USDA Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE

Grain Transportation Report

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

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September 16, 2021

Contents

The next release is September 23, 2021

WEEKLY HIGHLIGHTS

Grain Inspections Lowest Since Early January 2019

For the week ending September 9, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions totaled .824 million metric tons (mmt). Total grain inspections were up 2 percent from the previous week, down 75 percent from the same time last year, and down 66 percent from the 3-year average. Total inspections were the lowest since early January 2019. Increased inspections of wheat (33 percent) and soybeans (16 percent) from the previous week could not offset the 50 percent drop in corn inspections. Corn shipments were down, primarily to Asia. As the U.S. Gulf continued to recover from Hurricane Ida, there were no inspections of grain in the Mississippi Gulf. Pacific Northwest (PNW) inspections increased 30 percent from the previous week. During the last 4 weeks, total inspections were 57 percent below the same time last year and 51 percent below the 3-year average.

FMCSA Extends Emergency Waiver on CDL Requirements

The Federal Motor Carrier Safety Administration (FMCSA) recently extended, through November 30, 2021, its waiver on commercial driver's license (CDL) requirements for truck drivers. The original waiver was placed in effect to help meet the challenges of the national emergency declared for COVID-19. The waiver for CDLs permits, but does not require, States to extend the validity of CDLs due for renewal on or after March 1, 2020. The waiver also extends an exemption from CDL-required medical certification—provided the certification expired on or after June 1, 2021. FMCSA intends to review the status of the waiver on October 1, 2021, and may act to end it sooner, if conditions warrant.

USDA Research Examines Port Choice for Grain Exports

USDA's Agricultural Marketing Service recently published a synopsis of research conducted in cooperation with the University of Oregon. The research report is titled "A Study of Grain and Soybean Export Flows: Uncovering Their Determinants and the Implications for Infrastructure Investment." The researchers studied how transportation costs and port attributes (e.g., channel depth) affected port choice from two perspectives—an importing country and an inland U.S. shipper. They found a 1-percent increase in a port's shipping costs corresponded to a 6- to 8-percent reduction in the port's traffic. In addition, they found a 1-percent increase in channel depth resulted in a port gaining 1- to 3-percent more business, and a 1-percent increase in berthing length resulted in about 1 percent more traffic.

Snapshots by Sector

Export Sales

For the week ending September 2, **unshipped balances** of wheat, corn, and soybeans for marketing year 2021/22 totaled 49.2 million metric tons (mmt). Net **corn export sales** for the new marketing year, which began September 1, were 0.906. Net **soybean export sales** for the new marketing year, which began September 1, were 1.472 mmt, Net weekly **wheat export sales** were 0.388 mmt, up 31 percent from last week.

Rail

U.S. Class I railroads originated 16,711 **grain carloads** during the week ending September 4. This was a 3-percent decrease from the previous week, 27 percent less than last year, and 20 percent lower than the 3-year average.

Average September shuttle **secondary railcar** bids/offers (per car) were $351 above tariff for the week ending September 9. This was $287 more than last week and $449 lower than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending September 11, **barge grain movements** totaled 176,618 tons. This was 43 percent lower than the previous week and 78 percent lower than the same period last year.

For the week ending September 11, 114 grain barges **moved down river**—83 fewer barges than the previous week.

Ocean

For the week ending September 9, 6 **oceangoing grain vessels** were loaded in the Gulf—86 percent fewer than the same period last year. Within the next 10 days (starting September 10), 30 vessels were expected to be loaded—54 percent fewer than the same period last year. Lower vessel counts are partly due to incomplete data because of Hurricane Ida.

As of September 9, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $80.25. This was 2 percent less than the previous week. The rate from PNW to Japan was $44.25 per mt, 1 percent less than the previous week.

Fuel

For the week ending September 13, the U.S. average **diesel fuel price decreased** by 0.1 cent from the previous week to $3.372 per gallon, 95.0 cents above the same week last year.

Preferred citation: U.S. Department of Agriculture, Agricultural Marketing Service. *Grain Transportation Report.* September 16, 2021.
Web: http://dx.doi.org/10.9752/TS056.09-16-2021

Feature Article/Calendar

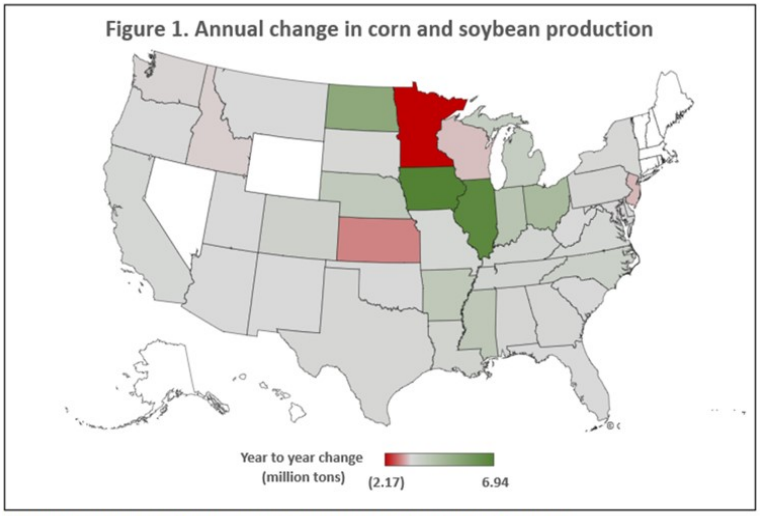
The Transportation Implications of USDA's September *WASDE* and *Crop Production* Reports

Released at the end of the growing period, USDA's September *World Agricultural Supply and Demand Estimates* (*WASDE*) report includes projections of production and use for corn, soybeans, and wheat. These projections provide broad indicators of transportation demand in the upcoming marketing year (MY). For MY 2021/22, USDA's World Agricultural Outlook Board (WAOB), which publishes *WASDE*, projects the United States will produce 546 million metric tons (mmt) of corn, soybeans, and wheat—up 23.6 mmt from last year. However, WAOB also projects the United States will export 143.6 mmt of corn, soybeans, and wheat—down 14.7 mmt, or 9 percent, from MY 2020/21. Domestic use of corn, soybeans, and wheat is estimated to be 407.9 mmt, 6.5 mmt higher than MY 2020/21 (a 1.6-percent increase). Despite the increase in production, the decline in total use of U.S. corn, soybean, and wheat in MY 2021/22 will likely put downward pressure on total grain transportation demand.

For a more close-up, regional perspective than *WASDE*, USDA's National Agricultural Statistics Service's (NASS) *Crop Production* report provides State-level production estimates. This article takes a look at both reports and the implications they hold nationally (*WASDE*) and regionally (*Crop Production*) for future grain transportation.

NASS Shows Increased Crop Production in Eastern States

While total transportation demand is likely down because of lower use, State-level changes in production may signal regional shifts in transportation demand. The recent severe drought in parts of the Corn Belt has hampered production of corn and soybeans in some States. NASS's projections of corn and soybean production are significantly lower than last year in Minnesota, Kansas, and Wisconsin (fig. 1). In contrast, several eastern Corn Belt States—Illinois, Indiana, and Ohio—show corn and soybean production that is either at or close to record-high levels. According to Department of Transportation data, key grain corridors in these States include the following: intra-state and interstate truck flows; barge traffic from Illinois and Indiana to Louisiana; rail from Indiana to Georgia; and rail from Ohio to North Carolina.[1] Unlike other western Corn Belt States, Iowa and North Dakota are projected to produce significantly more corn and soybeans than last year. Corn and soybean production in Missouri and Nebraska is forecast at normal to above-normal levels.



NASS also projects hard red spring (HRS) wheat production at 305 million bushels (mbu), 43 percent lower than the previous crop year and the lowest on record. From MY 2020/21 to MY 2021/22 (year to year), production in North Dakota and Montana—the largest and second largest domestic producers—is down 53 and 59 percent, respectively. Production in Minnesota and South Dakota is forecast at the lowest levels since 1988. With this drop in production, WAOB estimates HRS use will contract by 128 mbu (or 21 percent) year to year, which will lower regional demand for HRS transportation, such as truck and rail, as well as rail shipments out of the Pacific Northwest (PNW).

[1] Department of Transportation, Bureau of Transportation Statistics, and Federal Highway Administration, Freight Analysis Framework Version 5, 2017 flow data for STGC 02 (cereal grains).

Total U.S. Corn, Soybean, and Wheat Use Down 8.1 MMT Year to Year

Transportation demand derives from the various uses of grain, such as exports, feed, and fuel. On the domestic side of use, *WASDE* estimates production of ethanol—a domestic-use category for corn—to increase by 3.3 mmt year to year. Also, year to year, domestic wheat demand is projected to rise by 1.8 mmt, and increased soybean crush is projected to help soybean use rise by 1.5 mmt. Such increases in domestic use will offset some transportation demand that was lost because of reduced export volumes. Such increases may also result in less demand for barge services, which primarily serve export movements, but more demand for trucks and railroads, which support most domestic grain movements.

For a global perspective on use, the September *WASDE* projects corn, soybean, and wheat imports worldwide. Year to year, total global use for these commodities will increase, while U.S. exports will decline. WAOB expects export volumes of all commodities, except hard red winter wheat, to decline.[1] More specifically, WAOB estimates year-to-year corn exports will decline by 6.9 mmt, soybeans by 4.7 mmt, and all wheat by 3.2 mmt. Lower U.S. corn, soybean, and wheat exports in MY 2021/22 can be attributed to a few primary factors, including relatively high domestic cash prices, a strong U.S. dollar, increased domestic use, and record-high grain production (and hence, rising exports) in key, U.S.-competing countries.

In MY 2021/22, WAOB estimates corn will represent 45 percent of total grain export volumes, followed by soybeans (39 percent) and wheat (16 percent). According to Federal Grain Inspection Service (FGIS) data, over the last 5 marketing years, an overwhelming majority of corn, soybean, and wheat exports are shipped through export terminals in the U.S. Gulf (Mississippi River and north Texas) and ports in PNW (Oregon and Washington). Annually, over the last 5 years, at least 95 percent of corn exports, 90 percent of soybean exports, and 93 percent of wheat exports originated from the U.S. Gulf and PNW. According to FGIS (***GTR* table 16**), over the last 3 years, an annual average 83 percent of HRS exports by ocean vessel originated from terminals in PNW, and 9 percent originated from terminals on the Mississippi River. Reduced HRS exports will lead to lower rail demand, as well as somewhat reduced demand for Great Lakes ships (lakers) in the Great Plains. Therefore, given WAOB's reduced year-to-year export estimates, lower barge, rail, and ocean vessel demand could emerge at the ports in the U.S. Gulf and PNW. If the estimated extra production in the eastern Corn Belt States materializes into exports, that could increase rail and ocean-vessel volumes at ports on the Great Lakes (e.g., Toledo, Chicago, and Duluth) and the Atlantic Ocean.

Different Transportation Patterns May Emerge in MY 2021/22

NASS's State-level production estimates show the potential for record-high corn and soybean production in the eastern Corn Belt, and WAOB projects a decline in total use. These estimates suggest different transportation patterns this year, in terms of location and mode. If USDA's projections are realized, eastern carriers could see more originations, and with an increase in domestic use, trucks could see more traffic. Also, if exports decline as expected, railroads, barges, and ocean vessels could see less traffic. Factors affecting corn, soybean, and wheat exports are diverse, and ambiguity about how much countries may import from the United States further complicates the picture. For example, Chinese demand for U.S. agricultural commodities helped support U.S. row crop exports and pushed the demand for agricultural transportation to record levels in MY 2020/21. However, changes to Chinese demand could impact overall transportation patterns in MY 2021/22. Walter.Kunisch@usda.gov

[1] Note that, in the monthly *WASDE*, WAOB does not project U.S. exports by country.

Grain Transportation Indicators

Table 1

Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Non-Shuttle	Shuttle		Gulf	Pacific
09/15/21	226	291	239	333	359	314
09/08/21	226	291	227	313	368	317

[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)

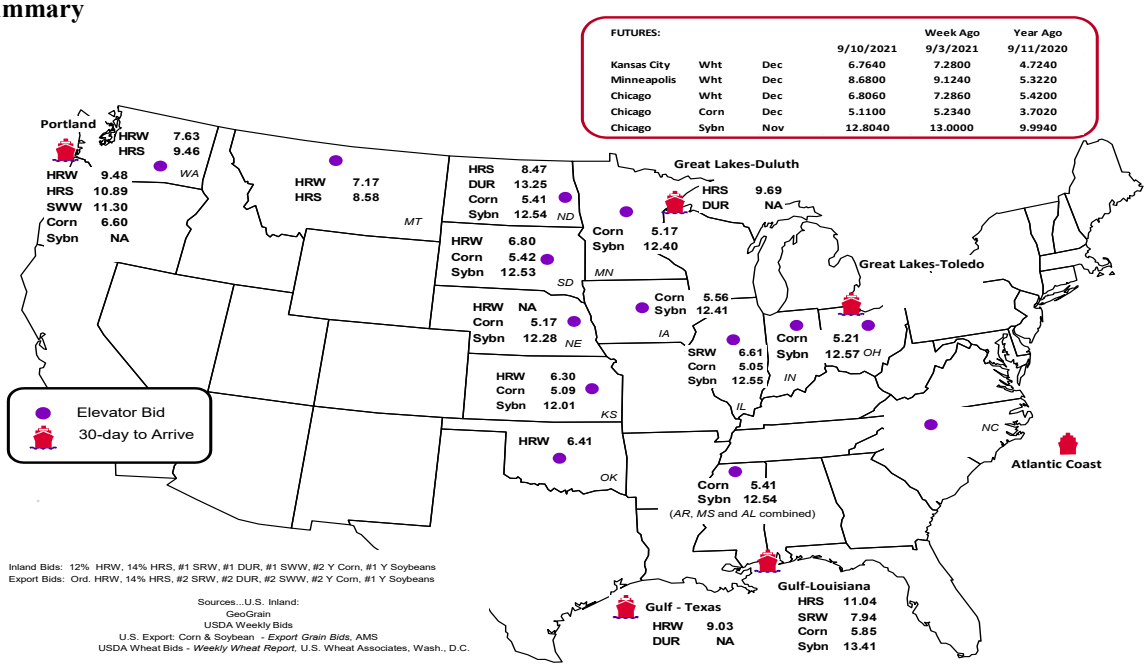
Commodity	Origin–destination	9/10/2021	9/3/2021
Corn	IL–Gulf	-0.80	-0.72
Corn	NE–Gulf	-0.68	-0.66
Soybean	IA–Gulf	-1.00	-1.22
HRW	KS–Gulf	-2.73	-2.55
HRS	ND–Portland	-2.42	-2.20

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]
9/08/2021[p]	106	1,109	2,974	116	4,305	9/4/2021	3,108
9/01/2021[r]	203	341	1,878	9	2,431	8/28/2021	3,286
2021 YTD[r]	36,875	46,554	192,418	10,366	286,213	2021 YTD	100,694
2020 YTD[r]	16,471	31,962	167,197	7,774	223,404	2020 YTD	89,229
2021 YTD as % of 2020 YTD	224	146	115	133	128	% change YTD	113
Last 4 weeks as % of 2020[2]	28	67	45	19	45	Last 4wks. % 2020	113
Last 4 weeks as % of 4-year avg.[2]	35	82	51	28	53	Last 4wks. % 4 yr.	124
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

[1]Data 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.

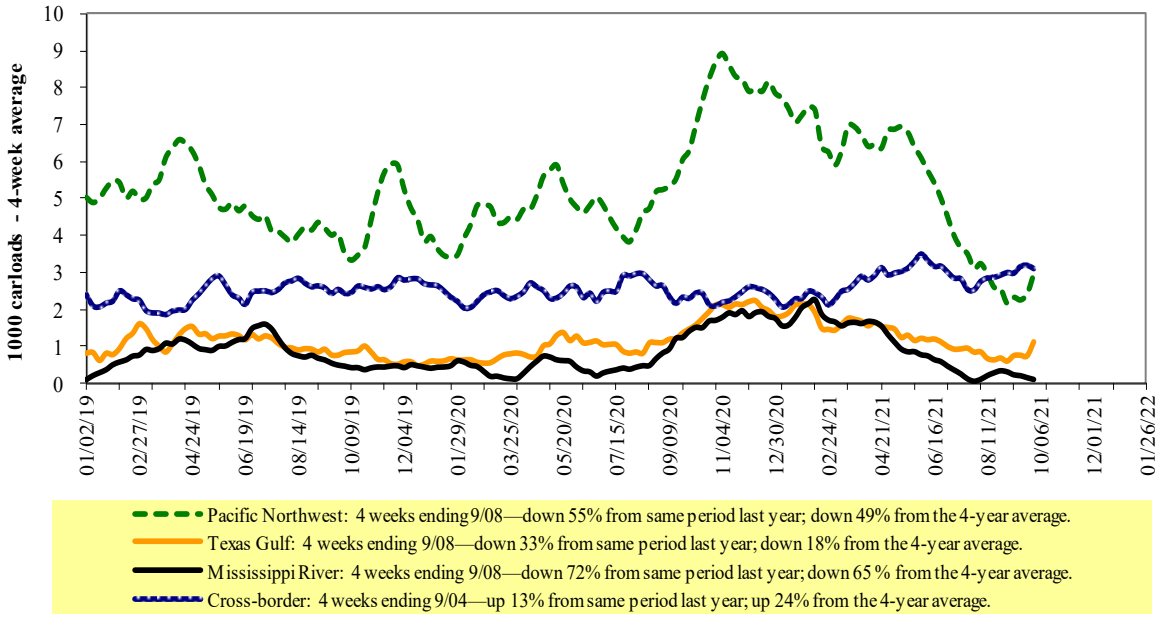
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available; wks. = weeks; avg. = average.

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.

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	
9/4/2021	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,229	1,542	7,456	1,427	5,057	16,711	3,232	3,753
This week last year	1,589	2,249	11,878	1,124	6,082	22,922	4,464	5,048
2021 YTD	63,007	86,512	404,628	40,061	214,600	808,808	143,678	168,735
2020 YTD	58,913	85,449	386,816	37,548	184,030	752,756	147,061	164,741
2021 YTD as % of 2020 YTD	107	101	105	107	117	107	98	102
Last 4 weeks as % of 2020*	78	74	72	122	90	80	70	59
Last 4 weeks as % of 3-yr. avg.**	81	75	72	137	99	83	77	61
Total 2020	91,659	129,814	613,630	57,782	296,701	1,189,586	238,326	261,778

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

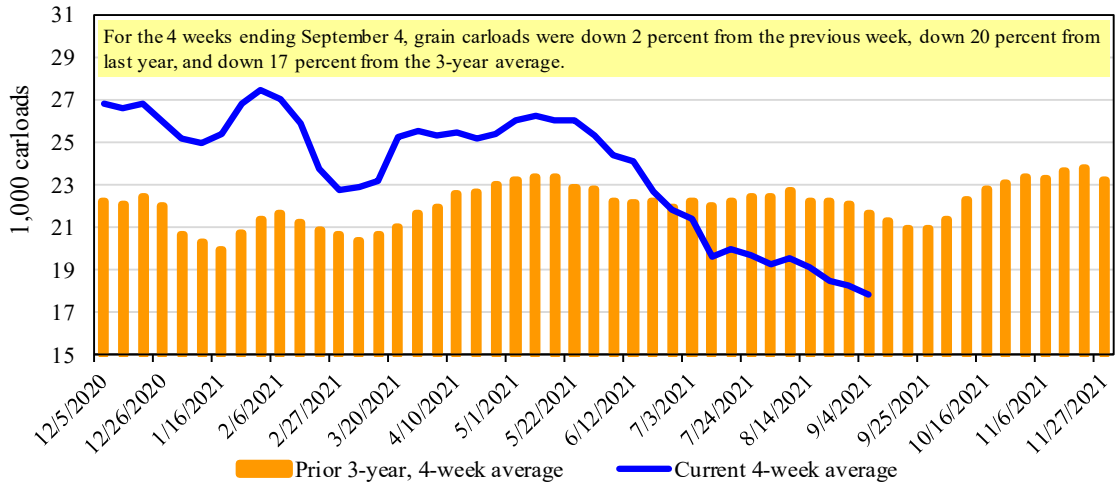
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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

Source: Association of American Railroads.

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							
9/9/2021		Sep-21	Sep-20	Oct-21	Oct-20	Nov-21	Nov-20	Dec-21	Dec-20
BNSF[3]	COT grain units	n/a	no offer	0	no offer	0	138	0	23
	COT grain single-car	no bids	no offer	129	no offer	0	378	0	252
UP[4]	GCAS/Region 1	n/a	no offer	n/a	no offer	n/a	no offer	n/a	n/a
	GCAS/Region 2	n/a	no offer	n/a	no offer	n/a	no offer	n/a	n/a

[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.

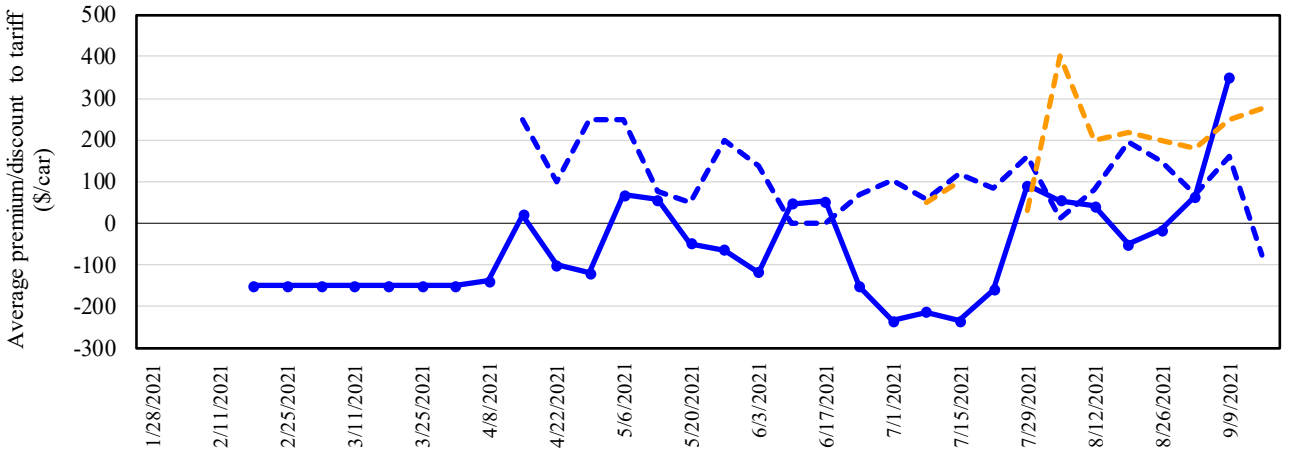
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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

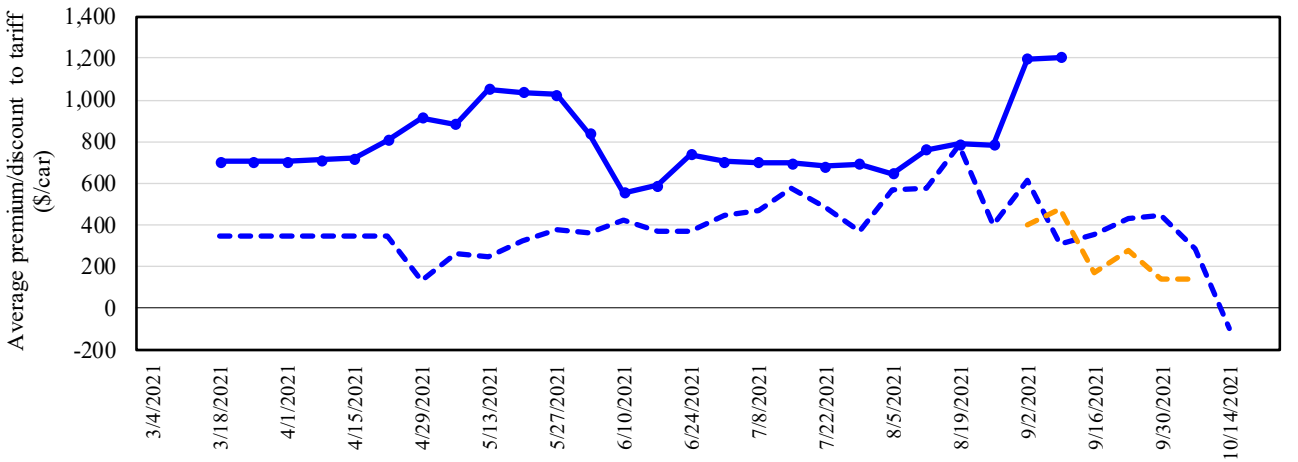


9/9/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$201	$500

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $287 this week and are at 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
Bids/offers for railcars to be delivered in October 2021, secondary market



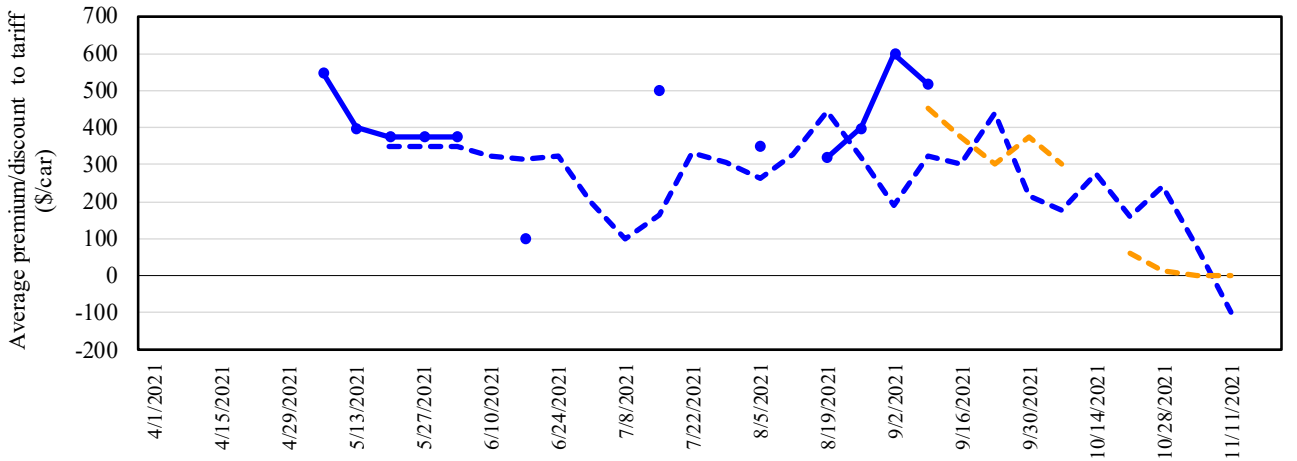
9/9/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$976	$1,438

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $10 this week and are at 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

Bids/offers for railcars to be delivered in November 2021, secondary market



9/9/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$500	$533

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $83 this week and are $83 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: 9/9/2021	Delivery period					
		Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-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 2020	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 2020	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**201**	**976**	**500**	**400**	**600**	**600**
	Change from last week	211	29	(250)	50	n/a	n/a
	Change from same week 2020	(799)	(307)	(200)	n/a	n/a	n/a
	UP-Pool	**500**	**1438**	**533**	**400**	**550**	**300**
	Change from last week	362	(10)	83	0	n/a	n/a
	Change from same week 2020	(100)	538	146	250	500	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]

September 2021	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	$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	$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	$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
	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							
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

[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: September 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	$6,813	$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

[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.

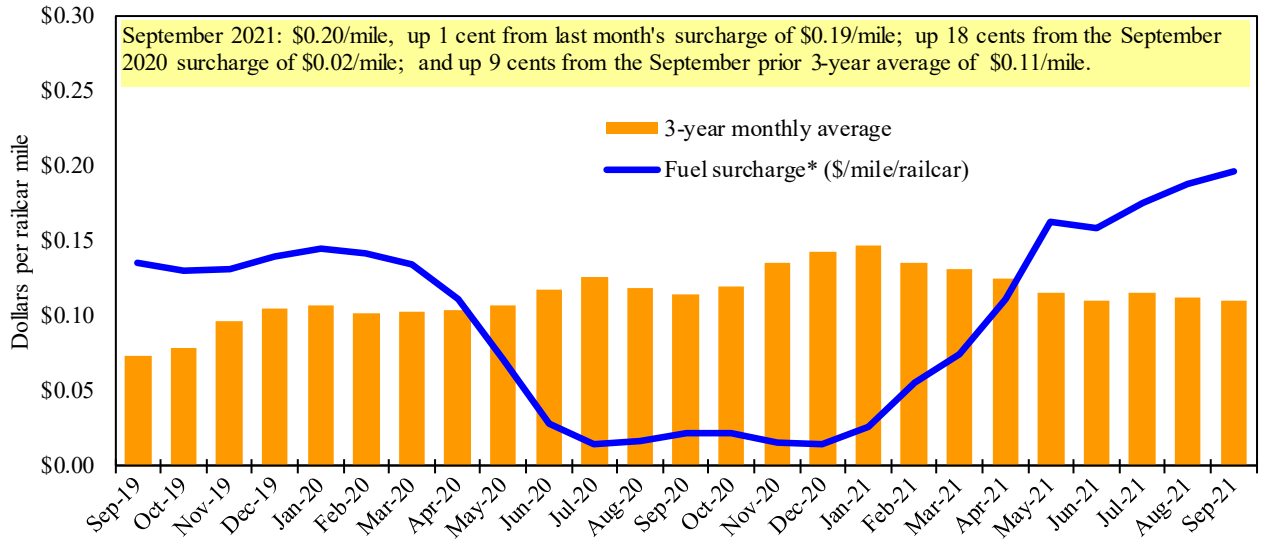
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu.

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

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.

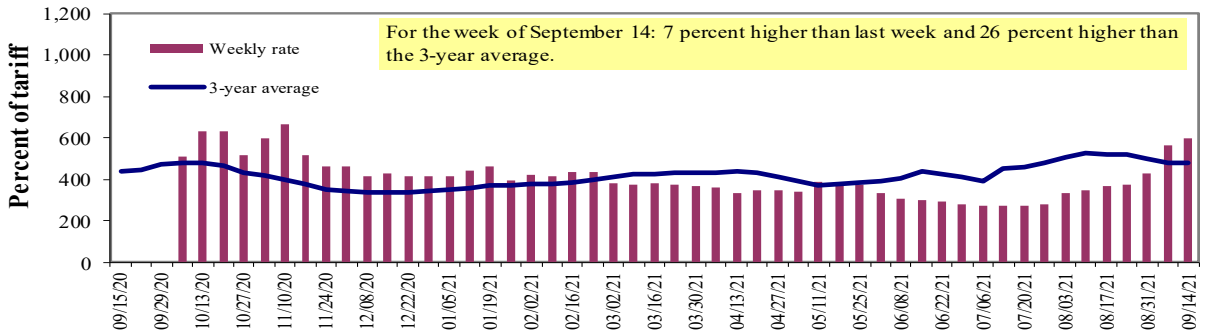
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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[1,2,3]



[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average of the 3-year average.
[3]No 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 avearge of 2018 and 2019. 2020 data is not available. *Source: USDA, Agricultural Marketing Service.

Table 9
Weekly barge freight rates: Southbound only

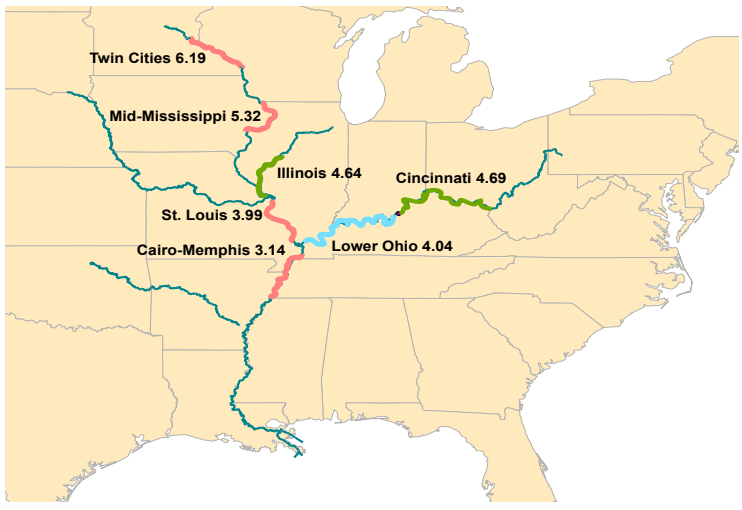
		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	9/14/2021	590	612	599	575	631	631	646
	9/7/2021	606	578	563	566	606	606	685
$/ton	9/14/2021	36.52	32.56	27.79	22.94	29.59	25.49	20.28
	9/7/2021	37.51	30.75	26.12	22.58	28.42	24.48	21.51
Current week % change from the same week:								
	Last year	37	58	-	98	64	64	120
	3-year avg. [2]	27	38	26	62	58	58	84
Rate[1]	October	688	682	665	642	665	665	638
	December	-	-	438	348	384	384	333

[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-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 for2020 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

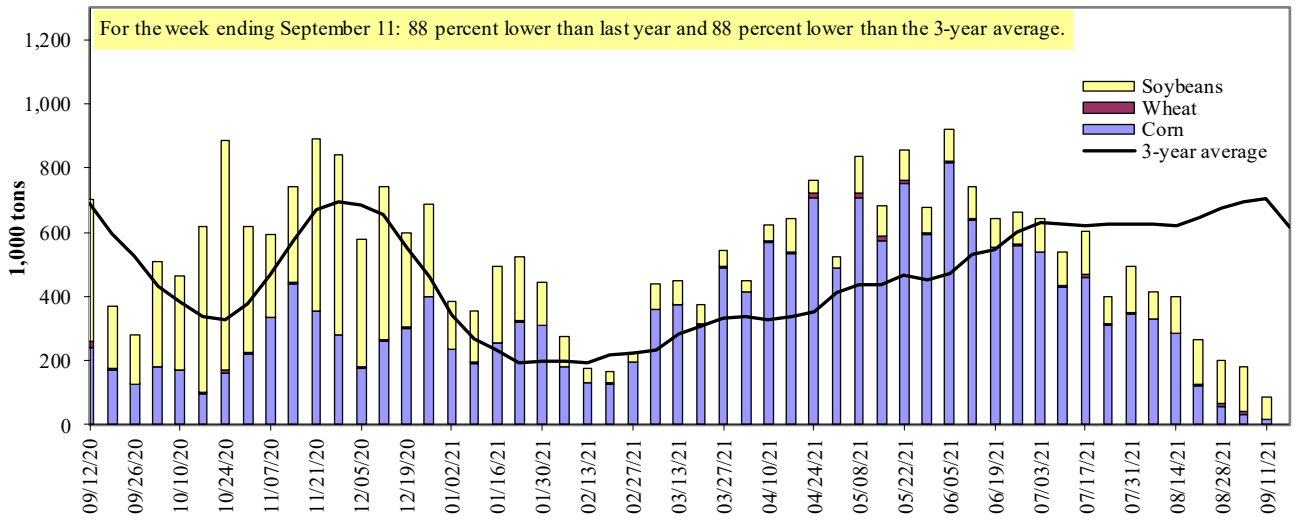
Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.



Map Credit: USDA, Agricultural Marketing Service

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 09/11/2021	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	5	0	45	0	49
Winfield, MO (L25)	10	0	41	0	51
Alton, IL (L26)	15	0	69	0	83
Granite City, IL (L27)	15	0	69	0	83
Illinois River (La Grange)	8	0	16	0	24
Ohio River (Olmsted)	5	20	19	0	45
Arkansas River (L1)	8	38	3	0	49
Weekly total - 2021	28	58	91	0	177
Weekly total - 2020	275	25	489	10	799
2021 YTD[1]	18,812	1,334	5,975	217	26,338
2020 YTD[1]	13,029	1,398	9,881	116	24,425
2021 as % of 2020 YTD	144	95	60	186	108
Last 4 weeks as % of 2020[2]	24	191	32	150	36
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.

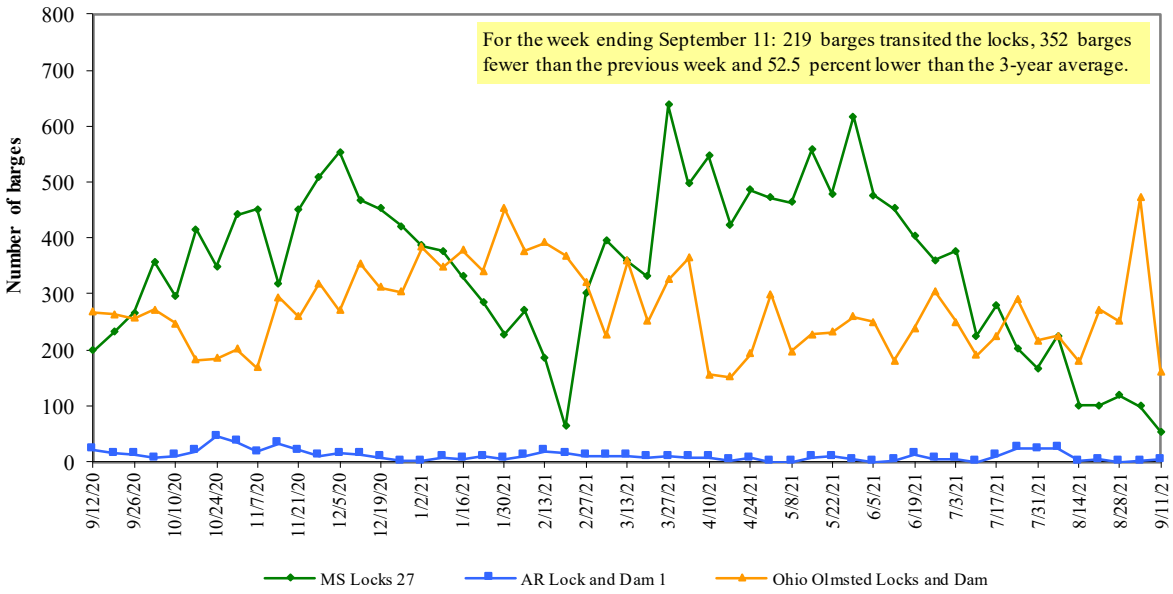
[2] As a percent of same period in 2020.

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

Source: U.S. Army Corps of Engineers.

Figure 11

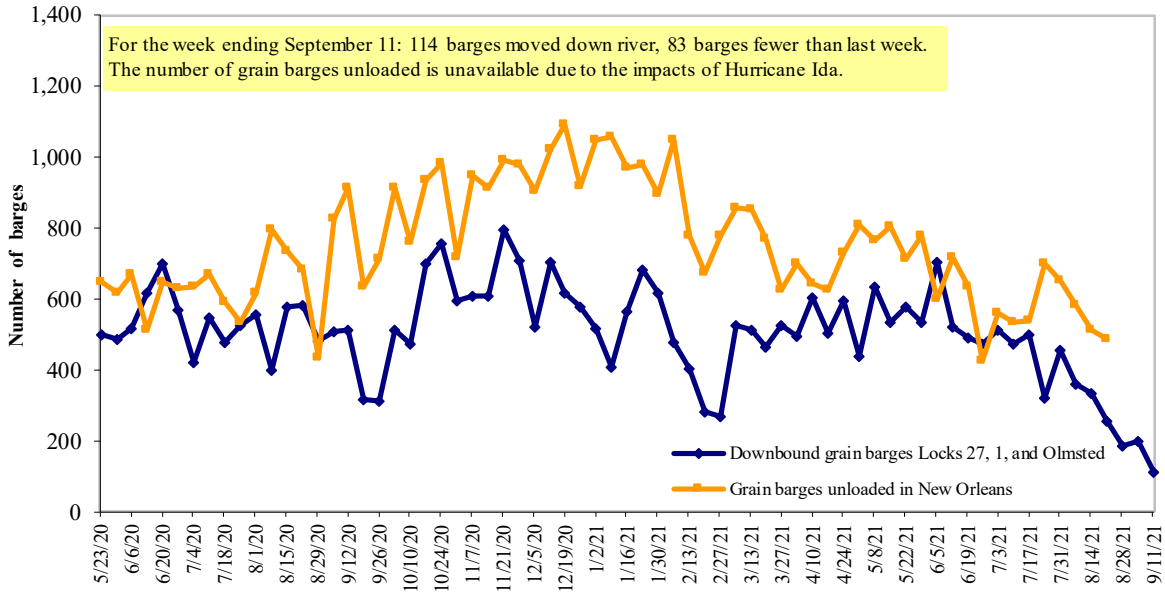
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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.

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 9/13/2021 (U.S. $/gallon)

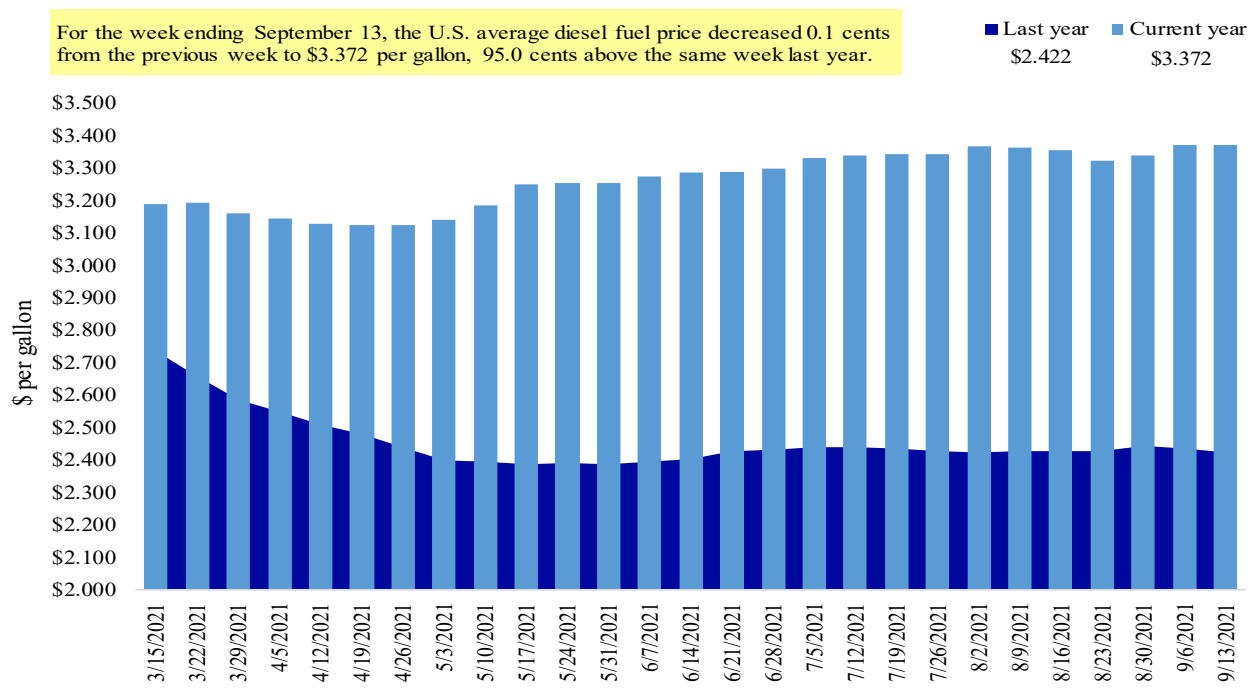
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	3.337	0.005	0.838
	New England	3.288	0.003	0.683
	Central Atlantic	3.486	0.003	0.810
	Lower Atlantic	3.246	0.006	0.889
II	Midwest	3.282	-0.002	0.974
III	Gulf Coast	3.099	-0.005	0.927
IV	Rocky Mountain	3.636	-0.009	1.268
V	West Coast	4.016	-0.004	1.061
	West Coast less California	3.661	-0.003	1.086
	California	4.313	-0.003	1.046
Total	United States	3.372	-0.001	0.950

[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]									
9/2/2021	1,507	760	1,049	669	7	3,993	24,158	21,011	49,163
This week year ago	1,856	518	1,832	1,226	257	5,688	18,601	29,360	53,649
Cumulative exports-marketing year[2]									
2021/22 YTD	2,118	886	1,676	1,095	43	5,818	168	14	6,000
2020/21 YTD	3,001	568	1,974	1,335	232	7,109	246	469	7,823
YTD 2021/22 as % of 2020/21	71	156	85	82	19	82	68	3	77
Last 4 wks. as % of same period 2020/21*	82	156	62	59	3	74	49	23	38
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 09/2/2021	Total commitments[2] 2021/22 current MY	Total commitments[2] 2020/21 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2019-21
	1,000 mt -			
Mexico	5,093	3,516	45	14,817
Japan	1,686	1,867	(10)	11,082
China	11,901	8,881	34	7,920
Columbia	866	509	70	4,491
Korea	70	68	2	3,302
Top 5 importers	**19,616**	**14,841**	**32**	**41,613**
Total U.S. corn export sales	**24,326**	**18,847**	**29**	**53,145**
% of projected exports	39%	27%		
Change from prior week[2]	**906**	**1,823**		
Top 5 importers' share of U.S. corn export sales	81%	79%		78%
USDA forecast September 2021	**62,977**	**69,847**	**(10)**	
Corn use for ethanol USDA forecast, September 2021	**132,080**	**127,889**	**3**	

[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 09/2/2021	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	9,422	15,875	(41)	21,666
Mexico	1,520	1,629	(7)	4,754
Egypt	354	427	(17)	3,093
Indonesia	127	376	(66)	2,325
Japan	502	476	5	2,275
Top 5 importers	**11,925**	**18,783**	**(37)**	**34,113**
Total U.S. soybean export sales	**21,025**	**29,829**	**(30)**	**50,758**
% of projected exports	37%	48%		
change from prior week[2]	**1,472**	**3,104**		
Top 5 importers' share of U.S. soybean export sales	57%	63%		**67%**
USDA forecast, September 2021	**56,948**	**61,580**	**92**	

[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 09/2/2021	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	1,708	1,328	29	3,388
Philippines	1,482	1,889	(22)	3,121
Japan	1,037	1,237	(16)	2,567
Korea	589	680	(13)	1,501
Nigeria	812	609	34	1,490
China	841	1,473	(43)	1,268
Taiwan	345	581	(41)	1,187
Indonesia	0	459	(100)	1,131
Thailand	274	301	(9)	768
Italy	103	402	(74)	681
Top 10 importers	**7,191**	**8,958**	(20)	**17,102**
Total U.S. wheat export sales	**9,812**	**12,797**	(23)	**24,617**
% of projected exports	41%	47%		
change from prior week[2]	**388**	**484**		
Top 10 importers' share of U.S. wheat export sales	73%	70%		69%
USDA forecast, September 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.
[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 09/09/21	Previous week*	Current week as % of previous	2021 YTD*	2020 YTD*	2021 YTD as % of 2020 YTD	Last 4-weeks as % of:		2020 total*
							Last year	Prior 3-yr. avg.	
Pacific Northwest									
Wheat	274	261	105	10,891	11,612	94	79	96	15,966
Corn	0	0	n/a	12,322	7,652	161	0	0	9,969
Soybeans	66	0	n/a	3,824	3,801	101	7	8	14,028
Total	**341**	**261**	**130**	**27,037**	**23,066**	**117**	**40**	**48**	**39,963**
Mississippi Gulf									
Wheat	0	0	n/a	2,236	2,809	80	45	52	3,422
Corn	0	83	0	30,690	20,541	149	58	50	28,781
Soybeans	0	0	n/a	11,581	17,375	67	13	17	38,013
Total	**0**	**83**	**0**	**44,507**	**40,725**	**109**	**29**	**32**	**70,215**
Texas Gulf									
Wheat	169	53	318	2,924	3,179	92	106	122	4,248
Corn	0	23	0	421	538	78	232	141	723
Soybeans	0	0	n/a	656	313	209	0	0	2,098
Total	**169**	**77**	**221**	**4,001**	**4,031**	**99**	**66**	**98**	**7,068**
Interior									
Wheat	133	120	111	2,257	1,578	143	237	221	2,263
Corn	136	129	106	6,628	6,044	110	102	106	8,683
Soybeans	42	95	45	3,957	4,490	88	70	62	7,274
Total	**311**	**344**	**91**	**12,841**	**12,113**	**106**	**108**	**104**	**18,220**
Great Lakes									
Wheat	0	0	n/a	285	595	48	12	17	891
Corn	0	38	0	94	54	174	138	370	111
Soybeans	0	0	n/a	67	283	24	0	0	1,111
Total	**0**	**38**	**1**	**446**	**932**	**48**	**19**	**23**	**2,113**
Atlantic									
Wheat	0	0	n/a	93	26	362	23	48	65
Corn	0	0	n/a	34	15	223	279	350	33
Soybeans	2	1	n/a	1,081	498	217	38	16	1,870
Total	**2**	**1**	**n/a**	**1,207**	**539**	**224**	**78**	**46**	**1,968**
U.S. total from ports*									
Wheat	577	434	133	18,685	19,799	94	82	97	26,854
Corn	136	274	50	50,189	34,845	144	56	55	48,301
Soybeans	111	95	116	21,166	26,760	79	16	20	64,394
Total	**824**	**804**	**102**	**90,040**	**81,405**	**111**	**43**	**49**	**139,548**

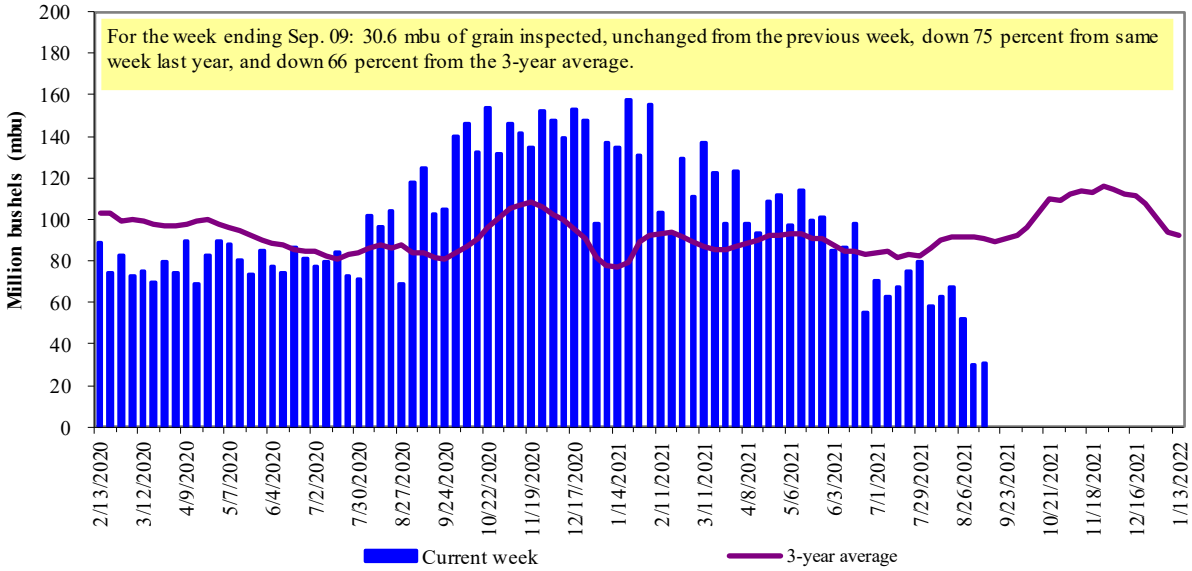
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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)

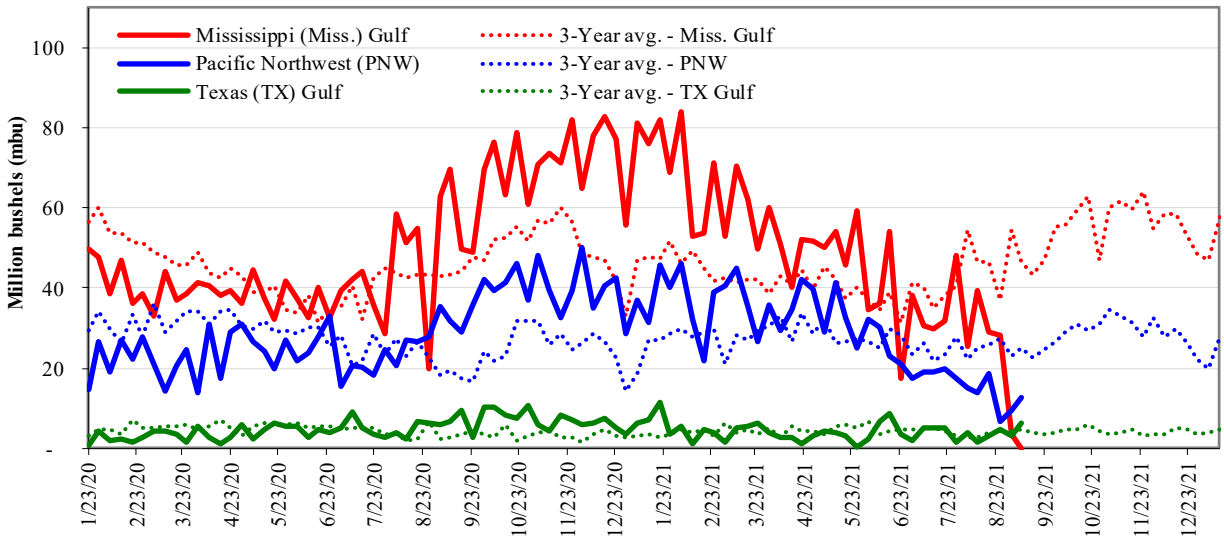


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

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



Week ending 09/09/21 inspections (mbu):	
MS Gulf:	0.0
PNW:	12.5
TX Gulf:	6.2

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last wk:	down 100	up 117	up 1	up 30
Last Year (same wk):	down 100	down 4	down 92	down 60
3-yr avg. (4-wk. mov. Avg):	down 100	up 45	down 88	down 51

Source: USDA, Federal Grain Inspection Service.

Ocean Transportation

Table 17

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

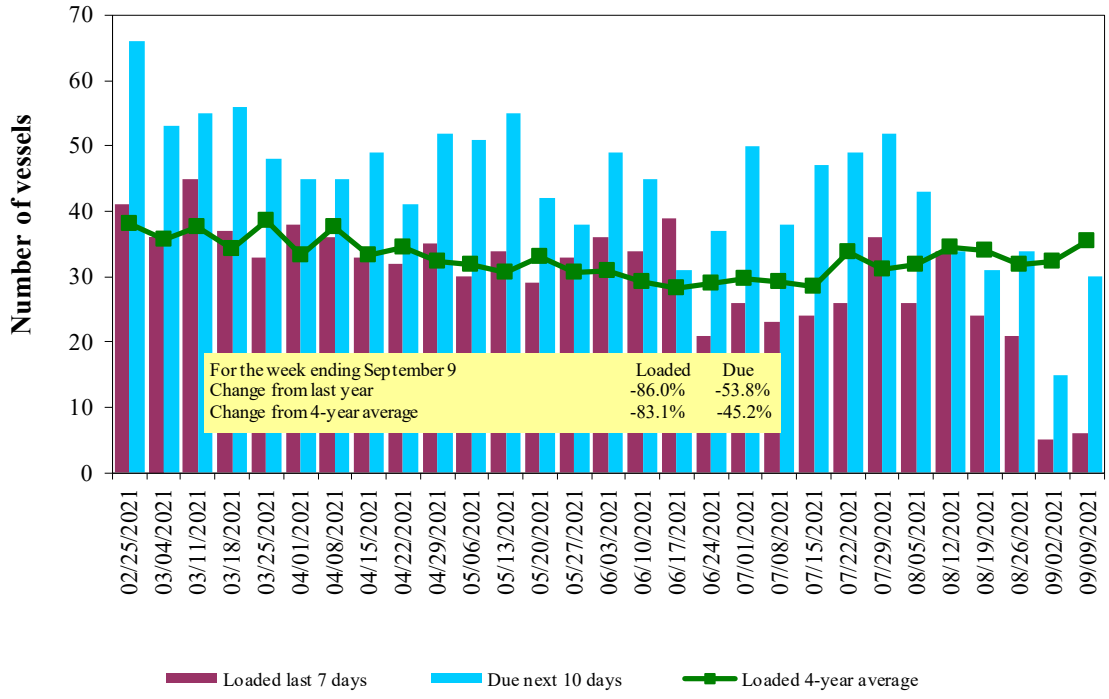
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
9/9/2021	24	6	30	6
9/2/2021*	10	5	15	6
2020 range	(22…60)	(23...46)	(34...68)	(7…24)
2020 average	37	33	49	15

Note: n/a = not available due to holiday; *Incomplete data due to Hurricane Ida

Source: USDA, Agricultural Marketing Service.

Figure 16

U.S. Gulf[1] vessel loading activity

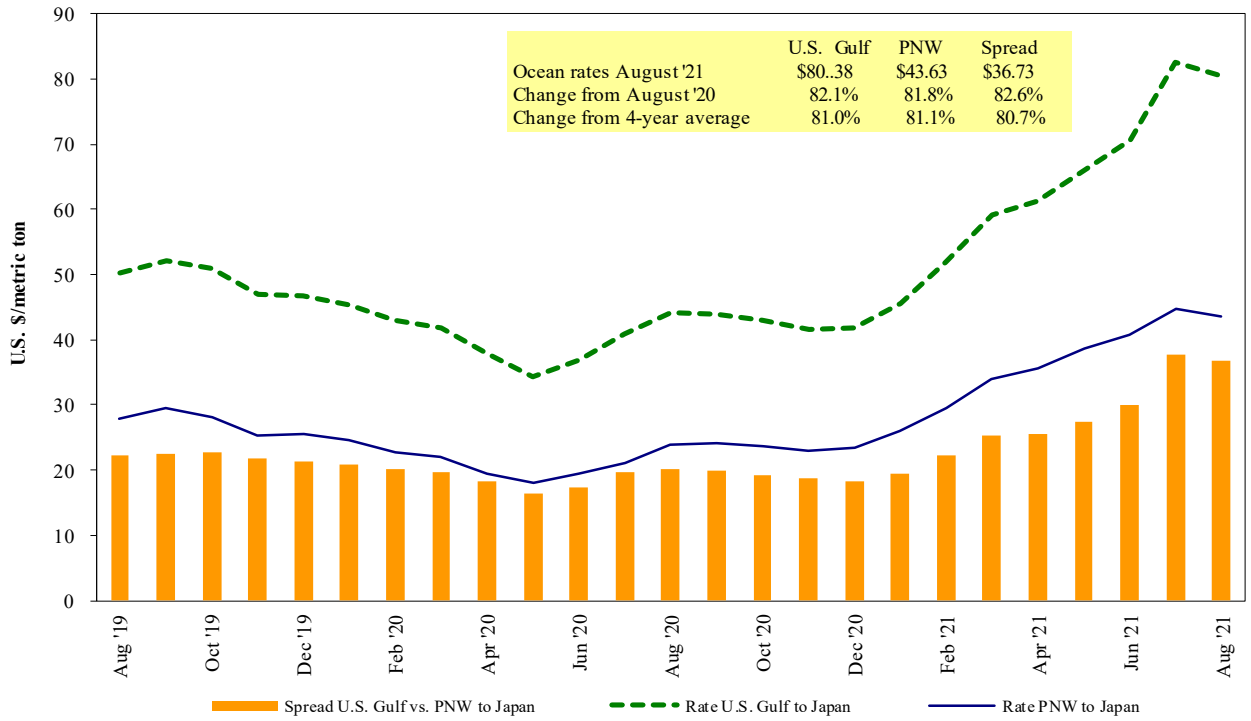


[1]U.S. Gulf includes Mississippi, Texas, and East Gulf.

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 09/11/2021

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (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
River Plate	South Korea	Corn	Oct 21	67,000	79.80

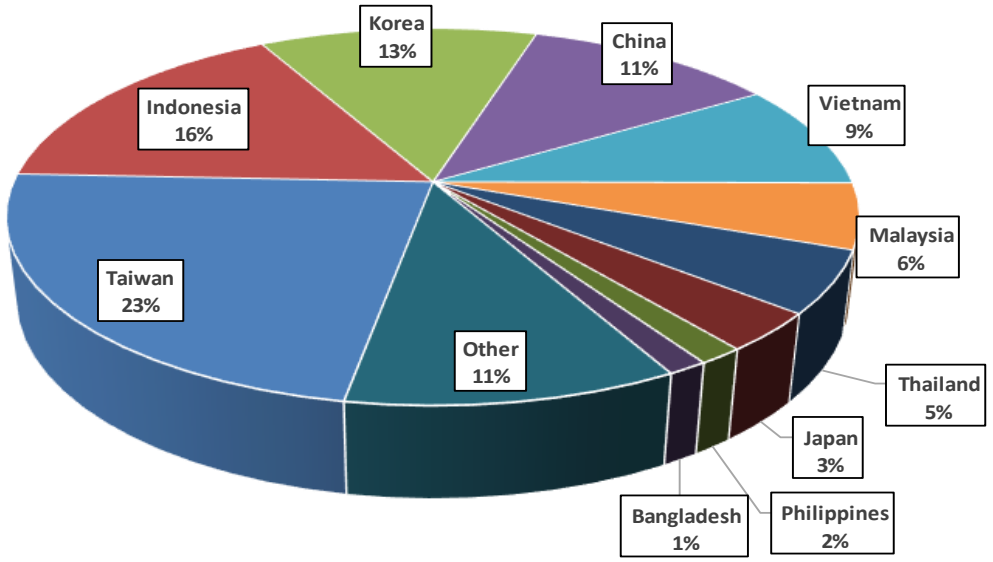
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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

Source: Maritime Research, Inc.

In 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.

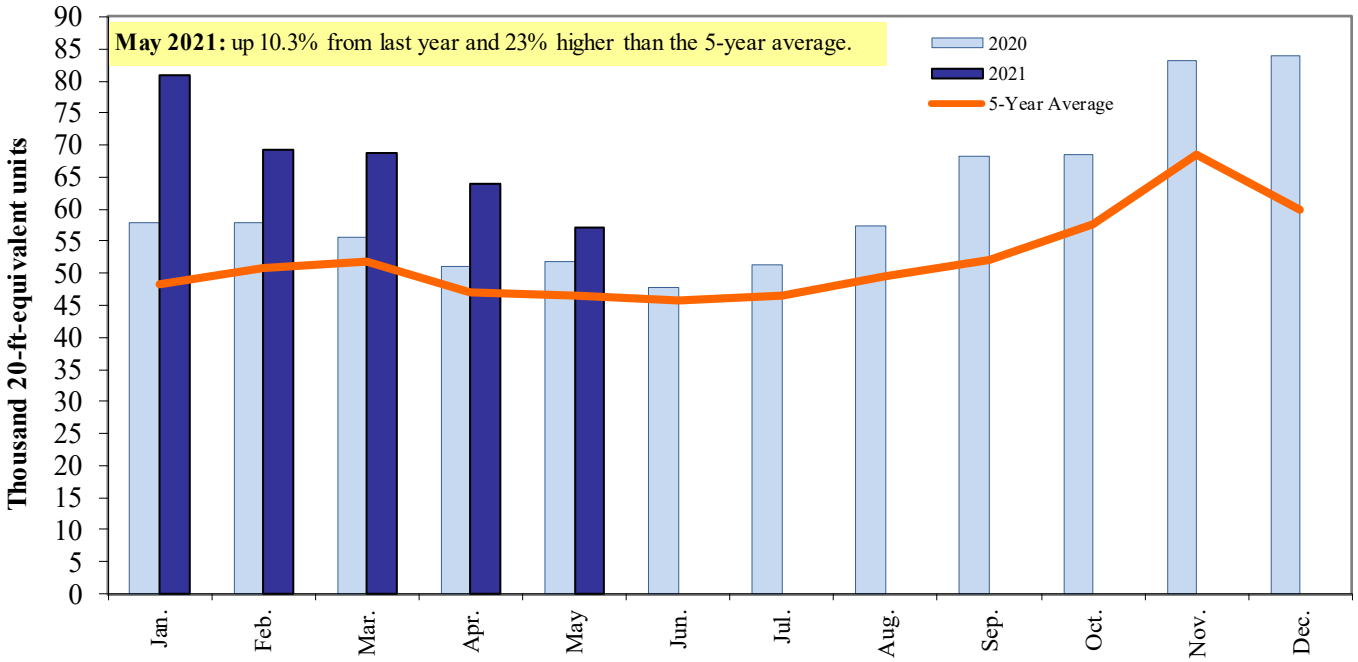
Figure 18
Top 10 destination markets for U.S. containerized grain exports, Jan-May 2021



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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Preferred citation: U.S. Department of Agriculture, Agricultural Marketing Service. *Grain Transportation Report.* September 16, 2021. Web: **http://dx.doi.org/10.9752/TS056.09-16-2021**.