United States Department of Agriculture

Grain Transportation Report

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

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December 7, 2017

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WEEKLY HIGHLIGHTS

Several Upper Mississippi River Locks Scheduled for Closure to Accommodate Repairs
In order to conduct repairs, the U.S. Army Corps of Engineers (Corps) has scheduled several lock closures on the Upper Mississippi River during the upcoming winter season. Mississippi River Lock 14 (LeClaire, IA) and Lock 16 (Muscatine, IL) will be closed from December 12 until March 6, 2018. In addition, Mississippi River Lock 18 (Burlington, IA) will be closed for repairs from December 16 until March 6, 2018. During the winter, much of the Upper Mississippi River is frozen or has ice accumulations that limit or stop barge traffic. Typically, the Corps will use this period to conduct repairs and maintenance to minimize the impact of the closure on barge traffic. Depending upon the severity of the winter, barge navigation is possible year round in the St. Louis area of the Mississippi River as well as most of the Illinois River.

Wheat Inspections Continue to Increase
For the week ending November 30, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions reached 2.87 million metric tons (mmt), up 2 percent from the previous week, down 23 percent from the same time last year, and 15 percent below the 3-year average. Total inspections of wheat continued to increase, up 18 percent from the previous week and 30 percent above the 3-year average. Total soybean inspections were up slightly from the past week, but inspections of corn decreased 8 percent. Pacific Northwest (PNW) inspections increased 19 percent from the past week, but Mississippi Gulf grain inspections decreased 7 percent for the same period. Current outstanding (unshipped) export sales were down for wheat, corn, and soybeans.

New Rail Project in Brazil
According to the International Railway Journal, the government of the Brazilian state of Paraná presented plans last week for a new freight railway that will improve the flow of agricultural products from the midwest of Brazil through the port of Paranaguá. The line (about 620 miles) will link the region of Dourados in Mato Grosso do Sul with the Paraná coast and could boost the competitiveness of Brazil's agricultural exports. The project is estimated to cost $3.1 billion. A September USDA Foreign Agricultural Service GAIN report (#BR 1715) highlighted infrastructure developments in Brazil's Northern Arc, noting "…Brazil's infrastructure still lags behind other countries. Many of its main grain transport roads are still partially unpaved and very few railways are available for agricultural transport. Improvements to infrastructure are slowly being made and transportation costs have dropped in recent years, but there are still many areas that need to be improved for Brazil's exports to remain competitive, especially in Brazil's north and center-west regions." For more information on Brazil's soybean transportation, see AMS' quarterly report and annual guide.

Snapshots by Sector

Export Sales
For the week ending November 23, **unshipped balances** of wheat, corn, and soybeans totaled 33.4 mmt, down 21 percent from the same time last year. Net weekly **wheat export sales** were .184 mmt, down 8 percent from the previous week. Net **corn export sales** were .599 mmt, down 45 percent from the previous week, and net **soybean export sales** were .943 mmt for the same period, up 9 percent from the previous week.

Rail
U.S. Class I railroads originated 18,771 **grain carloads** for the week ending November 25, down 14 percent from the previous week, down 17 percent from last year, and down 12 percent from the 3-year average.

There were no shuttle and non-shuttle **secondary railcar** bids/offers this week.

Barge
For the week ending December 2, **barge grain movements** totaled 709,219 tons, 40 percent lower than the previous week, and down 33 percent from the same period last year.

For the week ending December 2, 455 grain barges **moved down river**, down 39 percent from last week. 863 grain barges were **unloaded in New Orleans**, 1 percent lower than the previous week.

Ocean
For the week ending November 30, 43 **ocean-going grain vessels** were loaded in the Gulf, 14 percent less than the same period last year. Forty-two vessels are expected to be loaded within the next 10 days, 44 percent less than the same period last year.

For the week ending November 30, the ocean freight rate for shipping bulk grain from the Gulf to Japan was $44.25 per metric ton. The cost of shipping from the PNW to Japan was $24.75 per metric ton..

Fuel
During the week ending December 4, average **diesel fuel prices** were almost unchanged from the previous week at $2.92 per gallon, 44 cents above the same week last year.

Preferred citation: U.S. Dept. of Agriculture, Agricultural Marketing Service. *Grain Transportation Report.* December 7, 2017.
Web: **http://dx.doi.org/10.9752/TS056.12-07-2017**

Feature Article/Calendar

Containerized Grain Update, January-September 2017

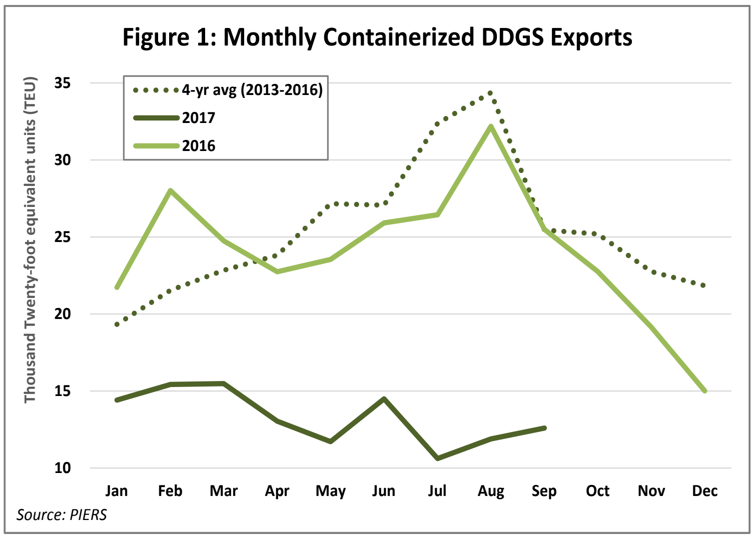
U.S. containerized grain exports have been well below average all year. Compared to 2016, year-to-date (January-September) shipments in 2017 fell 17 percent and were 20 percent lower than the 4-year average. Distillers' Dried Grains with Solubles (DDGS) have dominated the market over the past several years representing around 50 percent of the market share. However, beginning in 2016 and even more so in 2017, market share has dwindled. The introduction of a Chinese import tax on DDGS in 2016, in combination with decreased feed demand in Vietnam, suppressed these shipments.

Table 1: Containerized Grain Exports, Year-to-date (Jan-Sep 2017)

HTS Code	Commodity	Metric Tons	TEU	Share	% Change from 2016
120100	Soybeans	1,748,863	123,446	36%	32%
230330	Distillers Grains	1,574,871	119,664	32%	-48%
230990	Animal feed	582,475	55,427	12%	-9%
100590	Corn	473,649	31,603	10%	31%
120810	Soybean meal	256,940	19,950	5%	-20%
	Other	283,519	20,726	6%	0.4%
	Total	**4,920,317**	**370,816**	**100%**	**-17%**

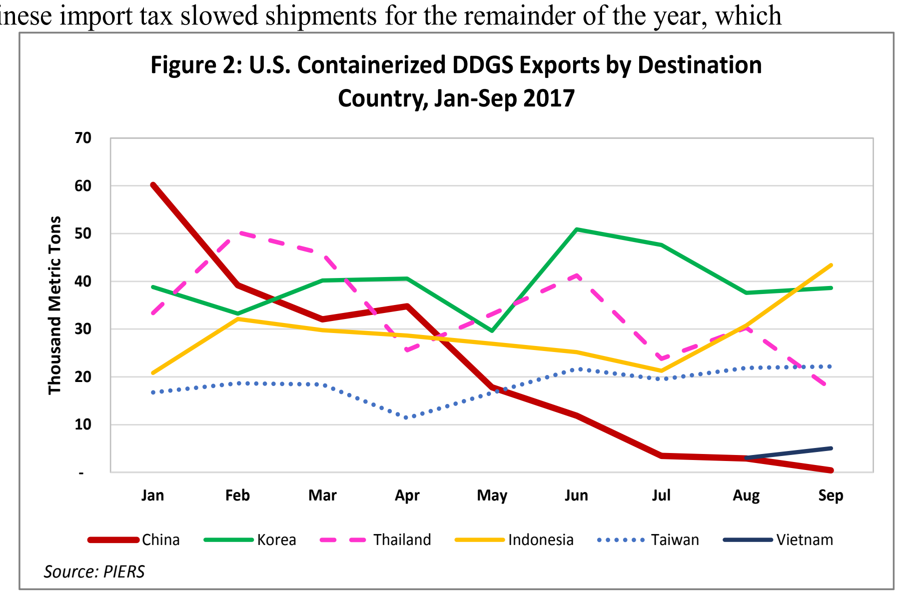
Source: PIERS

Containerized DDGS exports fell 48 percent compared with 2016, pushing these shipments below exports of containerized soybeans (see table 1). However, total shipments of DDGS (including bulk, container, and cross border movements) have not felt the steep impact because of increased demand for bulk DDGS in various countries. Exporters to key Asian markets for containerized DDGS have seen the largest shifts.



Demand for DDGS

U.S. DDGS exports peaked in 2015 with average monthly containerized movements topping 27,000 twenty-foot equivalent units (TEU). Strong demand continued in the beginning of 2016 until the Chinese import tax slowed shipments for the remainder of the year, which continued into 2017 (see figure 2). China has been the dominant importer of U.S. containerized DDGS exports for several years, so without the strong Chinese demand, containerized DDGS struggled to top 15,000 TEU per month since April of 2017, well below the previous 4-year average (see figure 1) of 25,000 TEU. Further contributing to the downward movement of DDGS shipments was a sharp decrease in shipments to



Vietnam in 2017. Vietnam ranked second for containerized DDGS exports in 2016, but shipments came nearly to a halt in 2017 with no measureable movements until August. Local Vietnamese pork and broiler production decreased in late 2016, slowing feed shipments to this region. Because of the slow demand in these previously dominate markets, countries like Korea, Thailand, and Indonesia, rose to the top three export markets for containerized DDGS by the third quarter of 2017 (see figure 2 and table 2).

Table 2: Top Destination Markets for Containerized DDGS Exports

Ranking	4-year average (2013-2016)	Jan-Sep 2017
1	China	Korea
2	Vietnam	Thailand
3	Korea	Indonesia
4	Thailand	China
5	Taiwan	Taiwan
6	Indonesia	Bangladesh

Source: PIERS

Total U.S. DDGS exports were not as impacted by the Chinese import tax as containerized shipments. According to data from the Global Agricultural Trade System (GATS) of the USDA's Foreign Agricultural Service, total DDGS exports (including both bulk and containerized shipments) have fallen by just 3 percent. Demand in countries such as Turkey, Mexico, Spain, and the United Kingdom has increased. Many of these countries received mostly bulk DDGS shipments and in the case of Turkey, where shipments have doubled in the past year, nearly 100 percent are bulk shipments. Whether or not shipments of DDGS move in a container or in bulk depends on several factors, such as the destination market, ocean freight rates (both bulk and container), the destination's landside infrastructure, and sometimes container availability. (*april.taylor@ams.usda.gov*)

Grain Transportation Indicators

Table 1

Grain Transport Cost Indicators[1]

For the week ending	Truck	Rail: Unit Train	Rail: Shuttle	Barge	Ocean: Gulf	Ocean: Pacific
12/06/17	196	272	213	158	198	176
11/29/17	196	266	208	167	n/a	n/a

[1]Indicator: Base year 2000 = 100; Weekly updates include truck = diesel ($/gallon); rail = near-month secondary rail market bid and monthly tariff rate with fuel surcharge ($/car); barge = Illinois River barge rate (index = percent of tariff rate); and ocean = routes to Japan ($/metric ton)

Source: Transportation & Marketing Programs/AMS/USDA

Table 2

Market Update: U.S. Origins to Export Position Price Spreads ($/bushel)

Commodity	Origin--Destination	12/1/2017	11/24/2017
Corn	IL--Gulf	-0.63	n/a
Corn	NE--Gulf	-0.82	n/a
Soybean	IA--Gulf	-1.09	n/a
HRW	KS--Gulf	-2.70	n/a
HRS	ND--Portland	-1.66	n/a

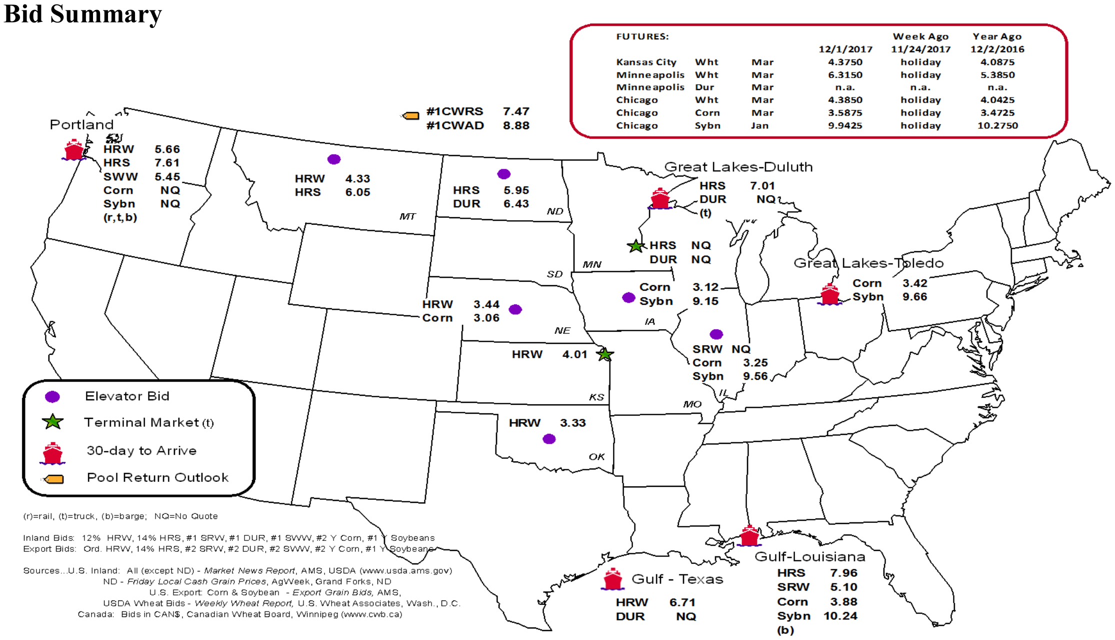
Note: nq = no quote; n/a = not available

Source: Transportation & Marketing Programs/AMS/USDA

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

Figure 1

Grain Bid Summary



Rail Transportation

Table 3
Rail Deliveries to Port (carloads)[1]

For the Week Ending	Mississippi Gulf	Texas Gulf	Pacific Northwest	Atlantic & East Gulf	Total	Week ending	Cross-Border Mexico[3]
11/29/2017[p]	127	893	4,930	187	6,137	11/25/2017	2,595
11/22/2017[r]	236	1,251	5,905	592	7,984	11/18/2017	2,050
2017 YTD[r]	27,241	72,171	262,277	20,620	382,309	2017 YTD	111,709
2016 YTD[r]	33,908	78,771	274,787	24,887	412,353	2016 YTD	100,070
2017 YTD as % of 2016 YTD	80	92	95	83	93	% change YTD	112
Last 4 weeks as % of 2016[2]	28	51	71	48	60	Last 4wks % 2016	94
Last 4 weeks as % of 4-year avg.[2]	28	73	79	52	69	Last 4wks % 4 yr	115
Total 2016	36,925	86,992	299,932	28,728	452,577	Total 2016	92,982
Total 2015	29,054	60,819	239,029	26,730	355,632	Total 2015	97,736

[1] Data is incomplete as it is voluntarily provided

[2] Compared with same 4-weeks in 2016 and prior 4-year average.

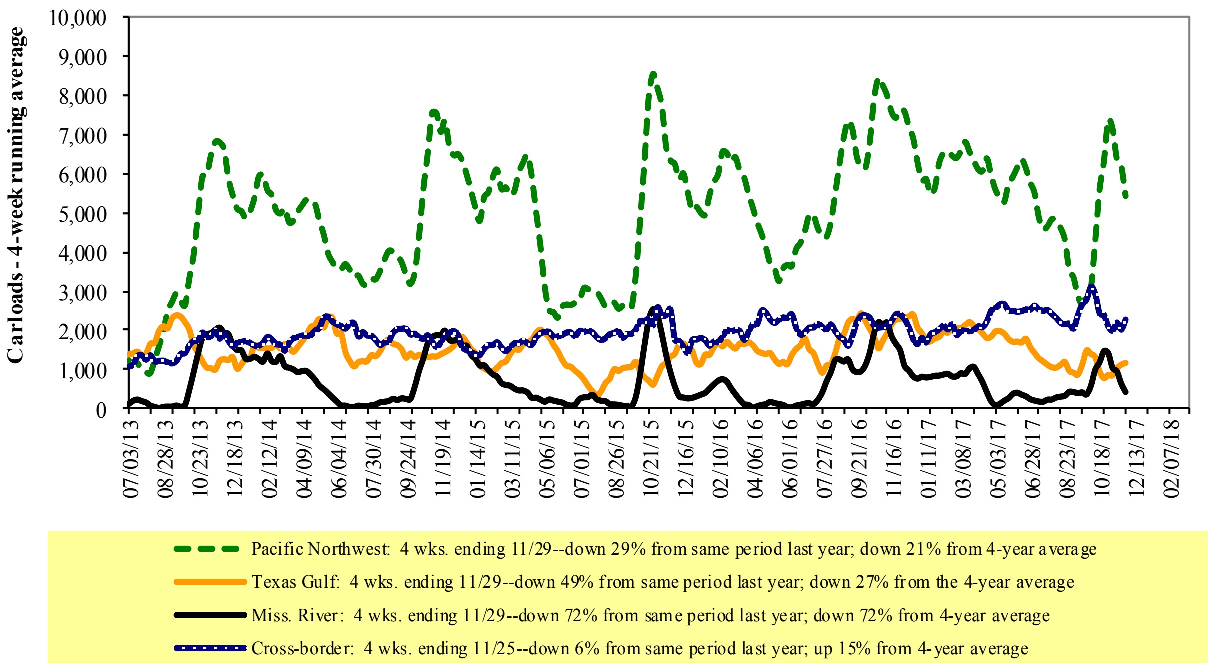
[3] Cross-border weekly data is approximately 15 percent below the Association of American Railroads' reported weekly carloads received by Mexican railroads to reflect switching between KCSM and FerroMex.

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:	East		West			U.S. total	Canada	
11/25/2017	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,582	2,638	9,891	518	4,142	18,771	3,604	4,884
This week last year	1,377	2,730	11,849	473	6,162	22,591	4,233	5,049
2017 YTD	80,342	129,863	519,710	45,629	264,246	1,039,790	181,400	220,809
2016 YTD	85,596	136,259	532,302	40,803	272,034	1,066,994	173,842	211,511
2017 YTD as % of 2016 YTD	94	95	98	112	97	97	104	104
Last 4 weeks as % of 2016*	93	81	85	117	76	84	94	97
Last 4 weeks as % of 3-yr avg.**	92	89	96	107	86	93	90	98
Total 2016	95,179	150,995	590,779	45,246	300,836	1,183,035	193,724	234,738

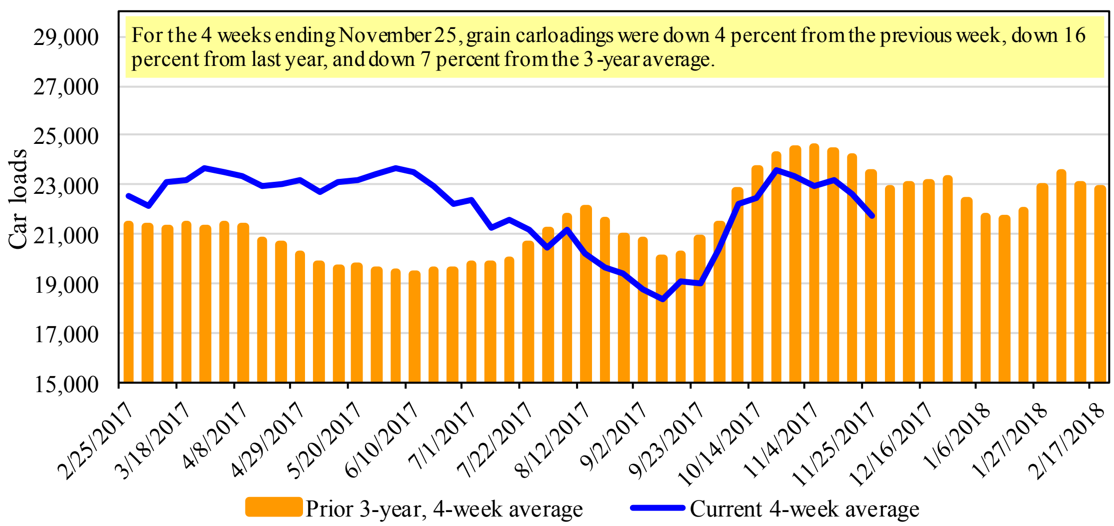
*The past 4 weeks of this year as a percent of the same 4 weeks last year.

**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 Offerings[1] (\$/car)[2]

For the week ending: 11/30/2017		Dec-17	Dec-16	Jan-18	Jan-17	Feb-18	Feb-17	Mar-18	Mar-17
BNSF[3]	COT grain units	no bids	no bids	0	no bids	no bids	no bids	no bids	no bids
	COT grain single-car[5]	1	0	0	5	0	1	0	no bids
UP[4]	GCAS/Region 1	no bids	no bids	no bids	no bids	no bids	no bids	n/a	n/a
	GCAS/Region 2	no bids	no bids	no bids	no bids	no bids	no bids	n/a	n/a

Delivery period: Dec-17 through Mar-17

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

[2]Average premium/discount to tariff, last auction

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

[4]UP - GCAS = Grain Car Allocation System

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

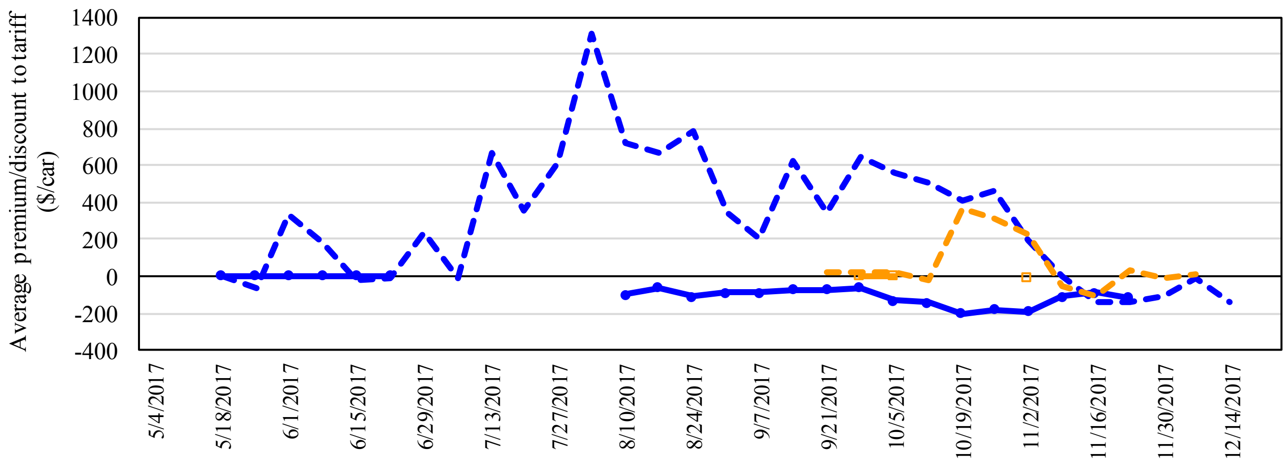
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

[5]Range 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 December 2017, Secondary Market

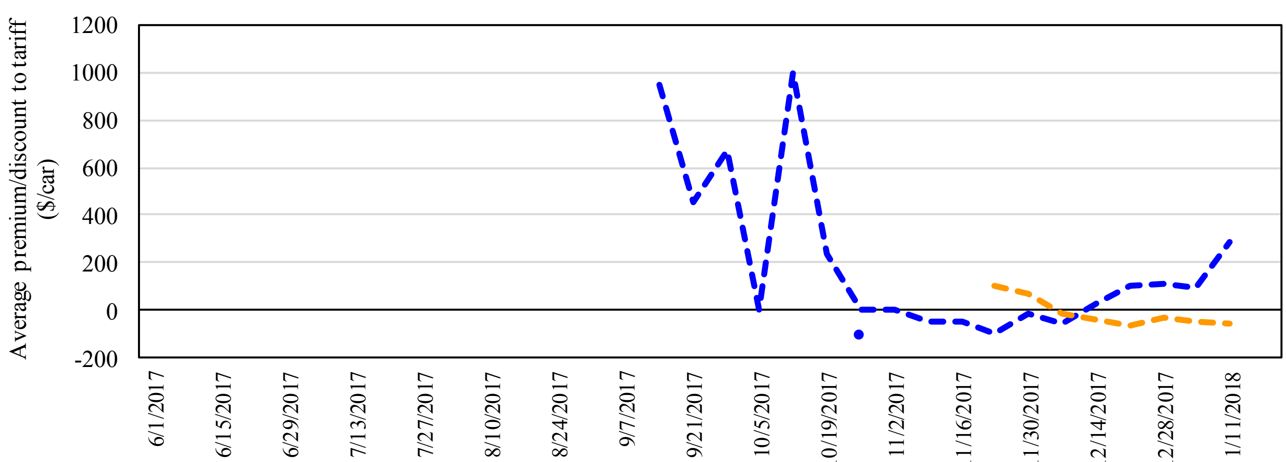


11/30/2017	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	n/a	n/a

There were no Non-Shuttle bids/offers this week.
There were no Shuttle bids/offers this week.

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 January 2018, Secondary Market



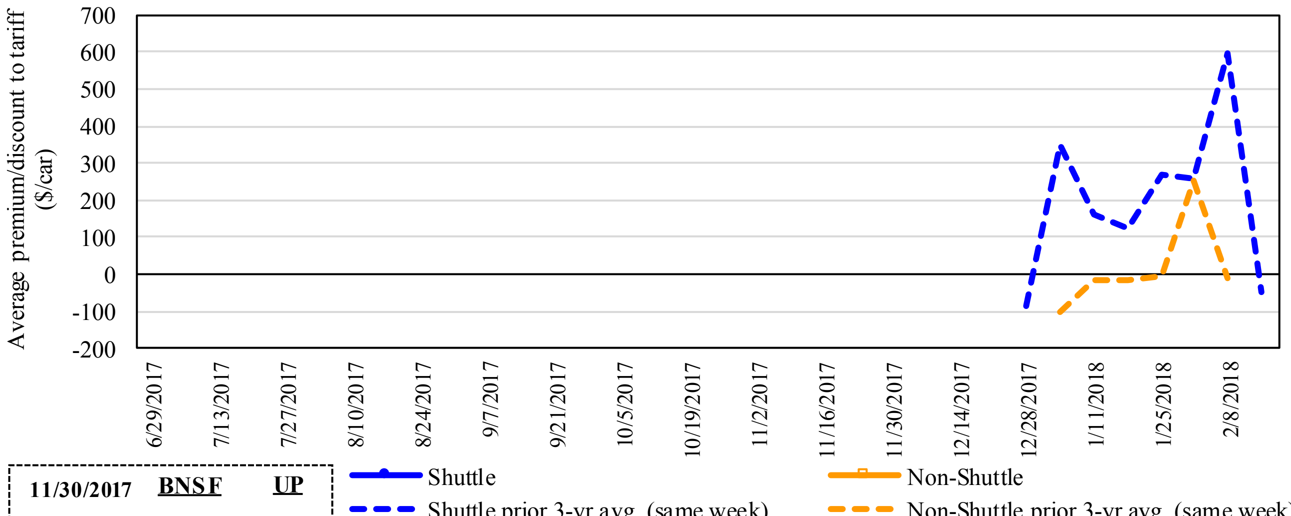
11/30/2017	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	n/a	n/a

There were no Non-Shuttle bids/offers this week.
There were no Shuttle bids/offers this week.

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 February 2018, Secondary Market



11/30/2017	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	n/a	n/a

There were no Non-Shuttle bids/offers this week.
There were no Shuttle bids/offers this week.

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

Table 6

Weekly Secondary Railcar Market ($/car)[1]

For the week ending: 11/30/2017		Delivery period					
		Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Non-shuttle	**BNSF-GF**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2016	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 2016	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	n/a	n/a	n/a	n/a	n/a	n/a
	Change from same week 2016	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 2016	n/a	n/a	n/a	n/a	n/a	n/a

[1]Average 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 Shipments[1]

December, 2017	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	$3,883	$71	$39.26	$1.07	4
	Grand Forks, ND	Duluth-Superior, MN	$4,143	$0	$41.14	$1.12	0
	Wichita, KS	Los Angeles, CA	$7,050	$0	$70.01	$1.91	1
	Wichita, KS	New Orleans, LA	$4,540	$125	$46.32	$1.26	4
	Sioux Falls, SD	Galveston-Houston, TX	$6,786	$0	$67.39	$1.83	5
	Northwest KS	Galveston-Houston, TX	$4,816	$137	$49.18	$1.34	4
	Amarillo, TX	Los Angeles, CA	$5,021	$190	$51.75	$1.41	5
Corn	Champaign-Urbana, IL	New Orleans, LA	$3,931	$141	$40.44	$1.03	8
	Toledo, OH	Raleigh, NC	$6,344	$0	$63.00	$1.60	5
	Des Moines, IA	Davenport, IA	$2,258	$30	$22.72	$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	$88	$36.71	$0.93	3
	Des Moines, IA	Los Angeles, CA	$5,327	$255	$55.43	$1.41	4
Soybeans	Minneapolis, MN	New Orleans, LA	$3,631	$127	$37.32	$1.02	2
	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	$141	$48.52	$1.32	7
Shuttle Train							
Wheat	Great Falls, MT	Portland, OR	$3,953	$0	$39.26	$1.07	0
	Wichita, KS	Galveston-Houston, TX	$4,171	$0	$41.42	$1.13	8
	Chicago, IL	Albany, NY	$5,663	$0	$56.24	$1.53	3
	Grand Forks, ND	Portland, OR	$5,611	$0	$55.72	$1.52	0
	Grand Forks, ND	Galveston-Houston, TX	$5,931	$0	$58.90	$1.60	0
	Northwest KS	Portland, OR	$5,812	$224	$59.94	$1.63	5
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	$141	$38.45	$0.98	9
	Lincoln, NE	Galveston-Houston, TX	$3,700	$0	$36.74	$0.93	0
	Des Moines, IA	Amarillo, TX	$3,970	$110	$40.52	$1.03	3
	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	$5,600	$0	$55.61	$1.51	0
	Minneapolis, MN	Portland, OR	$5,650	$0	$56.11	$1.53	0
	Fargo, ND	Tacoma, WA	$5,500	$0	$54.62	$1.49	0
	Council Bluffs, IA	New Orleans, LA	$4,775	$162	$49.03	$1.33	7
	Toledo, OH	Huntsville, AL	$4,352	$0	$43.22	$1.18	3
	Grand Island, NE	Portland, OR	$5,710	$229	$58.98	$1.61	6

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

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

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

[4]Percentage change year over year calculated using tariff rate plus fuel surcharge

Table 8

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

Date:	December, 2017			Fuel			Percent
	Origin		Tariff	surcharge	Tariff plus surcharge per:		change[4]
Commodity	state	Destination region	rate/car[1]	per car[2]	metric ton[3]	bushel[3]	Y/Y
Wheat	MT	Chihuahua, CI	$7,459	$0	$76.21	$2.07	0
	OK	Cuautitlan, EM	$6,631	$98	$68.75	$1.87	1
	KS	Guadalajara, JA	$7,309	$285	$77.59	$2.11	5
	TX	Salinas Victoria, NL	$4,292	$60	$44.46	$1.21	3
Corn	IA	Guadalajara, JA	$8,313	$248	$87.47	$2.22	3
	SD	Celaya, GJ	$7,700	$0	$78.68	$2.00	2
	NE	Queretaro, QA	$8,013	$205	$83.97	$2.13	3
	SD	Salinas Victoria, NL	$6,743	$0	$68.90	$1.75	2
	MO	Tlalnepantla, EM	$7,379	$200	$77.44	$1.97	3
	SD	Torreon, CU	$7,300	$0	$74.59	$1.89	2
Soybeans	MO	Bojay (Tula), HG	$8,134	$231	$85.47	$2.32	-5
	NE	Guadalajara, JA	$8,692	$250	$91.37	$2.48	-1
	IA	El Castillo, JA	$8,960	$0	$91.55	$2.49	0
	KS	Torreon, CU	$7,489	$180	$78.36	$2.13	1
Sorghum	NE	Celaya, GJ	$7,345	$226	$77.36	$1.96	4
	KS	Queretaro, QA	$7,819	$122	$81.14	$2.06	3
	NE	Salinas Victoria, NL	$6,452	$98	$66.92	$1.70	4
	NE	Torreon, CU	$6,790	$172	$71.13	$1.80	4

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

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

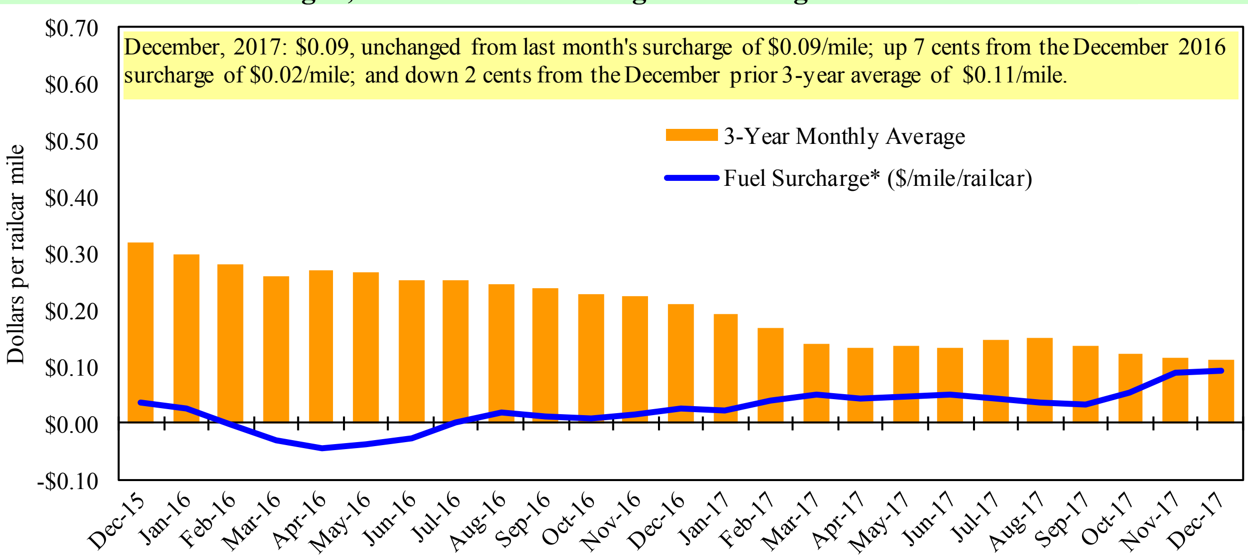
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

[4]Percentage change calculated using tariff rate plus fuel surchage

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

Figure 7

Railroad Fuel Surcharges, North American Weighted Average[1]

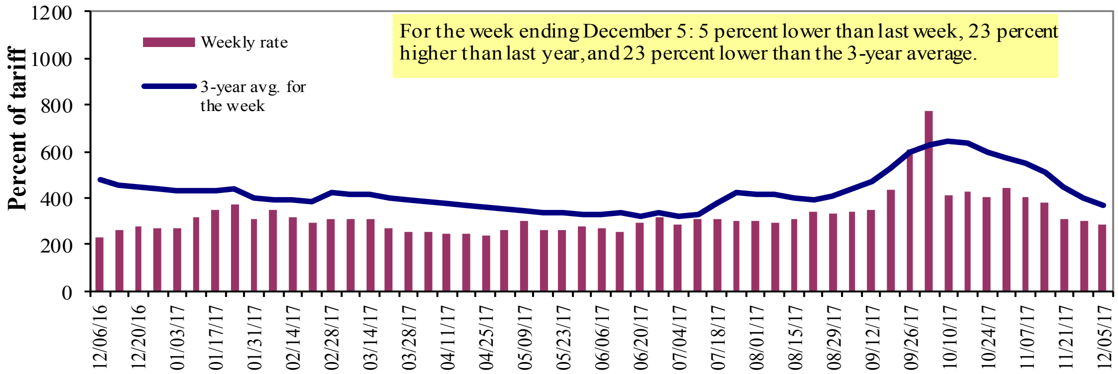


[1] Weighted by each Class I railroad's proportion of grain traffic for the prior year.
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.
**CSX strike price changed from $2.00/gal. to $3.75/gal. starting January 1, 2015.
Sources: 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]



[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-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
Rate[1]	12/5/2017	-	-	285	195	268	268	173
	11/28/2017	-	303	300	203	433	383	182
$/ton	12/5/2017	-	-	13.22	7.78	12.57	10.83	5.43
	11/28/2017	-	16.12	13.92	8.10	20.31	15.47	5.71
Current week % change from the same week:								
	Last year	-	-	23	8	41	41	13
	3-year avg. [2]	-	-	-23	-28	-15	-15	-27
Rate[1]	January	-	-	295	195	240	240	173
	March	-	-	273	188	213	213	173

[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average; ton = 2,000 pounds; "-" = closed
Source: Transportation & Marketing Programs/AMS/USDA

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.

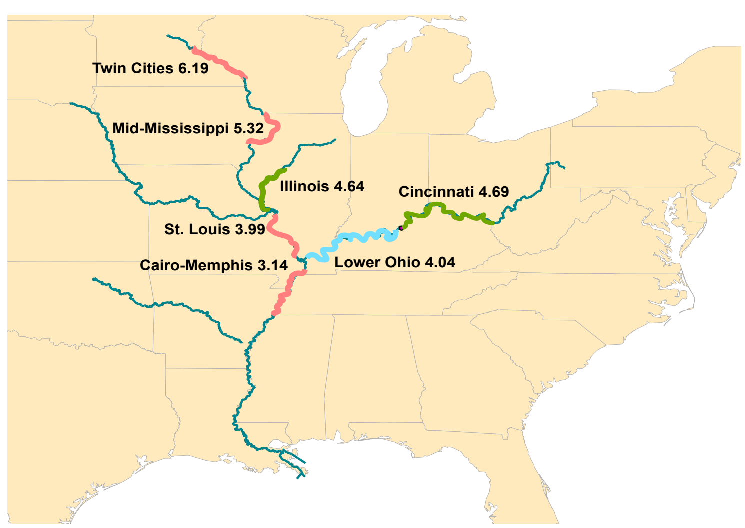
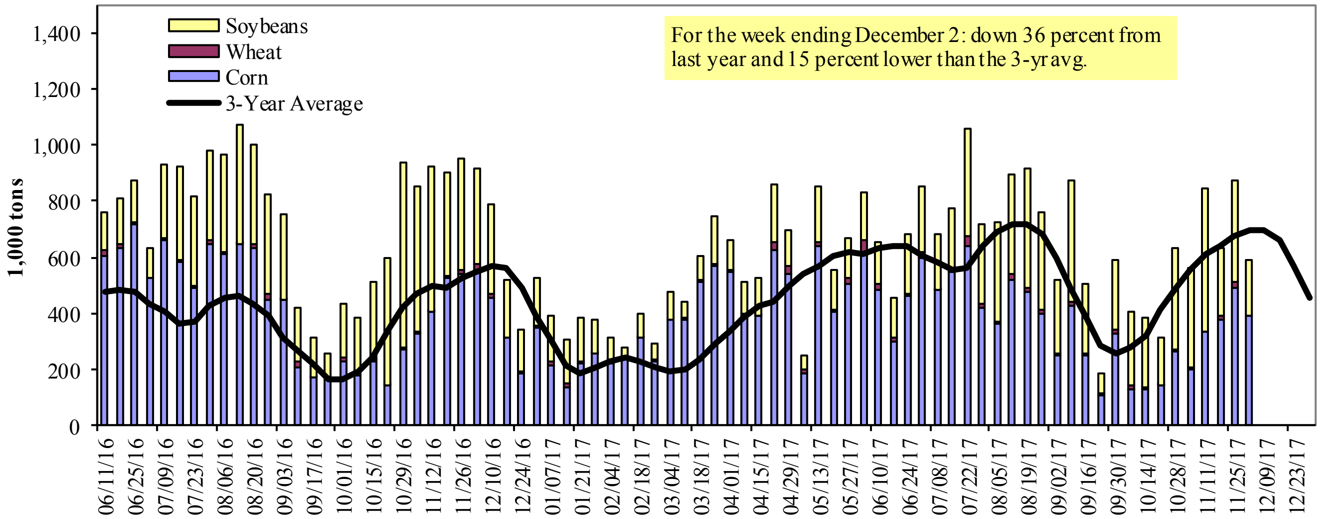


Figure 10

Barge Movements on the Mississippi River[1] (Locks 27 - Granite City, IL)



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

Source: U.S. Army Corps of Engineers

Table 10

Barge Grain Movements (1,000 tons)

For the week ending 12/2/2017	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	119	0	74	11	204
Winfield, MO (L25)	277	0	164	21	462
Alton, IL (L26)	374	0	173	29	576
Granite City, IL (L27)	393	0	199	18	609
Illinois River (L8)	115	0	14	0	130
Ohio River (L52)	16	0	40	5	62
Arkansas River (L1)	0	4	34	0	39
Weekly total - 2017	409	4	274	23	709
Weekly total - 2016	576	22	459	2	1,059
2017 YTD[1]	20,832	2,114	14,799	323	38,068
2016 YTD	22,624	1,917	15,084	317	39,942
2017 as % of 2016 YTD	92	110	98	102	95
Last 4 weeks as % of 2016[2]	80	95	81	448	82
Total 2016	24,136	2,030	16,668	344	43,178

[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.

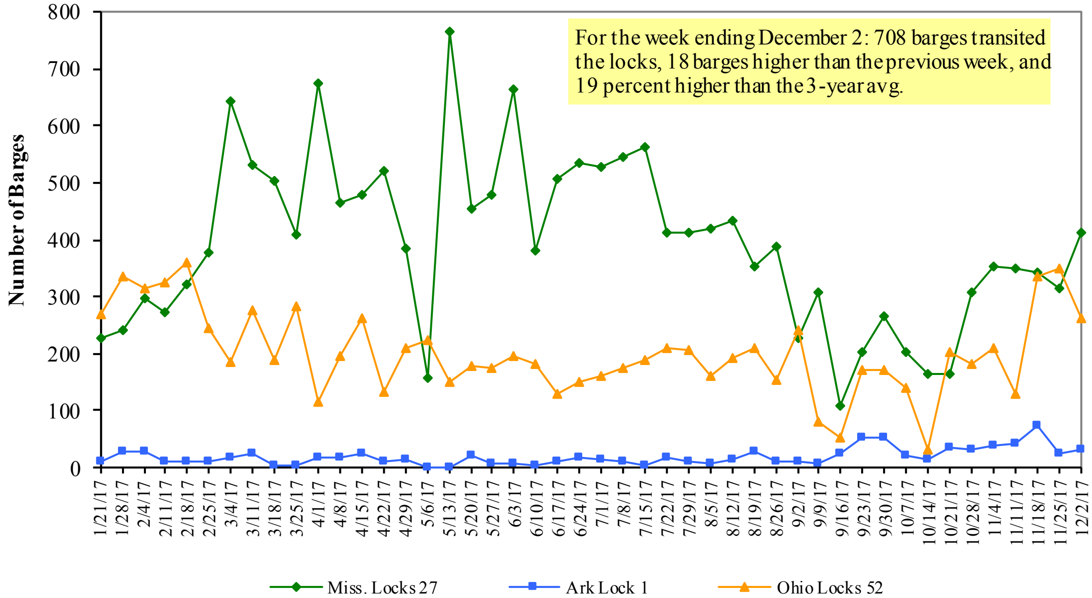
[2] As a percent of same period in 2016.

Note: Total may not add exactly, due to rounding

Source: U.S. Army Corps of Engineers

Figure 11

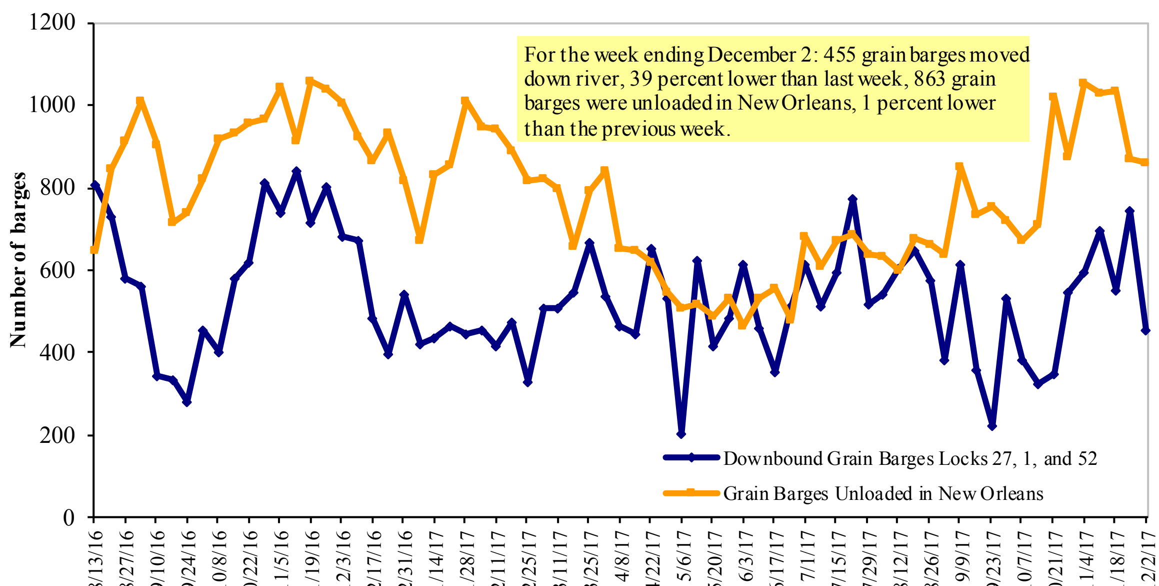
Upbound Empty Barges Transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Locks and Dam 52



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 12/4/2017 (US $/gallon)

Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	2.904	-0.003	0.405
	New England	2.897	0.016	0.371
	Central Atlantic	3.062	-0.012	0.460
	Lower Atlantic	2.794	0.000	0.379
II	Midwest[2]	2.877	-0.007	0.446
III	Gulf Coast[3]	2.713	0.001	0.352
IV	Rocky Mountain	3.019	-0.007	0.562
V	West Coast	3.373	-0.007	0.603
	West Coast less California	3.106	-0.007	0.427
	California	3.585	-0.012	0.742
Total	U.S.	2.922	-0.004	0.442

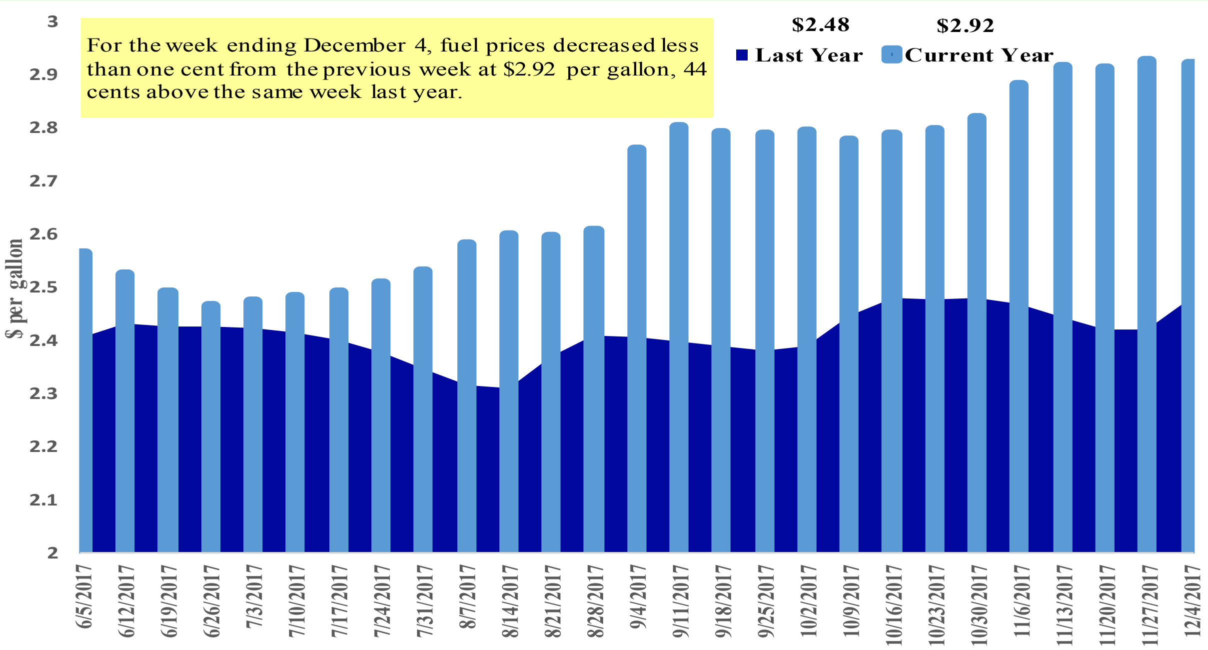
[1]Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

[2]Same as North Central [3]Same 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 HRW	SRW	HRS	SWW	DUR	All wheat	Corn	Soybeans	Total
Export Balances[1]									
11/23/2017	1,941	523	1,676	1,327	59	5,525	14,529	13,304	33,358
This week year ago	2,092	582	2,248	1,290	161	6,373	18,355	17,568	42,295
Cumulative exports-marketing year[2]									
2017/18 YTD	4,770	1,080	3,004	2,585	201	11,640	7,494	21,091	40,225
2016/17 YTD	5,575	1,024	3,729	1,992	174	12,493	11,728	24,130	48,351
YTD 2017/18 as % of 2016/17	86	105	81	130	115	93	64	87	83
Last 4 wks as % of same period 2016/17	95	89	76	102	36	88	78	86	83
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, corn, and soybeans

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 Importers[1] of U.S. Corn

For the week ending 11/23/2017	2017/18 Current MY	2016/17 Last MY	% change current MY from last MY	Exports[3] 3-year avg 2014-2016 - 1,000 mt -
Mexico	8,774	8,531	3	12,297
Japan	3,651	3,855	(5)	11,450
Korea	881	2,160	(59)	4,494
Colombia	1,375	1,819	(24)	4,179
Peru	1,278	1,033	24	2,693
Top 5 Importers	**15,958**	**17,397**	**(8)**	**35,113**
Total US corn export sales	**22,023**	**30,082**	**(27)**	**49,308**
% of Projected	45%	52%		
Change from prior week[2]	**599**	**762**		
Top 5 importers' share of U.S. corn export sales	72%	58%		71%
USDA forecast, November 2017	**48,982**	**58,346**	**(16)**	
Corn Use for Ethanol USDA forecast, November 2017	**139,065**	**138,151**	**1**	

[1]Based on FAS Marketing Year Ranking Reports for 2015/16 - 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/. Total commitments change (net sales) from prior week could include revisions from previous week's outstanding sales or accumulated sales.

[3]FAS Marketing Year Ranking Reports - http://apps.fas.usda.gov/export-sales/myrkaug.htm; 3-yr average

Table 14

Top 5 Importers[1] of U.S. Soybeans

For the week ending 11/23/2017	Commitments[2] 2017/18 Current MY	2016/17 Last MY	% change current MY from last MY	Exports[3] 3-yr avg. 2014-2016
	- 1,000 mt -			- 1,000 mt -
China	19,364	25,681	(25)	31,881
Mexico	1,803	1,792	1	3,452
Indonesia	713	708	1	1,987
Japan	908	1,092	(17)	2,067
Netherlands	656	449	0	2,098
Top 5 importers	**23,444**	**29,721**	**(21)**	**41,486**
Total US soybean export sales	**34,395**	**41,698**	**(18)**	**52,919**
% of Projected	56%	70%		
Change from prior week[2]	**943**	**1,328**		
Top 5 importers' share of U.S. soybean export sales	68%	71%		**78%**
USDA forecast, November 2017	**61,308**	**59,237**	**103**	

(n) indicates negative number.

[1]Based on FAS Marketing Year Ranking Reports for 2015/16 - 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 reivisions from previous week's outstanding sales and/or accumulated sales

[3] FAS Marketing Year Final Reports - www.fas.usda.gov/export-sales/myfi_rpt.htm. (Carryover plus Accumulated Exports)

Table 15

Top 10 Importers[1] of All U.S. Wheat

For the week ending 11/23/2017	Total Commitments[2] 2017/18 Current MY	2016/17 Last MY	% change current MY from last MY	Exports[3] 3-yr avg 2014-2016
	- 1,000 mt -			- 1,000 mt -
Japan	1,913	1,706	12	2,620
Mexico	2,087	1,809	15	2,743
Philippines	2,015	1,938	4	2,395
Brazil	111	1,053	(89)	862
Nigeria	812	816	(1)	1,254
Korea	1,215	981	24	1,104
China	782	675	16	1,623
Taiwan	752	608	24	768
Indonesia	796	654	22	726
Colombia	478	561	(15)	635
Top 10 importers	**10,960**	**10,802**	1	**14,729**
Total US wheat export sales	**17,165**	**18,866**	**(9)**	**22,804**
% of Projected	63%	66%		
Change from prior week[2]	**184**	**484**		
Top 10 importers' share of U.S. wheat export sales	64%	57%		65%
USDA forecast, November 2017	**27,248**	**28,747**	**(5)**	

(n) indicates negative number.

[1] Based on FAS Marketing Year Ranking Reports for 2015/16 - 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 outstanding and/or accumulated sales

[3] FAS Marketing Year Final Reports - www.fas.usda.gov/export-sales/myfi_rpt.htm.

Table 16

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

Port Regions	For the Week Ending 11/30/17	Previous Week[1]	Current Week as % of Previous	2017 YTD	2016 YTD	2017 YTD as % of 2016 YTD	Last 4-weeks as % of: Last Year	Prior 3-yr. avg.	2016 Total
Pacific Northwest									
Wheat	266	207	129	13,635	11,443	119	92	104	12,325
Corn	0	0	n/a	10,259	11,346	90	3	7	12,009
Soybeans	635	550	115	11,795	12,473	95	88	92	14,447
Total	**901**	**757**	**119**	**35,688**	**35,262**	**101**	**73**	**87**	**38,782**
Mississippi Gulf									
Wheat	65	63	102	4,036	3,287	123	104	99	3,480
Corn	435	446	98	27,336	29,427	93	77	91	31,420
Soybeans	991	1,095	91	29,484	31,131	95	85	88	35,278
Total	**1,491**	**1,604**	**93**	**60,856**	**63,846**	**95**	**83**	**89**	**70,178**
Texas Gulf									
Wheat	18	89	21	6,014	5,454	110	90	129	6,019
Corn	0	0	n/a	700	1,590	44	3	6	1,669
Soybeans	0	0	n/a	219	963	23	19	22	1,105
Total	**18**	**89**	**21**	**6,933**	**8,007**	**87**	**48**	**67**	**8,792**
Interior									
Wheat	37	7	496	1,600	1,427	112	63	78	1,543
Corn	136	182	75	8,158	6,725	121	128	171	7,197
Soybeans	113	71	159	5,050	4,212	120	92	96	4,577
Total	**285**	**260**	**110**	**14,808**	**12,364**	**120**	**107**	**127**	**13,317**
Great Lakes									
Wheat	46	0	n/a	642	1,003	64	75	74	1,186
Corn	0	0	n/a	189	558	34	20	56	584
Soybeans	32	23	138	825	804	103	65	65	910
Total	**78**	**23**	**335**	**1,655**	**2,366**	**70**	**58**	**66**	**2,681**
Atlantic									
Wheat	0	0	n/a	46	289	16	1	3	315
Corn	5	0	n/a	32	293	11	468	490	294
Soybeans	87	75	117	1,705	1,931	88	78	80	2,269
Total	**92**	**75**	**123**	**1,784**	**2,514**	**71**	**74**	**78**	**2,878**
U.S. total from ports[1]									
Wheat	431	367	118	25,973	22,904	113	88	104	24,867
Corn	576	628	92	46,673	49,941	93	65	92	53,173
Soybeans	1,858	1,814	102	49,079	51,514	95	83	86	58,587
Total	**2,865**	**2,808**	**102**	**121,724**	**124,358**	**98**	**79**	**89**	**136,627**

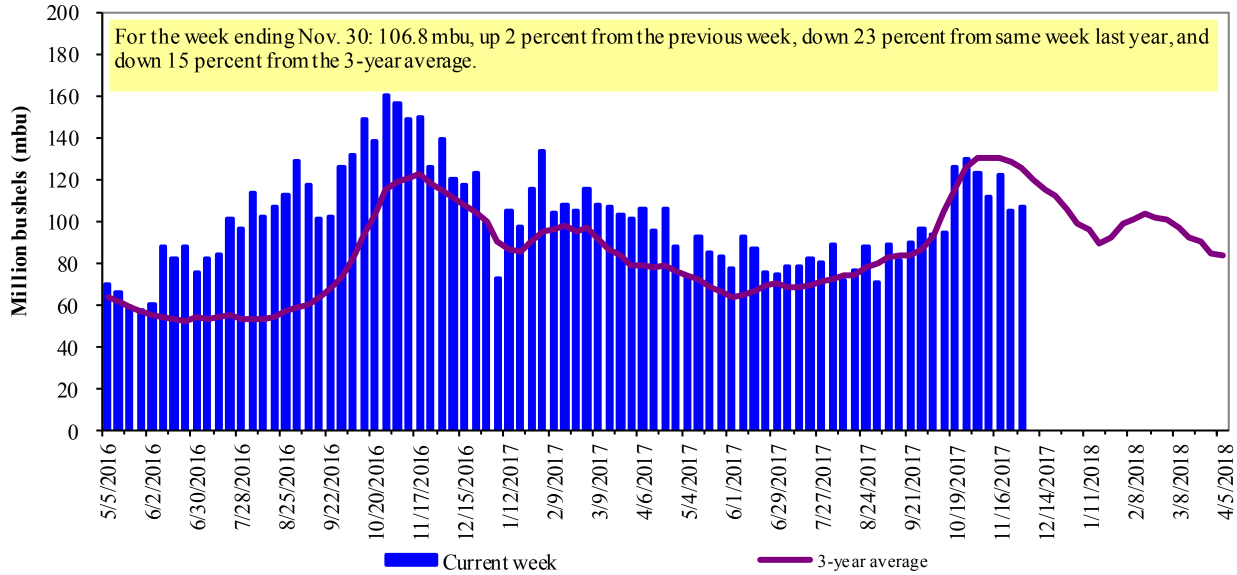
[1] Data includes revisions from prior weeks; some regional and U.S. totals may not add exactly due to rounding.

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, 35 percent of U.S.-grown soybeans, and 20 percent of the U.S.-grown corn. Approximately 58 percent of the U.S. export grain shipments departed through the U.S. Gulf region in 2016.

Figure 14

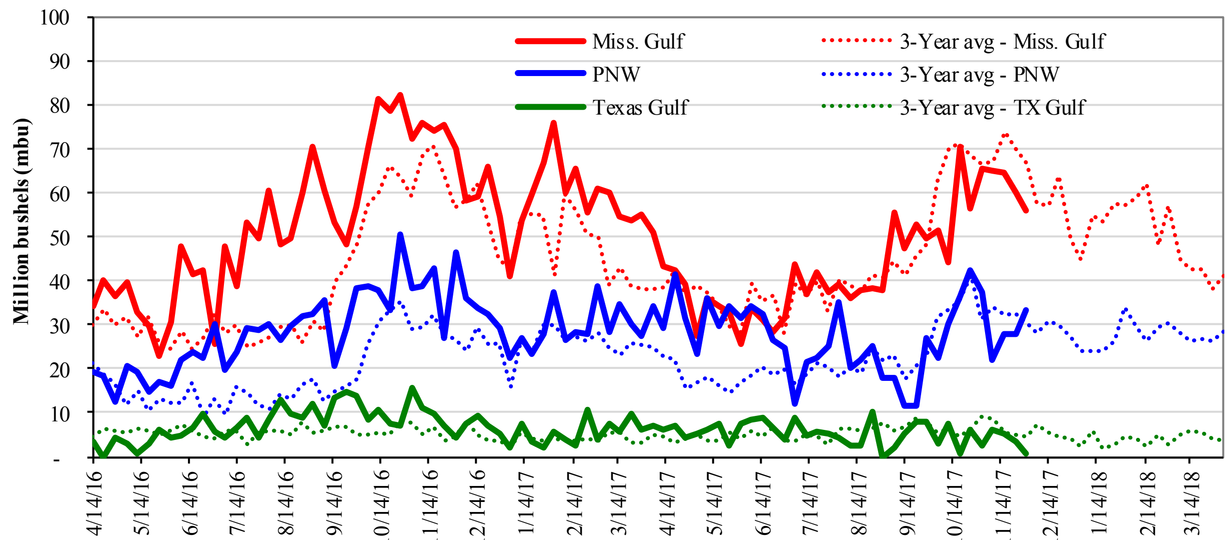
U.S. grain inspected for export (wheat, corn, and soybeans)



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 PNW[1] (wheat, corn, and soybeans)



Week ending 11/30/17 inspections (mbu):	
Mississippi Gulf:	55.9
PNW:	33.1
Texas Gulf:	0.7

Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Last Week:	down 7	down 79	down 11	up 19
Last Year (same week):	down 20	down 85	down 24	down 29
3-yr avg. (4-wk. mov. Avg):	down 19	down 88	down 25	up 3

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

Ocean Transportation

Table 17

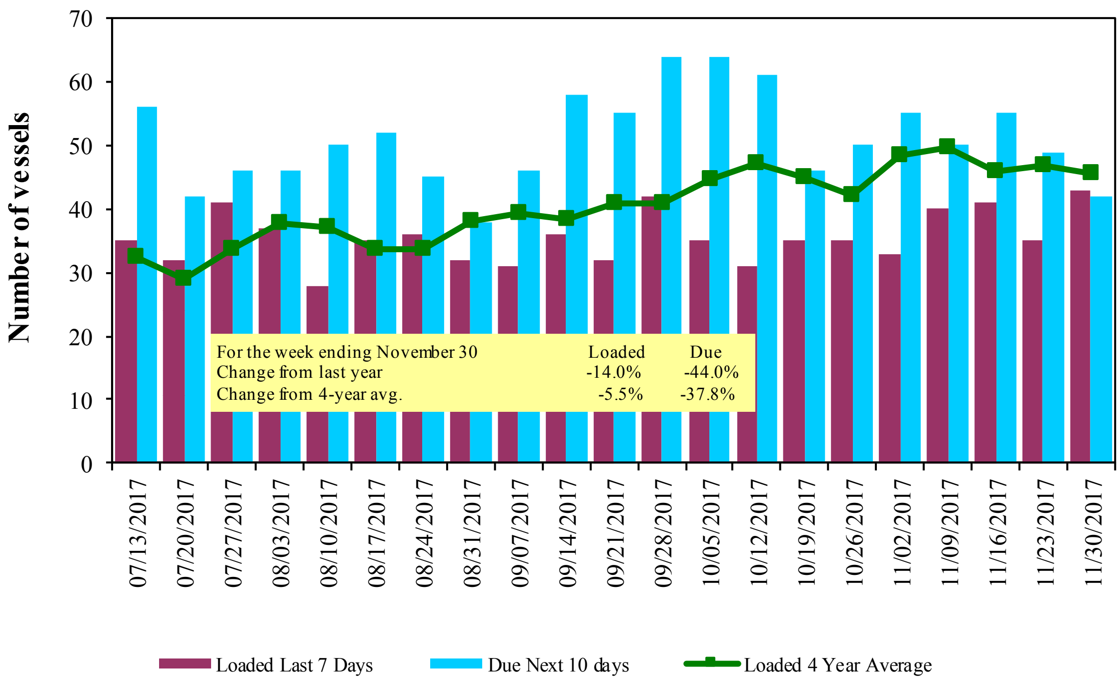
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

	Gulf			Pacific Northwest	Vancouver B.C.
Date	In port	Loaded 7-days	Due next 10-days	In port	In port
11/30/2017	48	43	42	9	n/a
11/23/2017	47	35	49	n/a	n/a
2016 range	(21..62)	(27..55)	(40..87)	(6..27)	n/a
2016 avg.	43	40	62	15	n/a

Source: Transportation & Marketing Programs/AMS/USDA

Figure 16

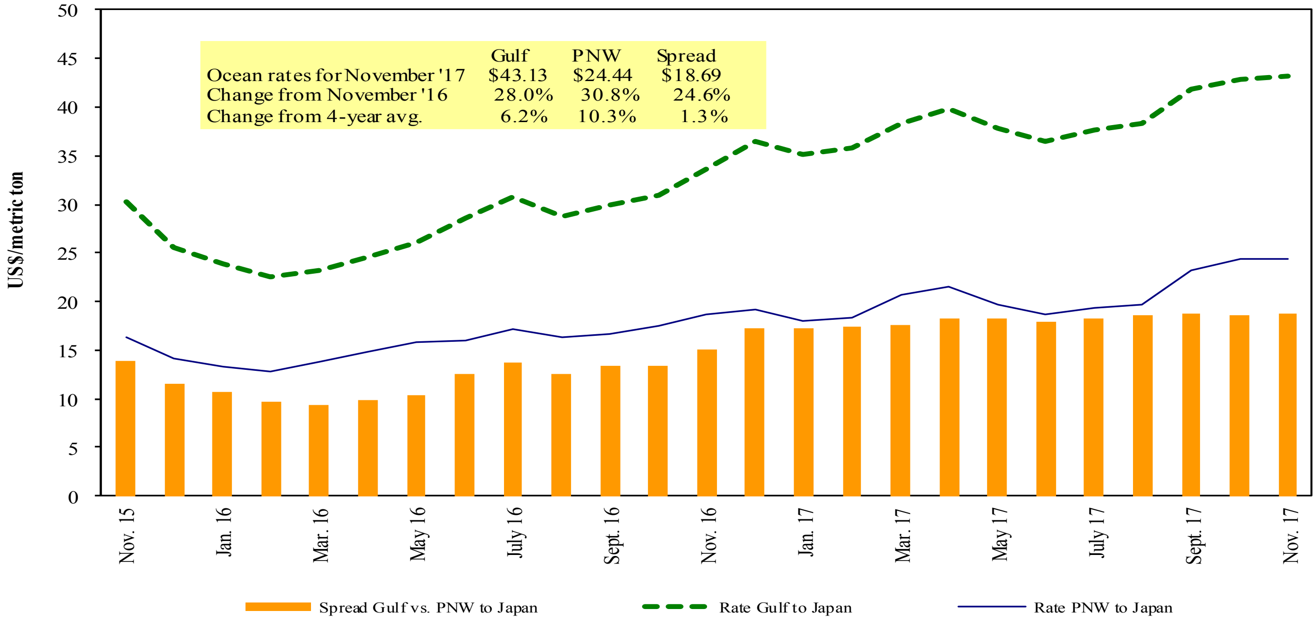
U.S. Gulf Vessel Loading Activity



Source: Transportation & Marketing Programs/AMS/USDA
[1]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 12/02/2017

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	China	Heavy Grain	Dec 10/20	60,000	43.25
U.S. Gulf	China	Heavy Grain	Nov 27/Dec 5	47,700	40.50
U.S. Gulf	China	Heavy Grain	Nov 20/30	66,000	41.25
U.S. Gulf	China	Heavy Grain	Nov 20/30	66,000	42.00
U.S. Gulf	China	Heavy Grain	Nov 15/25	65,000	43.85
U.S. Gulf	China	Heavy Grain	Nov 10/20	66,000	43.75
U.S. Gulf	China	Heavy Grain	Nov 10/15	66,000	40.25
U.S. Gulf	China	Heavy Grain	Nov 1/10	66,000	42.00
U.S. Gulf	China	Heavy Grain	Nov 1/10	66,000	41.75
U.S. Gulf	China	Heavy Grain	Nov 1/10	66,000	41.25
U.S. Gulf	China	Heavy Grain	Nov 1/10	66,000	42.00
U.S. Gulf	China	Heavy Grain	Nov 1/10	66,000	41.50
U.S. Gulf	Dakar	Wheat	Nov 20/30	7,500	73.89*
U.S. Gulf	Somali	Sorghum	Dec 1/10	10,640	192.10*
PNW	China	Heavy Grain	Dec 15/24	60,000	23.75
PNW	Bangladesh	Wheat	Sep 29/Oct 9	13,620	58.00*
PNW	South Korea	Heavy Grain	Dec 14/20	60,000	24.00
Brazil	China	Heavy Grain	Dec 1/10	60,000	31.90
Brazil	China	Heavy Grain	Nov 20/30	60,000	33.75
Brazil	China	Heavy Grain	Nov 1/10	60,000	31.90
Brazil	China	Heavy Grain	Oct 25/Nov 10	60,000	32.50
Brazil	S. Korea	Heavy Grain	Nov 22/29	63,000	33.25

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

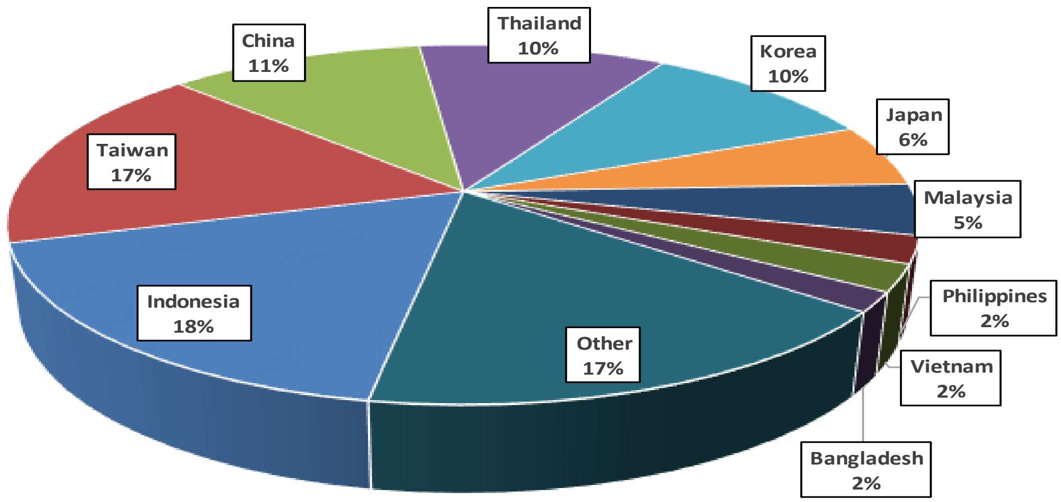
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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

In 2015, containers were used to transport 8 percent of total U.S. waterborne grain exports. Approximately 64 percent of U.S. waterborne grain exports in 2015 went to Asia, of which 12 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, January-September 2017

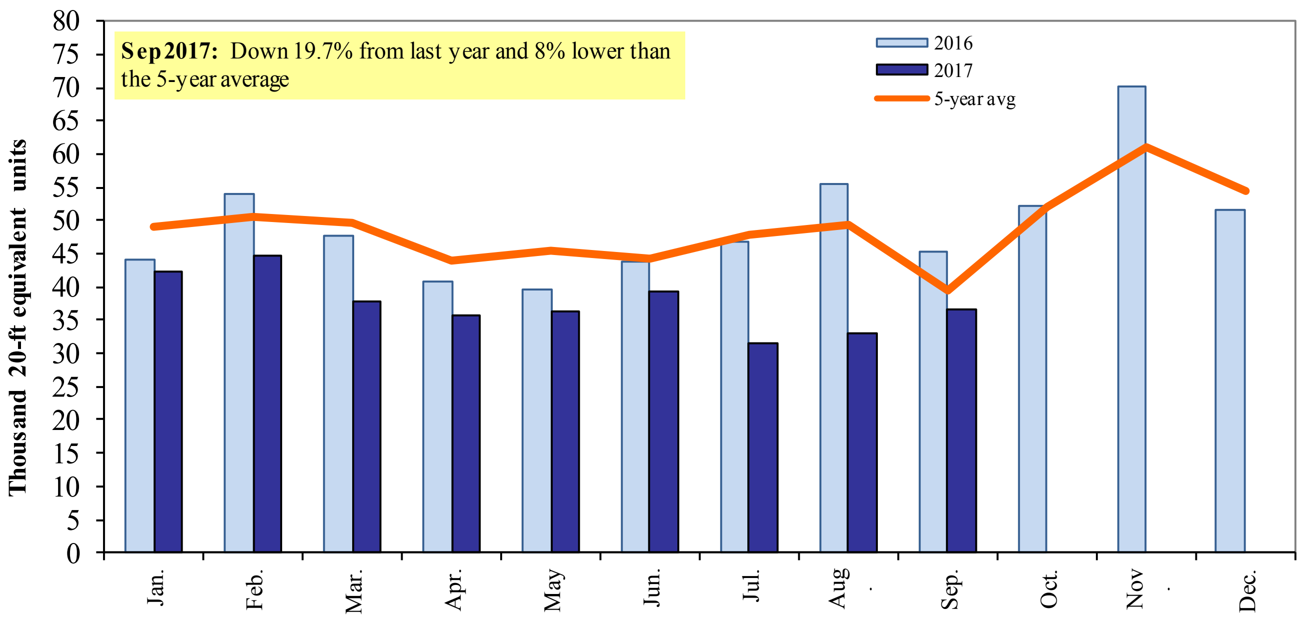


Source: USDA/Agricultural Marketing Service/Transportation Services Division analysis of Port Import Export Reporting Service (PIERS) data

Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: 100190, 100200, 100300, 100400, 100590, 100700, 110100, 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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Preferred citation: U.S. Dept. of Agriculture, Agricultural Marketing Service. *Grain Transportation Report.* December 7, 2017. Web: **http://dx.doi.org/10.9752/TS056.12-07-2017**