USDA United States Department of Agriculture

Grain Transportation Report

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

Contact Us

April 28, 2022

Contents

The next release is May 5, 2022

WEEKLY HIGHLIGHTS

STB Proposes To Amend Its Emergency Service Rules

The Surface Transportation Board (STB) issued a notice of proposed rulemaking (NPRM) on April 22 to amend its rarely used emergency service rules. Where rail service failures impose substantial costs on shippers, a region, or the general public, emergency service orders can provide immediate relief, but shippers believe the application process is too slow and burdensome. The proposed modifications would reduce barriers for shippers seeking emergency service orders in several ways: first, the need for a commitment from an alternative railroad to start the proceeding would be eliminated. Second, the proposal would shift—from the shipper to the railroad—the burden of informing STB about any potential effects, of an emergency service order, on safety and service. The proposal would also shorten the procedural schedule: the railroad would have to reply within 3 business days (instead of 5) of the filing date, and the shipper would be allowed 2 business days (instead of 3) for its rebuttal. STB also clarified that it expects to decide on a filing within 5 business days of receiving the rebuttal. Given the industry's serious ongoing service issues, STB set a short comment period for the proposal. Comments on the NPRM are due May 23, and replies are due June 6.

FMC Examines How Carriers Can Improve Service to Exporters

Federal Maritime Commission (FMC) staff are comprehensively examining how key ocean carriers serve U.S. export shippers. Launched in response to a March 2022 directive of the FMC Chair, the review is led by the Commission's vessel operating common carrier (VOCC) Audit Team. Last week, the VOCC Audit Program finished its first round of meetings with 11 key shipping lines. The meetings help identify which ocean carriers have export strategies and how well those strategies work. The VOCC Audit Team also uses its exchanges with carriers to urge companies without export strategies to establish one. The team will continue to engage ocean carriers on export issues, but its initial findings from the interviews will be presented to FMC later this Spring.

DOT Reports Progress Toward Relieving Supply-Chain Issues in Trucking

According to the U.S. Department of Transportation (DOT), the trucking industry now employs roughly 30,000 more drivers than at the start of the pandemic. DOT hopes to bolster these gains with recent accomplishments in its efforts to advance trucking. These achievements include more than 90 employers launching registered apprenticeship programs in 90 days and—between 2021 and 2022—a 112-percent increase in commercial driver's licenses issued in January and February. DOT also recently launched a new Women of Trucking Advisory Board to recruit women and a new Veterans Trucking Task Force to bring more veterans into the industry. DOT notes trucking is "one key bottleneck," which has struggled with declining employment—even before the pandemic—and a historic demand for goods since the pandemic.

Snapshots by Sector

Export Sales

For the week ending April 14, **unshipped balances** of wheat, corn, and soybeans for marketing year 2021/22 totaled 33.8 million metric tons (mmt), down 9 percent from the same time last year and down 3 percent from the previous week. Net **corn export sales** were 0.879 mmt, down 34 percent from the previous week. Net **soybean export sales** were 0.460 mmt, down 16 percent from the previous week. Net weekly **wheat export sales** were 0.026 mmt, down 73 percent from the previous week.

Rail

U.S. Class I railroads originated 19,602 **grain carloads** during the week ending April 16. This was a 19-percent decrease from the previous week, 25 percent fewer than last year, and 14 percent fewer than the 3-year average.

Average May shuttle **secondary railcar** bids/offers (per car) were $2,546 above tariff for the week ending April 21. This was $35 less than last week and $2,508 more than this week last year.

Barge

For the week ending April 23, **barged grain movements** totaled 895,067 tons. This was 3 percent more than the previous week and 7 percent lower than the same period last year.

For the week ending April 23, 549 grain barges **moved down river**—2 fewer barges than the previous week. There were 733 grain barges **unloaded** in the New Orleans region, 2 percent fewer than last week.

Ocean

For the week ending April 21, 38 **oceangoing grain vessels** were loaded in the Gulf—19 percent more than the same period last year. Within the next 10 days (starting April 22), 46 vessels were expected to be loaded—12 percent more than the same period last year.

As of April 21, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $79.00. This was 1 percent more than the previous week. The rate from the Pacific Northwest to Japan was $44.75 per mt, 1 percent more than the previous week.

Fuel

For the week ending April 25, the U.S. average **diesel fuel price** increased 5.9 cents from the previous week to $5.16 per gallon, 203.6 cents above the same week last year.

Preferred citation: U.S. Department of Agriculture, Agricultural Marketing Service. *Grain Transportation Report.* April 28, 2022.
Web: http://dx.doi.org/10.9752/TS056.04-28-2022

Feature Article/Calendar

First Quarter Ocean Rates Fell, Despite Late-Quarter Rise

Despite an increase in March due to the war in Ukraine, ocean freight rates for shipping bulk items, including grain (wheat, corn, and soybeans), fell from fourth quarter 2021 to first quarter 2022 (quarter to quarter). However, rates rose from first quarter 2021 (year to year) and the 4-year average.

Ocean freight rates for shipping bulk grain from the U.S. Gulf to Japan averaged $69.31 per metric ton (mt) in first quarter 2022—down 12 percent quarter to quarter, but up 33 percent year to year and up 53 percent from the 4-year average (see table and figure). Rates from the Pacific Northwest (PNW) to Japan—averaged $38.47 per mt. This was down 9 percent quarter to quarter, but up 29 percent year to year and up 54 percent from the 4-year average. From the U.S. Gulf to Europe, rates were $25.89 per mt—down 14 percent quarter to quarter, but up 31 percent year to year and up 52 percent from the 4-year average.

Ocean freight rates for grain routes first quarter 2022

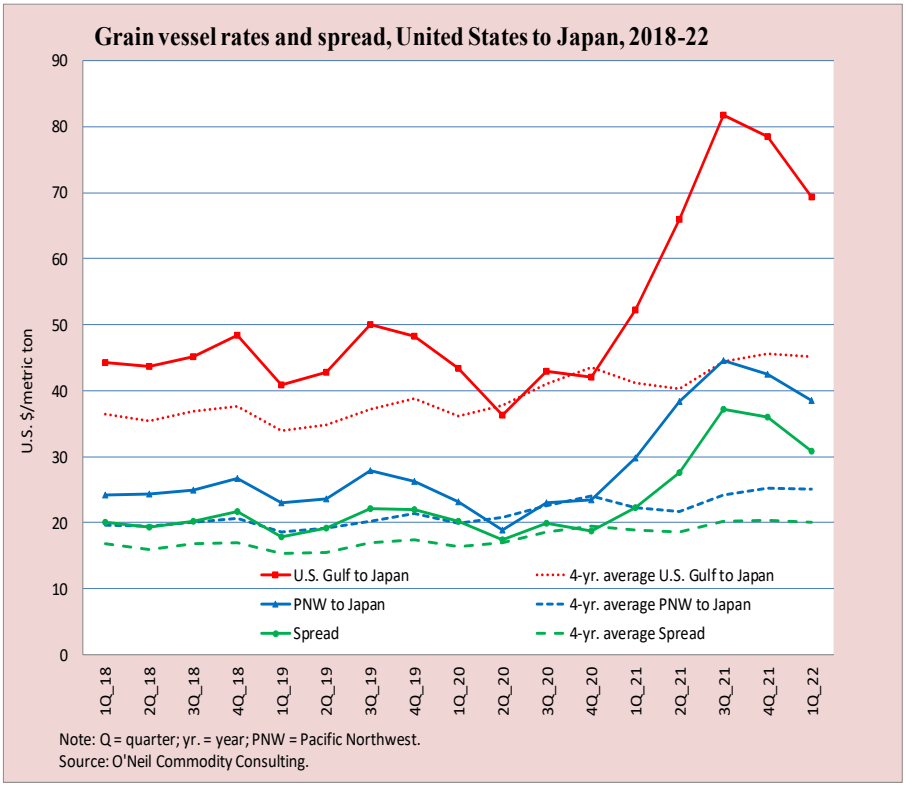
Route	Jan.	Feb.	Mar.	1st quarter 2022	Change from 4th qtr. '21	Change from 1st qtr. '21	Change from 4-yr. avg.
	--$/mt--			--$/mt--	Percent		
U.S. Gulf to Japan	66.50	65.13	76.30	69.31	-12	33	53
PNW to Japan	36.44	36.13	42.85	38.47	-9	29	54
Spread*	30.06	29.00	33.45	30.84	-14	38	53
U.S. Gulf to Europe	24.63	24.13	28.90	25.89	-14	31	52

Note: qtr. = quarter; avg. = average; mt = metric ton; yr. = year; PNW = Pacific Northwest.
*Spread is the difference between ocean freight rates for shipping grain from the U.S. Gulf to Japan and PNW to Japan.
Source: O'Neil Commodity Consulting.

Monthly Changes in Rates

January. The quarter began with a seasonal decline in ocean freight rates. The dip was due to low market activity resulting from various New Year holidays around the globe. After persisting for most of fourth quarter 2021, congestion at Chinese ports finally eased in January as Australian vessels stranded at the ports were allowed to unload their coal cargo. As Chinese port congestion loosened, other vessels were freed up as well.

February. Ocean freight rates continued to decline in February partly because of the slowdown in market activity in response to Chinese New Year celebration (January 31 - February 15). During the holiday, most Chinese financial systems and businesses shut down, slowing trade of iron ore and other bulk items. To ensure "blue skies" during the Beijing Winter Olympics and Paralympic



Note: Q = quarter; yr. = year; PNW = Pacific Northwest.
Source: O'Neil Commodity Consulting.

Games, the Chinese Government had intentionally limited steel, zinc, aluminum, and coal production from October 1, 2021 to March 31, 2022 (according to S&P Global Market Intelligence). The cumulative effect of these months-long production limitations constrained February trade in these commodities. The sluggish trade, in turn, helped push down ocean freight rates.

March. Ocean freight rates rose precipitously in March. Russia's invasion of Ukraine on February 24 created uncertainties in the dry bulk market as energy and commodity prices spiked. One factor behind the high ocean freight rates was high bunker fuel prices caused by war-related turmoil. As of April 20, the average global price (i.e., of 20 ports) of very low sulfur fuel oil (International Maritime Organization grade 0.5 percent) was $928.50 per mt, versus $628.50 per mt on January 3 and $513.50 per mt a year ago (shipandbunker.com). The April 20 price marked a 48-percent increase from January 3 and an 81-percent increase from the same period a year ago.

Current Market Analysis and Outlook

As of April 21, the rate for shipping 1 mt of grain from the U.S. Gulf to Japan was $79.00—1 percent more than the previous week and 26 percent more than a year earlier. The rate from PNW to Japan was $44.75 per mt—1 percent more than the previous week and 23 percent more than the same 2021 period.

Uncertainty remains about how long the war in Ukraine and economic sanctions will last and what repercussions will follow. However, most industry analysts, including Drewry Maritime Research, Inc. believe the war has helped raise energy costs. In addition to higher energy prices, increased vessel operating costs may also have contributed to high rates: as long as port operations in Ukraine remain suspended, Russian exports from the Black Sea face prohibitive vessel-insurance premiums (*Drewry Shipping Insight,* April 2022 (Drewry)). Another possible contributor to high ocean rates: disruptions to iron ore and steel products from the Black Sea have made buyers seek alternative sources such as Brazil. Australia, and elsewhere. Ukraine exported less iron ore and steel products in March than February. Drewry notes that European buyers sought to source from Vale, Brazil. These shifting trade routes have increased ton-miles considerably, squeezing vessel supply and exerting more upward pressure on ocean freight rates.

Similar effects to trade routes and vessel supply may result from substitutions for Russian coal on the global market. According to the February, 2022 *Drewry Shipping Insight* (Drewry), Russia supplied 42 percent of total European coal imports and 16 percent of global coal requirements in 2021. Depending how long the war lasts, Europe may replace Russian coal imports with coal from South Africa, Colombia, Indonesia, and Australia (Drewry). This scenario would also increase the dry bulk sector's ton-mile demand, putting more upward pressure on ocean freight rates. Yet, uncertainty remains about the ability of other suppliers to make up the shortfall of coal exports caused by Russia's absence in the market. The uncertainty has increased coal prices, limiting demand in India. The depressed demand for coal could spill over into demand for vessels and put downward pressure on rates.

More downward pressure on rates could come from increases in vessel supply. Over 700 dry bulk vessels are typically loaded at Russian and Ukranian ports monthly (Drewry). A protracted war could reduce trade of grain and other bulk items out of the Black Sea—freeing up dry bulk vessels and increasing supply. In addition, the recent effort by 31 members of the International Energy Agency to release roughly 240 million barrels of emergency oil within the next 6 months could soften the rise in energy prices, putting further downward pressure on ocean freight rates.

Nonetheless, some industry analysts predict enormous postwar construction activity to rebuild the war-torn cities in Ukraine. Such a construction boom (whenever it may come to pass) would generate increased demand in Ukraine for such commodities as iron ore and steel products, as well as other minor bulk items—putting upward pressure on ocean freight rates. *surajudeen.olowolayemo@usda.gov*

Grain Transportation Indicators

Table 1

Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Non-Shuttle	Shuttle		Gulf	Pacific
04/27/22	346	306	307	315	353	317
04/20/22	342	306	319	339	351	314

[1]Indicator: Base year 2000 = 100. Weekly updates include truck = diesel ($/gallon); rail = near-month secondary rail market bid and monthly tariff rate with fuel surcharge ($/car); barge = Illinois River barge rate (index = percent of tariff rate); ocean = routes to Japan ($/metric ton); n/a = not available.
Source: USDA, Agricultural Marketing Service.

Table 2

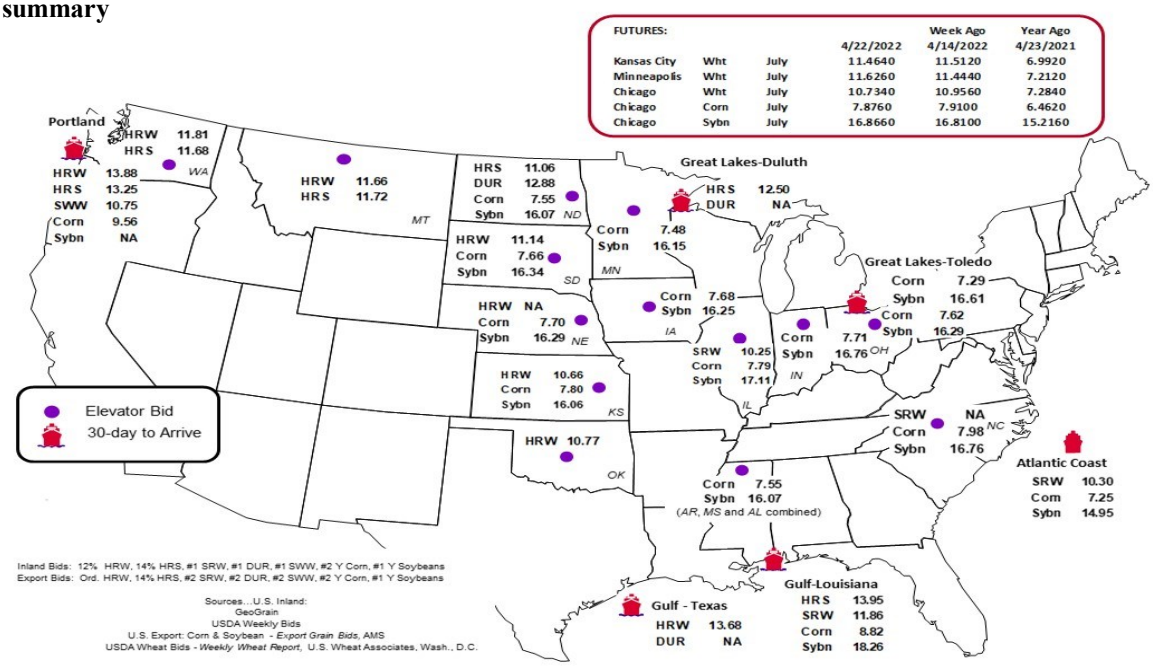
Market Update: U.S. origins to export position price spreads ($/bushel)

Commodity	Origin–destination	4/22/2022	4/14/2022
Corn	IL–Gulf	-1.03	-1.17
Corn	NE–Gulf	-1.12	-1.28
Soybean	IA–Gulf	-2.01	-2.02
HRW	KS–Gulf	-3.02	-3.31
HRS	ND–Portland	-2.19	-2.20

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
Rail deliveries to port (carloads)[1]

For the week ending	Mississippi Gulf	Texas Gulf	Pacific Northwest	Atlantic & East Gulf	Total	Week ending	Cross-border Mexico[3]
4/20/2022[p]	1,322	1,235	6,057	580	9,194	4/16/2022	3,187
4/13/2022[r]	2,001	1,018	6,089	572	9,680	4/9/2022	3,375
2022 YTD[r]	25,843	16,206	94,057	9,213	145,319	2022 YTD	42,956
2021 YTD[r]	26,897	26,532	100,839	8,906	163,174	2021 YTD	37,758
2022 YTD as % of 2021 YTD	96	61	93	103	89	% change YTD	114
Last 4 weeks as % of 2021[2]	103	69	91	150	91	Last 4wks. % 2021	95
Last 4 weeks as % of 4-year avg.[2]	199	85	96	152	107	Last 4wks. % 4 yr.	111
Total 2021	54,982	69,213	311,407	22,567	458,169	Total 2021	147,859
Total 2020	45,294	64,116	299,882	24,458	433,750	Total 2020	128,714

[1]Data is incomplete as it is voluntarily provided.

[2] Compared with same 4-weeks in 2021 and prior 4-year average.

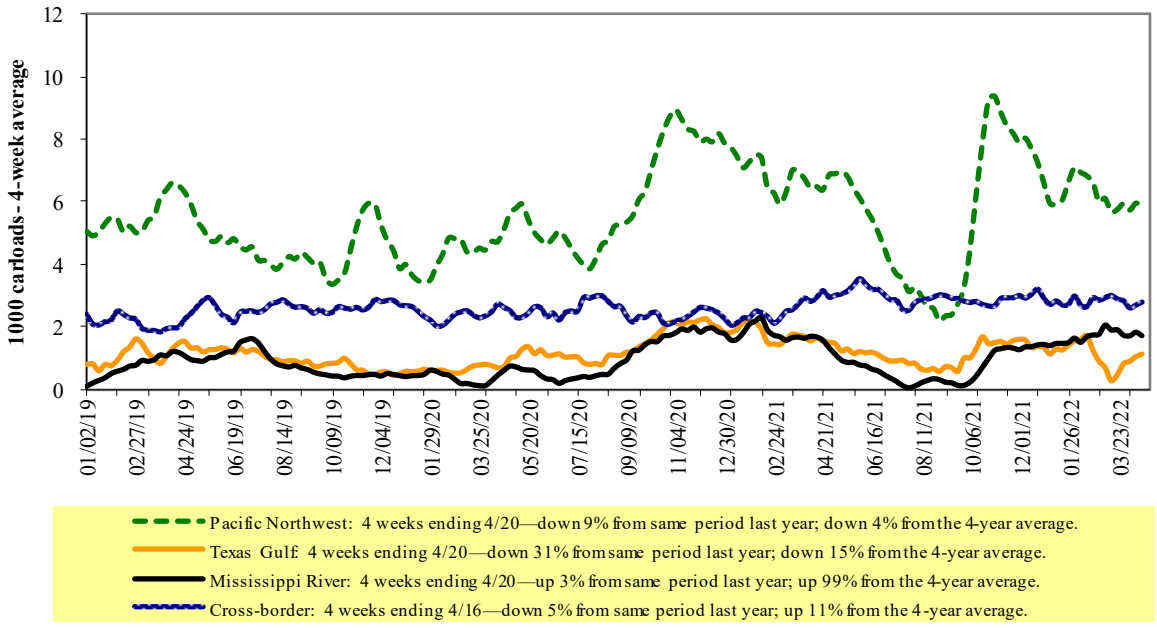
[3] Cross-border weekly data is approximately 15 percent below the Association of American Railroads' reported weekly carloads received by Mexican railroads to reflect switching between Kansas City Southern de Mexico (KCSM) and Grupo Mexico.

YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available; wks. = weeks; avg. = average.

Source: USDA, Agricultural Marketing Service.

Railroads originate approximately 24 percent of U.S. grain shipments. Trends in these loadings are indicative of market conditions and expectations.

Figure 2
Rail deliveries to port



Source: USDA, Agricultural Marketing Service.

Table 4

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

For the week ending:	East		West			U.S. total	Canada	
4/16/2022	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,614	2,484	9,498	1,029	4,977	19,602	3,663	3,282
This week last year	1,825	2,570	13,386	1,149	7,304	26,234	5,472	6,059
2022 YTD	27,888	34,803	174,319	19,112	91,296	347,418	53,360	55,978
2021 YTD	30,445	38,864	195,965	15,580	98,867	379,721	74,996	80,597
2022 YTD as % of 2021 YTD	92	90	89	123	92	91	71	69
Last 4 weeks as % of 2021*	96	97	87	112	80	88	66	58
Last 4 weeks as % of 3-yr. avg.**	96	94	98	103	95	97	70	68
Total 2021	93,935	120,907	609,890	64,818	318,002	1,207,552	210,212	242,533

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

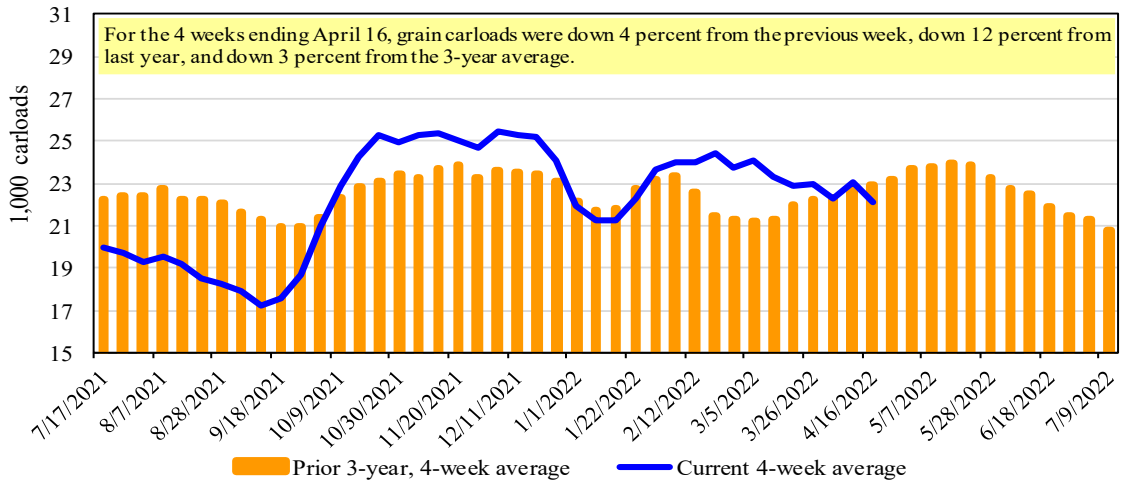
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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

Source: Association of American Railroads.

Figure 3

Total weekly U.S. Class I railroad grain carloads



Source: Association of American Railroads.

Table 5

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

For the week ending:		Delivery period							
4/21/2022		May-22	May-21	Jun-22	Jun-21	Jul-22	Jul-21	Aug-22	Aug-21
BNSF[3]	COT grain units	no offer	0	no offer	no bids	no bids	no bids	no bids	no bids
	COT grain single-car	no offer	25	no offer	0	0	0	0	0
UP[4]	GCAS/Region 1	no offer	no offer	no offer	no offer	no offer	no offer	n/a	n/a
	GCAS/Region 2	no offer	no offer	no offer	no offer	no offer	no offer	n/a	n/a

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

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

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

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

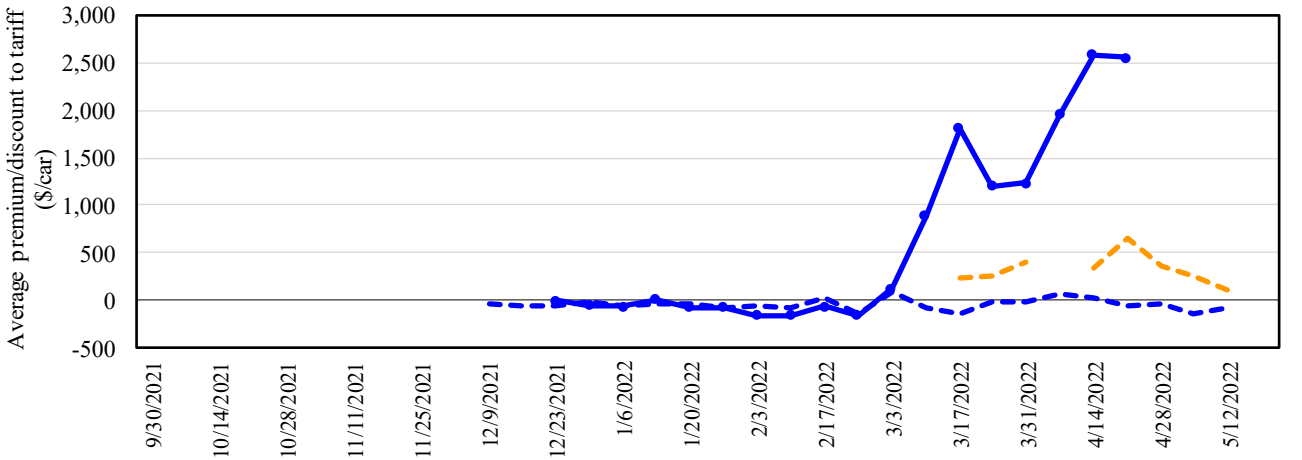
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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

Source: USDA, Agricultural Marketing Service.

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

Figure 4
Secondary market bids/offers for railcars to be delivered in May 2022

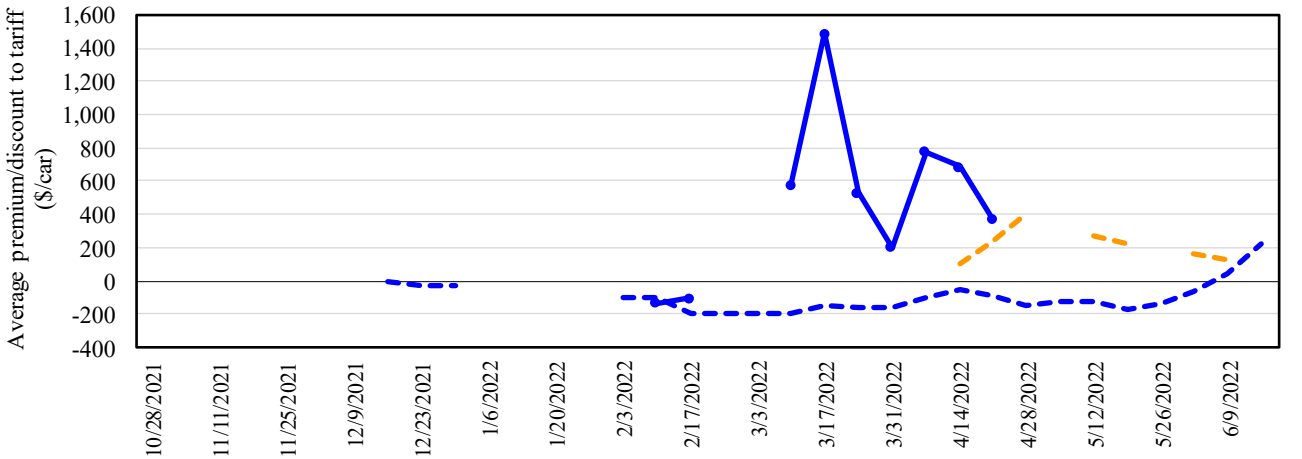


4/21/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$1,500	$3,592

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $35 this week and are $35 below the peak.

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

Figure 5
Secondary market bids/offers for railcars to be delivered in June 2022



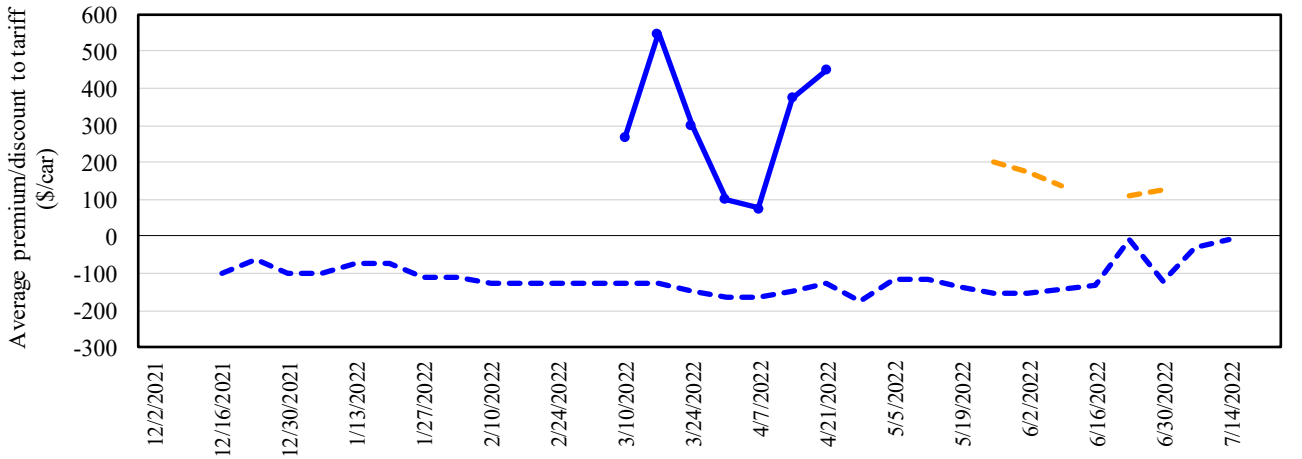
4/21/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$375	n/a

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $308 this week and are $1,113 below the peak.

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

Figure 6

Secondary market bids/offers for railcars to be delivered in July 2022



4/21/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$200	$700

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $75 this week and are $100 below the peak.

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

Table 6

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

	For the week ending:	Delivery period					
	4/21/2022	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
Non-shuttle	**BNSF-GF**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2021	n/a	n/a	n/a	n/a	n/a	n/a
	UP-Pool	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2021	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**1,500**	**375**	**200**	**0**	**269**	**1,200**
	Change from last week	(288)	(392)	150	0	(75)	(10)
	Change from same week 2021	1,550	531	350	200	319	208
	UP-Pool	**3,592**	**n/a**	**700**	**175**	**n/a**	**1,100**
	Change from last week	217	n/a	0	25	n/a	0
	Change from same week 2021	3,467	n/a	800	325	n/a	475

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

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

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

Source: USDA, Agricultural Marketing Service.

The **tariff rail rate** is the base price of freight rail service. Together with **fuel surcharges** and any **auction and secondary rail** values, the tariff rail rate constitutes the full cost of shipping by rail. Typically, auction and secondary rail values are a small fraction of the full cost of shipping by rail relative to the tariff rate. However, during times of high rail demand or short supply, high auction and secondary rail values can exceed the cost of the tariff rate plus fuel surcharge.

Table 7

Tariff rail rates for unit and shuttle train shipments[1]

April 2022	Origin region[3]	Destination region[3]	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per: metric ton	Tariff plus surcharge per: bushel[2]	Percent change Y/Y[4]
Unit train							
Wheat	Wichita, KS	St. Louis, MO	$3,695	$197	$38.65	$1.05	3
	Grand Forks, ND	Duluth-Superior, MN	$3,658	$0	$36.33	$0.99	-13
	Wichita, KS	Los Angeles, CA	$7,290	$0	$72.39	$1.97	2
	Wichita, KS	New Orleans, LA	$4,436	$347	$47.50	$1.29	3
	Sioux Falls, SD	Galveston-Houston, TX	$7,026	$0	$69.77	$1.90	3
	Colby, KS	Galveston-Houston, TX	$4,712	$380	$50.57	$1.38	3
	Amarillo, TX	Los Angeles, CA	$5,121	$529	$56.11	$1.53	6
Corn	Champaign-Urbana, IL	New Orleans, LA	$4,000	$392	$43.62	$1.11	8
	Toledo, OH	Raleigh, NC	$8,130	$439	$85.09	$2.16	9
	Des Moines, IA	Davenport, IA	$2,505	$83	$25.70	$0.65	4
	Indianapolis, IN	Atlanta, GA	$6,227	$329	$65.11	$1.65	10
	Indianapolis, IN	Knoxville, TN	$5,247	$213	$54.22	$1.38	8
	Des Moines, IA	Little Rock, AR	$4,000	$244	$42.15	$1.07	6
	Des Moines, IA	Los Angeles, CA	$5,880	$711	$65.45	$1.66	9
Soybeans	Minneapolis, MN	New Orleans, LA	$3,631	$589	$41.90	$1.14	12
	Toledo, OH	Huntsville, AL	$6,714	$313	$69.78	$1.90	7
	Indianapolis, IN	Raleigh, NC	$7,422	$445	$78.12	$2.13	10
	Indianapolis, IN	Huntsville, AL	$5,367	$211	$55.39	$1.51	6
	Champaign-Urbana, IL	New Orleans, LA	$4,665	$392	$50.22	$1.37	5
Shuttle train							
Wheat	Great Falls, MT	Portland, OR	$4,193	$0	$41.64	$1.13	4
	Wichita, KS	Galveston-Houston, TX	$4,411	$0	$43.80	$1.19	4
	Chicago, IL	Albany, NY	$6,670	$414	$70.35	$1.91	11
	Grand Forks, ND	Portland, OR	$5,851	$0	$58.10	$1.58	3
	Grand Forks, ND	Galveston-Houston, TX	$5,199	$0	$51.63	$1.41	-13
	Colby, KS	Portland, OR	$5,923	$624	$65.01	$1.77	5
Corn	Minneapolis, MN	Portland, OR	$5,380	$0	$53.43	$1.36	4
	Sioux Falls, SD	Tacoma, WA	$5,340	$0	$53.03	$1.35	4
	Champaign-Urbana, IL	New Orleans, LA	$3,920	$392	$42.82	$1.09	9
	Lincoln, NE	Galveston-Houston, TX	$4,080	$0	$40.52	$1.03	5
	Des Moines, IA	Amarillo, TX	$4,420	$307	$46.94	$1.19	7
	Minneapolis, MN	Tacoma, WA	$5,380	$0	$53.43	$1.36	4
	Council Bluffs, IA	Stockton, CA	$5,300	$0	$52.63	$1.34	4
Soybeans	Sioux Falls, SD	Tacoma, WA	$6,050	$0	$60.08	$1.64	3
	Minneapolis, MN	Portland, OR	$6,100	$0	$60.58	$1.65	3
	Fargo, ND	Tacoma, WA	$5,950	$0	$59.09	$1.61	3
	Council Bluffs, IA	New Orleans, LA	$4,895	$452	$53.10	$1.45	6
	Toledo, OH	Huntsville, AL	$4,954	$313	$52.30	$1.42	7
	Grand Island, NE	Portland, OR	$5,280	$638	$58.77	$1.60	7

[1]A unit train refers to shipments of at least 25 cars. Shuttle train rates are generally available for qualified shipments of 75-120 cars that meet railroad efficiency requirements.

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

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

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

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

Table 8

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

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

[1]Rates are based upon published tariff rates for high-capacity shuttle trains. Shuttle trains are available for qualified shipments of 75-110 cars that meet railroad efficiency requirements.

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

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

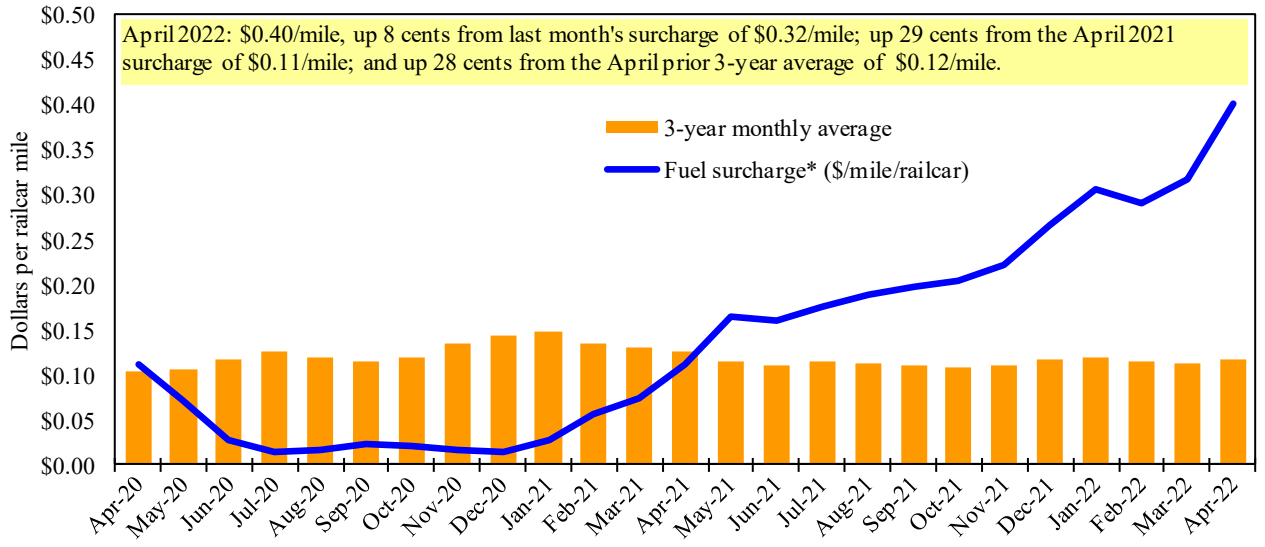
[4]Percentage change calculated using tariff rate plus fuel surchage; Y/Y = year over year.

[5] As of January 1, both BNSF and Union Pacific changed their billing and reporting of rates to Mexico. As we incorporate the change, Table 8 updates will be delayed.

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

Figure 7

Railroad fuel surcharges, North American weighted average [1]



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

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

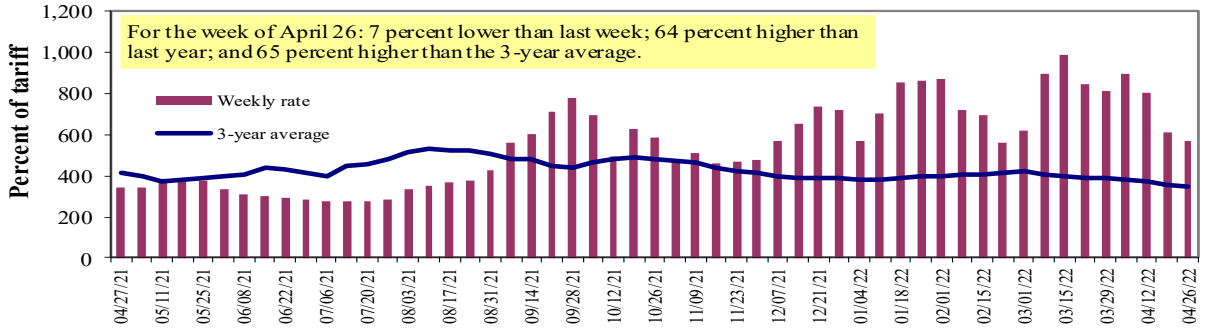
**CSX strike price changed from $2.00/gal. to $3.75/gal. starting January 1, 2015.

Sources: BNSF Railway, Canadian National Railway, CSX Transportation, Canadian Pacific Railway, Union Pacific Railroad, Kansas City Southern Railway, Norfolk Southern Corporation.

Barge Transportation

Figure 8

Illinois River barge freight rate[1,2]



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

Table 9

Weekly barge freight rates: Southbound only

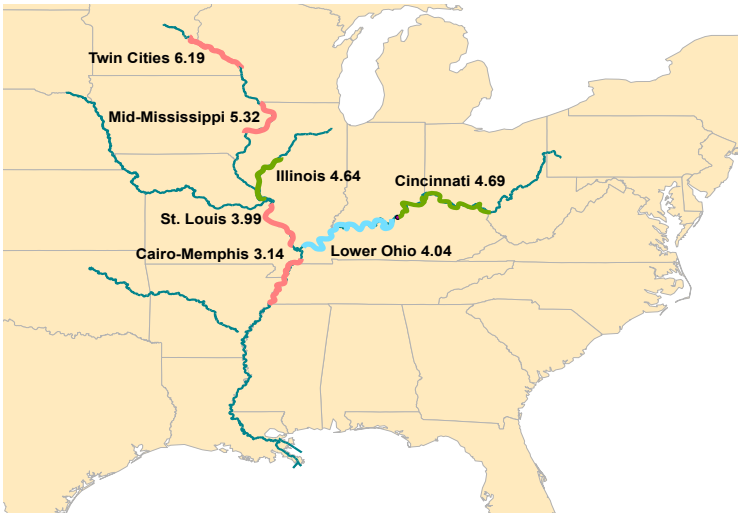
		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	4/26/2022	680	633	567	471	563	563	429
	4/19/2022	731	663	611	503	625	625	481
$/ton	4/26/2022	42.09	33.68	26.31	18.79	26.40	22.75	13.47
	4/19/2022	45.25	35.27	28.35	20.07	29.31	25.25	15.10
Current week % change from the same week:								
	Last year	57	81	64	98	108	108	94
	3-year avg. [2]	70	91	65	97	110	109	88
Rate[1]	May	660	573	525	446	517	517	408
	July	590	508	502	396	471	471	353

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

Figure 9
Benchmark tariff rates

Calculating barge rate per ton:
(Rate * 1976 tariff benchmark rate per ton)/100

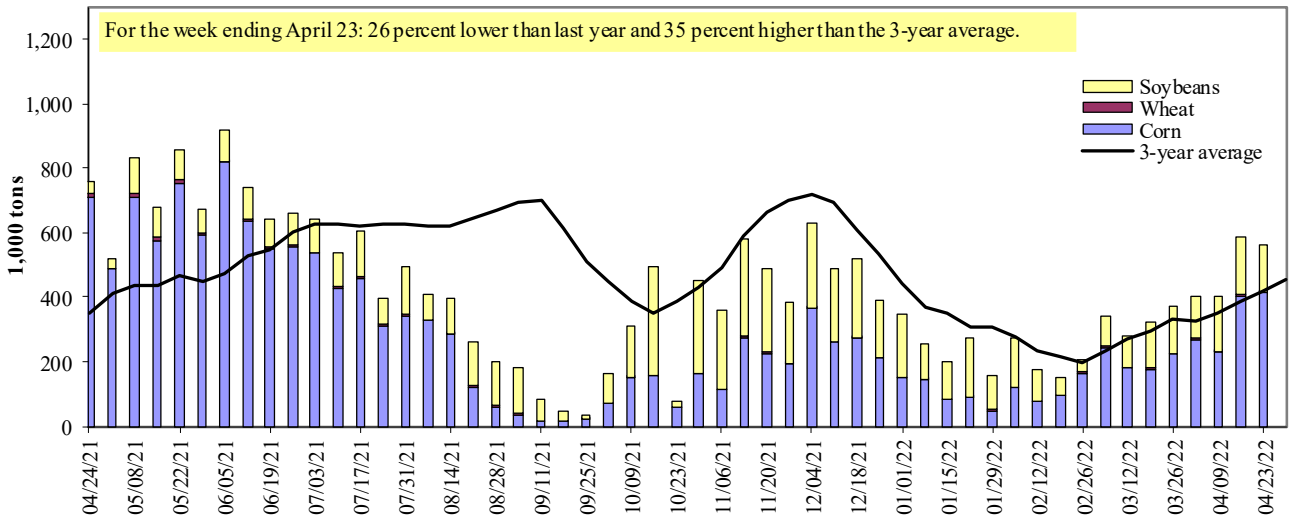
Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.



Map Credit: USDA, Agricultural Marketing Service

Figure 10

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



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

Source: U.S. Army Corps of Engineers.

Table 10

Barge grain movements (1,000 tons)

For the week ending 04/23/2022	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	127	0	55	0	182
Winfield, MO (L25)	202	0	72	0	274
Alton, IL (L26)	357	3	141	11	513
Granite City, IL (L27)	415	3	143	11	572
Illinois River (La Grange)	95	3	33	11	143
Ohio River (Olmsted)	213	14	45	4	276
Arkansas River (L1)	0	29	18	0	48
Weekly total - 2022	627	47	206	15	895
Weekly total - 2021	797	59	92	10	958
2022 YTD[1]	5,887	527	3,755	105	10,275
2021 YTD[1]	9,005	350	3,291	126	12,772
2022 as % of 2021 YTD	65	150	114	84	80
Last 4 weeks as % of 2021[2]	71	147	205	202	93
Total 2021	23,516	1,634	11,325	297	36,772

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

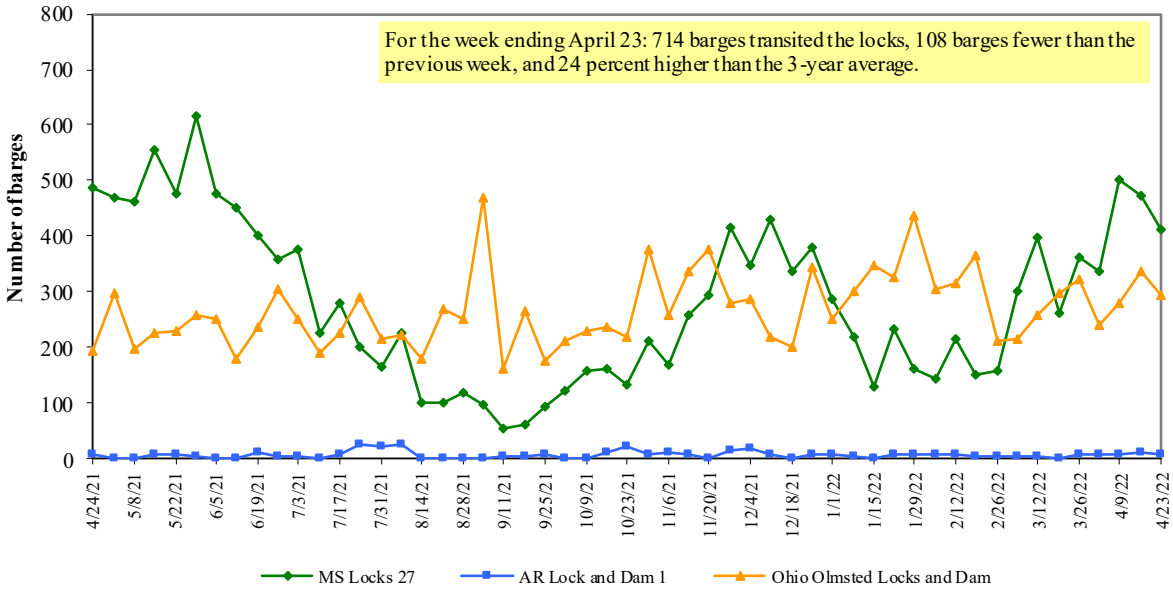
[2] As a percent of same period in 2020.

Note: L (as in "L15") refers to a lock, locks, or locks and dam facility.

Source: U.S. Army Corps of Engineers.

Figure 11

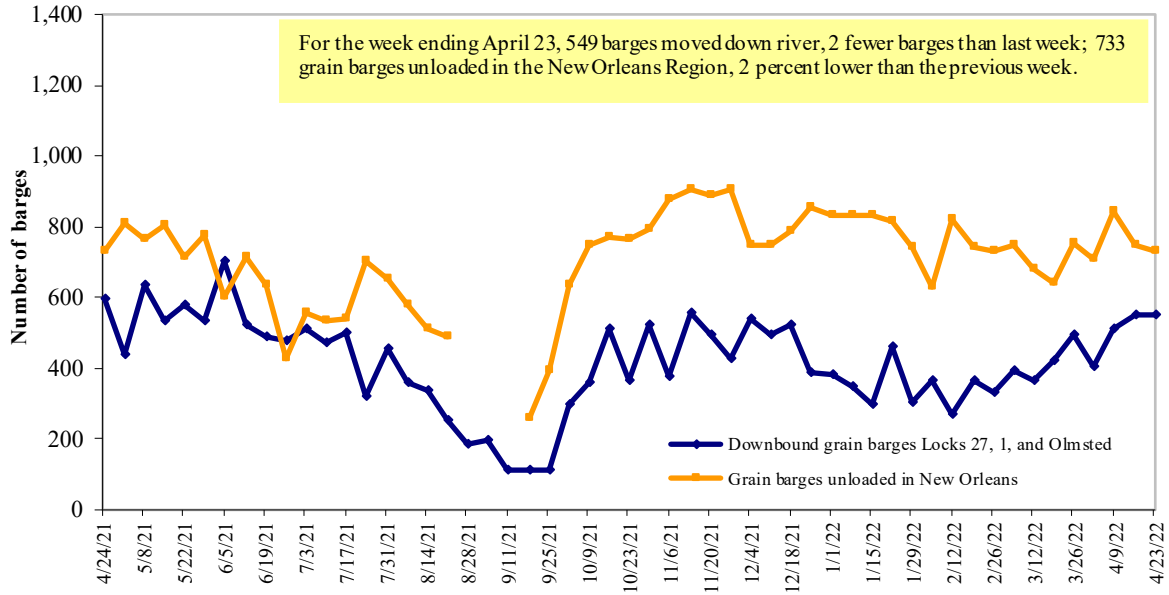
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



Source: U.S. Army Corps of Engineers.

Figure 12

Grain barges for export in New Orleans region



Note: Olmsted = Olmsted Locks and Dam.

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 11

Retail on-highway diesel prices, week ending 4/25/2022 (U.S. $/gallon)

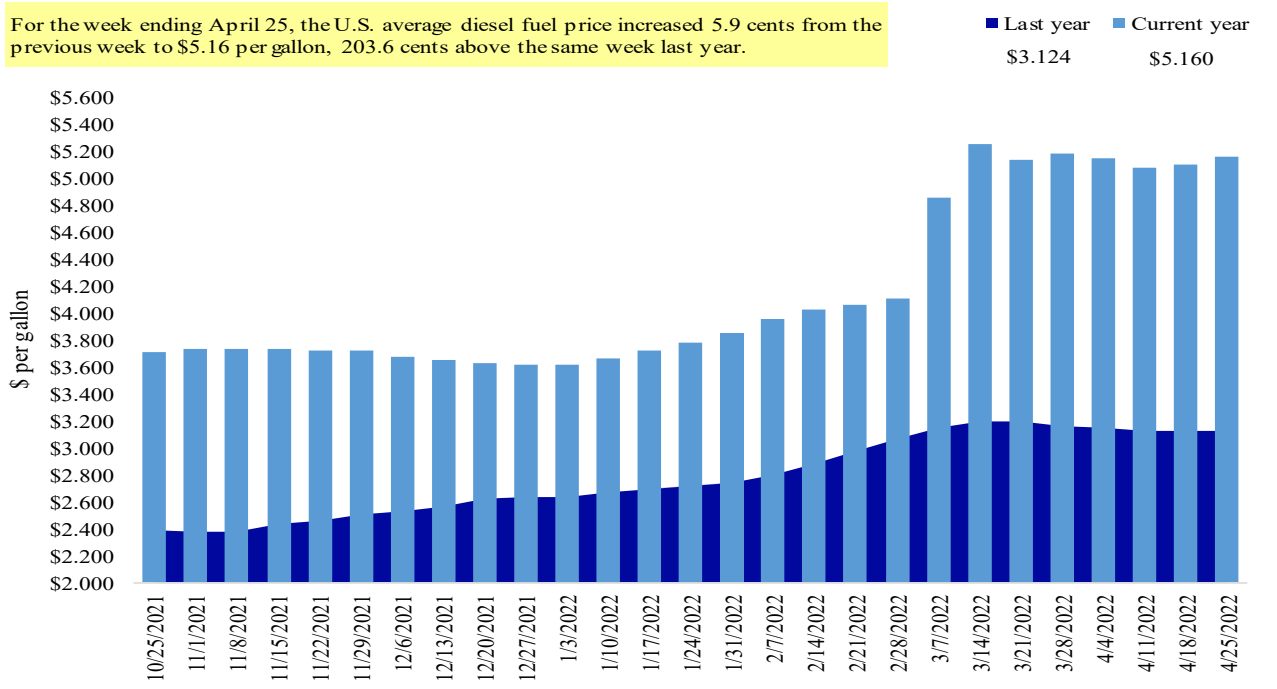
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	5.209	0.058	2.116
	New England	5.240	0.063	2.160
	Central Atlantic	5.400	0.065	2.132
	Lower Atlantic	5.086	0.053	2.106
II	Midwest	4.987	0.066	1.929
III	Gulf Coast	4.916	0.061	1.999
IV	Rocky Mountain	5.154	0.060	1.926
V	West Coast	5.841	0.046	2.190
	West Coast less California	5.346	0.068	2.096
	California	6.277	0.027	2.291
Total	United States	5.160	0.059	2.036

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

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

Figure 13

Weekly diesel fuel prices, U.S. average



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

Grain Exports

Table 12

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

	Wheat						Corn	Soybeans	Total
For the week ending	HRW	SRW	HRS	SWW	DUR	All wheat			
Export balances[1]									
4/14/2022	1,077	415	754	353	16	2,615	20,079	11,079	33,772
This week year ago	1,102	246	1,271	1,333	70	4,021	27,805	5,103	36,929
Cumulative exports-marketing year[2]									
2021/22 YTD	6,416	2,438	4,645	2,977	174	16,650	36,570	46,017	99,237
2020/21 YTD	7,519	1,529	6,409	5,297	595	21,349	39,393	55,724	116,466
YTD 2021/22 as % of 2020/21	85	159	72	56	29	78	93	83	85
Last 4 wks. as % of same period 2020/21*	120	191	69	33	23	78	74	226	96
Total 2020/21	8,331	1,744	7,337	6,281	654	24,347	66,702	60,287	151,336
Total 2019/20	9,526	2,318	6,960	4,751	922	24,477	42,622	43,994	111,094

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

[2] Shipped export sales to date; 2021/22 marketing year now in effect for wheat, corn and soybeans.

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 13

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

For the week ending 04/14/2022	Total commitments[2] 2021/22 current MY	2020/21 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
	1,000 mt -			
Mexico	15,490	13,281	17	14,817
Japan	8,628	9,473	(9)	11,082
China	13,453	23,137	(42)	7,920
Columbia	3,909	3,434	14	4,491
Korea	1,003	2,914	(66)	3,302
Top 5 importers	**42,483**	**52,238**	**(19)**	**41,613**
Total U.S. corn export sales	**56,649**	**67,198**	**(16)**	**53,145**
% of projected exports	89%	96%		
Change from prior week[2]	**879**	**387**		
Top 5 importers' share of U.S. corn export sales	75%	78%		78%
USDA forecast April 2022	**63,613**	**70,051**	**(9)**	
Corn use for ethanol USDA forecast, April 2022	**136,525**	**127,838**	**7**	

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

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

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

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

Source: USDA, Foreign Agricultural Service.

Table 14

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

For the week ending 4/14/2022	Total commitments[2] 2021/22 current MY	2020/21 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2018-20
				- 1,000 mt -
China	29,680	35,649	(17)	21,666
Mexico	4,943	4,563	8	4,754
Egypt	3,639	2,619	39	3,093
Indonesia	1,366	1,920	(29)	2,325
Japan	1,999	1,970	1	2,275
Top 5 importers	**41,625**	**46,720**	**(11)**	**34,113**
Total U.S. soybean export sales	**57,096**	**60,827**	**(6)**	**50,758**
% of projected exports	99%	99%		
change from prior week[2]	**460**	**64**		
Top 5 importers' share of U.S. soybean export sales	73%	77%		**67%**
USDA forecast, April 2022	**57,629**	**61,608**	**(6)**	

[1] Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2020/21; marketing year (MY) = Sep 1 - Aug 31.
[2] Cumulative exports (shipped) + outstanding sales (unshipped), FAS weekly export sales report, or export sales query. The total commitments change (net sales) from prior week could include revisions from previous week's outstanding sales and/or accumulated sales.
[3] FAS marketing year ranking reports (carryover plus accumulated export); yr. = year; avg. = average.
Note: A red number in parentheses indicates a negative number; mt = metric ton.
Source: USDA, Foreign Agricultural Service.

Table 15

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

For the week ending 4/14/2022	Total Commitments[2] 2021/22 current MY	2020/21 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2018-20
		1,000 mt -		- 1,000 mt -
Mexico	3,635	3,555	2	3,388
Philippines	2,720	3,204	(15)	3,121
Japan	2,350	2,488	(6)	2,567
Korea	1,249	1,842	(32)	1,501
Nigeria	1,856	1,391	33	1,490
China	848	3,204	(74)	1,268
Taiwan	918	1,185	(23)	1,187
Indonesia	122	879	(86)	1,131
Thailand	557	807	(31)	768
Italy	264	600	(56)	681
Top 10 importers	**14,518**	**19,156**	(24)	**17,102**
Total U.S. wheat export sales	**19,265**	**25,370**	(24)	**24,617**
% of projected exports	90%	94%		
change from prior week[2]	**26**	**240**		
Top 10 importers' share of U.S. wheat export sales	75%	76%		69%
USDA forecast, April 2022	**21,390**	**27,030**	(21)	

[1] Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2020/21; Marketing year (MY) = Jun 1 - May 31.
[2] Cumulative exports (shipped) + outstanding sales (unshipped), FAS weekly export sales report, or export sales query. The total commitments change (net sales) from prior week could include revisions from the previous week's outstanding and/or accumulated sales.
[3] FAS marketing year final reports (carryover plus accumulated export); yr. = year; avg. = average.
Note: A red number in parentheses indicates a negative number.
Source: USDA, Foreign Agricultural Service.

Table 16

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

Port regions	For the week ending 04/21/22	Previous week*	Current week as % of previous	2022 YTD*	2021 YTD*	2022 YTD as % of 2021 YTD	Last 4-weeks as % of: Last year	Last 4-weeks as % of: Prior 3-yr. avg.	2021 total*
Pacific Northwest									
Wheat	79	184	43	3,170	5,366	59	38	46	13,243
Corn	369	321	115	4,152	6,322	66	56	81	13,420
Soybeans	12	143	8	4,050	3,717	109	n/a	115	14,540
Total	**460**	**648**	**71**	**11,371**	**15,405**	**74**	**60**	**69**	**41,203**
Mississippi Gulf									
Wheat	47	120	39	1,253	677	185	136	109	3,202
Corn	1,037	604	172	13,935	16,274	86	86	116	38,498
Soybeans	360	666	54	8,679	9,336	93	297	193	27,159
Total	**1,443**	**1,390**	**104**	**23,866**	**26,286**	**91**	**114**	**132**	**68,858**
Texas Gulf									
Wheat	78	110	71	989	1,105	89	94	63	3,888
Corn	10	33	29	224	185	121	529	161	627
Soybeans	0	0	n/a	2	656	0	0	0	1,611
Total	**88**	**144**	**61**	**1,215**	**1,946**	**62**	**116**	**74**	**6,126**
Interior									
Wheat	25	53	47	916	837	109	101	126	2,973
Corn	206	182	113	2,879	2,931	98	87	104	10,157
Soybeans	149	151	99	2,375	2,289	104	116	118	6,525
Total	**380**	**386**	**99**	**6,171**	**6,056**	**102**	**98**	**112**	**19,656**
Great Lakes									
Wheat	41	3	n/a	70	21	343	n/a	97	536
Corn	0	10	0	18	25	71	71	214	145
Soybeans	40	31	126	90	0	n/a	n/a	775	592
Total	**81**	**45**	**181**	**178**	**45**	**394**	**588**	**227**	**1,273**
Atlantic									
Wheat	33	0	n/a	37	71	52	n/a	297	128
Corn	0	3	0	62	14	444	140	208	85
Soybeans	74	66	112	1,047	972	108	239	330	2,184
Total	**106**	**70**	**153**	**1,146**	**1,058**	**108**	**253**	**316**	**2,397**
U.S. total from ports*									
Wheat	303	470	65	6,436	8,077	80	64	66	23,969
Corn	1,622	1,155	140	21,269	25,750	83	79	106	62,932
Soybeans	634	1,057	60	16,243	16,970	96	254	168	52,612
Total	**2,559**	**2,681**	**95**	**43,947**	**50,797**	**87**	**96**	**109**	**139,512**

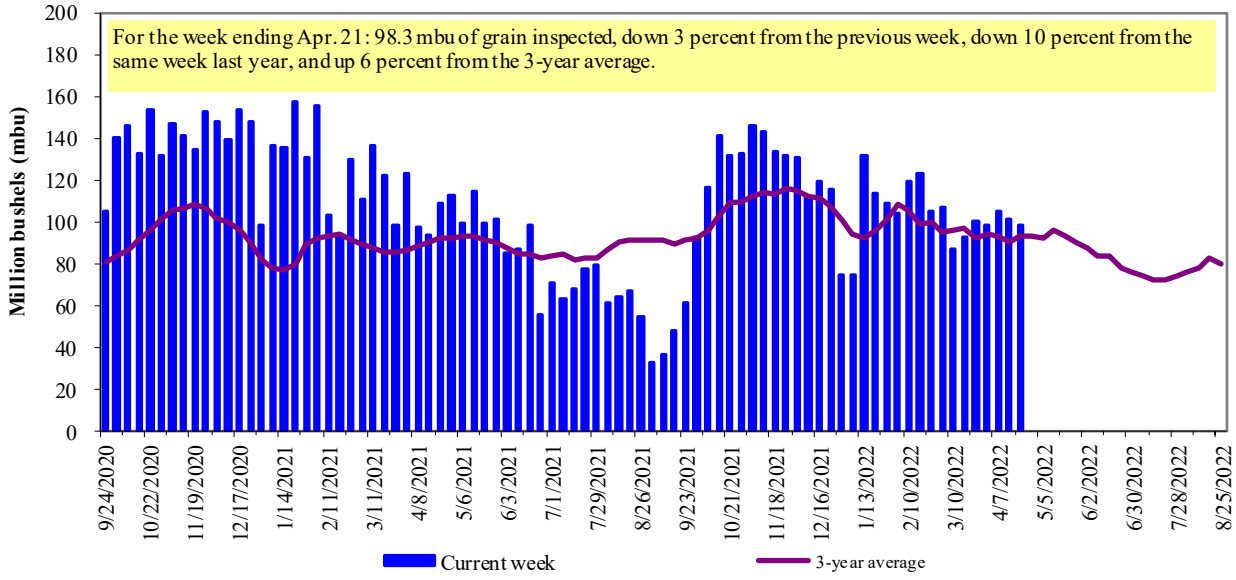
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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

The United States exports approximately one-quarter of the grain it produces. On average, this includes nearly 45 percent of U.S.-grown wheat, 50 percent of U.S.-grown soybeans, and 20 percent of the U.S.-grown corn. Approximately 55 percent of the U.S. export grain shipments departed through the U.S. Gulf region in 2019.

Figure 14

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

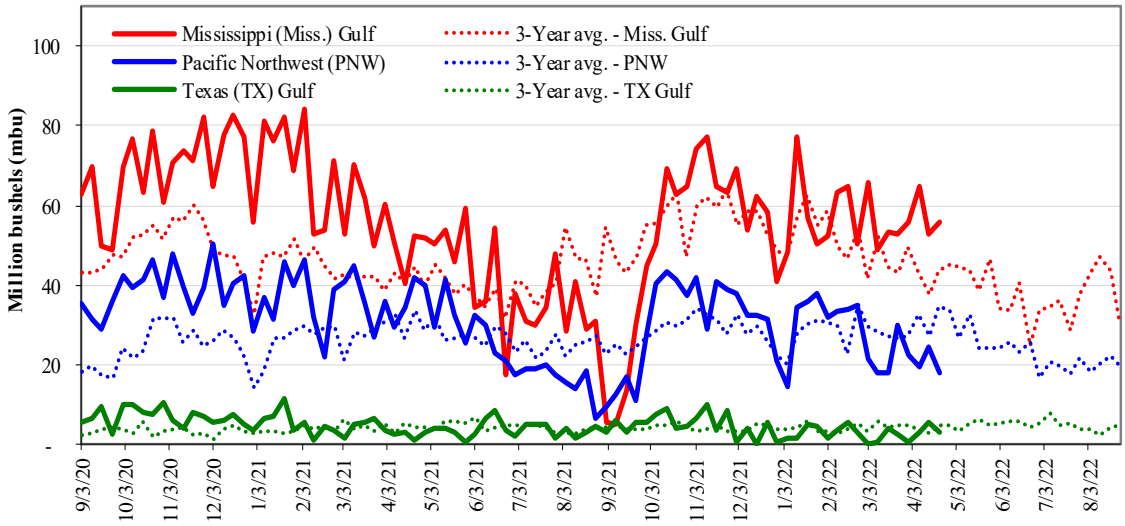


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

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



Week ending 04/21/22 inspections (mbu):	
MS Gulf:	55.8
PNW:	17.9
TX Gulf:	3.3

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last wk:	up 6	down 39	up 2	down 28
Last Year (same wk):	up 7	up 228	up 11	down 57
3-yr avg. (4-wk. mov. Avg):	up 28	down 19	up 24	down 41

Source: USDA, Federal Grain Inspection Service.

Table 17

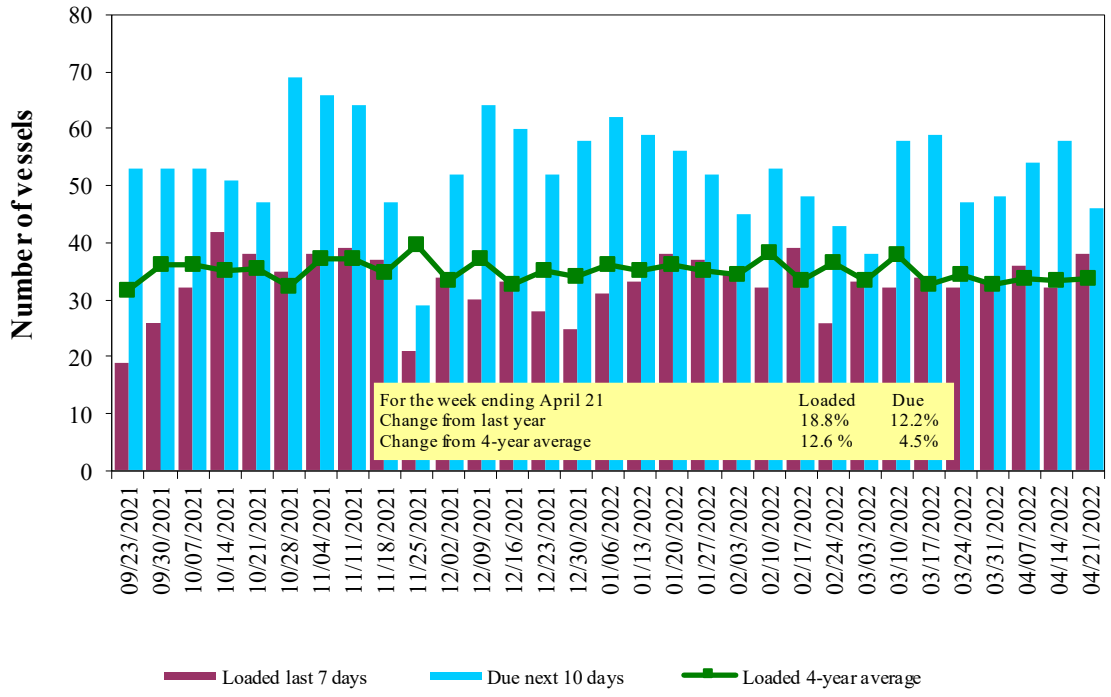
Weekly port region grain ocean vessel activity (number of vessels)

	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
4/21/2022	24	38	46	11
4/14/2022	34	32	58	12
2021 range	(10…57)	(5...48)	(15...69)	(4…27)
2021 average	34	32	49	15

Source: USDA, Agricultural Marketing Service.

Figure 16

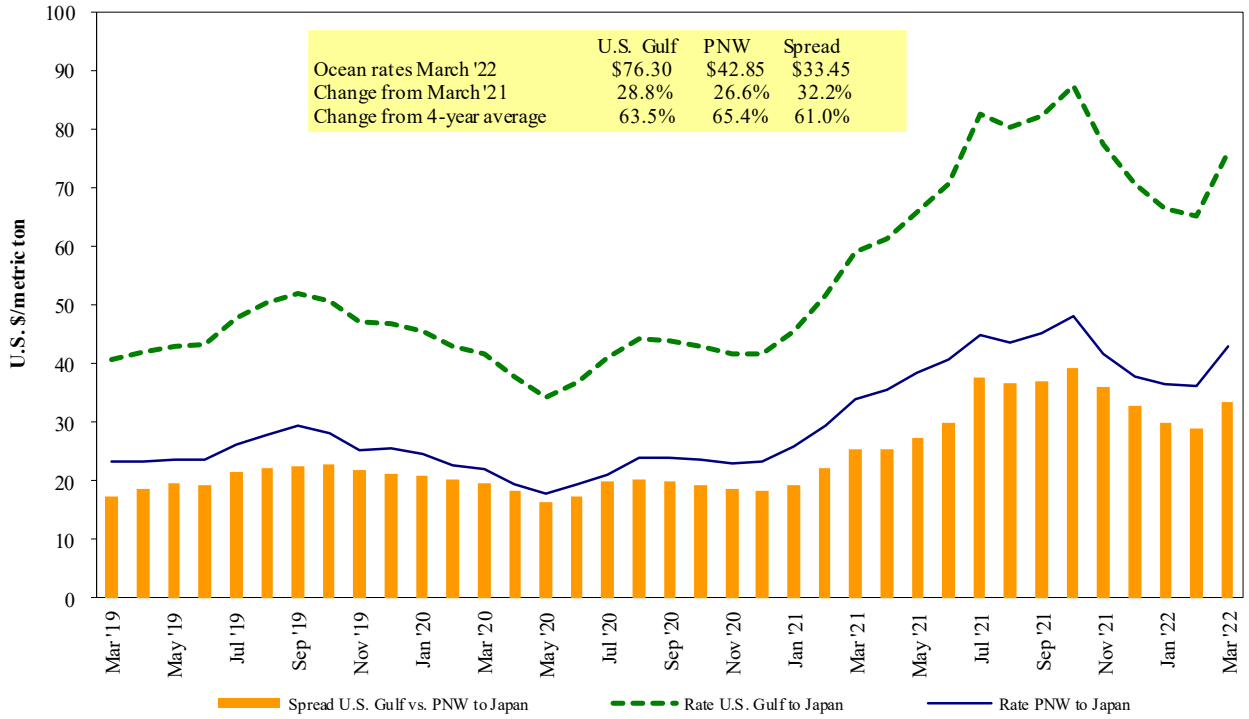
U.S. Gulf[1] vessel loading activity



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

Figure 17

Grain vessel rates, U.S. to Japan



Note: PNW = Pacific Northwest

Source: O'Neil Commodity Consulting

Table 18

Ocean freight rates for selected shipments, week ending 04/23/2022

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	Japan	Heavy grain	Jun 1/10	50,000	89.65
U.S. Gulf	Japan	Heavy grain	May 1/20, 2022	50,000	78.90
U.S. Gulf	China	Heavy grain	Dec 1/10, 2021	65,000	76.00
U.S. Gulf	China	Heavy grain	Nov 1/10, 2021	66,000	89.00
U.S. Gulf	Djibouti	Sorghum	Mar 1/10, 2022	10,000	209.97*
U.S. Gulf	Honduras	Soybean Meal	Feb 18/28, 2022	7,820	57.15*
U.S. Gulf	S. Korea	Heavy grain	Jun 1/Jul, 2022	55,000	82.75
U.S. Gulf	Sudan	Sorghum	Mar 1/10, 2022	35,790	149.97*
U.S. Gulf	Sudan	Sorghum	Feb 1/10, 2022	35,780	77.60*
PNW	Japan	Wheat	Sep 1, 2021	52,170	56.55*
PNW	Yemen	Wheat	Jan 24/Feb 4, 2022	29,960	124.00*
Brazil	N. China	Heavy grain	Mar 18/27, 2022	64,000	56.85
Brazil	N. China	Heavy grain	Jan 1/5, 2022	64,000	58.25
Argentina	Taiwan	Corn	May 1/Jun, 2022	65,000	85.00
Australia	Japan	Barley	Nov 1/10, 2021	55,000	65.50

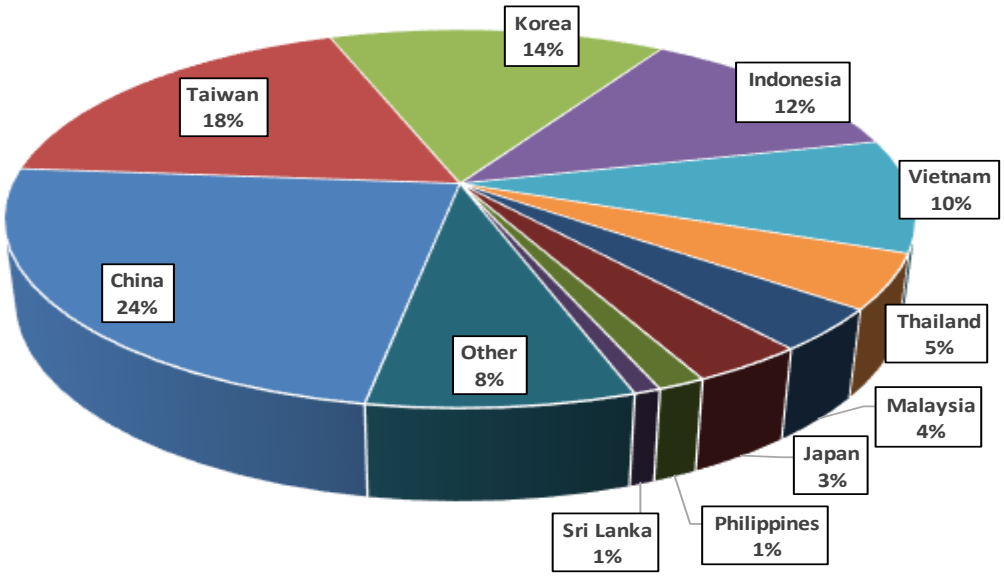
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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.

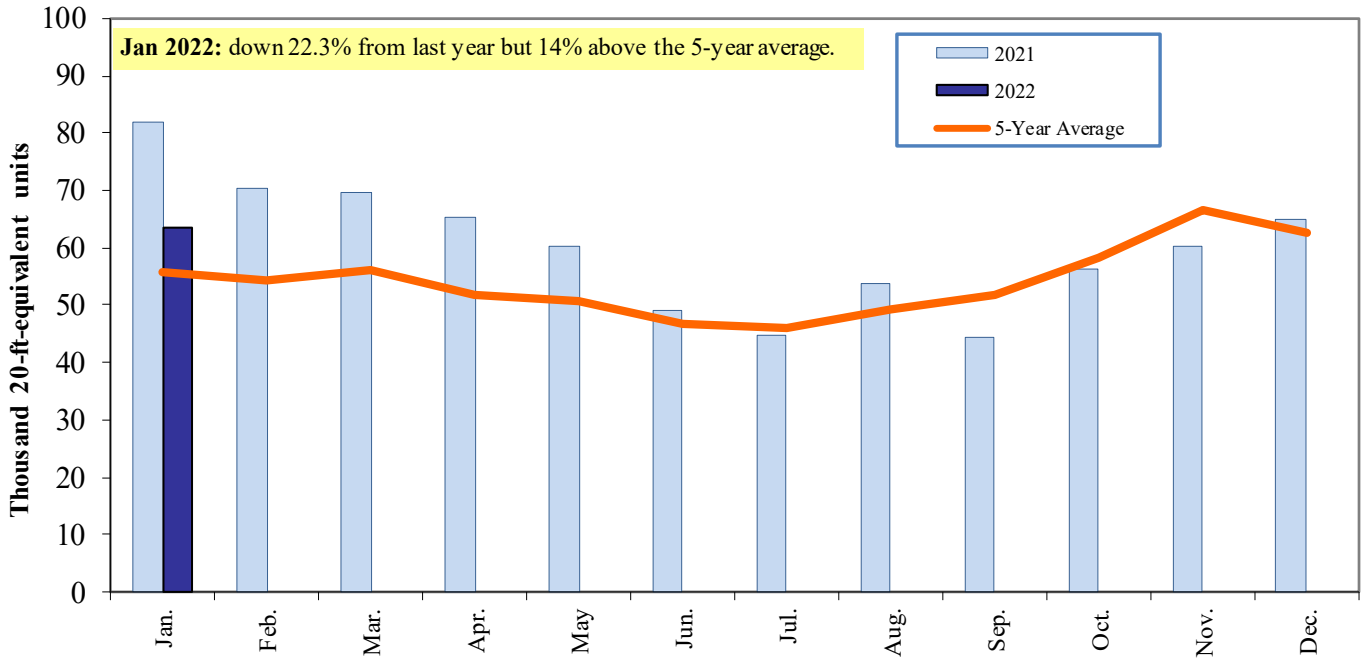
Figure 18
Top 10 destination markets for U.S. containerized grain exports, Jan 2022



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

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

Figure 19
Monthly shipments of U.S. containerized grain exports



Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: 100190, 100200, 100300, 100400, 100590, 100700, 110100, 110220, 110290, 1201, 120100, 120190, 120810, 230210, 230310, 230330, and 230990.

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

Contacts and Links

Coordinators		
Surajudeen (Deen) Olowolayemo	surajudeen.olowolayemo@usda.gov	(202) 720 - 0119
Maria Williams	maria.williams@usda.gov	(202) 690 - 4430
Bernadette Winston	bernadette.winston@usda.gov	(202) 690 - 0487
Matt Chang	matt.chang@usda.gov	(202) 720 - 0299
Grain Transportation Indicators		
Surajudeen (Deen) Olowolayemo	surajudeen.olowolayemo@usda.gov	(202) 720 - 0119
Rail Transportation		
Jesse Gastelle	jesse.gastelle@usda.gov	(202) 690 - 1144
Peter Caffarelli	petera.caffarelli@usda.gov	(202) 690 - 3244
Bernadette Winston	bernadette.winston@usda.gov	(202) 690 - 0487
Barge Transportation		
April Taylor	april.taylor@usda.gov	(202) 720 - 7880
Matt Chang	matt.chang@usda.gov	(202) 720 - 0299
Truck Transportation		
April Taylor	april.taylor@usda.gov	(202) 720 - 7880
Kranti Mulik	kranti.mulik@usda.gov	(202) 756 - 2577
Matt Chang	matt.chang@usda.gov	(202) 720 - 0299
Grain Exports		
Kranti Mulik	kranti.mulik@usda.gov	(202) 756 - 2577
Bernadette Winston	bernadette.winston@usda.gov	(202) 690 - 0487
Ocean Transportation		
Surajudeen (Deen) Olowolayemo (Freight rates and vessels)	surajudeen.olowolayemo@usda.gov	(202) 720 - 0119
April Taylor (Container movements)	april.taylor@usda.gov	(202) 720 - 7880
Editor		
Maria Williams	maria.williams@usda.gov	(202) 690-4430

Subscription Information: Please sign up to receive regular email announcements of the latest *GTR* issue by entering your email address **here** and selecting your preference to receive Transportation Research and Analysis. For any other information, you may contact us at **GTRContactUs@usda.gov**

Preferred citation: U.S. Department of Agriculture, Agricultural Marketing Service. *Grain Transportation Report.* April 28 2022. Web: **http://dx.doi.org/10.9752/TS056.04-28-2022**