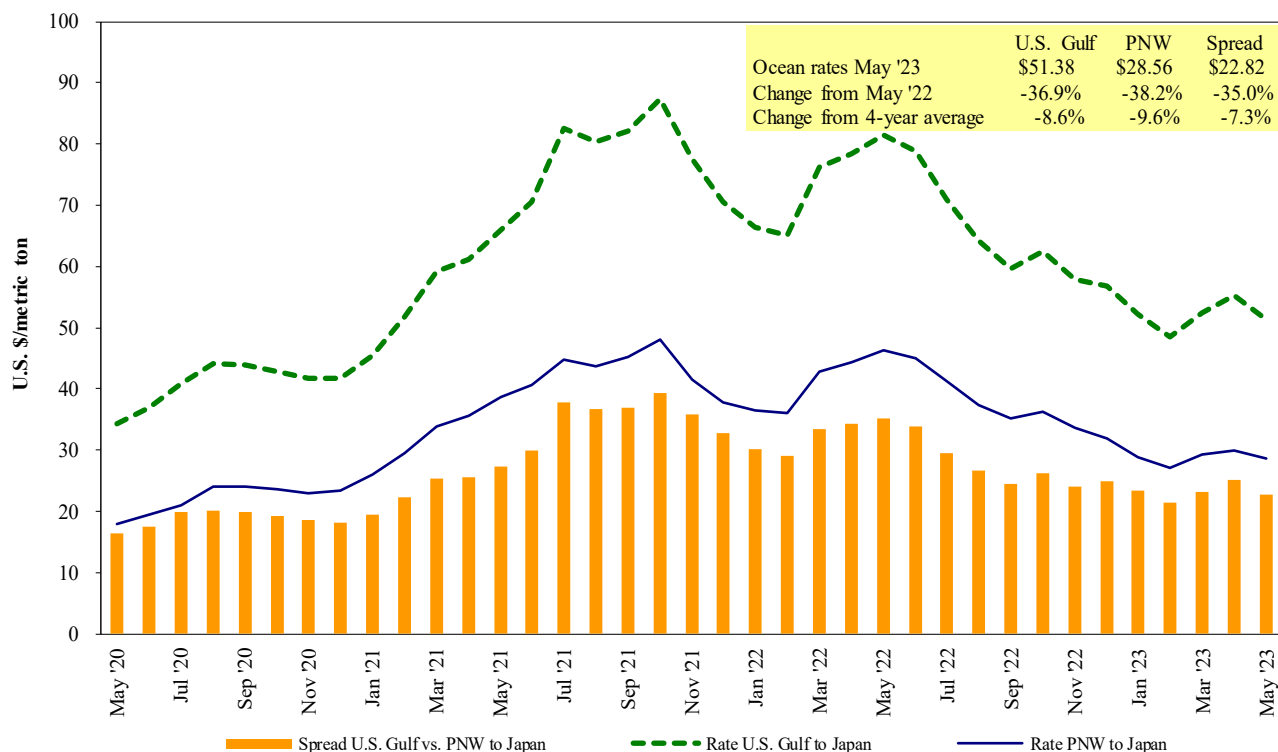


¹U.S. Gulf includes Mississippi, Texas, and East Gulf.

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 06/03/2023

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	Japan	Heavy grain	May 2, 2023	50,000	56.70
U.S. Gulf	Japan	Heavy grain	May 1, 2023	50,000	54.80
U.S. Gulf	Japan	Heavy grain	Nov 1/10, 2022	50,000	79.25
U.S. Gulf	S. China	Corn	Aug 1/10, 2022	68,000	71.00
U.S. Gulf	Kenya	Sorghum	Feb 15/25, 2023	22,820	63.30*
U.S. Gulf	Djibouti	Wheat	Nov 5/15, 2022	22,500	102.88*
PNW	N. China	Heavy grain	Apr 21/27, 2023	63,000	28.00
PNW	N. China	Heavy grain	May 1/4, 2023	66,000	29.00
WC US	Japan	Wheat	Feb 1/Mar 1, 2023	34,500	47.75
Brazil	S. Korea	Heavy grain	Jun 15/Jul 15, 2023	68,000	45.15
Brazil	S. Korea	Soybean Meal	Jun 1, 2023	60,000	53.75
Brazil	China	Heavy grain	Jul 1/31, 2023	63,000	41.50
Brazil	China	Heavy grain	May 5/10, 2023	65,000	36.50
Brazil	N. China	Heavy grain	Apr 21/30, 2023	66,000	40.60
Brazil	Vietnam	Heavy grain	Apr 11/29, 2023	66,000	37.00
Australia	Vietnam	Heavy grain	Feb 24/Apr 9, 2023	60,000	20.80

*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;

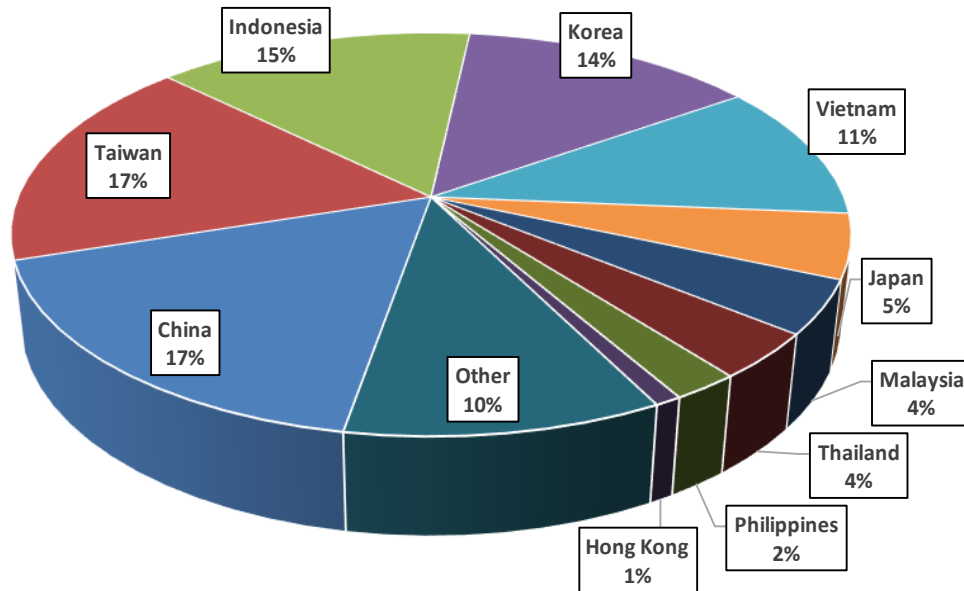
op = option.

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-Dec 2022

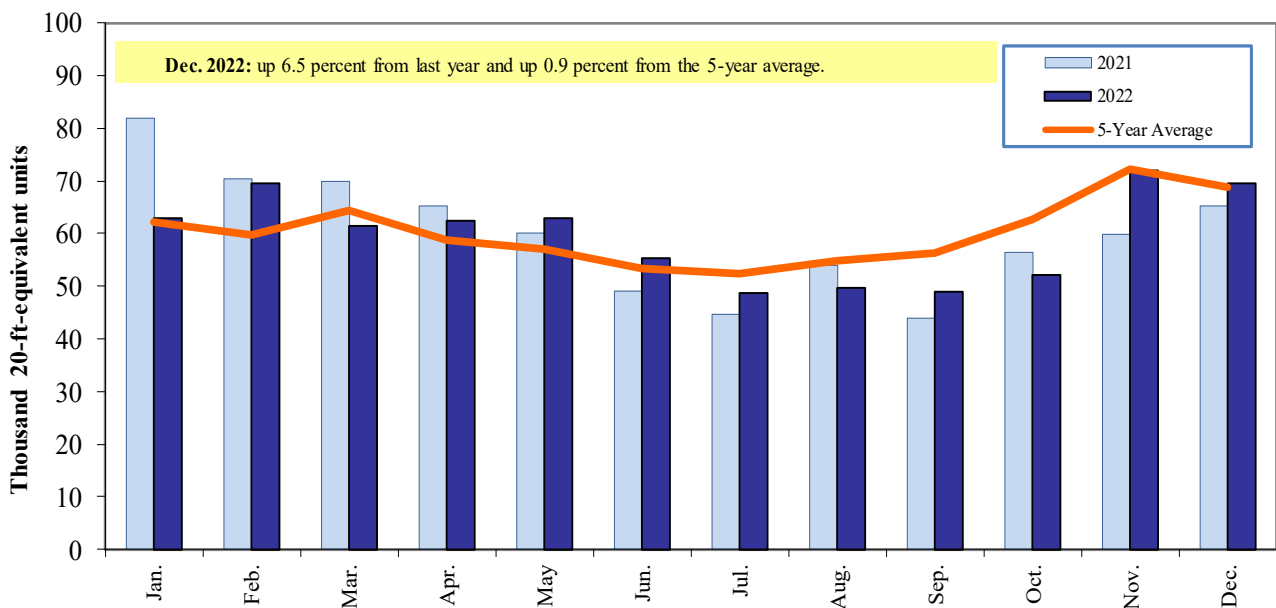


Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: '1001', '100190', '1002', '100200', '1003', '100300', '1004', '100400', '1005', '100590', '1007', '100700', '110100', '1102', '110220', '110290', '1201', '120100', '120190', '120810', '230210', '230310',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