United States Department of Agriculture

Grain Transportation Report

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

Contact Us

February 18, 2021

Contents

The next release is February 25, 2021

WEEKLY HIGHLIGHTS

Snow and Ice Storms Interrupt Grain Barge Movements

Since early February, grain barge movements on parts of the Mississippi River have been delayed and, in some cases, halted because of severe weather. For the week ending on February 13, total downbound grain barge movements were only 679,681 tons—a 14-percent drop from the previous week and 34-percent drop from 2 weeks ago (***GTR* table 10**). The decrease occurred despite strong export demand. Since the second week of February, icy water conditions have slowed barge operations on the Illinois River. As of the beginning of this week, in response to forecasts of snow and ice storms, fleet movements have been suspended on the Mississippi River around St. Louis, as well as on the Ohio River, Illinois River, and Lower Mississippi River areas. As a result, barge rates for this week at these locations (***GTR* table 9**) should be interpreted with caution. The industry expects continuous logistical challenges for the rest of the week.

USDA Cooperative Research Compares U.S. and Canadian Rail Systems and Regulations

USDA's Agricultural Marketing Service recently published a synopsis of a study conducted in cooperation with the University of Saskatchewan. The researchers describe the development of key rail regulations in the United States and Canada over the last several decades and identify several operational differences. For example, railroads in both countries have some freedom to set price, but face different regulatory limitations. In Canada, the revenue railroads can earn on grain shipments in the Western provinces is capped through a policy known as the "maximum revenue entitlement." Shippers in Canada can resolve rate disputes in a process known as "final offer arbitration." In the United States, shippers can challenge the reasonableness of their rates using cost-based methods, such as "stand-alone cost" and "three-benchmark."

Soybean Inspections Lowest Since Late August 2020

For the week ending February 11, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions totaled 2.6 million metric tons (mmt). Total grain inspections were down 36 percent from the previous week, up 10 percent from last year, and up 5 percent from the 3-year average. Grain inspections dropped 13 percent for wheat, 17 percent for corn, and 57 percent for soybeans. Total inspections were the lowest since late December 2020, and soybean inspections were the lowest since late August. The large drop in soybean inspections was partly due to weather-related transportation delays, as well as a significant drop in shipments to Asia. Inspections of soybeans destined to China decreased 54 percent from week to week. From the previous week, total Pacific Northwest inspections decreased 28 percent, while Mississippi Gulf inspections fell 42 percent.

Snapshots by Sector

Export Sales

For the week ending February 4, **unshipped balances** of wheat, corn, and soybeans totaled 52.3 million metric tons (mmt). This is 3 percent lower than last week, but still represented a significant increase in outstanding sales from the same time last year. Net **corn export sales** were 1.449 mmt, down 81 percent from the past week. Net **soybean export sales** were 0.805 mmt, down 2 percent from the previous week. Net **wheat export sales** were 0.591 mmt, down 8 percent from the previous week.

Rail

U.S. Class I railroads originated 25,951 **grain carloads** during the week ending February 6. This was a 6-percent decrease from the previous week, 24 percent more than last year, and 17 percent more than the 3-year average.

Average February shuttle **secondary railcar** bids/offers (per car) were $267 above tariff for the week ending February 11. This was $348 more than last week and $573 more than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending February 13, **barge grain movements** totaled 679,681 tons. This was 14 percent lower than the previous week and 51 percent more than the same period last year.

For the week ending February 13, 403 grain barges **moved down river**—73 barges fewer than the previous week. There were 777 grain barges **unloaded in New Orleans**, 26 percent fewer than the previous week.

Ocean

For the week ending February 11, 48 **oceangoing grain vessels** were loaded in the Gulf—55 percent more than the same period last year. Within the next 10 days (starting February 12, 2021), 62 vessels were expected to be loaded—32 percent more than the same period last year.

As of February 11, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $49.00. This was 5 percent more than the previous week. The rate from PNW to Japan was $27.00 per mt, 1 percent more than the previous week.

Fuel

For the week ending February 15, the U.S. average **diesel fuel price** increased 7.5 cents from the previous week to $2.876 per gallon, 1.4 cents below the same week last year.

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Feature Article/Calendar

Transportation Update for Ethanol and Distiller's Dried Grains With Solubles

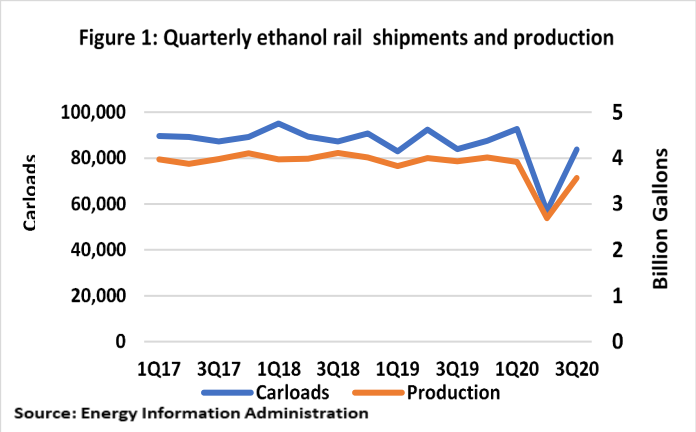
Over the last several months, COVID-19 precipitated sharp drops in fuel demand and prices, resulting in the shutdown of many ethanol plants. Predictably, these shutdowns reduced the demand for the main modes of transportation needed to ship ethanol and its primary co-product, distillers' dried grains with solubles (DDGS).[1] In the near future, several factors may exert opposing pressures (up and down) on demand for transporting corn, DDGS, and ethanol, and may shift demand from trucking to rail and barge.

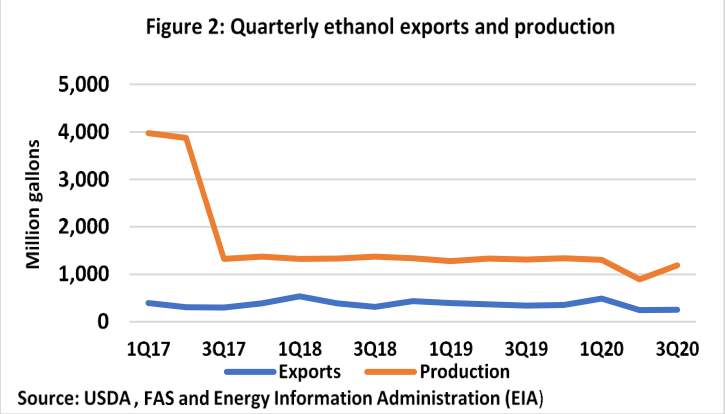
If last year's low demand for gasoline continues, demand for regional truck movements of corn to ethanol-producing facilities may also remain low in the near future. Furthermore, if more corn is thus diverted from ethanol production to exports, that diverted volume will create more demand for rail and barge for export movements. Further spurring demand for ethanol and DDGS exports, China has re-entered the ethanol and DDGS markets, prompted by the Phase 1 U.S.-China trade agreement. This article details the pandemic's ripple effects on demand for transporting ethanol, DDGS, and corn.

Impact on the Ethanol Market

The majority of U.S. ethanol ships by rail from the Midwest to export ports and distant consumption areas in the coastal United States. From 2017 to 2020, railroads transported 65-70 percent of domestic ethanol.

Early in the pandemic, demand for gasoline fell precipitously. In second quarter 2020, U.S. fuel ethanol production fell 31 percent, to just 2.7 billion gallons—the lowest quarterly volume since second quarter 2009.[2] As ethanol production decreased, so did Class I rail movements of ethanol, falling 39 percent—from 92,749 carloads in the first quarter to 56,868 carloads in the second quarter (fig. 1).[3] However, in third quarter 2020, with rising demand for ethanol for industrial uses like sanitizer, rail shipments of ethanol rose 47 percent, reaching 83,800 carloads. As a result, rail deliveries of ethanol in third quarter 2020 were almost unchanged from the same period a year ago.





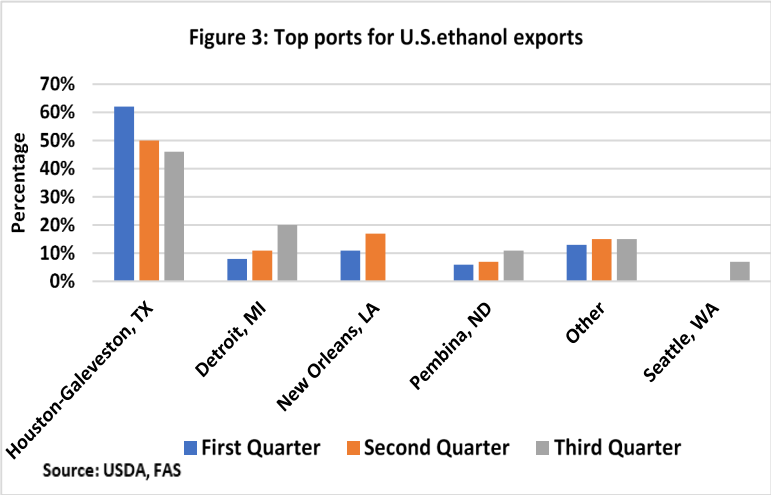
The decrease in corn used for ethanol production may have indirectly raised demand to transport corn for other purposes, such as exports and feed. From September through November 2020, USDA's Economic Research Service estimated 2.7 billion bushels of corn were used for feed, up 18 percent from the 5-year average.

A shift in domestic corn movements to exports is consistent with rising barge and rail demand. For example, in 2020, grain carloads (including corn) originated by U.S. Class I railroads were about 2 percent higher than the 5-year average. From September to year's end, grain carloads were 15 percent higher than the 5-year average. Also showing gains in 2020, barge movements for corn were 3 percent above the 5-year average (*GTR*, January 28, 2021).

The pandemic also affected ethanol exports. In second quarter 2020, stymied by COVID-19 lockdowns, which reduced global fuel demand and prices, ethanol exports declined 49 percent to just 245 million gallons. In the third quarter, ethanol exports rose 3 percent to 252 million gallons (fig. 2). In response to Brazil's declining imports of ethanol, the share of ethanol exports handled by Houston-Galveston, TX, ports dropped from 62 percent in the first quarter to just 46 percent in the third quarter. Also, in the second and third

[1] DDGS is primarily used for livestock feed in feedlots.
[2] Since most gasoline sold in the United States is blended with ethanol, reduction in gasoline consumption leads to a proportionate drop in ethanol use.
[3] Because data on rail movement, production, and containerized exports are not yet available for fourth quarter 2020, this article does not provide analysis past the third quarter.

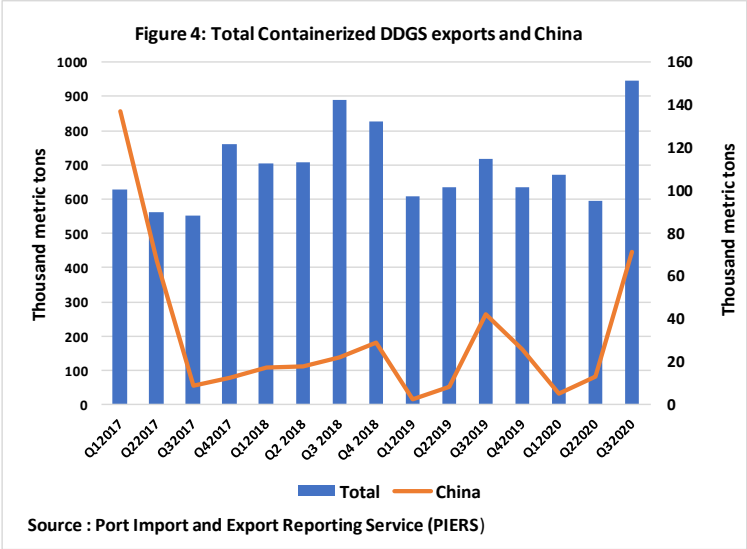
quarters, the share of ethanol exports handled by Detroit, MI, and Pembina, ND, ports rose in response to Canada's rising imports (fig. 3).



Impact on the DDGS market

Because DDGS production depends on ethanol production, lower U.S. ethanol production in the spring and summer of 2020 hampered DDGS availability. Containerized shipments of DDGS—the second largest exported commodity after soybeans—declined by 11 percent to almost 596,000 metric tons (mt) in the second quarter. This is the lowest level of DDGS shipments since third quarter 2017. However, in the third quarter, containerized shipment of DDGS rose 59 percent to 947,000 mt, the largest since 2018 (fig. 4). The re-entry of China in the DDGS market—along with more purchases by Vietnam, Indonesia, Thailand, and South Korea—raised U.S. containerized exports of DDGS.

In third quarter 2020, China's DDGS imports reached 72,000 mt, and China became the world's fifth largest DDGS importer (with an 8 percent share).[4] China is actively seeking to replenish feed stock, which has declined in recent years and raised domestic feed prices. China's elevated demand for DDGS may increase its containerized imports of DDGS in the future.



Looking Ahead

According to the Energy Information Administration's February 2021 *Short Term Energy Outlook*, ethanol production is estimated to remain below 2019 levels through 2022. EIA's projection is based on predictions of persistently low domestic gasoline demand and limited growth potential for higher-blend ethanol. In 2019, the share of ethanol in the total U.S. consumption of gasoline averaged 10.2 percent in 2019 and 2020, and is expected to remain at similar levels in 2021 and 2022.

The same factors EIA cites as potential constraints on ethanol production—i.e., low projections of domestic gasoline demand and ethanol supply—may similarly constrain demand for ethanol transportation in 2021 and 2022. If last year's trend continues, demand for regional truck movements of corn to ethanol-producing facilities could remain low. Demand may also shift to rail and barge, for export movements, and to truck and rail, for feed movements. For marketing year (MY) 2020/21, corn production and export demand are expected to grow 4 percent and 46 percent, respectively (*WASDE*, February 9, 2021). Based on waning domestic ethanol demand, the share of total ethanol movements may drop in the near future, compared to other corn-related products.

Factors undercutting global demand for U.S. ethanol exports may further affect demand for U.S. ethanol transportation in the near future. For example, the imposition of a 20-percent tariff rate on U.S. ethanol imports by Brazil—one of the top importers of U.S. ethanol—may lower demand for ethanol transportation. However, China's re-entry in the ethanol and the DDGS markets due to the Phase 1 trade agreement could increase the demand for ethanol transportation in the future. *Kranti.Mulik@usda.gov*

[4] Prior to 2015, China was the largest importer of U.S. DDGS. China's total imports of DDGS from the United States decreased from 6.5 million mt in 2015 (51 percent of China's total DDGS imports) to about 180,701 mt in 2019. Thus, the U.S. market share of China's imported DDGS fell from 51 percent to just 2 percent. The imposition of antidumping and anti-subsidy taxes in 2017—in combination with a continuing U.S.-China trade dispute—resulted in the decline. The reduced imports decreased port activity in New Orleans and Los Angeles, the main ports for DDGS shipments to China.

Grain Transportation Indicators

Table 1

Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Unit train	Shuttle		Gulf	Pacific
02/17/21	193	306	228	241	219	191
02/10/21	188	307	219	231	209	190

[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)

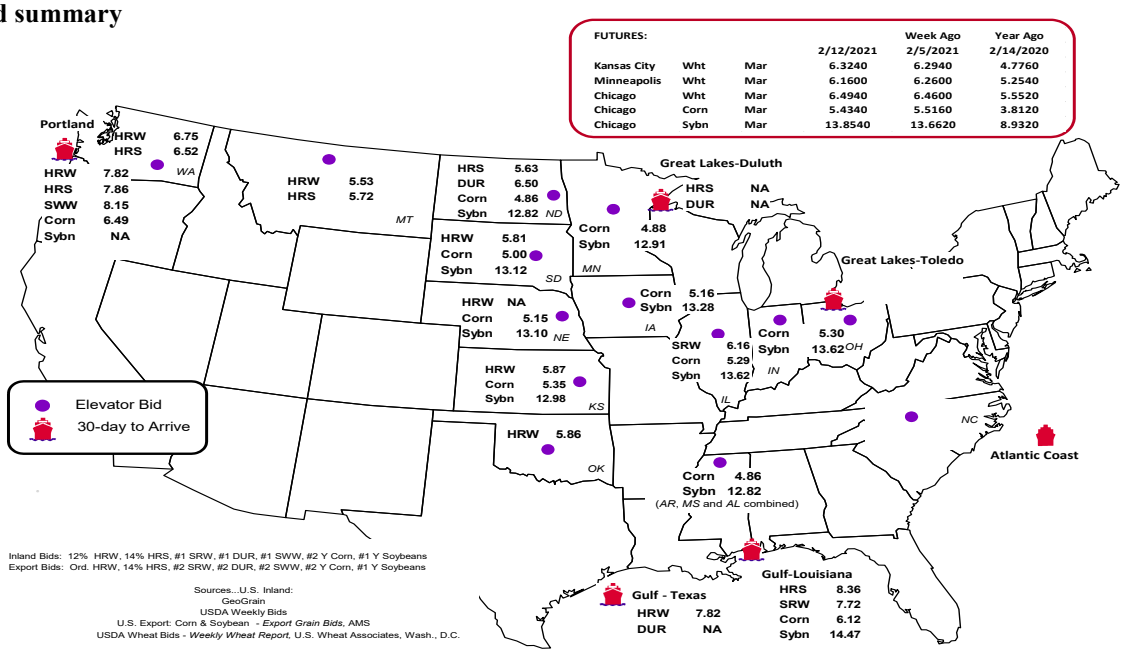
Commodity	Origin–destination	2/12/2021	2/5/2021
Corn	IL–Gulf	-0.83	-0.82
Corn	NE–Gulf	-0.97	-0.96
Soybean	IA–Gulf	-1.19	-1.22
HRW	KS–Gulf	-1.95	-1.95
HRS	ND–Portland	-2.23	-2.25

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]
2/10/2021[p]	2,206	1,316	6,399	698	10,619	2/6/2021	2,041
2/03/2021[r]	2,022	2,120	8,302	832	13,276	1/30/2021	2,255
2021 YTD[r]	12,479	11,975	43,760	5,551	73,765	2021 YTD	13,423
2020 YTD[r]	3,206	3,762	22,530	974	30,472	2020 YTD	13,055
2021 YTD as % of 2020 YTD	389	318	194	570	242	% change YTD	103
Last 4 weeks as % of 2020[2]	462	305	172	511	223	Last 4wks. % 2020	120
Last 4 weeks as % of 4-year avg.[2]	354	139	133	190	155	Last 4wks. % 4 yr.	117
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.

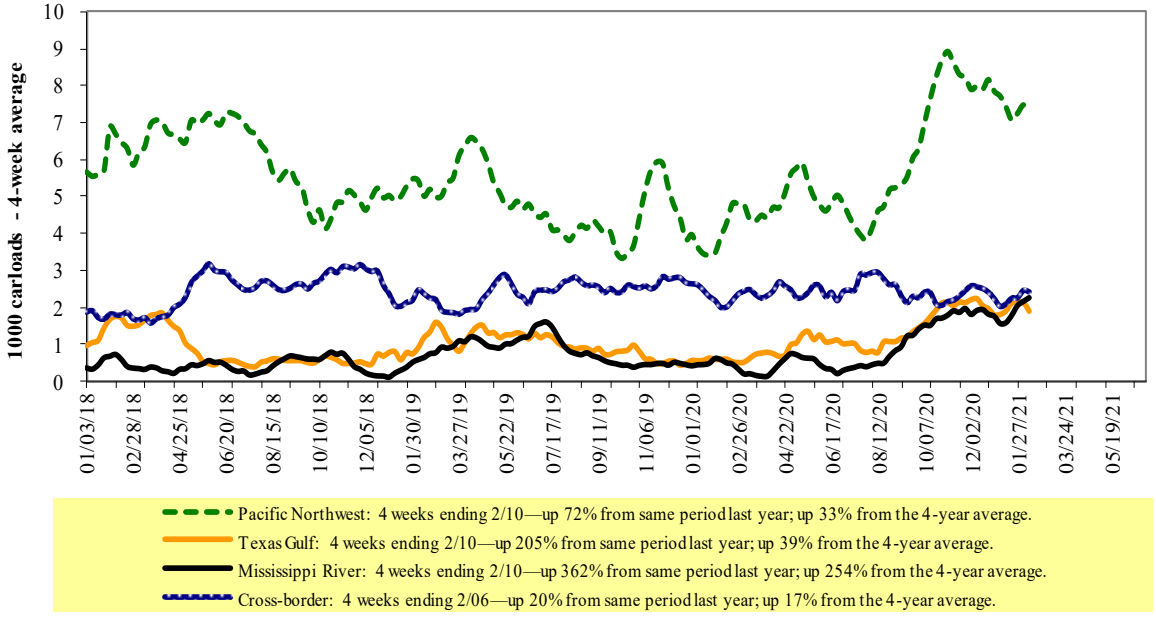
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available; wks. = weeks; avg. = average.

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	
2/6/2021	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,786	2,424	14,526	827	6,388	25,951	4,944	4,401
This week last year	1,919	2,319	10,799	1,168	4,676	20,881	3,381	3,174
2021 YTD	10,921	14,906	69,967	5,321	34,876	135,991	27,117	24,661
2020 YTD	10,624	13,912	61,257	6,547	26,728	119,068	20,718	21,351
2021 YTD as % of 2020 YTD	103	107	114	81	130	114	131	116
Last 4 weeks as % of 2020*	115	128	134	92	151	133	171	142
Last 4 weeks as % of 3-yr. avg.**	111	117	124	91	143	125	154	127
Total 2020	91,659	130,936	613,630	57,782	296,701	1,190,708	239,106	261,778

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

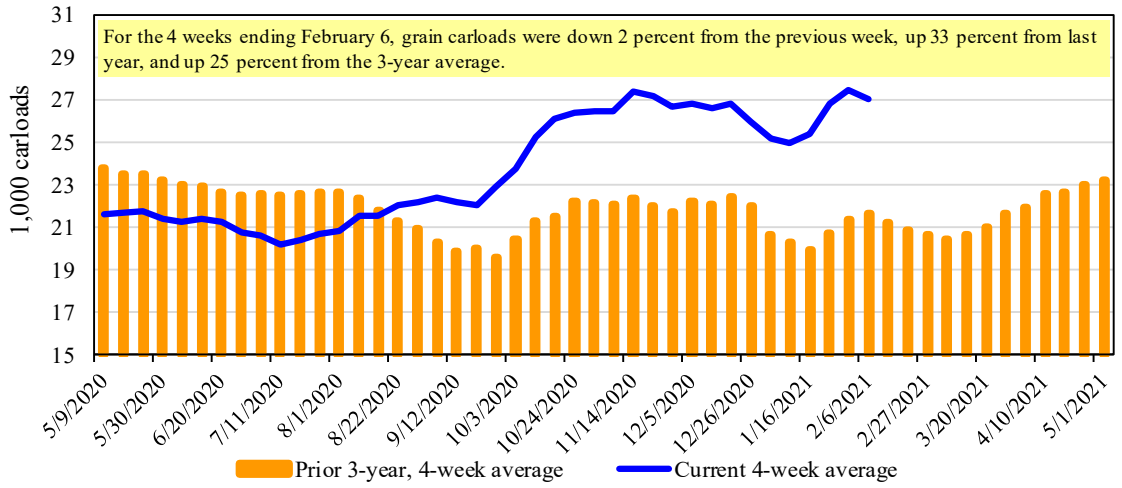
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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							
2/11/2021		Feb-21	Feb-20	Mar-21	Mar-20	Apr-21	Apr-20	May-21	May-20
BNSF[3]	COT grain units	no offer	no offer	no bids	0	no bids	no bid	no bids	no bid
	COT grain single-car	no offer	no offer	6	0	0	0	no bids	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 bid	no offer	no bid	no offer	no bid	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.

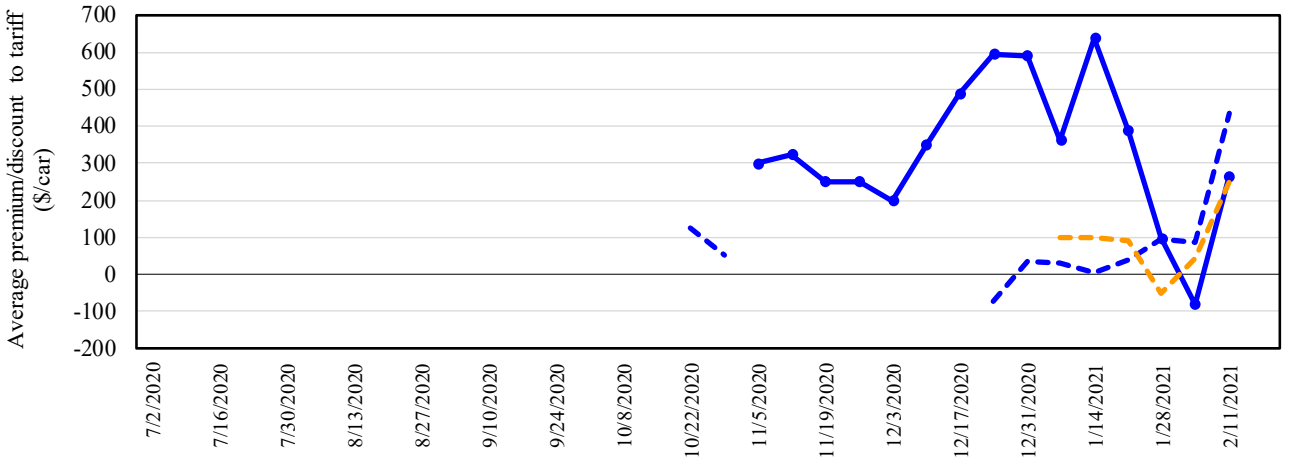
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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 February 2021, secondary market

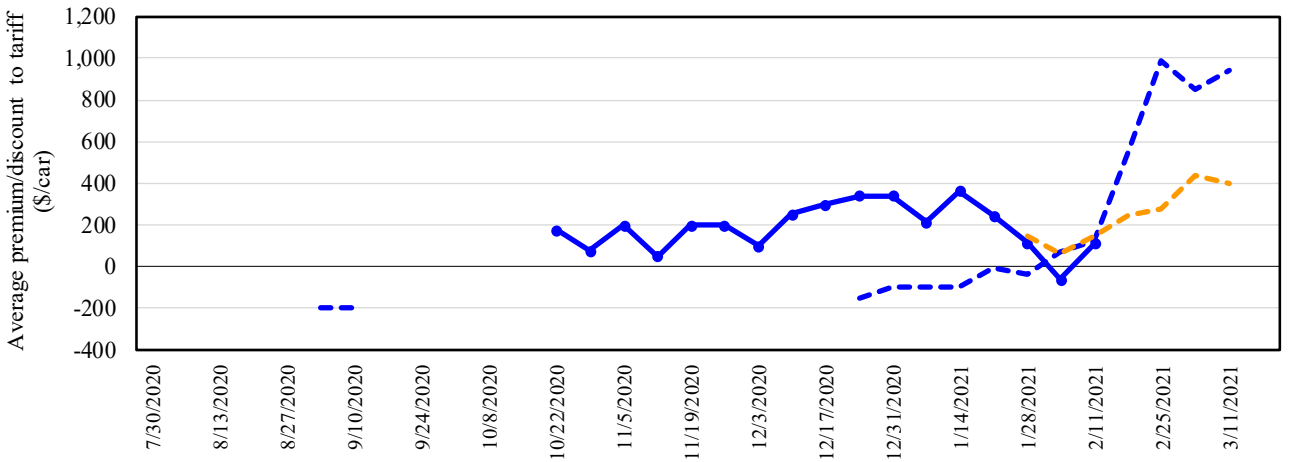


2/11/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$400	$133

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $348 this week and are $371 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
Bids/offers for railcars to be delivered in March 2021, secondary market



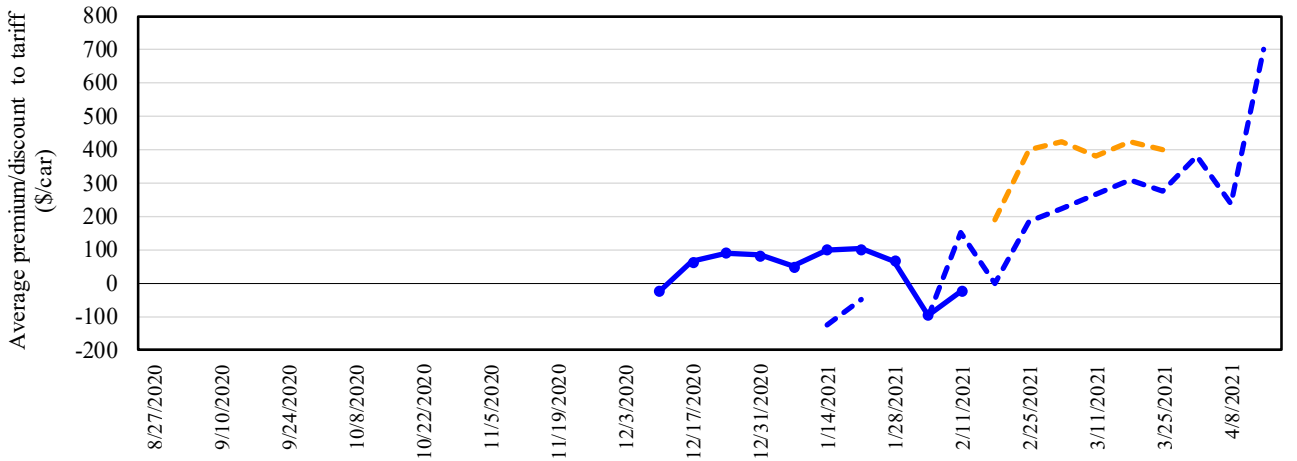
2/11/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$125	$100

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $172 this week and are $250 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

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



2/11/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	-$50	$0

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $71 this week and are $127 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: 2/11/2021	Delivery period					
		Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21
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**	**400**	**125**	**(50)**	**(83)**	**(100)**	**(150)**
	Change from last week	488	181	75	(33)	0	0
	Change from same week 2020	750	475	n/a	n/a	n/a	n/a
	UP-Pool	**133**	**100**	**0**	**n/a**	**n/a**	**(100)**
	Change from last week	208	163	67	n/a	n/a	0
	Change from same week 2020	396	250	n/a	n/a	n/a	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]

February 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	$3,983	$51	$40.06	$1.09	-1
	Grand Forks, ND	Duluth-Superior, MN	$4,208	$0	$41.79	$1.14	-3
	Wichita, KS	Los Angeles, CA	$7,115	$0	$70.66	$1.92	-2
	Wichita, KS	New Orleans, LA	$4,525	$89	$45.82	$1.25	-2
	Sioux Falls, SD	Galveston-Houston, TX	$6,851	$0	$68.03	$1.85	-2
	Colby, KS	Galveston-Houston, TX	$4,801	$98	$48.64	$1.32	-2
	Amarillo, TX	Los Angeles, CA	$5,121	$136	$52.20	$1.42	-3
Corn	Champaign-Urbana, IL	New Orleans, LA	$3,900	$101	$39.73	$1.01	-2
	Toledo, OH	Raleigh, NC	$7,833	$0	$77.79	$1.98	15
	Des Moines, IA	Davenport, IA	$2,455	$21	$24.59	$0.62	1
	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	$63	$39.35	$1.00	1
	Des Moines, IA	Los Angeles, CA	$5,780	$182	$59.21	$1.50	-1
Soybeans	Minneapolis, MN	New Orleans, LA	$5,246	$74	$52.83	$1.44	39
	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	$101	$47.13	$1.28	-2
Shuttle train							
Wheat	Great Falls, MT	Portland, OR	$4,018	$0	$39.90	$1.09	-3
	Wichita, KS	Galveston-Houston, TX	$4,236	$0	$42.07	$1.14	-3
	Chicago, IL	Albany, NY	$6,376	$0	$63.32	$1.72	-10
	Grand Forks, ND	Portland, OR	$5,676	$0	$56.37	$1.53	-2
	Grand Forks, ND	Galveston-Houston, TX	$5,996	$0	$59.54	$1.62	-2
	Colby, KS	Portland, OR	$6,012	$160	$61.29	$1.67	-3
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	$101	$38.93	$0.99	-3
	Lincoln, NE	Galveston-Houston, TX	$3,880	$0	$38.53	$0.98	0
	Des Moines, IA	Amarillo, TX	$4,320	$79	$43.68	$1.11	0
	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	$5,850	$0	$58.09	$1.58	0
	Minneapolis, MN	Portland, OR	$5,900	$0	$58.59	$1.59	0
	Fargo, ND	Tacoma, WA	$5,750	$0	$57.10	$1.55	0
	Council Bluffs, IA	New Orleans, LA	$4,875	$116	$49.56	$1.35	-2
	Toledo, OH	Huntsville, AL	$4,945	$0	$49.11	$1.34	3
	Grand Island, NE	Portland, OR	$5,260	$164	$53.86	$1.47	-3

[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: February 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	$7,384	$0	$75.45	$2.05	-2
	OK	Cuautitlan, EM	$6,713	$70	$69.30	$1.88	-2
	KS	Guadalajara, JA	$7,471	$519	$81.64	$2.22	-2
	TX	Salinas Victoria, NL	$4,347	$43	$44.85	$1.22	-1
Corn	IA	Guadalajara, JA	$8,902	$421	$95.26	$2.42	-1
	SD	Celaya, GJ	$8,140	$0	$83.17	$2.11	0
	NE	Queretaro, QA	$8,300	$145	$86.29	$2.19	-1
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	0
	MO	Tlalnepantla, EM	$7,665	$142	$79.76	$2.02	-1
	SD	Torreon, CU	$7,690	$0	$78.57	$1.99	0
Soybeans	MO	Bojay (Tula), HG	$8,547	$397	$91.38	$2.48	-1
	NE	Guadalajara, JA	$9,157	$408	$97.73	$2.66	-1
	IA	El Castillo, JA	$9,410	$0	$96.15	$2.61	-1
	KS	Torreon, CU	$8,014	$272	$84.66	$2.30	-1
Sorghum	NE	Celaya, GJ	$7,772	$364	$83.14	$2.11	-1
	KS	Queretaro, QA	$8,108	$87	$83.73	$2.12	-1
	NE	Salinas Victoria, NL	$6,713	$70	$69.30	$1.76	-1
	NE	Torreon, CU	$7,092	$242	$74.94	$1.90	-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.

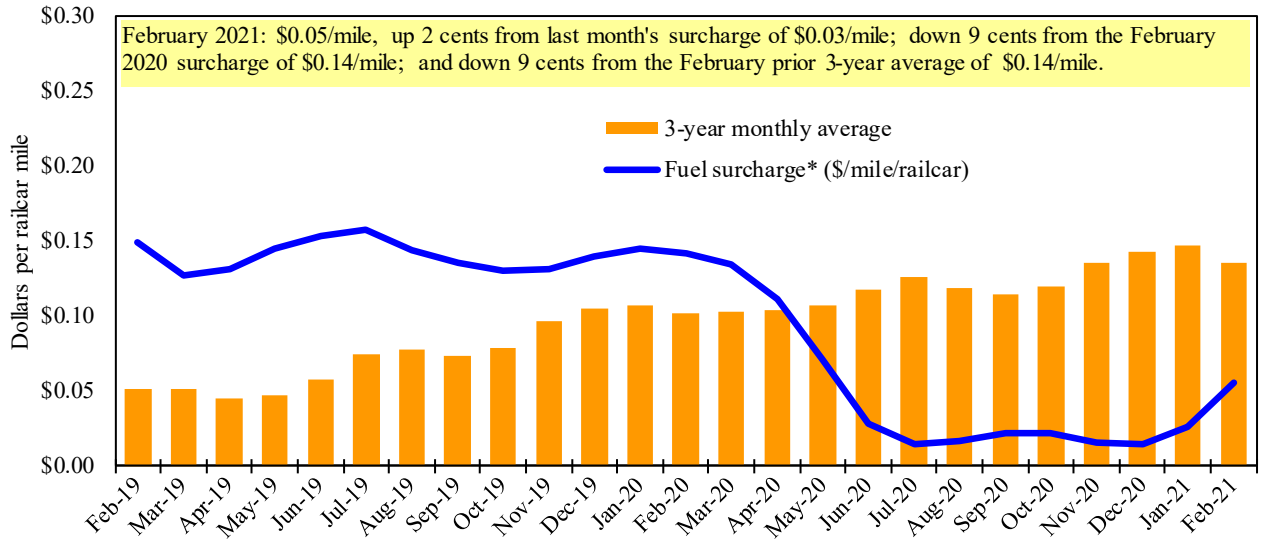
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu.

[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.

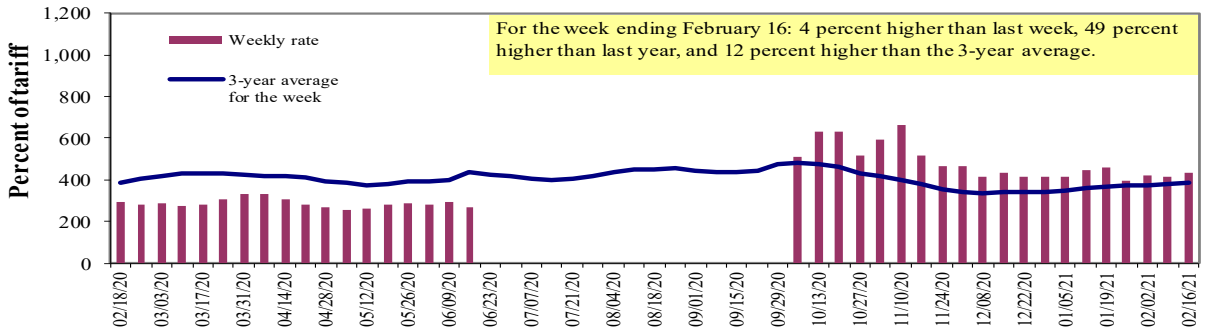
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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.
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]	2/16/2021	-	-	434	274	324	324	250
	2/9/2021	-	-	416	279	321	321	248
$/ton	2/16/2021	-	-	20.14	10.93	15.20	13.09	7.85
	2/9/2021	-	-	19.30	11.13	15.05	12.97	7.79
Current week % change from the same week:								
	Last year	-	-	49	44	56	56	39
	3-year avg. [2]	-	-	12	-6	-1	-1	-4
Rate[1]	March	-	-	403	281	306	306	250
	May	493	419	379	269	285	285	248

[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average; ton = 2,000 pounds; "-" not available due to closure.
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

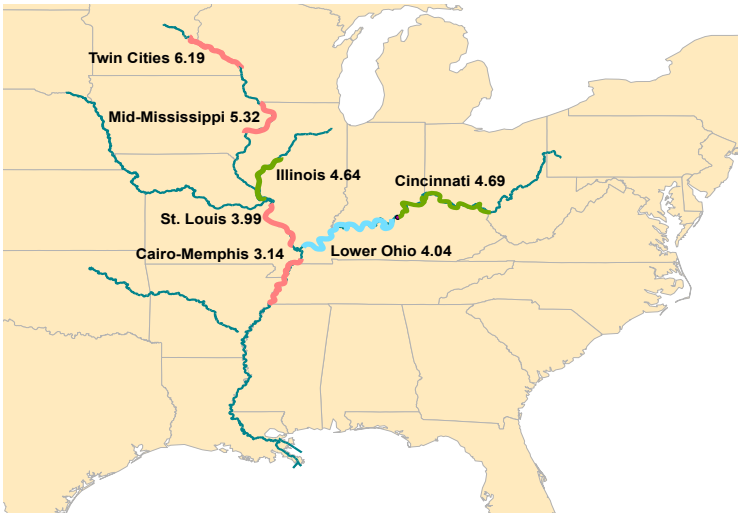
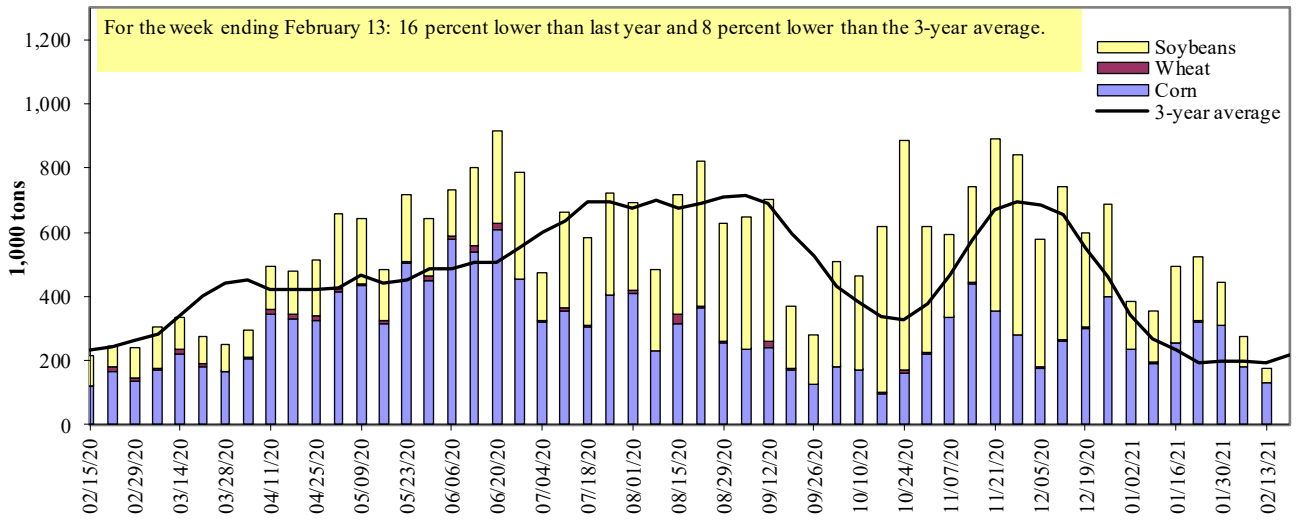


Figure 10

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 02/13/2021	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	0	0	0	0	0
Winfield, MO (L25)	0	0	0	0	0
Alton, IL (L26)	117	2	37	0	155
Granite City, IL (L27)	132	0	46	0	178
Illinois River (La Grange)	140	2	33	0	175
Ohio River (Olmsted)	322	0	96	0	418
Arkansas River (L1)	0	25	58	0	84
Weekly total - 2021	454	25	200	0	680
Weekly total - 2020	271	12	168	0	450
2021 YTD[1]	2,989	96	2,007	85	5,177
2020 YTD[1]	1,316	123	1,647	6	3,091
2021 as % of 2020 YTD	227	78	122	1,522	167
Last 4 weeks as % of 2020[2]	223	63	140	692	179
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.

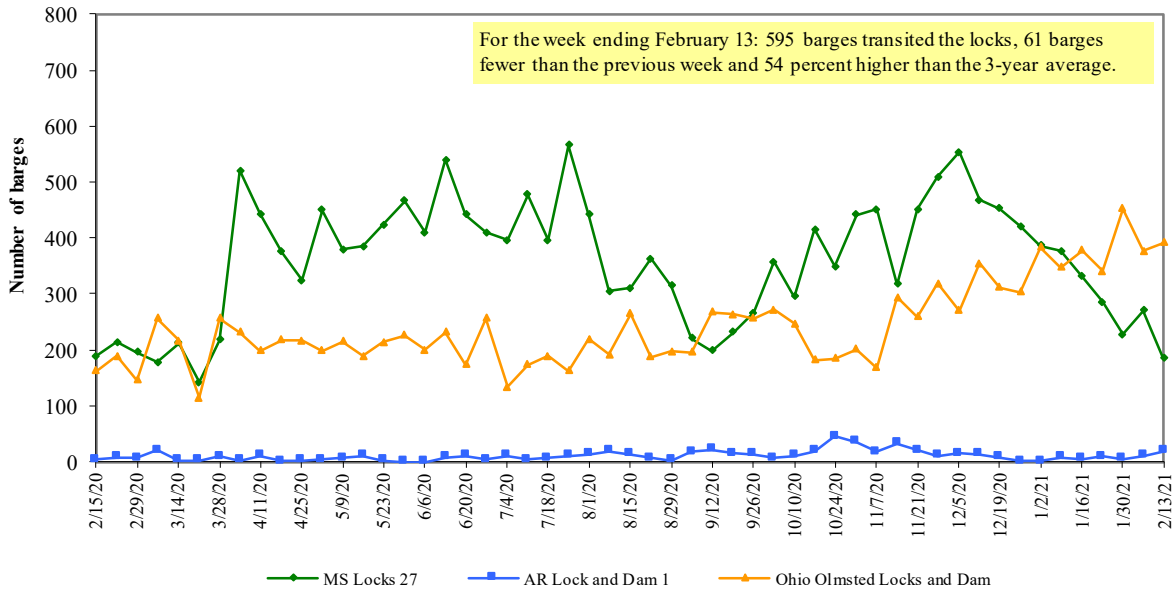
[2] As a percent of same period in 2020.

Note: L (as in "L15") refers to a lock, locks, or locks and dam facility. Olmsted = Olmsted Locks and Dam. La Grange = La Grange Lock and Dam.

Source: U.S. Army Corps of Engineers.

Figure 11

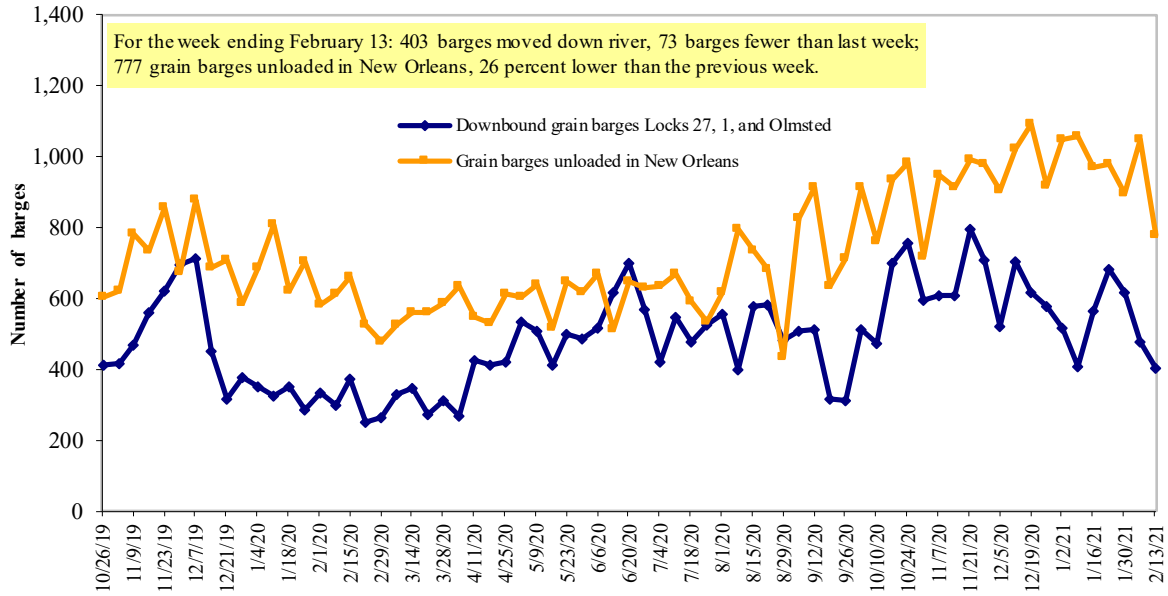
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 2/15/2021 (U.S. $/gallon)

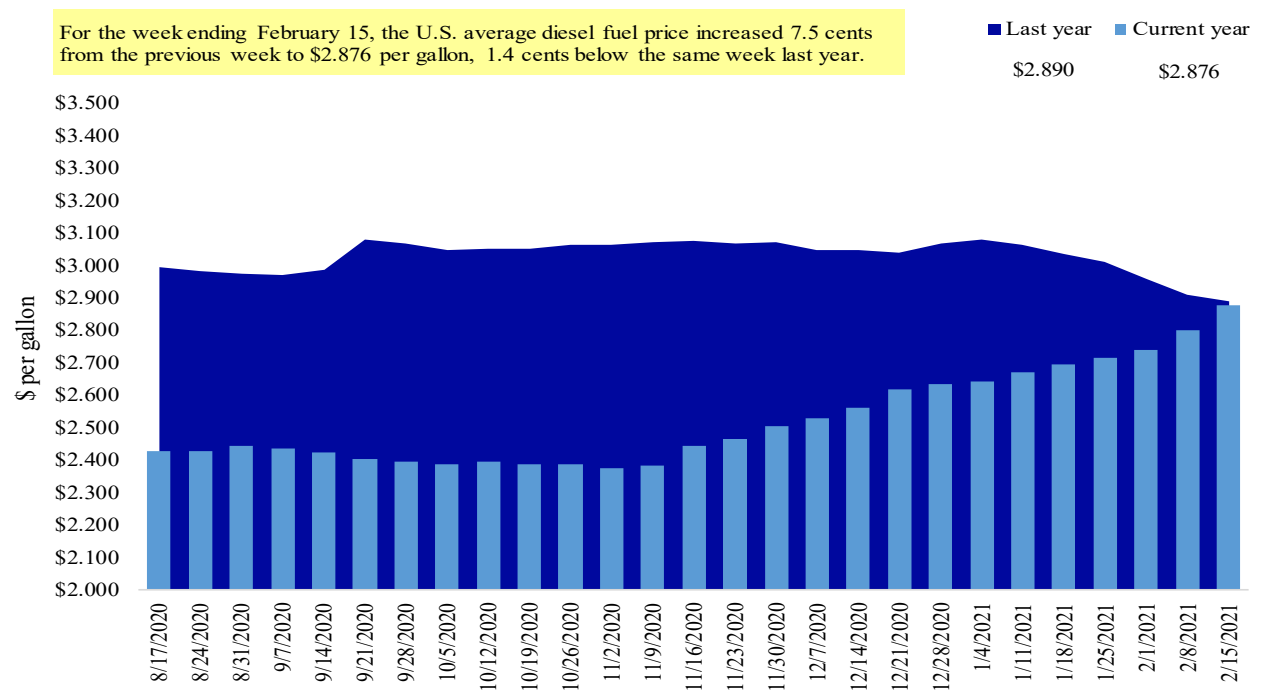
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	2.898	0.053	-0.042
	New England	2.888	0.048	-0.182
	Central Atlantic	3.052	0.047	-0.071
	Lower Atlantic	2.798	0.058	0.005
II	Midwest	2.852	0.104	0.095
III	Gulf Coast	2.627	0.061	-0.031
IV	Rocky Mountain	2.787	0.088	-0.071
V	West Coast	3.328	0.070	-0.140
	West Coast less California	2.960	0.063	-0.121
	California	3.635	0.077	-0.139
Total	United States	2.876	0.075	-0.014

[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]									
2/4/2021	1,440	484	2,075	2,393	165	6,557	35,973	9,723	52,252
This week year ago	1,908	393	1,577	1,219	197	5,294	11,869	5,505	22,668
Cumulative exports-marketing year[2]									
2020/21 YTD	6,316	1,225	4,828	3,586	493	16,448	21,583	49,740	87,770
2019/20 YTD	6,261	1,809	4,732	3,189	624	16,615	11,890	27,364	55,868
YTD 2020/21 as % of 2019/20	101	68	102	112	79	99	182	182	157
Last 4 wks. as % of same period 2019/20*	73	117	125	198	85	121	276	214	225
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; 2020/21 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 2/4/2021	Total commitments[2]		% change	Exports[3]
	2020/21 current MY	2019/20 last MY	current MY from last MY	3-yr. avg. 2017-19
		- 1,000 mt -		
Mexico	11,541	10,013	15	14,869
Japan	8,064	4,306	87	11,221
Columbia	2,551	2,299	11	4,830
Korea	1,333	273	389	4,011
China	17,721	61	28,903	909
Top 5 importers	**41,209**	**16,952**	**143**	**35,840**
Total U.S. corn export sales	**57,555**	**23,759**	**142**	**49,983**
% of projected exports	87%	53%		
Change from prior week[2]	**1,449**	**969**		
Top 5 importers' share of U.S. corn export sales	72%	71%		72%
USDA forecast February 2021	**66,158**	**45,242**	**46**	
Corn use for ethanol USDA forecast, February 2021	**125,730**	**123,241**	**2**	

[1]Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2019/20; 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 2/4/2021	Total commitments[2] 2020/21 current MY	2019/20 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2017-19
		- 1,000 mt -		- 1,000 mt -
China	35,850	12,139	195	19,106
Mexico	4,096	3,236	27	4,591
Egypt	2,270	1,959	16	2,980
Indonesia	1,493	1,067	40	2,360
Japan	1,520	1,508	1	2,288
Top 5 importers	**45,228**	**19,909**	**127**	**31,324**
Total U.S. soybean export sales	**59,462**	**32,869**	**81**	**49,352**
% of projected exports	97%	72%		
change from prior week[2]	**805**	**627**		
Top 5 importers' share of U.S. soybean export sales	76%	61%		**63%**
USDA forecast, February 2021	**61,308**	**45,831**	**134**	

[1]Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2019/20; 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 2/4/2021	Total commitments[2] 2020/21 current MY	2019/20 last MY	% change current MY from last MY	Exports[3] 3-yr. avg. 2017-19
		1,000 mt -		- 1,000 mt -
Mexico	3,056	3,089	(1)	3,213
Philippines	2,870	2,802	2	2,888
Japan	2,135	2,201	(3)	2,655
Nigeria	1,153	1,297	(11)	1,433
Korea	1,511	1,188	27	1,372
Indonesia	987	766	29	1,195
Taiwan	1,031	1,059	(3)	1,175
Thailand	699	757	(8)	727
Italy	545	747	(27)	622
Colombia	342	576	(41)	618
Top 10 importers	**14,330**	**14,481**	(1)	**15,897**
Total U.S. wheat export sales	**23,005**	**21,909**	5	**23,821**
% of projected exports	86%	83%		
change from prior week[2]	**591**	**643**		
Top 10 importers' share of U.S. wheat export sales	62%	66%		67%
USDA forecast, February 2021	**26,839**	**26,294**	2	

[1] Based on USDA, Foreign Agricultural Service(FAS) marketing year ranking reports for 2019/20; 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 02/11/21	Previous week*	Current week as % of previous	2021 YTD*	2020 YTD*	2021 YTD as % of 2020 YTD	Last 4-weeks as % of: Last year	Last 4-weeks as % of: Prior 3-yr. avg.	2020 total*
Pacific Northwest									
Wheat	324	320	101	1,667	1,991	84	110	119	15,966
Corn	232	298	78	1,620	269	602	542	161	9,969
Soybeans	289	551	52	2,837	1,610	176	187	153	14,028
Total	**845**	**1,169**	**72**	**6,124**	**3,870**	**158**	**182**	**143**	**39,963**
Mississippi Gulf									
Wheat	48	9	558	249	512	49	80	66	3,422
Corn	878	1,104	80	4,934	2,951	167	173	171	28,781
Soybeans	367	1,099	33	6,497	5,050	129	149	137	38,013
Total	**1,293**	**2,211**	**58**	**11,680**	**8,513**	**137**	**155**	**146**	**70,215**
Texas Gulf									
Wheat	17	65	27	318	515	62	120	65	4,248
Corn	10	9	111	61	74	82	116	125	723
Soybeans	0	79	0	569	6	n/a	n/a	n/a	2,098
Total	**27**	**153**	**18**	**947**	**595**	**159**	**238**	**148**	**7,068**
Interior									
Wheat	24	81	30	270	292	92	108	141	2,263
Corn	180	146	123	947	889	106	126	129	8,683
Soybeans	108	189	57	964	996	97	109	120	7,274
Total	**312**	**416**	**75**	**2,180**	**2,178**	**100**	**116**	**126**	**18,220**
Great Lakes									
Wheat	0	1	n/a	16	1	n/a	n/a	225	891
Corn	0	0	n/a	0	0	n/a	n/a	n/a	111
Soybeans	0	0	n/a	0	0	n/a	n/a	n/a	1,111
Total	**0**	**1**	**n/a**	**16**	**1**	**n/a**	**n/a**	**225**	**2,113**
Atlantic									
Wheat	0	0	n/a	0	0	n/a	n/a	n/a	65
Corn	0	0	n/a	0	0	n/a	n/a	0	33
Soybeans	88	85	103	556	173	320	404	280	1,870
Total	**88**	**85**	**103**	**556**	**173**	**320**	**404**	**275**	**1,968**
U.S. total from ports*									
Wheat	413	475	87	2,521	3,311	76	107	102	26,854
Corn	1,299	1,557	83	7,561	4,184	181	192	162	48,301
Soybeans	852	2,003	43	11,422	7,836	146	165	149	64,394
Total	**2,565**	**4,035**	**64**	**21,504**	**15,331**	**140**	**162**	**144**	**139,548**

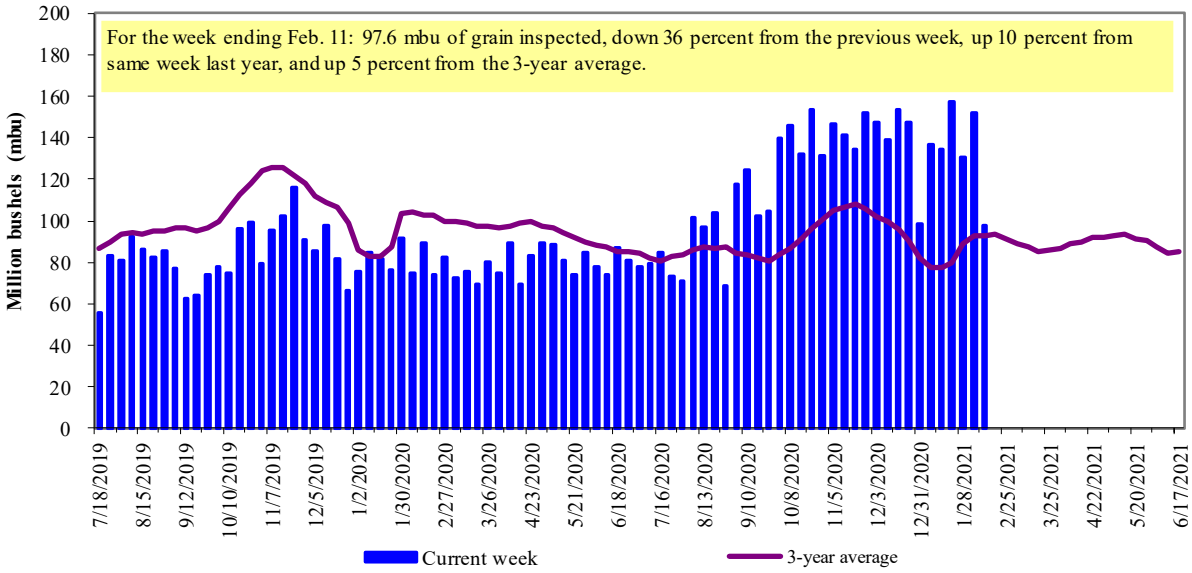
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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 2019.

Figure 14

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

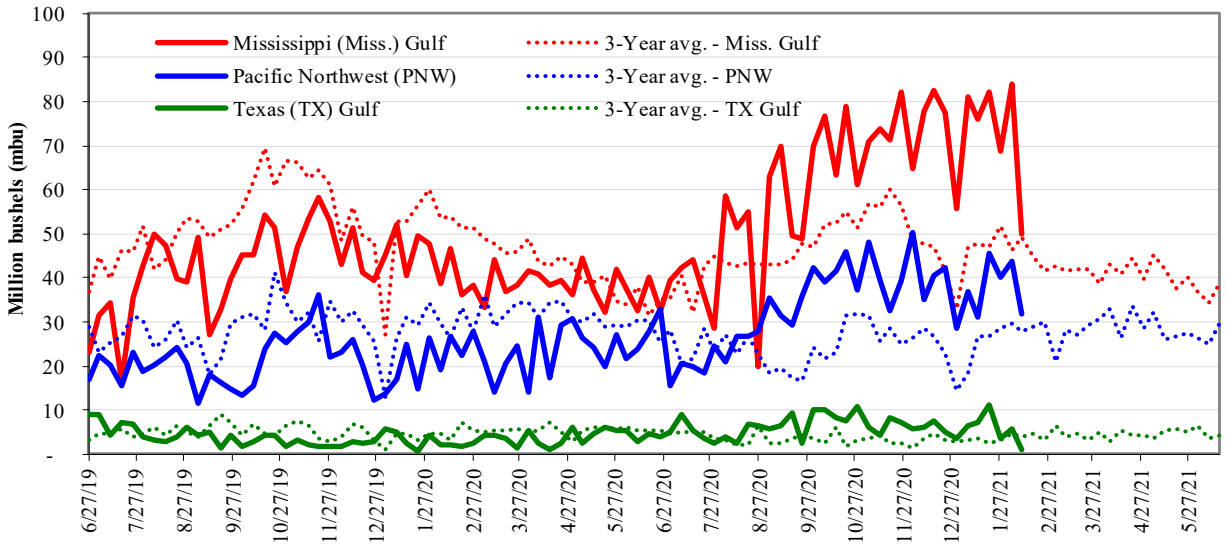


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

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



Week ending 02/11/21 inspections (mbu):	
MS Gulf:	49.8
PNW:	31.6
TX Gulf:	1.0

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last wk:	down 41	down 82	down 43	down 28
Last Year (same wk):	up 6	down 51	up 4	up 18
3-yr avg. (4-wk. mov. Avg):	up 2	down 71	down 3	up 12

Source: USDA, Federal Grain Inspection Service.

Ocean Transportation

Table 17

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

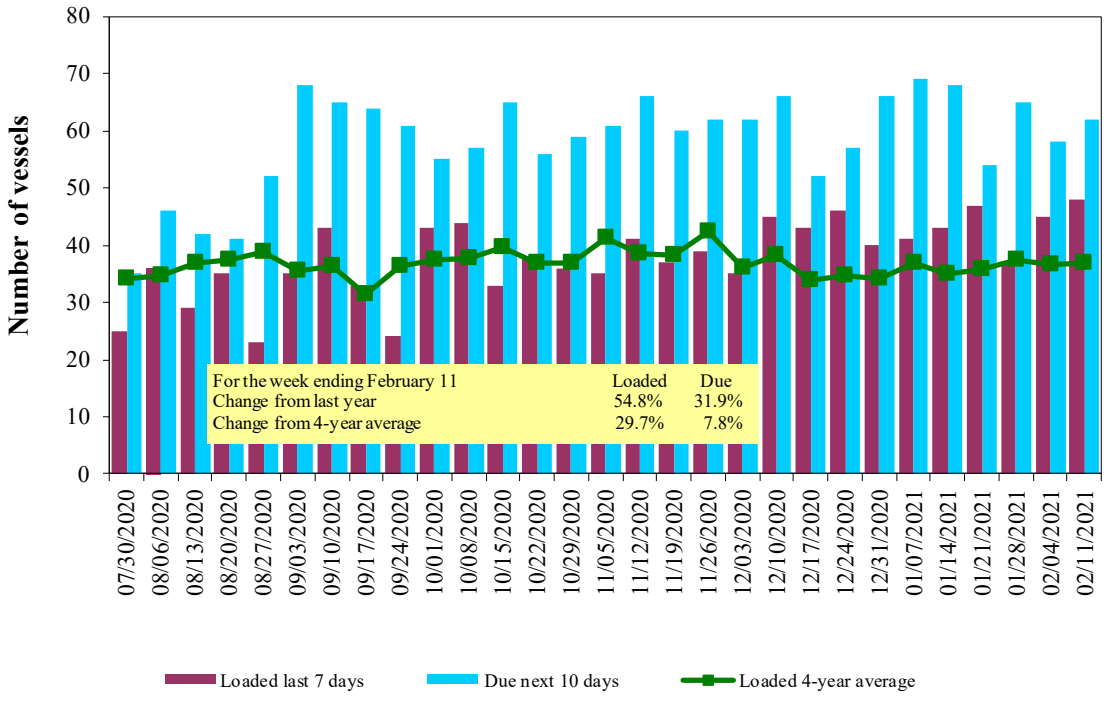
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
2/11/2021	44	48	62	22
2/4/2021	42	45	58	21
2020 range	(22…60)	(23...46)	(34...68)	(7…24)
2020 average	37	33	49	15

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

Source: USDA, Agricultural Marketing Service.

Figure 16

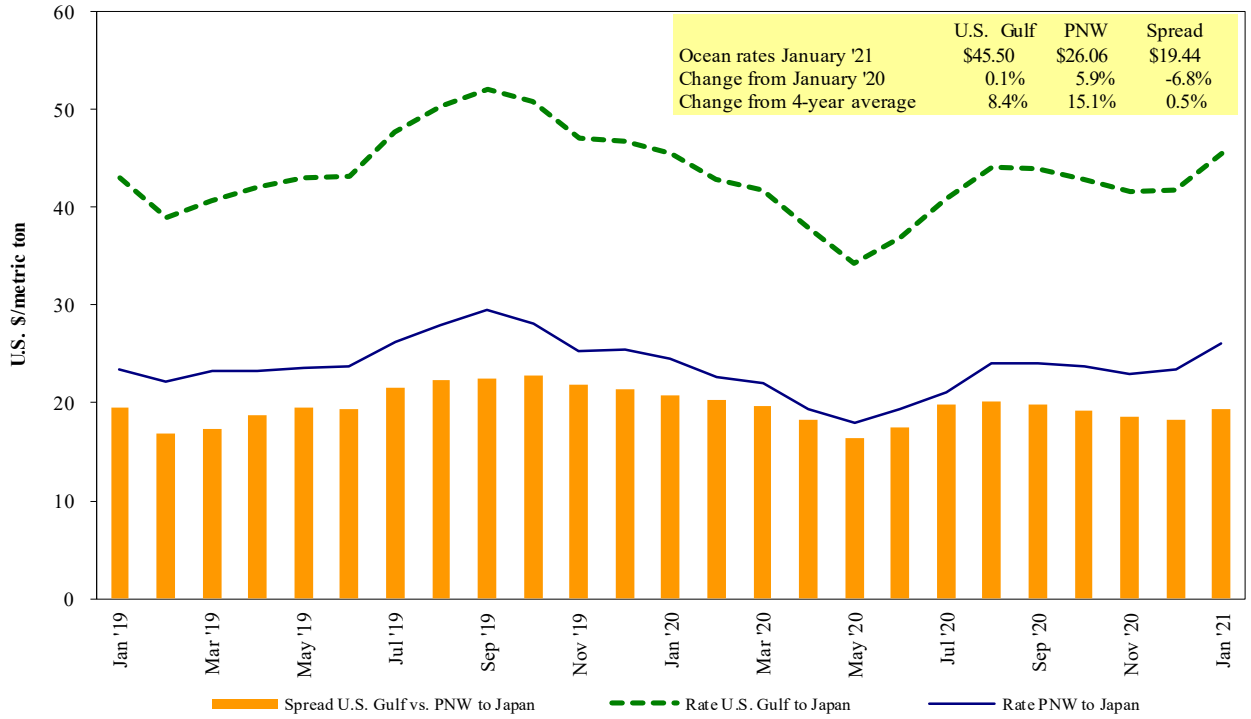
U.S. Gulf[1] vessel loading activity



[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 02/13/2021

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
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	Japan	Heavy grain	Apr 1/30	48,000	46.75
U.S. Gulf	South Korea	Heavy grain	Feb 20/28	51,000	51.50
U.S. Gulf	Pt Sudan	Sorghum	Feb 15/25	34,860	143.13*
U.S. Gulf	Vietnam	Corn	Feb 5/15	70,000	47.25
PNW	Japan	Grain	Mar 5/14	28,000	48.10
PNW	Taiwan	Wheat	Feb 18/Mar 4	40,925	35.24*
PNW	Taiwan	Corn	Feb 20/Mar 15	65,000	24.90
Ukraine	China	Corn	Feb 10/17	60,000	36.40 op 38.90

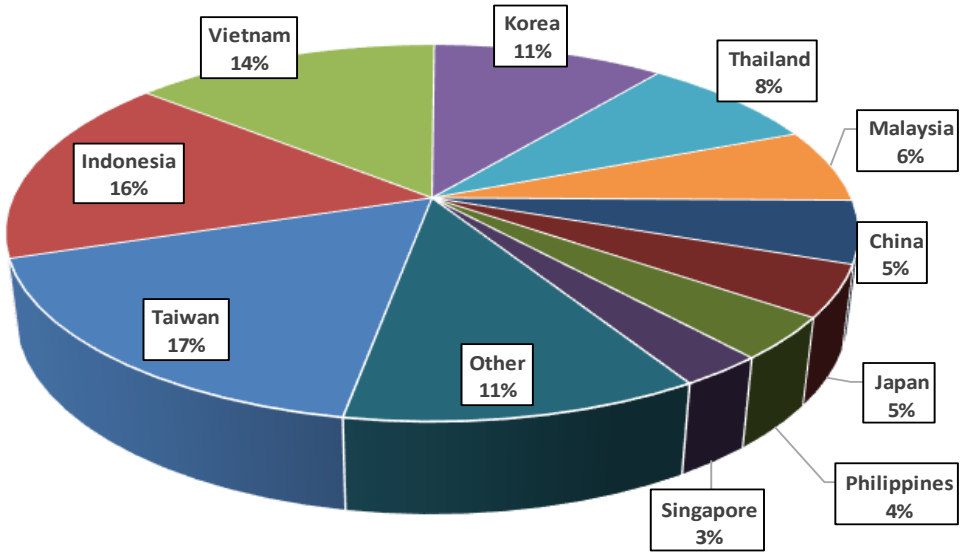
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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.

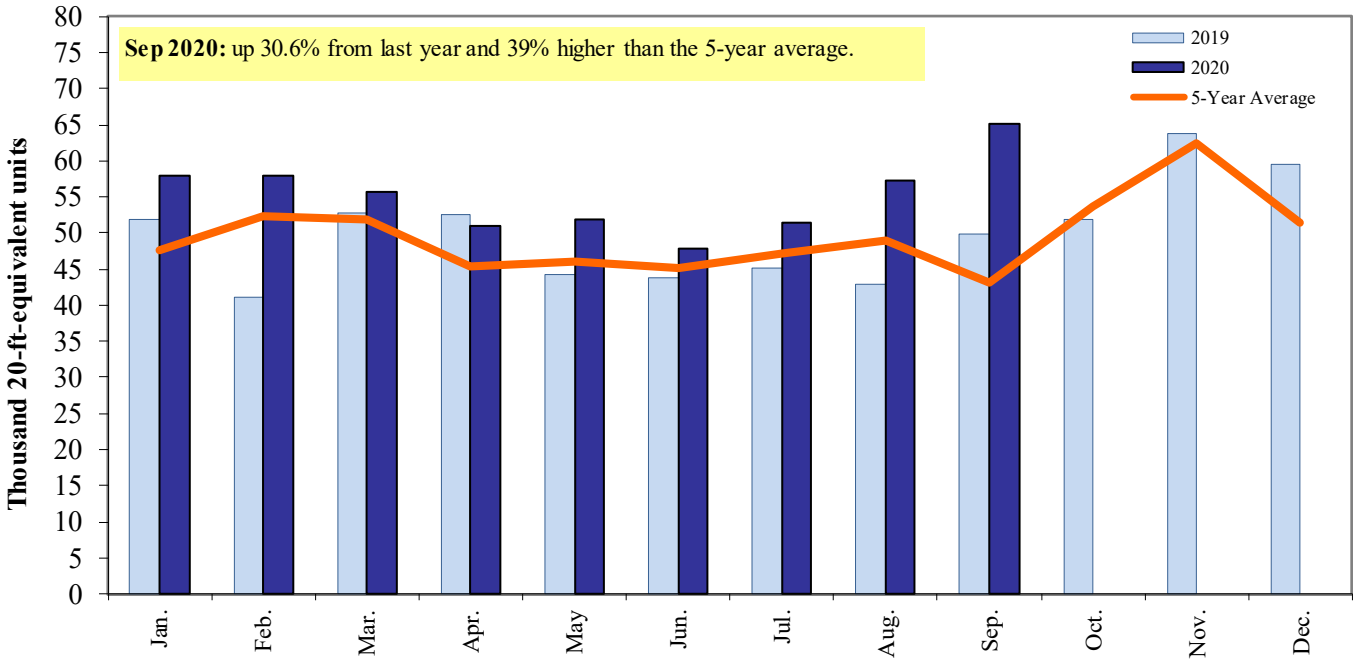
Figure 18
Top 10 destination markets for U.S. containerized grain exports, Jan-Sep 2020



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 containerized grain to Asia



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

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

Contacts and Links

Coordinators		
Surajudeen (Deen) Olowolayemo	surajudeen.olowolayemo@usda.gov	(202) 720 - 0119
Maria Williams	maria.williams@usda.gov	(202) 690 - 4430
Bernadette Winston	bernadette.winston@usda.gov	(202) 690 - 0487
Matt Chang	matt.chang@usda.gov	(202) 720 - 0299
Grain Transportation Indicators		
Surajudeen (Deen) Olowolayemo	surajudeen.olowolayemo@usda.gov	(202) 720 - 0119
Rail Transportation		
Johnny Hill	johnny.hill@usda.gov	(202) 690 - 3295
Jesse Gastelle	jesse.gastelle@usda.gov	(202) 690 - 1144
Peter Caffarelli	petera.caffarelli@usda.gov	(202) 690 - 3244
Barge Transportation		
April Taylor	april.taylor@usda.gov	(202) 720 - 7880
Bernadette Winston	bernadette.winston@usda.gov	(202) 690 - 0487
Matt Chang	matt.chang@usda.gov	(202) 720 - 0299
Truck Transportation		
April Taylor	april.taylor@usda.gov	(202) 720 - 7880
Kranti Mulik	kranti.mulik@usda.gov	(202) 756 - 2577
Matt Chang	matt.chang@usda.gov	(202) 720 - 0299
Grain Exports		
Johnny Hill	johnny.hill@usda.gov	(202) 690 - 3295
Kranti Mulik	kranti.mulik@usda.gov	(202) 756 - 2577
Ocean Transportation		
Surajudeen (Deen) Olowolayemo (Freight rates and vessels)	surajudeen.olowolayemo@usda.gov	(202) 720 - 0119
April Taylor (Container movements)	april.taylor@usda.gov	(202) 720 - 7880
Editor		
Maria Williams	maria.williams@usda.gov	(202) 690-4430

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