



Grain Transportation Report

A weekly publication of the Agricultural Marketing Service
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October 17, 2019

WEEKLY HIGHLIGHTS

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Arkansas River Navigation Recovering

The Arkansas River recently reopened for navigation to the Port of Catoosa, which is located near Tulsa, OK, and is the head of navigation for the McClellan-Kerr Arkansas River Navigation System (MKARNS). Dredging and lock repair work (including removing a grounded barge at Lock 16) is finished, and planned navigation resumed on October 2. For the week ending October 12, 51 barges transited Lock 1, the last lock before the confluence of the MKARNS—which serves ports in Arkansas and Oklahoma—and the Mississippi. This is the largest number of barges through the lock since March 23, 2019. Tow size restrictions of six barges are still in effect, with plans to add buoys during November that may allow the maximum tow size to increase to 12 barges per tow.

Panama Canal Lock Maintenance Tentatively Scheduled, Reducing Transit Capacity

The East Lane of the Pedro Miguel Panamax Locks on the Panama Canal will be closed for 5 hours, for maintenance and repair work, on October 17, 2019. The estimated transit capacity of the Canal due to the maintenance work is 30-32 vessels per day, rather than the normal transit capacity of 32-34 vessels, depending on vessel mix and other factors. Also, the East lane of Miraflores Locks will be closed on October 24 for 8 hours due to scheduled maintenance work. The transit capacity will be reduced to 29-31 vessels instead of the usual 32-34 vessels per day. At this time, no major delays are anticipated.

Grain Inspections Recede

For the week ending October 10, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions reached 2 million metric tons (mmt). Inspections are down 6 percent from the previous week, down 29 percent from last year, and 31 percent below the 3-year average. Total inspections of wheat and corn decreased 3 percent and 1 percent, respectively, from the previous week. Inspections of soybeans, however, were down 9 percent from the previous week. Mississippi Gulf grain inspections decreased 1 percent from week to week, but Pacific Northwest (PNW) inspections increased 5 percent, due primarily to more soybean inspections.

Snapshots by Sector

Export Sales

For the week ending October 3, **unshipped balances** of wheat, corn, and soybeans totaled 24.8 mmt. This represents a 31-percent decrease in outstanding sales, compared to the same time last year. Net **corn export sales** reached .284 mmt, down 49 percent from the past week. Net **soybean export sales** were 2.09 mmt, unchanged from the previous week. Net weekly **wheat export sales** reached .522 mmt, up 59 percent from the previous week.

Rail

U.S. Class I railroads originated 19,698 **grain carloads** during the week ending October 5. This is a 10-percent increase from the previous week, 13 percent less than last year, and 20 percent lower than the 3-year average.

Average October shuttle **secondary railcar** bids/offers (per car) were \$31 above tariff for the week ending October 10. This is \$31 less than last week and \$131 more than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending October 12, **barge grain movements** totaled 519,856 tons. This is a 2.5-percent increase from the previous week and 1 percent more than the same period last year.

For the week ending October 12, 327 grain barges **moved down river**. This is 13 more barges than the previous week. There were 736 grain barges **unloaded in New Orleans**, 10 percent more than the previous week.

Ocean

For the week ending October 10, 31 **ocean-going grain vessels** were loaded in the Gulf—21 percent fewer than the same period last year. Forty-five vessels are expected to be loaded within the next 10 days (starting October 11). This is 30 percent fewer than the same period last year.

As of October 10, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was \$51.50. This is relatively unchanged from the previous week. The rate from PNW to Japan was \$28.50 per mt, unchanged from the previous week.

Fuel

For the week ending October 14, the U.S. average **diesel fuel price** increased 0.4 cents from the previous week to \$3.051 per gallon. This price is 34.3 cents less than the same week last year.

Grain Inspections Fall During Third Quarter 2019

During the third quarter of 2019, inspections of grain (wheat, corn, and soybeans) for export from all U.S. ports reached 25.8 million metric tons (mmt), down 18 percent from the same time last year and 7 percent below the 5-year average (fig. 1). Despite the drop in overall inspections of grain, soybean inspections reached an all-time high during the third quarter. Wheat inspections were also up from last year during the third quarter, but the increases in wheat and soybean inspections could not offset the large drop in corn inspections. Pacific Northwest (PNW) grain inspections decreased notably from the third quarter of 2018, due mainly to the sharp drop in corn inspections.

U.S. Gulf grain inspections decreased despite increased soybean and wheat inspections. Third-quarter grain inspections in the U.S. Gulf were 14.2 mmt, down 15 percent from last year (fig. 1) and 7 percent below the 5-year average. The U.S. Gulf's share (55 percent) of total grain exports were above last year, but other regional shares were mostly down. Third-quarter rail deliveries of grain to the U.S. Gulf ports jumped 72 percent from last year, in part because of diverted traffic from the Mississippi River: a 20-percent drop in barge movements of grain through the Mississippi River locks was caused by navigational delays due to high water conditions.

Third-quarter PNW grain inspections reached 6.4 mmt, down 33 percent from last year (fig. 1) and 15 percent below the 5-year average, mainly because of an 85-percent drop in corn inspections. Rail deliveries of grain to PNW ports were down as well during the third quarter, falling 27 percent from last year. PNW soybeans, however, reached a record high during the third quarter, but wheat fell 6 percent from last year.

Third-quarter grain inspections for the Atlantic-Great Lakes region reached .942 mmt, down 18 percent from last year and 10 percent below the 5-year average. Third-quarter corn inspections dropped significantly from last year for the region, and soybeans decreased slightly. Atlantic-Great Lakes wheat inspections were down 11 percent from last year during the third quarter.

Third-quarter Interior inspections of grain reached a record 4.3 mmt, down slightly from last year and 30

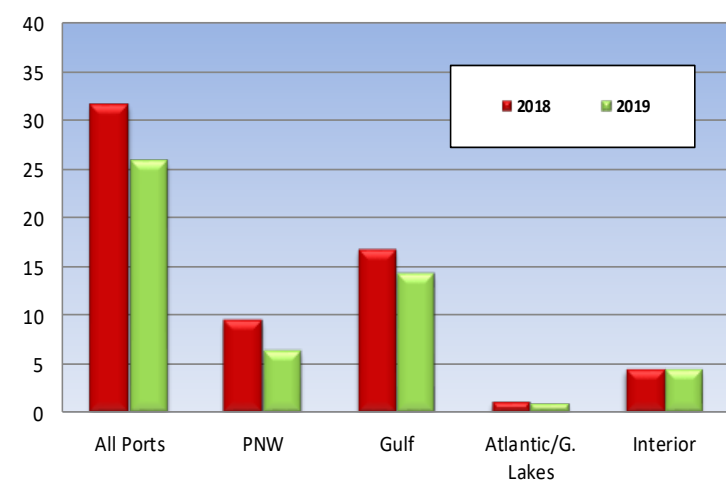
percent above the 5-year average. The Interior accounted for 17 percent of total third-quarter grain inspections. Mexico accounted for 77 percent of total Interior grain inspections during the quarter, up from 72 percent last year. Asia accounted for 22 percent of total Interior grain inspections. Soybeans and wheat inspections in the Interior increased 11 and 27 percent, respectively, during the third quarter, but corn decreased 11 percent. U.S. Interior corn inspected for export to Mexico during the third quarter was up 5 percent from last year, and soybean inspections in the Interior destined to Mexico increased 45 percent from last year.

Corn and Soybean Inspections

U.S. corn inspections reached 7.1 mmt, during the third quarter, down 57 percent from last year (fig. 2). U.S. corn exports were 48 percent below the 5-year average as export competition from abroad intensified. Third-quarter PNW corn inspections reached only .720 mmt, the lowest since 2013 and down 85 percent from last year, due mainly to lower demand from Asia. Third-quarter U.S. Gulf corn inspections totaled 4.54 mmt, down 52 percent from last year due to lower shipments to Asia and Latin America. Third-quarter Interior corn inspections totaled 2 mmt, down 11 percent from last year. Interior corn inspected for export to Mexico was down 10 percent from last year during the third quarter. Third-quarter inspections of corn in the Atlantic-Great Lakes region decreased 92 percent from last year, due mainly to a decrease in shipments to Africa. Compared to last year, total third-quarter inspections of corn shipped to Asia, from all port regions, decreased 67 percent. Also, overall U.S. third-quarter inspections of corn destined to Latin America decreased 38 percent from last year.

Third-quarter soybean inspections reached a record 12.2 mmt, up 26 percent from last year (fig. 2) and were 70 percent above the 5-year average. Inspections of soybeans destined to China totaled 5.6 mmt during the third quarter, significantly above the same time

Figure 1: Third quarter grain inspections by regions



Source: USDA/FGIS

last year. China accounted for 46 percent of total U.S. soybean exports during the third quarter. About 67 percent of U.S. third-quarter soybean exports were destined to Asia. Third-quarter PNW soybean inspections reached a record 2.5 mmt, up 114 percent from last year. Soybean inspections in the U.S. Gulf reached 7.4 mmt during the third quarter, up 17 percent from last year. Interior soybean inspections reached a record 1.7 mmt, up 11 percent from last year. Interior exports of soybeans to Mexico and Asia increased by 45 percent and 5 percent, respectively, over the third quarter 2018. Third-quarter Atlantic-Great Lakes soybean inspections decreased 4 percent from last year.

Wheat Inspections

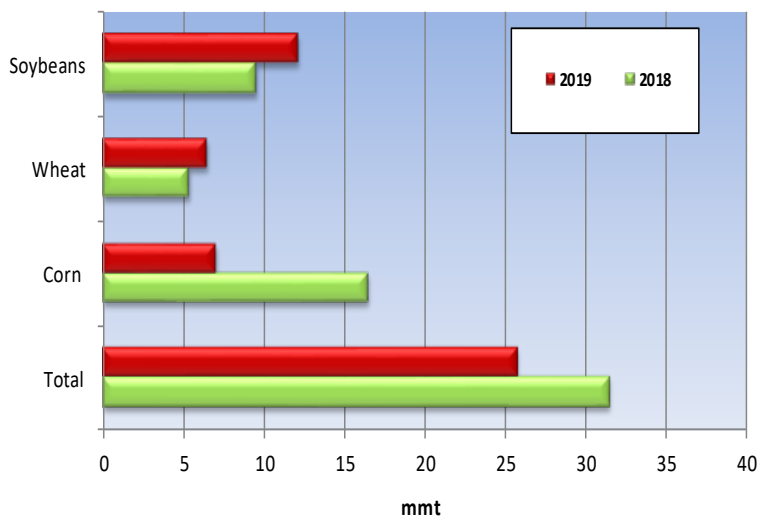
Inspections of wheat totaled 6.5 mmt during the third quarter, 20 percent above last year (fig. 2) but 8 percent below the 5-year average. In the U.S. Gulf, third-quarter wheat inspections were 95 percent above last year mainly because of increased exports to Africa and Latin America. In the Interior, third-quarter wheat

inspections were 40 percent above last year because of higher exports to Mexico. Wheat inspections, however, were down 6 percent from last year in PNW and down 11 percent in the Atlantic-Great Lakes. Third-quarter export inspections of wheat destined to Asia decreased 7 percent from last year, but wheat inspected for Latin American destinations increased 67 percent.

Market Outlook

According to the October *World Agricultural Supply and Demand Estimates* report, exports of wheat and soybeans are expected to increase 2 percent from last year for the 2019/20 marketing year. Corn exports, however, are projected to decrease 8 percent from last year. Currently outstanding third-quarter export sales of wheat, corn, and soybeans are below the same time last year. Also, currently there is a strong U.S. dollar, which usually slows U.S. grain exports. Cumulative (shipped) export sales are up from last year for wheat and soybeans, but down for corn (see [table 12 on page 15](#)). Johnny.Hill@ams.usda.gov

Figure 2: Third quarter grain inspections, 2018-2019



Source: USDA/FGIS.

Grain Transportation Indicators

Table 1

Grain transport cost indicators¹

For the week ending	Truck	Rail		Barge	Ocean	
		Unit train	Shuttle		Gulf	Pacific
10/16/19	205	n/a	227	206	230	202
10/09/19	204	n/a	228	213	229	202

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.
USDA, Agricultural Marketing Service.

Table 2

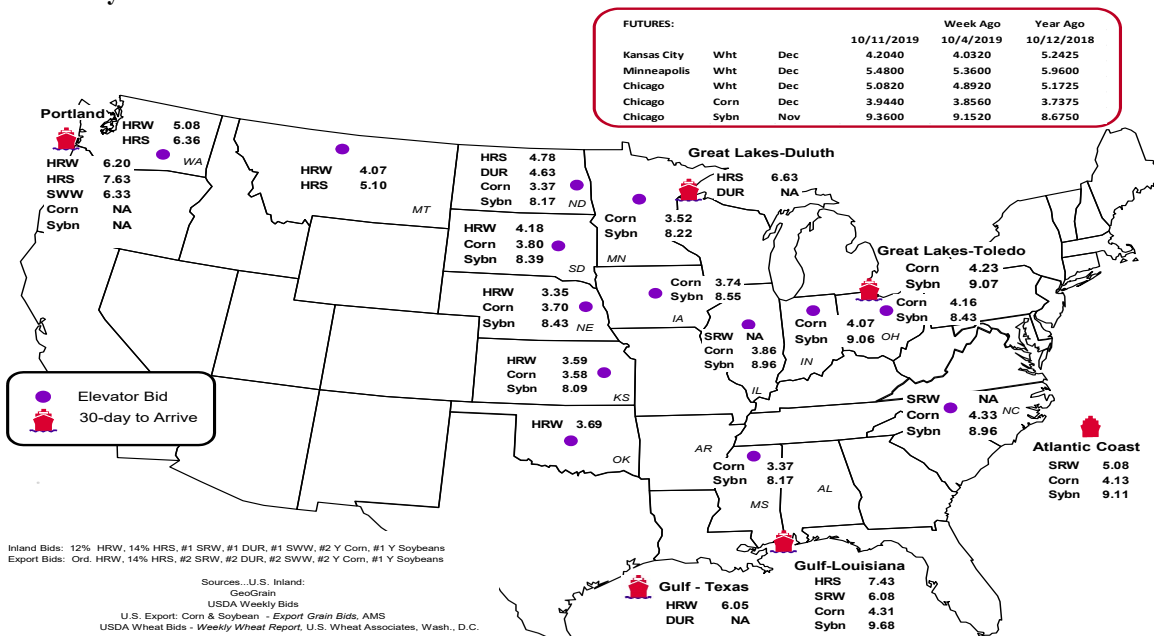
Market Update: U.S. origins to export position price spreads (\$/bushel)

Commodity	Origin-destination	10/11/2019	10/4/2019
Corn	IL-Gulf	-0.45	-0.47
Corn	NE-Gulf	-0.61	-0.63
Soybean	IA-Gulf	-1.13	-1.02
HRW	KS-Gulf	-2.46	-2.36
HRS	ND-Portland	-2.85	-2.81

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		Pacific	Atlantic &	Total	Week ending	Cross-Border
	Gulf	Texas Gulf	Northwest	East Gulf			Mexico ³
10/09/2019 ^p	342	939	2,999	180	4,460	10/5/2019	2,466
10/02/2019 ^r	353	1,134	2,587	271	4,345	9/28/2019	2,410
2019 YTD ^r	35,948	44,796	197,349	13,946	292,039	2019 YTD	97,438
2018 YTD ^r	17,943	40,039	256,645	16,119	330,746	2018 YTD	96,816
2019 YTD as % of 2018 YTD	200	112	77	87	88	% change YTD	101
Last 4 weeks as % of 2018 ²	73	137	72	47	77	Last 4wks % 2018	89
Last 4 weeks as % of 4-year avg. ²	44	68	65	42	62	Last 4wks % 4 yr	96
Total 2018	22,118	46,532	310,449	21,432	400,531	Total 2018	129,116
Total 2017	28,796	75,543	287,267	21,312	412,918	Total 2017	119,661

¹Data is incomplete as it is voluntarily provided.

² Compared with same 4-weeks in 2018 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.

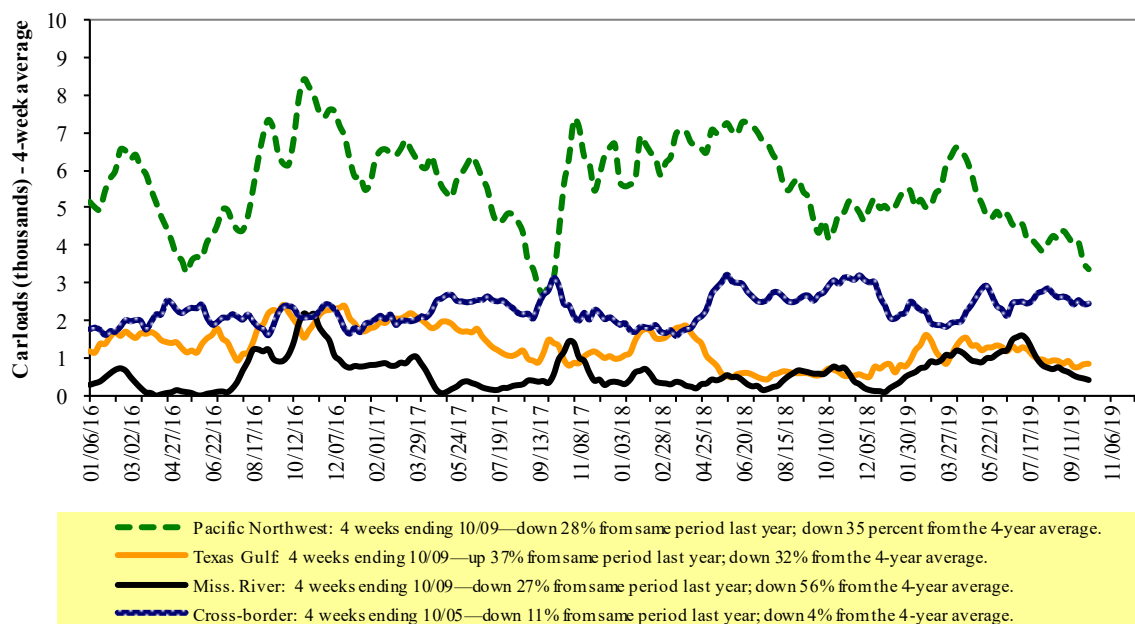
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available.; wks. = weeks; avg. = average.

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)

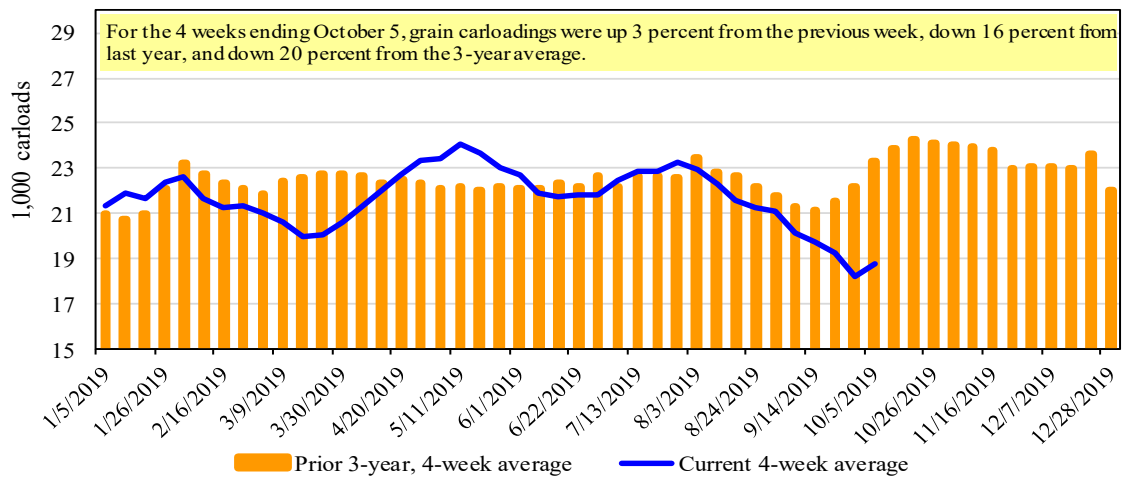
For the week ending: 10/5/2019	East		West			U.S. total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,649	2,093	9,584	1,370	5,002	19,698	4,899	4,448
This week last year	2,133	2,501	11,948	864	5,247	22,693	4,880	5,105
2019 YTD	72,301	109,074	434,030	45,360	202,834	863,599	161,741	176,516
2018 YTD	76,134	102,379	494,318	37,541	209,877	920,249	158,183	186,402
2019 YTD as % of 2018 YTD	95	107	88	121	97	94	102	95
Last 4 weeks as % of 2018*	94	81	77	136	90	84	74	96
Last 4 weeks as % of 3-yr. avg.**	95	79	76	115	79	80	82	90
Total 2018	98,978	133,201	635,458	48,638	267,713	1,183,988	211,762	244,697

*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.

Source: Association of American Railroads.

Figure 3

Total weekly U.S. Class I railroad grain car loadings

Source: Association of American Railroads.

Table 5

Railcar auction offerings¹ (\$/car)²

For the week ending: 10/10/2019		Delivery period							
		Oct-19	Oct-18	Nov-19	Nov-18	Dec-19	Dec-18	Jan-20	Jan-19
BNSF ³	COT grain units	0	no offer	0	no offer	no bid	no offer	no bid	0
	COT grain single-car	0	no offer	0	no offer	1	no offer	1	0
UP ⁴	GCAS/Region 1	no offer	n/a	no offer	n/a	no offer	n/a	n/a	n/a
	GCAS/Region 2	no offer	n/a	no bid	n/a	no bid	n/a	n/a	n/a

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

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

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

⁴UP - GCAS = Grain Car Allocation System.

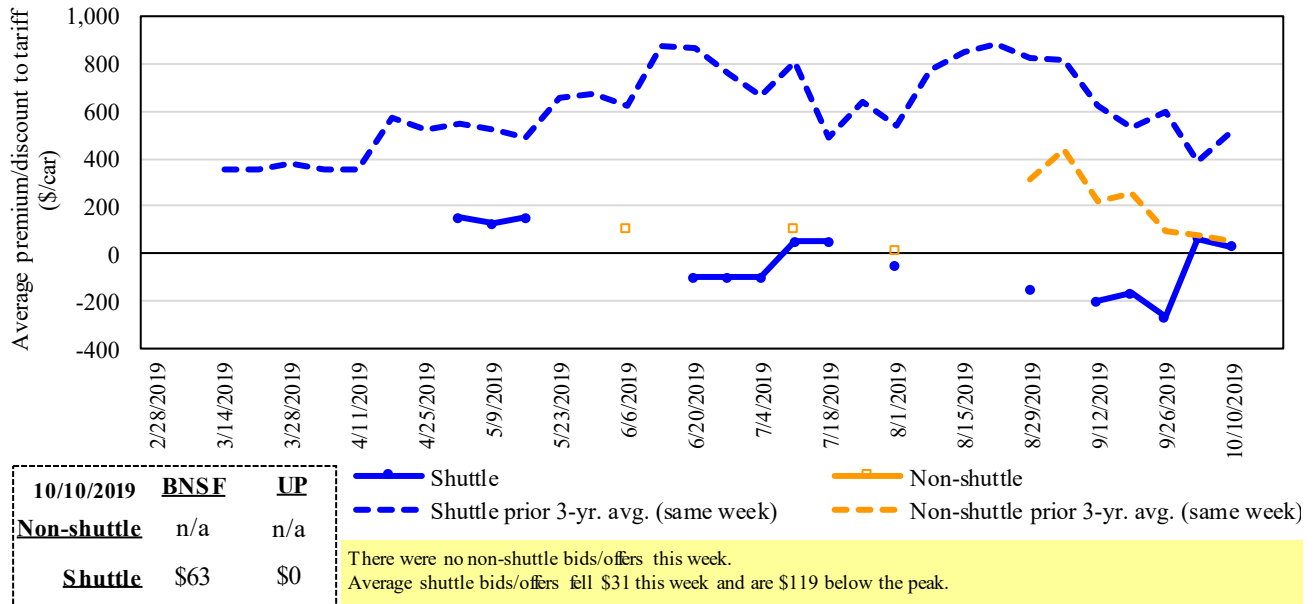
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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

Source: USDA, Agricultural Marketing Service.

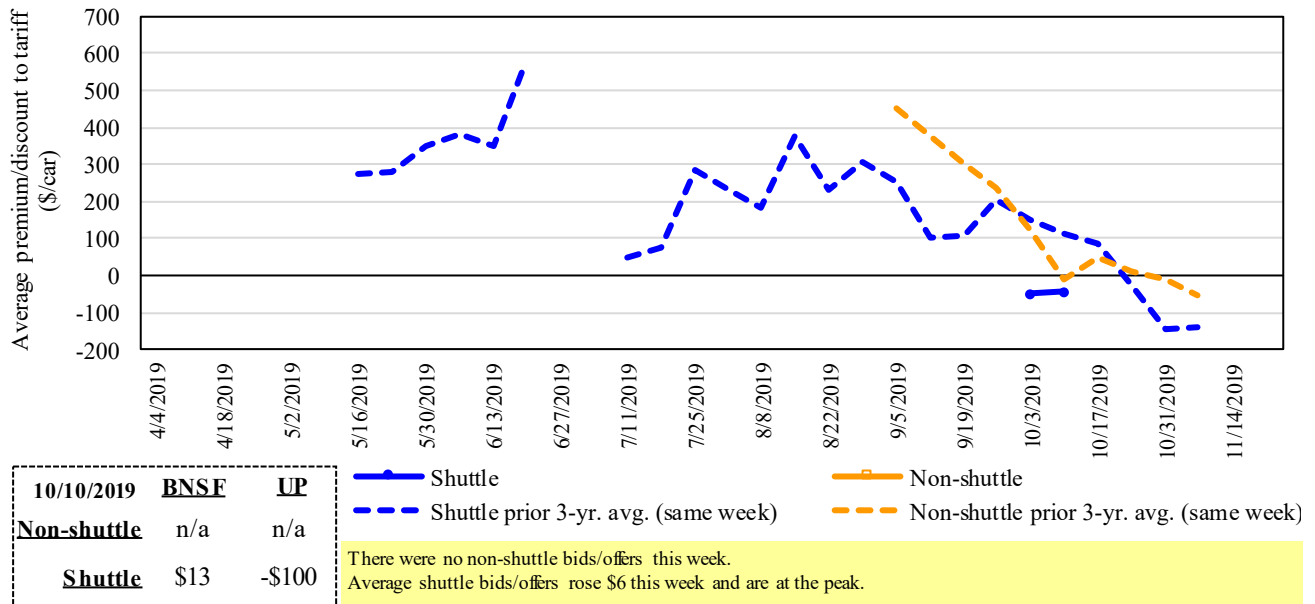
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

Figure 4
Bids/offers for railcars to be delivered in October 2019, secondary market



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

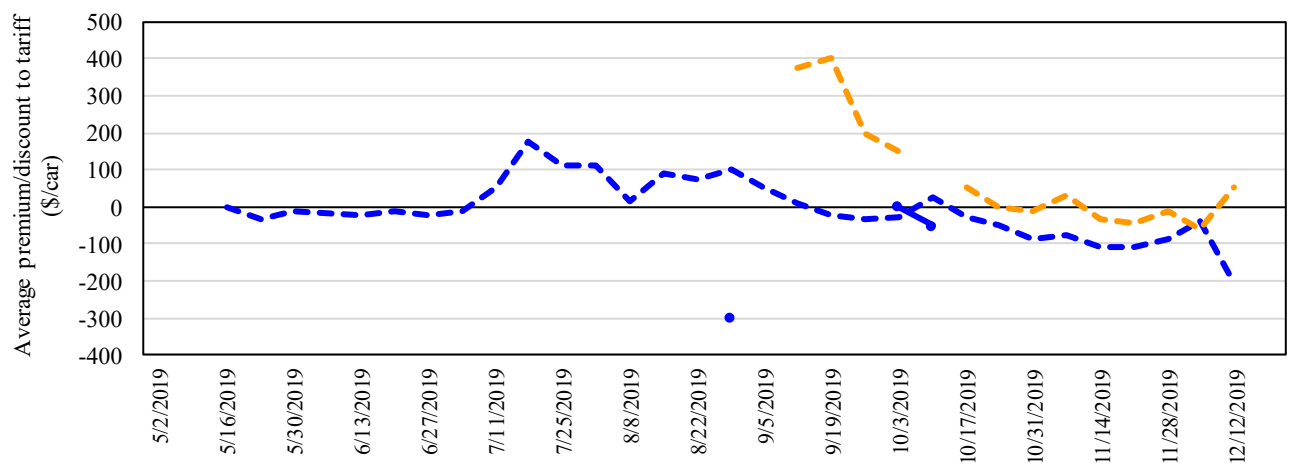
Figure 5
Bids/offers for railcars to be delivered in November 2019, secondary market



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

Figure 6

Bids/offers for railcars to be delivered in December 2019, secondary market



10/10/2019	BNSF	UP	Shuttle	Non-shuttle
Non-shuttle	n/a	n/a	Shuttle prior 3-yr. avg. (same week)	Non-shuttle prior 3-yr. avg. (same week)
Shuttle	-\$50	-\$50	There were no non-shuttle bids/offers this week. Average shuttle bids/offers fell \$50 this week and are \$50 below the peak.	

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

Table 6

Weekly secondary railcar market (\$/car)¹

For the week ending:		Delivery period					
		Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Non-shuttle	10/10/2019						
	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 2018	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 2018	n/a	n/a	n/a	n/a	n/a	n/a	
Shuttle	BNSF-GF	63	13	(50)	300	n/a	n/a
	Change from last week	(37)	n/a	n/a	25	n/a	n/a
	Change from same week 2018	188	13	n/a	n/a	n/a	n/a
	UP-Pool	0	(100)	(50)	n/a	n/a	n/a
	Change from last week	(25)	(50)	(50)	n/a	n/a	n/a
	Change from same week 2018	75	(50)	(150)	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.

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 and—together with **fuel surcharges** and any **auction and secondary rail** values—constitute 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. High auction and secondary rail values, during times of high rail demand or short supply, can exceed the cost of the tariff rate plus fuel surcharge.

Table 7

Tariff rail rates for unit and shuttle train shipments¹

October 2019	Origin region ³	Destination region ³	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per:		Percent change Y/Y ⁴	
					metric ton	bushel ²		
Unit train								
Wheat	Wichita, KS	St. Louis, MO	\$3,983	\$96	\$40.51	\$1.10	-1	
	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	\$169	\$46.61	\$1.27	-1	
	Sioux Falls, SD	Galveston-Houston, TX	\$6,976	\$0	\$69.28	\$1.89	1	
	Northwest KS	Galveston-Houston, TX	\$4,801	\$185	\$49.52	\$1.35	-1	
	Amarillo, TX	Los Angeles, CA	\$5,121	\$258	\$53.41	\$1.45	-1	
	Corn	Champaign-Urbana, IL	New Orleans, LA	\$3,900	\$191	\$40.63	\$1.03	-4
		Toledo, OH	Raleigh, NC	\$6,816	\$0	\$67.69	\$1.72	4
		Des Moines, IA	Davenport, IA	\$2,415	\$40	\$24.38	\$0.62	6
		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	\$119	\$38.92	\$0.99	-2
	Soybeans	Des Moines, IA	Los Angeles, CA	\$5,680	\$346	\$59.84	\$1.52	-2
Minneapolis, MN		New Orleans, LA	\$3,631	\$179	\$37.83	\$1.03	-13	
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	\$191	\$48.03	\$1.31	-3		
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	
	Northwest KS	Portland, OR	\$6,012	\$304	\$62.72	\$1.71	0	
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	\$191	\$39.83	\$1.01	-1	
	Lincoln, NE	Galveston-Houston, TX	\$3,880	\$0	\$38.53	\$0.98	0	
	Des Moines, IA	Amarillo, TX	\$4,220	\$150	\$43.39	\$1.10	3	
	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	\$220	\$50.60	\$1.38	1	
Toledo, OH		Huntsville, AL	\$4,805	\$0	\$47.72	\$1.30	4	
Grand Island, NE	Portland, OR	\$5,860	\$311	\$61.28	\$1.67	1		

¹A unit train refers to shipments of at least 25 cars. Shuttle train rates are generally available for qualified shipments of 75-120 cars that meet railroad efficiency requirements.

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.

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: October 2019			Fuel				Percent change ⁴
Commodity	Origin state	Destination region	Tariff rate/car ¹	Fuel surcharge per car ²	Tariff plus surcharge per:		
					metric ton ³	bushel ³	Y/Y
Wheat	MT	Chihuahua, CI	\$7,509	\$0	\$76.72	\$2.09	3
	OK	Cuautitlan, EM	\$6,775	\$132	\$70.58	\$1.92	0
	KS	Guadalajara, JA	\$7,534	\$606	\$83.17	\$2.26	5
	TX	Salinas Victoria, NL	\$4,329	\$80	\$45.05	\$1.22	0
Corn	IA	Guadalajara, JA	\$8,902	\$518	\$96.25	\$2.44	6
	SD	Celaya, GJ	\$8,140	\$0	\$83.17	\$2.11	3
	NE	Queretaro, QA	\$8,278	\$271	\$87.35	\$2.22	1
	SD	Salinas Victoria, NL	\$6,905	\$0	\$70.55	\$1.79	0
	MO	Tlalnepantla, EM	\$7,643	\$264	\$80.79	\$2.05	1
	SD	Torreon, CU	\$7,690	\$0	\$78.57	\$1.99	3
Soybeans	MO	Bojay (Tula), HG	\$8,547	\$484	\$92.27	\$2.51	5
	NE	Guadalajara, JA	\$9,172	\$505	\$98.87	\$2.69	5
	IA	El Castillo, JA	\$9,490	\$0	\$96.97	\$2.64	4
	KS	Torreon, CU	\$7,964	\$349	\$84.94	\$2.31	4
Sorghum	NE	Celaya, GJ	\$7,772	\$458	\$84.09	\$2.13	4
	KS	Queretaro, QA	\$8,108	\$165	\$84.53	\$2.15	1
	NE	Salinas Victoria, NL	\$6,713	\$133	\$69.94	\$1.77	1
	NE	Torreon, CU	\$7,157	\$324	\$76.44	\$1.94	3

¹Rates are based upon published tariff rates for high-capacity shuttle trains. Shuttle trains are available for qualified shipments of 75-110 cars that meet railroad efficiency requirements.

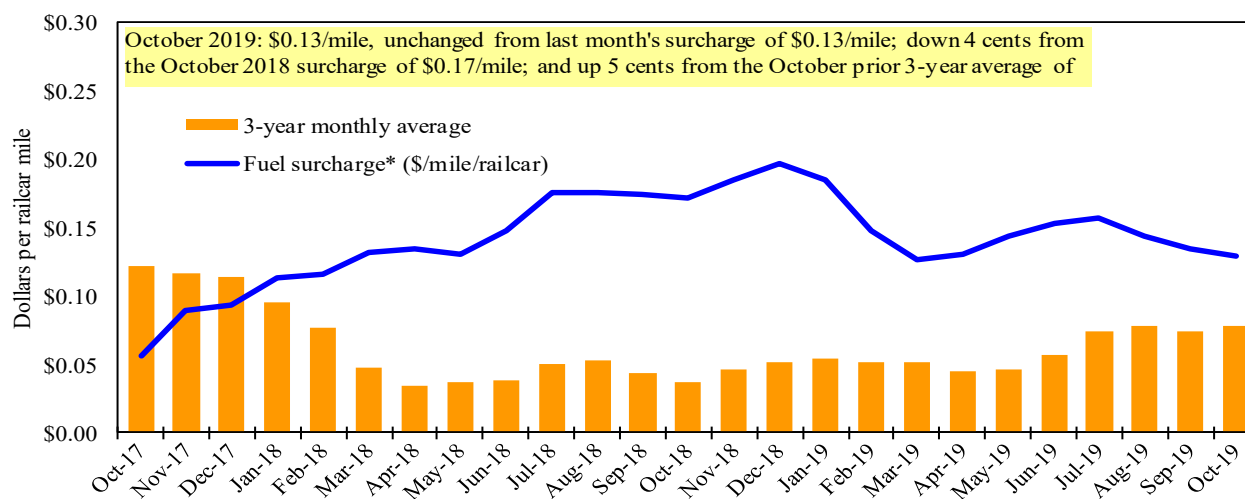
²Fuel surcharge adjusted to reflect the change in Ferrocarril Mexicano, S.A. de C.V railroad fuel surcharge policy as of 10/01/2009.

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

⁴Percentage change calculated using tariff rate plus fuel surcharge; Y/Y = year to year.

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

Figure 7

Railroad fuel surcharges, North American weighted average¹

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

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

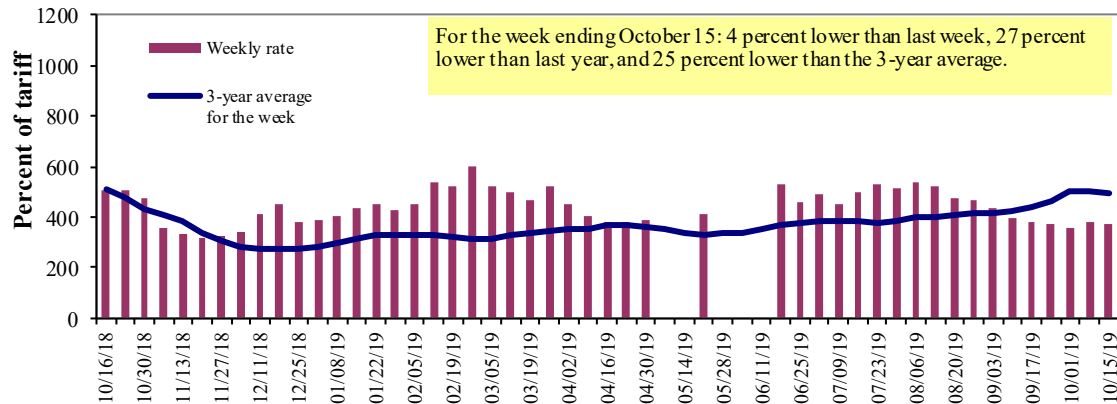
** CSX strike price changed from \$2.00/gal. to \$3.75/gal. starting January 1, 2015.

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

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

		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate¹	10/15/2019	374	395	370	315	363	363	299
	10/8/2019	382	417	384	355	453	453	373
\$/ton	10/15/2019	23.15	21.01	17.17	12.57	17.02	14.67	9.39
	10/8/2019	23.65	22.18	17.82	14.16	21.25	18.30	11.71
Current week % change from the same week:								
	Last year	-29	N/A ³	-27	-37	-29	-29	-35
	3-year avg. ²	-28	-21	-25	-27	-28	-28	-31
Rate¹	November	378	378	365	281	324	324	250
	January	-	-	373	268	295	295	243

¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average; ton = 2,000 pounds; "-" n/a due to closure

³ No rate for mid-Mississippi in 2018 for the equivalent week due to flooding-related 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 included in tables on this page. The 1976 benchmark rates per ton are provided in map.

Map Credit: USDA, Agricultural Marketing Service

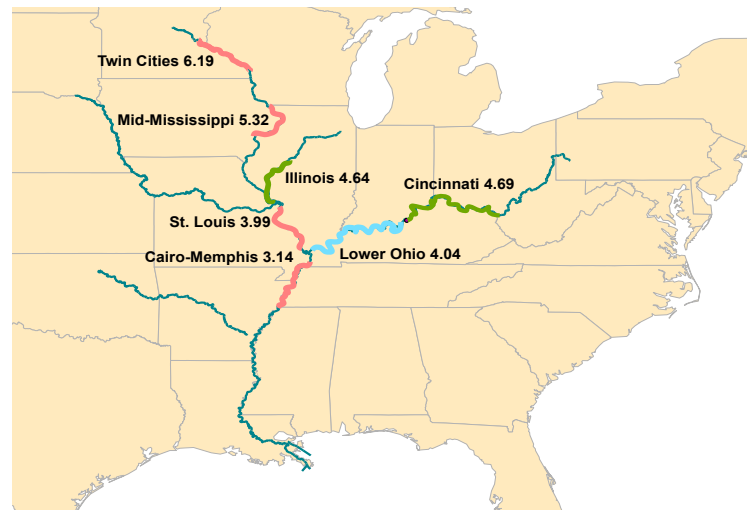
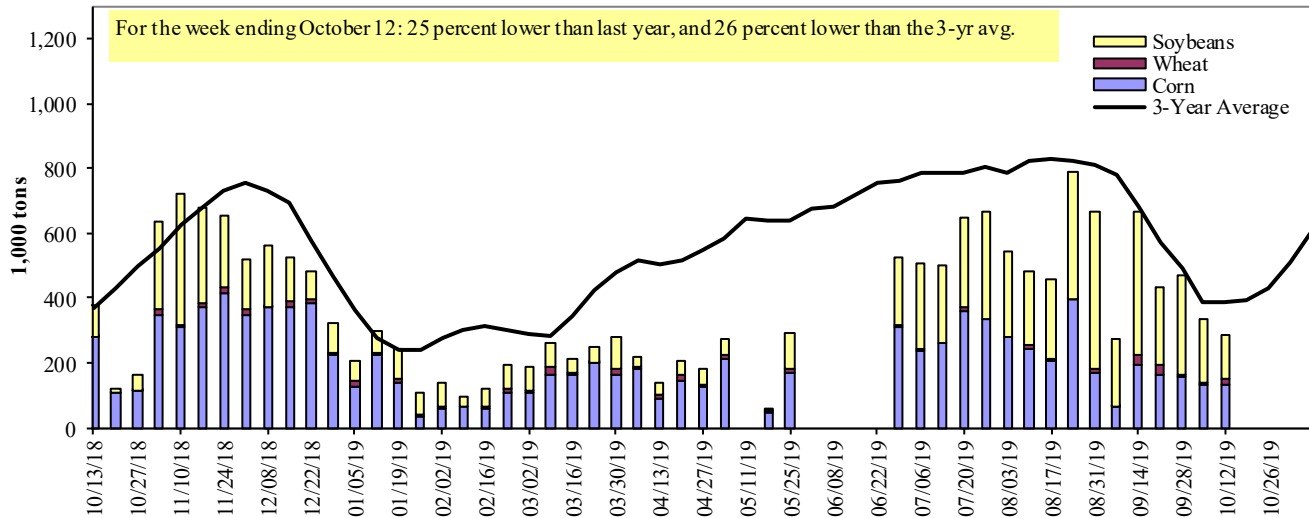


Figure 10

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 10/12/2019	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	28	14	67	2	111
Winfield, MO (L25)	108	14	134	0	256
Alton, IL (L26)	141	14	120	0	275
Granite City, IL (L27)	135	14	137	0	287
Illinois River (LAGRANGE)	21	0	2	0	22
Ohio River (OLMSTED)	79	16	69	0	163
Arkansas River (L1)	0	13	57	0	70
Weekly total - 2019	214	42	263	0	520
Weekly total - 2018	324	14	177	1	517
2019 YTD ¹	9,801	1,348	9,830	134	21,113
2018 YTD ¹	19,107	1,421	9,579	89	30,196
2019 as % of 2018 YTD	51	95	103	150	70
Last 4 weeks as % of 2018 ²	60	134	175	364	98
Total 2018	23,349	1,674	12,819	133	37,975

¹ Weekly total, YTD (year-to-date) and calendar year total includes Miss/27, Ohio/OLMSTED, and Ark/1; "Other" refers to oats, barley, sorghum, and rye.

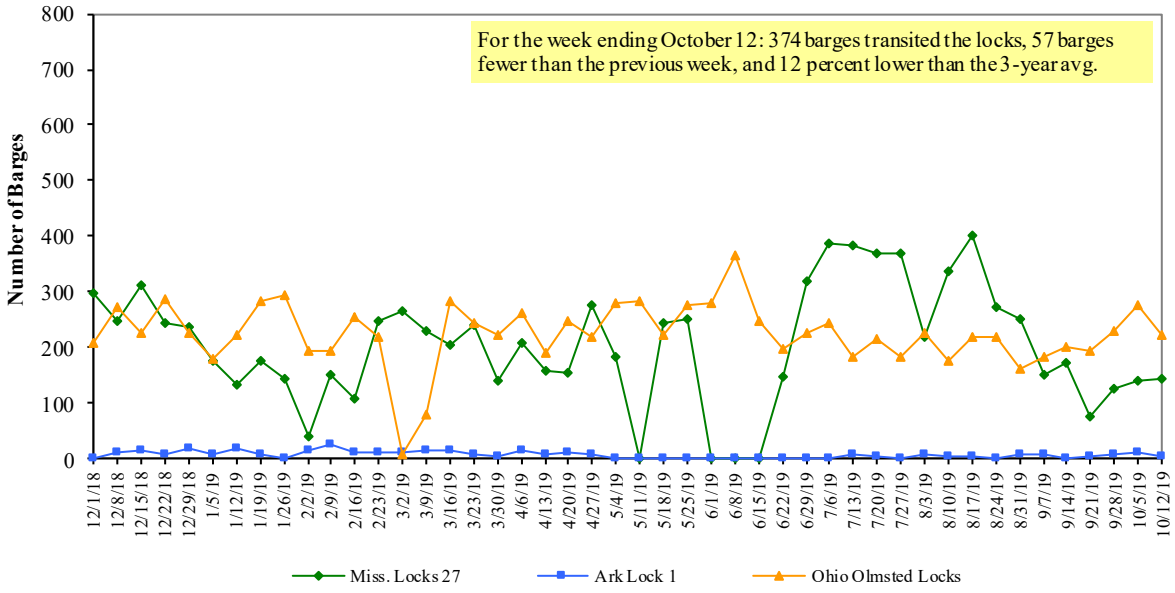
² As a percent of same period in 2018.

Note: 1. Total may not add exactly, due to rounding.

2. Starting from 11/24/2018, weekly movement through Ohio 52 is replaced by Olmsted.

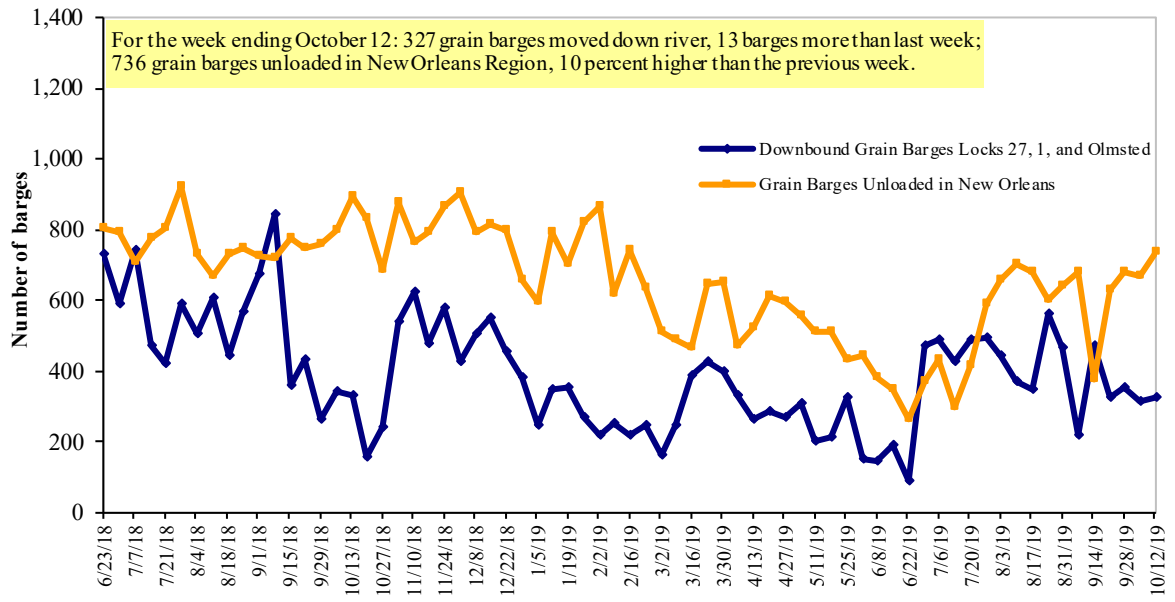
Source: U.S. Army Corps of Engineers

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



Source: U.S. Army Corps of Engineers and USDA, Agricultural Market 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 10/14/2019 (U.S. \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	3.044	0.003	-0.338
	New England	3.042	-0.005	-0.319
	Central Atlantic	3.227	0.003	-0.317
	Lower Atlantic	2.920	0.005	-0.352
II	Midwest	2.967	0.000	-0.384
III	Gulf Coast	2.805	0.001	-0.367
IV	Rocky Mountain	3.041	0.019	-0.359
	West Coast	3.653	0.011	-0.227
V	West Coast less California	3.240	0.025	-0.351
	California	3.982	0.001	-0.127
Total	U.S.	3.051	0.004	-0.343

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

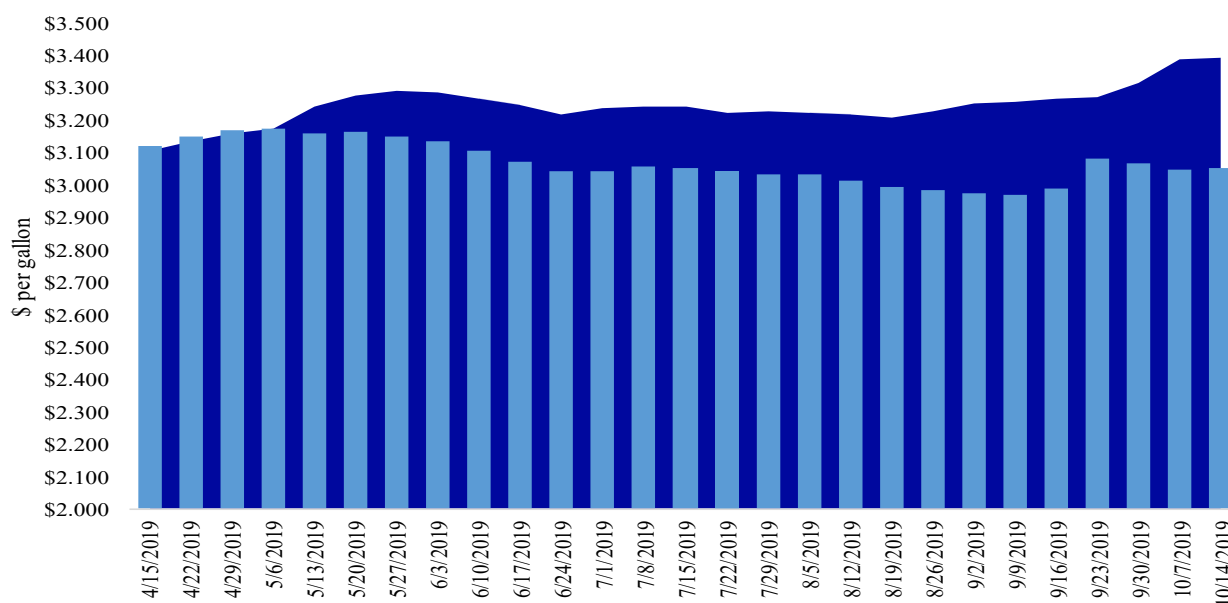
Source: U.S. Department of Energy, Energy Information Administration.

Figure 13

Weekly diesel fuel prices, U.S. average

For the week ending October 14, the U.S. average diesel fuel price increased 0.4 cents from the previous week to \$3.051 per gallon, 34.3 cents below the same week last year.

■ Last year \$3.394 ■ Current year \$3.051



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 ton)

For the week ending	Wheat						Corn	Soybeans	Total
	HRW	SRW	HRS	SWW	DUR	All wheat			
Export balances¹									
10/3/2019	1,323	589	1,302	1,082	205	4,500	7,915	12,359	24,774
This week year ago	1,445	696	1,324	1,076	96	4,637	14,529	16,643	35,808
Cumulative exports-marketing year²									
2019/20 YTD	3,707	1,105	2,326	1,497	291	8,926	2,081	4,028	15,036
2018/19 YTD	1,934	771	2,177	1,890	187	6,960	6,177	3,906	17,042
YTD 2019/20 as % of 2018/19	192	143	107	79	155	128	34	103	88
Last 4 wks as % of same period 2018/19	91	90	112	90	263	100	55	66	66
2018/19 Total	8,591	3,204	6,776	5,164	479	24,214	48,924	46,189	119,327
2017/18 Total	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

² Shipped export sales to date; new 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 importers¹ of U.S. corn

For the week ending 10/03/2019	Total commitments ²		% change current MY from last MY	Exports ³ 3-yr. avg. 2016-18
	2019/20 current MY	2018/19 last MY		
	- 1,000 mt -			
Mexico	5,373	6,463	(17)	14,659
Japan	1,334	3,208	(58)	11,955
Korea	71	1,877	(96)	4,977
Colombia	378	638	(41)	4,692
Peru	0	714	(100)	2,808
Top 5 Importers	7,156	12,899	(45)	39,091
Total U.S. corn export sales	9,996	20,706	(52)	54,024
% of projected exports	21%	39%		
Change from prior week ²	284	1,007		
Top 5 importers' share of U.S. corn export sales	72%	62%		72%
USDA forecast, October 2019	48,346	52,545	(8)	
Corn use for ethanol USDA forecast, October 2019	137,160	136,551	0	

¹Based on USDA, Foreign Agricultural Service (FAS) Marketing Year Ranking Reports for 2018/19; Marketing year (MY) = Sep 1 - Aug 31.

²Cumulative exports (shipped) + outstanding sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query. Total commitments change (net sales) from prior week could include revisions from previous week's outstanding sales or accumulated sales.

³FAS Marketing Year Ranking Reports (Carryover plus Accumulated Export; yr. = year; avg. = average).

Note: (n) indicates negative number; mt = metric ton

Source: USDA, Foreign Agricultural Service.

Table 14

Top 5 importers¹ of U.S. soybeans

For the week ending 10/03/2019	Total commitments ²		% change current MY from last MY	Exports ³ 3-yr. avg. 2016-2018
	2019/20 Current MY	2018/19 Last MY		
	- 1,000 mt -			- 1,000 mt -
China	4,790	1,078	344	25,733
Mexico	2,210	3,053	(28)	4,271
Indonesia	425	672	(37)	2,386
Japan	636	649	(2)	2,243
Egypt	520	434	20	1,983
Top 5 importers	8,581	5,886	46	36,616
Total US soybean export sales	16,387	20,549	(20)	53,746
% of Projected exports	34%	43%		
Change from prior week ²	2,092	440		
Top 5 importers' share of U.S. soybean export sales	52%	29%		68%
USDA forecast, October 2019	48,365	47,629	102	

¹Based on USDA, Foreign Agricultural Service (FAS) Marketing Year Ranking Reports for 2018/19; Marketing year (MY) = Sep 1 - Aug 31.

²Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query. The total commitments change (net sales) from prior week could include revisions from previous week's outstanding sales and/or accumulated sales.

³FAS Marketing Year Ranking Reports (Carryover plus Accumulated Export; yr. = year; avg. = average).

Note: (n) indicates negative number; mt = metric ton

Source: USDA, Foreign Agricultural Service.

Table 15

Top 10 importers¹ of all U.S. wheat

For the week ending 10/03/2019	Total commitments ²		% change current MY from last MY	Exports ³ 3-yr. avg. 2016-2018
	2019/20 current MY	2018/19 last MY		
	- 1,000 mt -			- 1,000 mt -
Philippines	1,607	1,772	(9)	3,047
Mexico	2,010	1,385	45	3,034
Japan	1,318	1,363	(3)	2,695
Nigeria	859	533	61	1,564
Indonesia	304	336	(9)	1,381
Korea	825	854	(3)	1,355
Taiwan	670	585	15	1,164
Egypt	101	0	n/a	821
Thailand	418	537	(22)	747
Iraq	262	357	(27)	574
Top 10 importers	8,374	7,720	8	16,382
Total US wheat export sales	13,427	11,596	16	24,388
% of projected exports	52%	45%		
Change from prior week ²	522	316		
Top 10 importers' share of U.S. wheat export sales	62%	67%		67%
USDA forecast, October 2019	25,886	25,504	1	

¹Based on USDA, Foreign Agricultural Service (FAS) Marketing Year Ranking Reports for 2018/19; Marketing year = Jun 1 - May 31.

²Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query. Total commitments change (net sales) from prior week could include revisions from the previous week's outstanding and/or accumulated sales.

³FAS Marketing Year Final Reports.

Note: (n) indicates negative number; mt = metric ton

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 10/10/19	Previous week*	Current week as % of previous	2019 YTD*	2018 YTD*	2019 YTD as % of 2018 YTD	Last 4-weeks as % of:		2018 total*
							Last year	Prior 3-yr. avg.	
Pacific Northwest									
Wheat	313	303	103	10,849	10,305	105	110	112	13,315
Corn	0	0	n/a	6,918	16,842	41	4	7	20,024
Soybeans	69	61	113	7,724	6,693	115	111	29	7,719
Total	382	364	105	25,491	33,840	75	56	52	41,058
Mississippi Gulf									
Wheat	45	65	69	3,873	3,190	121	73	95	3,896
Corn	351	291	121	17,369	27,940	62	34	40	33,735
Soybeans	804	858	94	21,200	19,513	109	135	99	28,124
Total	1,201	1,214	99	42,442	50,643	84	80	75	65,755
Texas Gulf									
Wheat	77	28	270	5,283	2,357	224	217	45	3,198
Corn	0	13	2	577	657	88	20	11	730
Soybeans	0	0	n/a	2	69	2	n/a	0	69
Total	77	42	184	5,861	3,083	190	146	37	3,997
Interior									
Wheat	17	50	34	1,534	1,312	117	96	109	1,614
Corn	111	159	70	5,999	6,980	86	73	80	8,650
Soybeans	127	182	70	5,433	5,233	104	125	136	6,729
Total	254	391	65	12,966	13,525	96	93	102	16,993
Great Lakes									
Wheat	36	58	62	904	662	137	154	164	894
Corn	0	0	n/a	0	364	0	0	0	404
Soybeans	0	0	n/a	473	695	68	20	21	1,192
Total	36	58	62	1,378	1,721	80	78	84	2,491
Atlantic									
Wheat	0	1	n/a	37	69	54	165	50	69
Corn	0	1	0	98	110	89	9	5	138
Soybeans	5	6	92	1,000	1,494	67	22	24	2,047
Total	5	7	68	1,135	1,673	68	19	16	2,253
U.S. total from ports*									
Wheat	487	505	97	22,480	17,894	126	113	95	22,986
Corn	462	465	99	30,961	52,894	59	31	38	63,682
Soybeans	1,005	1,107	91	35,832	33,697	106	124	83	45,879
Total	1,954	2,076	94	89,273	104,484	85	76	69	132,547

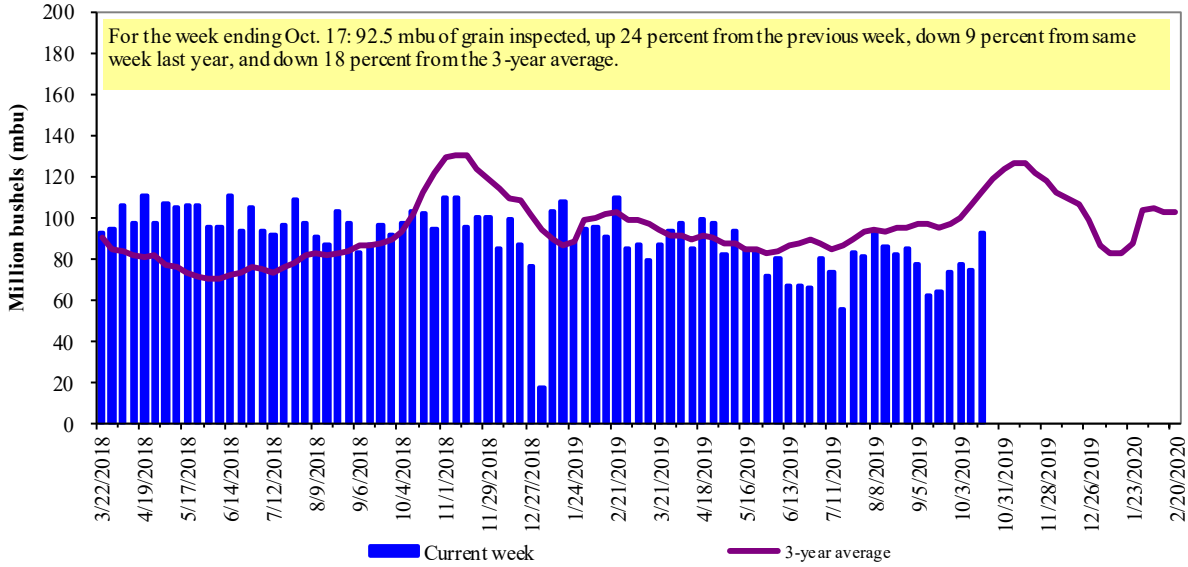
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

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 53 percent of the U.S. export grain shipments departed through the U.S. Gulf region in 2018.

Figure 14

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

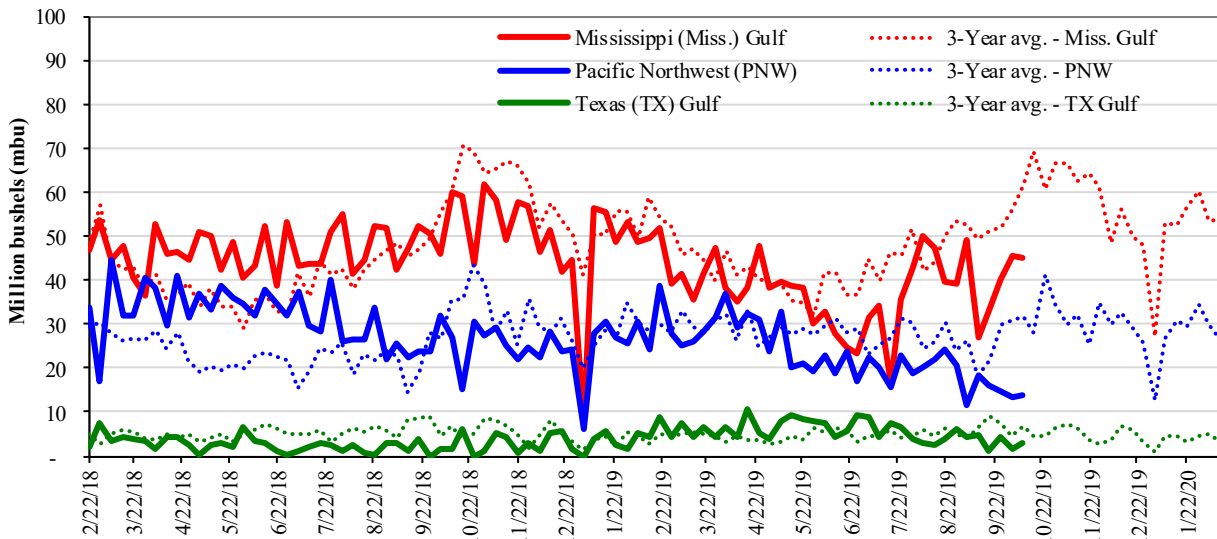


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 15

U.S. Grain inspections: U.S. Gulf and PNW¹ (wheat, corn, and soybeans)



Week ending 10/10/19 inspections (mbu):	Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
MS Gulf: 45.0	Last wk:	unchanged	up 80	up 2	up 5
PNW: 14.0	Last Year (same wk):	down 25	up 72	down 23	down 48
TX Gulf: 2.8	3-yr avg. (4-wk. mov. Avg):	down 18	down 58	down 23	down 51

Source: USDA, Federal Grain Inspection Service.

Ocean Transportation

Table 17

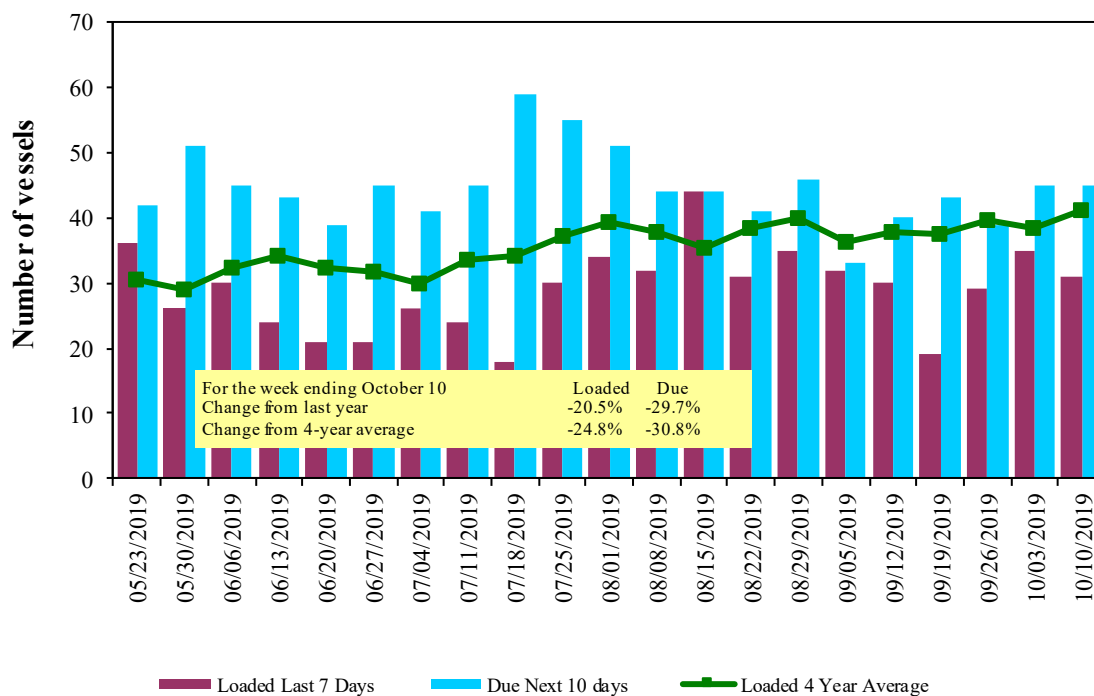
Weekly port region grain ocean vessel activity (number of vessels)

Date	Gulf			Pacific Northwest
	In port	Loaded 7-days	Due next 10-days	In port
10/10/2019	37	31	45	15
10/3/2019	43	35	45	15
2018 range	(23...88)	(24...41)	(38...67)	(4...30)
2018 average	40	34	54	17

Source: USDA, Agricultural Marketing Service

Figure 16

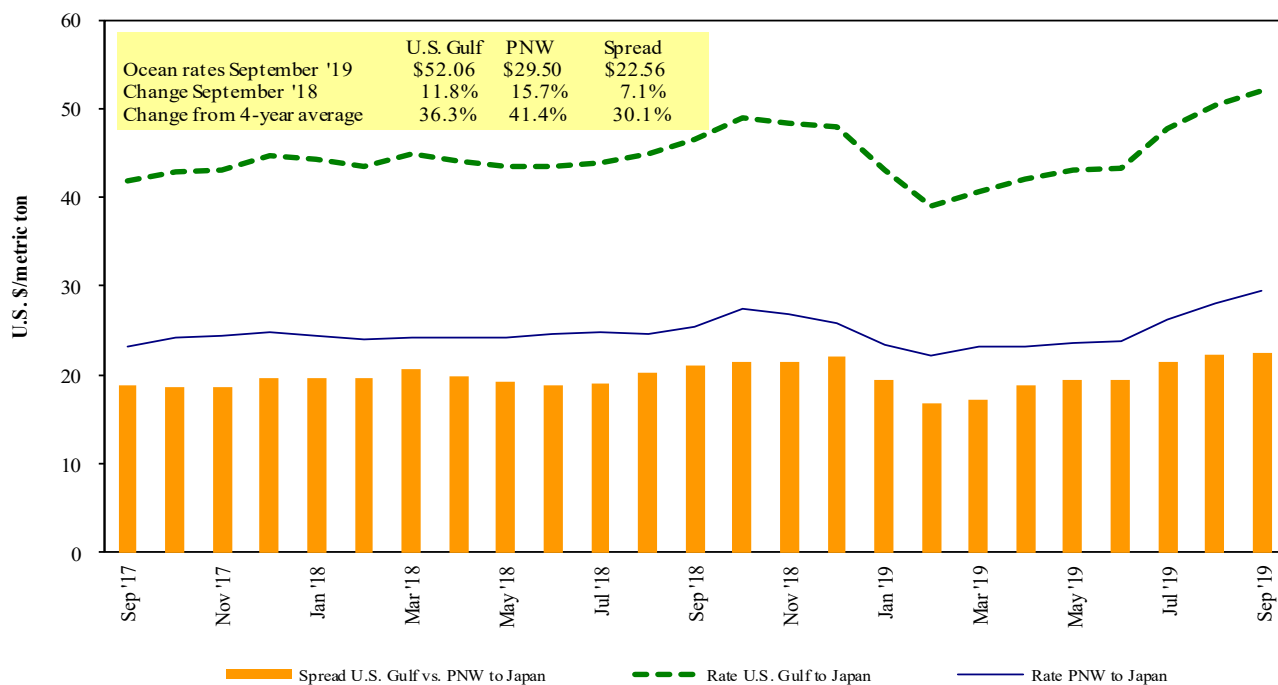
U.S. Gulf¹ vessel loading activity



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 10/12/2019

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	Bangladesh	Wheat	Dec 10/20	48,990	79.92*
U.S. Gulf	China	Heavy Grain	Jun 1/30	63,000	42.00
U.S. Gulf	Pt Sudan	Sorghum	Sep 20/30	24,960	58.15*
U.S. Gulf	Djibouti	Wheat	Aug 19/29	20,000	85.66*
U.S. Gulf	Somaliland	Sorghum	Sep 20/30	32,240	61.75*
PNW	Bangladesh	Wheat	Dec 10/20	23,080	74.44*
PNW	Philippines	Soybean Meal	Oct 31/31	15,390	49.82*
PNW	Vietnam	Soybean Meal	Oct 21/31	3,200	49.82*
PNW	Yemen	Wheat	Sep 5/15	35,380	59.59*
PNW	Yemen	Wheat	Sep 20/30	35,000	62.19*
Brazil	China	Heavy Grain	Oct 1/10	65,000	32.00
Brazil	China	Heavy Grain	Jun 10/20	65,000	33.00
Brazil	China	Heavy Grain	Apr 20/May 5	63,000	33.00

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

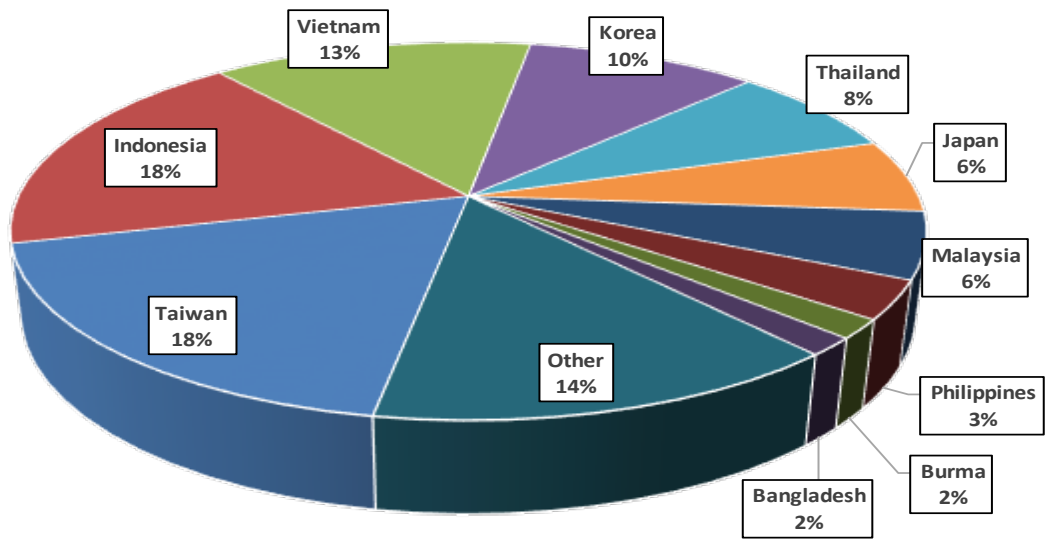
Note: Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), free on board (F.O.B), except where otherwise indicated; op = option.

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, Jan-Jul 2019

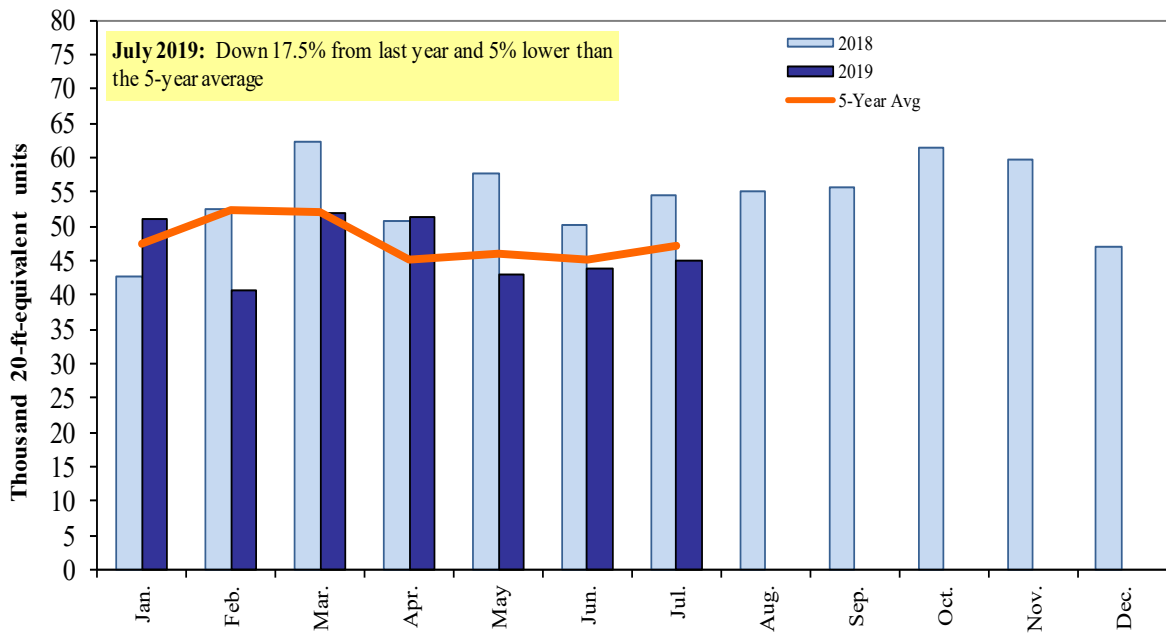


Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: 1001, 100190, 1002, 1003 100300, 1004, 100400, 1005, 100590, 1007, 100700, 1102, 110100, 230310, 110220, 110290, 1201, 120100, 230210, 230990, 230330, and 120810.

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, 120100, 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*. October 17, 2019. Web: <http://dx.doi.org/10.9752/TS056.10-17-2019>

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