United States Department of Agriculture

Grain Transportation Report

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

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March 11, 2021

Contents

The next release is March 18, 2021

WEEKLY HIGHLIGHTS

Diesel Fuel Prices Continue Rising Quickly

In the week ending March 8, U.S. average **diesel fuel prices** increased 7 cents to reach $3.143 per gallon. Last week average diesel prices surpassed $3 per gallon for the first time since January 2020. Over the past 5 weeks, prices have increased more than 40 cents per gallon. According to the Department of Energy's Energy Information Administration (EIA), diesel fuel prices have increased because of rising crude oil prices and supply chain disruptions. EIA's latest *Short-Term Energy Outlook* reports crude prices increased $8 per barrel in February. Higher prices reflect expectations oil demand will rise globally. Higher prices also reflect ongoing petroleum supply limitations by overseas suppliers. In addition, disruptions to petroleum supply from extreme U.S. winter weather (notably, in Texas) put upward pressure on crude oil prices in February.

Grain Barge Movements Recovered From Previous Low Tonnages

For the week ending March 6, grain barge movements recovered from the effects of severe weather in the last half of February. Despite high water conditions on the Ohio River and Lower Mississippi, total downbound grain was 848,441 tons, 93 percent higher than last week and the highest level since the beginning of February (***GTR* table 10**). Meanwhile, although total upbound empty barges stayed the same as the previous week (632), upbound empty barges on the Ohio River dropped 30 percent because of high water. In the St. Louis area, on the other hand, upbound empty barges on the Mississippi River totaled 396 barges, a 32-percent increase from last week. Early this week, there were some barge delays on the Ohio River and Lower Mississippi due to high water, but the industry expects water conditions to improve for the rest of the week.

Latest *WASDE* Projections Could Affect Transportation Demand and Ocean Freight Rates

In the March *World Agricultural Supply and Demand Estimates* (WASDE), USDA's World Agriculture Outlook Board (WAOB) released its adjusted projections for marketing year (MY) 2020/21. According to the report, since February, estimated MY 2020/21 U.S. soft white wheat exports rose and estimated hard red winter wheat exports fell. If these adjusted totals are realized, they can incrementally reduce demand for rail and ocean vessels in the Texas Gulf region, while supporting western rail and barge volumes. Also, since February, estimated MY 2020/21 U.S. corn exports—as well as U.S. soybean and soybean derivative exports—remain unchanged. WAOB estimates Brazil corn and soybean exports at record levels, which could hasten the seasonal demand for ocean transportation from Brazil, and consequently put upward pressure on ocean freight rates for shipping bulk grain.

Snapshots by Sector

Export Sales

For the week ending February 25, **unshipped balances** of wheat, corn, and soybeans totaled 46.6 mmt. This was 6 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 0.116 mmt, down 74 percent from the past week. Net **soybean export sales** were 0.334 mmt, up significantly from the previous week. Net **wheat export sales** were 0.219 mmt, down 31 percent from the previous week.

Rail

U.S. Class I railroads originated 23,530 **grain carloads** during the week ending February 27. This was a 25-percent increase from the previous week, 14 percent more than last year, and 16 percent more than the 3-year average.

Average March shuttle **secondary railcar** bids/offers (per car) were $369 above tariff for the week ending March 4. This was $369 more than last week and $331 more than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending March 6, **barge grain movements** totaled 848,441 tons. This was 93 percent higher than the previous week and 108 percent higher than the same period last year.

For the week ending March 6, 525 grain barges **moved down river**—258 barges more than the previous week. There were 857 grain barges **unloaded in New Orleans**, 10 percent more than the previous week.

Ocean

For the week ending March 4, 36 **oceangoing grain vessels** were loaded in the Gulf—24 percent more than the same period last year. Within the next 10 days (starting March 5, 2021), 53 vessels were expected to be loaded—29 percent more than the same period last year.

As of March 4, the rate for shipping a metric ton of grain from the U.S. Gulf to Japan was $57.50. This was unchanged from the previous week. The rate from PNW to Japan was $32.25 per metric ton, unchanged from the previous week.

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Feature Article/Calendar

Fourth-Quarter Corn and Soybean Landed Costs Up From Previous Quarter

Transportation costs for shipping corn and soybeans from Minneapolis, MN, to Japan via the U.S. Gulf (Gulf route) increased—both from third quarter to fourth quarter 2020 (quarter to quarter) and from fourth quarter 2019 to fourth quarter 2020 (year to year). However, for shipping corn and soybeans from Minneapolis, MN, to Japan via the Pacific Northwest (PNW route), transportation costs declined, both from quarter to quarter and year to year.

For both routes and both commodities, landed costs for shipping corn and soybeans rose (tables 1 and 2)—both from quarter to quarter and from year to year. Rising corn and soybean farm values were the main driver of increased landed costs. Although total landed costs for corn have mostly remained steady since 2015, fourth-quarter 2020 landed costs for soybeans were the highest since fourth quarter 2014 (see figure, page 3).

U.S. Gulf Costs

Quarter to quarter. Quarter to quarter, transportation costs for shipping corn and soybeans via the Gulf route rose 11 percent from (see table 1). The main driver of rising transportation costs was a 38-percent jump in barge rates. Barge rates had risen in response to strong demand from China and other major corn and soybean importers. Ocean freight rates decreased 2 percent, but trucking rates decreased 8 percent.

Year to year. With a significant jump in barge rates, transportation costs for shipping corn and soybeans via the Gulf route increased 10 percent from year to year (table 1).

Table 1: Cost of shipping corn and soybeans from Minneapolis to Japan through the U.S. Gulf

	Corn					Soybeans				
	$/metric ton			Percent change		$/metric ton			Percent Change	
	4th qtr. '19	3rd qtr. '20	4th qtr. '20	Yr. to Yr.	Qtr to Qtr	4th qtr. '19	3rd qtr. '20	4th qtr. '20	Yr. to Yr.	Qtr to Qtr
Truck	11.46	12.38	11.38	-0.70	-8.08	11.46	12.38	11.38	-0.70	-8.08
Barge[1]	26.54	29.89	41.37	55.88	38.41	26.54	29.89	41.37	55.88	38.41
Ocean	48.25	42.99	42.11	-12.73	-2.05	48.25	42.99	42.11	-12.73	-2.05
Total transportation cost	86.25	85.26	94.86	9.98	11.26	86.25	85.26	94.86	9.98	11.26
Farm value[3]	129.65	116.00	140.02	8.00	20.71	320.28	316.85	364.86	13.92	15.15
Total landed cost	215.90	201.26	234.88	8.79	16.70	406.53	402.11	459.72	13.08	14.33
Transportation % landed cost	39.95	42.36	40.39			21.22	21.20	20.63		

Table 2: Cost of shipping corn and soybeans from Minneapolis to Japan through the Pacific Northwest

	Corn					Soybeans				
	$/metric ton			Percent change		$/metric ton			Percent Change	
	4th qtr. '19	3rd qtr. '20	4th qtr. '20	Yr. to Yr.	Qtr to Qtr	4th qtr. '19	3rd qtr. '20	4th qtr. '20	Yr. to Yr.	Qtr to Qtr
Truck	12.10	12.38	11.38	-5.95	-8.08	11.46	12.38	11.38	-0.70	-8.08
Rail[2]	51.44	51.44	51.44	0.00	0.00	58.59	58.59	58.59	0.00	0.00
Ocean	26.28	23.05	23.40	-10.96	1.52	26.28	23.05	23.40	-10.96	1.52
Total Transportation Cost	89.82	86.87	86.22	-4.01	-0.75	96.33	94.02	93.37	-3.07	-0.69
Farm Value[3]	129.65	116.00	140.02	8.00	20.71	320.28	316.85	364.86	13.92	15.15
Total Landed Cost	219.47	202.87	226.24	3.08	11.52	416.61	410.87	458.23	9.99	11.53
Transportation % Landed Cost	40.93	42.82	38.11			23.12	22.88	20.38		

[1] Barge rates are from Minneapolis, MN to the Gulf.

[2] All rail tariffs include fuel surcharges and revisions for heavy axle rail cars and shuttle trains. The rail tariff rate is a base price of rail freight rates, but during periods of high rail demand or car shortages, high auction and secondary market rates could exceed the base rail tariffs per car.

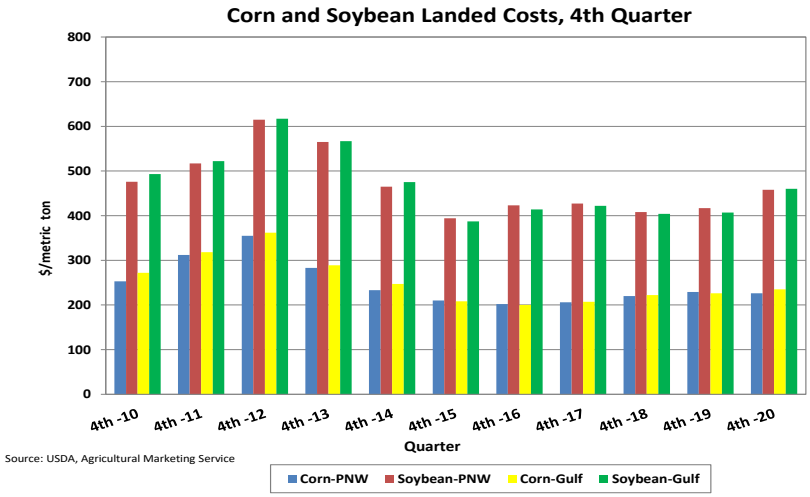
[3] USDA, National Agricultural Statistics Service is the source for corn and soybean prices.

Note: qtr. = quarter; yr. = year; landed cost = transportation cost plus farm value.

Source: USDA, Agricultural Marketing Service.

U.S. Gulf landed costs. Fourth-quarter total landed costs for shipping via the Gulf route were $235 per metric ton (mt) for corn and $460 per mt for soybeans (see figure). Quarter to quarter, landed costs for shipping via the Gulf route increased 17 percent for corn and 14 percent for soybeans. The increase for each grain was mainly in response to higher barge rates and rising farm values (see table 1).

Year to year, landed costs for shipping via the Gulf route increased 9 percent for corn and 13 percent for soybeans. Fourth-quarter transportation costs for shipping corn via the Gulf route represented 40 percent of total landed costs, which were down from quarter to quarter, but up from year to year. Fourth-quarter transportation costs for shipping soybeans via the Gulf route accounted for 21 percent of landed costs, which were unchanged from quarter to quarter and from year to year.



Source: USDA, Agricultural Marketing Service

Pacific Northwest Costs

Quarter to Quarter. Transportation costs for shipping via the PNW route decreased 1 percent for corn and soybeans from quarter to quarter. Trucking rates decreased, but ocean freight rates increased, as Asian demand for grain held firm (*Grain Transportation Report* (*GTR*), January 21, 2021). Rail rates for shipping to PNW were unchanged for both commodities.

Year to year. Year to year transportation costs decreased 4 percent for corn and 3 percent for soybeans (see table 2). Rail rates for shipping to PNW were unchanged for both commodities.

PNW landed costs. Total fourth-quarter landed costs ranged from $226 per mt to $458 per mt (see figure). Quarter to quarter, total landed costs for shipping corn and soybeans increased 12 percent each, mainly responding to higher farm values. Year to year, total landed costs increased 3 percent for corn and 10 percent for soybeans—in both cases, responding to higher farm values. Transportation costs for shipping corn represented 38 percent of the landed cost for corn, which was down quarter to quarter and year to year. Transportation costs for shipping soybeans via the PNW route represented 20 percent of the landed costs, which were down both quarter to quarter and year to year.

Fourth-Quarter Corn and Soybean Inspections and Annual Forecasts

According to USDA's Federal Grain Inspection Service, fourth-quarter export inspections of corn increased 86 percent from 2019 due to increased demand from Asia and Latin America (see *GTR*, January 14, 2021). Year-to-year inspections of corn destined to Japan increased 25 percent, to 1.5 mmt. Likewise, fourth quarter inspections of corn to all Asia and to South America increased from 2019. Fourth-quarter soybean inspections destined to Japan increased 14 percent from 2019, to 608 mmt.

Current Marketing Year Forecasts. According to USDA's March *World Agricultural Supply and Demand Estimates* report, the forecast for current marketing year (MY 2020/21) corn exports is unchanged from February and up 46 percent from MY 2019/20. The sizeable increase in the year-to-year forecast for corn exports is mainly due to higher demand from Asia and other major importers. The increase is due also to somewhat tightening global supplies. The March forecast for MY 2020/21 soybean exports is unchanged from February and up 34 percent from MY 2019/20. *Johnny.Hill@usda.gov*

Grain Transportation Indicators

Table 1

Grain transport cost indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Unit train	Shuttle		Gulf	Pacific
03/10/21	211	295	233	207	257	229
03/03/21	206	301	222	212	257	229

[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)

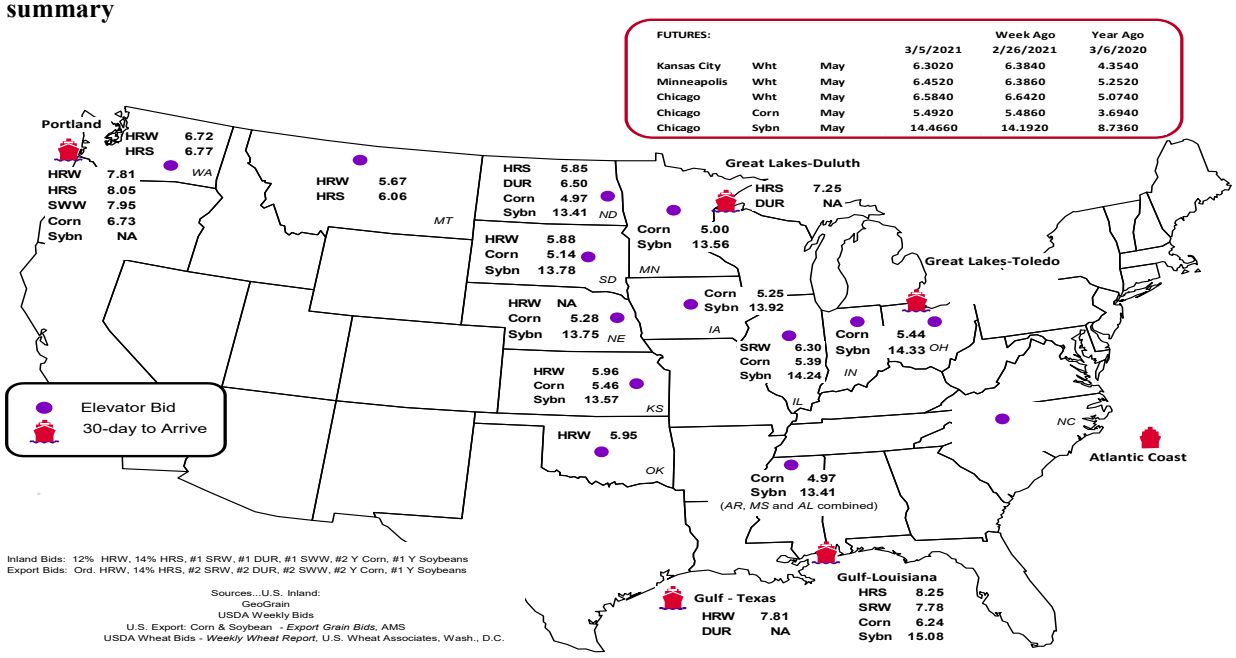
Commodity	Origin–destination	3/5/2021	2/26/2021
Corn	IL–Gulf	-0.85	-0.86
Corn	NE–Gulf	-0.96	-0.99
Soybean	IA–Gulf	-1.16	-1.21
HRW	KS–Gulf	-1.85	-1.95
HRS	ND–Portland	-2.20	-2.26

Note: nq = no quote; n/a = not available; HRW = hard red winter wheat; HRS = hard red spring wheat.
Source: USDA, Agricultural Marketing Service.

The **grain bid summary** illustrates the market relationships for commodities. Positive and negative adjustments in differential between terminal and futures markets, and the relationship to inland market points, are indicators of changes in fundamental market supply and demand. The map may be used to monitor market and time differentials.

Figure 1

Grain bid summary



Rail Transportation

Table 3

Rail deliveries to port (carloads)[1]

For the week ending	Mississippi Gulf	Texas Gulf	Pacific Northwest	Atlantic & East Gulf	Total	Week ending	Cross-border Mexico[3]
3/03/2021[p]	1,821	2,033	6,861	511	11,226	2/27/2021	2,849
2/24/2021[r]	1,497	1,412	7,176	284	10,369	2/20/2021	1,612
2021 YTD[r]	16,968	16,380	61,019	7,077	101,444	2021 YTD	20,406
2020 YTD[r]	3,859	5,359	37,019	1,631	47,868	2020 YTD	20,708
2021 YTD as % of 2020 YTD	440	306	165	434	212	% change YTD	99
Last 4 weeks as % of 2020[2]	882	264	123	239	166	Last 4wks. % 2020	92
Last 4 weeks as % of 4-year avg.[2]	296	102	106	153	121	Last 4wks. % 4 yr.	113
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.

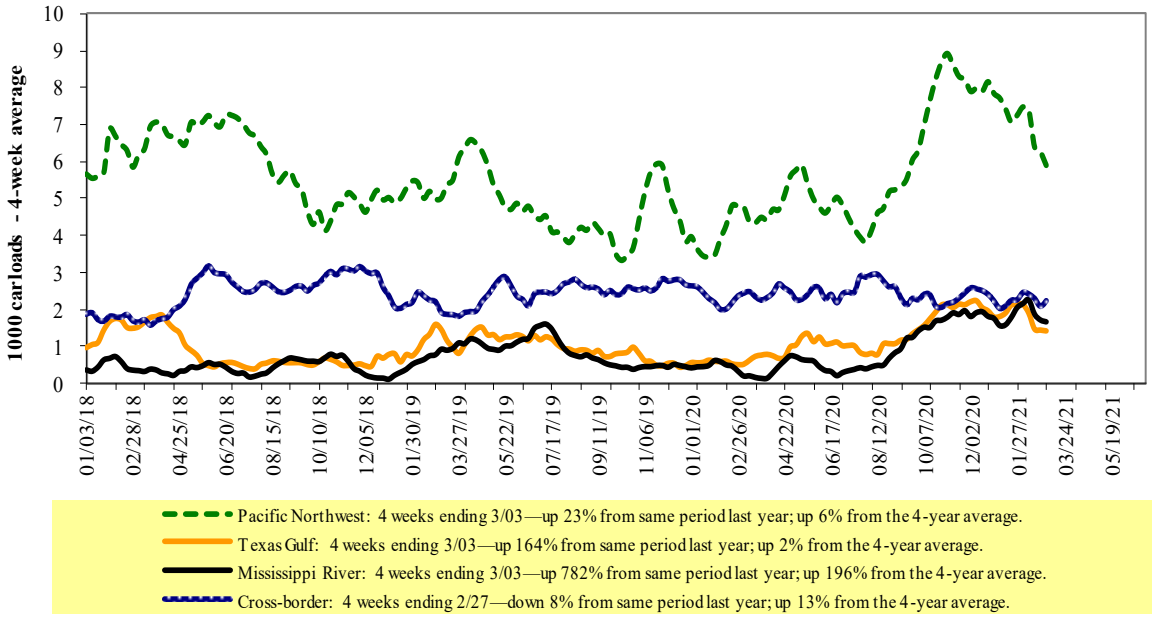
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available; wks. = weeks; avg. = average.

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	
2/27/2021	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,927	2,435	12,049	1,171	5,948	23,530	4,107	4,934
This week last year	1,499	2,065	11,801	1,208	4,137	20,710	3,050	3,486
2021 YTD	16,896	21,757	102,974	7,937	51,640	201,204	38,383	37,355
2020 YTD	15,539	19,924	92,827	9,628	39,091	177,009	29,197	32,429
2021 YTD as % of 2020 YTD	109	109	111	82	132	114	131	115
Last 4 weeks as % of 2020*	114	111	112	81	136	116	137	120
Last 4 weeks as % of 3-yr. avg.**	108	99	110	83	123	110	120	112
Total 2020	91,659	130,934	613,630	57,782	296,701	1,190,706	239,121	261,778

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

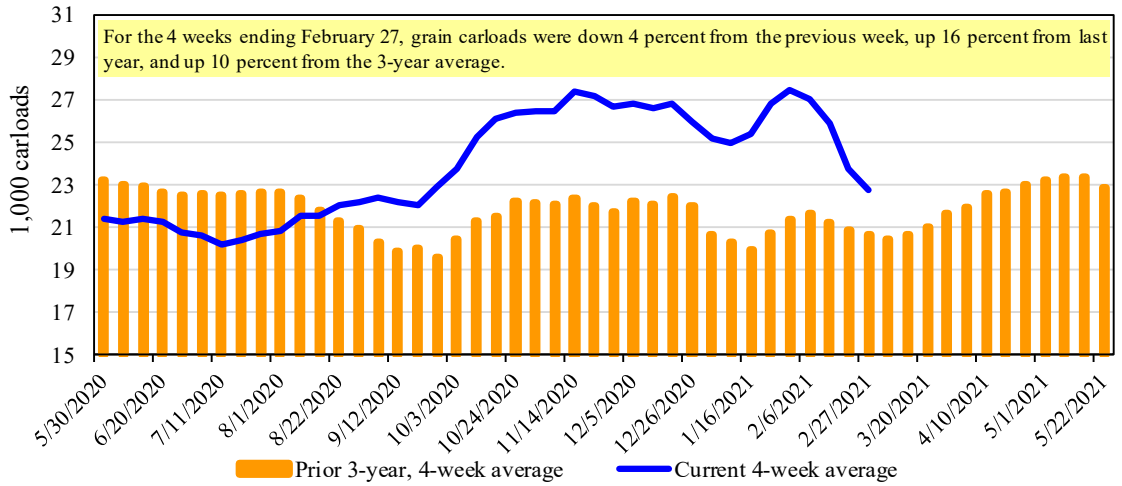
**The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

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							
3/4/2021		Mar-21	Mar-20	Apr-21	Apr-20	May-21	May-20	Jun-21	Jun-20
BNSF[3]	COT grain units	0	0	0	no bid	no bids	no bid	no bids	0
	COT grain single-car	7	0	0	0	0	0	0	0
UP[4]	GCAS/Region 1	no offer	no offer	no offer	no offer	no offer	no offer	n/a	n/a
	GCAS/Region 2	no offer	no offer	no offer	no 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.

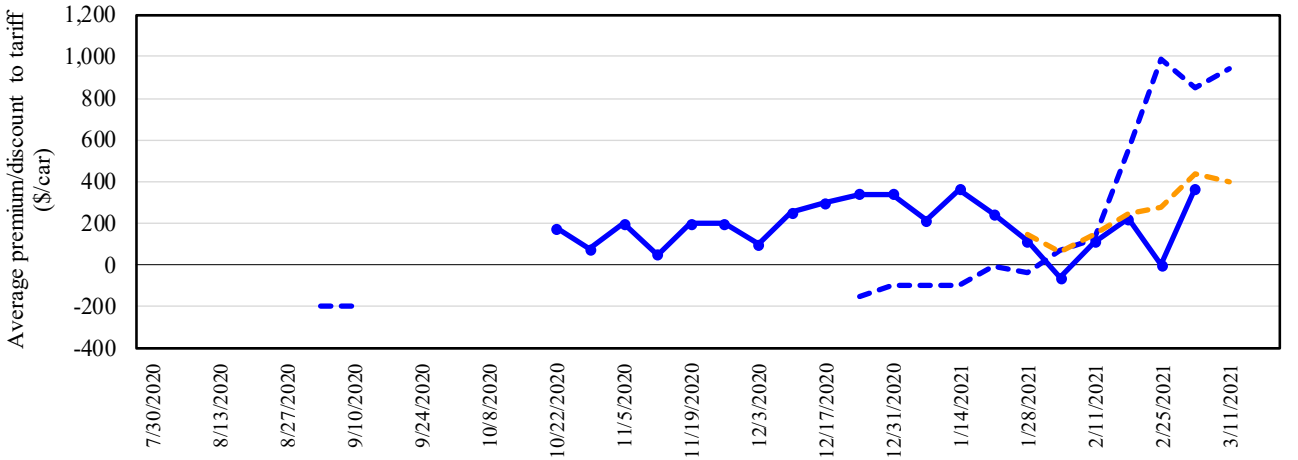
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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 March 2021, secondary market

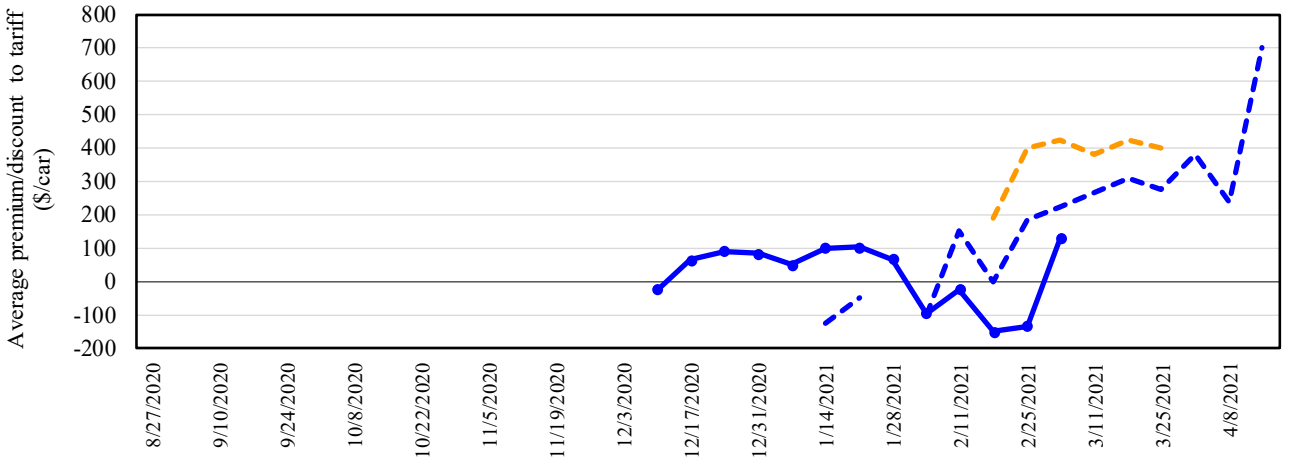


3/4/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$363	$375

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $369 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 April 2021, secondary market



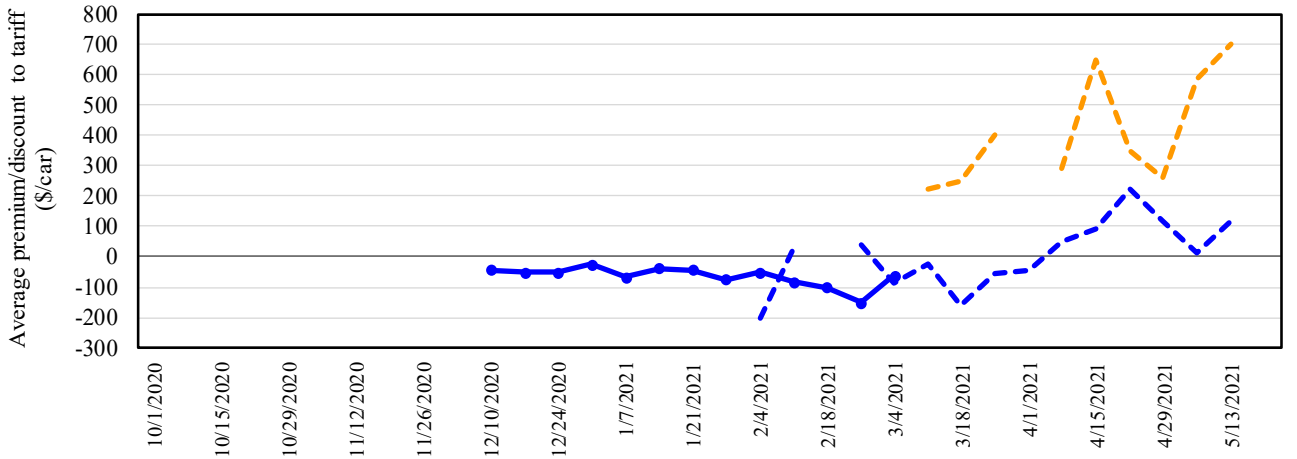
3/4/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	$50	$206

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $261 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 May 2021, secondary market



3/4/2021	BNSF	UP
Non-shuttle	n/a	n/a
Shuttle	-$75	-$50

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers rose $88 this week and are $38 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: 3/4/2021		Delivery period					
		Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-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**	**363**	**50**	**(75)**	**(200)**	**(150)**	**(150)**
	Change from last week	438	183	75	0	0	0
	Change from same week 2020	288	n/a	n/a	n/a	n/a	n/a
	UP-Pool	**375**	**206**	**(50)**	**n/a**	**(100)**	**(150)**
	Change from last week	300	n/a	n/a	n/a	0	0
	Change from same week 2020	375	356	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]

March 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	$61	$40.16	$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	$107	$46.00	$1.25	-1
	Sioux Falls, SD	Galveston-Houston, TX	$6,851	$0	$68.03	$1.85	-2
	Colby, KS	Galveston-Houston, TX	$4,801	$117	$48.84	$1.33	-1
	Amarillo, TX	Los Angeles, CA	$5,121	$163	$52.47	$1.43	-2
Corn	Champaign-Urbana, IL	New Orleans, LA	$3,900	$121	$39.93	$1.01	-2
	Toledo, OH	Raleigh, NC	$7,833	$0	$77.79	$1.98	15
	Des Moines, IA	Davenport, IA	$2,455	$26	$24.63	$0.63	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	$75	$39.47	$1.00	1
	Des Moines, IA	Los Angeles, CA	$5,780	$219	$59.57	$1.51	0
Soybeans	Minneapolis, MN	New Orleans, LA	$5,246	$97	$53.06	$1.44	40
	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	$121	$47.33	$1.29	-1
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	$192	$61.61	$1.68	-2
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	$121	$39.13	$0.99	-2
	Lincoln, NE	Galveston-Houston, TX	$3,880	$0	$38.53	$0.98	0
	Des Moines, IA	Amarillo, TX	$4,320	$94	$43.84	$1.11	1
	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	$139	$49.79	$1.36	-2
	Toledo, OH	Huntsville, AL	$4,945	$0	$49.11	$1.34	3
	Grand Island, NE	Portland, OR	$5,260	$196	$54.19	$1.47	-2

[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: March 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	$84	$69.44	$1.89	-2
	KS	Guadalajara, JA	$7,471	$611	$82.58	$2.25	0
	TX	Salinas Victoria, NL	$4,347	$51	$44.93	$1.22	0
Corn	IA	Guadalajara, JA	$8,902	$496	$96.02	$2.44	0
	SD	Celaya, GJ	$8,140	$0	$83.17	$2.11	0
	NE	Queretaro, QA	$8,300	$172	$86.56	$2.20	-1
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	0
	MO	Tlalnepantla, EM	$7,665	$167	$80.03	$2.03	-1
	SD	Torreon, CU	$7,690	$0	$78.57	$1.99	0
Soybeans	MO	Bojay (Tula), HG	$8,547	$467	$92.10	$2.50	0
	NE	Guadalajara, JA	$9,157	$481	$98.48	$2.68	0
	IA	El Castillo, JA	$9,410	$0	$96.15	$2.61	-1
	KS	Torreon, CU	$8,014	$321	$85.16	$2.32	0
Sorghum	NE	Celaya, GJ	$7,772	$430	$83.80	$2.13	0
	KS	Queretaro, QA	$8,108	$104	$83.91	$2.13	-1
	NE	Salinas Victoria, NL	$6,713	$84	$69.44	$1.76	-1
	NE	Torreon, CU	$7,092	$286	$75.39	$1.91	-1

[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.

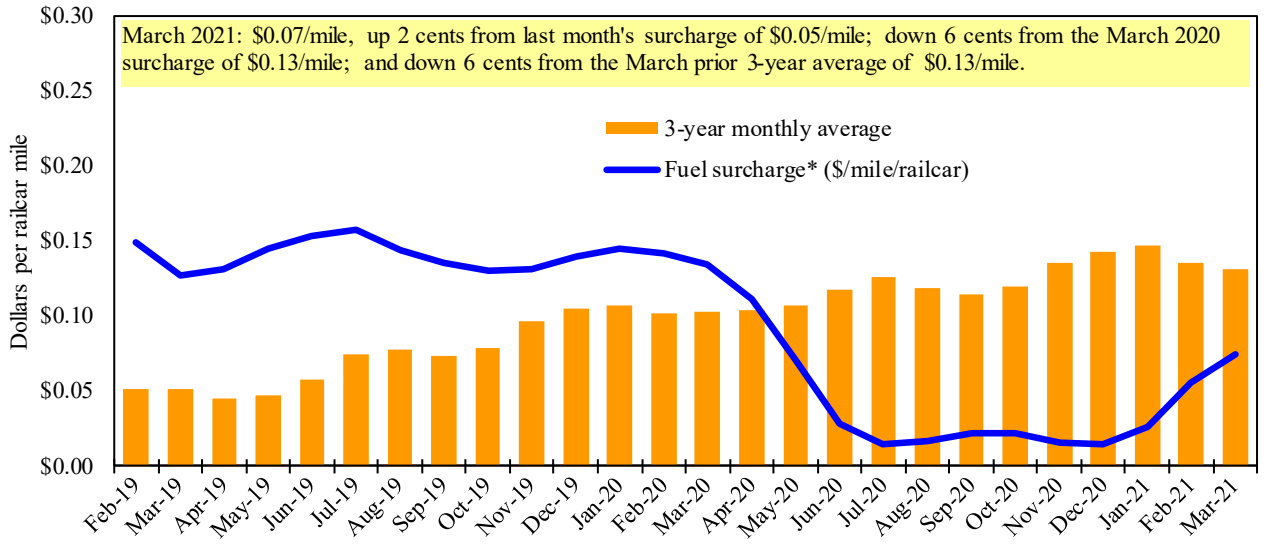
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu.

[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.

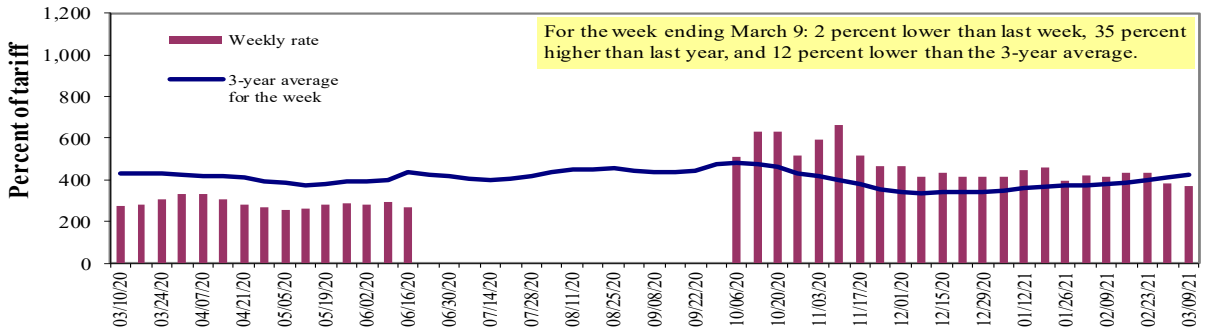
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

**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]	3/9/2021	-	-	372	264	294	294	246
	3/2/2021	-	-	381	265	298	298	240
$/ton	3/9/2021	-	-	17.26	10.53	13.79	11.88	7.72
	3/2/2021	-	-	17.68	10.57	13.98	12.04	7.54
Current week % change from the same week:								
	Last year	-	-	35	43	48	48	38
	3-year avg. [2]	-	-	-12	-18	-20	-21	-15
Rate[1]	April	488	414	377	265	286	286	244
	June	470	377	367	259	273	273	237

[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

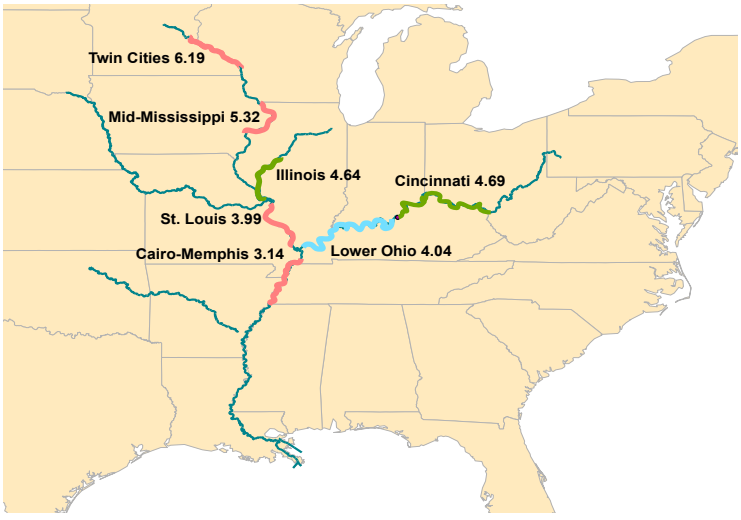
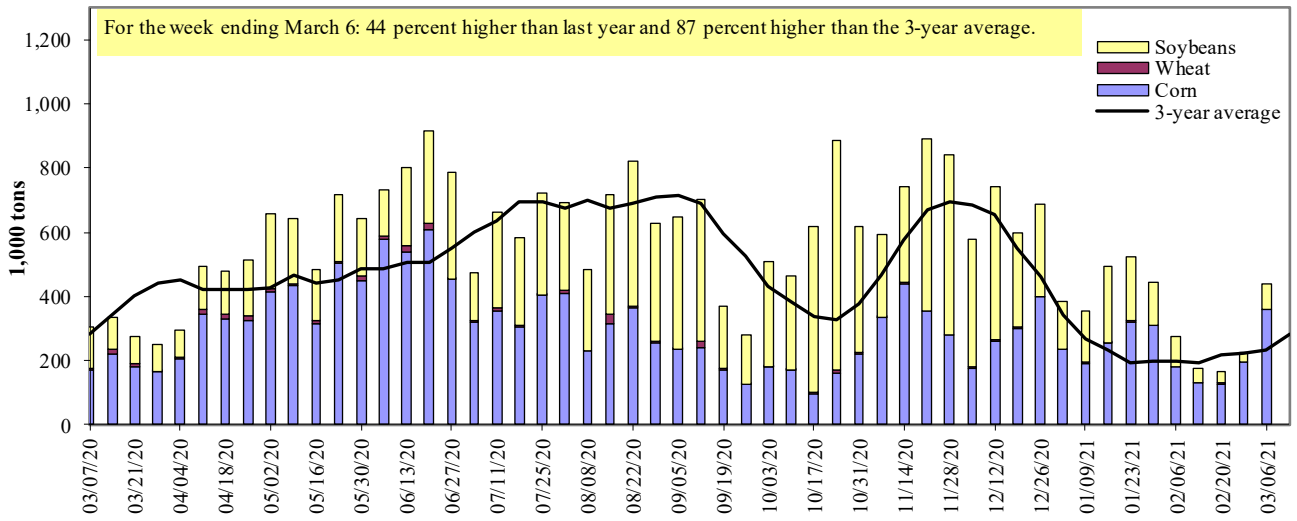


Figure 10

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 03/06/2021	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)	320	0	65	0	385
Granite City, IL (L27)	358	0	79	0	437
Illinois River (La Grange)	361	0	71	0	433
Ohio River (Olmsted)	305	4	61	2	372
Arkansas River (L1)	0	13	27	0	40
Weekly total - 2021	663	17	167	2	848
Weekly total - 2020	179	50	173	6	409
2021 YTD[1]	4,341	127	2,399	87	6,953
2020 YTD[1]	2,033	268	2,137	12	4,450
2021 as % of 2020 YTD	214	47	112	750	156
Last 4 weeks as % of 2020[2]	179	32	84	30	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.

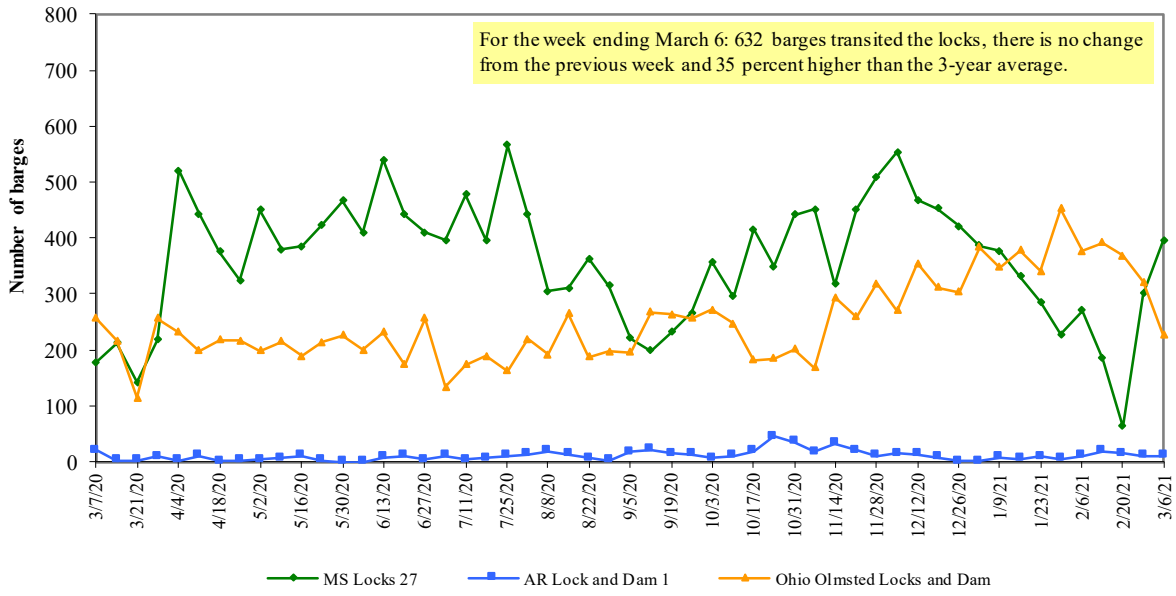
[2] As a percent of same period in 2020.

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

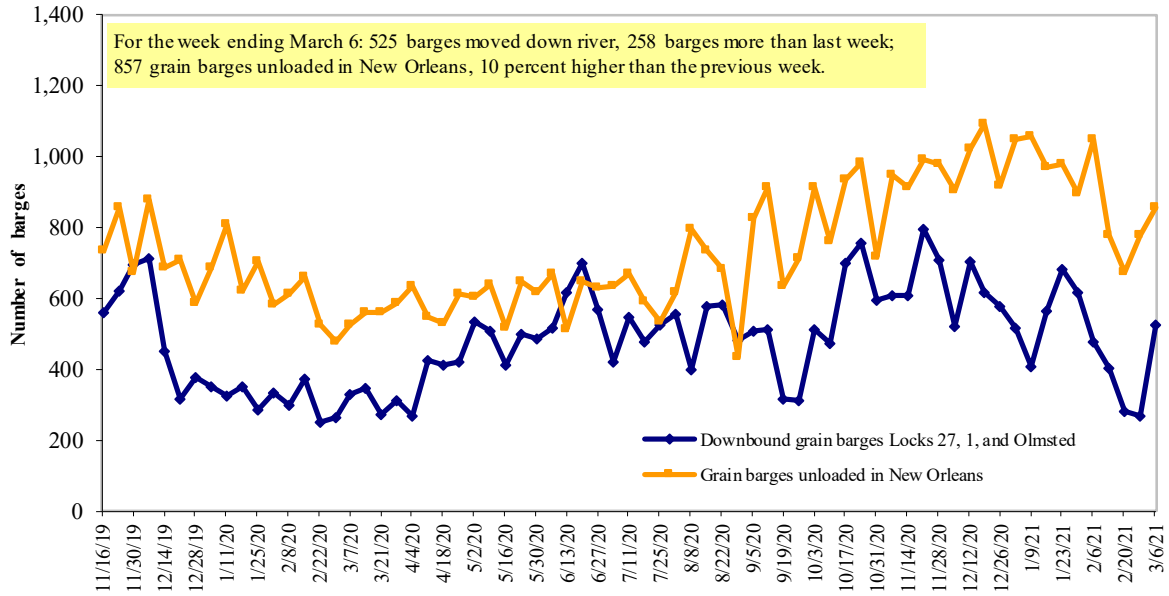
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 3/8/2021 (U.S. $/gallon)

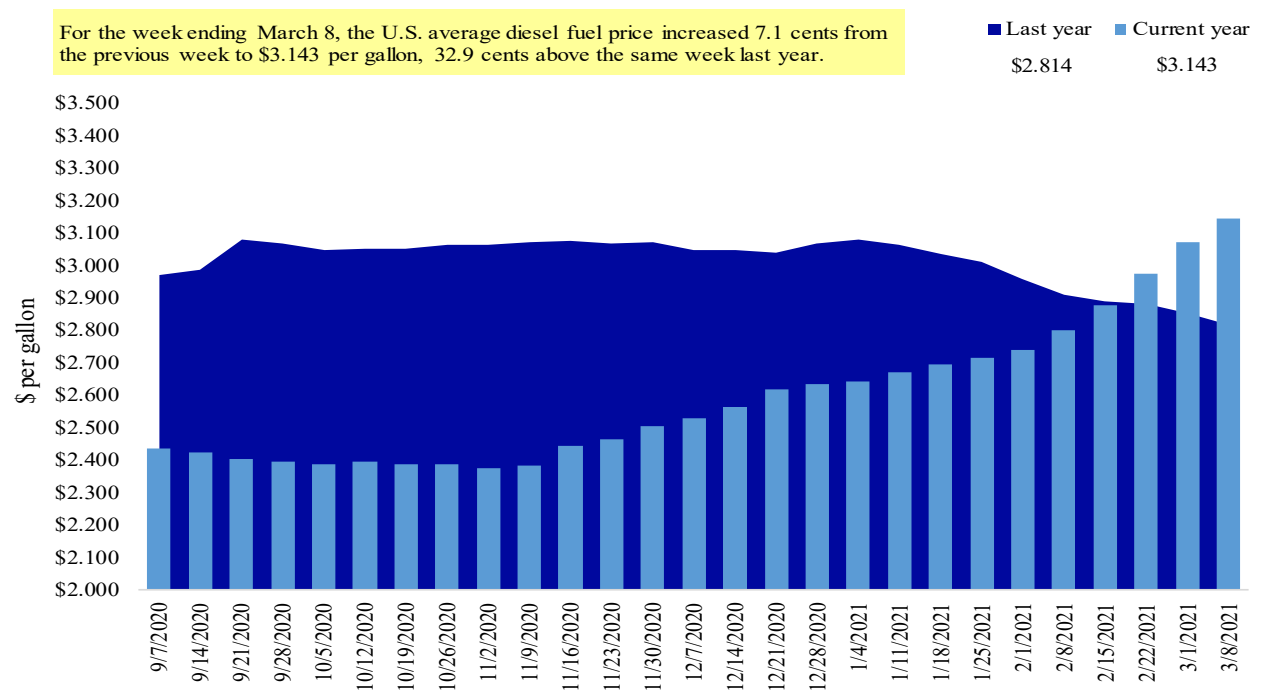
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	3.116	0.033	0.256
	New England	3.053	0.039	0.063
	Central Atlantic	3.266	0.066	0.221
	Lower Atlantic	3.027	0.009	0.318
II	Midwest	3.127	0.086	0.438
III	Gulf Coast	2.929	0.092	0.352
IV	Rocky Mountain	3.131	0.148	0.328
V	West Coast	3.593	0.052	0.194
	West Coast less California	3.228	0.054	0.202
	California	3.897	0.051	0.192
Total	United States	3.143	0.071	0.329

[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]									
2/25/2021	1,335	405	1,984	2,285	154	6,163	32,954	7,466	46,582
This week year ago	1,776	357	1,575	1,057	148	4,912	12,262	4,432	21,607
Cumulative exports-marketing year[2]									
2020/21 YTD	6,672	1,330	5,108	4,000	518	17,628	26,170	52,683	96,481
2019/20 YTD	6,828	1,938	5,230	3,591	680	18,267	14,380	29,589	62,236
YTD 2020/21 as % of 2019/20	98	69	98	111	76	97	182	178	155
Last 4 wks. as % of same period 2019/20*	79	124	129	225	107	131	284	195	231
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 2/25/2021	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	12,035	10,711	12	14,869
Japan	8,398	5,141	63	11,221
Columbia	2,624	2,599	1	4,830
Korea	1,633	673	143	4,011
China	18,730	61	30,555	909
Top 5 importers	**43,420**	**19,185**	**126**	**35,840**
Total U.S. corn export sales	**59,124**	**26,642**	**122**	**49,983**
% of projected exports	89%	59%		
Change from prior week[2]	**116**	**769**		
Top 5 importers' share of U.S. corn export sales	73%	72%		72%
USDA forecast March 2021	**66,158**	**45,242**	**46**	
Corn use for ethanol USDA forecast, March 2021	**125,730**	**123,368**	**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 2/25/2021	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	35,762	12,228	192	19,106
Mexico	4,354	3,484	25	4,591
Egypt	2,323	2,080	12	2,980
Indonesia	1,623	1,214	34	2,360
Japan	1,719	1,748	(2)	2,288
Top 5 importers	**45,782**	**20,753**	**121**	**31,324**
Total U.S. soybean export sales	**60,149**	**34,021**	**77**	**49,352**
% of projected exports	98%	74%		
change from prior week[2]	**334**	**319**		
Top 5 importers' share of U.S. soybean export sales	76%	61%		**63%**
USDA forecast, March 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 2/25/2021	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	3,163	3,268	(3)	3,213
Philippines	2,934	2,980	(2)	2,888
Japan	2,280	2,395	(5)	2,655
Nigeria	1,348	1,323	2	1,433
Korea	1,597	1,275	25	1,372
Indonesia	994	971	2	1,195
Taiwan	1,033	1,164	(11)	1,175
Thailand	702	853	(18)	727
Italy	570	768	(26)	622
Colombia	349	682	(49)	618
Top 10 importers	**14,971**	**15,678**	(5)	**15,897**
Total U.S. wheat export sales	**23,791**	**23,179**	3	**23,821**
% of projected exports	89%	88%		
change from prior week[2]	**219**	**542**		
Top 10 importers' share of U.S. wheat export sales	63%	68%		67%
USDA forecast, March 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 03/04/21	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	389	179	218	2,461	3,087	80	80	100	15,966
Corn	370	558	66	2,720	724	376	203	160	9,969
Soybeans	210	281	75	3,527	1,968	179	171	105	14,028
Total	**969**	**1,018**	**95**	**8,707**	**5,780**	**151**	**130**	**119**	**39,963**
Mississippi Gulf									
Wheat	23	26	87	322	710	45	39	33	3,422
Corn	950	1,286	74	8,120	4,583	177	194	191	28,781
Soybeans	259	536	48	7,799	6,036	129	101	75	38,013
Total	**1,232**	**1,849**	**67**	**16,241**	**11,329**	**143**	**144**	**124**	**70,215**
Texas Gulf									
Wheat	32	61	52	488	683	71	86	44	4,248
Corn	9	38	22	107	129	83	102	111	723
Soybeans	0	0	n/a	619	6	n/a	786	n/a	2,098
Total	**41**	**99**	**41**	**1,214**	**819**	**148**	**105**	**61**	**7,068**
Interior									
Wheat	62	58	106	440	466	95	80	112	2,263
Corn	189	129	147	1,390	1,340	104	109	113	8,683
Soybeans	132	101	130	1,329	1,430	93	82	90	7,274
Total	**382**	**288**	**133**	**3,159**	**3,236**	**98**	**93**	**103**	**18,220**
Great Lakes									
Wheat	1	1	n/a	19	1	n/a	n/a	580	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	**1**	**1**	**n/a**	**19**	**1**	**n/a**	**n/a**	**580**	**2,113**
Atlantic									
Wheat	0	35	0	35	0	n/a	n/a	n/a	65
Corn	0	0	n/a	0	0	n/a	n/a	0	33
Soybeans	17	88	20	740	239	310	315	190	1,870
Total	**17**	**122**	**14**	**775**	**239**	**324**	**355**	**211**	**1,968**
U.S. total from ports*									
Wheat	507	359	141	3,765	4,946	76	76	80	26,854
Corn	1,517	2,011	75	12,337	6,777	182	180	170	48,301
Soybeans	618	1,006	61	14,014	9,680	145	119	90	64,394
Total	**2,643**	**3,377**	**78**	**30,116**	**21,402**	**141**	**132**	**118**	**139,548**

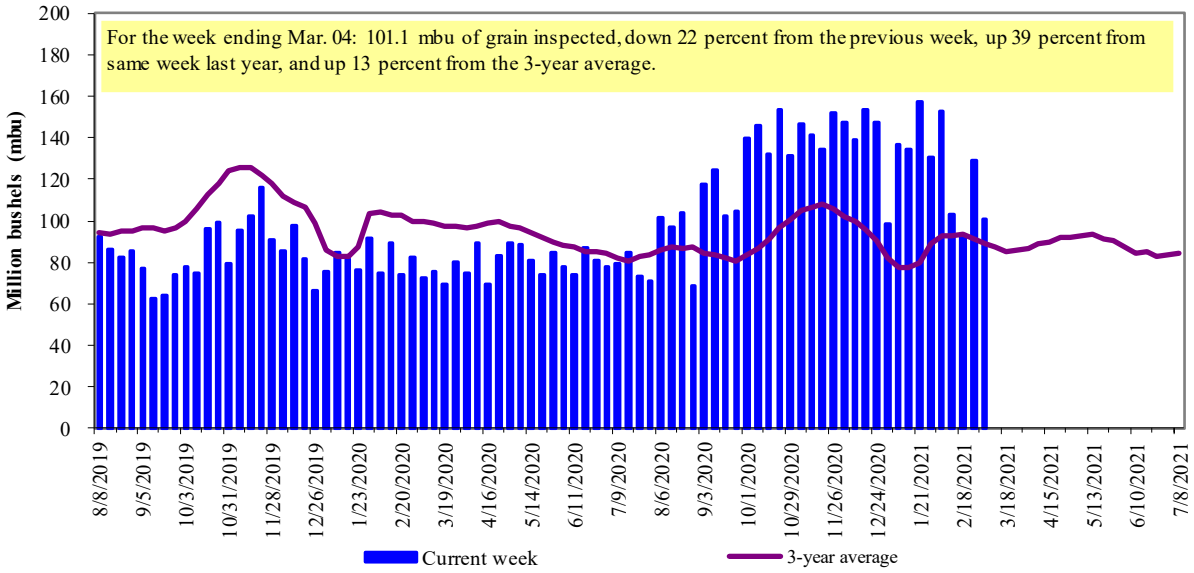
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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)

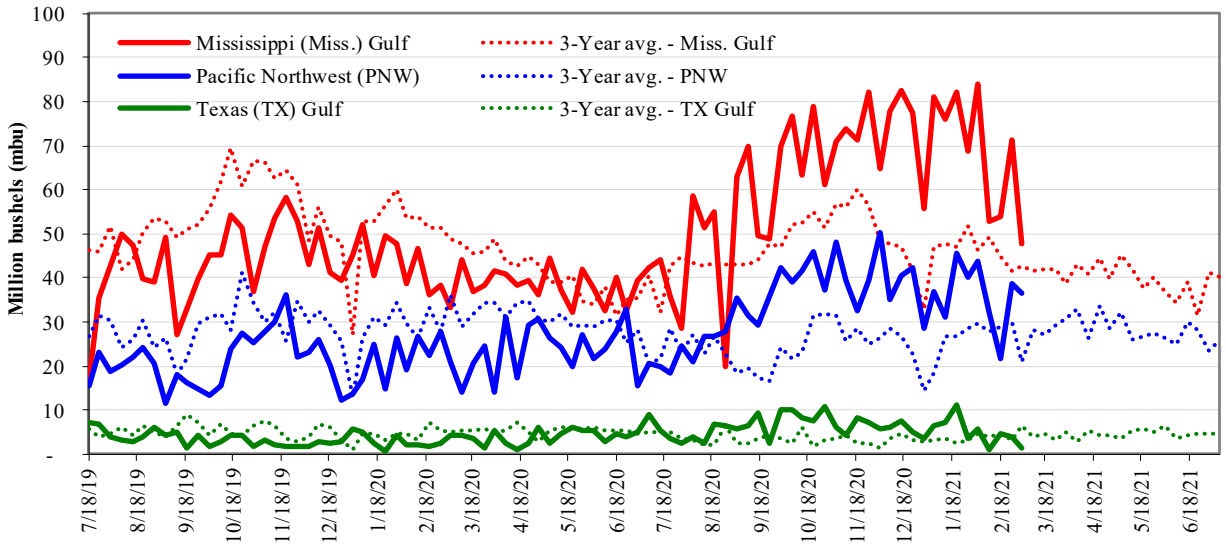


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

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



Week ending 03/04/21 inspections (mbu):	
MS Gulf:	47.8
PNW:	36.6
TX Gulf:	1.5

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last wk:	down 33	down 60	down 34	down 6
Last Year (same wk):	up 44	down 64	up 32	up 74
3-yr avg. (4-wk. mov. Avg):	up 7	down 66	unchanged	up 36

Source: USDA, Federal Grain Inspection Service.

Table 17

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

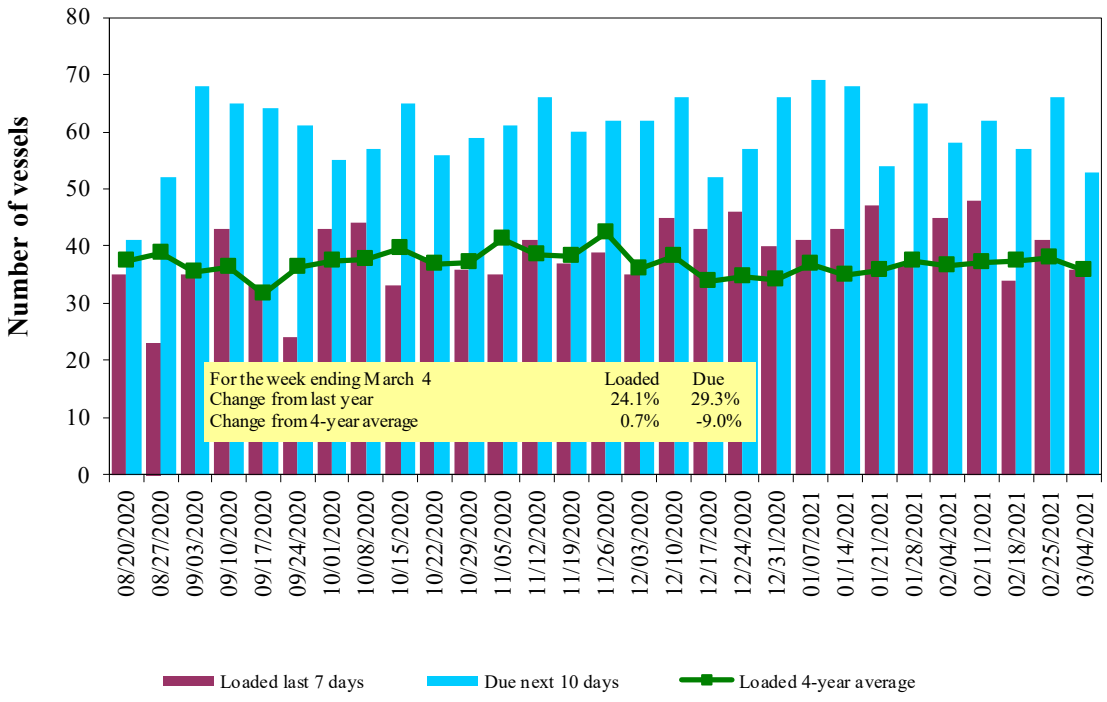
	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
3/4/2021	51	36	53	24
2/25/2021	41	41	66	27
2020 range	(22…60)	(23...46)	(34...68)	(7…24)
2020 average	37	33	49	15

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

Source: USDA, Agricultural Marketing Service.

Figure 16

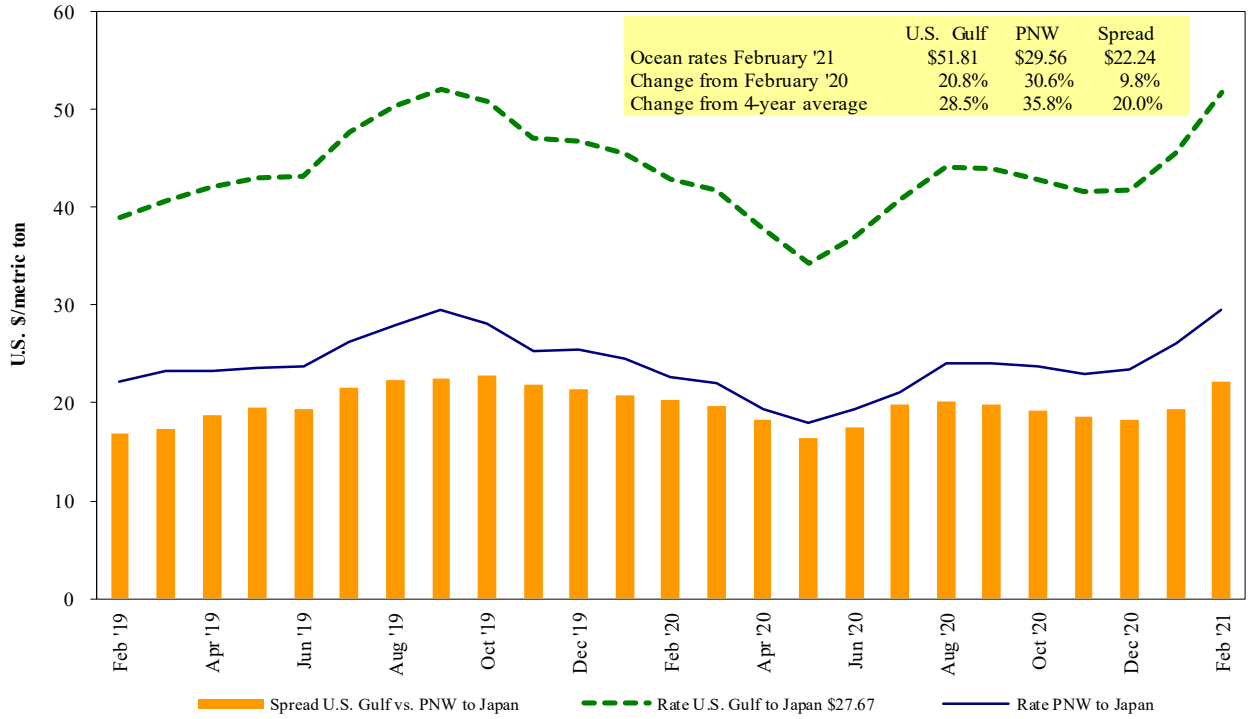
U.S. Gulf[1] vessel loading activity



[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 03/06/2021

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	Corn	Feb 20/Mar 15	65,000	24.90
Brazil	China	Heavy grain	Mar 21/31	66,000	44.00
Brazil	China	Heavy grain	Mar 21/30	66,000	45.50
River Plate	S. Korea	Corn	May 1/31	68,000	52.60*
Ukraine	China	Corn	Feb 10/17	60,000	36.40 op 38.90

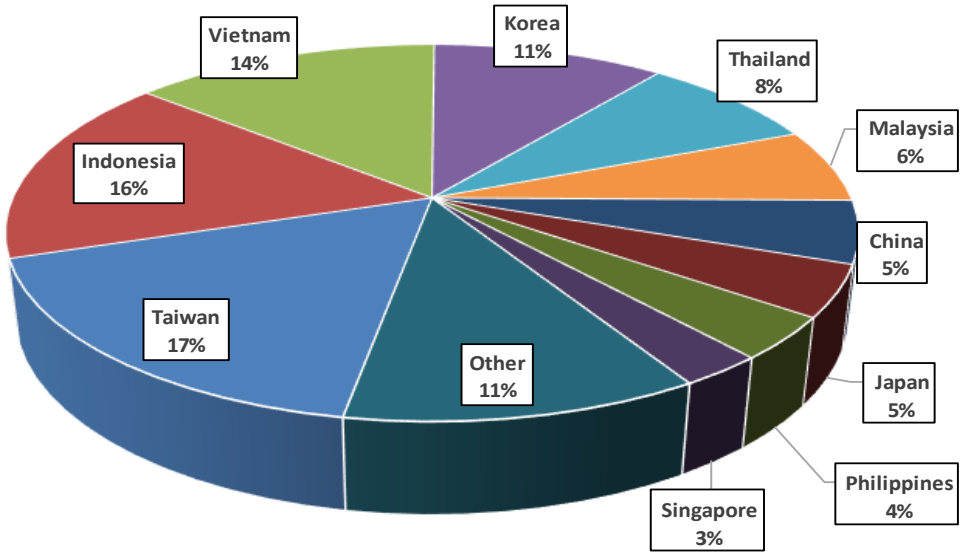
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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.

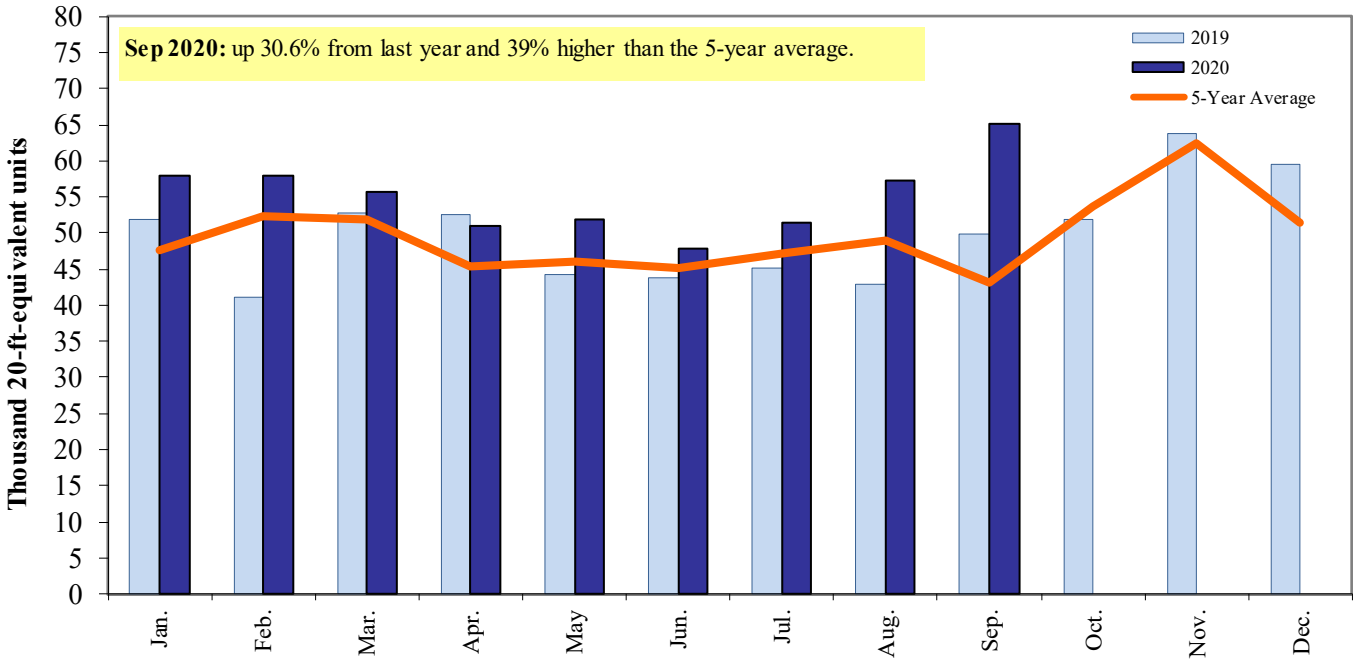
Figure 18
Top 10 destination markets for U.S. containerized grain exports, Jan-Sep 2020



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.

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