



Grain Transportation Report

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

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October 27, 2016

WEEKLY HIGHLIGHTS

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Weekly Barge Rates Significantly Increase for Last Half of Harvest

As of October 25, spot barge rates for export grain at major origin locations increased 18 to 39 percent compared to last week. However, rates are still 9 to 43 percent below the 3-year average. For the last 52 weeks, barge rates have been below average except for a brief period during June and July (see GTR Figure 8). The increase in barge rates is likely due to an increased demand in soybean exports. For the week ending October 20, Mississippi Gulf soybean export inspections were 1.6 million metric tons (mmt), 14 percent higher than last week, while corn inspections were 372,000 metric tons. As of October 24, USDA's Crop Progress Report showed that the projected record soybean crop was 76 percent harvested compared to 62 percent last week and the same as the 5-year average. The corn crop was 61 percent harvested compared to 46 percent last week and 63 percent for the 5-year average.

Grain Inspections Down but Second Highest for The Year

For the week ending October 20, **total inspections of grain** (corn, wheat, and soybeans) for export from major U.S. export regions reached 3.67 mmt, down 8 percent from the previous week, up 6 percent from last year, and 31 percent above the 3-year average. Inspections reached the second highest level for the year, with total soybeans reaching 2.88 mmt, up 9 percent from the previous week. Inspections of wheat dropped 47 percent from the past week, and corn inspections decreased 38 percent as slower increases in corn prices could be affecting farmer willingness to sell. Total Pacific Northwest (PNW) inspections decreased 14 percent from the previous week, and Mississippi Gulf grain inspections decreased 3 percent for the same period. Outstanding export sales (unshipped) of grain were up for wheat and corn but down for soybeans.

Ocean Alliance gets FMC's green light

On October 21, the Federal Maritime Commission (FMC) announced its approval of the requested Ocean Alliance between COSCO Shipping, CMA CGM, Evergreen Marine, and Orient Overseas Container Line Limited (OOCL), which became effective on October 24. The member carriers are set to begin operating in U.S. trade lanes under the new Alliance next April. The Alliance permits members to share vessels; charter and exchange space on each other's ships; and, enter into cooperative working arrangements in international trade lanes between the United States and ports in Asia, Northern Europe, the Mediterranean, the Middle East, Canada, Central America, and the Caribbean. The FMC stated that it thoroughly examined all aspects of the proposed agreement to assure that competition in the ocean transportation industry would not suffer. In 2015, containers transported 8 percent of total U.S. waterborne grain exports.

Snapshots by Sector

Export Sales

During the week ending October 13, **unshipped balances** of wheat, corn, and soybeans totaled 43.9 mmt, up 43 percent from the same time last year. Net weekly **wheat export sales** were .514 mmt, up 5 percent from the previous week. Net **corn export sales** were 1 mmt, up 18 percent from the previous week, and net **soybean export sales** were 2 mmt, up 42 percent from the past week.

Rail

U.S. Class I railroads originated 27,300 **grain carloads** for the week ending October 15, up 2 percent from the previous week, up 8 percent from last year, and up 19 percent from the 3-year average.

Average November shuttle **secondary railcar bids/offers** per car were \$256 above tariff for the week ending October 20, down \$156 from last week, and \$423 higher than last year. Average non-shuttle secondary railcar bids/offers were \$38 above tariff, up \$50 from last week, and \$111 higher than last year.

Barge

For the week ending October 22, **barge grain movements** totaled 959,730 tons, 6 percent higher than last week, and up 0.2 percent from the same period last year.

For the week ending October 22, 618 grain barges **moved down river**, up 7 percent from last week, 959 grain barges were **unloaded in New Orleans**, up 3 percent from the previous week.

Ocean

For the week ending October 20, 51 **ocean-going grain vessels** were loaded in the Gulf, 16 percent more than the same period last year. Seventy-one vessels are expected to be loaded within the next 10 days, 22 percent more than the same period last year.

For the week ending October 20, the ocean freight rate for shipping bulk grain from the Gulf to Japan was \$31.75 per metric ton, 5 percent more than the previous week. The cost of shipping from the PNW to Japan was \$18.00 per metric ton, 3 percent more than the previous week.

Fuel

During the week ending October 24, U.S. average **diesel fuel prices** remain unchanged from the previous week at \$2.48 per gallon, down \$0.02 from the same week last year.

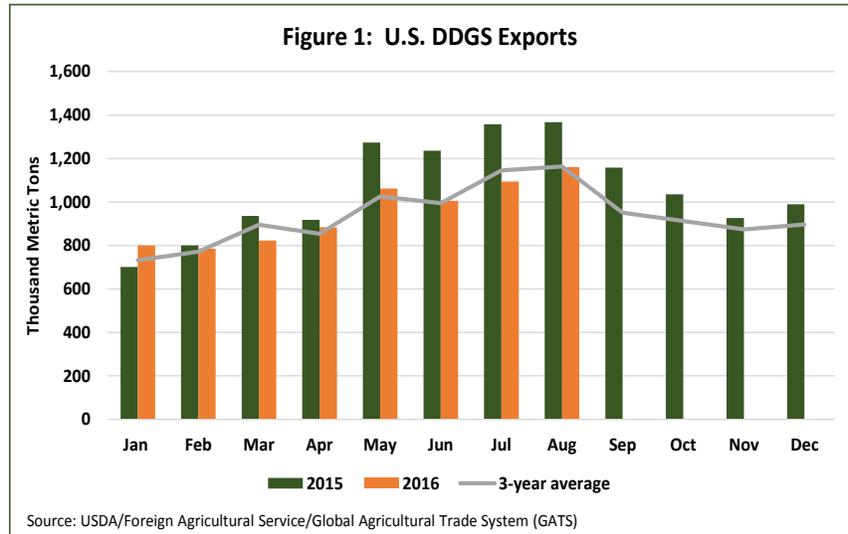
Feature Article/Calendar

Containerized Grain Update—Spotlight on DDGS

In the past decade, distiller’s dried grains with solubles (DDGS) have grown substantially in the U.S. export grain market. The ethanol co-product is used as a nutrient-rich feed supplement for growing livestock industries in emerging markets overseas. As the global middle class grows, demand for higher-valued meat products also grows, resulting in greater demand for feed grains to sustain changing food demands. U.S. DDGS exports have grown to fill this demand. China is the predominate importer of U.S. DDGS, so a change in demand from China impacts the overall market.

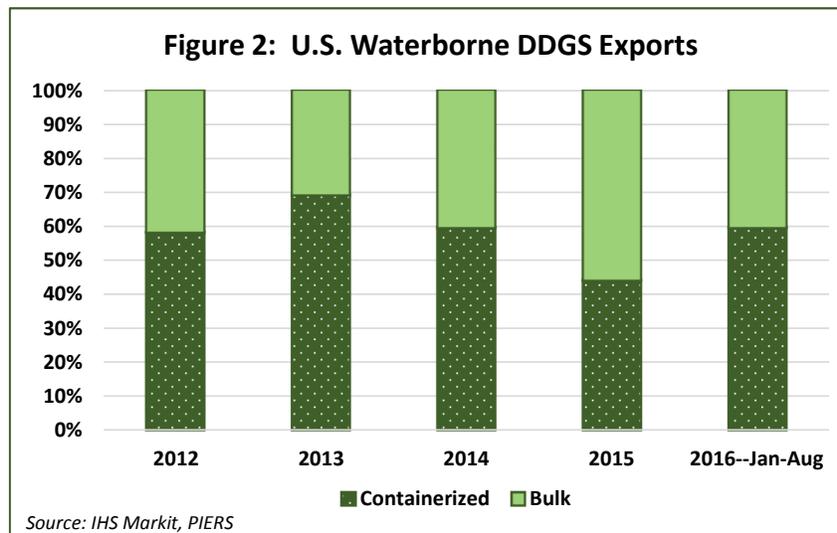
Total DDGS exports (including bulk, container, and cross border movements) have grown from 1.2 million metric tons (mmt) in 2006 to a peak of 12.7 mmt in 2015. The main importer of U.S. DDGS is China representing 50 percent of the market followed by Mexico (13 percent), Vietnam (5 percent), and South Korea (5 percent). The growing trend slowed in 2016; year-to-date DDGS exports are 7.6 mmt, 11

percent below the same period last year. Figure 1 shows monthly DDGS exports at or below the 3-year average during several of the first 8 months of this year. DDGS exports to most of the top importing countries have increased, except for shipments to China. Year-to-date exports to China have fallen from 5.9 mmt last year to just under 2 mmt this year. Demand for U.S. exports to China has been slow due to weak economic conditions.



Container or Bulk?

DDGS is the only grain export that uses both bulk and container transportation almost equally. Most grain products use containers only minimally because of the demand for large volumes of the primary feed products. In fact, only 8 percent of waterborne grain exports in 2015 were moved in containers. U.S.



DDGS exports dominate the containerized grain export market—shipments represent nearly 50 percent of containerized grain exports each year. On average, DDGS exports are moved in containers 60 percent of the time (see figure 2). As a feed supplement, large bulk volumes of the product are not needed in many cases. However, because the product easily moves by both modes, you see

example, the increase in bulk movements in 2015 was likely in response to the labor disruptions at U.S. West Coast ports that caused significant delays for containerized cargo. So far this year, containerized DDGS exports are also below average. Shipments made a strong entry into 2016, but have been below last year's levels and the 4-year average since May due to slow demand in China.

Because DDGS exports are so often moved in containers, the top importing countries of U.S. containerized DDGS exports closely follows the top countries for overall DDGS exports. China, Vietnam, and Thailand represent more than three quarters of the market. Of the top 6 importing countries for containerized DDGS exports, all of them use containers more than 60 percent of the time, and 3 of the top 6 use containers almost exclusively (see table).

Top Importers of U.S. Containerized DDGS Exports, Jan-Aug 2016	
Importing Country	% containerized
China	82%
Vietnam	100%
Thailand	86%
South Korea	67%
Indonesia	100%
Taiwan	100%

Conclusion

The U.S. DDGS export market has grown significantly over the past decade mostly due to strong Chinese demand for feed products. However, reliance on the Chinese market makes U.S. DDGS exporters vulnerable to shifts in Chinese demand and trade policy. Slow Chinese demand for DDGS so far in 2016 has almost exclusively caused the decrease in overall U.S. DDGS exports. Additionally, China issued a dumping determination in September, which may further reduce DDGS exports through the end of the year. Typically between 30 and 40 percent of DDGS exports ship during the last 4 months of the year. (April.Taylor@ams.usda.gov)

Grain Transportation Indicators

Table 1

Grain Transport Cost Indicators¹

For the week ending	Truck		Rail		Barge	Ocean	
		Unit	Train	Shuttle		Gulf	Pacific
10/26/16	166	263	218	285	142	128	
10/19/16	167	264	261	204	135	124	

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); 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)

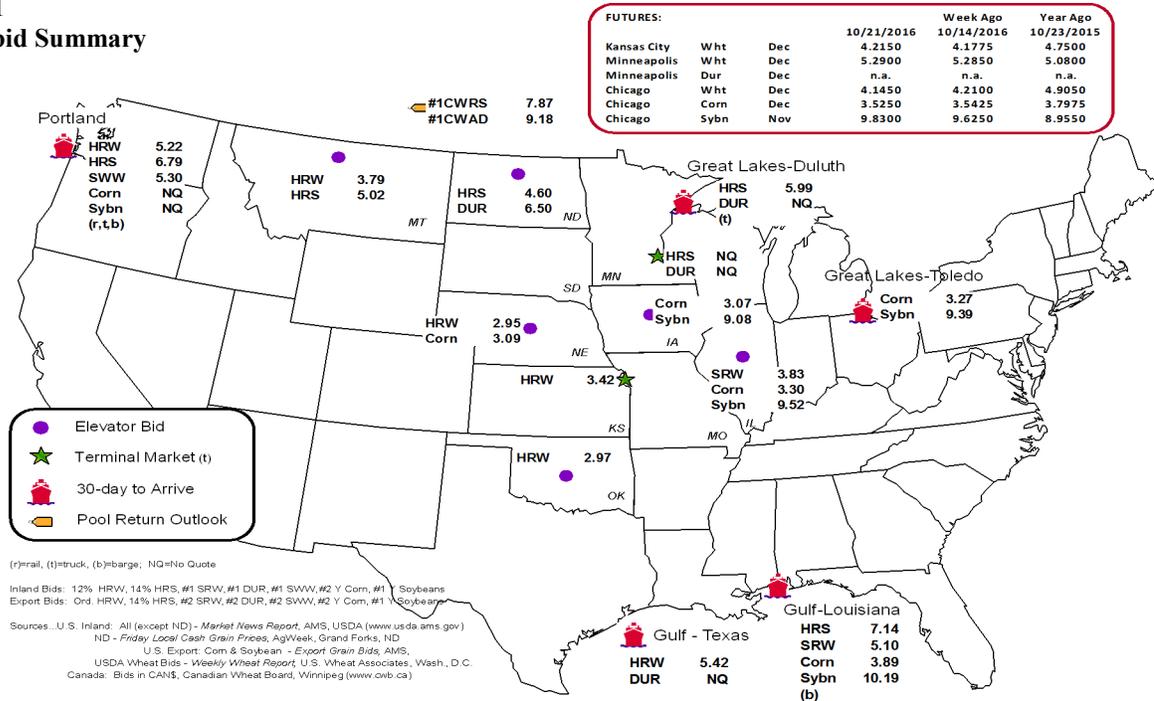
Commodity	Origin--Destination	10/21/2016	10/14/2016
Corn	IL--Gulf	-0.59	-0.60
Corn	NE--Gulf	-0.80	-0.81
Soybean	IA--Gulf	-1.11	-1.19
HRW	KS--Gulf	-2.00	-2.10
HRS	ND--Portland	-2.19	-2.25

Note: nq = no quote

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		Pacific	Atlantic &	Total	Week ending	Cross-Border Mexico ³
	Gulf	Texas Gulf	Northwest	East Gulf			
10/19/2016 ^p	2,651	1,356	8,620	1,720	14,347	10/15/2016	1,907
10/12/2016 ^r	2,061	1,690	8,317	1,118	13,186	10/8/2016	2,281
2016 YTD ^r	24,234	65,811	228,329	16,999	335,373	2016 YTD	86,234
2015 YTD ^r	22,048	47,293	179,324	18,466	267,131	2015 YTD	77,789
2016 YTD as % of 2015 YTD	110	139	127	92	126	% change YTD	111
Last 4 weeks as % of 2015 ²	85	253	98	134	108	Last 4wks % 2015	92
Last 4 weeks as % of 4-year avg. ²	125	163	138	135	138	Last 4wks % 4 yr	113
Total 2015	29,054	60,819	239,029	26,730	355,632	Total 2015	97,736
Total 2014	44,617	83,674	256,670	32,107	417,068	Total 2014	98,422

¹ Data is incomplete as it is voluntarily provided

² Compared with same 4-weeks in 2015 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.

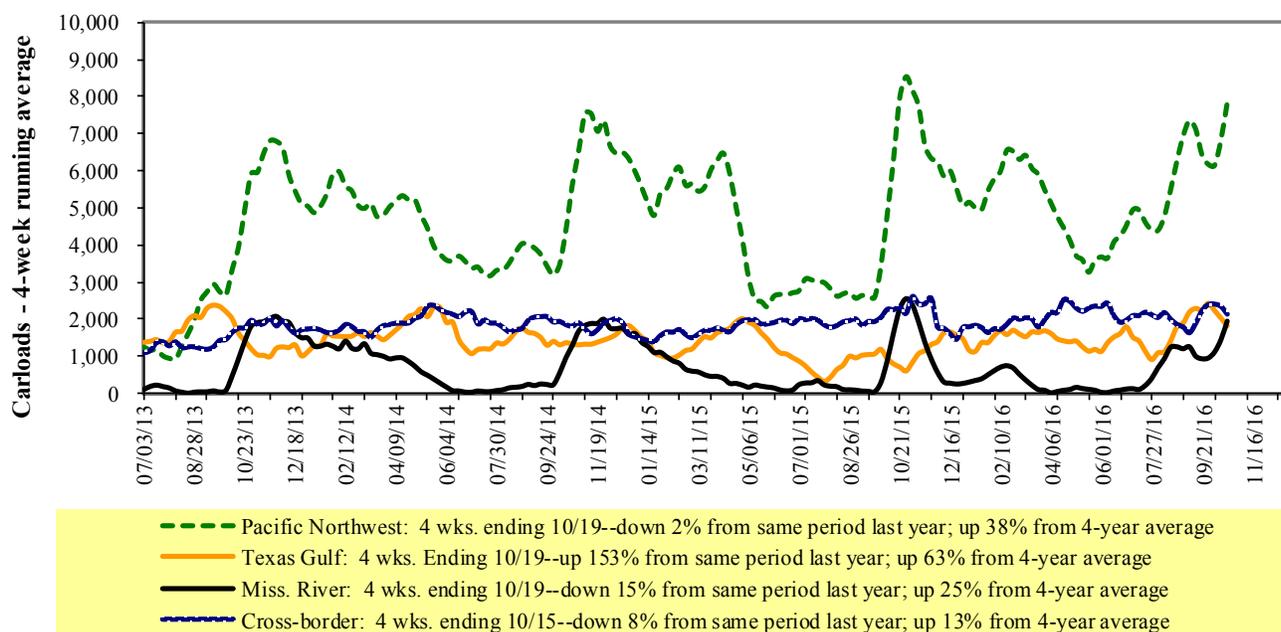
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

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)

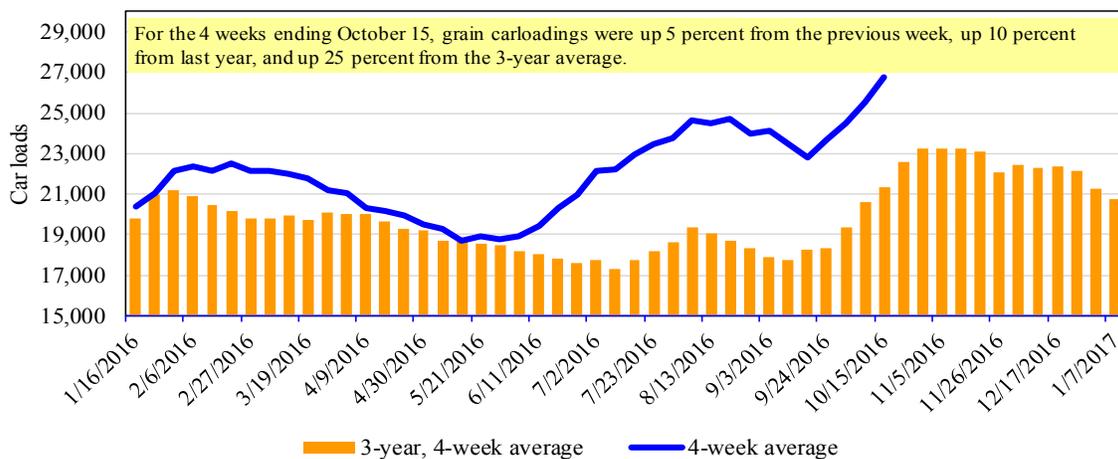
For the week ending: 10/15/2016	East		West			U.S. total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	2,621	3,772	12,361	1,126	7,420	27,300	5,789	5,613
This week last year	3,042	3,340	11,917	1,031	6,042	25,372	4,143	4,291
2016 YTD	71,079	113,485	459,343	35,558	231,890	911,355	144,063	180,733
2015 YTD	82,538	118,273	412,744	37,144	211,083	861,782	164,259	182,775
2016 YTD as % of 2015 YTD	86	96	111	96	110	106	88	99
Last 4 weeks as % of 2015*	88	106	109	106	125	110	122	126
Last 4 weeks as % of 3-yr avg.**	108	115	128	105	137	125	114	106
Total 2015	104,039	149,043	536,173	45,445	267,720	1,102,420	211,868	236,263

*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: 10/20/2016		Delivery period							
		Nov-16	Nov-15	Dec-16	Dec-15	Jan-17	Jan-16	Feb-17	Feb-16
BNSF ³	COT grain units	0	no bids	no bids	no bids	no bids	no bids	no bids	no bids
	COT grain single-car ⁵	76	no bids	17	no bids	no bids	no bids	no bids	no bids
UP ⁴	GCAS/Region 1	no offer	no bids	no bids	no bids	no offer	no bids	n/a	n/a
	GCAS/Region 2	no offer	no bids	no bids	no bids	no offer	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.

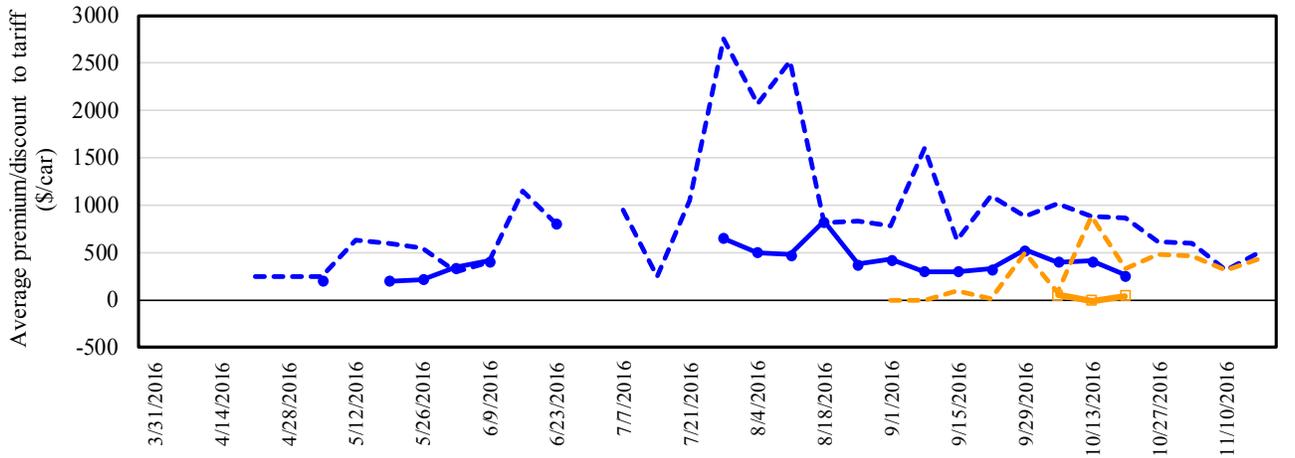
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

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.

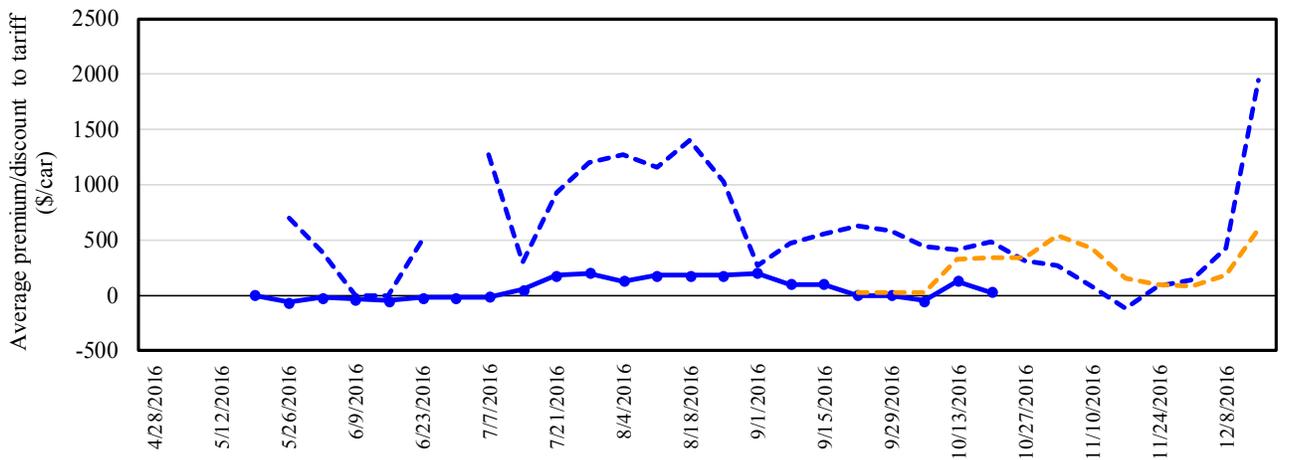
Figure 4
Bids/Offers for Railcars to be Delivered in November 2016, Secondary Market



10/20/2016	BNSF	UP	Shuttle	Non-Shuttle
Non-Shuttle	\$25	\$50	Shuttle prior 3-yr avg. (same week)	Non-Shuttle prior 3-yr avg. (same week)
Shuttle	\$613	-\$100	Average Non-shuttle bids/offers rose \$50 this week, and are \$13 below the peak. Average Shuttle bids/offers fell \$156 this week and are \$569 below the peak.	

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 December 2016, Secondary Market

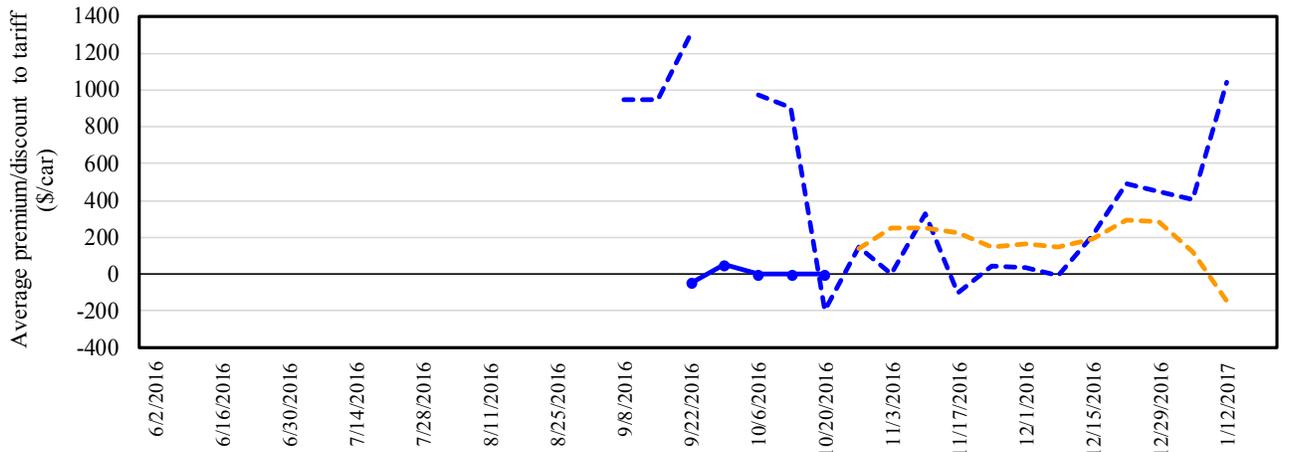


10/20/2016	BNSF	UP	Shuttle	Non-Shuttle
Non-Shuttle	n/a	n/a	Shuttle prior 3-yr avg. (same week)	Non-Shuttle prior 3-yr avg. (same week)
Shuttle	\$206	-\$150	There were no Non-Shuttle bids/offers this week. Average Shuttle bids/offers fell \$97 this week and are \$172 below the peak.	

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 January 2017, Secondary Market



10/20/2016	BNSF	UP		
Non-Shuttle	n/a	n/a	—●— Shuttle	—○— Non-Shuttle
Shuttle	n/a	\$0	--- Shuttle prior 3-yr avg. (same week)	--- Non-Shuttle prior 3-yr avg. (same week)

There were no Non-Shuttle bids/offers this week.
Average Shuttle bids/offers are unchanged this week and are \$50 below the peak.

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:		Delivery period					
		10/20/2016	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17
Non-shuttle	BNSF-GF	25	n/a	n/a	n/a	n/a	n/a
	Change from last week	25	n/a	n/a	n/a	n/a	n/a
	Change from same week 2015	83	n/a	n/a	n/a	n/a	n/a
	UP-Pool	50	n/a	n/a	n/a	n/a	n/a
	Change from last week	75	n/a	n/a	n/a	n/a	n/a
	Change from same week 2015	138	n/a	n/a	n/a	n/a	n/a
Shuttle	BNSF-GF	613	206	n/a	n/a	n/a	n/a
	Change from last week	(337)	(194)	n/a	n/a	n/a	n/a
	Change from same week 2015	841	n/a	n/a	n/a	n/a	n/a
	UP-Pool	(100)	(150)	0	n/a	n/a	n/a
	Change from last week	25	0	0	n/a	n/a	n/a
	Change from same week 2015	6	50	200	n/a	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

Effective date:		Origin region*	Destination region*	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per:		Percent change Y/Y ³
10/1/2016	metric ton					bushel ²		
Unit train								
Wheat	Wichita, KS	St. Louis, MO	\$3,770	\$30	\$37.74	\$1.03	4	
	Grand Forks, ND	Duluth-Superior, MN	\$4,143	-\$9	\$41.05	\$1.12	16	
	Wichita, KS	Los Angeles, CA	\$6,950	-\$46	\$68.56	\$1.87	-1	
	Wichita, KS	New Orleans, LA	\$4,408	\$53	\$44.30	\$1.21	3	
	Sioux Falls, SD	Galveston-Houston, TX	\$6,486	-\$38	\$64.03	\$1.74	-1	
	Northwest KS	Galveston-Houston, TX	\$4,676	\$59	\$47.02	\$1.28	3	
	Amarillo, TX	Los Angeles, CA	\$4,875	\$81	\$49.22	\$1.34	2	
Corn	Champaign-Urbana, IL	New Orleans, LA	\$3,681	\$60	\$37.15	\$0.94	9	
	Toledo, OH	Raleigh, NC	\$6,061	\$0	\$60.19	\$1.53	0	
	Des Moines, IA	Davenport, IA	\$2,258	\$13	\$22.55	\$0.57	4	
	Indianapolis, IN	Atlanta, GA	\$5,191	\$0	\$51.55	\$1.31	4	
	Indianapolis, IN	Knoxville, TN	\$4,311	\$0	\$42.81	\$1.09	0	
Soybeans	Des Moines, IA	Little Rock, AR	\$3,534	\$38	\$35.47	\$0.90	2	
	Des Moines, IA	Los Angeles, CA	\$5,202	\$109	\$52.74	\$1.34	1	
	Minneapolis, MN	New Orleans, LA	\$3,934	\$15	\$39.21	\$1.07	6	
	Toledo, OH	Huntsville, AL	\$5,051	\$0	\$50.16	\$1.37	0	
	Indianapolis, IN	Raleigh, NC	\$6,178	\$0	\$61.35	\$1.67	0	
	Indianapolis, IN	Huntsville, AL	\$4,529	\$0	\$44.98	\$1.22	0	
	Champaign-Urbana, IL	New Orleans, LA	\$4,495	\$60	\$45.24	\$1.23	12	
Shuttle Train								
Wheat	Great Falls, MT	Portland, OR	\$3,953	-\$26	\$38.99	\$1.06	-1	
	Wichita, KS	Galveston-Houston, TX	\$3,871	-\$21	\$38.24	\$1.04	-2	
	Chicago, IL	Albany, NY	\$5,492	\$0	\$54.54	\$1.48	0	
	Grand Forks, ND	Portland, OR	\$5,611	-\$46	\$55.27	\$1.50	-2	
	Grand Forks, ND	Galveston-Houston, TX	\$5,931	-\$47	\$58.43	\$1.59	-11	
	Northwest KS	Portland, OR	\$5,673	\$96	\$57.29	\$1.56	2	
	Corn	Minneapolis, MN	Portland, OR	\$5,000	-\$56	\$49.10	\$1.25	-2
Sioux Falls, SD		Tacoma, WA	\$4,960	-\$51	\$48.75	\$1.24	-2	
Champaign-Urbana, IL		New Orleans, LA	\$3,481	\$60	\$35.17	\$0.89	9	
Lincoln, NE		Galveston-Houston, TX	\$3,700	-\$30	\$36.45	\$0.93	1	
Des Moines, IA		Amarillo, TX	\$3,895	\$47	\$39.15	\$0.99	2	
Minneapolis, MN		Tacoma, WA	\$5,000	-\$55	\$49.11	\$1.25	-2	
Council Bluffs, IA		Stockton, CA	\$4,740	-\$57	\$46.50	\$1.18	0	
Soybeans	Sioux Falls, SD	Tacoma, WA	\$5,600	-\$51	\$55.11	\$1.50	0	
	Minneapolis, MN	Portland, OR	\$5,650	-\$56	\$55.56	\$1.51	1	
	Fargo, ND	Tacoma, WA	\$5,500	-\$45	\$54.17	\$1.47	1	
	Council Bluffs, IA	New Orleans, LA	\$4,525	\$70	\$45.63	\$1.24	1	
	Toledo, OH	Huntsville, AL	\$4,226	\$0	\$41.97	\$1.14	0	
Grand Island, NE	Portland, OR	\$5,460	\$98	\$55.20	\$1.50	1		

¹A unit train refers to shipments of at least 25 cars. Shuttle train rates are 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 & soybeans 60 lbs./bu.

³Percentage change year over year calculated using tariff rate plus fuel surcharge

Sources: www.bnsf.com, www.cpr.ca, www.csx.com, www.uprr.com

*Regional economic areas defined by the Bureau of Economic Analysis (BEA)

Table 8

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

Commodity	Origin state	Destination region	Tariff rate/car ¹	Fuel surcharge per car ²	Tariff plus surcharge per:		Percent change ⁴ Y/Y
					metric ton ³	bushel ³	
Wheat	MT	Chihuahua, CI	\$7,459	\$0	\$76.21	\$2.07	-1
	OK	Cuautitlan, EM	\$6,596	\$42	\$67.82	\$1.84	0
	KS	Guadalajara, JA	\$7,077	\$125	\$73.59	\$2.00	1
	TX	Salinas Victoria, NL	\$4,197	\$24	\$43.13	\$1.17	1
Corn	IA	Guadalajara, JA	\$8,187	\$108	\$84.75	\$2.15	-3
	SD	Celaya, GJ	\$7,580	\$0	\$77.45	\$1.97	-4
	NE	Querretaro, QA	\$7,909	\$79	\$81.62	\$2.07	-1
	SD	Salinas Victoria, NL	\$6,635	\$0	\$67.79	\$1.72	1
	MO	Tlalnepantla, EM	\$7,268	\$77	\$75.05	\$1.90	-1
	SD	Torreon, CU	\$7,180	\$0	\$73.36	\$1.86	-2
Soybeans	MO	Bojay (Tula), HG	\$8,647	\$112	\$89.49	\$2.43	2
	NE	Guadalajara, JA	\$8,942	\$115	\$92.54	\$2.52	-2
	IA	El Castillo, JA	\$8,960	\$0	\$91.55	\$2.49	-4
	KS	Torreon, CU	\$7,489	\$79	\$77.33	\$2.10	2
Sorghum	NE	Celaya, GJ	\$7,164	\$98	\$74.20	\$1.88	-4
	KS	Querretaro, QA	\$7,608	\$52	\$78.26	\$1.99	0
	NE	Salinas Victoria, NL	\$6,213	\$42	\$63.91	\$1.62	0
	NE	Torreon, CU	\$6,607	\$74	\$68.26	\$1.73	-4

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.

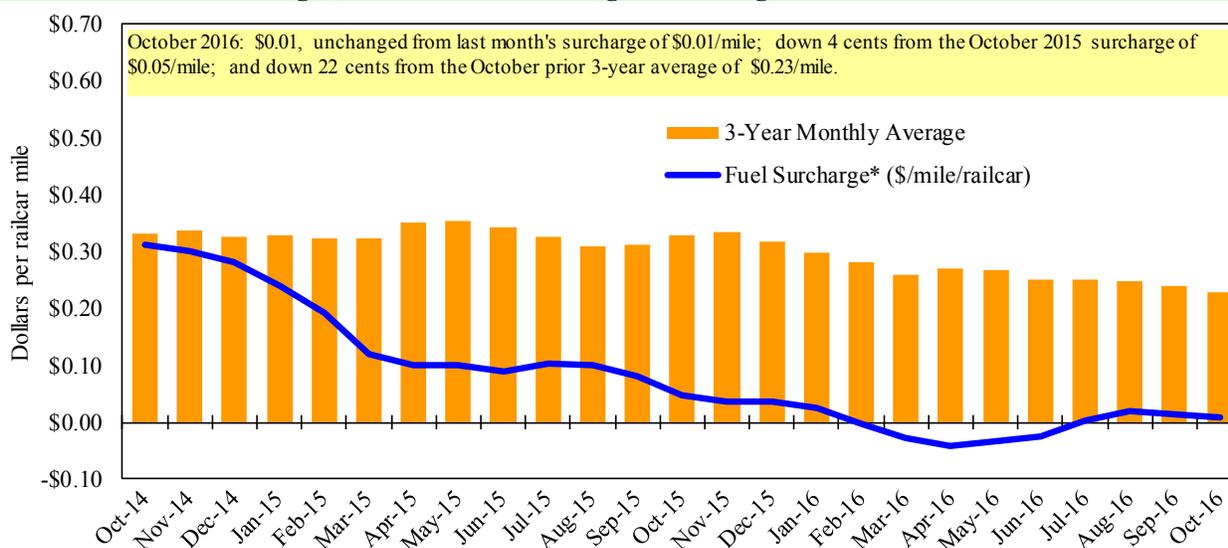
²Fuel surcharge adjusted to reflect the change in Ferrocarril Mexicano, S.A. de C.V railroad fuel surcharge policy as of 10/01/2009

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	10/25/2016	583	538	513	388	388	388	318
	10/18/2016	495	403	368	290	313	288	243
\$/ton	10/25/2016	36.09	28.62	23.80	15.48	18.20	15.68	9.99
	10/18/2016	30.64	21.44	17.08	11.57	14.68	11.64	7.63
Current week % change from the same week:								
	Last year	18	26	22	16	-7	-7	6
	3-year avg. ²	-9	-20	-22	-34	-43	-43	-42
Rate¹	November	500	425	393	300	305	305	248
	January	-	-	340	250	250	250	203

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

Source: Transportation & Marketing Programs/AMS/USDA

Figure 9

Benchmark tariff rates

Calculating barge rate per ton:

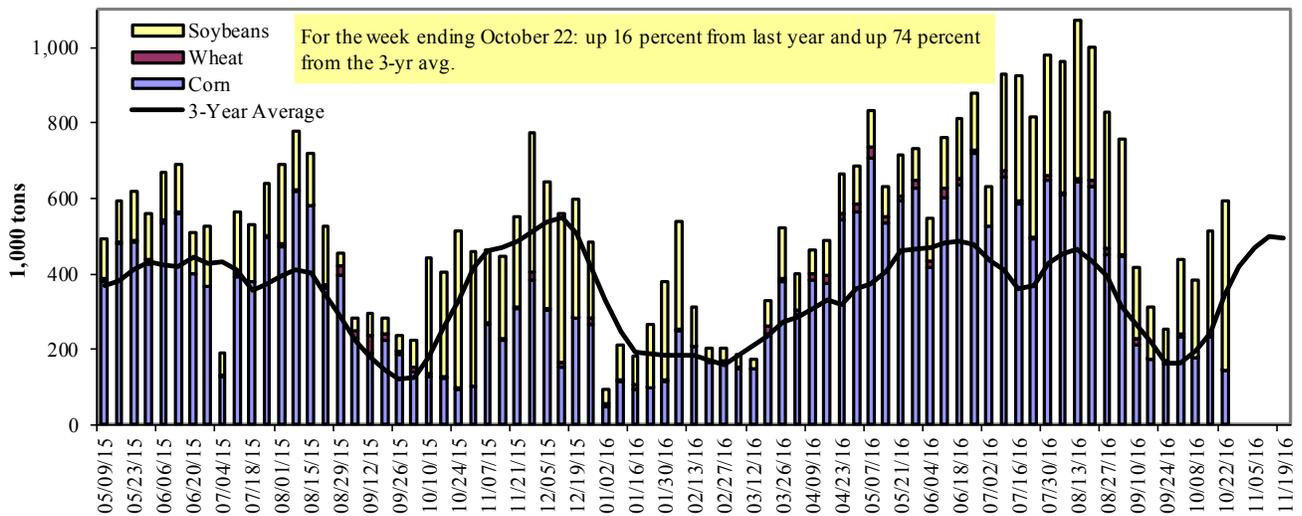
(Rate * 1976 tariff benchmark rate per ton)/100

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 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 10/22/2016	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	61	0	391	13	464
Winfield, MO (L25)	101	0	357	3	460
Alton, IL (L26)	188	0	493	3	684
Granite City, IL (L27)	143	2	450	3	598
Illinois River (L8)	80	0	102	0	182
Ohio River (L52)	39	0	263	0	302
Arkansas River (L1)	3	24	34	0	60
Weekly total - 2016	185	25	747	3	960
Weekly total - 2015	176	8	760	15	958
2016 YTD ¹	19,716	1,794	10,923	297	32,731
2015 YTD	16,183	1,543	9,298	256	27,280
2016 as % of 2015 YTD	122	116	117	116	120
Last 4 weeks as % of 2015 ²	132	176	82	74	97
Total 2015	19,215	1,686	14,191	359	35,451

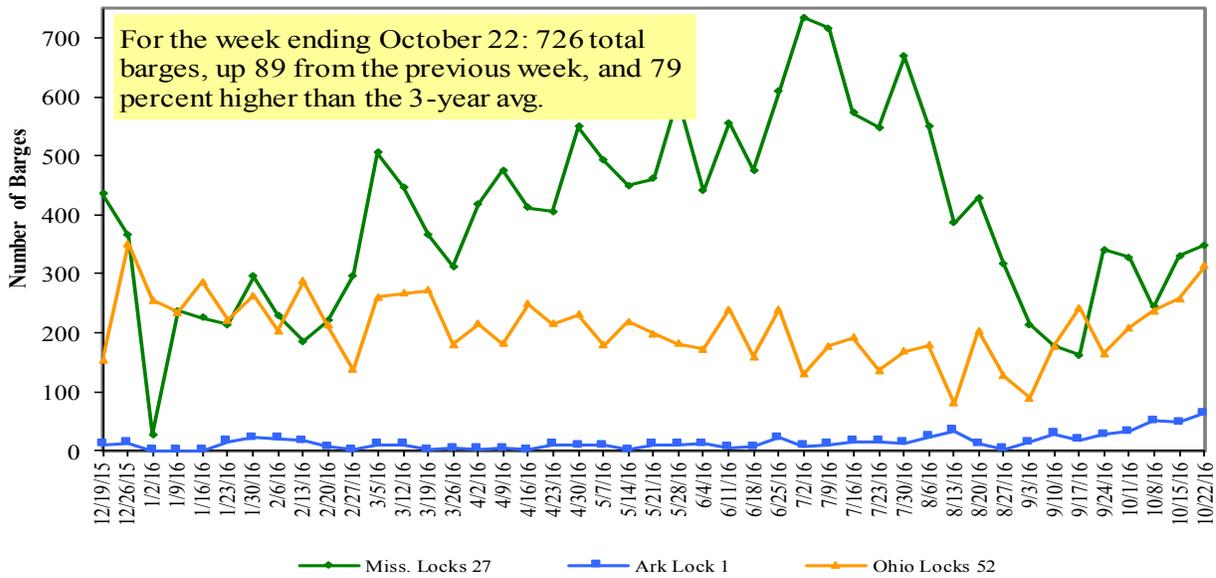
¹ Weekly total, YTD (year-to-date) and calendar year total includes Miss/27, Ohio/52, and Ark/1; "Other" refers to oats, barley, sorghum, and rye.

² As a percent of same period in 2015.

Note: Total may not add exactly, due to rounding

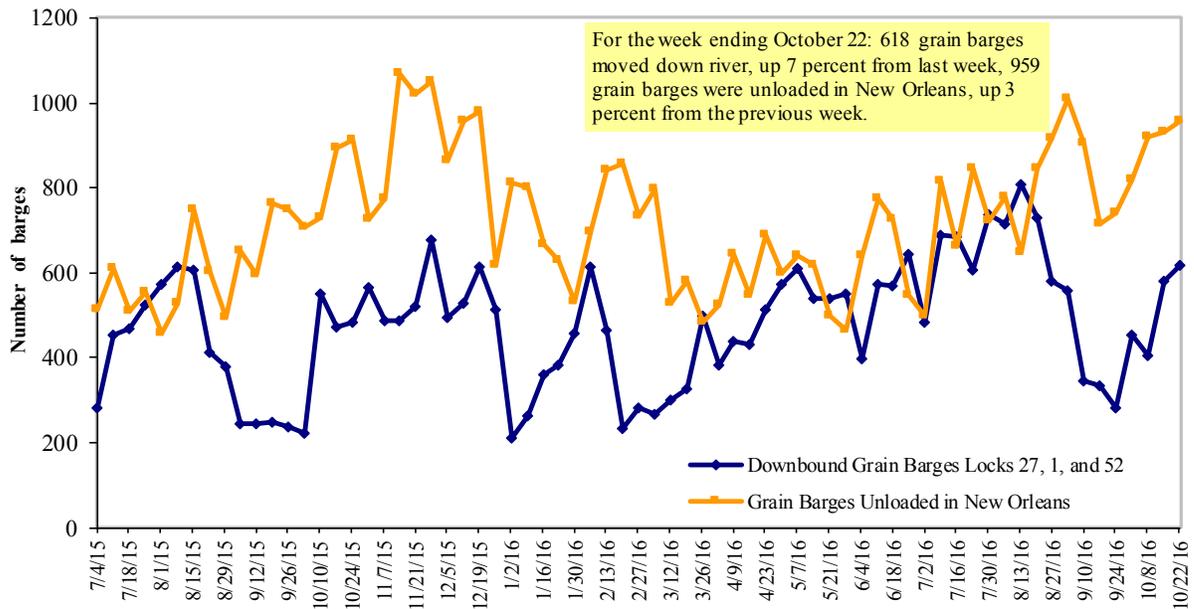
Source: U.S. Army Corps of Engineers

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 Prices¹, Week Ending 10/24/2016 (US \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	2.468	-0.004	-0.031
	New England	2.485	0.008	-0.068
	Central Atlantic	2.581	0.002	-0.039
	Lower Atlantic	2.378	-0.011	-0.018
II	Midwest ²	2.451	-0.007	-0.089
III	Gulf Coast ³	2.353	-0.004	0.054
IV	Rocky Mountain	2.550	0.004	0.042
V	West Coast	2.747	0.005	0.044
	West Coast less California	2.645	0.010	0.078
	California	2.828	0.000	0.015
Total	U.S.	2.478	-0.003	-0.020

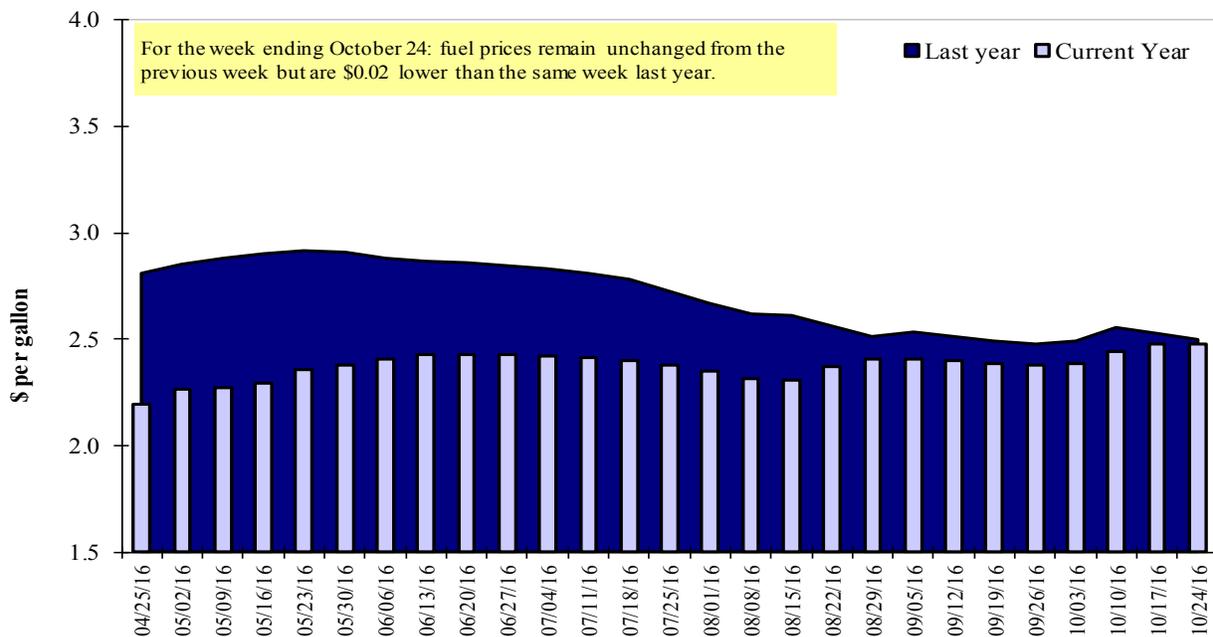
¹Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

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									
10/13/2016	1,825	527	1,554	941	73	4,919	14,964	24,049	43,932
This week year ago	1,036	616	1,443	756	134	3,984	7,690	19,142	30,816
Cumulative exports-marketing year²									
2016/17 YTD	4,770	823	3,122	1,653	137	10,503	7,536	7,670	25,709
2015/16 YTD	2,278	1,527	2,546	1,431	396	8,178	4,190	6,047	18,415
YTD 2016/17 as % of 2015/16	209	54	123	116	35	128	180	127	140
Last 4 wks as % of same period 2015/16	187	80	103	122	51	123	193	127	143
2015/16 Total	5,538	3,057	6,285	3,551	670	19,101	45,564	49,821	114,487
2014/15 Total	7,009	3,654	7,250	3,758	665	22,336	45,205	49,614	117,155

¹ Current unshipped (outstanding) export sales to date

² Shipped export sales to date; new marketing year now in effect for wheat; new marketing year now in effect for 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 Importers¹ of U.S. Corn

For the week ending 10/13/2016	Total Commitments ²		% change current MY from last MY	Exports ³ 3-year avg 2013-2015
	2016/17 Current MY	2015/16 Last MY		
	- 1,000 mt -			- 1,000 mt -
Japan	2,805	1,922	46	10,997
Mexico	6,339	4,923	29	11,542
Korea	1,508	124	1,114	3,933
Colombia	1,402	974	44	3,994
Taiwan	867	223	289	1,991
Top 5 Importers	12,921	8,166	58	32,457
Total US corn export sales	22,500	11,880	89	47,026
% of Projected	40%	25%		
Change from prior week	1,023	248		
Top 5 importers' share of U.S. corn export sales	57%	69%		69%
USDA forecast, October 2016	56,616	48,295	17	
Corn Use for Ethanol USDA forecast, October 2016	133,985	132,233	1	

(n) indicates negative number.

¹Based on FAS Marketing Year Ranking Reports - 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/esrquery/. Total commitments change from prior week could include revisions from previous
Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query--
http://www.fas.usda.gov/esrquery/

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 10/13/2016	Total Commitments ²		% change current MY from last MY	Exports ³ 3-yr avg. 2013-2015
	2016/17 Current MY	2015/16 Last MY		
	- 1,000 mt -			- 1,000 mt -
China	15,541	12,449	25	29,033
Mexico	1,265	1,262	0	3,295
Indonesia	470	302	55	2,065
Japan	856	864	(1)	1,994
Taiwan	693	387	79	1,226
Top 5 importers	18,823	15,264	23	37,614
Total US soybean export sales	31,719	25,190	26	39,169
% of Projected	57%	48%		
Change from prior week	2,009	1,938		
Top 5 importers' share of U.S. soybean export sales	59%	61%		96%
USDA forecast, October 2016	55,177	52,752	5	

(n) indicates negative number.

¹ Based on FAS Marketing Year Ranking Reports - 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 from prior week could include revisions from previous week's³ 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 10/13/2016	Total Commitments ²		% change current MY from last MY	Exports ³ 3-yr avg 2013-2015
	2016/17 Current MY	2015/16 Last MY		
	- 1,000 mt -			- 1,000 mt -
Japan	1,397	1,221	14	2,743
Mexico	1,540	1,182	30	2,660
Nigeria	697	992	(30)	1,978
Philippines	1,641	1,259	30	2,156
Brazil	995	310	221	2,076
Korea	840	662	27	1,170
Taiwan	512	512	0	1,005
Indonesia	478	193	148	776
Colombia	453	411	10	679
Thailand	440	194	127	618
Top 10 importers	8,552	6,741	27	15,861
Total US wheat export sales	15,422	12,162	27	24,485
% of Projected	58%	58%		
Change from prior week	514	358		
Top 10 importers' share of U.S. wheat export sales	55%	55%		65%
USDA forecast, October 2016	26,567	21,117	26	

(n) indicates negative number.

¹ Based on FAS Marketing Year Ranking Reports - 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 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.

Table 16

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

Port Regions	For the Week Ending 10/20/16	Previous Week*	Current Week as % of Previous	2016 YTD*	2015 YTD*	2016 YTD as % of 2015 YTD	Last 4-weeks as % of:		2015 Total*
							Last Year	Prior 3-yr. avg.	
Pacific Northwest									
Wheat	52	117	44	10,231	9,248	111	66	62	10,985
Corn	0	0	n/a	10,449	7,057	148	506	658	7,232
Soybeans	834	913	91	7,996	6,629	121	107	151	11,809
Total	885	1,030	86	28,676	22,935	125	110	137	30,027
Mississippi Gulf									
Wheat	87	39	223	2,997	3,787	79	93	38	4,504
Corn	372	679	55	26,301	23,424	112	208	135	26,701
Soybeans	1,646	1,443	114	22,521	18,491	122	101	128	29,593
Total	2,104	2,162	97	51,819	45,702	113	122	123	60,797
Texas Gulf									
Wheat	38	241	16	4,796	3,123	154	480	165	3,724
Corn	31	0	n/a	1,419	541	262	430	1289	596
Soybeans	130	54	242	308	306	101	225	234	864
Total	199	294	68	6,524	3,970	164	388	196	5,184
Interior									
Wheat	41	47	87	1,264	1,198	106	202	217	1,388
Corn	124	129	96	5,799	5,122	113	124	129	6,201
Soybeans	171	112	152	3,306	2,763	120	86	96	3,518
Total	336	289	116	10,370	9,083	114	111	120	11,106
Great Lakes									
Wheat	15	37	40	881	836	105	143	151	997
Corn	0	11	0	463	485	95	36	46	485
Soybeans	31	113	28	331	347	95	66	88	733
Total	46	160	29	1,675	1,668	100	85	105	2,216
Atlantic									
Wheat	25	10	249	235	478	49	833	89	520
Corn	3	38	7	226	275	82	106	104	277
Soybeans	72	6	1,283	1,194	1,031	116	306	213	2,053
Total	99	54	185	1,655	1,784	93	168	127	2,850
U.S. total from ports**									
Wheat	257	490	53	20,406	18,670	109	129	89	22,118
Corn	529	858	62	44,658	36,904	121	201	155	41,492
Soybeans	2,884	2,641	109	35,656	29,568	121	103	133	48,570
Total	3,670	3,988	92	100,720	85,142	118	123	130	112,180

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

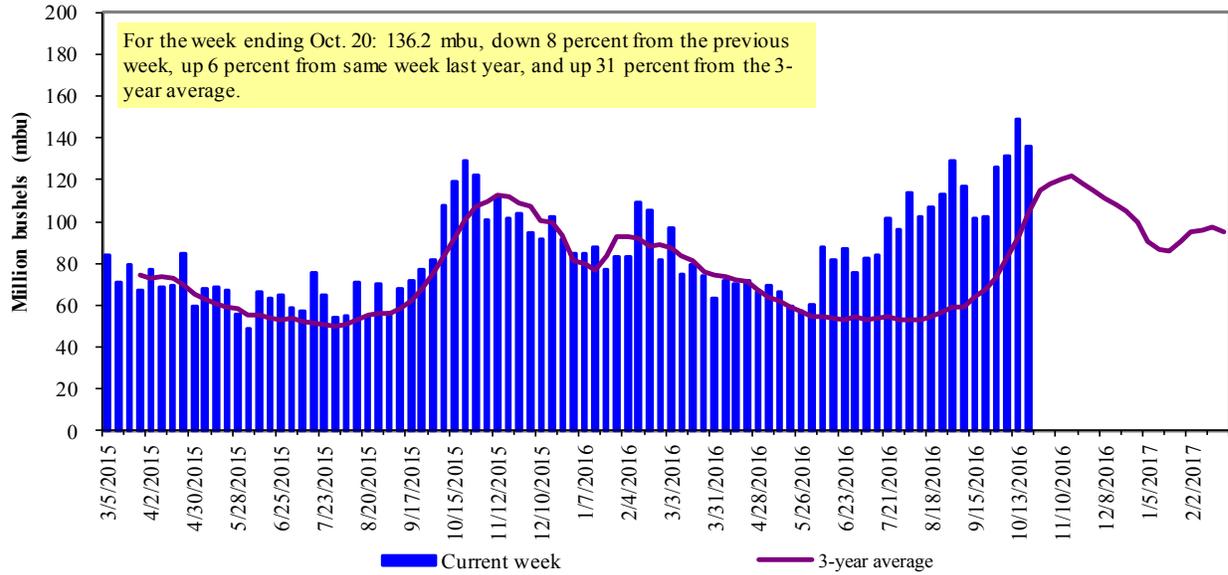
**Total only includes regions shown above

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 59 percent of the U.S. export grain shipments departed through the U.S. Gulf region in 2015.

Figure 14

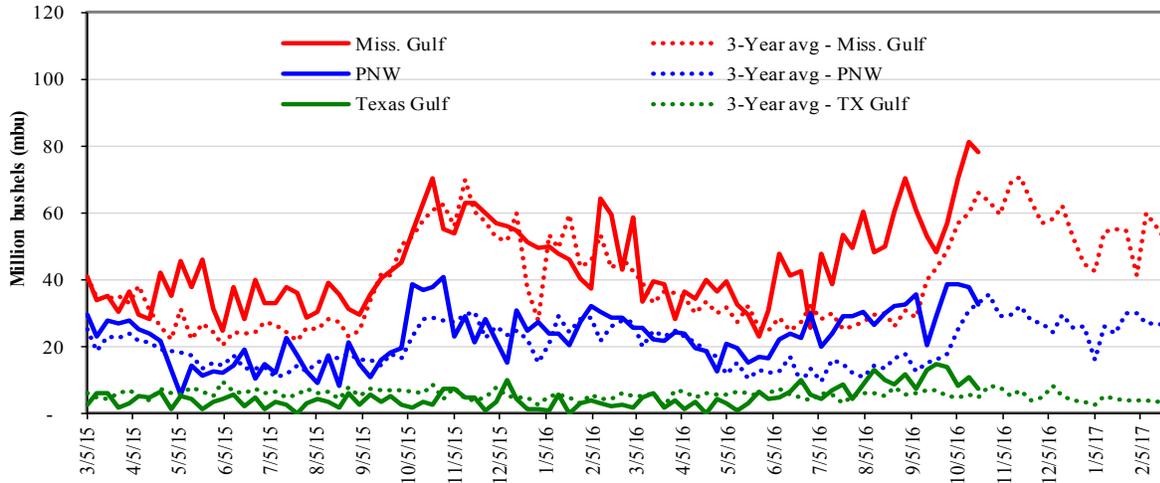
U.S. grain inspected for export (wheat, corn, and soybeans)



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 10/20/16 inspections (mbu):		Percent change from:				
Mississippi Gulf:	78.3	Last Week:	MS Gulf	TX Gulf	U.S. Gulf	PNW
PNW:	32.5	Last Year (same week):	down 4	up 202	down 7	down 14
Texas Gulf:	7.4	3-yr avg. (4-wk. mov. Avg):	up 35	up 44	up 36	up 22

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

Ocean Transportation

Table 17

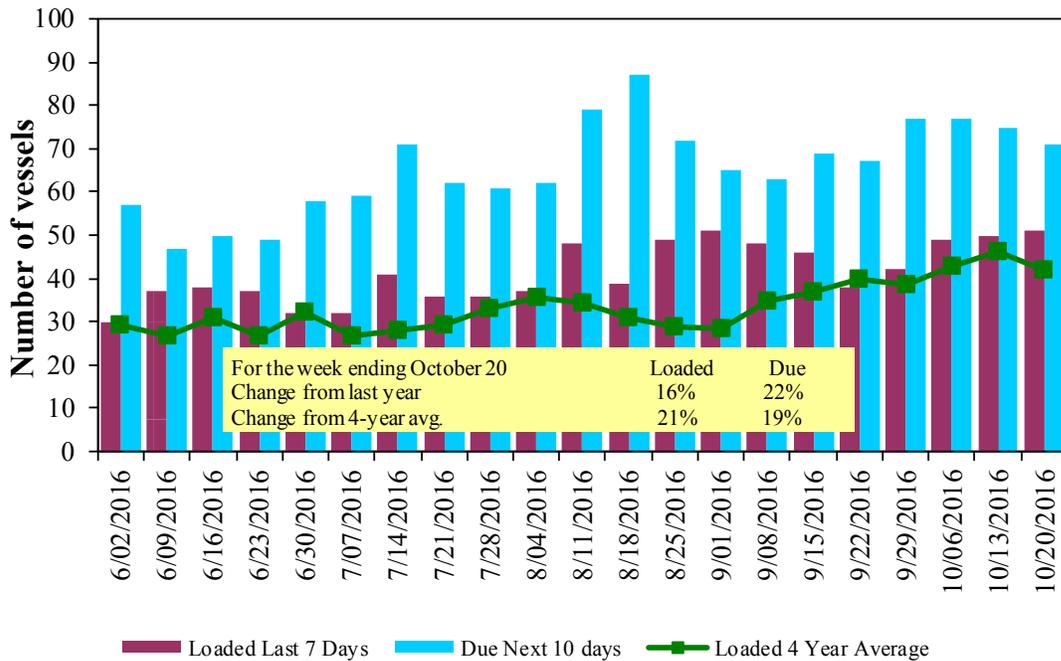
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

Date	Gulf			Pacific Northwest	Vancouver B.C.
	In port	Loaded 7-days	Due next 10-days	In port	In port
10/20/2016	57	51	71	24	n/a
10/13/2016	57	50	75	15	n/a
2015 range	(25..54)	(28..54)	(36..80)	(3..26)	n/a
2015 avg.	42	38	56	11	n/a

Source: Transportation & Marketing Programs/AMS/USDA

Figure 16

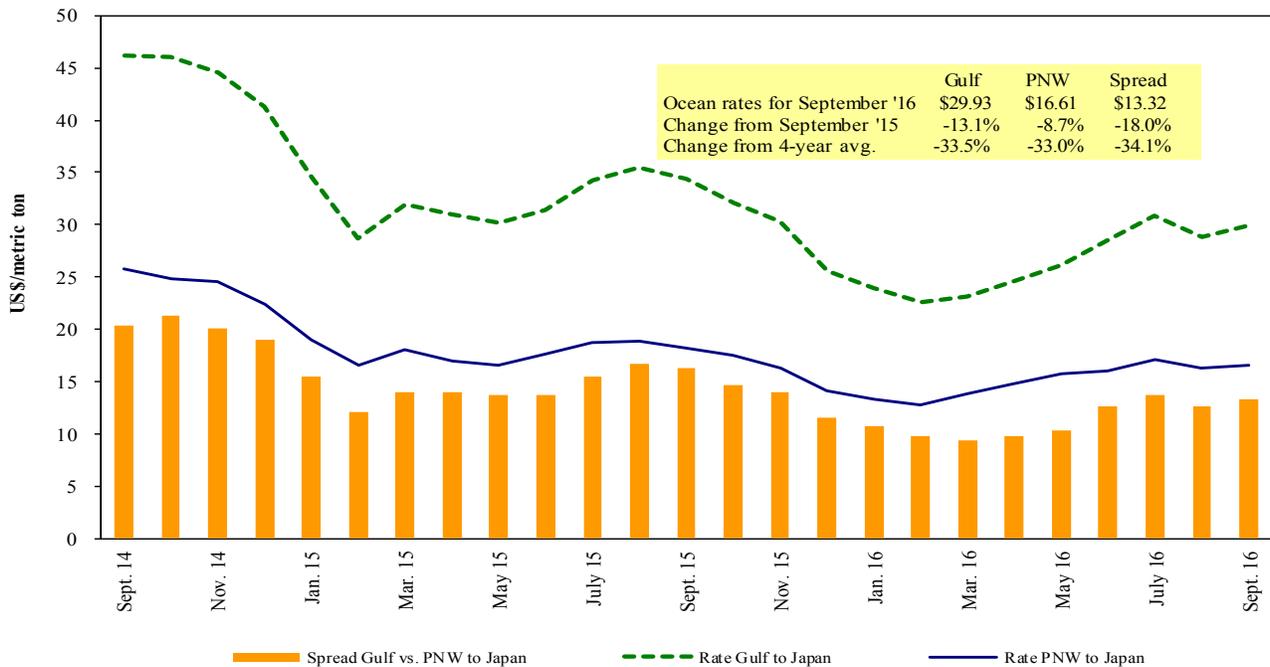
U.S. Gulf Vessel Loading Activity



Source: Transportation & Marketing Programs/AMS/USDA

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 10/22/2016

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	China	Heavy Grain	Oct 20/30	65,000	27.50
U.S. Gulf	China	Heavy Grain	Oct 10/20	60,000	28.25
U.S. Gulf	China	Heavy Grain	Oct 5/15	66,000	28.00
U.S. Gulf	China	Heavy Grain	Sep 20/25	60,000	27.75
U.S. Gulf	China	Heavy Grain	Sep 1/10	60,000	27.00
U.S. Gulf	China	Heavy Grain	Aug 25/Sep 5	66,000	26.25
U.S. Gulf	China	Heavy Grain	Aug 24/30	60,000	26.40
U.S. Gulf	China	Heavy Grain	Aug 16/26	60,000	26.00
U.S. Gulf	South Africa	Sorghum	Sep 15/25	20,000	63.50*
U.S. Gulf	Djibouti	Wheat	Aug 22/31	47,720	46.48*
PNW	Bangladesh	Wheat	Dec 1/10	12,500	160.33*
Vancouver	China	Heavy Grain	Nov 1/10	50,000	31.50
PNW	Bangladesh	Wheat	Nov 1/10	12,500	163.55*
PNW	Taiwan	Wheat	Sep 8/22	54,000	21.10
Black Sea	Spanish Mediterranean	Heavy Grain	Oct 14/18	60,000	9.35
Brazil	Japan	Heavy Grain	Sep 1/30	62,000	19.00
Brazil	Malaysia	Heavy Grain	Sep 1/30	65,000	17.00
River Plate	Algeria	Corn	Sep 24/28	40,000	19.50
Ukraine	Iran	Wheat	Oct 10/17	60,000	22.25
Ukraine	Morocco	Heavy Grain	Aug 29/Sep 3	30,000	16.00

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

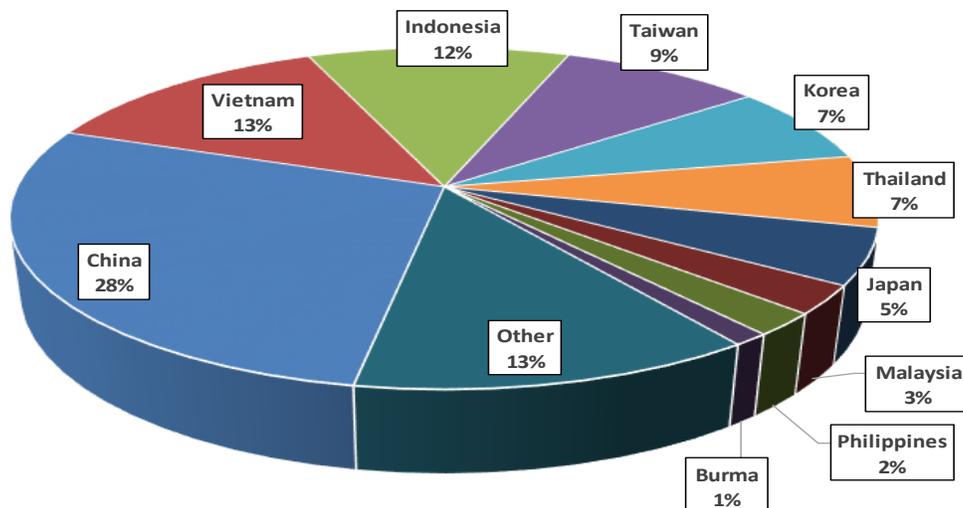
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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

In 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-August 2016

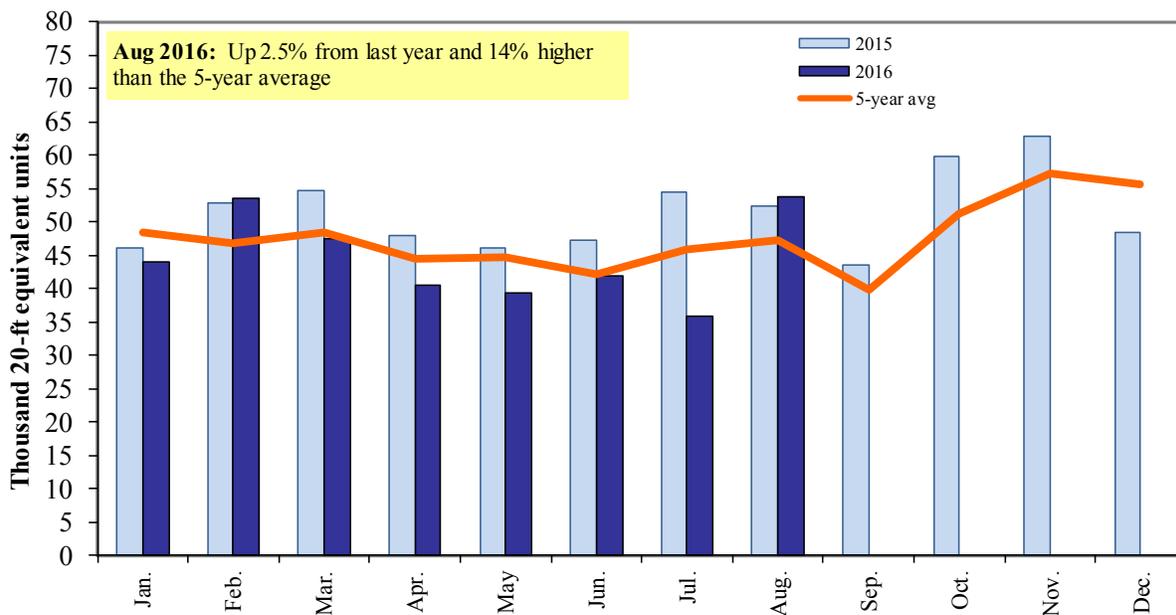


Source: USDA/Agricultural Marketing Service/Transportation Services Division analysis of Port Import Export Reporting Service (PIERS) data

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, 230310, 110220, 110290, 120100, 230210, 230990, 230330, and 120810.

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