USDA United States Department of Agriculture

Grain Transportation Report

A weekly publication of the Agricultural Marketing Service
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April 7, 2022

Contents

The next release is April 14, 2022

WEEKLY HIGHLIGHTS

White House Announces Huge Release From Strategic Oil Reserves

Reduced oil supplies, resulting from the war in Ukraine, are raising oil and gas prices. In response, on March 31, the President announced the largest release of oil reserves in U.S. history: an average 1 million additional barrels per day will enter the market for the next 6 months. This record release is intended to bridge the supply shortfall until the end of the year when domestic production is expected to increase. To help spur domestic production, the Administration is urging companies to produce more oil: companies producing from their leased acres and existing wells will not face higher fees. However, companies that continue to sit on nonproducing acres will have to choose whether to start producing or pay a fee for each idled well and unused acre. The U.S. Department of Energy will use the revenue generated by the release of oil reserves to restock the Strategic Petroleum Reserve for future years.

DOT Offers $2.9 Billion for Regional and Multijurisdictional Infrastructure Projects

The U.S Department of Transportation (DOT) recently announced $2.9 billion for major infrastructure projects, available under the 2021 Infrastructure Investment and Jobs Act. The notice of funding opportunity (NOFO) streamlines access to three major discretionary grant programs. Using a single application and common set of criteria, the application process allows communities to apply to one, two, or three of the following: the National Infrastructure Project Assistance (MEGA) program; Infrastructure for Rebuilding America program (INFRA); and Rural Surface Transportation Grant Program (RURAL). Awarded on a competitive basis, the grants will support multijurisdictional or regional projects across multiple modes of transportation. For the three programs, eligible projects include those for highways, bridges, rail, multimodal freight, ports, and tunnels. Applications are due by 11:59 pm EDT on May 23. Additional resources can be found here.

America's Marine Highway Program Gains $25 Million in New Funding

The U.S. Department of Transportation's Maritime Administration (MARAD) recently announced $25 million in grant funding for America's Marine Highway Program (AMHP). These new resources represent the largest single appropriation ever to AMHP—enabled by the 2021 Infrastructure Investment and Jobs Act. AMHP's main goal is to increase use of the Nation's navigable waterways. The latest funding is expected to expand waterborne transportation options; help project sponsors reduce landside infrastructure costs; reduce delays caused by congestion; and improve the Nation's supply chain and movement of goods throughout the country. To be eligible for a grant, a project must have been previously designated, by the Secretary of Transportation, as a Marine Highway Project. More information on eligible projects can be found here and, on America's Marine Highway, here. The deadline for grant applications is 5 pm, April 29.

Snapshots by Sector

Export Sales

For the week ending March 24, **unshipped balances** of wheat, corn, and soybeans for marketing year 2021/22 totaled 36.8 million metric tons (mmt), down 15 percent from the same time last year and down 2 percent from the previous week. Net **corn export sales** were 0.637 mmt, down 35 percent from the previous week. Net **soybean export sales** were 1.306 mmt, up significantly from the previous week. Net weekly **wheat export sales** were 0.095 mmt, down 39 percent from the previous week.

Rail

U.S. Class I railroads originated 22,516 **grain carloads** during the week ending March 26. This was a 3-percent decrease from the previous week, 8 percent fewer than last year, and 2 percent fewer than the 3-year average.

Average April shuttle **secondary railcar** bids/offers (per car) were $1,550 above tariff for the week ending March 31. This was $1,206 less than last week and $1,346 more than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending April 2, **barged grain movements** totaled 660,750 tons. This was 18 percent less than the previous week and 15 percent less than the same period last year.

For the week ending April 2, 404 grain barges **moved down river**—88 fewer barges than the previous week. There were 711 grain barges **unloaded** in the New Orleans region, 6 percent fewer than last week.

Ocean

For the week ending March 31, 33 **oceangoing grain vessels** were loaded in the Gulf—13 percent fewer than the same period last year. Within the next 10 days (starting April 1), 48 vessels were expected to be loaded—7 percent more than the same period last year.

As of March 31, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $78.50. This was unchanged from the previous week. The rate from the Pacific Northwest to Japan was $44.00 per mt, unchanged from the previous week.

Fuel

For the week ending April 4, the U.S. average **diesel fuel price** decreased 4.1 cents from the previous week to $5.144 per gallon, 200.0 cents above the same week last year.

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Feature Article/Calendar

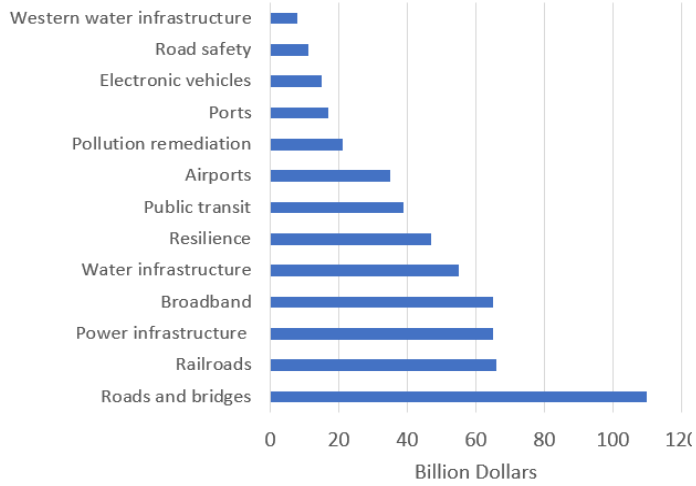
Impacts of the Infrastructure Investment and Jobs Act On Inland Waterways New Construction Projects

On November 15, President Biden signed the Infrastructure Investment and Jobs Act (IIJA) into law. This infrastructure package included $1.2 trillion to help the Nation upgrade its major public transportation infrastructure and public works.[1] This article briefly summarizes IIJA's appropriations for implementing new and ongoing inland waterways construction projects. Critical to the U.S. supply chain, these projects will maximize the efficient passage of barged cargo through the inland waterways navigation system.

$550 Billion in New Investments

IIJA included a total of $550 billion in funding to support new investments in roads, bridges, railroads, and other infrastructure projects (fig. 1). Specifically, IIJA appropriated $17.10 billion for the U.S. Army Corps of Engineers (USACE) in fiscal year (FY) 2022. This USACE funding—combined with $5.71 billion from the 2022 Disaster Relief Supplemental Appropriations Act—provided a total of $22.81 billion to implement civil works studies and projects and maintain existing infrastructure. To respond to flooding and coastal storms, part of this funding will enable repairing damage and dredging channels. Another portion of the funding is designated for studies of five projects in four States (Louisiana, New Jersey, New York, and Pennsylvania) where major disasters were declared in FY 2021 for Hurricane Ida.[2]

Figure 1: Categories of the $550 billion new investment fund from the Infrastructure Investment and Jobs Act



Source: White House, Briefing Room, November 18, 2021.

USACE Spending Plan To Advance Inland Waterways Construction Projects

Historically, according to cost-share principles, funding for USACE's new construction and major rehabilitation projects is split between the annual appropriations of the Inland Waterways Trust Fund (IWTF) and the Treasury. However, the IIJA provides a historic $2.22 billion of 100 percent Federal funding for USACE to conduct new construction and major rehabilitation projects for the inland waterways.[3] USACE may make a considerable dent in its backlog of projects if all IIJA funding is appropriated as planned in the next 5 years. That progress will receive more of a boost if the IIJA funding is supplemented (as expected) by additional annual appropriations from IWTF and the Treasury for new construction. USACE could possibly complete a significant number of its new and ongoing construction projects included in the 2020 update of its *Five-Year Review and Update of the Inland and*

[1] The Infrastructure Investment and Jobs Act (IIJA) is sometimes referred as a "$1.2 trillion package" because it contains funds that are appropriated annually for highway and other projects.

[2] USACE submitted the spending plan, which was approved by the Congress and White House in January 2022, to utilize IIJA's $22.81 billion in funding. According to the plan, in FY 2022, USACE will use the funding to complete 15 feasibility studies; the preconstruction engineering and design (PED) phase of 5 projects; and construction of 19 projects. Additionally, in FY 2022, 22 new projects will be funded from the construction account. Overall, about 68 percent of the total IIJA funding will be used for construction, 23 percent for operations and maintenance, and 5 percent for Mississippi River and tributaries projects.

[3] The authority and funding rules for USACE inland waterways projects usually follow the scope and instructions established by the Water Resources Reform and Development Act (WRDA). See this feature article (*Grain Transportation Report* (*GTR*), June 17, 2021) for more details on how this funding works.

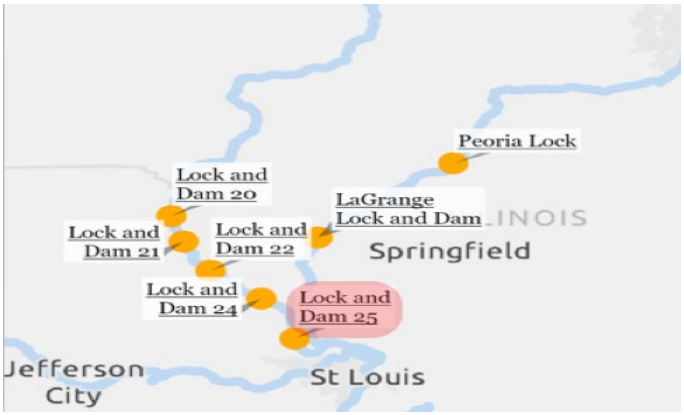
Intracoastal Waterways Twenty-Five Capital Investment Strategy report. Specifically, to utilize the IIJA's $2.22 billion in funding, USACE's spending plan lists the following inland navigation construction projects:[1]

- Kentucky Lock (Tennessee River): $465.49 million (funded to completion)
- Montgomery Lock (Ohio River): $857.71 million (funded to completion)
- Lock and Dam 25 (UMR) (Navigation & Ecosystem Sustainability Program (NESP)): $732 million (funded to completion)
- Three Rivers (Arkansas River): $109.15 million (spending plan summary lists this as funded to completion, but the project is authorized for $184.39 million)
- T.J. O'Brien Lock and Dam (Illinois Waterway), (Major Rehabilitation): $52.52 million (funded to completion)

Mississippi River Lock and Dam 25

Among five IIJA-funded projects supporting the movement of barges through the inland waterways, the $732 million for the new 1,200-foot lock construction in Mississippi River Lock and Dam 25 will create the most direct and positive impacts on agricultural communities and grain shippers. Lock and Dam 25 is one of the seven congressionally authorized new construction sites from the Navigation and Ecosystem Sustainability Program (NESP). All of the NESP locks are located in the Upper Mississippi River (UMR) (Lock and Dam 20-22, and 24) and Illinois River (Peoria Lock, and LaGrange Lock), which combine to form the UMR Navigation System (fig 2).[2]

Figure 2: New construction projects authorized by the Navigation and Ecosystem Sustainability Program



Source: USDA, Agricultural Marketing Service.

According to USDA, the inland waterways system saves between $7 billion and $9 billion annually over the cost of shipping by other modes. In 2021, the barge industry moved more than 37 million tons of downbound grain to the U.S. Gulf through the Mississippi River locking system, representing more than 55 percent of U.S. corn and soybean exports (by volume).[3] However, most of the UMR and Illinois's locks and dams were built more than 50 years ago and are prone to mechanical failures that result in closures or delays. In 2021, Lock and Dam 25 transited 13.3 million tons of downbound grain, about 36 percent of the total downbound tonnages (***GTR* table 10**). Currently, the lock can handle only a 600-foot barge tow—half the length of a 15-barge tow, which is standard for the Mississippi River. The new 1,200-foot lock will significantly improve locking efficiency and safety by eliminating the untying/re-tying procedure necessary with the 600-foot barge tows. Also, by combining with the existing 600-foot locks, the new lock will enable two-way traffic to reduce wait time and delays.

Conclusion

Through its commercial navigation mission, IIJA provides resources to strengthen national supply chains. It also provides $22.81 billion for USACE civil works, which benefit agricultural communities and grain shippers. Of all IIJA's funding for USACE projects, the $732 million to build a new 1,200-foot lock in Mississippi River Lock and Dam 25 will create the most direct and positive impacts for agricultural communities and grain shippers.

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[1] Additionally, as part of NESP's ecosystem restoration component, $97.10 million is designated to complete the design and initiate construction of a fish passage at Lock 22.

[2] All the NESP construction projects were authorized in 2007.

[3] USDA, Agricultural Marketing Service (2022). *A Reliable Waterway System Is Important to Agriculture*. See the report for details.

Grain Transportation Indicators

Table 1

Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Non-Shuttle	Shuttle		Gulf	Pacific
04/06/22	345	306	282	497	351	312
03/30/22	348	303	326	452	351	312

[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)

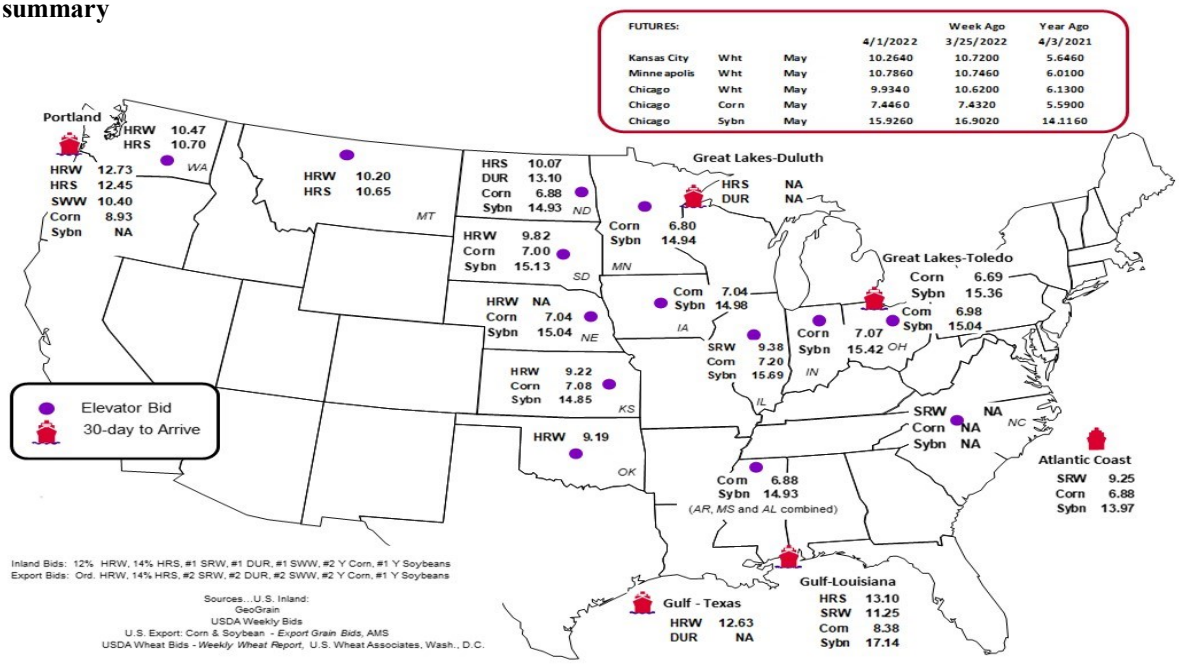
Commodity	Origin–destination	4/1/2022	3/25/2022
Corn	IL–Gulf	-1.18	-1.27
Corn	NE–Gulf	-1.34	-1.47
Soybean	IA–Gulf	-2.16	-2.26
HRW	KS–Gulf	-3.41	-3.38
HRS	ND–Portland	-2.38	-2.41

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]
3/30/2022[p]	1,414	1,409	5,698	480	9,001	3/26/2022	2,542
3/23/2022[r]	1,745	896	6,324	278	9,243	3/19/2022	2,826
2022 YTD[r]	20,422	13,100	76,246	7,544	117,312	2022 YTD	34,425
2021 YTD[r]	21,796	21,250	81,947	7,999	132,992	2021 YTD	28,395
2022 YTD as % of 2021 YTD	94	62	93	94	88	% change YTD	121
Last 4 weeks as % of 2021[2]	104	48	86	135	84	Last 4wks. % 2021	104
Last 4 weeks as % of 4-year avg.[2]	217	62	97	160	105	Last 4wks. % 4 yr.	127
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.

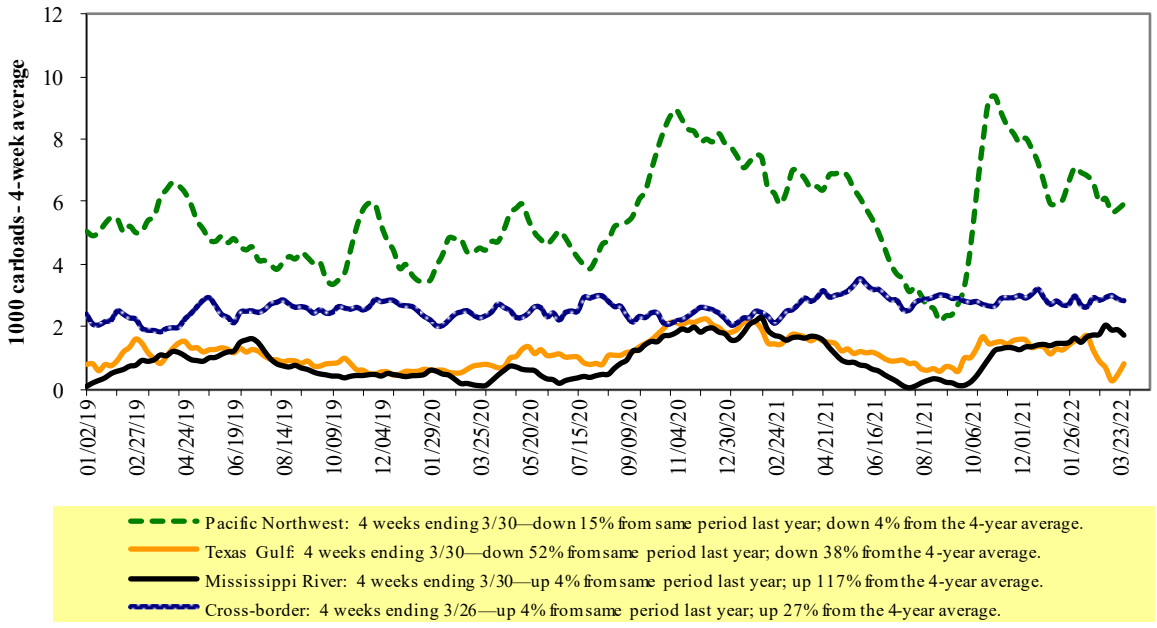
[3] Cross-border weekly data is approximately 15 percent below the Association of American Railroads' reported weekly carloads received by Mexican railroads to reflect switching between Kansas City Southern de Mexico (KCSM) and Grupo Mexico.

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	
3/26/2022	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,639	2,478	12,520	1,274	4,605	22,516	3,523	3,597
This week last year	2,140	2,490	12,347	1,165	6,373	24,515	5,551	6,825
2022 YTD	22,142	27,603	141,818	15,609	74,235	281,407	42,244	44,629
2021 YTD	24,914	31,328	156,639	12,473	78,092	303,446	58,335	61,530
2022 YTD as % of 2021 YTD	89	88	91	125	95	93	72	73
Last 4 weeks as % of 2021*	94	100	88	103	86	90	70	66
Last 4 weeks as % of 3-yr. avg.**	100	97	105	101	106	104	82	85
Total 2021	93,935	120,894	609,890	64,818	318,002	1,207,539	210,325	242,533

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

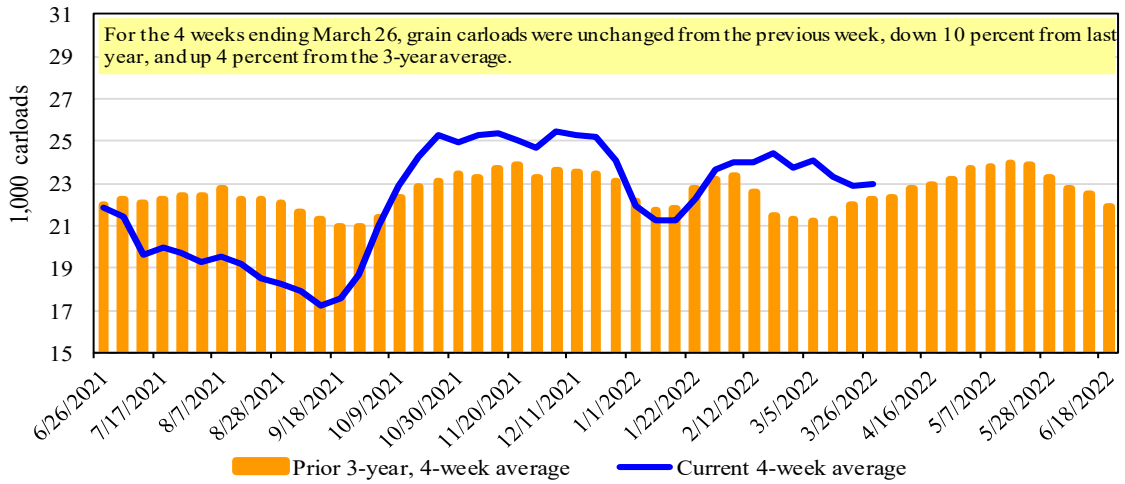
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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							
3/31/2022		Apr-22	Apr-21	May-22	May-21	Jun-22	Jun-21	Jul-22	Jul-21
BNSF[3]	COT grain units	0	no bids	0	no bids	0	no bids	no bids	no bids
	COT grain single-car	201	1	0	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.

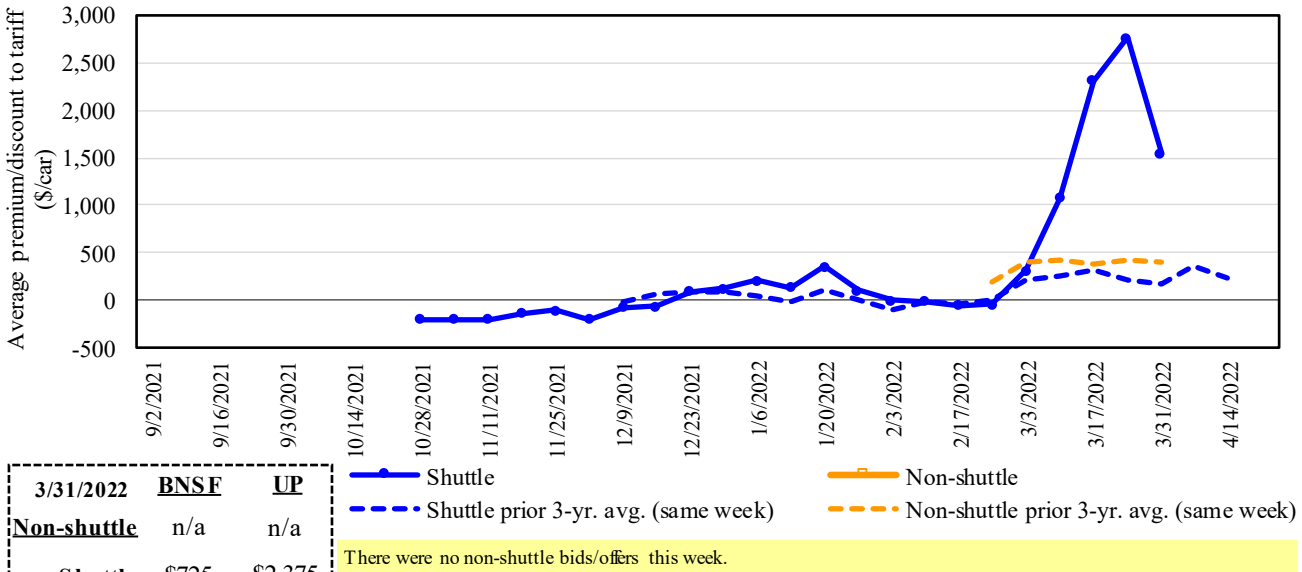
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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 April 2022

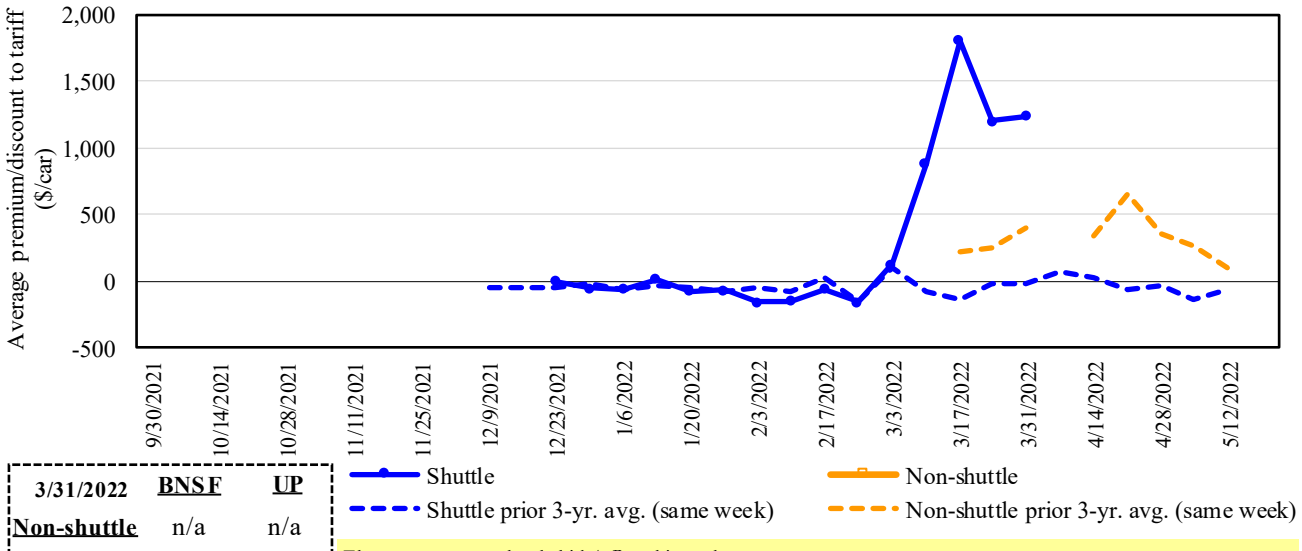


3/31/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$725	$2,375

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $1,206 this week and are $1,206 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 May 2022



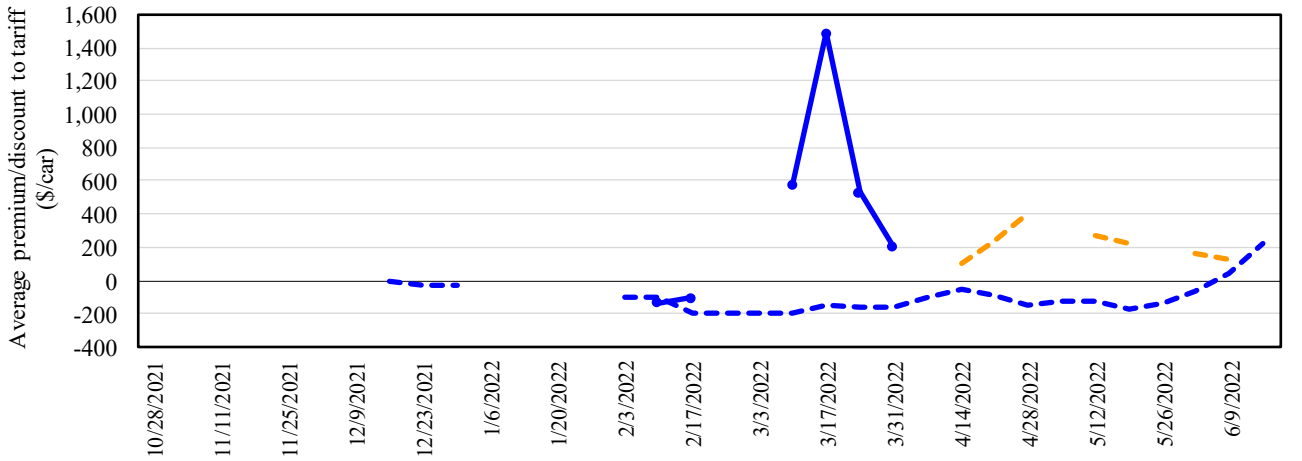
3/31/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$425	$2,050

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $38 this week and are $569 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 June 2022



3/31/2022	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$200	n/a

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $331 this week and are $1,288 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					
	3/31/2022	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-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**	**725**	**425**	**200**	**100**	**100**	**367**
	Change from last week	(1,413)	(725)	(331)	(200)	50	(44)
	Change from same week 2021	588	450	363	275	250	517
	UP-Pool	**2,375**	**2,050**	**n/a**	**n/a**	**200**	**n/a**
	Change from last week	(1,000)	800	n/a	n/a	n/a	n/a
	Change from same week 2021	2,104	2,075	n/a	n/a	400	n/a

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

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

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

Source: USDA, Agricultural Marketing Service.

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

Table 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.

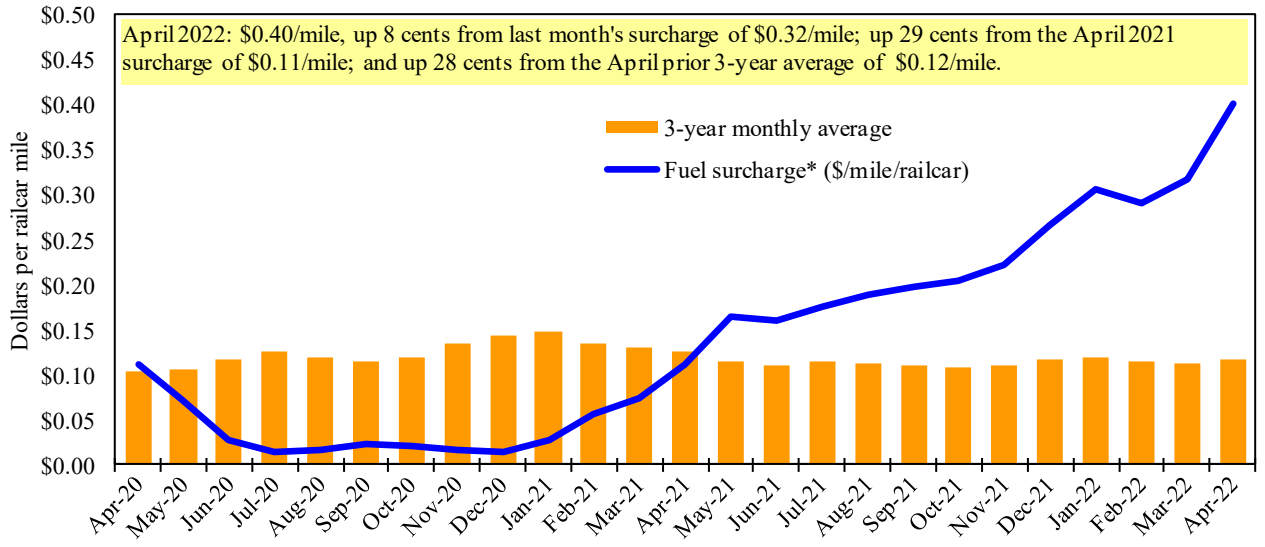
[4]Percentage change calculated using tariff rate plus fuel surchage; Y/Y = year over year.

[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.

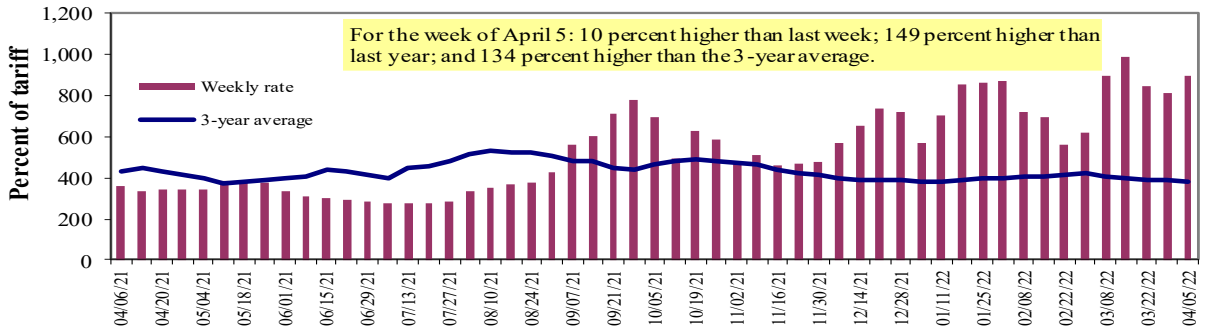
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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

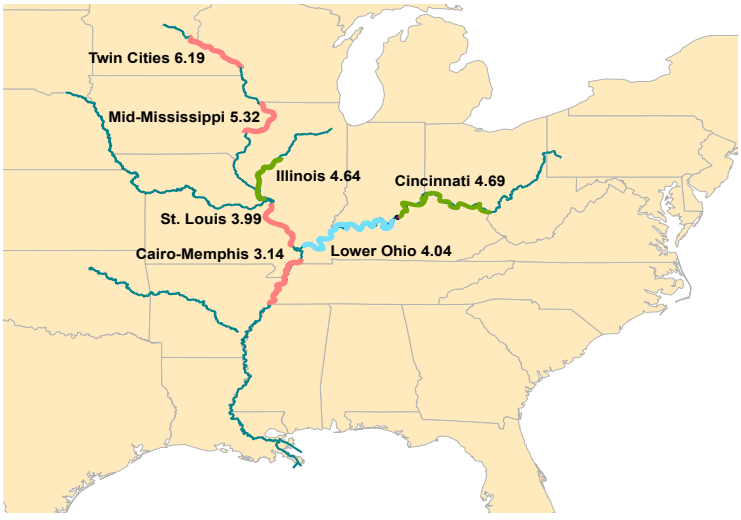
		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	4/5/2022	963	916	894	723	781	781	623
	3/29/2022	900	850	814	700	786	786	611
$/ton	4/5/2022	59.61	48.73	41.48	28.85	36.63	31.55	19.56
	3/29/2022	55.71	45.22	37.77	27.93	36.86	31.75	19.19
Current week % change from the same week:								
	Last year	109	146	149	189	154	154	175
	3-year avg. [2]	124	155	134	157	147	146	137
Rate[1]	May	813	744	716	600	656	656	494
	July	669	600	581	478	525	525	400

[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

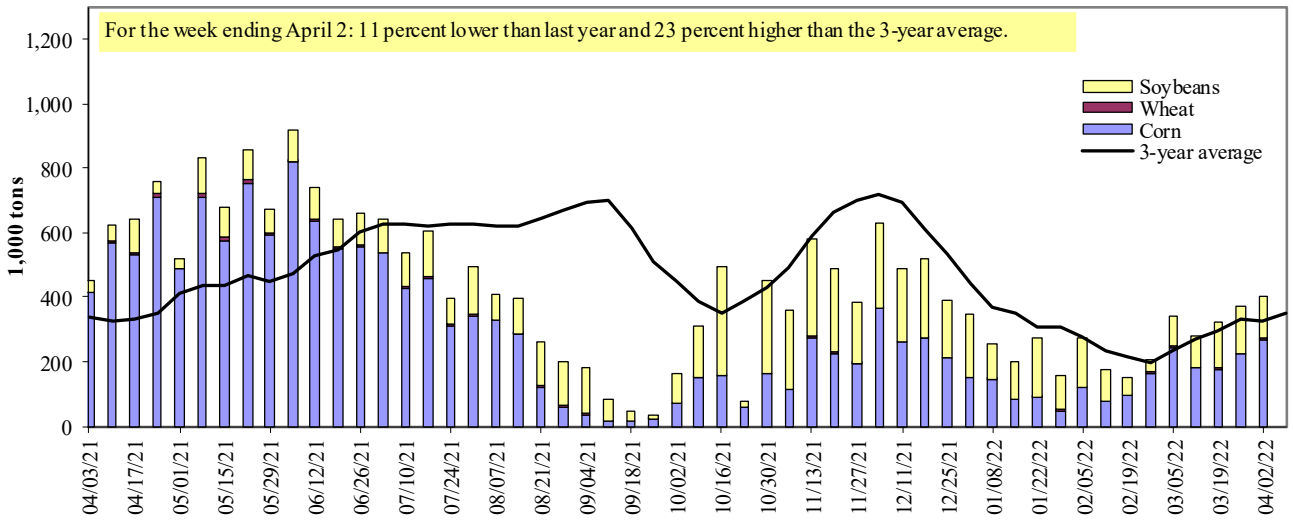
Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.



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 04/02/2022	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	20	0	8	0	28
Winfield, MO (L25)	72	3	38	0	113
Alton, IL (L26)	226	3	95	0	325
Granite City, IL (L27)	266	6	130	2	404
Illinois River (La Grange)	83	0	48	0	130
Ohio River (Olmsted)	140	7	51	19	217
Arkansas River (L1)	0	27	13	0	40
Weekly total - 2022	406	40	194	21	661
Weekly total - 2021	675	13	82	5	776
2022 YTD[1]	4,276	369	3,019	79	7,743
2021 YTD[1]	6,857	229	2,920	108	10,113
2022 as % of 2021 YTD	62	161	103	74	77
Last 4 weeks as % of 2021[2]	65	125	177	239	86
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.

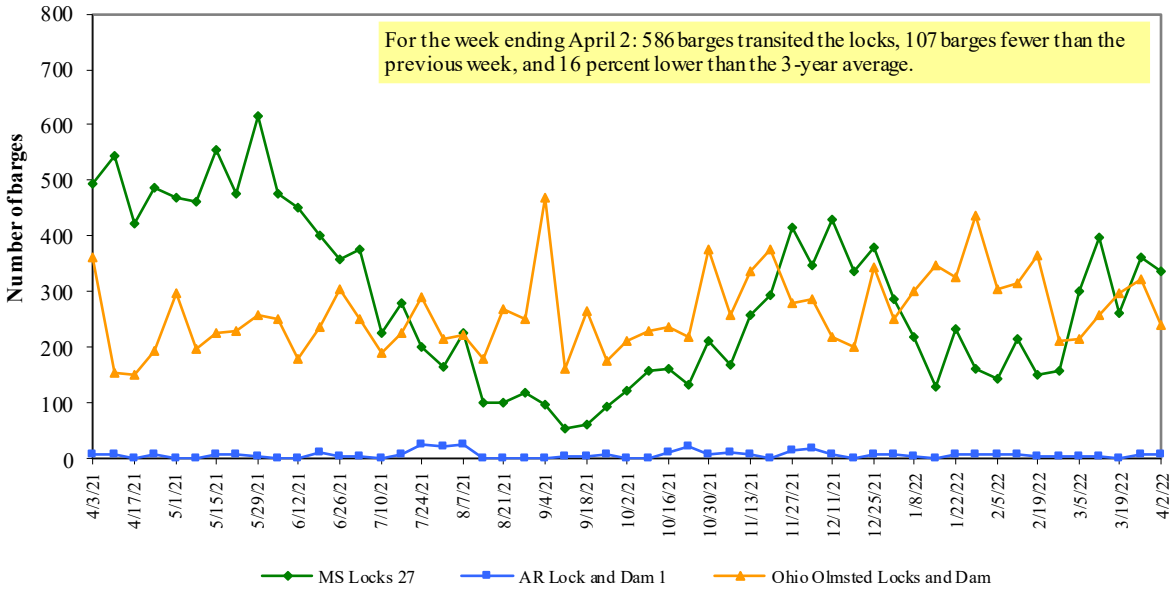
[2] As a percent of same period in 2020.

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

Source: U.S. Army Corps of Engineers.

Figure 11

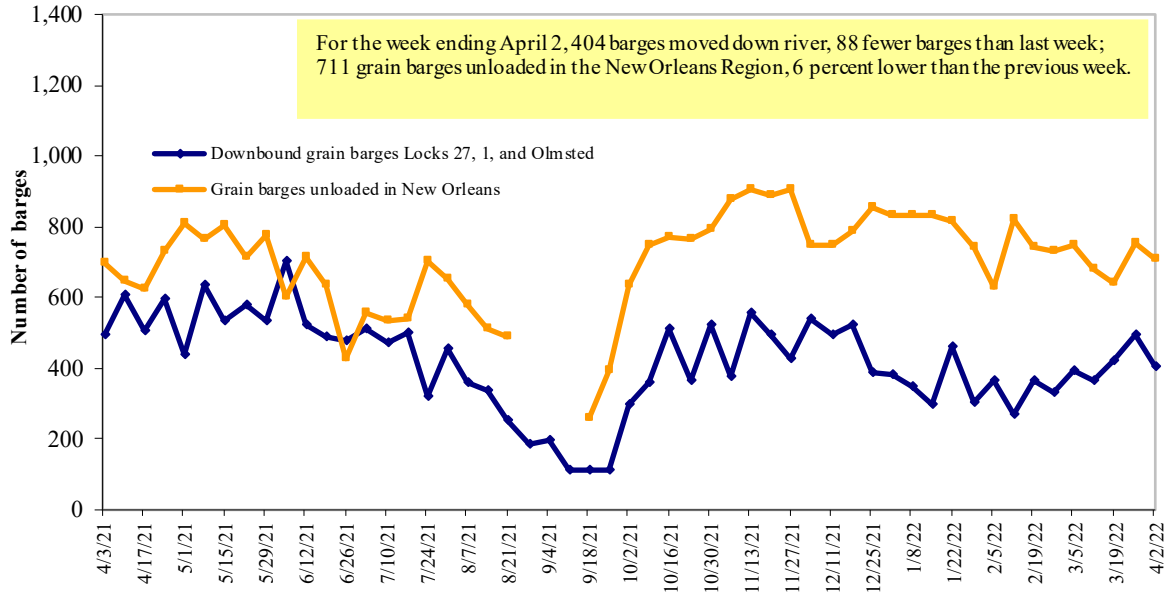
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 4/4/2022 (U.S. $/gallon)

Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	5.206	-0.043	2.092
	New England	5.283	-0.026	2.207
	Central Atlantic	5.363	-0.037	2.095
	Lower Atlantic	5.095	-0.050	2.077
II	Midwest	4.947	-0.047	1.864
III	Gulf Coast	4.929	-0.043	1.995
IV	Rocky Mountain	5.055	0.011	1.776
V	West Coast	5.832	-0.042	2.179
	West Coast less California	5.312	-0.090	2.053
	California	6.289	0.000	2.308
Total	United States	5.144	-0.041	2.000

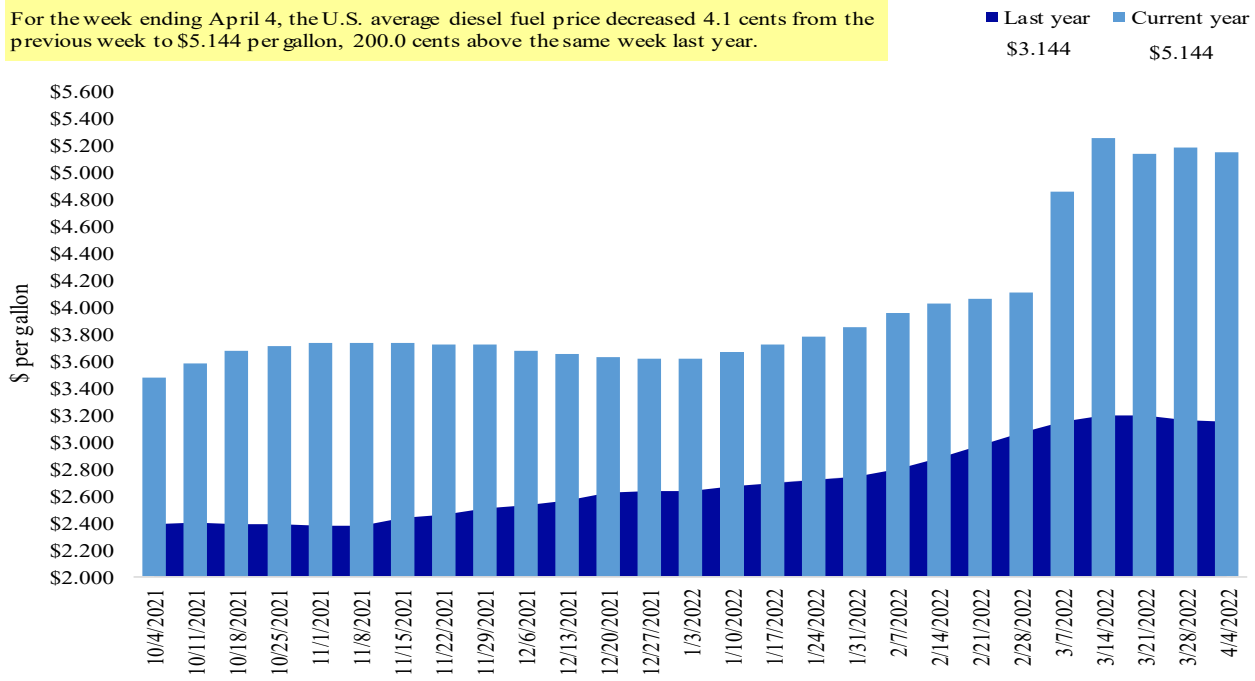
[1]Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

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

Figure 13

Weekly diesel fuel prices, U.S. average

For the week ending April 4, the U.S. average diesel fuel price decreased 4.1 cents from the previous week to $5.144 per gallon, 200.0 cents above the same week last year.



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]									
3/24/2022	1,422	516	1,020	512	19	3,490	21,474	11,797	36,761
This week year ago	1,427	331	1,551	2,031	78	5,418	31,808	6,025	43,251
Cumulative exports-marketing year[2]									
2021/22 YTD	6,053	2,243	4,214	2,817	170	15,496	32,180	43,545	91,221
2020/21 YTD	7,087	1,452	5,927	4,629	592	19,686	33,918	54,740	108,344
YTD 2021/22 as % of 2020/21	85	154	71	61	29	79	95	80	84
Last 4 wks. as % of same period 2020/21*	114	173	69	26	24	70	71	187	87
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 3/24/2022	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	14,735	12,708	16	14,817
Japan	8,349	8,906	(6)	11,082
China	12,124	23,185	(48)	7,920
Columbia	3,748	3,232	16	4,491
Korea	534	2,406	(78)	3,302
Top 5 importers	**39,489**	**50,436**	**(22)**	**41,613**
Total U.S. corn export sales	**53,654**	**65,726**	**(18)**	**53,145**
% of projected exports	84%	94%		
Change from prior week[2]	**637**	**797**		
Top 5 importers' share of U.S. corn export sales	74%	77%		78%
USDA forecast March 2022	**63,613**	**70,051**	**(9)**	
Corn use for ethanol USDA forecast, March 2022	**135,890**	**127,838**	**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. 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 3/24/2022	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	28,312	35,971	(21)	21,666
Mexico	4,881	4,545	7	4,754
Egypt	3,428	2,552	34	3,093
Indonesia	1,288	1,808	(29)	2,325
Japan	1,886	1,858	1	2,275
Top 5 importers	**39,795**	**46,734**	**(15)**	**34,113**
Total U.S. soybean export sales	**55,342**	**60,765**	**(9)**	**50,758**
% of projected exports	97%	99%		
change from prior week[2]	**1,306**	**106**		
Top 5 importers' share of U.S. soybean export sales	72%	77%		**67%**
USDA forecast, March 2022	**56,948**	**61,608**	**(8)**	

[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 3/24/2022	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	3,470	3,422	1	3,388
Philippines	2,725	3,145	(13)	3,121
Japan	2,355	2,456	(4)	2,567
Korea	1,245	1,829	(32)	1,501
Nigeria	1,971	1,393	42	1,490
China	848	3,257	(74)	1,268
Taiwan	873	1,138	(23)	1,187
Indonesia	67	879	(92)	1,131
Thailand	542	808	(33)	768
Italy	229	570	(60)	681
Top 10 importers	**14,325**	**18,896**	(24)	**17,102**
Total U.S. wheat export sales	**18,986**	**25,104**	(24)	**24,617**
% of projected exports	87%	93%		
change from prior week[2]	**95**	**250**		
Top 10 importers' share of U.S. wheat export sales	75%	75%		69%
USDA forecast, March 2022	**21,798**	**27,030**	(19)	

[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 03/31/22	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	132	183	72	5,005	4,094	122	39	56	13,415
Corn	249	452	55	5,820	4,834	120	54	86	13,792
Soybeans	215	142	152	7,299	3,697	197	588	122	15,388
Total	**597**	**777**	**77**	**18,123**	**12,625**	**144**	**62**	**81**	**42,595**
Mississippi Gulf									
Wheat	86	85	101	1,814	479	379	217	122	3,279
Corn	1,087	924	118	20,515	13,250	155	75	114	39,243
Soybeans	266	362	73	13,606	8,870	153	128	102	28,987
Total	**1,438**	**1,372**	**105**	**35,936**	**22,599**	**159**	**88**	**111**	**71,509**
Texas Gulf									
Wheat	0	70	0	1,431	946	151	37	37	4,025
Corn	0	0	n/a	282	174	162	40	43	662
Soybeans	0	0	n/a	4	648	1	2	5	1,612
Total	**0**	**70**	**0**	**1,717**	**1,769**	**97**	**35**	**37**	**6,299**
Interior									
Wheat	95	22	426	1,422	708	201	90	128	3,023
Corn	149	210	71	4,228	2,342	181	79	104	10,528
Soybeans	152	143	106	3,548	1,934	183	100	119	6,778
Total	**396**	**375**	**105**	**9,198**	**4,984**	**185**	**88**	**113**	**20,329**
Great Lakes									
Wheat	1	1	59	47	19	243	n/a	231	554
Corn	0	0	n/a	0	0	n/a	n/a	n/a	145
Soybeans	19	0	n/a	19	0	n/a	n/a	n/a	633
Total	**20**	**1**	**n/a**	**66**	**19**	**341**	**n/a**	**926**	**1,332**
Atlantic									
Wheat	0	0	n/a	9	71	13	0	0	128
Corn	16	0	n/a	101	0	n/a	n/a	559	85
Soybeans	70	17	406	1,584	932	170	139	217	2,292
Total	**87**	**18**	**486**	**1,694**	**1,004**	**169**	**127**	**209**	**2,505**
U.S. total from ports*									
Wheat	313	361	87	9,729	6,318	154	55	67	24,425
Corn	1,501	1,587	95	30,946	20,600	150	70	105	64,455
Soybeans	722	664	109	26,060	16,082	162	142	115	55,689
Total	**2,537**	**2,612**	**97**	**66,735**	**42,999**	**155**	**79**	**100**	**144,569**

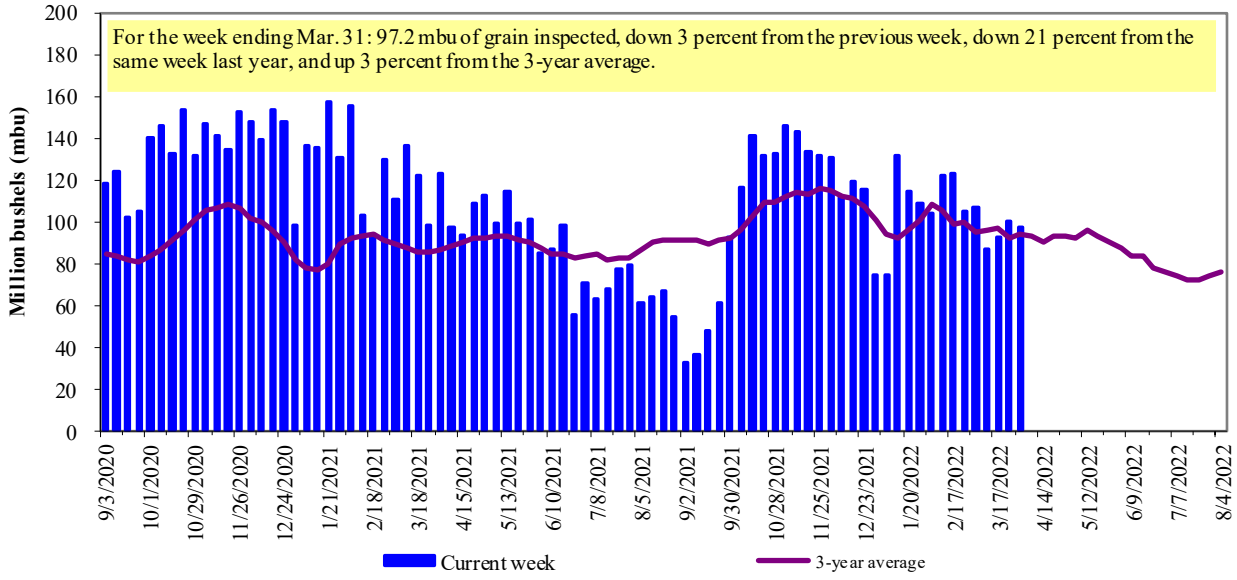
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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)

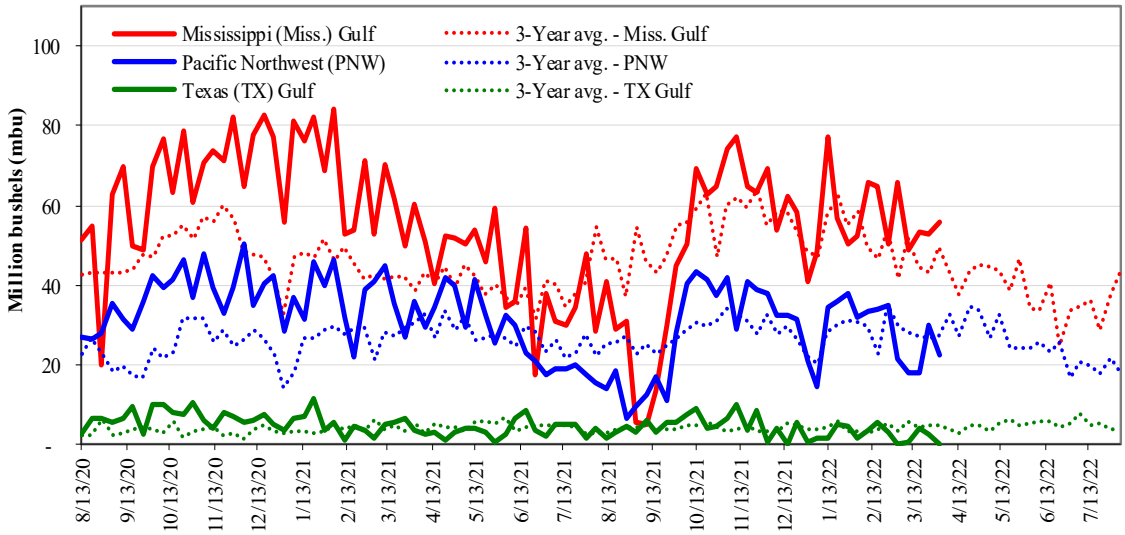


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

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



Week ending 03/31/22 inspections (mbu):	
MS Gulf:	55.7
PNW:	22.6
TX Gulf:	0.0

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last wk:	up 5	down 100	unchanged	down 24
Last Year (same wk):	down 8	down 100	down 13	down 37
3-yr avg. (4-wk. mov. Avg):	up 18	down 100	up 7	down 17

Source: USDA, Federal Grain Inspection Service.

Table 17

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

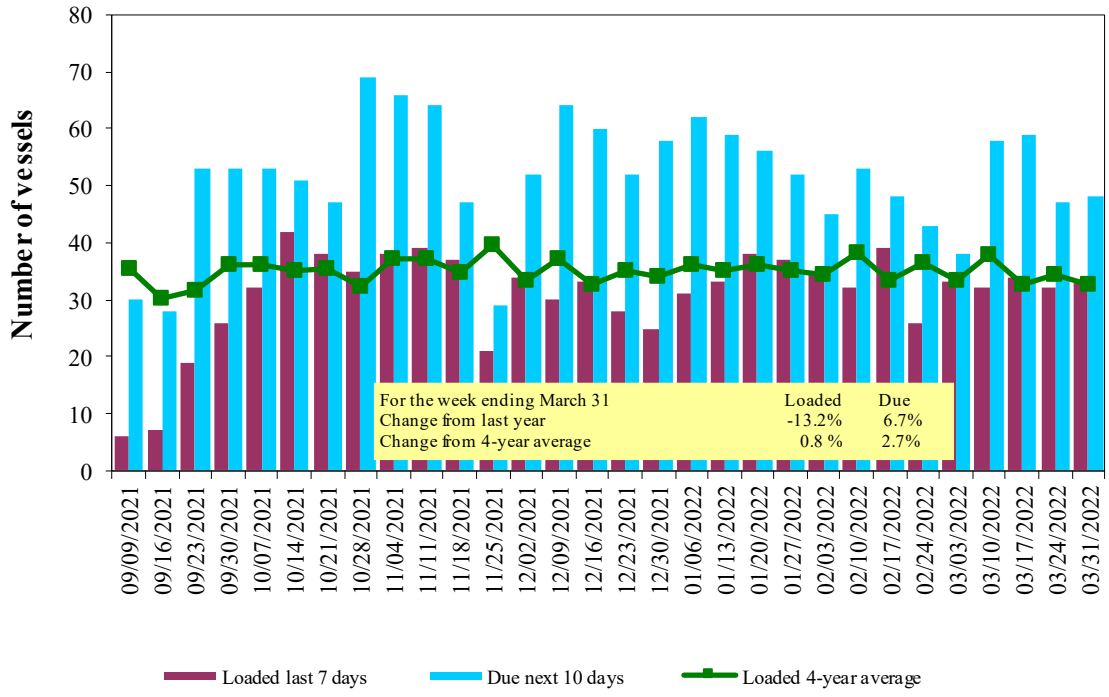
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
3/31/2022	33	33	48	12
3/24/2022	31	32	47	10
2021 range	(10…57)	(5...48)	(15...69)	(4…27)
2021 average	34	32	49	15

Note: n/a = not available due to the holiday

Source: USDA, Agricultural Marketing Service.

Figure 16

U.S. Gulf[1] vessel loading activity

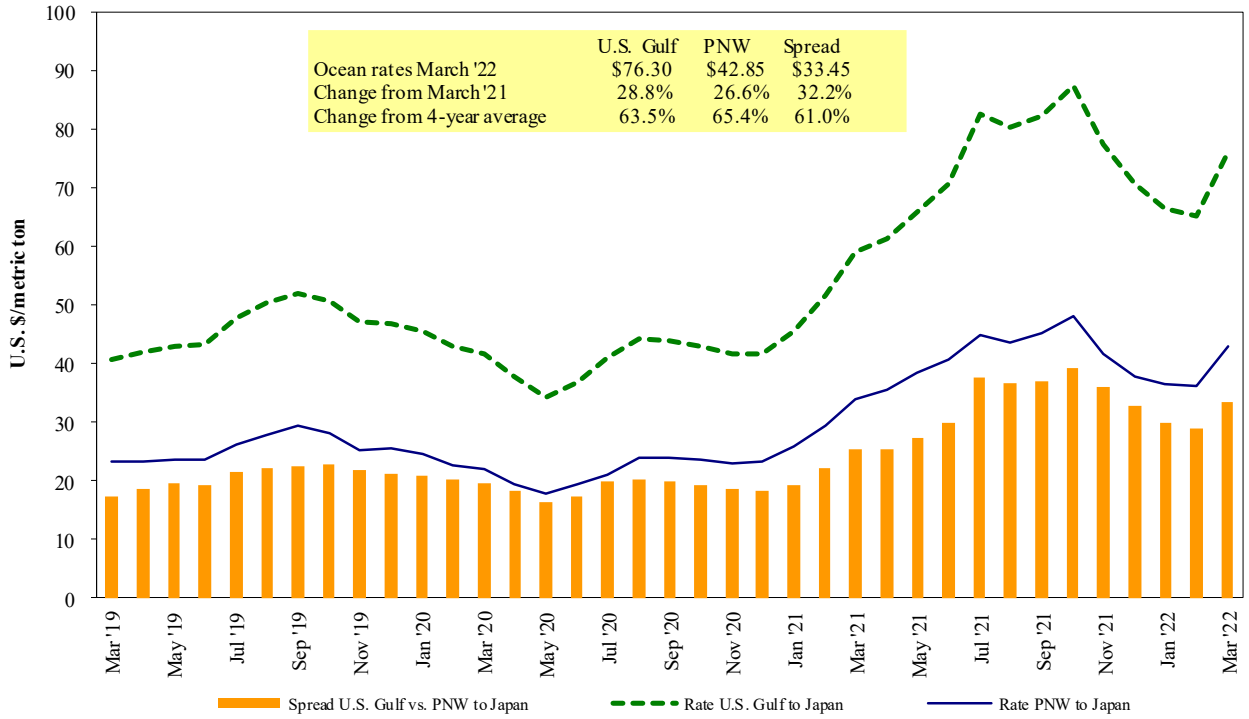


[1]U.S. Gulf includes Mississippi, Texas, and East Gulf

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 04/02/2022

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

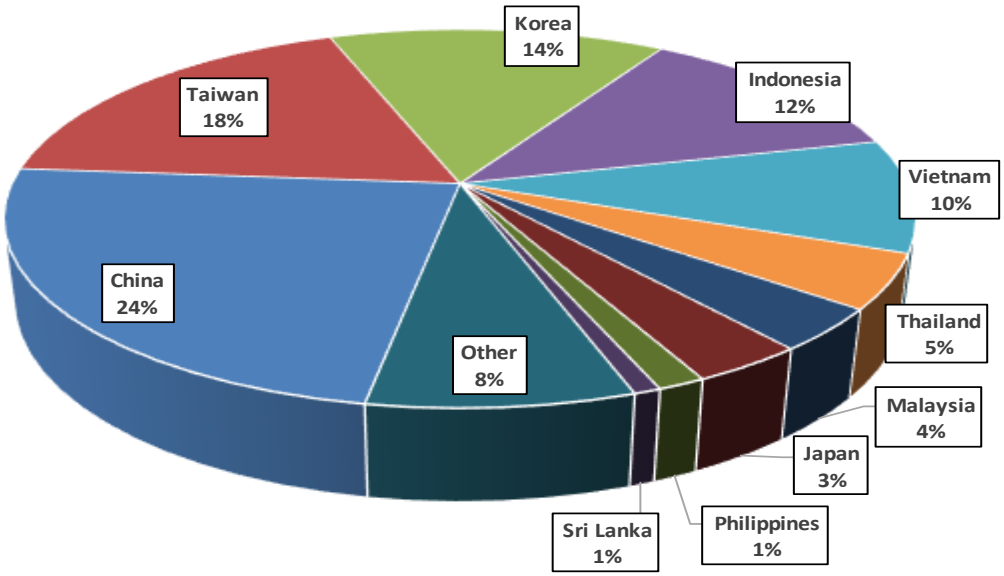
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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.

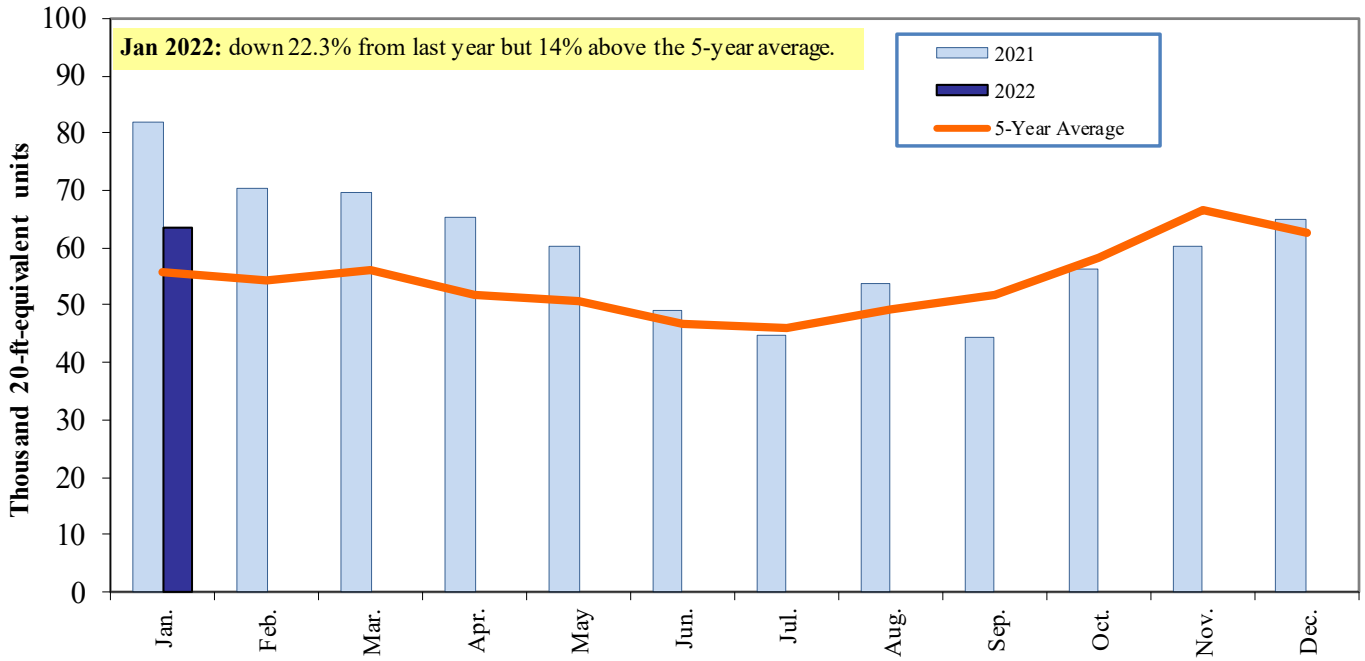
Figure 18
Top 10 destination markets for U.S. containerized grain exports, Jan 2022



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.

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