



Grain Transportation Report

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

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April 30, 2020

WEEKLY HIGHLIGHTS

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Ocean Freight Rates Continue To Drop

Since the beginning of January, ocean freight rates for shipping bulk commodities (including grains) have continued to drop, mirroring the slump in global bulk trade. In the week ending April 23, shipping bulk grain from the U.S. Gulf to Japan cost \$37.25 per metric ton (mt)—a 19-percent drop from the first available rate on January 2. Also, in the week ending April 23, shipping from the Pacific Northwest (PNW) to Japan cost \$19.25 per mt—23 percent less than on January 2. Despite rallying slightly between February 13 and March 5, rates have continued to decline since then. The slump in the global dry bulk results from recent supply chain disruptions around the globe (see April 16, *Grain Transportation Report*).

Corn Boosts Total Grain Inspections

For the week ending April 23, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions reached 2.17 million metric tons (mmt). Total grain inspections were up 21 percent from the previous week, down 15 percent from last year, and down 17 percent from the 3-year average. With a sharp increase in week to week Asia-destined corn inspections, total corn inspections rose 54 percent. Total wheat inspections decreased 1 percent from the previous week, and soybeans increased 1 percent. Total grain inspections jumped 62 percent in PNW and increased 7 percent in the Mississippi Gulf.

FMC Published Interpretive Rule on Detention and Demurrage

On April 28, the Federal Maritime Commission (FMC) <u>published Docket No. 19-05</u>, <u>Interpretive Rule on Demurrage and Detention under the Shipping Act</u>. The interpretive rule provides guidance regarding what FMC "may consider in assessing whether a demurrage or detention practice is unjust or unreasonable." The rule followed years of complaints that unfair detention and demurrage practices by ocean carriers and terminal operators unfairly penalized U.S. importers, exporters, transportation intermediaries, and drayage truckers for circumstances outside their control.

Snapshots by Sector

Export Sales

For the week ending April 16, **unshipped balances** of wheat, corn, and soybeans totaled 22.6 million metric tons (mmt). This represented a 26-percent decrease in outstanding sales, compared to the same time last year. Net **corn export sales** were 0.727 mmt, down 20 percent from the past week. Net **soybean export sales** were 0.345 mmt, up 41 percent from the previous week. Net weekly **wheat export sales** were 0.245 mmt, up 37 percent from the previous week.

Rail

U.S. Class I railroads originated 20,690 grain carloads during the week ending April 18. This was a 7-percent decrease from the previous week, 16 percent less than last year, and 14 percent lower than the 3-year average.

Average May shuttle **secondary railcar** bids/offers (per car) were \$110 below tariff for the week ending April 23. This was \$63 less than last week and \$202 lower than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending April 25, barge grain movements totaled 662,000 tons. This was 0.4 percent more than the previous week and 56 percent more than the same period last year.

For the week ending April 25, 419 grain barges **moved down river**—6 more barges than the previous week. There were 613 grain barges **unloaded in New Orleans**, 16 percent more than the previous week.

Ocean

For the week ending April 23, 35 oceangoing grain vessels were loaded in the Gulf—3 percent more than the same period last year. Within the next 10 days (starting April 24), 43 vessels were expected to be loaded—8 percent fewer than the same period last year.

Fuel

For the week ending April 27, the U.S. average **diesel fuel price** decreased 4.3 cents from the previous week to \$2.437 per gallon, 73.2 cents below the same week last year.

Feature Article/Calendar

Date	Event	Online/In-Person	Website for More Information
	The following list contains information and links to upcoming e	vents, most of which are o	online or virtual.
May 5	Maritime London COVID-19 Webinar Series The live webinar will explore how English shipping law has responded to the COVID-19 crisis.	Online	https://www.maritimelondon.com/maritime-london- events
May 6	Maritime London COVID-19 Webinar Series The live webinar will explore how ship finance providers are responding to challenges emerging from the pandemic-related economic slowdown.	Online	https://www.maritimelondon.com/maritime-london- events
May 6	ESRI Transportation Webinar Series: "Manage Your Berths and Channels With GIS Data" This webinar from the the Environmental Systems Research Institute (ESRI) highlights how bathymetric Geographic Information Systems (GIS) data can be leveraged for better analysis, informing the planning of berths and harbor terminals. The webinar shows how these GIS data can be a vital part of your port's digital information strategy.	Online	https://register.gotowebinar.com/register/53661548108 26322444
May 7	TRF Webinar: "E-Scooters, Panama Canal, and More: Four Mini-Presentations - Notable Presentations from the 61st Annual Forum" The Transportation Research Forum (TRF) is holding a 1-hour webinar with four presentations, including "Ethical Concerns in Emerging Transportation Industries" and "The Impact of the Panama Canal Expansion on Potential Logistics Developments and the Economy."	Online	https://trforum.org/events/#levent/2020/5/7/webinar-e-scooters-panama-canal-and-more-four-mini-presentations-notable-presentations-from-the-61st-annual-forum
May 5-7	FreightWaves Live Atlanta Meeting FreightWaves—a data and content forum—is holding its upcoming Atlanta Meeting online this year. The meeting will have online sessions on May 5 from 9 a.m 4:30 p.m., May 6 from 9 a.m 5 p.m., and May 7 from 9 a.m 4 p.m. Experts will address the latest trends affecting freight and transportation and also discuss their experiences and strategies to navigate current markets.	Online	https://www.freightwaves.com/live-home
May 19	JOC Webcasts: Leveraging Supply Chain Visibility in a Crisis Industry experts hosted by <i>Journal of Commerce</i> (JOC) will discuss what it takes to prepare for and deal with critical supply chain disruptions. Topics covered will include building supply-chain contingency plans, planning for unexpected shifts in demand, and leveraging digitization to mitigate risks.	Online	https://www.joc.com/webcasts
May 20-21	AgTC Virtual Annual Meeting The Agriculture Transportation Coalition (AgTC) is holding its 32nd Annual Meeting virtually this year. The trade association will host two 2-hour online sessions over 2 days.	Online	https://agtrans.org/events/
June 22	25th Annual AAR Research Review The Association of American Railroads' (AAR) Transportation Technology Center, Inc. will present and discuss the industry's key research of the past year.	Online	https://www.aar.org/25th-annual-aar-research-review-webinar/
July 26-28	Agricultural and Applied Economics Association Annual Meeting The Agricultural and Applied Economics Association (AAEA) holds its annual meeting on topics related to agricultural and resource economics. This year's meeting will be in Kansas City, MO.	In-Person	https://www.aaea.org/meetings/2020-aaea-annual-meeting
Aug. 11-12	Bridging Transportation Researchers Online Conference This is a 2-day conference with multi-track Zoom-based meetings addressing topics in a multitude of transportation-related areas, including multimodal transportation network and systems, freight transportation and logistics, transportation safety and security, and more.	Online	https://bridgingtransport.wordpress.com/
Aug. 26-27	Sustainable Fleet Technology Conference and Expo Duke University in Durham, NC, hosts a 2-day event showcasing recent opportunities for biofuel, electric, natural gas, and propane fuels and fueling. The conference has a strong focus on data-driven decisions, tools, and technologies.	In-Person	https://energy.duke.edu/events/sustainable-fleet- technology-conference-expo
Aug 26-28	cmdtyExchange Grain Summit 2020 This is a 3-day, in-person event held in Chicago focusing on issues and innovations affecting agricultural commodity markets. The agenda includes a presentation by USDA's Agricultural Marketing Service on the new Agricultural Transportation Open Data Platform: https://agtransport.usda.gov/ .	In-Person	https://www.barchart.com/cmdty/resources/events/exc hange2020

Grain Transportation Indicators

Table 1 **Grain transport cost indicators**¹

_	Truck	Ra	nil	Barge	Ocean	
For the week ending		Unit train	Shuttle		Gulf	Pacific
04/29/20	164	n/a	219	151	167	137
04/22/20	166	n/a	222	157	171	140

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

Source: USDA, Agricultural Marketing Service.

Table 2
Market Update: U.S. origins to export position price spreads (\$/bushel)

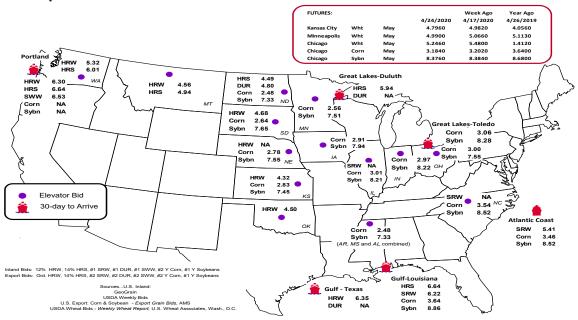
Commodity	Origin-destination	4/24/2020	4/17/2020
Corn	IL—Gulf	-0.63	-0.68
Corn	NE-Gulf	-0.86	-0.89
Soybean	IA-Gulf	-0.92	-0.98
HRW	KS-Gulf	-2.03	-2.08
HRS	ND-Portland	-2.15	-2.17

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

Tun denveries to port (currou	Mississippi		Pacific	Atlantic &			Cross-border
For the week ending	Gulf	Texas Gulf	Northwest	East Gulf	Total	Week ending	Mexico ³
4/22/2020 ^p	624	767	6,018	207	7,616	4/18/2020	1,798
4/15/2020 ^r	949	657	4,982	166	6,754	4/11/2020	3,105
2020 YTD ^r	6,776	11,375	75,351	3,469	96,971	2020 YTD	37,904
2019 YTD ^r	13,865	19,655	96,109	6,124	135,753	2019 YTD	36,109
2020 YTD as % of 2019 YTD	49	58	78	57	71	% change YTD	105
Last 4 weeks as % of 2019 ²	57	47	81	64	72	Last 4wks. % 2019	116
Last 4 weeks as % of 4-year avg. ²	148	48	87	49	81	Last 4wks. % 4 yr.	111
Total 2019	40,974	51,167	251,181	16,192	359,514	Total 2019	127,622
Total 2018	22,118	46,532	310,449	21,432	400,531	Total 2018	129,674

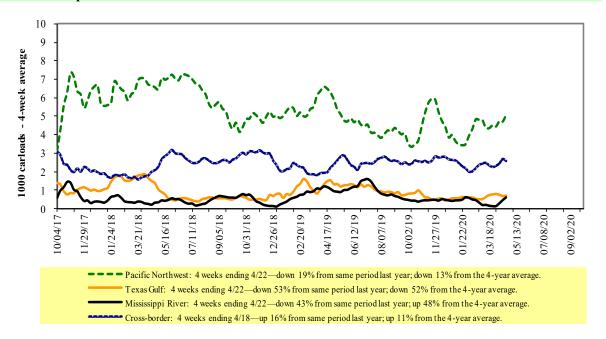
¹Data is incomplete as it is voluntarily provided.

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

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.

² Compared with same 4-weeks in 2019 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.

Table 4

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

For the week ending:	Ea	ıst		West		U.S. total	Car	nada
4/18/2020	CSXT	NS	BNSF	KCS	UP	U.S. total	CN	CP
This week	1,937	2,024	10,862	884	4,983	20,690	4,174	5,106
This week last year	1,906	2,934	13,337	851	5,654	24,682	5,468	4,716
2020 YTD	27,560	36,742	169,391	17,096	73,979	324,768	59,433	64,178
2019 YTD	31,610	43,301	170,957	18,159	81,596	345,623	69,002	67,429
2020 YTD as % of 2019 YTD	87	85	99	94	91	94	86	95
Last 4 weeks as % of 2019*	83	83	100	89	95	95	89	98
Last 4 weeks as % of 3-yr. avg.**	87	87	92	109	92	92	105	102
Total 2019	91,611	137,080	568,369	58,527	260,269	1,115,856	212,537	235,892

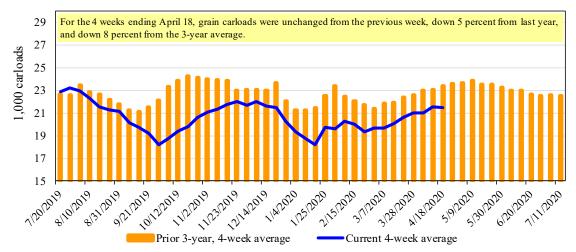
^{*}The past 4 weeks of this year as a percent of the same 4 weeks last year.

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 offerings¹ (\$/car)²

Fo	or the week ending:				<u>Deliver</u>	y period			
	4/23/2020	May-20	May-19	Jun-20	Jun-19	Jul-20	Jul-19	Aug-20	Aug-19
BNSF ³	COT grain units	0	no offer	no bids	15	no bids	0	no bids	19
	COT grain single-car	0	no offer	0	326	0	201	0	159
UP ⁴	GCAS/Region 1	10	no offer	no offer	no offer	no offer	no offer	n/a	n/a
	GCAS/Region 2	no bid	no offer	no bid	no offer	no bid	no offer	n/a	n/a

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

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

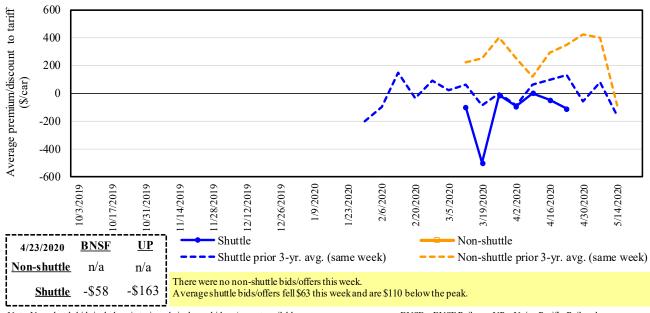
²Average premium/discount to tariff, last auction. n/a = not available.

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

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

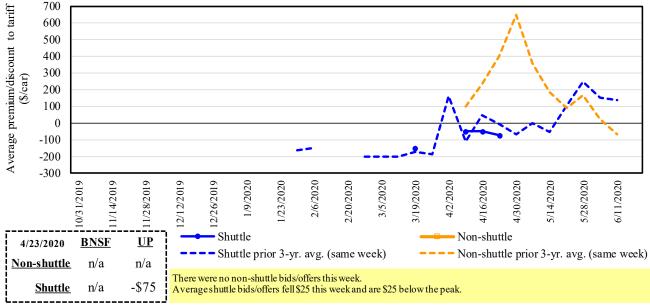
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/ supply.

Figure 4
Bids/offers for railcars to be delivered in May 2020, secondary market



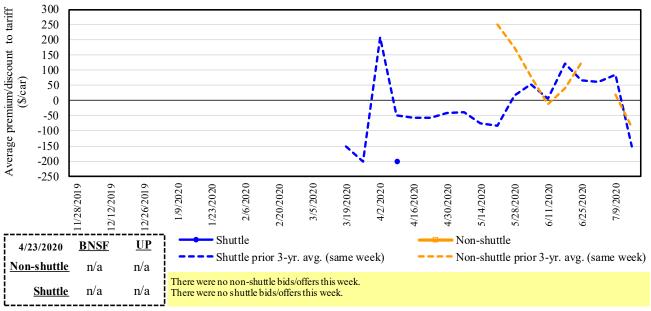
Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = y ear; BNSF = BNSF Railway; UP = Union Pacific Railroad. Source: USDA, Agricultural Marketing Service.

Figure 5
Bids/offers for railcars to be delivered in June 2020, secondary market



Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = year; BNSF = BNSF Railway; UP = Union Pacific Railroad. Source: USDA, Agricultural Marketing Service.

Figure 6
Bids/offers for railcars to be delivered in July 2020, secondary market



Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = year; BNSF = BNSF Railway; UP = Union Pacific Railroad. Source: USDA, Agricultural Marketing Service.

Table 6

Weekly secondary railcar market (\$/car)¹

	For the week ending:			De	livery period		
	4/23/2020	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20
	BNSF-GF	n/a	n/a	n/a	n/a	n/a	n/a
le	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
-shuttle	Change from same week 2019	n/a	n/a	n/a	n/a	n/a	n/a
Non-s	UP-Pool	n/a	n/a	n/a	n/a	n/a	n/a
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2019	n/a	n/a	n/a	n/a	n/a	n/a
	BNSF-GF	(58)	n/a	n/a	n/a	(50)	n/a
	Change from last week	13	n/a	n/a	n/a	n/a	n/a
Shuttle	Change from same week 2019	(129)	n/a	n/a	n/a	n/a	n/a
Shu	UP-Pool	(163)	(75)	n/a	n/a	n/a	n/a
	Change from last week	(138)	(25)	n/a	n/a	n/a	n/a
	Change from same week 2019	(275)	n/a	n/a	n/a	n/a	n/a

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

 $Note: Bids\ listed\ are\ market\ indicators\ only\ and\ are\ not\ guaranteed\ prices.\ n/a=not\ available; GF=guaranteed\ freight; Pool=guaranteed\ pool; and are not\ guaranteed\ prices.\ n/a=not\ available; GF=guaranteed\ freight; Pool=guaranteed\ pool; and are not\ guaranteed\ prices.\ n/a=not\ available; GF=guaranteed\ freight; Pool=guaranteed\ pool; and are not\ guaranteed\ prices.\ n/a=not\ available; GF=guaranteed\ freight; Pool=guaranteed\ pool; and are not\ guaranteed\ prices.\ n/a=not\ available; GF=guaranteed\ prices.$

 $BNSF = BNSF \; Railway ; UP = Union \; Pacific \; Railroad.$

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

Source: USDA, Agricultural Marketing Service.

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

Table 7

Tariff rail rates for unit and shuttle train shipments¹

				Fuel			Percent
	0.1 3	D 4 4 3	Tariff	surcharge_	Tariff plus surcl		change
April 2020	Origin region ³	Destination region ³	rate/car	per car	metric ton	bus hel ²	Y/Y ⁴
Unit train	W. 1. VC	G. I MO	#2.002	006	040.41	Φ1 1O	0
Wheat	Wichita, KS	St. Louis, MO	\$3,983	\$86	\$40.41	\$1.10	0
	Grand Forks, ND	Duluth-Superior, MN	\$4,333	\$0	\$43.03	\$1.17	2
	Wichita, KS	Los Angeles, CA	\$7,240	\$0	\$71.90	\$1.96	1
	Wichita, KS	New Orleans, LA	\$4,525	\$151	\$46.44	\$1.26	-1
	Sioux Falls, SD	Galveston-Houston, TX	\$6,976	\$0	\$69.28	\$1.89	1
	Colby, KS	Galveston-Houston, TX	\$4,801	\$166	\$49.32	\$1.34	0
	Amarillo, TX	Los Angeles, CA	\$5,121	\$231	\$53.14	\$1.45	0
Corn	Champaign-Urbana, IL	New Orleans, LA	\$3,900	\$171	\$40.43	\$1.03	-3
	Toledo, OH	Raleigh, NC	\$6,816	\$0	\$67.69	\$1.72	4
	Des Moines, IA	Davenport, IA	\$2,415	\$36	\$24.34	\$0.62	7
	Indianapolis, IN	Atlanta, GA	\$5,818	\$0	\$57.78	\$1.47	3
	Indianapolis, IN	Knoxville, TN	\$4,874	\$0	\$48.40	\$1.23	4
	Des Moines, IA	Little Rock, AR	\$3,800	\$106	\$38.79	\$0.99	-2
	Des Moines, IA	Los Angeles, CA	\$5,680	\$310	\$59.48	\$1.51	-1
Soybeans	Minneapolis, MN	New Orleans, LA	\$3,631	\$156	\$37.61	\$1.02	-12
	Toledo, OH	Huntsville, AL	\$5,630	\$0	\$55.91	\$1.52	3
	Indianapolis, IN	Raleigh, NC	\$6,932	\$0	\$68.84	\$1.87	3
	Indianapolis, IN	Huntsville, AL	\$5,107	\$0	\$50.71	\$1.38	3
	Champaign-Urbana, IL	New Orleans, LA	\$4,645	\$171	\$47.83	\$1.30	-2
Shuttle train							
Wheat	Great Falls, MT	Portland, OR	\$4,143	\$0	\$41.14	\$1.12	2
	Wichita, KS	Galveston-Houston, TX	\$4,361	\$0	\$43.31	\$1.18	2
	Chicago, IL	Albany, NY	\$7,074	\$0	\$70.25	\$1.91	20
	Grand Forks, ND	Portland, OR	\$5,801	\$0	\$57.61	\$1.57	1
	Grand Forks, ND	Galveston-Houston, TX	\$6,121	\$0	\$60.78	\$1.65	1
	Colby, KS	Portland, OR	\$6,012	\$272	\$62.40	\$1.70	1
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	\$171	\$39.63	\$1.01	0
	Lincoln, NE	Galveston-Houston, TX	\$3,880	\$0	\$38.53	\$0.98	0
	Des Moines, IA	Amarillo, TX	\$4,220	\$134	\$43.24	\$1.10	4
	Minneapolis, MN	Tacoma, WA	\$5,180	\$0	\$51.44	\$1.31	0
	Council Bluffs, IA	Stockton, CA	\$5,000	\$0	\$49.65	\$1.26	0
Soybeans	Sioux Falls, SD	Tacoma, WA	\$5,850	\$0	\$58.09	\$1.58	2
	Minneapolis, MN	Portland, OR	\$5,900	\$0	\$58.59	\$1.59	2
	Fargo, ND	Tacoma, WA	\$5,750	\$0	\$57.10	\$1.55	2
	Council Bluffs, IA	New Orleans, LA	\$4,875	\$197	\$50.37	\$1.37	2
	Toledo, OH	Huntsville, AL	\$4,805	\$0	\$47.72	\$1.30	4
	Grand Island, NE	Portland, OR	\$5,260	\$278	\$55.00	\$1.50	-8

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

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

⁷⁵⁻¹²⁰ cars that meet railroad efficiency requirements.

²Approximate load per car = 111 short tons (100.7 metric tons): corn 56 pounds per bushel (lbs/bu), wheat and soybeans 60 lbs/bu.

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

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

Table 8

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

Date	: April 2020)		Fuel		ff rate plus	Percent
	Origin		Tariff rate	surcharge		harge per:	change ⁴
Commodity	state	Destination region	per car ¹	per car ²	metric ton ³	bus hel ³	Y/Y
Wheat	MT	Chihuahua, CI	\$7,509	\$0	\$76.72	\$2.09	3
	OK	Cuautitlan, EM	\$6,775	\$118	\$70.44	\$1.92	0
	KS	Guadalajara, JA	\$7,534	\$502	\$82.10	\$2.23	3
	TX	Salinas Victoria, NL	\$4,329	\$72	\$44.96	\$1.22	0
Corn	IA	Guadalajara, JA	\$8,902	\$433	\$95.39	\$2.42	5
	SD	Celaya, GJ	\$8,140	\$0	\$83.17	\$2.11	3
	NE	Queretaro, QA	\$8,278	\$244	\$87.08	\$2.21	1
	SD	Salinas Victoria, NL	\$6,905	\$0	\$70.55	\$1.79	0
	MO	Tlalnepantla, EM	\$7,643	\$238	\$80.53	\$2.04	1
	SD	Torreon, CU	\$7,690	\$0	\$78.57	\$1.99	3
Soybeans	MO	Bojay (Tula), HG	\$8,547	\$405	\$91.46	\$2.49	4
	NE	Guadalajara, JA	\$9,172	\$424	\$98.04	\$2.67	4
	IA	El Castillo, JA	\$9,490	\$0	\$96.97	\$2.64	4
	KS	Torreon, CU	\$7,964	\$295	\$84.38	\$2.29	4
Sorghum	NE	Celaya, GJ	\$7,772	\$385	\$83.34	\$2.12	4
	KS	Queretaro, QA	\$8,108	\$148	\$84.35	\$2.14	1
	NE	Salinas Victoria, NL	\$6,713	\$119	\$69.80	\$1.77	1
	NE	Torreon, CU	\$7,092	\$272	\$75.24	\$1.91	2

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

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

Figure 7

Railroad fuel surcharges, North American weighted average¹



¹ Weighted by each Class I railroad's proportion of grain traffic for the prior year.

Sources: BNSF Railway, Canadian National Railway, CSX Transportation, Canadian Pacific Railway, Union Pacific Railroad, Kansas City Southern Railway, Norfolk Southern Corporation.

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

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

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

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

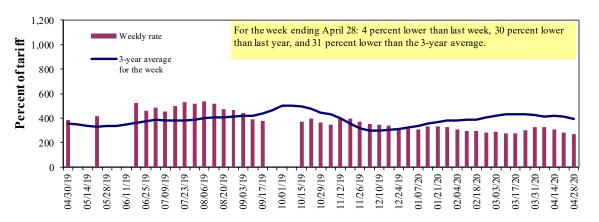
^{*} Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

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

Barge Transportation

Figure 8

Illinois River barge freight rate^{1,2}



¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average of the 3-year average. Source: USDA, Agricultural Marketing Service.

Table 9

Weekly barge freight rates: Southbound only

				Lower				
		Twin	Mid-	Illinois	C4 T	C:	Lower	Cairo-
		Cities	Mississippi	River	St. Louis	Cincinnati	Ohio	Memphis
Rate ¹	4/28/2020	335	278	271	175	188	188	173
	4/21/2020	346	296	283	181	195	195	175
\$/ton	4/28/2020	20.74	14.79	12.57	6.98	8.82	7.60	5.43
	4/21/2020	21.42	15.75	13.13	7.22	9.15	7.88	5.50
Curren	t week % chang	e from the s	same week:					
	Last year	-	-	-30	-36	-32	-32	-34
	3-year avg. ²	-27	-31	-31	-42	-43	-43	-39
Rate ¹	May	333	278	276	178	188	188	173
	July	336	285	-	189	194	194	179

¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-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

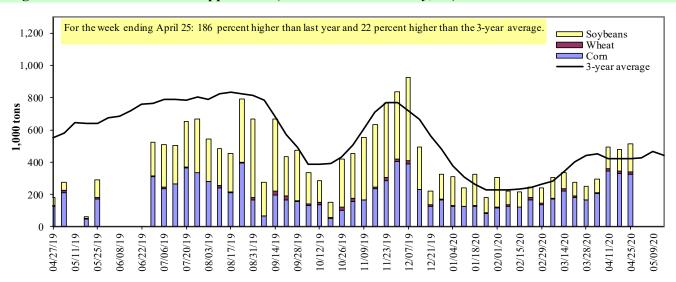
Select applicable index from market quotes are included in tables on this page. The 1976 benchmark rates per ton are provided in map.

Map Credit: USDA, Agricultural Marketing Service



Figure 10

Barge movements on the Mississippi River¹ (Locks 27 - Granite City, IL)



¹ The 3-year average is a 4-week moving average.

Source: U.S. Army Corps of Engineers.

Table 10 **Barge grain movements (1.000 tons)**

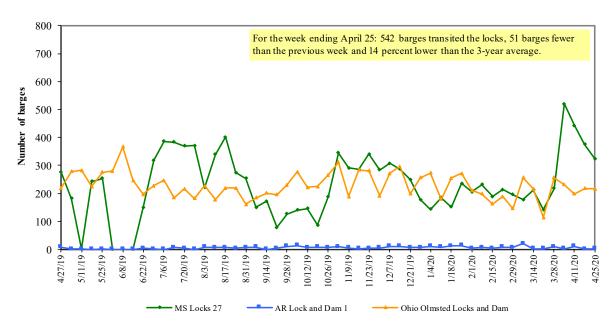
For the week ending 04/25/2020	Corn	Wheat	Soybe ans	Other	Total
Mississippi River					_
Rock Island, IL (L15)	88	0	59	0	147
Winfield, MO (L25)	215	2	130	0	346
Alton, IL (L26)	350	17	187	0	554
Granite City, IL (L27)	325	15	172	0	513
Illinois River (La Grange)	120	11	73	0	203
Ohio River (Olmsted)	58	0	44	5	108
Arkansas River (L1)	0	18	24	0	42
Weekly total - 2020	383	34	241	5	662
Weekly total - 2019	244	33	147	0	424
2020 YTD ¹	4,786	523	3,577	19	8,905
2019 YTD ¹	3,987	763	3,166	46	7,962
2020 as % of 2019 YTD	120	69	113	41	112
Last 4 weeks as % of 2019 ²	135	73	144	65	132
Total 2019	12,780	1,631	14,683	154	29,247

¹ Weekly total, YTD (year-to-date), and calendar year total include MS/27, OH/Olmsted, and AR/1; Other refers to oats, barley, sorghum, and rye. L (as in "L15") refers to a lock or lock and dam facility. Olmsted = Olmsted Locks and Dam. La Grange = La Grange Lock and Dam.

Note: Total may not add exactly because of rounding. Starting from 11/24/2018, weekly movement through Ohio 52 is replaced by Olmsted. Source: U.S. Army Corps of Engineers.

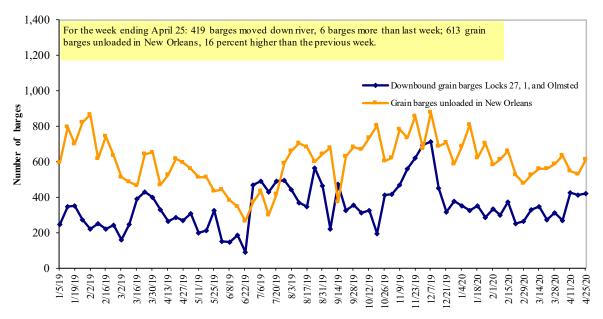
² As a percent of same period in 2019.

Figure 11
Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



Source: U.S. Army Corps of Engineers.

Figure 12 **Grain barges for export in New Orleans region**



Note: Olmsted = Olmsted Locks and Dam.

Source: U.S. Army Corps of Engineers and USDA, Agricultural Marketing Service.

Truck Transportation

The **weekly diesel price** provides a proxy for trends in U.S. truck rates as diesel fuel is a significant expense for truck grain movements.

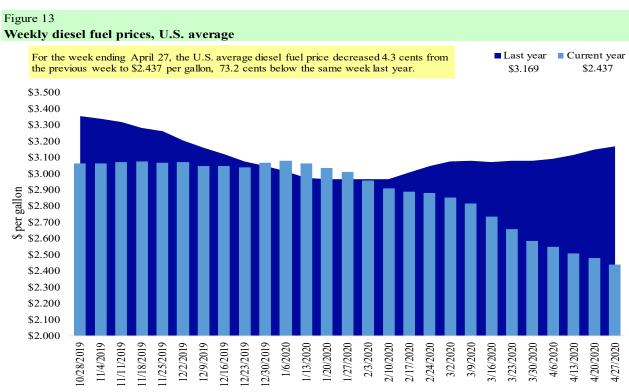
Table 11

Retail on-highway diesel prices, week ending 4/27/2020 (U.S. \$/gallon)

			Change	e from
Region	Location	Price	Week ago	Year ago
I	East Coast	2.545	-0.031	-0.649
	New England	2.677	-0.032	-0.559
	Central Atlantic	2.711	-0.036	-0.674
	Lower Atlantic	2.406	-0.028	-0.651
II	Midwest	2.287	-0.039	-0.771
III	Gulf Coast	2.208	-0.064	-0.731
IV	Rocky Mountain	2.434	-0.037	-0.749
V	West Coast	2.934	-0.040	-0.796
	West Coast less California	2.593	-0.047	-0.753
	California	3.214	-0.034	-0.821
Total	United States	2.437	-0.043	-0.732

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

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



Source: U.S. Department of Energy, Energy Information Administration, Retail On-Highway Diesel Prices.

Grain Exports

Table 12 U.S. export balances and cumulative exports (1,000 metric tons)

Cisi capore summees und cumulati	ve empore	3 (1,000 1					~	G 1	7D ()
			Whe	eat			Corn	Soybeans	Total
For the week ending	HRW	SRW	HRS	SWW	DUR	All wheat			
Export balances ¹									
4/16/2020	1,501	257	1,269	840	179	4,046	13,740	4,800	22,585
This week year ago	2,366	772	1,136	905	67	5,245	11,974	13,128	30,347
Cumulative exports-marketing year ²									
2019/20 YTD	8,135	2,140	6,153	4,250	741	21,419	21,650	33,175	76,243
2018/19 YTD	6,839	2,567	5,797	4,476	416	20,095	33,497	31,696	85,287
YTD 2019/20 as % of 2018/19	119	83	106	95	178	107	65	105	89
Last 4 wks. as % of same period 2018/19*	71	35	126	109	318	87	116	38	77
Total 2018/19	8,591	3,204	6,776	5,164	479	24,214	48,924	46,189	119,327
Total 2017/18	9,150	2,343	5,689	4,854	384	22,419	57,209	56,214	135,842

¹ Current unshipped (outstanding) export sales to date.

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 4/16/2020	Total com	mitments ²	% change	Exports ³
	2019/20	2018/19	current MY	3-yr. avg.
	current MY	last MY*	from last MY	2016-18
		- 1,000 mt -		
Mexico	12,257	14,574	(16)	14,659
Japan	7,861	10,069	(22)	11,955
Korea	1,770	3,618	(51)	4,977
Colombia	3,361	3,898	(14)	4,692
Peru	36	1,995	(98)	2,808
Top 5 importers	25,284	34,154	(26)	39,091
Total U.S. corn export sales	35,390	45,471	(22)	54,024
% of projected exports	81%	87%		
Change from prior week ²	727	780		
Top 5 importers' share of U.S. corn				
export sales	71%	75%		72%
USDA forecast April 2020	43,893	52,545	(16)	
Corn use for ethanol USDA				
forecast, April 2020	128,270	136,601	(6)	

¹Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2018/19; marketing year (MY) = Sep 1 - Aug 31.

Note: A red number in parentheses indicates a negative number; mt = metric ton.

Source: USDA, Foreign Agricultural Service.

² Shipped export sales to date; new marketing year now in effect for wheat, corn, and soybeans.

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

³FAS marketing year ranking reports (carry over plus accumulated export); yr. = year; avg. = average.

Table 14

Top 5 importers¹ of U.S. soybeans

For the week ending 4/16/2020	Total com	mitments ²	% change	Exports ³
	2019/20	2018/19	current MY	3-yr. avg.
	current MY	last MY*	from last MY	2016-18
	- 1,0	00 mt -		- 1,000 mt -
China	12,634	13,134	(4)	25,733
Mexico	4,103	4,659	(12)	4,271
Indonesia	1,614	1,824	(11)	2,386
Japan	2,120	2,142	(1)	2,243
Egypt	2,505	2,302	9	1,983
Top 5 importers	22,977	24,060	(5)	36,616
Total U.S. soybean export sales	37,975	34,824	9	53,746
% of projected exports	79%	73%		
change from prior week ²	345	(9,404)		
Top 5 importers' share of U.S.				
soybean export sales	61%	69%		68%
USDA forecast, April 2020	48,365	47,629	102	

Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2018/19; marketing year (MY) = Sep 1 - Aug 31.

Note: A red number in parentheses indicates a negative number; mt = metric ton.

Source: USDA, Foreign Agricultural Service.

Table 15

Top 10 importers¹ of all U.S. wheat

For the week ending 4/16/2020	Total comr	nitments ²	% change	Exports ³ 3-yr. avg.	
	2019/20	2018/19	current MY		
	current MY	last MY*	from last MY	2016-18	
	- 1,000	mt -		- 1,000 mt -	
Philippines	3,275	3,087	6	3,047	
Mexico	3,741	3,220	16	3,034	
Japan	2,683	2,740	(2)	2,695	
Nigeria	1,533	1,591	(4)	1,564	
Indonesia	1,011	1,322	(24)	1,381	
Korea	1,556	1,562	(0)	1,355	
Taiwan	1,293	1,107	17	1,164	
Egypt	101	815	(88)	821	
Thailand	879	748	18	747	
Iraq	262	616	(57)	574	
Top 10 importers	16,334	16,809	(3)	16,382	
Total U.S. wheat export sales	25,464	25,340	0	24,388	
% of projected exports	95%	99%			
change from prior week ²	245	425			
Top 10 importers' share of U.S.					
wheat export sales	64%	66%		67%	
USDA forecast, April 2020	26,839	25,504	5		

Based on USDA, Foreign Agricultural Service(FAS) marketing year ranking reports for 2018/19; Marketing year (MY) = Jun 1 - May 31.

Note: A red number in parentheses indicates a negative number.

 $Source: USDA, For eign\ Agricultural\ Service.$

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

³FAS marketing year ranking reports (carry over plus accumulated export); yr. = year; avg. = average.

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 (carry over plus accumulated export); yr. = year; avg. = average.

Table 16
Grain inspections for export by U.S. port region (1,000 metric tons)

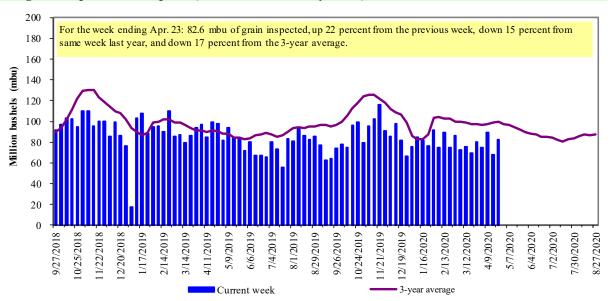
	For the week ending	Previous	Current week			2020 YTD as	Last 4-we	eeks as % of:	
Port regions	04/23/20	week*	as % of previous	2020 YTD*	2019 YTD*	% of 2019 YTD	Last year	Prior 3-yr. avg.	2019 total*
Pacific Northwest									
Wheat	267	328	81	5,044	4,439	114	97	97	13,961
Corn	419	1	n/a	2,302	4,287	54	55	49	7,047
Soybeans	76	141	54	2,423	4,018	60	52	62	11,969
Total	762	469	162	9,769	12,745	77	71	69	32,977
Mississippi Gulf	702	107	102	,,,,,,	12,7 10	.,	,,	0)	02,577
Wheat	115	103	111	1,251	1,715	73	68	73	4,448
Corn	514	531	97	9,031	9,199	98	100	85	20,763
Soybeans	408	333	122	8,307	8,455	98	110	103	31,398
Total	1,037	968	107	18,589	19,369	96	100	88	56,609
Texas Gulf	1,007	700	107	10,000	17,007	70	100	00	20,00
Wheat	38	13	286	1,154	2,106	55	38	46	6,009
Corn	31	14	224	213	244	87	77	87	640
Soybeans	0	0	n/a	7	0	n/a	n/a	n/a	2
Total	69	27	254	1,373	2,349	58	43	52	6,650
Interior)	,				-,
Wheat	44	44	99	786	544	144	109	132	1,987
Corn	96	140	68	2,448	2,295	107	97	88	7,857
Soybeans	80	101	80	2,254	2,162	104	69	79	7,043
Total	219	285	77	5,487	5,001	110	87	89	16,887
Great Lakes									
Wheat	64	44	145	110	110	99	136	147	1,339
Corn	0	0	n/a	0	0	n/a	n/a	0	11
Soybeans	8	0	n/a	8	43	20	32	32	493
Total	73	44	164	118	153	77	110	108	1,844
Atlantic									
Wheat	0	0	n/a	1	32	2	2	6	37
Corn	0	0	n/a	0	49	0	0	0	99
Soybeans	12	5	224	329	440	75	50	30	1,353
Total	12	5	224	330	522	63	35	25	1,489
U.S. total from ports	*								
Wheat	528	533	99	8,345	8,947	93	79	86	27,781
Corn	1,059	686	154	13,993	16,074	87	85	74	36,417
Soybeans	585	580	101	13,328	15,118	88	83	84	52,258
Total	2,172	1,799	121	35,665	40,139	89	83	79	116,457

^{*}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.

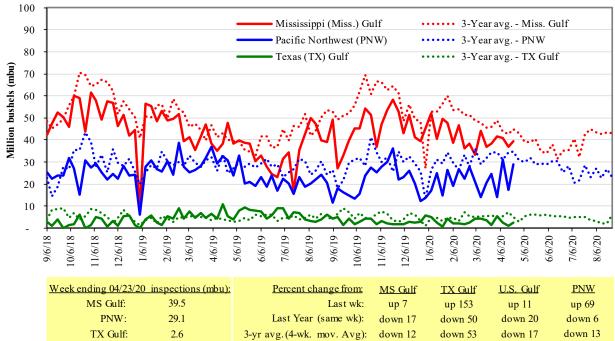
Figure 14
U.S. grain inspected for export (wheat, corn, and soybeans)



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

Source: USDA, Federal Grain Inspection Service.





Source: USDA, Federal Grain Inspection Service.

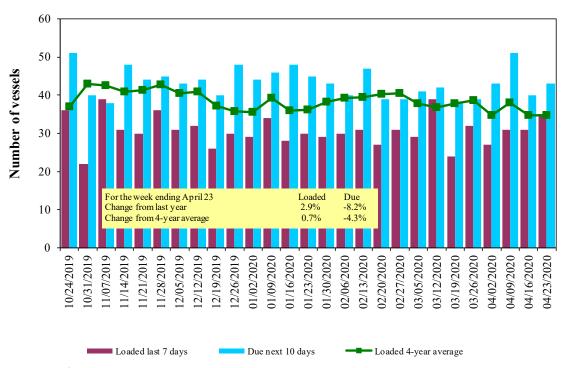
Ocean Transportation

Table 17
Weekly port region grain ocean vessel activity (number of vessels)

		•	,	Pacific
		Gulf		Northwest
		Loaded	Due next	
Date	In port	7-days	10-days	In port
4/23/2020	31	35	43	18
4/16/2020	34	31	40	7
2019 range	(2661)	(1844)	(3369)	(833)
2019 average	40	31	49	17

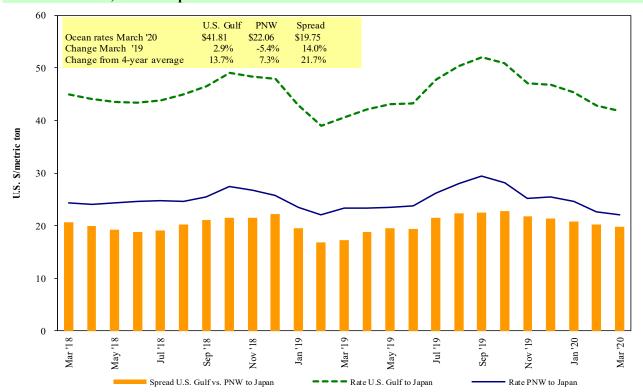
Source: USDA, Agricultural Marketing Service.

Figure 16
U.S. Gulf¹ vessel loading activity



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

Figure 17 **Grain vessel rates, U.S. to Japan**



Note: PNW = Pacific Northwest.

Source: O'Neil Commodity Consulting.

Table 18

Ocean freight rates for selected shipments, week ending 04/25/2020

Export	Import	Grain	Loading	Volume loads	Freight rate
region	region	types	date	(metric tons)	(US\$/metric ton)
U.S. Gulf	Djibouti	Wheat	Jun 5/15	30,000	131.75*
U.S. Gulf	Djibouti	Sorghum	Apr 17/27	45,730	105.75*
U.S. Gulf	China	Heavy grain	Jan 25/30	65,000	46.50
U.S. Gulf	Rotterdam	Heavy grain	Feb 5/11	55,000	19.50
PNW	Yemen	Wheat	May 4/14	49,630	36.50
PNW	Yemen	Wheat	Mar 26/Apr 6	35,000	51.84*
PNW	Taiwan	Wheat	Apr 27/May 11	50,700	29.40
PNW	China	Heavy grain	Jan 22/26	63,000	23.00
Brazil	SE Asia	Corn	Jul 1/6	66,000	22.75
Brazil	China	Heavy grain	May 1/31	60,000	33.25 op 33.00
Brazil	China	Heavy grain	Apr 2/16	66,000	30.75
Brazil	China	Heavy grain	Mar 1/10	65,000	32.00
Brazil	China	Heavy grain	Feb 12/21	65,000	34.50
Brazil	China	Heavy grain	Feb 18/27	60,000	34.00

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

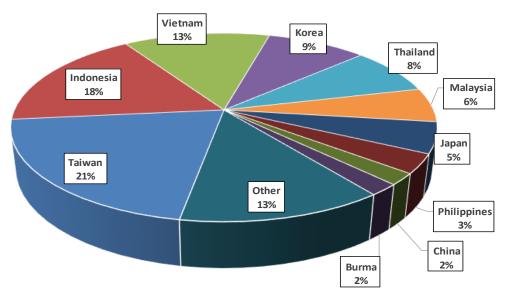
Note: Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), free on board (F.O.B), except where otherwise indicated; op = option.

Source: Maritime Research, Inc.

In 2018, containers were used to transport 8 percent of total U.S. waterborne grain exports. Approximately 55 percent of U.S. waterborne grain exports in 2018 went to Asia, of which 13 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, 2019



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, and 120810.

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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Preferred citation: U.S. Dept. of Agriculture, Agricultural Marketing Service. *Grain Transportation Report*. April 30, 2020. Web: http://dx.doi.org/10.9752/TS056.04-30-2020

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