



Grain Transportation Report

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

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September 13, 2018

WEEKLY HIGHLIGHTS

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Overall Grain Inspections Recede Despite Increases for Wheat and Soybeans

For the week ending September 6, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions reached 2.18 million metric tons (mmt), down 15 percent from the previous week, down 8 percent from last year, and 6 percent below the 3-year average. Although wheat and soybean inspections increased 5 and 19 percent, respectively, from the previous week, the increases could not offset the 43 percent drop in corn inspections. Shipments of corn to Latin America and Asia were down significantly from the previous week. Pacific Northwest (PNW) grain inspections increased 17 percent from the past week, but Mississippi Gulf inspections decreased 20 percent for the same period. Outstanding (unshipped) export sales were up for wheat but down for corn and soybeans.

Weekly Grain Barge Traffic Up

For the week ending September 8, barge volumes for down-bound grain on the locking portions of the Mississippi, Ohio, and Arkansas rivers were 1.3 million tons, 24 percent higher than the prior week. Much of the barge traffic increases are attributable to the completed repairs at Melvin Price Locks and Dam (L&D), near St. Louis, MO. With elimination of the significant delays at Melvin Price L&D the backlog of traffic was freed to continue its journey from the Upper Mississippi River to the Gulf. However, next week's tonnage report may be impacted by the current high water conditions caused by remnants of Tropical Storm Gordon that dumped significant rain on much of the Midwest. Tropical Storm Gordon made land fall in Mississippi near the Alabama border on September 5.

Railroads Prepare for Hurricane Florence

The eastern carriers, CSX Transportation (CSX) and Norfolk Southern Railway (NS), have implemented operational plans for Hurricane Florence, expected to make landfall in the Carolinas early Friday morning. CSX has taken steps to protect equipment and prepare areas in the storm's projected path and the surrounding regions. NS issued embargos on carload and intermodal traffic destined to many locations in North Carolina, South Carolina, and Virginia, including Charleston, SC, and Norfolk, VA. Charleston and Norfolk house the largest ports for moving grain that could be affected by Hurricane Florence. In terms of bulk U.S. grain exports, Norfolk ranked 11th and Charleston ranked 23rd in 2017. In terms of containerized grain exports, Norfolk ranked 3rd and Charleston ranked 7th. Shipments traveling through affected areas will experience delays.

Snapshots by Sector

Export Sales

For the week ending August 30, **unshipped balances** of wheat, corn, and soybeans totaled 10.4 mmt, up 23 percent from the same time last year. Net weekly **wheat export sales** were .380 mmt, down 8 percent from the previous week. Net **corn export sales** were .030 mmt, down 83 percent from the previous week. Net **soybean export sales** were .001 mmt, down significantly from the previous week due to the end of the marketing year.

Rail

U.S. Class I railroads originated 22,633 **grain carloads** for the week ending September 1, up 3 percent from the previous week, 24 percent from last year, and 11 percent from the 3-year average.

Average September shuttle **secondary railcar** bids/offers per car were \$119 below tariff for the week ending September 6, down \$108 from last week, and \$248 lower than last year. Average non-shuttle secondary railcar bids/offers per car were \$250 above tariff, up \$69 from last week. There were no non-shuttle bids/offers this week last year.

Barge

For the week ending September 8, **barge grain movements** totaled 1,288,464 tons, 24 percent higher than the previous week and up 33 percent from the same period last year.

For the week ending September 8, 844 grain barges **moved down river**, 172 barges more than the previous week. There were 722 grain barges **unloaded in New Orleans**, 1 barge less than the previous week.

Ocean

For the week ending September 6, 31 **ocean-going grain vessels** were loaded in the Gulf, unchanged from the same period last year. Fifty-six vessels are expected to be loaded within the next 10 days, 22 percent more than the same period last year.

For the week ending September 6, the ocean freight rate for shipping bulk grain, from the Gulf to Japan, was \$46.00 per metric ton, unchanged from the previous week. The cost of shipping, from the PNW to Japan, was \$25.00 per metric ton, unchanged from the previous week.

Fuel

For the week ending September 10, the **U.S. average diesel fuel price** increased 0.6 cents, from the previous week to \$3.258 per gallon, 45.6 cents above the same week last year.

Feature Article/Calendar

Second Quarter Corn and Soybean Transportation Costs Above Last Year

During the second quarter 2018, transportation costs for shipping corn and soybeans, from Minneapolis, Minnesota (MN) to Japan through the Gulf and the Pacific Northwest (PNW), increased from last year. Higher year-to-year percentage changes in barge and ocean rates caused the increase in the cost of shipping from the Gulf. Ocean rates, alone, pushed year-to-year PNW transportation costs higher (*see table 1*). Ocean rates increased, due to high demand for coal and record high demand for grain, during the second quarter (*Grain Transportation Report GTR, July 26, 2018*). Total landed costs, for shipping grain from Minnesota to Japan through each export region, also increased from year-to-year, especially for grain shipped through the Gulf.

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	
	2ndQtr 17	1stQtr 18	2ndQtr 18	Yr. to Yr.	Qtr to Qtr	2ndQtr 17	1stQtr 18	2ndQtr 18	Yr. to Yr.	Qtr to Qtr
Truck	12.30	13.87	12.06	-1.95	-13.05	12.30	13.87	12.06	-1.95	-13.05
Barge	21.55	n/a	38.81	80.09	n/a	21.55	n/a	38.81	80.09	n/a
Ocean	38.08	44.27	43.68	14.71	-1.33	38.08	44.27	43.68	14.71	-1.33
Total Transportation Cost	71.93	58.14	94.55	31.45	n/a	71.93	58.14	94.55	31.45	n/a
Farm Value ²	131.62	125.62	135.29	2.79	7.70	340.00	346.37	348.21	2.41	0.53
Total Landed Cost	203.55	183.76	229.84	12.92	n/a	411.93	404.51	442.76	7.48	n/a
Transportation % Landed Cost	35.34	31.64	41.14			17.46	14.37	21.35		

Table 2: Cost of Shipping Corn and Soybeans from Minneapolis to Japan through the U.S. PNW

	Corn					Soybeans				
	\$/metric ton			Percent change		\$/metric ton			Percent Change	
	2ndQtr 17	1stQtr 18	2ndQtr 18	Yr. to Yr.	Qtr to Qtr	2ndQtr 17	1stQtr 18	2ndQtr 18	Yr. to Yr.	Qtr to Qtr
Truck	12.30	13.87	12.06	-1.95	-13.05	12.30	13.87	12.06	-1.95	-13.05
Rail ¹	49.90	49.65	49.65	-0.50	0.00	56.35	56.29	56.11	-0.43	-0.32
Ocean	19.93	24.25	24.37	22.28	0.49	19.93	24.25	24.37	22.28	0.49
Total Transportation Cost	82.13	87.77	86.08	4.81	-1.93	88.58	94.41	92.54	4.47	-1.98
Farm Value ²	131.62	125.62	135.29	2.79	7.70	340.00	346.37	348.21	2.41	0.53
Total Landed Cost	213.75	213.39	221.37	3.56	3.74	428.58	440.78	440.75	2.84	-0.01
Transportation % Landed Cost	38.42	41.13	38.89			20.67	21.42	21.00		

Source: USDA/AMS/TMP

¹ 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

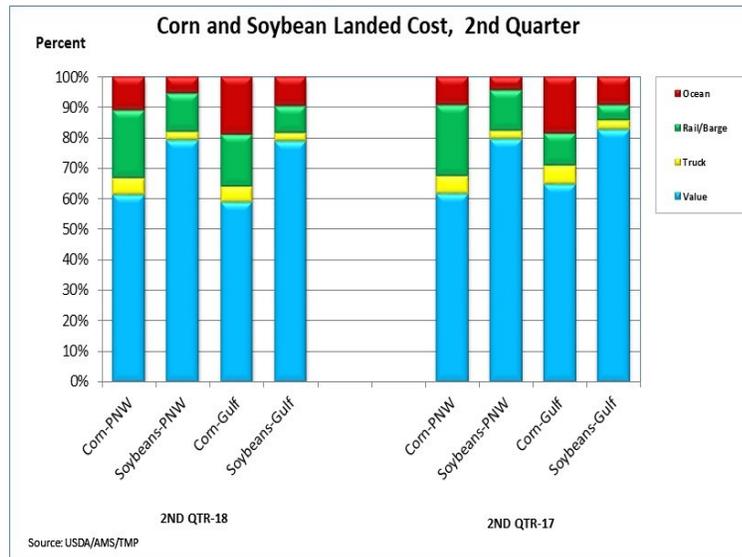
² Source: USDA/NASS, Agricultural Prices

U.S. Gulf Costs: Year-to-year transportation costs, for shipping grain from Minneapolis, MN to Japan through the Gulf, increased 31 percent for corn and soybeans (see table 1). Higher costs were caused primarily by increased year-to-year barge and ocean rates for shipping grain through the Gulf. Year-to-year trucking rates, for moving grain from Minnesota to locally served grain elevators, decreased only 2 percent. During the second quarter, corn and soybean farm values accounted for 59 and 79 percent of the landed costs for shipping grain through the Gulf, slightly below last year's values for corn and soybeans (*see figure*). Rail and barge's share of the Gulf landed cost, however, increased from last year.

During the second quarter of 2018, farm values for corn and soybeans, shipped from MN through the Gulf to Japan, increased slightly from year to year. Transportation costs, for shipping corn and soybeans, accounted for 41 and 21 percent of the landed costs in the Gulf, both above last year (see table 1). The barge and ocean share of total landed costs, for each grain, were above last year. Corn exports in the Gulf, during the second quarter, increased 20 percent from last year, accounting for 50 percent of total corn exports. Second quarter soybean exports, shipped from the Gulf, reached 4.2 mmt, up 43 percent from last year; and accounting for 52 percent of total soybean exports. (*GTR, July 12 2018*).

Pacific Northwest Costs:

Total transportation costs from Minneapolis, via the PNW to Japan, decreased 1 percent for corn and soybeans from quarter to quarter (*see table 2*). Quarter-to-quarter rates were down slightly for trucking and ocean shipping. Year-to-year transportation costs, for shipping grain from the PNW to Japan, increased 5 percent for corn and 4 percent for soybeans, primarily due to ocean rates. Compared to last year, PNW rail rates were unchanged for corn and soybeans.



Quarter-to-quarter total landed costs, for shipping grain from the PNW to Japan, increased 4 percent for corn due to higher farm values, but remained unchanged for soybeans. Higher ocean rates and farm values pushed year-to-year landed costs up 4 percent for corn and 3 percent for soybeans (*see table 2*). First quarter transportation costs, for grain shipped through the PNW, accounted for 39 percent of the total landed costs for corn and 21 percent for soybeans. Both were down slightly from the previous quarter, but above last year. The farm value for soybeans accounted for 79 percent of the total landed cost for shipping through the PNW, below the value for the previous quarter and last year (*see figure*). Rail, barge, and ocean's share of the PNW landed costs remained mostly unchanged.

Total second quarter PNW corn exports reached a record 7.1 mmt, up 51 percent from last year, accounting for about 33 percent of total corn exports (*GTR, July 12, 2018*). Second quarter soybean exports in the PNW reached 1.5 mmt, up 12 percent from last year due to strong demand from Asia. PNW soybean exports accounted for 19 percent of total soybean exports during the second quarter.

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Rail Transportation

Table 3

Rail Deliveries to Port (carloads)¹

For the Week Ending	Mississippi		Pacific	Atlantic &	Total	Week ending	Cross-Border Mexico ³
	Gulf	Texas Gulf	Northwest	East Gulf			
09/05/2018 ^p	737	405	5,417	209	6,768	9/1/2018	2,879
08/29/2018 ^r	776	710	6,475	427	8,388	8/25/2018	2,831
2018 YTD ^r	15,035	36,777	234,280	14,381	300,473	2018 YTD	83,391
2017 YTD ^r	17,707	58,573	198,783	13,241	288,304	2017 YTD	81,688
2018 YTD as % of 2017 YTD	85	63	118	109	104	% change YTD	102
Last 4 weeks as % of 2017 ²	167	58	171	102	147	Last 4wks % 2017	124
Last 4 weeks as % of 4-year avg ²	140	37	132	70	110	Last 4wks % 4 yr	136
Total 2017	28,796	76,545	289,178	21,999	416,518	Total 2017	119,661
Total 2016	36,925	88,035	299,604	29,007	453,571	Total 2016	92,982

¹ Data is incomplete as it is voluntarily provided

² Compared with same 4-weeks in 2017 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 KCSM and Grupo Mexico.

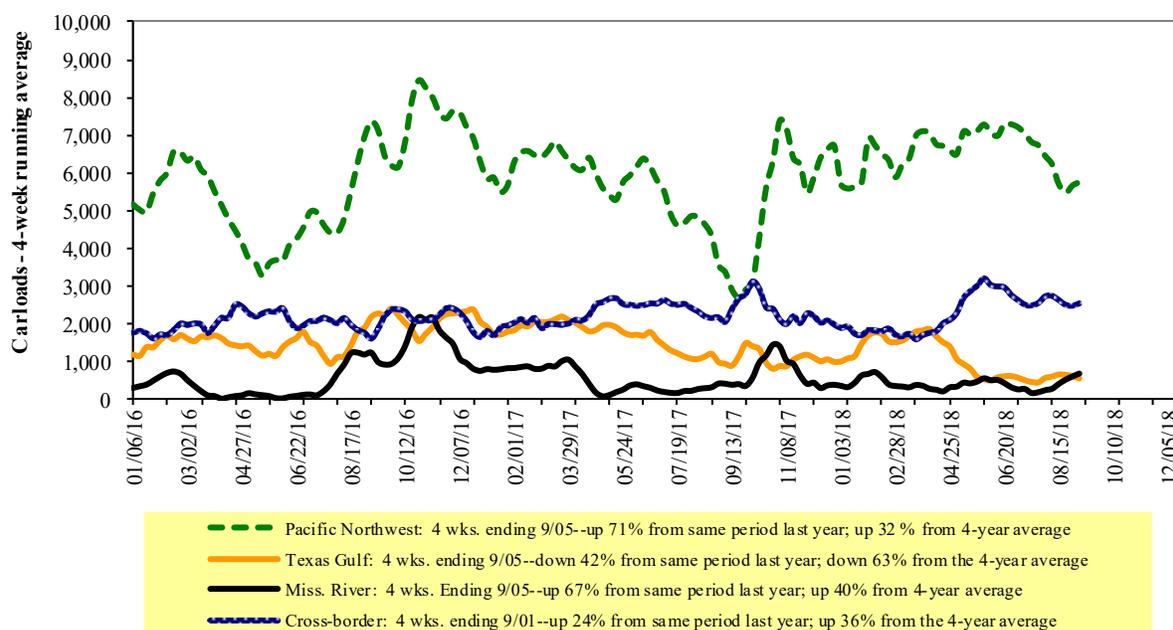
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

Source: Transportation & Marketing Programs/AMS/USDA

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: Transportation & Marketing Programs/AMS/USDA

Table 4

Class I Rail Carrier Grain Car Bulletin (grain carloads originated)

For the week ending: 9/1/2018	East		West			U.S. total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,485	2,257	12,110	746	6,035	22,633	5,023	4,867
This week last year	1,148	2,461	8,727	804	5,073	18,213	3,582	4,668
2018 YTD	67,373	89,699	436,657	33,287	183,923	810,939	134,838	163,119
2017 YTD	58,151	96,731	389,671	32,553	201,153	778,259	131,638	158,954
2018 YTD as % of 2017 YTD	116	93	112	102	91	104	102	103
Last 4 weeks as % of 2017*	147	101	129	98	109	120	127	97
Last 4 weeks as % of 3-yr avg.**	126	100	112	104	99	108	130	101
Total 2017	89,465	142,832	578,964	50,223	289,574	1,151,058	198,431	244,766

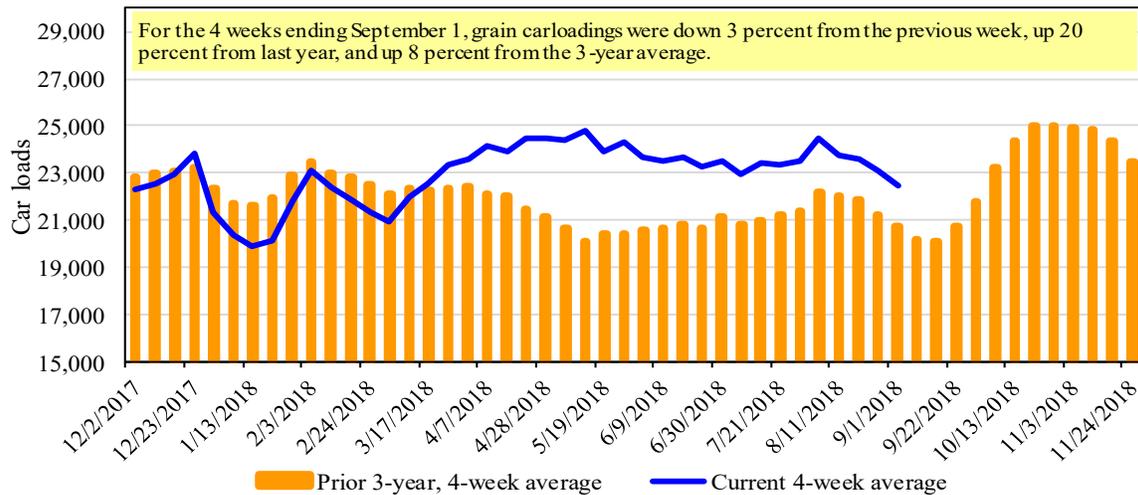
*The past 4 weeks of this year as a percent of the same 4 weeks last year.

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

Source: Association of American Railroads (www.aar.org)

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: 9/6/2018		Delivery period							
		Sep-18	Sep-17	Oct-18	Oct-17	Nov-18	Nov-17	Dec-18	Dec-17
BNSF ³	COT grain units	0	0	0	0	0	0	0	no bids
	COT grain single-car ⁵	183	0	144	0	162	0	123	no bids
UP ⁴	GCAS/Region 1	no offer	no offer	no offer	no bids	no offer	no bids	n/a	n/a
	GCAS/Region 2	no offer	no offer	no offer	13	10	no bids	n/a	n/a

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

²Average premium/discount to tariff, last auction

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.

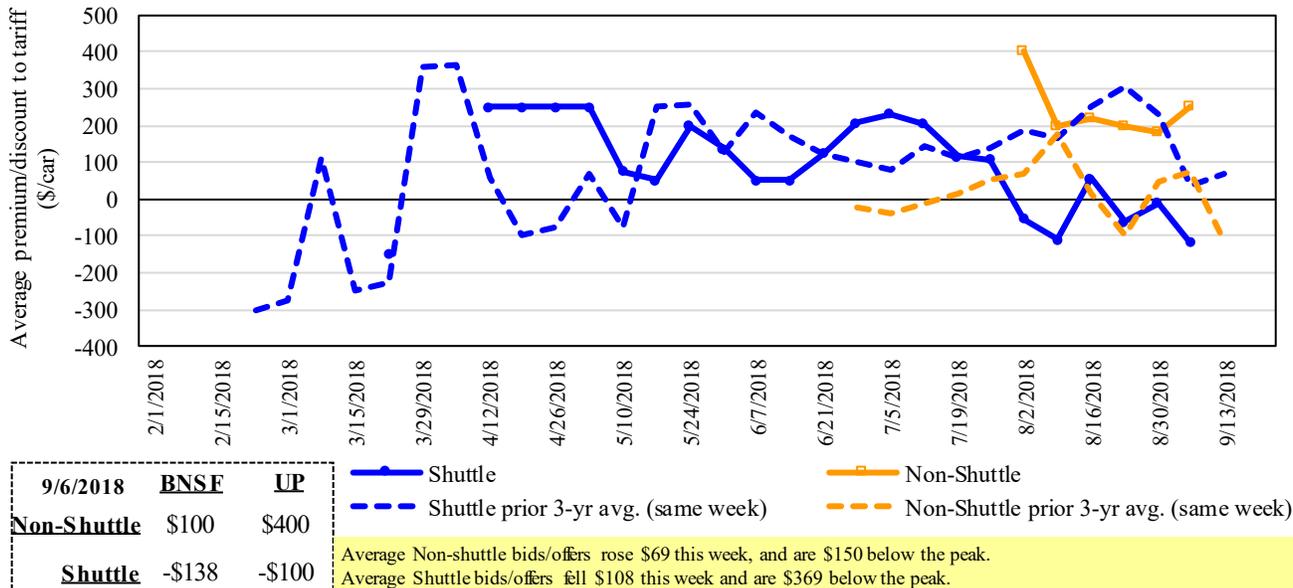
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

⁵Range is shown because average is not available. Not available = n/a.

Source: Transportation & Marketing Programs/AMS/USDA.

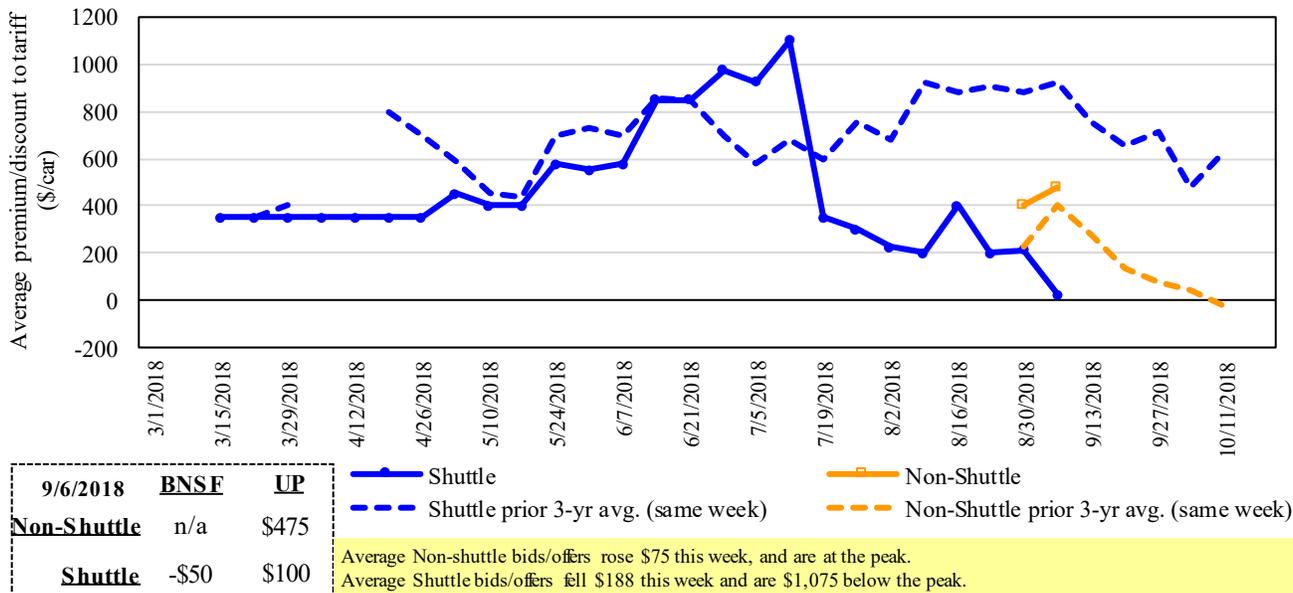
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

Figure 4
Bids/Offers for Railcars to be Delivered in September 2018, Secondary Market



Non-shuttle bids include unit-train and single-car bids. n/a = not available.
 Source: Transportation & Marketing Programs/AMS/USDA

Figure 5
Bids/Offers for Railcars to be Delivered in October 2018, Secondary Market



Non-shuttle bids include unit-train and single-car bids. n/a = not available.
 Source: Transportation & Marketing Programs/AMS/USDA

Figure 6
Bids/Offers for Railcars to be Delivered in November 2018, Secondary Market

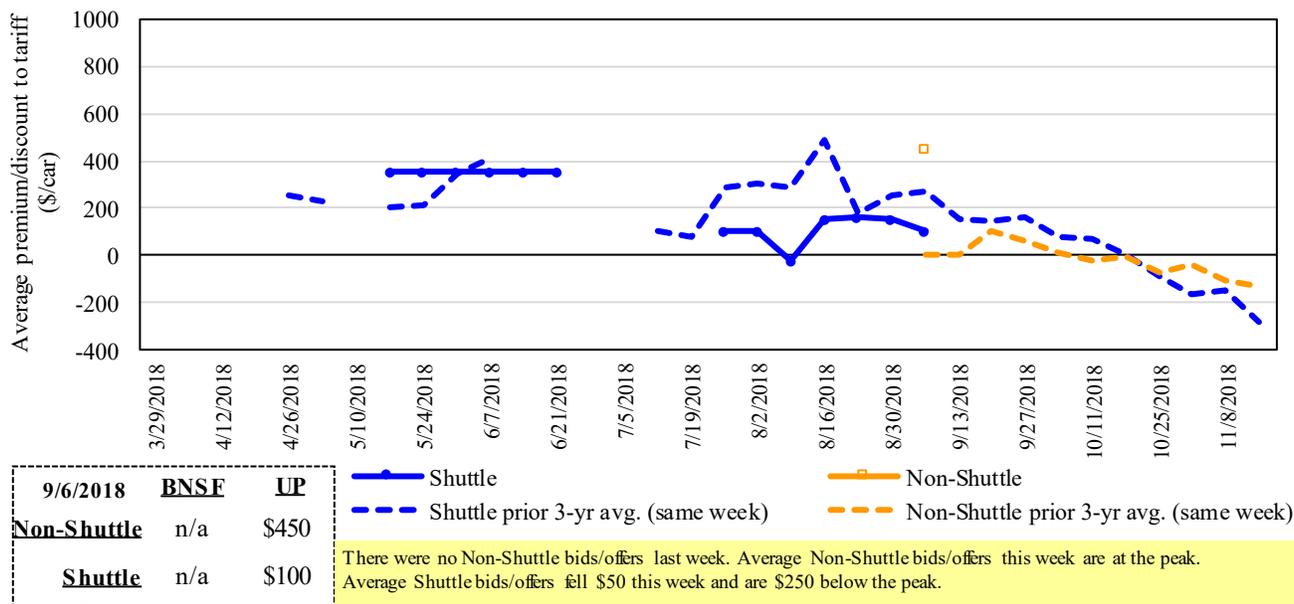


Table 6
Weekly Secondary Railcar Market (\$/car)¹

For the week ending:		Delivery period					
		Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19
Non-shuttle	BNSF-GF	100	n/a	n/a	n/a	n/a	n/a
	Change from last week	50	n/a	n/a	n/a	n/a	n/a
	Change from same week 2017	n/a	n/a	n/a	n/a	n/a	n/a
	UP-Pool	400	475	450	n/a	n/a	n/a
	Change from last week	87	75	n/a	n/a	n/a	n/a
	Change from same week 2017	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	BNSF-GF	(138)	(50)	n/a	200	n/a	n/a
	Change from last week	(180)	(275)	n/a	(100)	n/a	n/a
	Change from same week 2017	(171)	(1025)	n/a	275	n/a	n/a
	UP-Pool	(100)	100	100	100	n/a	n/a
	Change from last week	(37)	(100)	50	25	n/a	n/a
	Change from same week 2017	(325)	(250)	(25)	200	n/a	n/a

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

Note: Bids listed are market INDICATORS only & are NOT guaranteed prices,

n/a = not available; GF = guaranteed freight; Pool = guaranteed pool

Sources: Transportation and Marketing Programs/AMS/USDA

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

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

September, 2018	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	\$116	\$40.71	\$1.11	4
	Grand Forks, ND	Duluth-Superior, MN	\$4,268	\$0	\$42.38	\$1.15	3
	Wichita, KS	Los Angeles, CA	\$7,175	\$0	\$71.25	\$1.94	2
	Wichita, KS	New Orleans, LA	\$4,540	\$205	\$47.12	\$1.28	3
	Sioux Falls, SD	Galveston-Houston, TX	\$6,911	\$0	\$68.63	\$1.87	2
	Northwest KS	Galveston-Houston, TX	\$4,816	\$224	\$50.05	\$1.36	3
	Amarillo, TX	Los Angeles, CA	\$5,121	\$312	\$53.95	\$1.47	6
Corn	Champaign-Urbana, IL	New Orleans, LA	\$3,931	\$231	\$41.33	\$1.05	11
	Toledo, OH	Raleigh, NC	\$6,344	\$0	\$63.00	\$1.60	5
	Des Moines, IA	Davenport, IA	\$2,258	\$49	\$22.91	\$0.58	1
	Indianapolis, IN	Atlanta, GA	\$5,446	\$0	\$54.08	\$1.37	5
	Indianapolis, IN	Knoxville, TN	\$4,540	\$0	\$45.08	\$1.15	5
	Des Moines, IA	Little Rock, AR	\$3,609	\$144	\$37.27	\$0.95	5
	Des Moines, IA	Los Angeles, CA	\$5,327	\$419	\$57.06	\$1.45	7
Soybeans	Minneapolis, MN	New Orleans, LA	\$4,131	\$238	\$43.39	\$1.18	19
	Toledo, OH	Huntsville, AL	\$5,287	\$0	\$52.50	\$1.43	5
	Indianapolis, IN	Raleigh, NC	\$6,460	\$0	\$64.15	\$1.75	5
	Indianapolis, IN	Huntsville, AL	\$4,764	\$0	\$47.31	\$1.29	5
	Champaign-Urbana, IL	New Orleans, LA	\$4,745	\$231	\$49.42	\$1.34	9
Shuttle Train							
Wheat	Great Falls, MT	Portland, OR	\$4,078	\$0	\$40.50	\$1.10	3
	Wichita, KS	Galveston-Houston, TX	\$4,296	\$0	\$42.66	\$1.16	3
	Chicago, IL	Albany, NY	\$5,663	\$0	\$56.24	\$1.53	3
	Grand Forks, ND	Portland, OR	\$5,736	\$0	\$56.96	\$1.55	2
	Grand Forks, ND	Galveston-Houston, TX	\$6,056	\$0	\$60.14	\$1.64	2
	Northwest KS	Portland, OR	\$5,912	\$368	\$62.36	\$1.70	6
Corn	Minneapolis, MN	Portland, OR	\$5,000	\$0	\$49.65	\$1.26	0
	Sioux Falls, SD	Tacoma, WA	\$4,960	\$0	\$49.26	\$1.25	0
	Champaign-Urbana, IL	New Orleans, LA	\$3,731	\$231	\$39.35	\$1.00	11
	Lincoln, NE	Galveston-Houston, TX	\$3,700	\$0	\$36.74	\$0.93	0
	Des Moines, IA	Amarillo, TX	\$3,970	\$181	\$41.22	\$1.05	5
	Minneapolis, MN	Tacoma, WA	\$5,000	\$0	\$49.65	\$1.26	0
	Council Bluffs, IA	Stockton, CA	\$4,820	\$0	\$47.86	\$1.22	2
Soybeans	Sioux Falls, SD	Tacoma, WA	\$5,750	\$0	\$57.10	\$1.55	3
	Minneapolis, MN	Portland, OR	\$5,800	\$0	\$57.60	\$1.57	3
	Fargo, ND	Tacoma, WA	\$5,650	\$0	\$56.11	\$1.53	3
	Council Bluffs, IA	New Orleans, LA	\$4,775	\$267	\$50.07	\$1.36	9
	Toledo, OH	Huntsville, AL	\$4,352	\$0	\$43.22	\$1.18	3
	Grand Island, NE	Portland, OR	\$5,710	\$377	\$60.44	\$1.65	9

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 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 calculated using tariff rate plus fuel surcharge

Sources: www.bnsf.com, www.cn.ca, www.csx.com, www.up.com

Table 8

Tariff Rail Rates for U.S. Bulk Grain Shipments to Mexico

Date: September, 2018			Fuel			Percent	
Commodity	Origin state	Destination region	Tariff rate/car ¹	surcharge per car ²	Tariff plus surcharge per:		change ⁴ Y/Y
					metric ton ³	bushel ³	
Wheat	MT	Chihuahua, CI	\$7,284	\$0	\$74.43	\$2.02	-2
	OK	Cuautitlan, EM	\$6,743	\$160	\$70.54	\$1.92	3
	KS	Guadalajara, JA	\$7,371	\$396	\$79.36	\$2.16	3
	TX	Salinas Victoria, NL	\$4,292	\$98	\$44.86	\$1.22	1
Corn	IA	Guadalajara, JA	\$8,313	\$358	\$88.59	\$2.25	3
	SD	Celaya, GJ	\$7,700	\$0	\$78.68	\$2.00	2
	NE	Queretaro, QA	\$8,013	\$337	\$85.32	\$2.17	4
	SD	Salinas Victoria, NL	\$6,743	\$0	\$68.90	\$1.75	2
	MO	Tlalnepantla, EM	\$7,379	\$329	\$78.76	\$2.00	4
	SD	Torreón, CU	\$7,300	\$0	\$74.59	\$1.89	2
Soybeans	MO	Bojay (Tula), HG	\$8,209	\$333	\$87.28	\$2.37	-3
	NE	Guadalajara, JA	\$8,767	\$363	\$93.29	\$2.54	0
	IA	El Castillo, JA	\$9,110	\$0	\$93.08	\$2.53	2
	KS	Torreón, CU	\$7,564	\$267	\$80.01	\$2.18	3
Sorghum	NE	Celaya, GJ	\$7,345	\$331	\$78.43	\$1.99	5
	KS	Queretaro, QA	\$7,819	\$200	\$81.94	\$2.08	4
	NE	Salinas Victoria, NL	\$6,452	\$161	\$67.56	\$1.71	5
	NE	Torreón, CU	\$6,790	\$257	\$72.00	\$1.83	5

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.

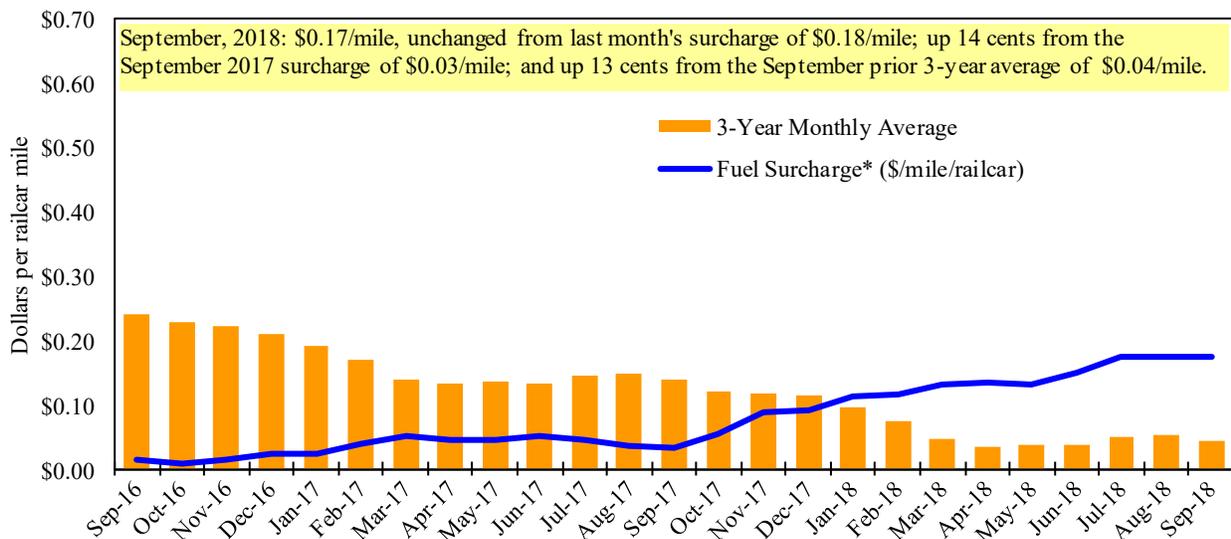
²Fuel surcharge adjusted to reflect the change in Ferrocarril Mexicano, S.A. de C.V railroad fuel surcharge policy as of 10/01/2009

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

Sources: www.bnsf.com, www.uprr.com, www.kcsouthern.com

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.

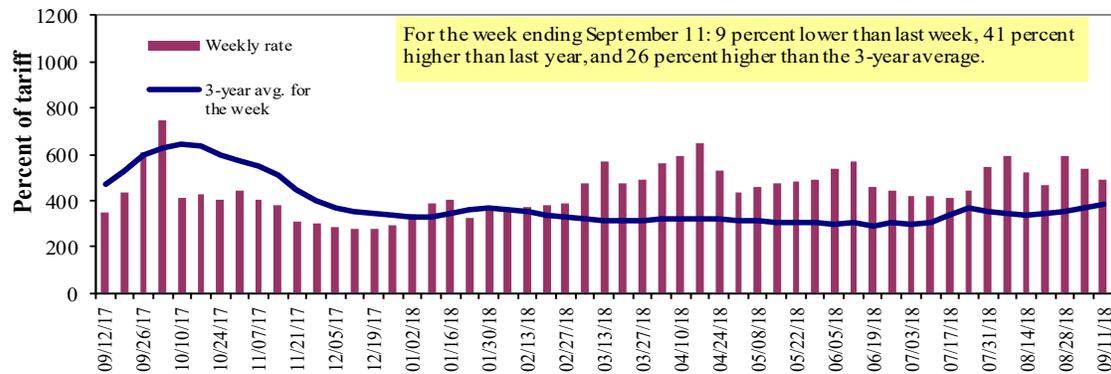
** CSX strike price changed from \$2.00/gal. to \$3.75/gal. starting January 1, 2015.

Sources: www.bnsf.com, www.cn.ca, www.cpr.ca, www.csx.com, www.kcsi.com, www.nscorp.com, www.uprr.com

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: Transportation & Marketing Programs/AMS/USDA

Table 9

Weekly Barge Freight Rates: Southbound Only

		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate¹	9/11/2018	513	488	488	400	463	463	388
	9/4/2018	575	550	538	420	525	525	413
\$/ton	9/11/2018	31.75	25.96	22.64	15.96	21.71	18.71	12.18
	9/4/2018	35.59	29.26	24.96	16.76	24.62	21.21	12.97
Current week % change from the same week:								
	Last year	31	41	41	55	23	23	55
	3-year avg. ²	19	24	26	30	28	28	30
Rate¹	October	563	563	563	450	563	563	438
	December	-	-	415	318	363	363	288

¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average; ton = 2,000 pounds;

Source: Transportation & Marketing Programs/AMS/USDA

Figure 9

Benchmark tariff rates

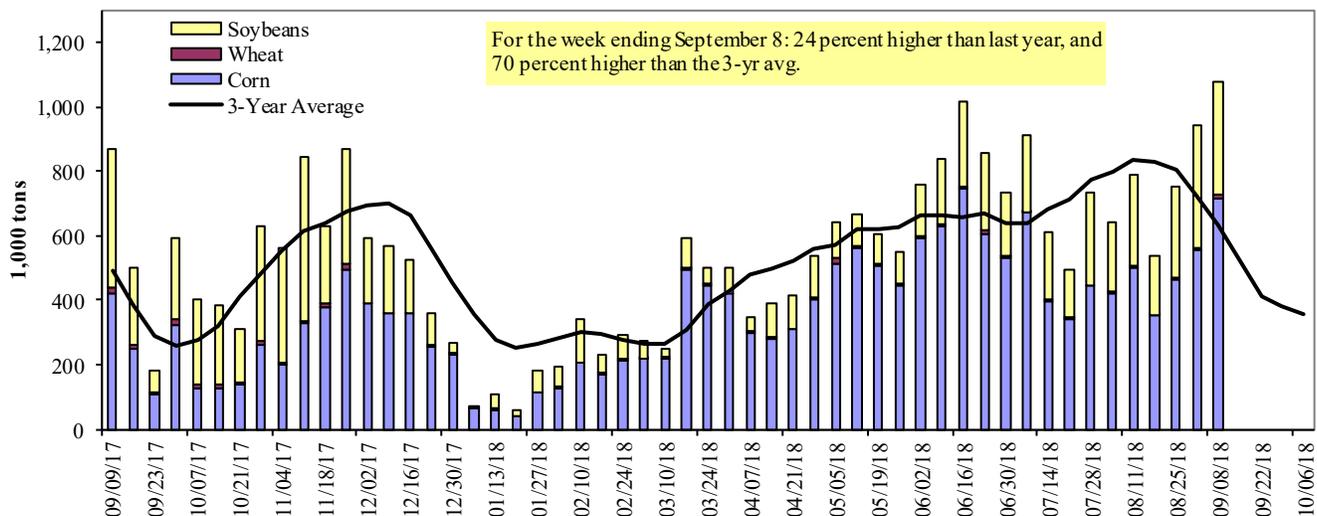
Calculating barge rate per ton:

$(\text{Rate} * 1976 \text{ tariff benchmark rate per ton}) / 100$

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



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 09/08/2018	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	193	5	127	0	324
Winfield, MO (L25)	332	8	181	0	520
Alton, IL (L26)	605	11	327	0	944
Granite City, IL (L27)	719	11	351	0	1,081
Illinois River (L8)	185	0	87	0	272
Ohio River (L52)	111	18	46	2	177
Arkansas River (L1)	3	21	7	0	31
Weekly total - 2018	833	50	404	2	1,288
Weekly total - 2017	438	49	477	5	968
2018 YTD ¹	17,330	1,315	8,781	88	27,514
2017 YTD	17,214	1,813	9,761	221	29,010
2018 as % of 2017 YTD	101	73	90	40	95
Last 4 weeks as % of 2017 ²	147	79	84	27	113
Total 2017	22,242	2,210	16,123	360	40,936

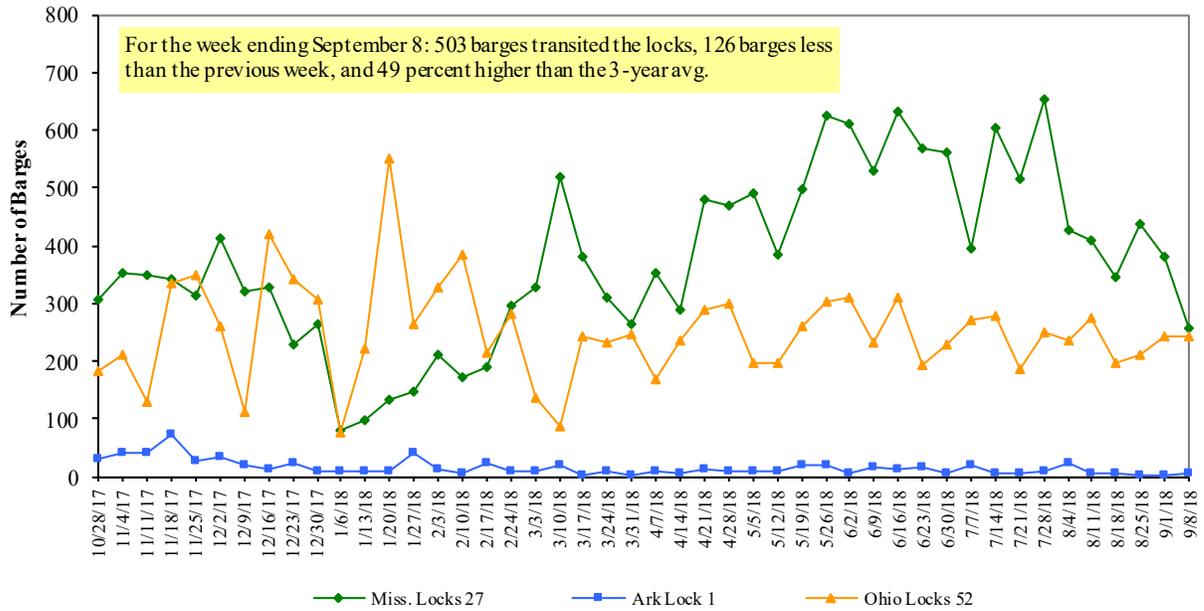
¹ Weekly total, YTD (year-to-date) and calendar year total includes Miss/27, Ohio/52, and Ark/1; "Other" refers to oats, barley, sorghum, and rye.

² As a percent of same period in 2017.

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

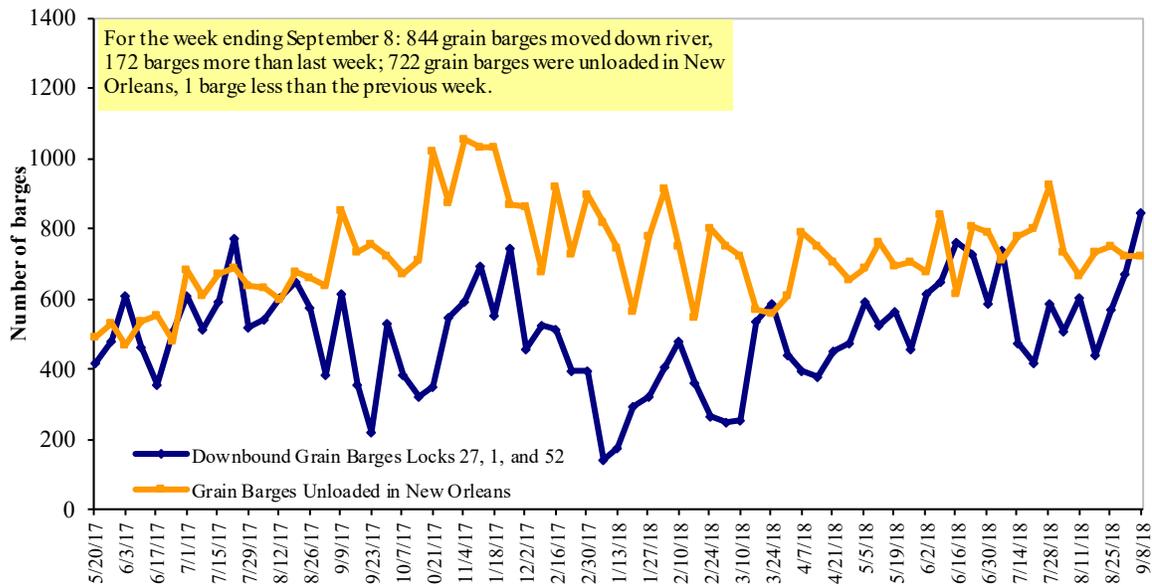
Source: U.S. Army Corps of Engineers

Figure 11
Upbound Empty Barges Transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Locks and Dam 52



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 GIPSA

Truck Transportation

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

Table 11

Retail on-Highway Diesel Prices, Week Ending 9/10/2018 (US \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	3.246	0.011	0.417
	New England	3.255	-0.015	0.494
	Central Atlantic	3.407	0.008	0.485
	Lower Atlantic	3.131	0.017	0.355
II	Midwest ²	3.194	0.003	0.441
III	Gulf Coast ³	3.039	0.004	0.392
IV	Rocky Mountain	3.367	0.003	0.540
V	West Coast	3.746	0.004	0.644
	West Coast less California	3.465	-0.004	0.458
	California	3.969	0.010	0.790
Total	U.S.	3.258	0.006	0.456

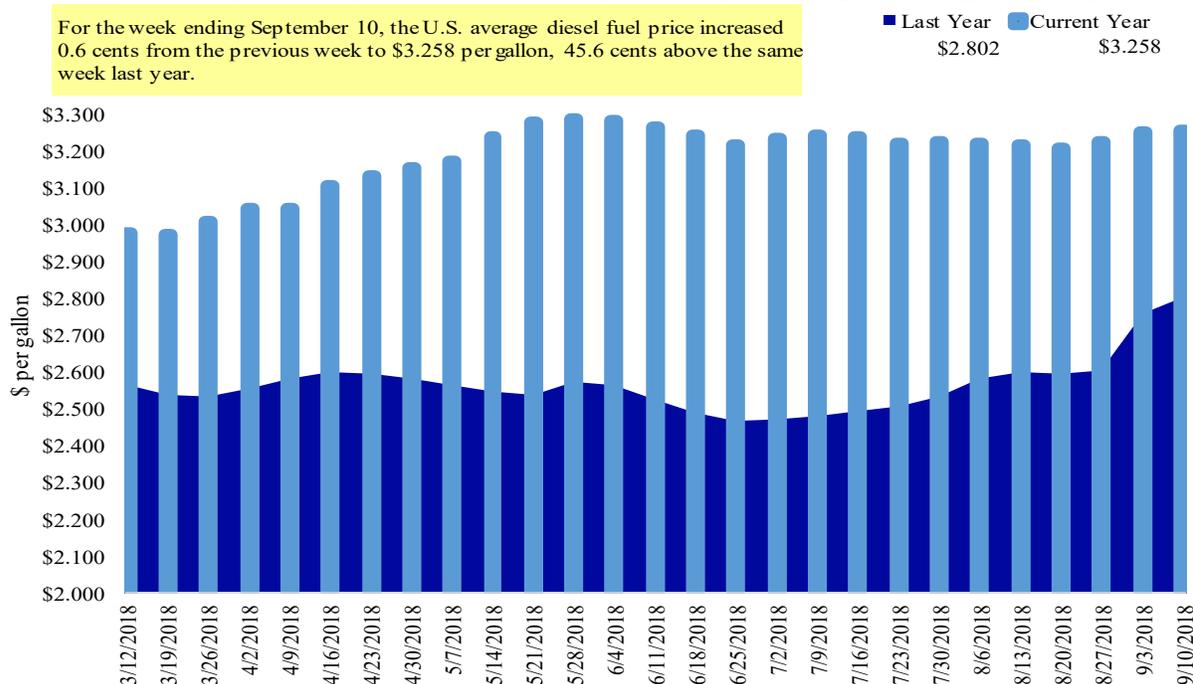
¹Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

²Same as North Central ³Same as South Central

Source: Energy Information Administration/U.S. Department of Energy (www.eia.doe.gov)

Figure 13

Weekly Diesel Fuel Prices, U.S. Average



Source: Retail On-Highway Diesel Prices, Energy Information Administration, Dept. of Energy

Grain Exports

Table 12

U.S. Export Balances and Cumulative Exports (1,000 metric tons)

For the week ending	Wheat						Corn	Soybeans	Total
	HRW	SRW	HRS	SWW	DUR	All wheat			
Export Balances¹									
8/30/2018	1,415	552	1,313	943	173	4,396	3,362	2,659	10,417
This week year ago	1,701	577	1,427	1,285	99	5,089	1,011	2,359	8,458
Cumulative exports-marketing year²									
2017/18 YTD	1,287	640	1,527	1,434	67	4,955	57,209	56,214	118,379
2016/17 YTD	2,968	651	1,926	1,722	104	7,370	55,395	58,118	120,883
YTD 2017/18 as % of 2016/17	43	98	79	83	64	67	103	97	98
Last 4 wks as % of same period 2016/17	76	97	95	78	168	86	54	24	44
2016/17 Total	11,096	2,285	7,923	4,254	484	26,042	41,864	51,156	119,062
2015/16 Total	5,538	3,057	6,285	3,551	670	19,101	45,564	49,821	114,486

¹ Current unshipped (outstanding) export sales to date

² Shipped export sales to date; new marketing year now in effect for wheat

Note: YTD = year-to-date. Marketing Year: wheat = 6/01-5/31, corn & soybeans = 9/01-8/31

Source: Foreign Agricultural Service/USDA (www.fas.usda.gov)

Table 13

Top 5 Importers¹ of U.S. Corn

For the week ending 8/30/2018	Total Commitments ²			% change current MY from last MY	Exports ³ 3-year avg 2014-2016
	2018/19	2017/18	2016/17		
	Next MY	Current MY	Last MY		
	- 1,000 mt -				
Mexico	3,835	15,553	14,039	11	12,297
Japan	1,613	11,991	12,097	(1)	11,450
Korea	909	5,982	5,590	7	4,494
Colombia	177	4,907	4,440	10	4,179
Peru	117	3,293	3,206	3	2,693
Top 5 Importers	6,650	41,725	39,372	6	35,113
Total US corn export sales	11,471	60,572	56,405	7	49,308
% of Projected	19%	98%	97%		
Change from prior week ²	1,033	30	(359)		
Top 5 importers' share of U.S. corn export sales	58%	69%	70%		71%
USDA forecast, September 2018	61,069	61,705	58,372	6	
Corn Use for Ethanol USDA forecast, September 2018	143,510	142,240	137,973	3	

(n) indicates negative number.

¹Based on FAS Marketing Year Ranking Reports for 2016/17 - www.fas.usda.gov; Marketing year (MY) = Sep 1 - Aug 31.

²Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query--
http://www.fas.usda.gov/esquery/. 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 - http://apps.fas.usda.gov/export-sales/myrkaug.htm; 3-yr average

Table 14

Top 5 Importers¹ of U.S. Soybeans

For the week ending 8/30/2018	Total Commitments ²			% change current MY from last MY	Exports ³ 3-yr avg. 2014-2016
	2018/19	2017/18	2016/17		
	Next MY	Current MY	Last MY		
	- 1,000 mt -				- 1,000 mt -
China	1,266	27,861	36,661	(24)	31,881
Mexico	1,860	4,421	3,765	17	3,452
Indonesia	203	2,779	2,473	12	1,987
Japan	212	2,376	2,261	5	2,067
Netherlands	0	2,620	2,045	28	2,098
Top 5 importers	3,541	40,057	47,206	(15)	41,486
Total US soybean export sales	13,890	58,873	60,477	(3)	52,919
% of Projected	25%	101%	102%		
Change from prior week ²	673	1	(366)		
Top 5 importers' share of U.S. soybean export sales	25%	68%	78%		78%
USDA forecast, September 2018	56,131	58,038	59,019	98	

(n) indicates negative number.

¹ Based on FAS Marketing Year Ranking Reports for 2016/17 - www.fas.usda.gov; Marketing year (MY) = Sep 1 - Aug 31.² Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query--http://www.fas.usda.gov/esrquery/. The total commitments change (net sales) from prior week could include revisions from previous week's outstanding sales and/or accumulated sales³ FAS Marketing Year Final Reports - www.fas.usda.gov/export-sales/myfi_rpt.htm. (Carryover plus Accumulated Exports)

Table 15

Top 10 Importers¹ of All U.S. Wheat

For the week ending 8/30/2018	Total Commitments ²		% change current MY from last MY	Exports ³ 3-yr avg 2014-2016
	2018/19	2017/18		
	Current MY	Last MY		
	- 1,000 mt -			- 1,000 mt -
Japan	1,118	1,190	(6)	2,620
Mexico	1,152	1,618	(29)	2,743
Philippines	1,519	1,464	4	2,395
Brazil	104	95	10	862
Nigeria	416	721	(42)	1,254
Korea	801	1,023	(22)	1,104
China	0	532	(100)	1,623
Taiwan	389	565	(31)	768
Indonesia	287	611	(53)	726
Colombia	173	301	(43)	635
Top 10 importers	5,960	8,120	(27)	14,729
Total US wheat export sales	9,351	12,459	(25)	22,804
% of Projected	33%	51%		
Change from prior week ²	380	375		
Top 10 importers' share of U.S. wheat export sales	64%	65%		65%
USDA forecast, September 2018	27,929	24,550	14	

(n) indicates negative number.

¹ Based on FAS Marketing Year Ranking Reports for 2016/17 - www.fas.usda.gov; Marketing year = Jun 1 - May 31.² Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query--http://www.fas.usda.gov/esrquery/. Total commitments change (net sales) from prior week could include revisions from the previous week's outstanding and/or accumulated sales³ FAS Marketing Year Final Reports - www.fas.usda.gov/export-sales/myfi_rpt.htm. (Carryover plus Accumulated Exports)

Table 16

Grain Inspections for Export by U.S. Port Region (1,000 metric tons)

Port Regions	For the Week Ending 09/06/18	Previous Week*	Current Week as % of Previous	2018 YTD*	2017 YTD*	2018 YTD as % of 2017 YTD	Last 4-weeks as % of:		2017 Total*
							Last Year	Prior 3-yr. avg.	
Pacific Northwest									
Wheat	267	184	145	8,927	11,167	80	97	106	14,805
Corn	164	259	63	15,190	9,988	152	302	120	10,928
Soybeans	248	140	178	6,326	5,548	114	91	155	13,246
Total	679	583	117	30,443	26,703	114	129	118	38,978
Mississippi Gulf									
Wheat	43	54	80	2,803	3,369	83	77	67	4,198
Corn	479	799	60	24,550	22,916	107	143	117	28,690
Soybeans	571	506	113	16,541	16,292	102	92	98	32,911
Total	1,094	1,360	80	43,895	42,577	103	111	104	65,800
Texas Gulf									
Wheat	80	52	153	2,239	4,839	46	38	31	6,354
Corn	0	31	0	566	548	103	180	39	733
Soybeans	0	0	n/a	69	0	n/a	n/a	n/a	292
Total	80	83	96	2,873	5,387	53	50	33	7,379
Interior									
Wheat	39	63	62	1,084	1,360	80	94	110	1,727
Corn	101	223	45	6,037	6,047	100	80	98	8,758
Soybeans	104	137	76	4,705	3,458	136	152	216	5,508
Total	243	422	58	11,826	10,865	109	102	128	15,993
Great Lakes									
Wheat	22	77	28	509	461	110	250	72	711
Corn	0	0	n/a	324	140	231	29	4	192
Soybeans	46	20	225	512	308	166	195	527	890
Total	68	97	70	1,345	909	148	198	113	1,793
Atlantic									
Wheat	0	0	n/a	67	44	154	8	9	46
Corn	7	0	n/a	75	9	829	158	73	32
Soybeans	4	13	29	1,398	944	148	229	79	2,001
Total	11	13	83	1,540	997	154	166	72	2,079
U.S. total from ports*									
Wheat	452	431	105	15,630	21,239	74	87	83	27,841
Corn	750	1,312	57	46,741	39,648	118	146	109	49,333
Soybeans	973	816	119	29,550	26,551	111	101	120	54,847
Total	2,175	2,559	85	91,922	87,438	105	113	106	132,021

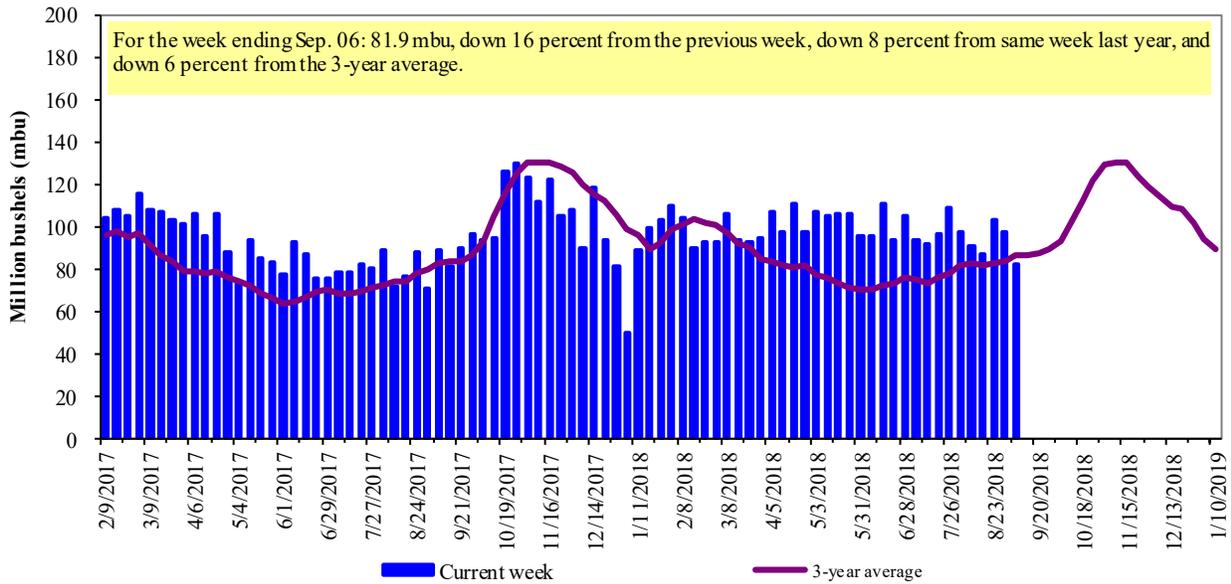
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

Source: Grain Inspection, Packers and Stockyards Administration/USDA (www.gipsa.usda.gov); YTD= year-to-date; n/a = not applicable

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 2017.

Figure 14

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

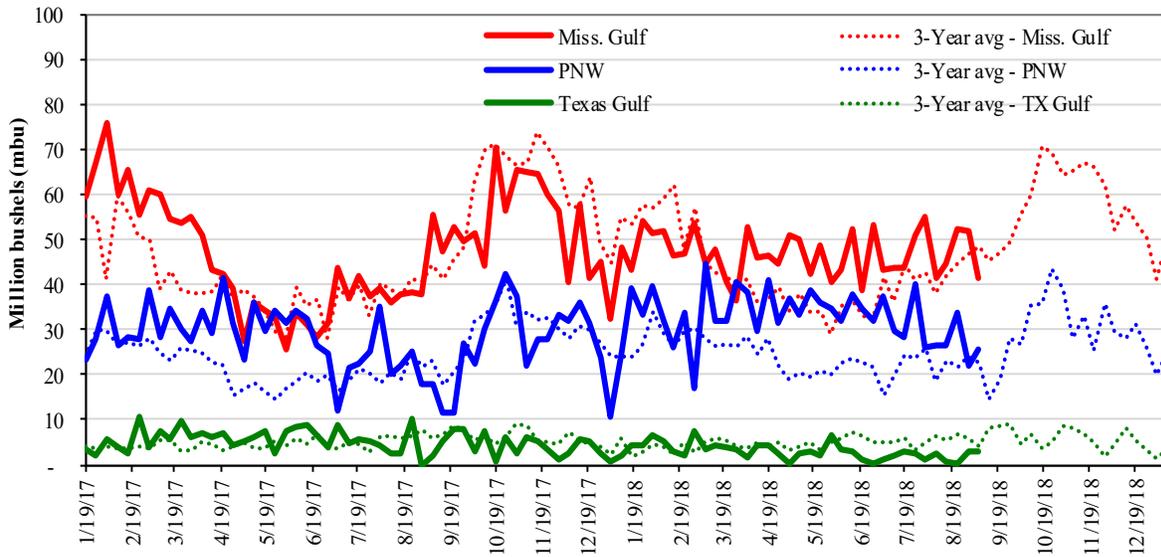


Source: Grain Inspection, Packers and Stockyards Administration/USDA (www.gipsa.usda.gov)

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

Figure 15

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



Week ending 09/06/18 inspections (mbu):	Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Mississippi Gulf: 41.4	Last Week:	down 20	down 6	down 20	up 15
PNW: 25.4	Last Year (same week):	down 25	up 52	down 23	up 43
Texas Gulf: 3.0	3-yr avg. (4-wk. mov. Avg):	down 9	down 47	down 13	up 11

Source: Grain Inspection, Packers and Stockyards Administration/USDA (www.gipsa.usda.gov)

Ocean Transportation

Table 17

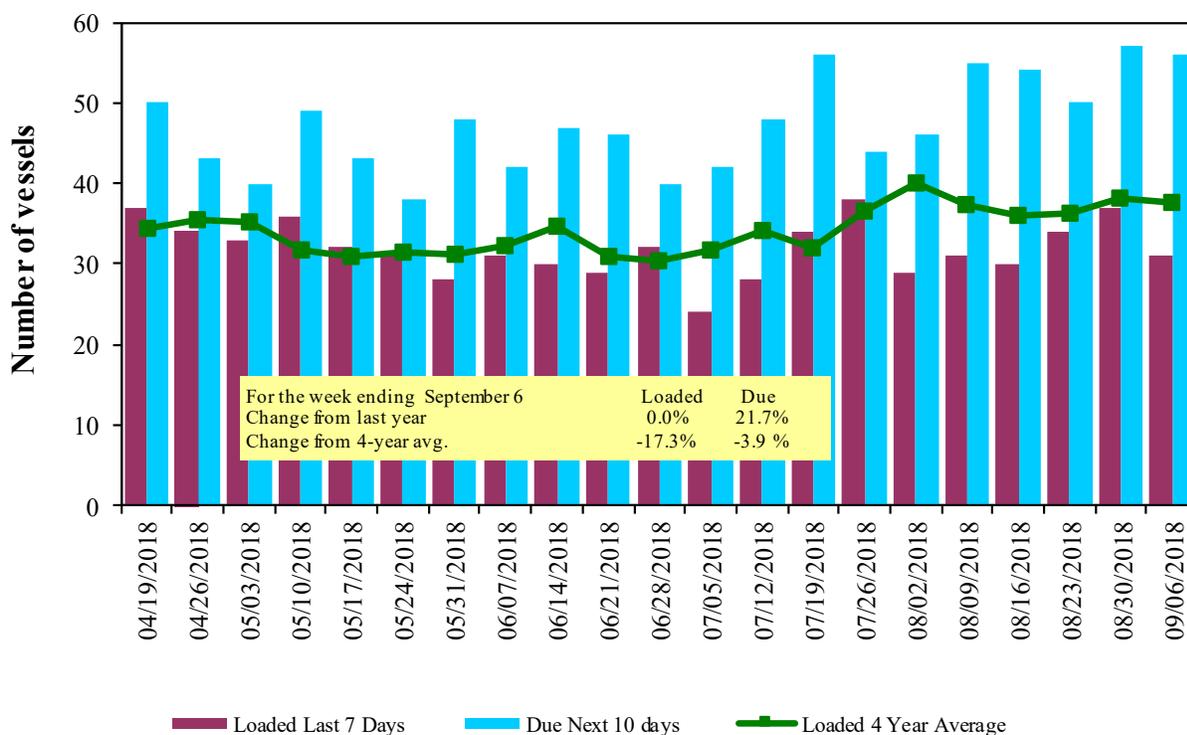
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

Date	Gulf			Pacific Northwest
	In port	Loaded 7-days	Due next 10-days	In port
9/6/2018	25	31	56	7
8/30/2018	25	37	57	11
2017 range	(25..66)	(28..54)	(37..87)	(5..44)
2017 avg.	46	38	56	20

Source: Transportation & Marketing Programs/AMS/USDA

Figure 16

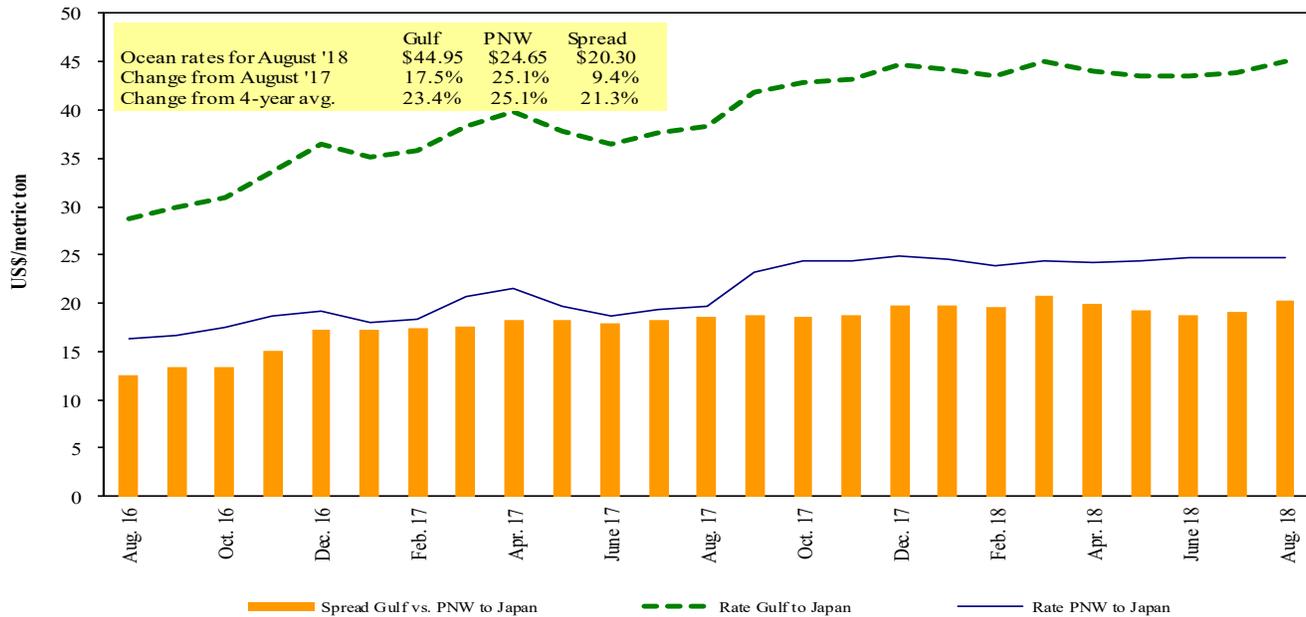
U.S. Gulf Vessel Loading Activity



Source: Transportation & Marketing Programs/AMS/USDA
 U.S. Gulf includes Mississippi, Texas, and East Gulf.

Figure 17

Grain Vessel Rates, U.S. to Japan



Data Source: O'Neil Commodity Consulting

Table 18

Ocean Freight Rates For Selected Shipments, Week Ending 09/08/2018

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	Honduras	Soybean Meal	Oct 1/10	12,500	85.00*
U.S. Gulf	Egypt	Heavy Grain	Jun 26/30	60,000	27.75
PNW	Taiwan	Heavy Grain	Sep 15/Oct 31	63,000	25.00
PNW	Yemen	Wheat	Aug 16	34,900	75.50*
PNW	Yemen	Wheat	Jul 26/Aug 9	27,500	83.70*
Brazil	China	Heavy Grain	Oct 5/15	60,000	33.75
Brazil	China	Heavy Grain	Sep 25/30	60,000	34.50
Brazil	China	Heavy Grain	Sep 10/20	60,000	35.75
Brazil	China	Heavy Grain	Aug 21/30	60,000	36.00
Brazil	China	Heavy Grain	Aug 18/28	60,000	36.00
Brazil	China	Heavy Grain	Jul 18/28	60,000	36.00
Brazil	China	Heavy Grain	Jun 22/30	60,000	35.00
Brazil	China	Heavy Grain	Jun 22/30	60,000	33.75
Brazil	Malaysia	Heavy Grain	Aug 17/24	65,000	31.00

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

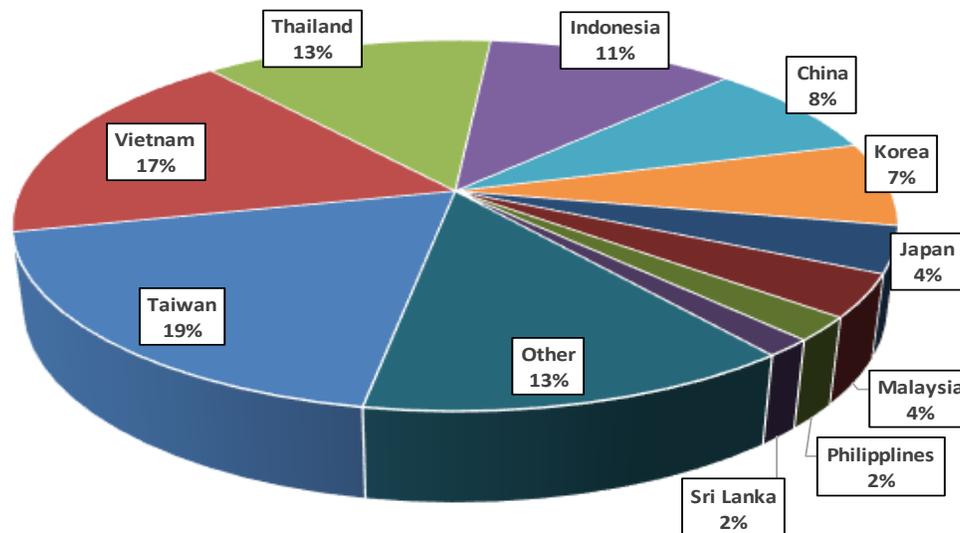
* 50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

Source: Maritime Research Inc. (www.maritime-research.com)

In 2017, containers were used to transport 7 percent of total U.S. waterborne grain exports. Approximately 62 percent of U.S. waterborne grain exports in 2017 went to Asia, of which 10 percent were moved in containers. Approximately 93 percent of U.S. waterborne containerized grain exports were destined for Asia.

Figure 18

Top 10 Destination Markets for U.S. Containerized Grain Exports, January-May 2018

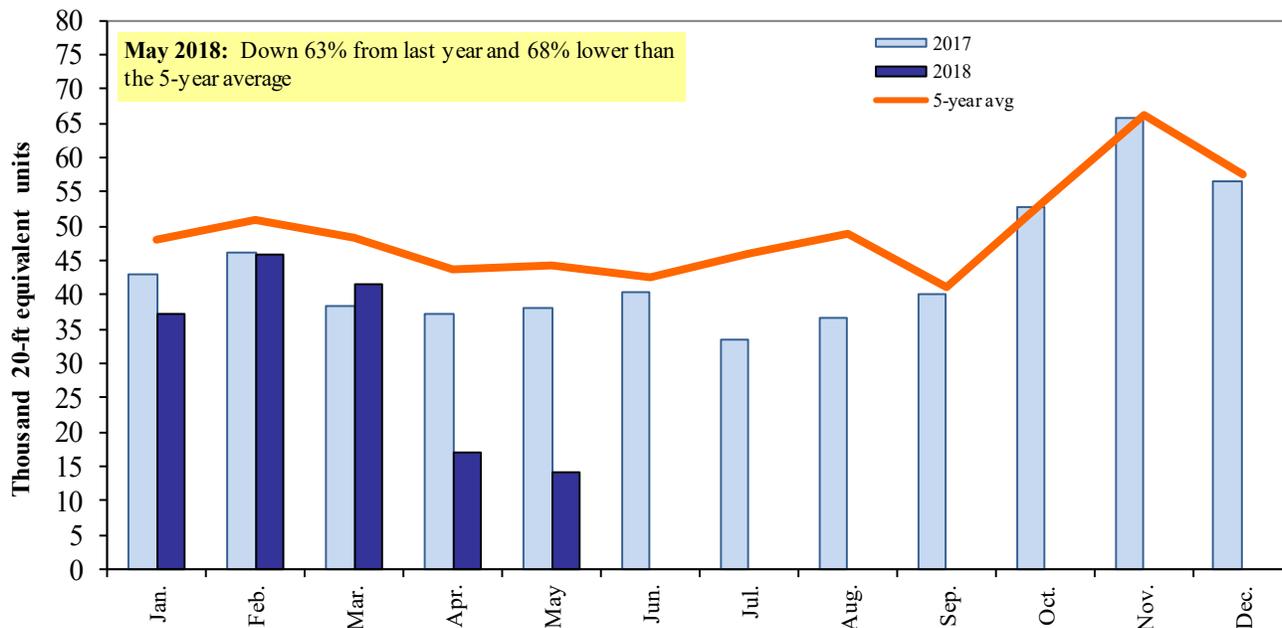


Service (PIERS) data

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

Figure 19

Monthly Shipments of Containerized Grain to Asia



Source: USDA/Agricultural Marketing Service/Transportation Services Division analysis of Port Import Export Reporting Service (PIERS) data.

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.

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