



# Grain Transportation Report

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

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## WEEKLY HIGHLIGHTS

March 23, 2023

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### USDA Funds Grain Storage in Areas Affected by Severe Weather

On March 9, USDA [announced](#) that producers affected by eligible severe weather events in some Midwestern and Southeastern States can apply for cost-share assistance for on-farm grain storage facilities and upgrades. USDA's Emergency Grain Storage Facility Assistance Program (EGSFP) will aid eligible producers in Kentucky, Minnesota, South Dakota, Illinois, Indiana, Iowa, Missouri, North Dakota, and Tennessee. Administered by USDA's Farm Service Agency, EGSFP has an initial allocation of \$20 million. The program comes in the wake of several severe weather events in 2021 and 2022 that reduced grain storage capacity. For example, damages from a [tornado in December 2021](#) resulted in the closure of the Mayfield Grain Company in Mayfield, KY. Grain storage helps moderate gaps between agricultural production and transportation demand. Thus, reductions in grain storage capacity compromise its function and can put additional strain on transportation systems ([Grain Transportation Report, March 2, 2023](#)).

### Navigation Resumes on the Upper Mississippi River

On March 11, two tows, pushing six barges each, successfully traveled through Lake Pepin, opening the Upper Mississippi River to shipping after its cyclic winter shutdown. In winter, the Upper Mississippi River typically closes to barge traffic because of cold weather and icy conditions. As the widest location on the river, Lake Pepin also has the slowest current, so its ice is usually the last to break up. The tows arrived in St. Paul, MN, on March 12—about a week early compared to last year and the 30-year average. Nearby barge freight rates can be found for all portions of the river, including the newly reopened Upper Mississippi, in [GTR table 8](#).

### Black Sea Grain Initiative Extended

The Black Sea Grain Initiative—which helped free up grain exports from Ukraine's southern Black Sea ports—was renewed on March 18, after a previous 120-day extension last November. Russia agreed to an additional [60-day extension](#), but Turkey, Ukraine, and the United Nations support another [120-day extension](#). A shorter renewal period could reduce the amount of grain Ukraine can export and strain the system, as companies consider the possibility of their shipments getting stuck. Because Ukraine is a major exporter of grain, a shorter, rather than longer, extension of the deal may escalate price volatility in agricultural and transportation markets.

### Expansion to GTR Barge Grain Movements Data File

On March 23, grain barge movements for all of the Locks listed in [Table 9](#) of the *Grain Transportation Report* will be included in the [Table 9: Barge Grain Movements](#) data file. Previously, the data file only included current and historical information on weekly barge grain movements for the Mississippi River Lock 27, Ohio River Lock 52, and Arkansas River Lock 1 in the "Data" tab. The updated data file will continue to include the above information in the "Data" tab, but will also include the current and historical weekly barge grain movements for the Illinois River LaGrange Lock, Mississippi River Lock 15, Mississippi River Lock 25, and Mississippi River Lock 26 in the new, "Other Locks" tab. Beginning with the week ending January 5, 2013, and through the current date, weekly corn, wheat, soybean, other grain, and total grain volumes for each lock will be updated every week.

## Snapshots by Sector

### Export Sales

For the week ending March 9, [unshipped balances](#) of wheat, corn, and soybeans for marketing year (MY) 2022/23 totaled 24.33 million metric tons (mmt), down 37 percent from the same time last year and unchanged from last week. Net [corn export sales](#) for MY 2022/23 were 1.236 mmt, down 12 percent from last week. Net [soybean export sales](#) were 0.665 mmt, up significantly from last week. Net weekly [wheat export sales](#) were 0.337 mmt, up 26 percent from last week.

### Rail

U.S. Class I railroads originated 20,156 [grain carloads](#) during the week ending March 11. This was a 2 percent decrease from the previous week, 5 percent fewer than last year, and 7 percent lower than the 3-year average.

Average April [shuttle secondary railcar bids/offers](#) (per car) were \$172 below tariff for the week ending March 16. This was \$30 less than last week and \$2,484 lower than this week last year.

### Barge

For the week ending March 18, [barged grain movements](#) totaled 578,425 tons. This was 32 percent higher than the previous week and 17 percent lower than the same period last year.

For the week ending March 18, 392 grain barges [moved down river](#)—107 more than last week. There were 699 grain barges [unloaded](#) in the New Orleans region, 5 percent more than last week.

### Ocean

For the week ending March 16, 31 [oceangoing grain vessels](#) were loaded in the Gulf—9 percent fewer than the same period last year. Within the next 10 days (starting March 17), 43 vessels were expected to be loaded—27 percent fewer than the same period last year.

As of March 16, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was \$53.50. This was 2 percent more than the previous week. The rate from the Pacific Northwest to Japan was \$30.50 per mt, 3 percent more than the previous week.

### Fuel

For the week ending March 20, the U.S. average [diesel fuel price](#) decreased 6.2 cents from the previous week to \$4.185 per gallon, 94.9 cents below the same week last year.

# Feature Article/Calendar

## Fourth-Quarter 2022 Soybean Transportation and Landed Costs in the United States and Brazil

The world's two leading producers of soybeans, the United States and Brazil, compete for the same overseas markets. For both countries, the competitiveness of their soybeans depends on low transportation and landed costs (i.e., transportation costs plus farm values) to China and Europe—the key export destinations. 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**

	2021	2022	2022	Percent change		2021	2022	2022	Percent change	
	4 <sup>th</sup> qtr.	3 <sup>rd</sup> qtr.	4 <sup>th</sup> qtr.	Yr. to yr.	Qtr. to qtr.	3 <sup>rd</sup> qtr.	3 <sup>rd</sup> qtr.	4 <sup>th</sup> qtr.	Yr. to yr.	Qtr. to qtr.
<b>United States (via U.S. Gulf)</b>										
<b>Minneapolis, MN</b>										
	--\$/mt--									
Truck	13.50	19.07	16.31	20.81	-14.47	13.50	19.07	16.31	20.81	-14.47
Rail <sup>1</sup>	-	-	-	-	-	-	-	-	-	-
Barge	35.21	46.33	94.50	168.39	103.97	33.49	36.95	78.46	134.28	112.34
Ocean <sup>2</sup>	77.72	63.87	58.11	-25.23	-9.02	77.72	63.87	58.11	-25.23	-9.02
Total transportation	126.43	129.27	168.92	33.61	30.67	124.71	119.89	152.88	22.59	27.52
Farm value <sup>3</sup>	448.27	531.56	509.51	13.66	-4.15	448.27	551.16	515.64	15.03	-6.44
Landed cost <sup>4</sup>	574.70	660.83	678.43	18.05	2.66	572.98	671.05	668.52	16.67	-0.38
Transport % of landed cost <sup>5</sup>	22.00	19.56	24.90	2.90	5.34	21.77	17.87	22.87	1.10	5.00
<b>Via PNW</b>										
<b>Fargo, ND</b>										
	--\$/mt--									
Truck	13.50	19.07	16.31	20.81	-14.47	13.50	19.07	16.31	20.81	-14.47
Rail <sup>1</sup>	59.09	68.96	69.00	16.77	0.06	60.08	71.06	70.86	17.94	-0.28
Ocean	42.01	37.41	33.53	-20.19	-10.37	42.01	37.41	33.53	-20.19	-10.37
Total transportation	114.60	125.44	118.84	3.70	-5.26	115.59	127.54	120.70	4.42	-5.36
Farm value	440.92	521.76	500.94	13.61	-3.99	447.05	537.68	516.86	15.62	-3.87
Landed cost	555.52	647.20	619.78	11.57	-4.24	562.64	665.22	637.56	13.32	-4.16
Transport % of landed cost	20.63	19.38	19.17	-1.45	-0.21	20.54	19.17	18.93	-1.61	-0.24
<b>Brazil</b>										
<b>North MT<sup>6</sup> - Santos<sup>7</sup></b>										
	--\$/mt--									
Truck	50.42	99.71	90.13	78.76	-9.61	29.58	58.82	52.88	78.77	-10.10
Ocean <sup>8</sup>	62.00	48.70	47.70	-23.06	-2.05	64.00	49.00	48.60	-24.06	-0.82
Total transportation	112.42	148.41	137.83	22.60	-7.13	93.58	107.82	101.48	8.44	-5.88
Farm Value <sup>9</sup>	457.88	514.98	515.89	12.67	0.18	456.20	513.50	511.31	12.08	-0.43
Landed Cost	570.30	663.39	653.72	14.63	-1.46	549.78	621.32	612.79	11.46	-1.37
Transport % of landed cost	19.71	22.37	21.08	1.37	-1.29	17.02	17.35	16.56	-0.46	-0.79
<b>South GO<sup>6</sup> - Paranagua<sup>7</sup></b>										
	--\$/mt--									
Truck	50.42	99.71	90.13	78.76	-9.61	29.58	58.82	52.88	78.77	-10.10
Ocean <sup>8</sup>	62.00	48.70	47.70	-23.06	-2.05	64.00	49.00	48.60	-24.06	-0.82
Total transportation	112.42	148.41	137.83	22.60	-7.13	93.58	107.82	101.48	8.44	-5.88
Farm Value <sup>9</sup>	457.88	514.98	515.89	12.67	0.18	456.20	513.50	511.31	12.08	-0.43
Landed Cost	570.30	663.39	653.72	14.63	-1.46	549.78	621.32	612.79	11.46	-1.37
Transport % of landed cost	19.71	22.37	21.08	1.37	-1.29	17.02	17.35	16.56	-0.46	-0.79

<sup>1</sup>Rail 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.

<sup>2</sup>Source for the U.S. Ocean freight rates: O'Neil Commodity Consulting.

<sup>3</sup>Source for the U.S. farm values: USDA, National Agricultural Statistics Service.

<sup>4</sup>Landed cost is transportation cost plus farm value.

<sup>5</sup>For transportation as a percentage of landed costs, the year-to-year and quarter-to-quarter columns record percentage-point differences.

<sup>6</sup>Producing regions: MT= Mato Grosso, GO = Goiás.

<sup>7</sup>Export ports.

<sup>8</sup>Source for Brazil's ocean freight rates: University of São Paulo, Brazil, and USDA, Agricultural Marketing Service.

<sup>9</sup>Source 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 third to fourth quarter 2022 (quarter to quarter), total transportation costs for exporting U.S. soybeans to China varied, depending on selected routes. From Minneapolis, MN, and Davenport, IA, via the U.S. Gulf (Gulf routes to China), transportation costs rose in response to higher barge rates, which offset drops in truck and ocean freight rates (table 1). From Fargo, ND, and Sioux Falls, SD, through the Pacific Northwest (PNW routes to China), transportation costs fell in response to falling truck, rail, and ocean freight rates. For both U.S. Gulf routes to Europe (like the Gulf routes to China), soybean transportation costs rose with rising barge rates (table 2, p. 3). Brazil's transportation costs to China and Europe fell in response to lower truck and ocean freight rates.

In the United States, truck rates decreased partly because of lower diesel fuel prices during the quarter. Similarly, ocean rates fell because of lower demand for shipping bulk items during end-of-year holidays ([GTR, February 9, 2023](#)). Barge rates rose

in response to record-low water levels in the Mississippi River System that led to reductions in flow, tow size, and draft size. ([GTR, January 26, 2023](#)).

**Year-to-year transportation costs.** From fourth quarter 2021 to fourth quarter 2022 (year to year), transportation costs increased in the United States and Brazil. In the United States, higher truck, barge, and rail rates pushed up total transportation costs. In Brazil, higher truck rates pushed up the costs.

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

	2021	2022	2022	Percent change		2021	2022	2022	Percent change	
	4 <sup>th</sup> qtr.	3 <sup>rd</sup> qtr.	4 <sup>th</sup> qtr.	Yr. to yr.	Qtr. to qtr.	4 <sup>th</sup> qtr.	3 <sup>rd</sup> qtr.	4 <sup>th</sup> qtr.	Yr. to yr.	Qtr. to qtr.
<b>United States (via U.S. Gulf)</b>										
	<b>Minneapolis, MN</b>					<b>Davenport, IA</b>				
	--\$/mt--					--\$/mt--				
Truck	13.50	19.07	16.31	20.81	-14.47	13.50	19.07	16.31	20.81	-14.47
Rail <sup>1</sup>	-	-	-	-	-	-	-	-	-	-
Barge	35.21	46.33	94.50	168.39	103.97	33.49	36.95	78.46	134.28	112.34
Ocean <sup>2</sup>	30.09	32.08	29.17	-3.06	-9.07	30.09	32.08	29.17	-3.06	-9.07
Total transportation	78.80	97.48	139.98	77.64	43.60	77.08	88.10	123.94	60.79	40.68
Farm value <sup>3</sup>	448.27	531.56	509.51	13.66	-4.15	448.27	551.16	515.64	15.03	-6.44
Landed cost <sup>4</sup>	527.07	629.04	649.49	23.23	3.25	525.35	639.26	639.58	21.74	0.05
Transport % of landed cost <sup>5</sup>	14.95	15.50	21.55	6.60	6.06	14.67	13.78	19.38	4.71	5.60
<b>Brazil</b>										
	<b>North MT<sup>6</sup> - Santos<sup>7</sup></b>					<b>South GO<sup>6</sup> - Paranaguá<sup>7</sup></b>				
	--\$/mt--					--\$/mt--				
Truck	50.42	99.71	90.13	78.76	-9.61	29.58	58.82	52.88	78.77	-10.10
Ocean <sup>7</sup>	52.50	42.60	42.20	-19.62	-0.94	51.50	41.60	41.20	-20.00	-0.96
Total transportation	102.92	142.31	132.33	28.58	-7.01	81.08	100.42	94.08	16.03	-6.31
Farm value <sup>8</sup>	457.88	514.98	515.89	12.67	0.18	456.20	513.50	511.31	12.08	-0.43
Landed cost	560.80	657.29	648.22	15.59	-1.38	537.28	613.92	605.39	12.68	-1.39
Transport % of landed cost	18.35	21.65	20.41	2.06	-1.24	15.09	16.36	15.54	0.45	-0.82

<sup>1</sup>Rail 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.

<sup>2</sup>Source for the U.S. ocean rates: O'Neil Commodity Consulting.

<sup>3</sup>Source for the U.S. farm values: USDA, National Agricultural Statistics Service.

<sup>4</sup>Landed cost is total cost plus farm value.

<sup>5</sup>For transportation as a percentage of landed costs, the year-to-year and quarter-to-quarter columns record percentage-point differences.

<sup>6</sup>Producing regions: MT= Mato Grosso, GO = Goiás.

<sup>7</sup>Export ports.

<sup>8</sup>Source for Brazil's ocean rates: University of São Paulo, Brazil, and USDA, Agricultural Marketing Service.

<sup>9</sup>Source 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 the USDA, Agricultural Marketing Service.

**Quarter-to-quarter landed costs.** Quarter to quarter, landed costs decreased for U.S.-to-China shipments, except for those out of Minneapolis, MN. Landed costs for U.S.-to-Europe shipments either increased or remained stable. From Brazil, landed costs to China and Europe fell. For most U.S.-to-China routes, landed costs declined because of both falling transportation costs and falling farm values. However, for the IA-Gulf route to China, falling farm values (exceeding the rise in transportation costs) pushed down landed costs. For both U.S.-to-Europe routes, landed costs rose because rising transportation costs exceeded falling farm values. In Brazil, landed costs decreased because of both falling transportation costs and falling farm values (as in South Goiás). The share of fourth-quarter U.S. landed costs comprising transportation was 19-25 percent for shipments to China (table 1) and 19-22 percent for shipments to Europe (table 2). The transportation share of Brazil's total landed costs was 17-21 percent for shipments to China (table 1) and 16-20 percent for shipments to Europe (table 2).

**Year-to-year landed costs.** Year to year, landed costs rose in the United States and Brazil. For exports out of the United States and Brazil, increased landed costs reflected both higher transportation costs and higher soybean farm values.

**U.S. exports to China.** According to [USDA's Federal Grain Inspection Service](#), China imported 19.38 million metric tons (mmt) of U.S. soybeans in fourth quarter 2022, versus 2.09 mmt in the previous quarter and 18.63 mmt in fourth quarter 2021. Total U.S. soybean exports are projected at 54.84 mmt in marketing year (MY) 2022/23, down from 58.74 mmt in MY 2021/22, according to USDA's March [World Agricultural Supply and Demand Estimates](#). On the other hand, Brazil is projected to export 92.70 mmt in MY 2022/23, up from 79.06 mmt in MY 2021/22. For more on soybean transportation in Brazil, see the quarterly [Brazil Soybean Transportation](#) report. [surajudeen.olowlayemo@usda.gov](mailto:surajudeen.olowlayemo@usda.gov)

# Grain Transportation Indicators

Table 1  
Grain transport cost indicators<sup>1</sup>

For the week ending	Truck	Rail		Barge	Ocean	
		Non-Shuttle	Shuttle		Gulf	Pacific
03/22/23	281	326	250	294	239	216
03/15/23	285	326	250	277	235	209

<sup>1</sup>Indicator: Base year 2000 = 100. Weekly updates include truck = diesel (\$/gallon); rail = near-month secondary rail market bid and monthly tariff rate with fuel surcharge (\$/car); barge = Illinois River barge rate (index = percent of tariff rate); ocean = routes to Japan (\$/metric ton); n/a = not available due to holiday.

Source: USDA, Agricultural Marketing Service.

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

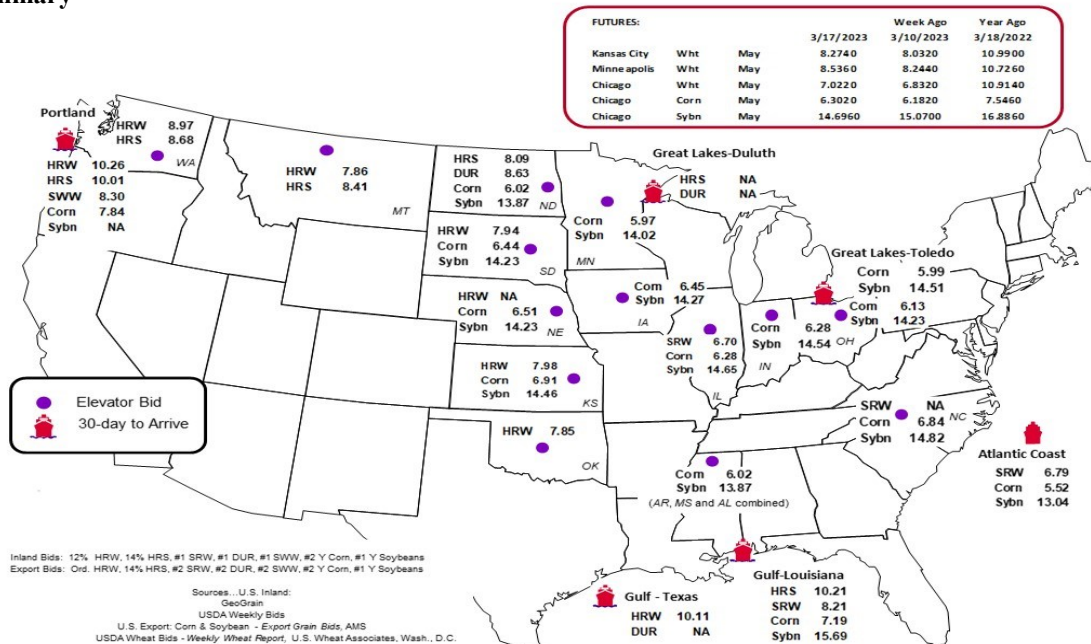
Commodity	Origin-destination	3/17/2023	3/10/2023
Corn	IL-Gulf	-0.91	-0.98
Corn	NE-Gulf	-0.68	-0.74
Soybean	IA-Gulf	-1.42	-1.51
HRW	KS-Gulf	-2.13	-2.13
HRS	ND-Portland	-1.92	-2.05

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: 3/11/2023	East		West			U.S. total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	2,086	2,621	8,726	1,274	5,449	20,156	5,550	4,635
This week last year	2,094	2,218	10,427	1,027	5,488	21,254	3,398	3,969
2023 YTD	20,733	27,950	103,863	13,263	57,651	223,460	53,282	45,424
2022 YTD	18,622	22,952	117,654	13,158	63,353	235,739	35,447	37,071
2023 YTD as % of 2022 YTD	111	122	88	101	91	95	150	123
Last 4 weeks as % of 2022*	106	111	78	108	93	89	140	103
Last 4 weeks as % of 3-yr. avg.**	108	114	79	119	104	93	141	96
Total 2022	93,313	130,394	570,232	66,338	296,945	1,157,222	214,319	214,010

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

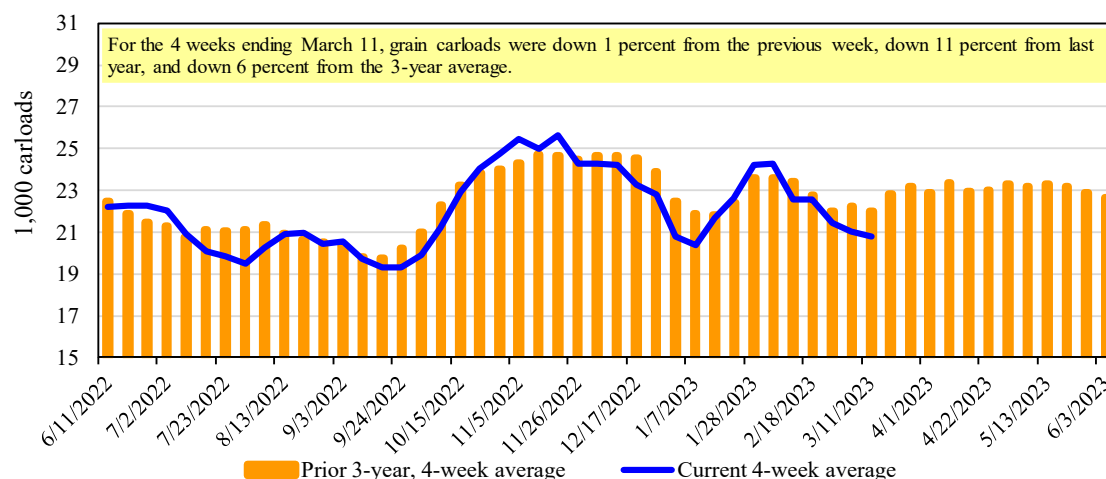
\*\*The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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<sup>1</sup> (\$/car)<sup>2</sup>

For the week ending: 3/16/2023		Delivery period							
		Apr-23	Apr-22	May-23	May-22	Jun-23	Jun-22	Jul-23	Jul-22
BNSF <sup>3</sup>	COT grain units	0	0	0	no bids	0	no bids	0	no bids
	COT grain single-car	190	240	67	0	25	0	51	0
UP <sup>4</sup>	GCAS/Region 1	n/a	no offer	n/a	no offer	n/a	no offer	n/a	n/a
	GCAS/Region 2	n/a	no offer	n/a	no offer	n/a	no offer	n/a	n/a

<sup>1</sup> Auction offerings are for single-car and unit train shipments only.

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

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

<sup>4</sup> UP - GCAS = Union Pacific Railroad Grain Car Allocation System.

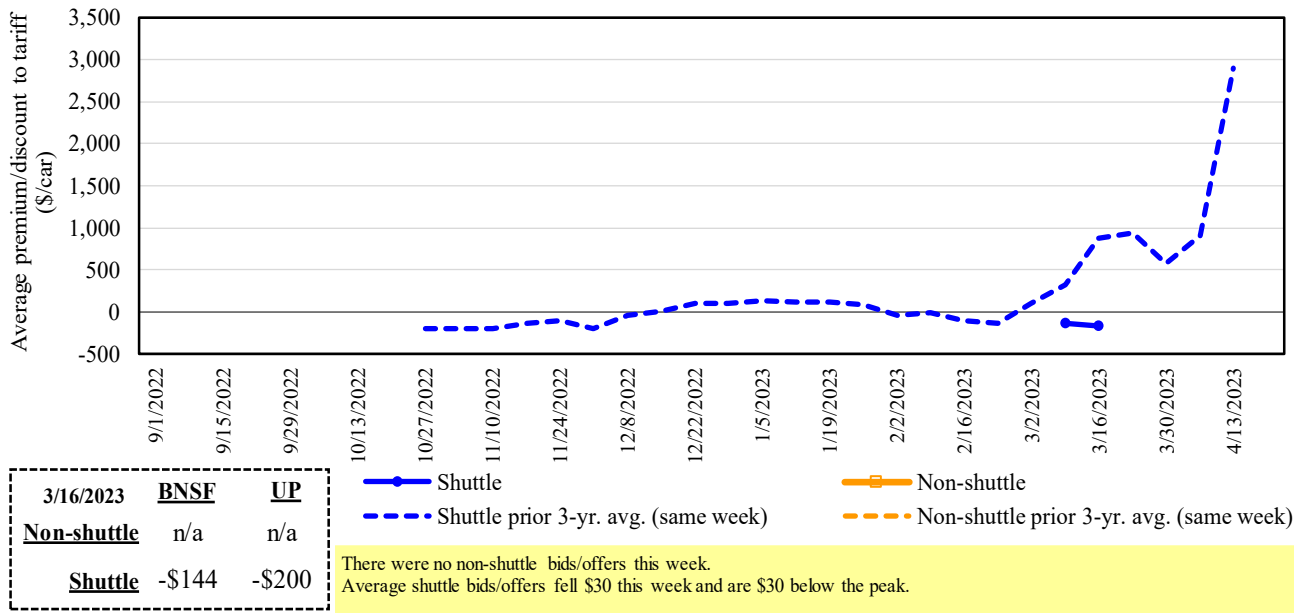
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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

Source: USDA, Agricultural Marketing Service.

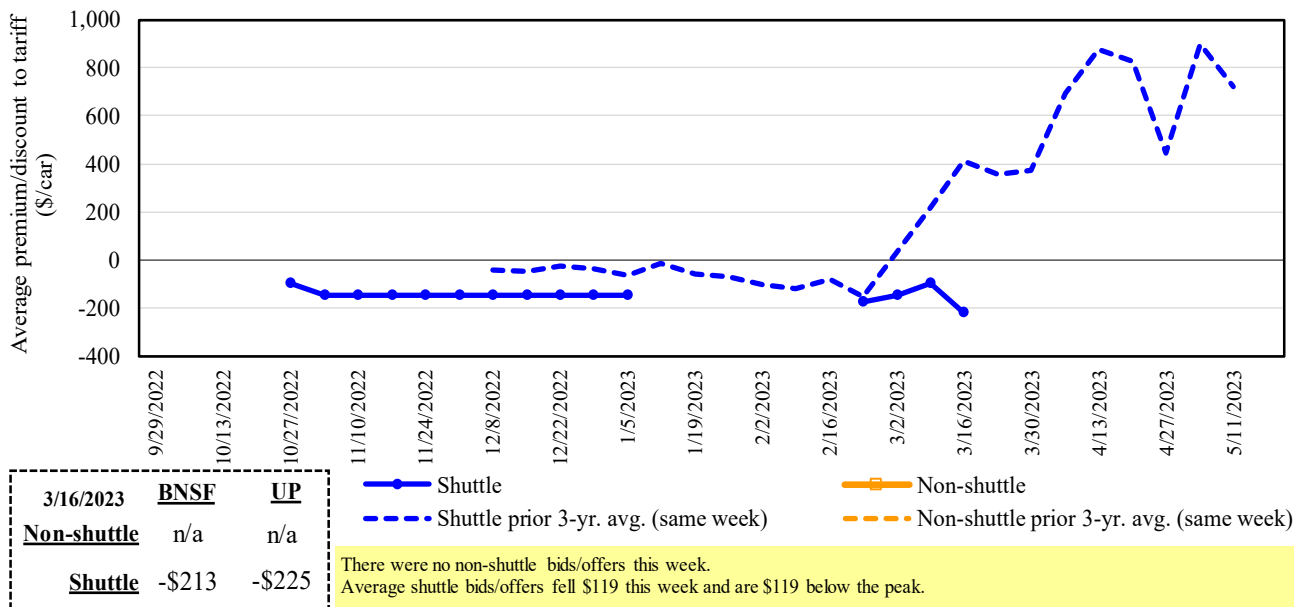
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

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



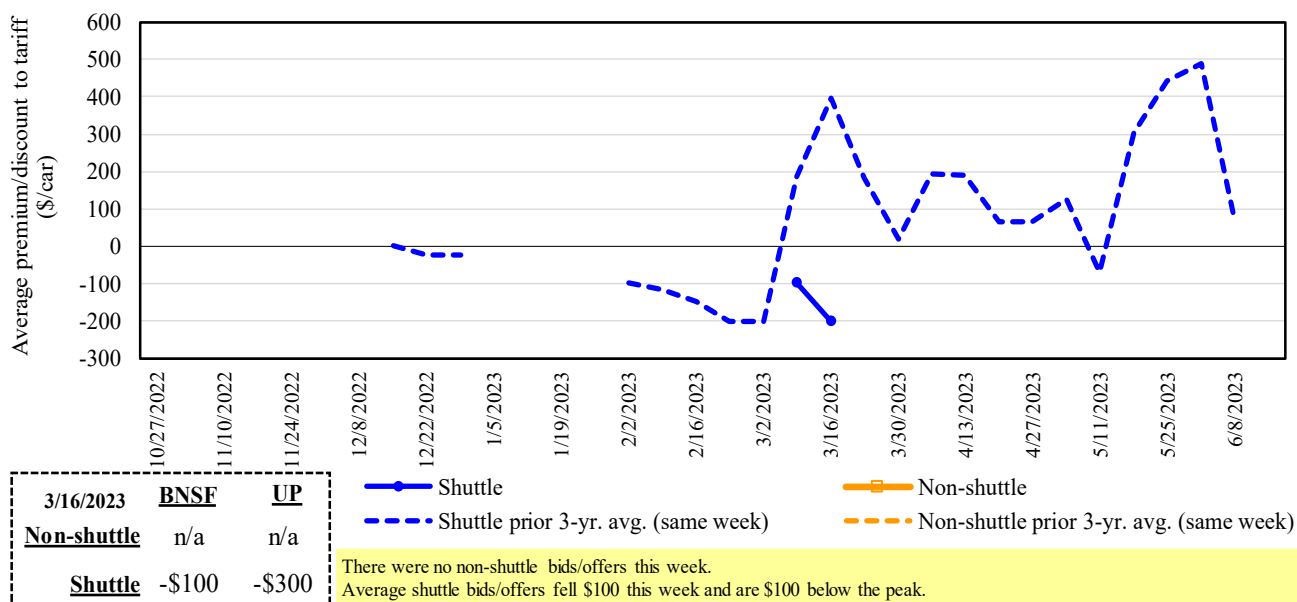
Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = year; BNSF = BNSF Railway; UP = Union Pacific Railroad  
 Source: USDA, Agricultural Marketing Service.

**Figure 4**  
**Secondary market bids/offers for railcars to be delivered in May 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 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.

Table 5

**Weekly secondary railcar market (\$/car)<sup>1</sup>**

For the week ending:		Delivery period					
		Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
<b>3/16/2023</b>							
<b>Non-shuttle</b>	<b>BNSF-GF</b>	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 2022	n/a	n/a	n/a	n/a	n/a	n/a
	<b>UP-Pool</b>	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 2022	n/a	n/a	n/a	n/a	n/a	n/a
<b>Shuttle</b>	<b>BNSF-GF</b>	(144)	(213)	(100)	(125)	(150)	n/a
	Change from last week	(85)	(113)	0	n/a	0	n/a
	Change from same week 2022	(2,519)	(2,825)	(1,588)	(675)	(300)	n/a
	<b>UP-Pool</b>	(200)	(225)	(300)	n/a	(100)	n/a
	Change from last week	25	n/a	n/a	n/a	n/a	n/a
	Change from same week 2022	(2,450)	(1,225)	n/a	n/a	n/a	n/a

<sup>1</sup> 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.

Table 6

**Tariff rail rates for unit and shuttle train shipments<sup>1</sup>**

March 2023	Origin region <sup>3</sup>	Destination region <sup>3</sup>	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per:		Percent change Y/Y <sup>4</sup>
					metric ton	bushel <sup>2</sup>	
<b><u>Unit train</u></b>							
Wheat	Wichita, KS	St. Louis, MO	\$3,695	\$253	\$39.21	\$1.07	2
	Grand Forks, ND	Duluth-Superior, MN	\$3,858	\$101	\$39.32	\$1.07	7
	Wichita, KS	Los Angeles, CA	\$7,490	\$520	\$79.55	\$2.16	7
	Wichita, KS	New Orleans, LA	\$4,600	\$445	\$50.10	\$1.36	7
	Sioux Falls, SD	Galveston-Houston, TX	\$7,226	\$427	\$76.00	\$2.07	7
	Colby, KS	Galveston-Houston, TX	\$4,850	\$488	\$53.00	\$1.44	6
Corn	Amarillo, TX	Los Angeles, CA	\$5,121	\$679	\$57.59	\$1.57	4
	Champaign-Urbana, IL	New Orleans, LA	\$4,000	\$503	\$44.72	\$1.14	4
	Toledo, OH	Raleigh, NC	\$8,551	\$559	\$90.47	\$2.30	7
	Des Moines, IA	Davenport, IA	\$2,655	\$107	\$27.42	\$0.70	7
	Indianapolis, IN	Atlanta, GA	\$6,593	\$420	\$69.64	\$1.77	8
	Indianapolis, IN	Knoxville, TN	\$5,564	\$272	\$57.95	\$1.47	7
Soybeans	Des Moines, IA	Little Rock, AR	\$4,250	\$313	\$45.31	\$1.15	8
	Des Moines, IA	Los Angeles, CA	\$6,130	\$912	\$69.93	\$1.78	9
	Minneapolis, MN	New Orleans, LA	\$3,856	\$774	\$45.98	\$1.25	13
	Toledo, OH	Huntsville, AL	\$7,037	\$398	\$73.84	\$2.01	6
	Indianapolis, IN	Raleigh, NC	\$7,843	\$567	\$83.51	\$2.27	8
	Indianapolis, IN	Huntsville, AL	\$5,689	\$269	\$59.17	\$1.61	7
	Champaign-Urbana, IL	New Orleans, LA	\$4,865	\$503	\$53.31	\$1.45	7
<b><u>Shuttle train</u></b>							
Wheat	Great Falls, MT	Portland, OR	\$4,393	\$299	\$46.60	\$1.27	9
	Wichita, KS	Galveston-Houston, TX	\$4,311	\$233	\$45.12	\$1.23	1
	Chicago, IL	Albany, NY	\$7,090	\$528	\$75.65	\$2.06	8
	Grand Forks, ND	Portland, OR	\$6,051	\$517	\$65.22	\$1.78	9
	Grand Forks, ND	Galveston-Houston, TX	\$5,399	\$538	\$58.96	\$1.60	10
	Colby, KS	Portland, OR	\$5,923	\$800	\$66.76	\$1.82	4
Corn	Minneapolis, MN	Portland, OR	\$5,660	\$629	\$62.46	\$1.59	12
	Sioux Falls, SD	Tacoma, WA	\$5,620	\$576	\$61.53	\$1.56	12
	Champaign-Urbana, IL	New Orleans, LA	\$4,170	\$503	\$46.41	\$1.18	10
	Lincoln, NE	Galveston-Houston, TX	\$4,360	\$336	\$46.63	\$1.18	12
	Des Moines, IA	Amarillo, TX	\$4,670	\$394	\$50.28	\$1.28	8
	Minneapolis, MN	Tacoma, WA	\$5,660	\$624	\$62.41	\$1.59	12
Soybeans	Council Bluffs, IA	Stockton, CA	\$5,580	\$646	\$61.82	\$1.57	13
	Sioux Falls, SD	Tacoma, WA	\$6,350	\$576	\$68.78	\$1.87	11
	Minneapolis, MN	Portland, OR	\$6,400	\$629	\$69.80	\$1.90	11
	Fargo, ND	Tacoma, WA	\$6,250	\$512	\$67.15	\$1.83	10
	Council Bluffs, IA	New Orleans, LA	\$5,095	\$580	\$56.36	\$1.53	8
	Toledo, OH	Huntsville, AL	\$5,277	\$398	\$56.36	\$1.53	9
	Grand Island, NE	Portland, OR	\$5,730	\$819	\$65.03	\$1.77	13

<sup>1</sup>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.

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

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

<sup>4</sup>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 2022			Tariff rate per car <sup>1</sup>	Fuel surcharge per car <sup>2</sup>	Tariff rate plus fuel surcharge per:		Percent change <sup>4</sup> Y/Y
Commodity	Origin state	Destination region			metric ton <sup>3</sup>	bushel <sup>3</sup>	
Wheat	MT	Chihuahua, CI	\$7,699	\$0	\$78.67	\$2.14	0
	OK	Cuautitlan, EM	\$6,900	\$537	\$75.99	\$2.07	4
	KS	Guadalajara, JA	\$7,619	\$2,672	\$105.14	\$2.86	1
	TX	Salinas Victoria, NL	\$4,420	\$298	\$48.21	\$1.31	3
Corn	IA	Guadalajara, JA	\$9,102	\$2,299	\$116.49	\$2.96	2
	SD	Celaya, GJ	\$8,300	\$0	\$84.81	\$2.15	0
	NE	Queretaro, QA	\$8,322	\$919	\$94.42	\$2.40	5
	SD	Salinas Victoria, NL	\$6,905	\$0	\$70.55	\$1.79	0
	MO	Tlalnepantla, EM	\$7,687	\$891	\$87.65	\$2.22	6
	SD	Torreon, CU	\$7,825	\$0	\$79.95	\$2.03	0
Soybeans	MO	Bojay (Tula), HG	\$8,647	\$2,142	\$110.24	\$3.00	2
	NE	Guadalajara, JA	\$9,207	\$2,209	\$116.64	\$3.17	2
	IA	El Castillo, JA	\$9,510	\$0	\$97.17	\$2.64	0
	KS	Torreon, CU	\$8,109	\$1,527	\$98.46	\$2.68	2
Sorghum	NE	Celaya, GJ	\$7,932	\$2,019	\$101.68	\$2.58	3
	KS	Queretaro, QA	\$8,108	\$670	\$89.68	\$2.28	4
	NE	Salinas Victoria, NL	\$6,713	\$538	\$74.08	\$1.88	4
	NE	Torreon, CU	\$7,225	\$1,393	\$88.05	\$2.23	3

<sup>1</sup>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.

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

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

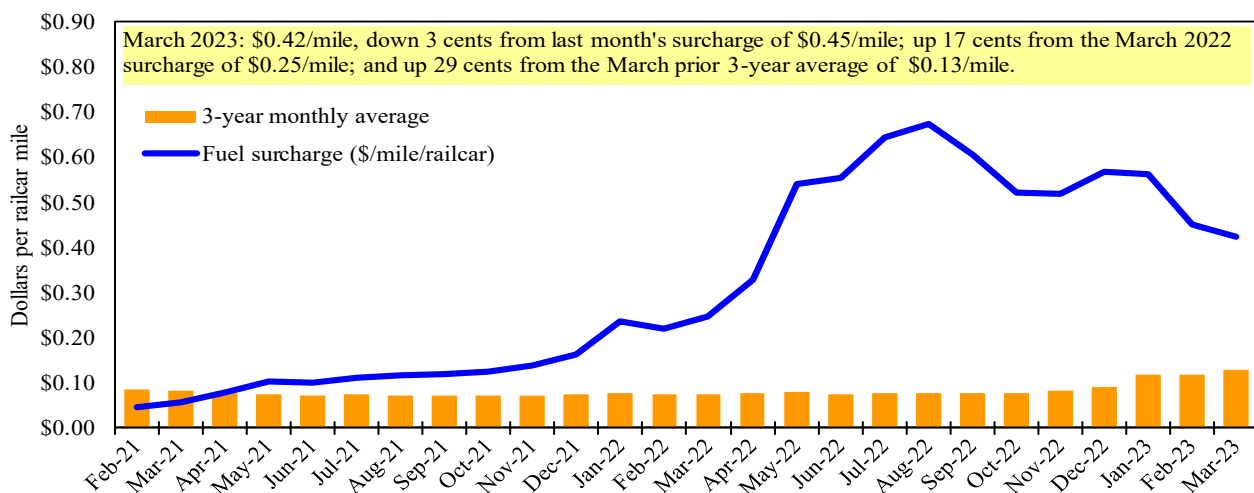
<sup>4</sup>Percentage change calculated using tariff rate plus fuel surcharge; Y/Y = year over year.

<sup>5</sup> 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<sup>1</sup>**

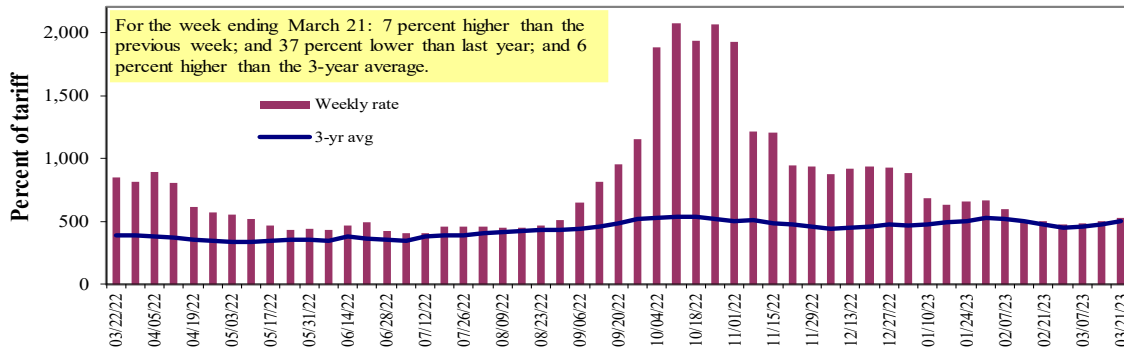
<sup>1</sup> Weighted by each Class I railroad's proportion of grain traffic for the prior year.

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<sup>1,2</sup>



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

Table 8

### Weekly barge freight rates: Southbound only

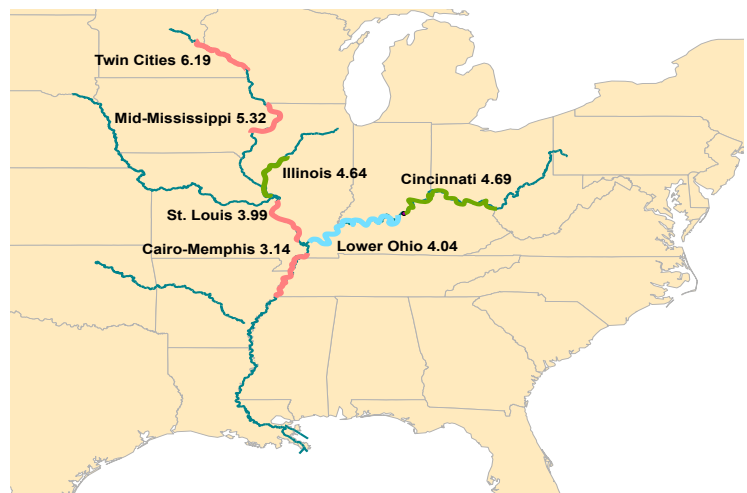
		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate <sup>1</sup>	3/21/2023	551	548	530	436	430	430	338
	3/14/2023	-	510	498	392	410	410	301
\$/ton	3/21/2023	34.11	29.15	24.59	17.40	20.17	17.37	10.61
	3/14/2023	-	27.13	23.11	15.64	19.23	16.56	9.45
<b>Current week % change from the same week:</b>								
	Last year	-35	-38	-37	-41	-50	-50	-49
	3-year avg. <sup>2</sup>	-	-	6	12	-3	-3	-4
Rate <sup>1</sup>	April	528	508	500	393	403	403	301
	June	509	488	476	370	388	388	291

<sup>1</sup>Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); <sup>2</sup>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

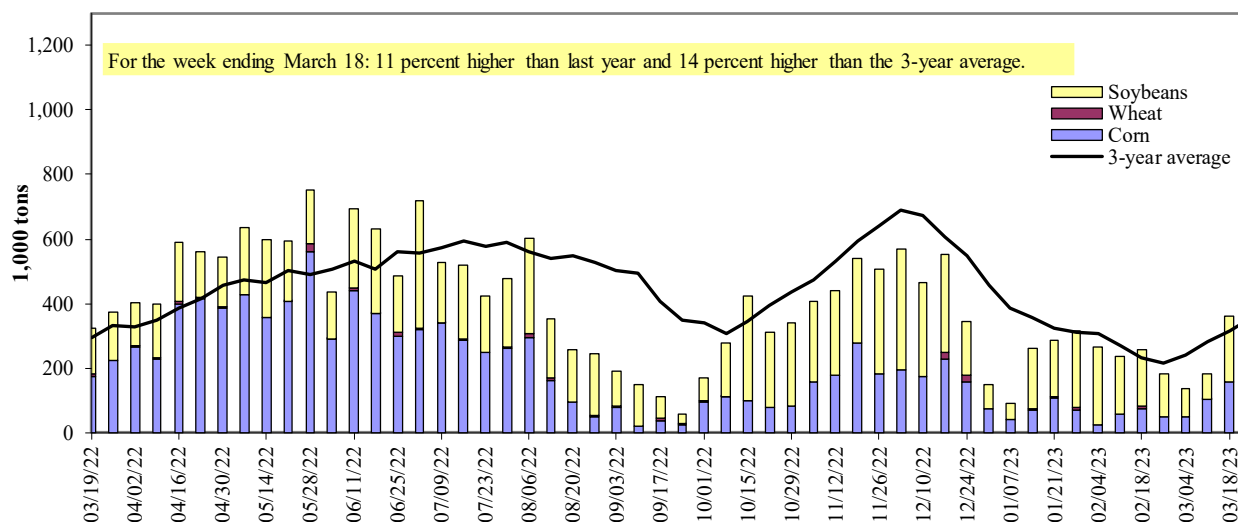
Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.



Map Credit: USDA, Agricultural Marketing Service

Figure 9

**Barge movements on the Mississippi River<sup>1</sup> (Locks 27 - Granite City, IL)**



<sup>1</sup> The 3-year average is a 4-week moving average.

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

Source: U.S. Army Corps of Engineers.

Table 9

**Barge grain movements (1,000 tons)**

For the week ending 03/18/2023	Corn	Wheat	Soybeans	Other	Total
<b>Mississippi River</b>					
Rock Island, IL (L15)	13	0	44	0	57
Winfield, MO (L25)	66	0	77	0	143
Alton, IL (L26)	177	0	187	0	364
Granite City, IL (L27)	159	0	201	0	359
<b>Illinois River (La Grange)</b>	101	0	84	0	185
<b>Ohio River (Olmsted)</b>	116	4	70	0	190
<b>Arkansas River (L1)</b>	0	24	6	0	30
Weekly total - 2023	274	28	276	0	578
Weekly total - 2022	416	31	243	4	693
2023 YTD <sup>1</sup>	2,253	266	3,251	80	5,851
2022 YTD <sup>1</sup>	3,416	289	2,537	35	6,277
2023 as % of 2022 YTD	66	92	128	227	93
Last 4 weeks as % of 2022 <sup>2</sup>	60	98	101	186	75
Total 2022	16,437	1,594	14,464	232	32,727

<sup>1</sup> 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.

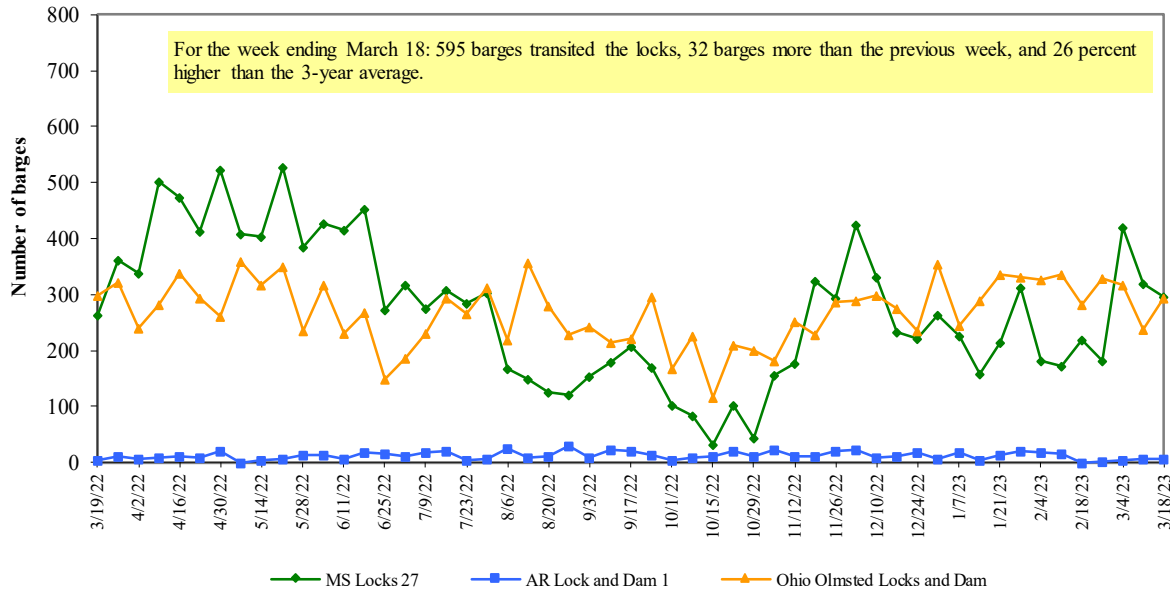
<sup>2</sup> As a percent of same period in 2022.

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**

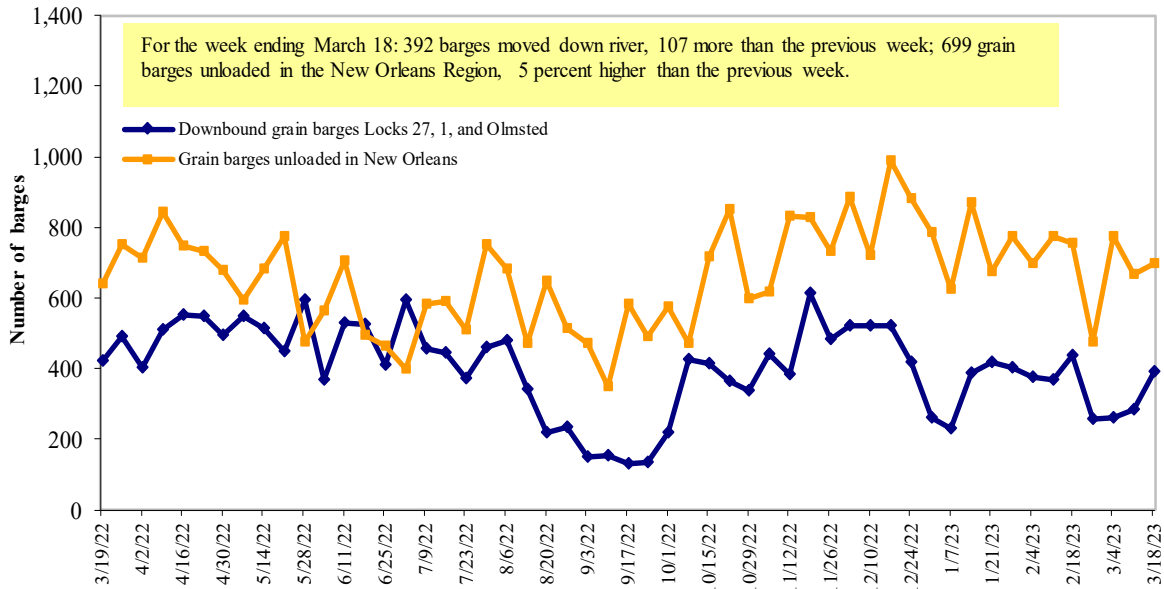


Note: The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.

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 3/20/2023 (U.S. \$/gallon)**

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	4.309	-0.051	-0.870
	New England	4.657	-0.074	-0.468
	Central Atlantic	4.647	-0.052	-0.656
	Lower Atlantic	4.148	-0.048	-0.962
II	Midwest	4.021	-0.073	-0.938
III	Gulf Coast	3.930	-0.068	-1.034
IV	Rocky Mountain	4.350	-0.081	-0.537
	West Coast	4.862	-0.036	-0.935
V	West Coast less California	4.515	-0.023	-0.804
	California	5.260	-0.052	-0.958
Total	United States	4.185	-0.062	-0.949

<sup>1</sup>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.

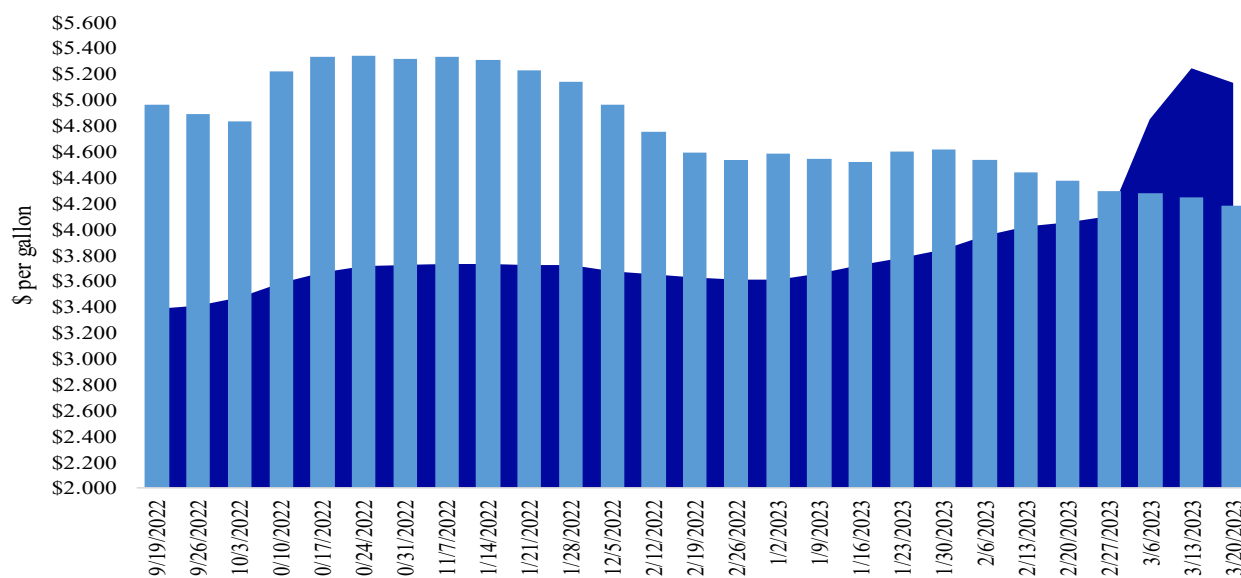
Source: U.S. Department of Energy, Energy Information Administration.

Figure 12

**Weekly diesel fuel prices, U.S. average**

For the week ending March 20, the U.S. average diesel fuel price decreased 6.2 cents from the previous week to \$4.185 per gallon, 94.9 cents below the same week last year.

■ Last year \$5.134 ■ Current year \$4.185



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

Source: U.S. Department of Energy, Energy Information Administration, Retail On-Highway Diesel Prices.

# Grain Exports

Table 11

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

For the week ending	Wheat					All wheat	Corn	Soybeans	Total
	HRW	SRW	HRS	SWW	DUR				
<b>Export balances<sup>1</sup></b>									
3/9/2023	691	525	1,030	908	45	3,199	14,640	6,496	24,334
This week year ago	1,705	622	1,081	528	19	3,955	23,232	11,299	38,485
<b>Cumulative exports-marketing year<sup>2</sup></b>									
2022/23 YTD	4,118	2,187	4,375	3,569	291	14,539	17,247	42,839	74,625
2021/22 YTD	5,721	2,149	4,007	2,735	170	14,781	28,807	42,326	85,913
YTD 2022/23 as % of 2021/22	72	102	109	131	171	98	60	101	87
Last 4 wks. as % of same period 2021/22	41	94	92	177	300	83	62	62	64
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

<sup>1</sup> Current unshipped (outstanding) export sales to date.

<sup>2</sup> 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<sup>1</sup> of U.S. corn

For the week ending 3/9/2023	Total commitments <sup>2</sup>		% change current MY from last MY	Exports <sup>3</sup> 3-yr. avg. 2019-21
	2022/23 current MY	2021/22 last MY		
	1,000 mt -			
Mexico	13,091	14,384	(9)	15,227
China	4,560	12,100	(62)	12,616
Japan	3,929	8,070	(51)	10,273
Columbia	1,516	3,490	(57)	4,398
Korea	764	347	120	2,563
<b>Top 5 importers</b>	<b>23,861</b>	<b>38,390</b>	<b>(38)</b>	<b>45,077</b>
<b>Total U.S. corn export sales</b>	<b>31,886</b>	<b>52,039</b>	<b>(39)</b>	<b>56,665</b>
% of projected exports	68%	83%		
Change from prior week <sup>2</sup>	<b>1,236</b>	<b>1,836</b>		
<b>Top 5 importers' share of U.S. corn export sales</b>	75%	74%		80%
<b>USDA forecast March 2023</b>	<b>47,074</b>	<b>62,875</b>	<b>(25)</b>	
<b>Corn use for ethanol USDA forecast, March 2023</b>	<b>133,350</b>	<b>135,281</b>	<b>(1)</b>	

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

<sup>2</sup> 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.

<sup>3</sup> 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<sup>1</sup> of U.S. soybeans**

For the week ending 3/9/2023	Total commitments <sup>2</sup>		% change current MY from last MY	Exports <sup>3</sup> 3-yr. avg. 2019-21
	2022/23 current MY	2021/22 last MY		
				- 1,000 mt -
China	30,539	27,686	10	27,283
Mexico	4,120	4,806	(14)	4,929
Egypt	976	3,350	(71)	3,553
Japan	1,769	1,818	(3)	2,266
Indonesia	1,078	1,201	(10)	2,116
<b>Top 5 importers</b>	<b>38,482</b>	<b>38,861</b>	<b>(1)</b>	<b>40,147</b>
<b>Total U.S. soybean export sales</b>	<b>49,335</b>	<b>53,624</b>	<b>(8)</b>	<b>54,231</b>
% of projected exports	90%	91%		
change from prior week <sup>2</sup>	<b>665</b>	<b>1,253</b>		
<b>Top 5 importers' share of U.S. soybean export sales</b>	<b>78%</b>	<b>72%</b>		<b>74%</b>
<b>USDA forecast, March 2023</b>	<b>54,905</b>	<b>58,801</b>	<b>(7)</b>	

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

<sup>2</sup>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.

<sup>3</sup>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<sup>1</sup> of all U.S. wheat**

For the week ending 3/9/2023	Total Commitments <sup>2</sup>		% change current MY from last MY	Exports <sup>3</sup> 3-yr. avg. 2019-21
	2022/23 current MY	2021/22 last MY		
				- 1,000 mt -
		1,000 mt -		
Mexico	3,001	3,410	(12)	3,566
Philippines	2,142	2,722	(21)	2,985
Japan	2,090	2,243	(7)	2,453
China	956	848	13	1,537
Nigeria	777	2,023	(62)	1,528
Korea	1,252	1,197	5	1,459
Taiwan	752	823	(9)	1,106
Indonesia	335	67	401	711
Thailand	624	542	15	703
Colombia	501	688	(27)	621
<b>Top 10 importers</b>	<b>12,430</b>	<b>14,562</b>	<b>(15)</b>	<b>16,669</b>
<b>Total U.S. wheat export sales</b>	<b>17,738</b>	<b>18,735</b>	<b>(5)</b>	<b>22,763</b>
% of projected exports	84%	86%		
change from prior week <sup>2</sup>	<b>337</b>	<b>146</b>		
<b>Top 10 importers' share of U.S. wheat export sales</b>	<b>70%</b>	<b>78%</b>		<b>73%</b>
<b>USDA forecast, March 2023</b>	<b>21,117</b>	<b>21,798</b>	<b>(3)</b>	

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

<sup>2</sup> 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.

<sup>3</sup> 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 03/16/23	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.	
<b>Pacific Northwest</b>									
Wheat	255	108	236	2,816	2,345	120	132	85	9,836
Corn	199	56	357	747	2,559	29	27	22	9,615
Soybeans	0	0	n/a	3,298	3,471	95	10	12	14,178
<b>Total</b>	<b>454</b>	<b>164</b>	<b>277</b>	<b>6,861</b>	<b>8,375</b>	<b>82</b>	<b>55</b>	<b>45</b>	<b>33,629</b>
<b>Mississippi Gulf</b>									
Wheat	40	89	45	559	822	68	75	87	4,053
Corn	766	766	100	4,799	9,267	52	68	72	30,781
Soybeans	553	419	132	9,227	6,526	141	128	128	31,283
<b>Total</b>	<b>1,358</b>	<b>1,274</b>	<b>107</b>	<b>14,585</b>	<b>16,615</b>	<b>88</b>	<b>84</b>	<b>87</b>	<b>66,116</b>
<b>Texas Gulf</b>									
Wheat	69	20	349	518	681	76	155	98	3,421
Corn	15	0	n/a	68	141	48	61	33	648
Soybeans	0	0	n/a	52	2	n/a	0	0	685
<b>Total</b>	<b>85</b>	<b>20</b>	<b>426</b>	<b>638</b>	<b>824</b>	<b>78</b>	<b>142</b>	<b>88</b>	<b>4,754</b>
<b>Interior</b>									
Wheat	30	42	71	567	659	86	59	77	2,912
Corn	187	164	114	2,007	1,937	104	102	107	8,961
Soybeans	125	175	71	1,826	1,650	111	96	104	7,109
<b>Total</b>	<b>342</b>	<b>382</b>	<b>89</b>	<b>4,401</b>	<b>4,245</b>	<b>104</b>	<b>92</b>	<b>101</b>	<b>18,982</b>
<b>Great Lakes</b>									
Wheat	0	11	0	50	23	220	140	372	395
Corn	0	0	n/a	0	0	n/a	n/a	n/a	158
Soybeans	0	0	n/a	2	0	n/a	n/a	n/a	760
<b>Total</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>52</b>	<b>23</b>	<b>229</b>	<b>140</b>	<b>372</b>	<b>1,312</b>
<b>Atlantic</b>									
Wheat	0	0	n/a	36	4	803	n/a	4	169
Corn	0	11	0	39	42	93	108	324	309
Soybeans	77	72	107	981	753	130	121	198	2,867
<b>Total</b>	<b>77</b>	<b>83</b>	<b>92</b>	<b>1,056</b>	<b>799</b>	<b>132</b>	<b>120</b>	<b>178</b>	<b>3,345</b>
<b>U.S. total from ports*</b>									
Wheat	394	270	146	4,546	4,534	100	110	86	20,786
Corn	1,168	997	117	7,660	13,946	55	65	65	50,471
Soybeans	754	666	113	15,387	12,401	124	93	103	56,882
<b>Total</b>	<b>2,316</b>	<b>1,934</b>	<b>120</b>	<b>27,593</b>	<b>30,881</b>	<b>89</b>	<b>80</b>	<b>79</b>	<b>128,139</b>

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

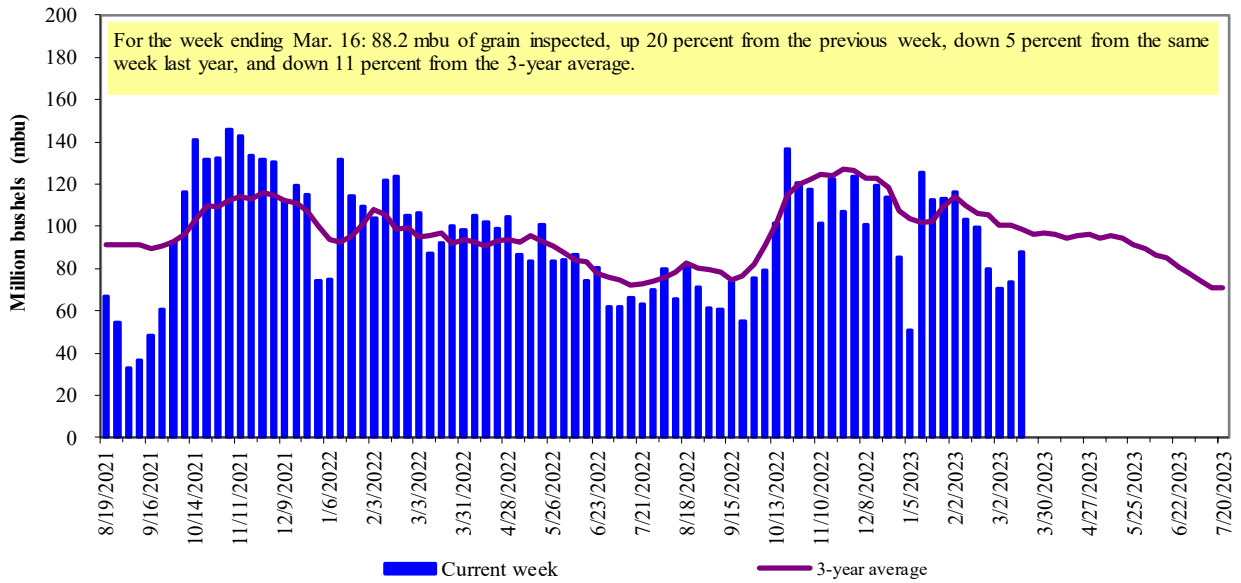
Source: USDA, Federal Grain Inspection Service; YTD= year-to-date; n/a = not applicable or no change.

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)**

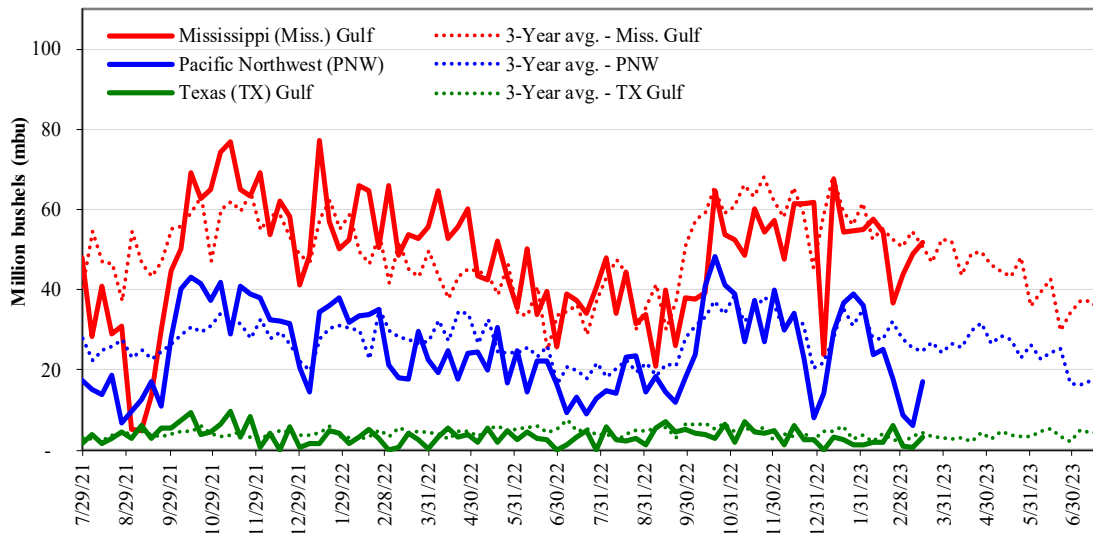


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 14

**U.S. Grain inspections: U.S. Gulf and PNW<sup>1</sup> (wheat, corn, and soybeans)**



Week ending 03/16/23 inspections (mbu):	Percent change	MS Gulf	TX	U.S. Gulf	PNW
MS Gulf: 51.9	Last wk:	up 6	up 332	up 11	up 179
PNW: 17.2	Last Year (same wk):	down 3	down 23	down 4	down 3
TX Gulf: 3.2	3-yr avg. (4-wk. mov. Avg):	unchanged	up 2	unchanged	down 38

Source: USDA, Federal Grain Inspection Service.

# Ocean Transportation

Table 16

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

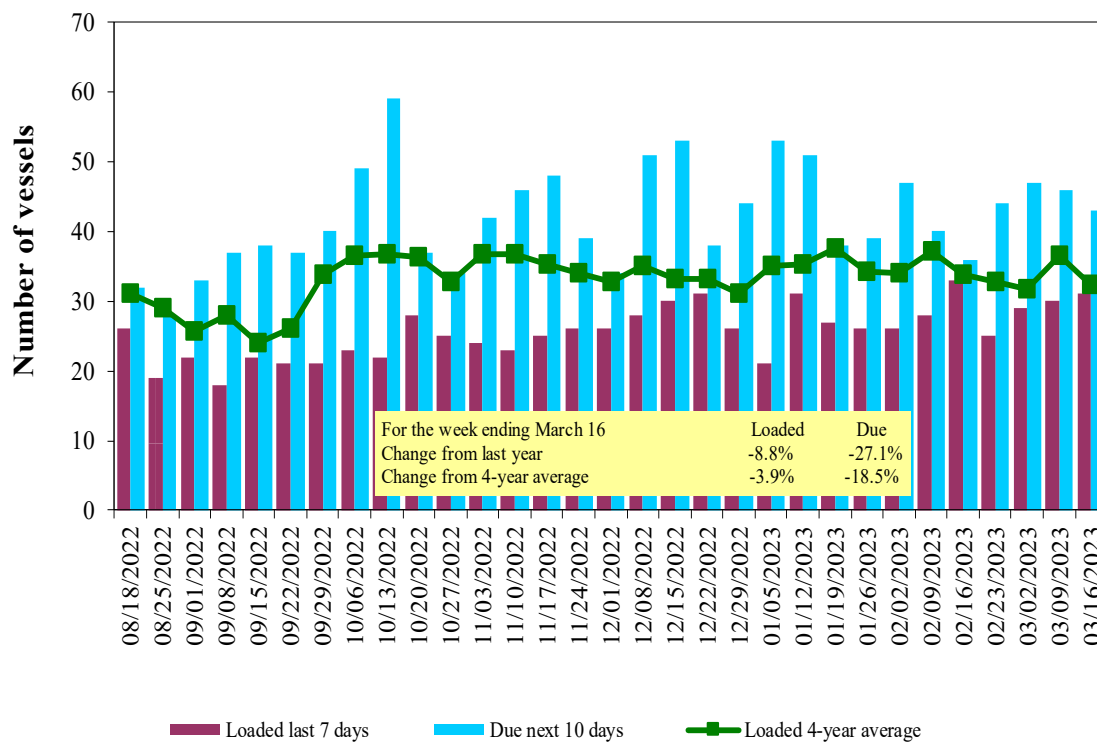
Date	Gulf			Pacific Northwest
	In port	Loaded 7-days	Due next 10-days	In port
3/16/2023	19	31	43	6
3/9/2023	22	30	46	6
2022 range	(14...61)	(18...39)	(28...62)	(5...23)
2022 average	30	28	44	13

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

Source: USDA, Agricultural Marketing Service.

Figure 15

**U.S. Gulf<sup>1</sup> vessel loading activity**

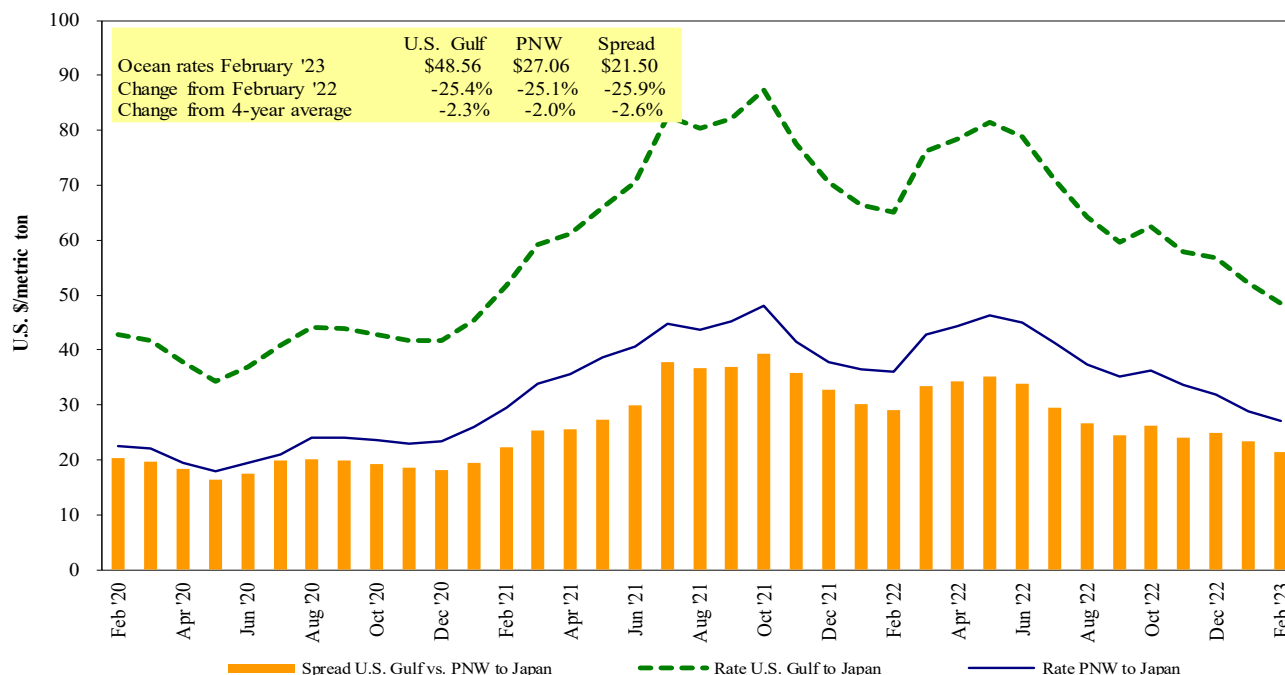


<sup>1</sup>U.S. Gulf includes Mississippi, Texas, and East Gulf

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 03/18/2023**

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	Japan	Heavy grain	May 1, 2023	50,000	54.80
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	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*
U.S. Gulf	S. Korea	Heavy grain	Jun 1/Jul, 2022	55,000	82.75
WC US	Japan	Wheat	Feb 1/Mar 1, 2023	34,500	47.75
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;

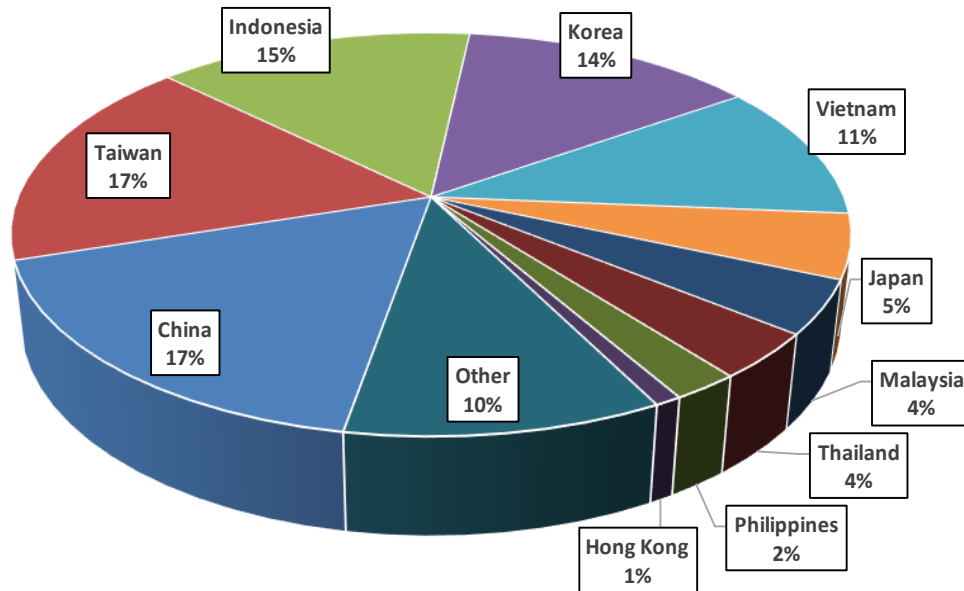
op = option.

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**

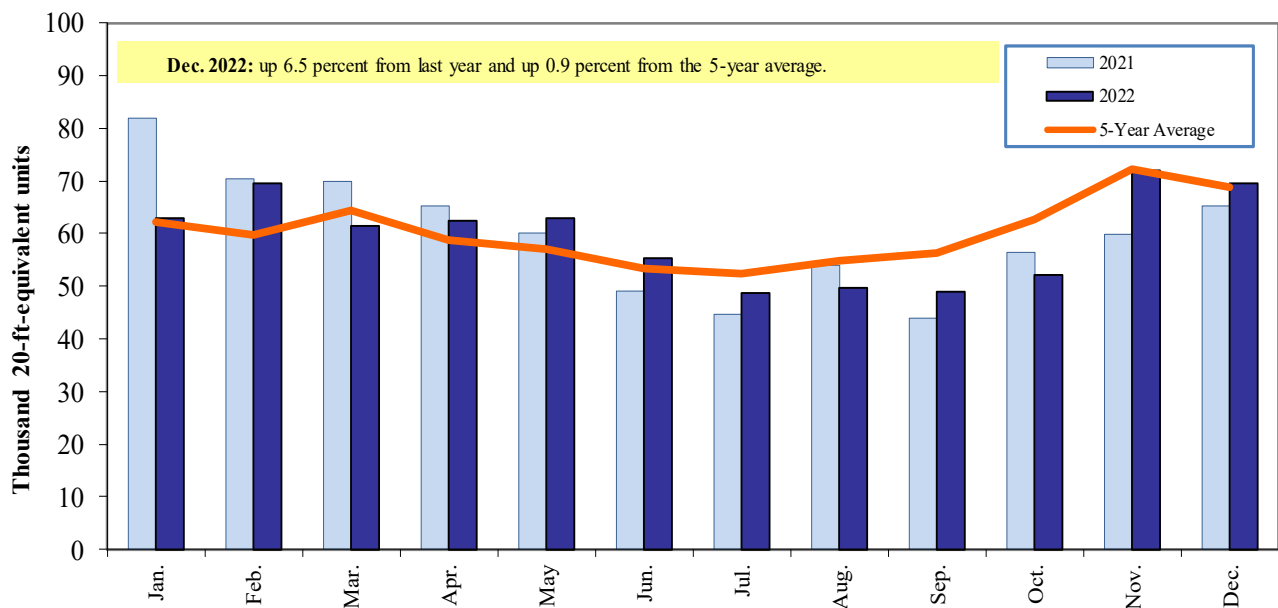


Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: '1001', '100190', '1002', '100200', '1003', '100300', '1004', '100400', '1005', '100590', '1007', '100700', '110100', '1102', '110220', '110290', '1201', '120100', '120190', '120810', '230210', '230310',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

# Contacts and Links

## Coordinators

Surajudeen (Deen) Olowolayemo	<a href="mailto:surajudeen.olowolayemo@usda.gov">surajudeen.olowolayemo@usda.gov</a>	(202) 720 - 0119
Maria Williams	<a href="mailto:maria.williams@usda.gov">maria.williams@usda.gov</a>	(202) 690 - 4430
Bernadette Winston	<a href="mailto:bernadette.winston@usda.gov">bernadette.winston@usda.gov</a>	(202) 690 - 0487

## Grain Transportation Indicators

Surajudeen (Deen) Olowolayemo	<a href="mailto:surajudeen.olowolayemo@usda.gov">surajudeen.olowolayemo@usda.gov</a>	(202) 720 - 0119
-------------------------------	--	------------------

## Rail Transportation

Jesse Gastelle	<a href="mailto:jesse.gastelle@usda.gov">jesse.gastelle@usda.gov</a>	(202) 690 - 1144
Peter Caffarelli	<a href="mailto:petera.caffarelli@usda.gov">petera.caffarelli@usda.gov</a>	(202) 690 - 3244
Bernadette Winston	<a href="mailto:bernadette.winston@usda.gov">bernadette.winston@usda.gov</a>	(202) 690 - 0487
Rich Henderson	<a href="mailto:richard.henderson2@usda.gov">richard.henderson2@usda.gov</a>	(919) 855 - 7801
Austin Hunt	<a href="mailto:austin.hunt@usda.gov">austin.hunt@usda.gov</a>	(540) 681 - 2596

## Barge Transportation

April Taylor	<a href="mailto:april.taylor@usda.gov">april.taylor@usda.gov</a>	(202) 720 - 7880
Rich Henderson	<a href="mailto:richard.henderson2@usda.gov">richard.henderson2@usda.gov</a>	(919) 855 - 7801
Alexis Heyman	<a href="mailto:alexis.heyman@usda.gov">alexis.heyman@usda.gov</a>	(847) 699 - 2414

## Truck Transportation

April Taylor	<a href="mailto:april.taylor@usda.gov">april.taylor@usda.gov</a>	(202) 720 - 7880
Kranti Mulik	<a href="mailto:kranti.mulik@usda.gov">kranti.mulik@usda.gov</a>	(202) 756 - 2577
Alexis Heyman	<a href="mailto:alexis.heyman@usda.gov">alexis.heyman@usda.gov</a>	(847) 699 - 2414

## Grain Exports

Kranti Mulik	<a href="mailto:kranti.mulik@usda.gov">kranti.mulik@usda.gov</a>	(202) 756 - 2577
Bernadette Winston	<a href="mailto:bernadette.winston@usda.gov">bernadette.winston@usda.gov</a>	(202) 690 - 0487

## Ocean Transportation

Surajudeen (Deen) Olowolayemo (Freight rates and vessels)	<a href="mailto:surajudeen.olowolayemo@usda.gov">surajudeen.olowolayemo@usda.gov</a>	(202) 720 - 0119
April Taylor (Container movements)	<a href="mailto:april.taylor@usda.gov">april.taylor@usda.gov</a>	(202) 720 - 7880

## Editor

Maria Williams	<a href="mailto:maria.williams@usda.gov">maria.williams@usda.gov</a>	(202) 690-4430
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