

U.S. DEPARTMENT OF AGRICULTURE



September 2, 2021

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

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WEEKLY HIGHLIGHTS

Hurricane Ida Impacts Freight Traffic Into and out of the Lower Mississippi River

In the wake of Hurricane Ida, which made landfall in Louisiana on August 29, the Mississippi River was closed from Baton Rouge to the Gulf of Mexico for 5 days. As of today, vessel traffic above Mississippi River mile marker 167.5 near St. James, LA, and south of mile marker 105 near Bridge City, LA, is open but restricted to daylight hours only. The river remains closed between mile markers 105 and 167.5. The situation is fluid and changing quickly as officials continue assessing channel safety. While constrained by power outages and limited labor availability, grain elevators are still assessing damage. All interstates are now open in Louisiana, with the exception of two sections of I-55—a major north/south artery to access LaPlace and New Orleans. However, State officials have asked to keep these arteries clear for the use of emergency personnel. Railroads report widespread power outages, fallen trees, and major flooding have closed lanes and inhibited service-restoration efforts. Rail customers should expect delays of 48-72 hours. More than 50 percent of U.S. grain exports depend on this region to reach overseas markets.

DOT Designates Six New Marine Highway Projects

On August 19, the U.S. Department of Transportation's Maritime Administration <u>announced</u> the designation of six new <u>marine highway</u> <u>projects</u> as part of the America's Marine Highway Program (AMHP). AMHP encourages use of the Nation's inland waterways for moving freight and people to save costs and reduce the congestion of land-based transportation. An AMHP designation qualifies projects on marine highway routes to receive grants when program funding is available. One newly designated project—the Missouri River Container on Barge Project—will expand options for transporting goods: a new service will allow the river to accommodate barges carrying containers (including those with agricultural commodities). The project will affect movements originating from ports and terminals in Central Missouri, destined to ocean ports on the U.S. Gulf.

Port of Houston Signs Agreement for \$1.1 Billion Channel Expansion

On August 19, the Port of Houston and U.S. Army Corps of Engineers signed a partnership agreement on a \$1.1 billion project to expand the Houston Ship Channel. Along the channel's 26-mile Galveston Bay reach, the project will widen the Houston Ship Channel from 530 feet to a total 700 feet wide and deepen upstream segments from 45 feet to a total 46.5 feet deep. The deeper, wider channel will allow safe passage of larger vessels, accommodating an estimated additional 1,400 vessels per year. According to USDA, in 2017, bulk grain export shipments accounted for 62 percent of total U.S. waterborne agricultural exports through the Port of Houston, a key grain export port.

Snapshots by Sector

Export Sales

For the week ending August 19, **unshipped balances** of wheat, corn, and soybeans totaled 10.5 million metric tons (mmt). This was 13 percent lower than last week and 16 percent lower than the same time last year. Net **corn export sales** were 0.007 mmt, down 97 percent from the past week. Net **soybean export sales** were 0.075 mmt, up 11 percent from the previous week. Net weekly **wheat export sales** were 0.116 mmt, down 62 percent from last week.

Datasets

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Subscription Information

The next release is September 9, 2021

Rail U.S. Class I railroads originated 18,098 grain carloads during the week ending August 21. This was a 7-percent decrease from the previous week, 20 percent less than last year, and 19 percent lower than the 3-year average.

Average September shuttle **secondary railcar** bids/offers (per car) were \$15 below tariff for the week ending August 26. This was \$35 more than last week and \$819 lower than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending August 28, **barged grain movements** totaled 289,938 tons. This was 28 percent lower than the previous week and 69 percent lower than the same period last year.

For the week ending August 28, 185 grain barges moved down river—69 fewer barges than the previous week.

Ocean

For the week ending August 26, 21 oceangoing grain vessels were loaded in the Gulf—9 percent fewer than the same period last year. Within the next 10 days (starting August 27), 34 vessels were expected to be loaded—35 percent fewer than the same period last year.

As of August 26, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was \$82.00. This was 1 percent more than the previous week. The rate from the Pacific Northwest to Japan was \$44.50 per mt, 1 percent more than the previous week.

Fuel

For the week ending August 30, the U.S. average **diesel fuel price** increased by 1.5 cents from the previous week to \$3.339 per gallon, 89.8 cents above the same week last year.

Transportation of U.S. Wheat Exports to Mexico

From an agricultural trade perspective, Mexico and the United States have a longstanding mutually beneficial relationship. Since 2010, Mexico is one of the largest, if not the largest, importers of U.S wheat. Historically, a majority of U.S.-to-Mexico wheat export volumes have shipped by rail, and a significant portion have shipped by ocean vessel. This article describes Mexico's reliance on U.S. wheat imports and examines the shift of U.S.-to-Mexico wheat export volumes from ocean to rail transportation.

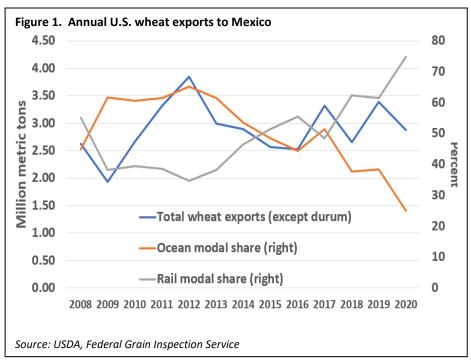
Impact of Mexico's Proximity and NAFTA on Trade

The North American Free Trade Agreement (NAFTA) and the natural border the two countries share have helped U.S.-Mexico agricultural trade flourish for the past 20 years. As Mexico's population has grown, imported U.S. wheat has helped support the expanding demand. Since 2010, an average 71 percent of Mexico's annual wheat imports have come from the United States. Also, since 2010, annual U.S. wheat exports to Mexico have remained in a range of 2.5-3.3 million metric tons (roughly 13 percent of total U.S. wheat exports). These volumes have held, despite a strong U.S. dollar and increased competition from wheat-exporting countries like Russia and Argentina. Since 2016, Mexico is consistently among the top five importers of U.S. wheat.

Since 2010, Mexico has increasingly relied on wheat imports to meet its growing domestic needs. The country imported an average 46 percent of its annual wheat supplies in 2000-10, 54 percent in 2011-15, and 56 percent in 2016-20. For marketing year (MY) 2021/22, USDA's Foreign Agricultural Service (FAS) anticipates Mexico will import 60 percent of its wheat needs. Over the last 5 marketing years, U.S. wheat exports to Mexico have averaged the following shares by wheat class: hard red winter (HRW), 63 percent; soft red winter (SRW), 27 percent; hard red spring, 8 percent; and white winter, 1 percent.

Rail Versus Ocean Shipments

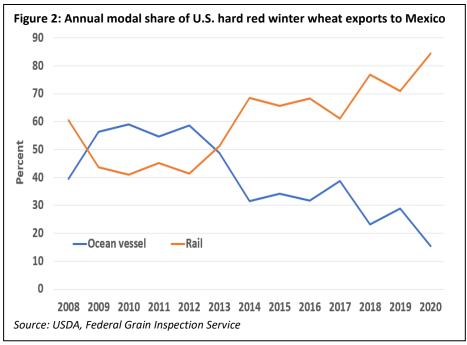
Rail is, by far, the favored mode for shipping U.S. wheat to Mexico. Since 2017, more than 60 percent of U.S. wheat exported to Mexico has shipped by rail, and in 2020, a record 73 percent of U.S.-to-Mexico wheat exports shipped by rail (fig. 1). After rail, ocean vessels are the next preferred mode for wheat exports, moving substantial volumes of SRW wheat. According to weekly export inspections data from USDA's Federal Grain Inspection Service (FGIS), trucks account for less than 0.1 percent of U.S. wheat shipped to Mexico. Modal



shares vary depending on the variety of wheat. For example, railroads dominate in the movement of HRW exports to Mexico, and ocean vessels move much of the SRW. To understand the modal shares of U.S. wheat exports to Mexico, it is useful to consider where the wheat is produced. Transportation logistics vary substantially by production region, as explored below.

HRW and rail transport. According to FGIS data, over the last 5 marketing years, HRW wheat has comprised 63 percent of total U.S. wheat exports to Mexico. According to the USDA's National Agricultural Statistical Service, HRW is produced primarily in Kansas, Oklahoma, northern Texas, eastern Colorado, and Montana—which all have easy access to strategic rail lines. Kansas and Oklahoma are the two largest producers of HRW, accounting for 49 and 14 percent of the total production in MY 2021/22, respectively. Some of the largest commercial elevator facilities in the United States are in these two States, which have access to key southern and western rail lines.

Since 2008, 78 percent of total HRW rail-export volumes to Mexico have originated in Kansas and Oklahoma. Based on weekly FGIS export inspections data, the modal shares for U.S. HRW exports since 2010 reveal a systemic shift toward rail and away from ocean vessel. In 2010, ocean vessels transported 59 percent of HRW exported to Mexico, and rail shipped the other 41 percent. By 2020, rail shipped a record 85 percent of HRW exported to Mexico (fig. 2).



SRW and ocean transport.

Based on FGIS data, over the last 5 marketing years, SRW wheat has comprised 27 percent of total U.S. wheat exports to Mexico. SRW is produced primarily in the eastern corn belt along with eastern portions of Arkansas and Missouri. Because these States enjoy strategic access to the U.S. inland waterways system, approximately 78 percent of annual wheat exports to Mexico in 2020 were shipped by river to New Orleans. Since 2016, approximately 76 percent of annual SRW exports to Mexico have shipped by ocean vessel.

Conclusion

Mexico is a leading importer of U.S. wheat. Grains, including wheat, are shipped to Mexico mainly by rail and ocean vessels. Total SRW and HRW export volumes by ocean have declined since peaking at 64 percent in 2012. After 2017, rail became the dominant mode for transporting wheat to Mexico. The share of wheat transported by each mode depends on the types of wheat and production area. <u>Walter.Kunisch@usda.gov</u>

Grain Transportation Indicators

Table 1

Grain transport cost indicators¹

_	Truck	Rail		Barge	00	ean
For the week ending		Non-Shuttle	Shuttle		Gulf	Pacific
09/01/21	224	290	224	239	367	316
08/25/21	223	290	222	210	364	312

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

Source: USDA, Agricultural Marketing Service.

Table 2 Market Upda	te: U.S. origins to export posi	tion price spreads (\$/bus	hel)
Commodity	Origin-destination	8/27/2021	8/20/2021
Corn	IL–Gulf	-0.63	-0.49
Corn	NE–Gulf	-0.67	-0.41
Soybean	IA–Gulf	-1.62	-1.44
HRW	KS–Gulf	-2.28	-2.28
HRS	ND–Portland	-2.40	-2.38

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

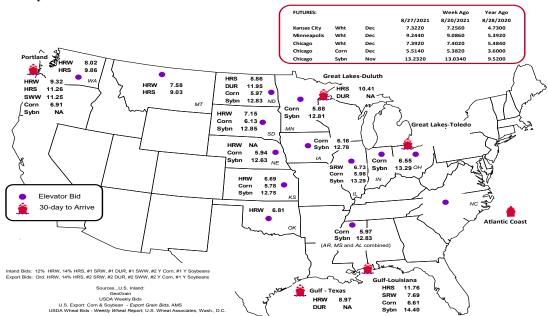


Table 3Rail deliveries to port (carloads)1

For the week ending	Mississippi Gulf	Texas Gulf	Pacific Northwest	Atlantic & East Gulf	Total	Week ending	Cross-border Mexico ³
8/25/2021 ^p	317	785	1,941	94	3,137	8/21/2021	3,108
8/18/2021 ^r	305	702	2,546	84	3,637	8/14/2021	2,419
2021 YTD ^r	36,566	45,104	187,551	10,241	279,462	2021 YTD	94,300
2020 YTD ^r	14,236	30,016	157,072	7,179	208,503	2020 YTD	84,475
2021 YTD as % of 2020 YTD	257	150	119	143	134	% change YTD	112
Last 4 weeks as $\%$ of 2020^2	70	62	54	26	55	Last 4wks. % 2020	105
Last 4 weeks as % of 4-year avg. ²	58	71	53	32	55	Last 4wks. % 4 yr.	119
Total 2020	45,294	64,116	299,882	24,458	433,750	Total 2020	126,407
Total 2019	40,974	51,167	251,181	16,192	359,514	Total 2019	127,622

¹Data is incomplete as it is voluntarily provided.

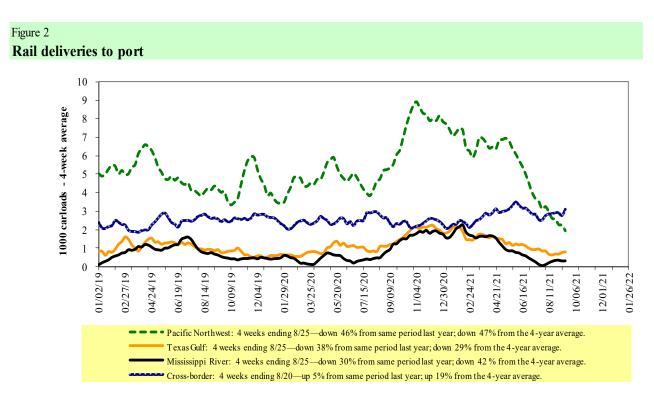
 2 Compared with same 4-weeks in 2020 and prior 4-year average.

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.



Source: USDA, Agricultural Marketing Service.

Table 4 Class I rail carrier grain car bulletin (grain carloads originated)

For the week ending:	Ea	st		West		U.S. total	Ca	nada
8/21/2021	CSXT	NS	BNSF	KCS	UP	0.5. total	CN	СР
This week	1,350	1,756	8,592	1,660	4,740	18,098	3,446	2,453
This week last year	1,715	2,722	10,671	1,022	6,451	22,581	4,357	4,648
2021 YTD	60,541	83,209	390,007	37,176	203,904	774,837	137,609	162,184
2020 YTD	55,991	80,871	363,466	35,305	172,521	708,154	138,114	154,735
2021 YTD as % of 2020 YTD	108	103	107	105	118	109	100	105
Last 4 weeks as % of 2020*	83	83	77	116	92	84	69	65
Last 4 weeks as % of 3-yr. avg.**	80	78	75	122	98	83	80	67
Total 2020	91,659	129,878	613,630	57,782	296,701	1,189,650	238,360	261,778

*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.

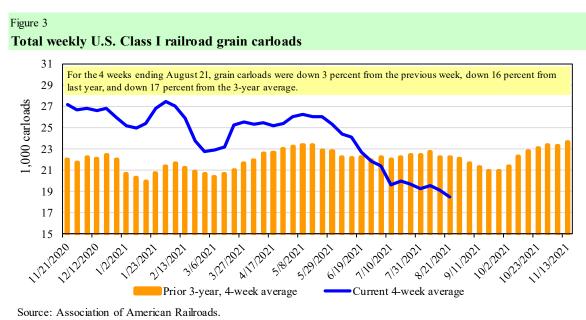


Table 5

Railcar auction offerings¹ (\$/car)²

Fo	or the week ending:				Deliver	y period			
	8/26/2021	Sep-21	Sep-20	Oct-21	Oct-20	Nov-21	Nov-20	Dec-21	Dec-20
BNSF ³	COT grain units	no bids	54	0	104	no bids	0	no bids	0
	COT grain single-car	0	122	0	78	no bids	82	0	116
UP ⁴	GCAS/Region 1	no offer	n/a	n/a					
	GCAS/Region 2	no offer	n/a	n/a					

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

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

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

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

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

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

Source: USDA, Agricultural Marketing Service.

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

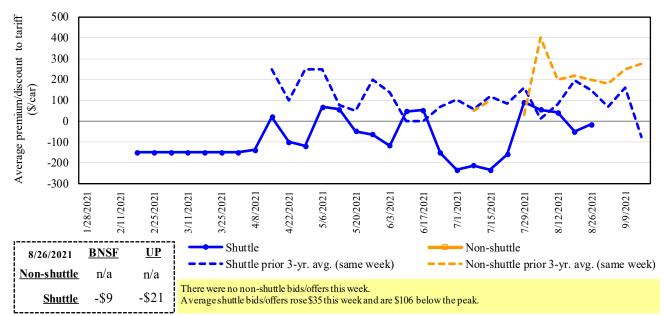


Figure 4 Bids/offers for railcars to be delivered in September 2021, secondary market

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.

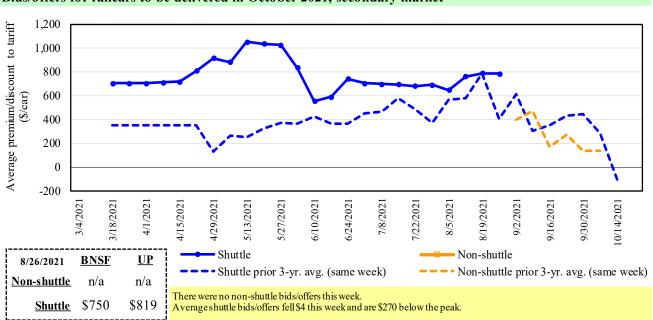
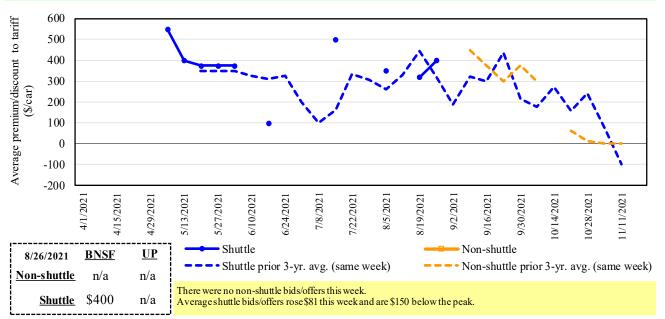


Figure 5 Bids/offers for railcars to be delivered in October 2021, secondary market

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.





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:			De	livery period		
	8/26/2021	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22
	BNSF-GF	n/a	n/a	n/a	n/a	n/a	n/a
e	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
-shuttle	Change from same week 2020	n/a	n/a	n/a	n/a	n/a	n/a
Non-s	UP-Pool	n/a	n/a	n/a	n/a	n/a	n/a
Z	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2020	n/a	n/a	n/a	n/a	n/a	n/a
	BNSF-GF	(9)	750	400	n/a	n/a	250
	Change from last week	17	3	81	n/a	n/a	0
Shuttle	Change from same week 2020	(1084)	(575)	n/a	n/a	n/a	n/a
Shu	UP-Pool	(21)	819	n/a	n/a	n/a	n/a
	Change from last week	54	(12)	n/a	n/a	n/a	n/a
	Change from same week 2020	(554)	(181)	n/a	n/a	n/a	n/a

¹Average 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 shipments¹

			Tariff	Fuel	Tariff plus surcl	argo por	Percent change
September 2021	Origin region ³	Destination region ³	rate/car	surcharge _ per car	metric ton	bushel ²	Y/Y ⁴
Unit train			Tate/cai	per cui	incure ton		
Wheat	Wichita, KS	St. Louis, MO	\$3,695	\$127	\$37.95	\$1.03	5
	Grand Forks, ND	Duluth-Superior, MN	\$3,658	\$0	\$36.33	\$0.99	-13
	Wichita, KS	Los Angeles, CA	\$7,115	\$0	\$70.66	\$1.92	0
	Wichita, KS	New Orleans, LA	\$4,525	\$223	\$47.14	\$1.28	3
	Sioux Falls, SD	Galveston-Houston, TX	\$6,851	\$ 22 0 \$0	\$68.03	\$1.85	0
	Colby, KS	Galveston-Houston, TX	\$4,801	\$244	\$50.10	\$1.36	4
	Amarillo, TX	Los Angeles, CA	\$5,121	\$339	\$54.22	\$1.48	5
Corn	Champaign-Urbana, IL	New Orleans, LA	\$3,900	\$252	\$41.23	\$1.05	5
	Toledo, OH	Raleigh, NC	\$7,833	\$ <u>2</u> \$0	\$77.79	\$1.98	15
	Des Moines, IA	Davenport, IA	\$2,455	\$53	\$24.91	\$0.63	3
	Indianapolis, IN	Atlanta, GA	\$5,979	\$0	\$59.37	\$1.51	3
	Indianapolis, IN	Knoxville, TN	\$5,040	\$0	\$50.05	\$1.27	3
	Des Moines, IA	Little Rock, AR	\$3,900	\$157	\$40.28	\$1.02	6
	Des Moines, IA	Los Angeles, CA	\$5,780	\$456	\$61.92	\$1.57	7
Soybeans	Minneapolis, MN	New Orleans, LA	\$3,631	\$272	\$38.76	\$1.05	6
5	Toledo, OH	Huntsville, AL	\$6,595	\$0	\$65.49	\$1.78	17
	Indianapolis, IN	Raleigh, NC	\$7,125	\$0	\$70.75	\$1.93	3
	Indianapolis, IN	Huntsville, AL	\$5,247	\$0	\$52.11	\$1.42	3
	Champaign-Urbana, IL	New Orleans, LA	\$4,645	\$252	\$48.62	\$1.32	4
Shuttle train	1 0 /	,	. ,				
Wheat	Great Falls, MT	Portland, OR	\$4,193	\$0	\$41.64	\$1.13	4
	Wichita, KS	Galveston-Houston, TX	\$4,236	\$0	\$42.07	\$1.14	0
	Chicago, IL	Albany, NY	\$6,376	\$0	\$63.32	\$1.72	-10
	Grand Forks, ND	Portland, OR	\$5,851	\$0	\$58.10	\$1.58	3
	Grand Forks, ND	Galveston-Houston, TX	\$5,721	\$0	\$56.81	\$1.55	-5
	Colby, KS	Portland, OR	\$6,012	\$400	\$63.67	\$1.73	5
Corn	Minneapolis, MN	Portland, OR	\$5,180	\$0	\$51.44	\$1.31	0
	Sioux Falls, SD	Tacoma, WA	\$5,140	\$0	\$51.04	\$1.30	0
	Champaign-Urbana, IL	New Orleans, LA	\$3,820	\$252	\$40.43	\$1.03	5
	Lincoln, NE	Galveston-Houston, TX	\$3,880	\$0	\$38.53	\$0.98	0
	Des Moines, IA	Amarillo, TX	\$4,320	\$197	\$44.85	\$1.14	6
	Minneapolis, MN	Tacoma, WA	\$5,180	\$0	\$51.44	\$1.31	0
	Council Bluffs, IA	Stockton, CA	\$5,100	\$0	\$50.65	\$1.29	2
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	\$4,875	\$290	\$51.29	\$1.40	4
	Toledo, OH	Huntsville, AL	\$4,945	\$0	\$49.11	\$1.34	3
	Grand Island, NE	Portland, OR	\$5,260	\$409	\$56.30	\$1.53	5

¹A unit train refers to shipments of at least 25 cars. Shuttle train rates are generally available for qualified shipments of

75-120 cars that meet railroad efficiency requirements.

 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.

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

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

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

Date	: Septembe	er 2021		Fuel	Tari	ff rate plus	Percent
	Origin		Tariff rate	surcharge		harge per:	change ⁴
Commodity	state	Destination region	per car ¹	per car ²	metric ton ³	bus hel ³	Y/Y
Wheat	MT	Chihuahua, CI	\$7,699	\$0	\$78.67	\$2.14	4
	OK	Cuautitlan, EM	\$6,813	\$174	\$71.39	\$1.94	3
	KS	Guadalajara, JA	\$7,531	\$684	\$83.94	\$2.28	3
	TX	Salinas Victoria, NL	\$4,347	\$106	\$45.50	\$1.24	2
Corn	IA	Guadalajara, JA	\$8,902	\$597	\$97.06	\$2.46	2
	SD	Celaya, GJ	\$8,140	\$0	\$83.17	\$2.11	0
	NE	Queretaro, QA	\$8,300	\$364	\$88.52	\$2.25	3
	SD	Salinas Victoria, NL	\$6,905	\$0	\$70.55	\$1.79	0
	MO	Tlalnepantla, EM	\$7,665	\$355	\$81.94	\$2.08	4
	SD	Torreon, CU	\$7,690	\$0	\$78.57	\$1.99	0
Soybeans	MO	Bojay (Tula), HG	\$8,547	\$560	\$93.04	\$2.53	3
	NE	Guadalajara, JA	\$9,157	\$588	\$99.56	\$2.71	3
	IA	El Castillo, JA	\$9,410	\$0	\$96.15	\$2.61	0
	KS	Torreon, CU	\$8,064	\$412	\$86.60	\$2.35	3
Sorghum	NE	Celaya, GJ	\$7,772	\$533	\$84.85	\$2.15	3
	KS	Queretaro, QA	\$8,108	\$218	\$85.06	\$2.16	2
	NE	Salinas Victoria, NL	\$6,713	\$175	\$70.37	\$1.79	2
	NE	Torreon, CU	\$7,092	\$380	\$76.34	\$1.94	2

 Table 8

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

¹Rates are based upon published tariff rates for high-capacity shuttle trains. Shuttle trains are available for qualified

shipments of 75-110 cars that meet railroad efficiency requirements.

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

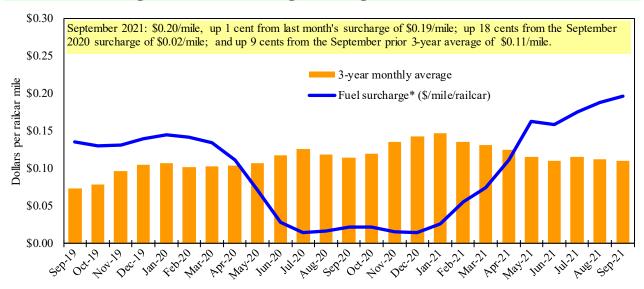
³Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu.

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

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

Figure 7

Railroad fuel surcharges, North American weighted average¹



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.

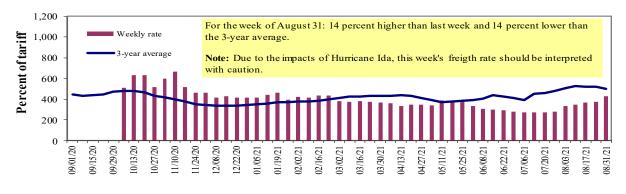
**CSX strike price changed from \$2.00/gal. to \$3.75/gal. starting January 1, 2015.

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^{1,2,3}



¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average of the 3-year average.
 ³No rates data from 06/23/20 to 9/29/20 due to the lock closure for rehabilitation and replacement of lock machinery.
 The 3-yr avg counts the average of 2018 and 2019. 2020 data is not available. *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	8/31/2021	485	435	430	381	425	425	400
	8/24/2021	443	387	378	307	342	342	333
\$/ton	8/31/2021	30.02	23.14	19.95	15.20	19.93	17.17	12.56
	8/24/2021	27.42	20.59	17.54	12.25	16.04	13.82	10.46
Curren	t week % chang	e from the s	same week:					
	Last year	11	19	-	49	34	34	63
	3-year avg. ²	-1	-6	-14	13	12	12	21
Rate ¹	September	560	549	539	465	533	533	454
	November	545	493	505	366	450	450	338

¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average; ton = 2,000 pounds; "-" not available due to lock closure. ILL River 3-year avg. is the 4-week moving average of 2018 and 2019. Data for 2020 is not available. Source: USDA, Agricultural Marketing Service.

Figure 9 Benchmark tariff rates

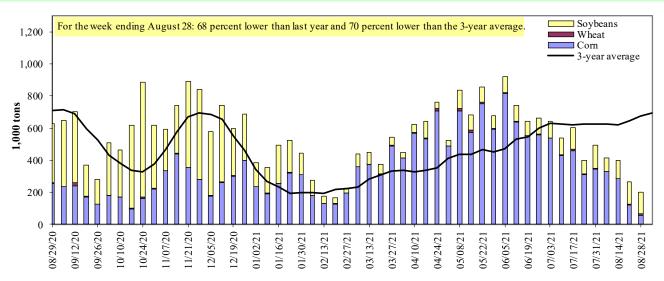
Calculating barge rate per ton: (Rate * 1976 tariff benchmark rate per ton)/100

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







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 08/28/2021	Corn	Wheat	Soybe ans	Other	Total
Mississippi River					
Rock Island, IL (L15)	13	11	93	0	117
Winfield, MO (L25)	25	8	78	0	111
Alton, IL (L26)	52	8	137	0	197
Granite City, IL (L27)	57	8	137	0	202
Illinois River (La Grange)	14	0	38	0	53
Ohio River (Olmsted)	9	27	11	0	47
Arkansas River (L1)	0	41	0	0	41
Weekly total - 2021	66	77	148	0	290
Weekly total - 2020	381	29	512	0	922
2021 YTD ¹	18,722	1,225	5,689	217	25,853
2020 YTD ¹	12,469	1,342	8,948	107	22,866
2021 as % of 2020 YTD	150	91	64	203	113
Last 4 weeks as $\%$ of 2020^2	71	135	34	145	55
Total 2020	18,942	1,765	19,205	237	40,149

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.

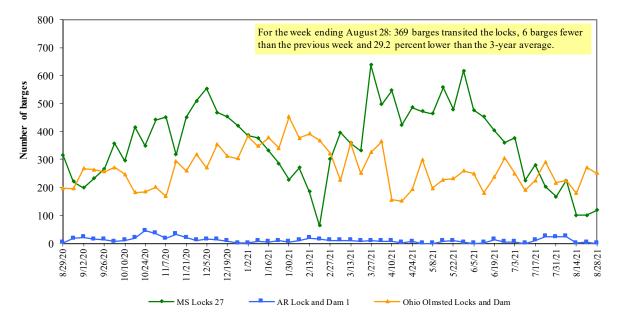
a contract and exactly due to founding

² As a percent of same period in 2020.

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

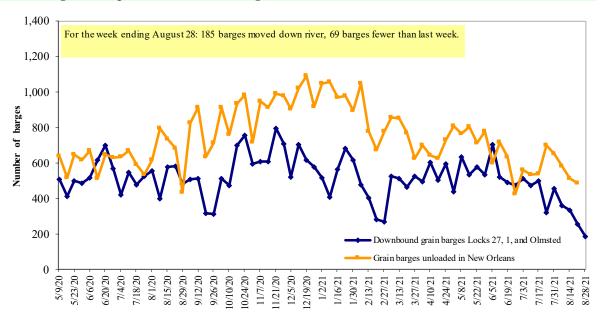
Source: U.S. Army Corps of Engineers.

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



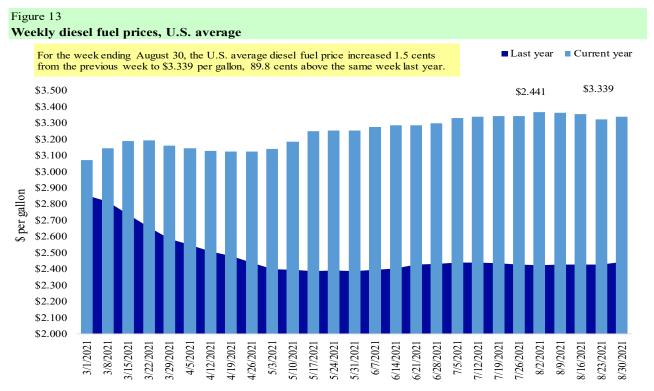
Grain barges for export in New Orleans region

Note: Olmsted = Olmsted Locks and Dam. Grain unload data is currently unavailable for the week ending August 28. Source: U.S. Army Corps of Engineers and USDA, Agricultural Marketing Service. 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.

			Change	e from
Region	Location	Price	Week ago	Year ago
Ι	East Coast	3.306	0.009	0.787
	New England	3.271	0.011	0.649
	Central Atlantic	3.474	0.001	0.780
	Lower Atlantic	3.201	0.015	0.822
II	Midwest	3.241	0.025	0.912
III	Gulf Coast	3.060	0.022	0.872
IV	Rocky Mountain	3.628	-0.011	1.243
V	West Coast	3.997	0.005	1.025
	West Coast less California	3.645	0.002	1.042
	California	4.291	0.007	1.015
Total	United States	3.339	0.015	0.898

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

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



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)

			Whe	eat			Corn	Soybeans	Total
For the week ending	HRW	SRW	HRS	SWW	DUR	All wheat			
Export balances ¹									
8/19/2021	1,473	842	1,122	673	7	4,117	4,152	2,197	10,465
This week year ago	1,856	638	1,883	1,201	251	5,829	2,334	4,308	12,471
Cumulative exports-marketing year ²									
2020/21 YTD	1,779	758	1,461	970	43	5,011	66,173	59,963	131,147
2019/20 YTD	2,637	446	1,573	1,029	213	5,898	42,158	42,976	91,032
YTD 2020/21 as % of 2019/20	67	170	93	94	20	85	157	140	144
Last 4 wks. as % of same period 2019/20*	87	148	70	73	3	82	223	57	99
Total 2019/20	9,526	2,318	6,960	4,751	922	24,477	42,622	43,994	111,094
Total 2018/19	8,591	3,204	6,776	5,164	479	24,214	48,924	46,189	119,327

¹ Current unshipped (outstanding) export sales to date.

² Shipped export sales to date; 2021/22 marketing year now in effect for wheat while corn and soybeans remain in effect for the 2020/21 marketing year.

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 importers¹ of U.S. corn

For the week ending 08/19/2021		Total commitments ²		% change	Exports ³
	2021/22	2020/21	2019/20	current MY	3-yr. avg.
	next MY	current MY	last MY	from last MY	2017-19
			- 1,000 mt -		
Mexico	3,316	15,752	14,496	9	14,869
Japan	1,331	10,999	10,072	9	11,221
Columbia	451	3,949	4,848	(19)	4,830
Korea	65	3,527	2,693	31	4,011
China	10,744	22,748	2,240	915	909
Top 5 importers	15,907	56,974	34,349	66	35,840
Total U.S. corn export sales	19,283	70,324	44,492	58	49,983
% of projected exports	32%	100%	98%		
Change from prior week ²	684	7	270		
Top 5 importers' share of U.S. corn					
export sales	82%	81%	77%		72%
USDA forecast August 2021	61,069	70,611	45,216	56	
Corn use for ethanol USDA forecast,					
August 2021	132,080	128,905	123,368	4	

¹Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2019/20; marketing year (MY) = Sep 1 - Aug 31.

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

³FAS marketing year ranking reports (carry over 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 importers¹ of U.S. soybeans

For the week ending 08/19/2021		Total commitme	nts ²	% change	Exports ³
	2021/22	2020/21	2019/20	current MY	3-yr. avg.
	next MY	current MY	last MY	from last MY	2017-19
			1,000 mt -		- 1,000 mt -
China	6,679	36,053	16,924	113	19,106
Mexico	1,261	4,809	4,731	2	4,591
Egypt	249	2,777	3,833	(28)	2,980
Indonesia	29	2,383	2,404	(1)	2,360
Japan	171	2,361	2,507	(6)	2,288
Top 5 importers	8,389	48,384	30,398	59	31,324
Total U.S. soybean export sales	15,615	62,160	47,284	31	49,352
% of projected exports	28%	101%	103%		
change from prior week ²	1,750	75	(9)		
Top 5 importers' share of U.S.					
soybean export sales	54%	78%	64%		63%
USDA forecast, August 2021	55,995	61,580	45,749	135	

¹Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2019/20; marketing year (MY) = Sep 1 - Aug 31.

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

³FAS marketing year ranking reports (carry over 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 importers¹ of all U.S. wheat

For the week ending 08/19/2021	Total Co	ommitments ²	% change	Exports ³
	2021/22	2020/21	current MY	3-yr. avg.
	current MY	last MY	from last MY	2018-20
		1,000 mt -		- 1,000 mt -
Mexico	1,476	1,219	21	3,388
Philippines	1,373	1,650	(17)	3,121
Japan	890	1,061	(16)	2,567
Korea	585	704	(17)	1,501
Nigeria	725	586	24	1,490
China	783	1,223	(36)	1,268
Taiwan	343	479	(28)	1,187
Indonesia	0	413	(100)	1,131
Thailand	224	268	(17)	768
Italy	72	403	(82)	681
Top 10 importers	6,470	8,005	(19)	17,102
Total U.S. wheat export sales	9,128	11,727	(22)	24,617
% of projected exports	38%	43%		
change from prior week ²	116	713		
Top 10 importers' share of				
U.S. wheat export sales	71%	68%		69%
USDA forecast, August 2021	23,842	27,030	(12)	

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

²Cumulative exports (shipped) + outstanding sales (unshipped), FAS weekly export sales report, or export sales query. The total commitments change (net sales) from prior week could include revisions from the previous week's outstanding and/or accumulated sales.

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)

	For the week ending	Previous	Current week			2021 YTD as	Last 4-we	eeks as % of:	
Port regions	08/26/21	week*	as % of previous	2021 YTD*	2020 YTD*	% of 2020 YTD	Last year	Prior 3-yr. avg.	2020 total*
Pacific Northwest									
Wheat	182	506	36	10,356	10,794	96	99	104	15,966
Corn	0	0	n/a	12,322	7,255	170	7	8	9,969
Soybeans	0	0	n/a	3,758	3,225	117	0	0	14,028
Total	182	506	36	26,436	21,274	124	54	55	39,963
Mississippi Gulf			••						•,,, ••
Wheat	56	128	43	2,236	2,540	88	219	146	3,422
Corn	382	464	82	30,607	19,517	157	97	95	28,781
Soybeans	305	163	187	11,581	15,129	77	29	31	38,013
Total	743	755	98	44,424	37,186	119	65	65	70,215
Texas Gulf				,					
Wheat	53	28	189	2,647	2,991	89	79	102	4,248
Corn	10	51	19	387	538	72	83	75	723
Soybeans	0	0	n/a	656	170	387	0	0	2,098
Total	62	79	78	3,690	3,698	100	55	80	7,068
nterior				,	,				,
Wheat	43	84	52	2,002	1,501	133	149	141	2,263
Corn	161	197	82	6,322	5,706	111	101	104	8,683
Soybeans	91	84	107	3,810	4,302	89	49	48	7,274
Total	294	365	81	12,134	11,509	105	85	86	18,220
Great Lakes									
Wheat	0	21	0	284	483	59	34	29	891
Corn	0	0	n/a	55	26	214	0	0	111
Soybeans	0	0	n/a	67	240	28	9	10	1,111
Total	0	21	0	407	749	54	17	18	2,113
Atlantic									
Wheat	0	1	0	92	24	379	31	79	65
Corn	0	20	0	34	8	418	n/a	n/a	33
Soybeans	1	5	26	1,078	489	220	14	8	1,870
Total	1	26	5	1,204	522	231	45	31	1,968
J.S. total from ports	*								
Wheat	333	768	43	17,617	18,333	96	109	109	26,854
Corn	553	732	75	49,728	33,050	150	77	78	48,301
Soybeans	397	253	157	20,950	23,555	89	26	27	64,394
Total	1,283	1,753	73	88,294	74,937	118	63	64	139,548

*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 2020.

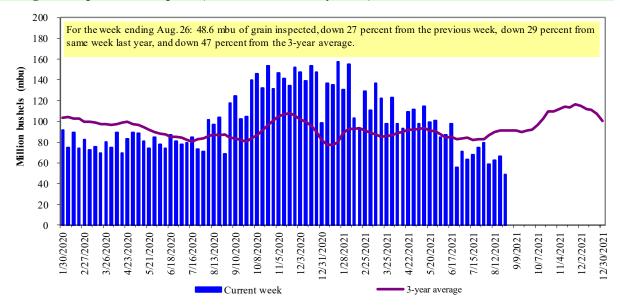
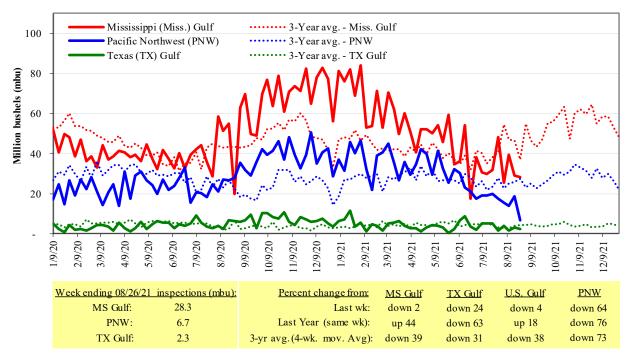


Figure 14 U.S. grain inspected for export (wheat, corn, and soybeans)

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 PNW¹ (wheat, corn, and soybeans)



Source: USDA, Federal Grain Inspection Service.

Table 17

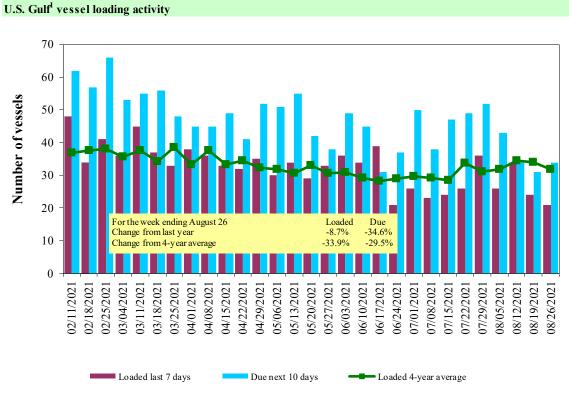
Figure 16

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

				Pacific
		Gulf		Northwest
		Loaded	Due next	
Date	In port	7-days	10-days	In port
8/26/2021	26	21	34	4
8/19/2021	22	24	31	5
2020 range	(2260)	(2346)	(3468)	(724)
2020 average	37	33	49	15

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

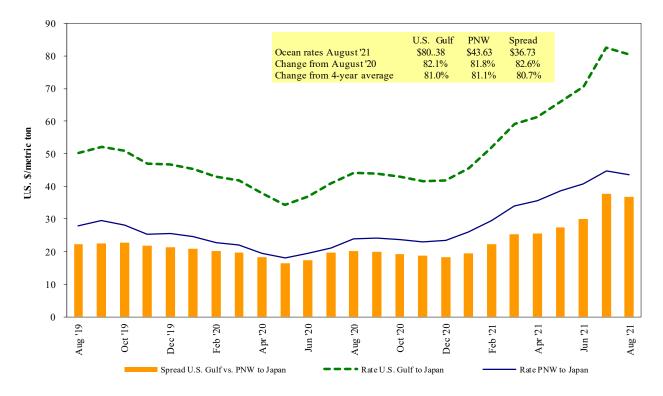
Source: USDA, Agricultural Marketing Service.



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

Figure 17





Note: PNW = Pacific Northwest Source: O'Neil Commodity Consulting

Table 18

Ocean freight rates for selected shipments, week ending 08/28/2021

Export	Import	Grain	Loading	Volume loads	Freight rate
region	region	types	date	(metric tons)	(US\$/metric ton)
U.S. Gulf	Japan	Heavy grain	Oct 1/10	48,000	70.10
U.S. Gulf	Japan	Heavy grain	Aug 21/Sep 9	50,000	60.90
U.S. Gulf	Japan	Heavy grain	Aug 1/10	50,000	69.75
U.S. Gulf	Japan	Heavy grain	Jul 1/15	50,000	64.10
U.S. Gulf	Japan	Grain	May 25/Jun 25	50,000	46.85 op 47.85
U.S. Gulf	Japan	Heavy grain	Apr 15/May 15	50,000	47.00
U.S. Gulf	Sudan	Wheat	Sep 1/10	49,000	79.12*
U.S. Gulf	China	Heavy grain	Oct 1/10	55,000	81.50
U.S. Gulf	Djibouti	Wheat	Jul 6/16	5,880	85.70*
PNW	Japan	Wheat	Sep 1	52,170	56.55*
PNW	Japan	Wheat	Jul 25/ Aug 5	32,590	64.00
PNW	Japan	Wheat	Jul 16/31	30,250	64.35
PNW	Japan	Wheat	Jun 5/15	50,600	49.30
PNW	Yemen	Wheat	Jun 10/20	22,230	132.25*
PNW	Taiwan	Heavy grain	Aug 20/30	35,000	64.20*
PNW	Taiwan	Wheat	Aug 1/10	55,000	54.95
PNW	Taiwan	Wheat	May 29/Jun 12	45,665	48.00

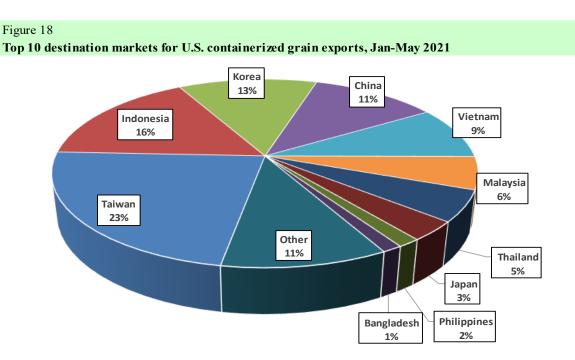
^{*}50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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

op = option.

Source: Maritime Research, Inc.

In 2019, containers were used to transport 9 percent of total U.S. waterborne grain exports. Approximately 60 percent of U.S. waterborne grain exports in 2019 went to Asia, of which 14 percent were moved in containers. Approximately 94 percent of U.S. waterborne containerized grain exports were destined for Asia.



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.

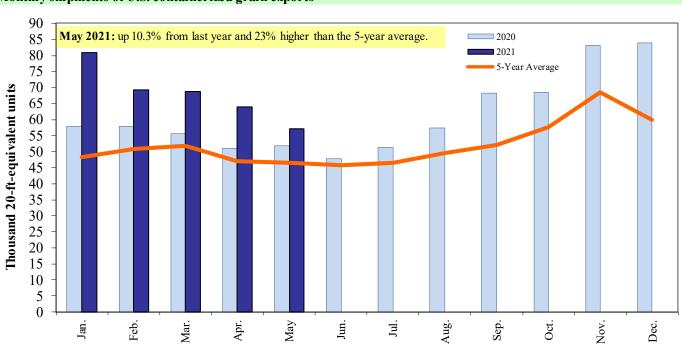


Figure 19 Monthly shipments of U.S. containerized grain exports

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, 120190, 120190, 230210, 230310, 230330, and 230990.

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

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Preferred citation: U.S. Department of Agriculture, Agricultural Marketing Service. *Grain Transportation Report.* September 2, 2021. Web: <u>http://dx.doi.org/10.9752/TS056.09-02-2021</u>.

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