



Grain Transportation Report

A weekly publication of the Agricultural Marketing Service

www.ams.usda.gov/GTR

Contact Us

March 30, 2017

WEEKLY HIGHLIGHTS

Contents

Article/
Calendar

Grain
Transportation
Indicators

Rail

Barge

Truck

Exports

Ocean

Brazil

Mexico

Grain Truck/Ocean
Rate Advisory

Datasets

Specialists

Subscription
Information

The next
release is
April 6, 2017

Grain Inspections Down but Remain Above Average

For the week ending March 23, **total inspections of grain** (corn, wheat, and soybeans) for export from major U.S. export regions reached 2.68 million metric tons (mmt), down 4 percent from the previous week, but up 39 percent from the same time last year, and 23 percent above the 3-year average. Despite decreases the last 2 weeks, total grain inspections during the last 4 weeks are 32 percent above last year and 28 percent above the 3-year average. Corn inspections increased 15 percent from the past week, but wheat and soybeans decreased 17 and 25 percent, respectively, for the same period. Pacific Northwest (PNW) inspections decreased 13 percent from the previous week, and Mississippi Gulf inspections decreased 3 percent. Outstanding export sales (unshipped) decreased for corn and wheat but increased for soybeans.

Missouri River Navigation Season Expected to be Normal

Normally, navigation on the Missouri River is only possible certain times of the year through a series of releases of stored water in upstream reservoirs. This year, with sufficient water levels in the reservoir system, the U.S. Army Corps of Engineers (Corps) is scheduling full service water flow for at least the first half of the Missouri River navigation season. Navigation opening dates are March 23 at Sioux City, IA; March 25 at Omaha, NE; and April 1 at St. Louis, MO. The Corps will determine the season ending date on July 1 after a reservoir level check. The typical ending date is December 1 at St. Louis, where the river flows into the Mississippi River. However, that date may be extended as conditions permit. Water flows off the Missouri River are important to supplement Mississippi River levels between St. Louis and Cairo, IL.

St. Lawrence Seaway Re-Opens

On March 20, the St. Lawrence Seaway opened for its 59th season. The Great Lakes/St. Lawrence Seaway System extends about 2,340 miles from Duluth, MN, to the Atlantic Ocean and connects northern U.S. shippers to domestic and international markets in Europe, South America, the Middle East, and Africa. Dominant commodities moving through the system include grain (mainly wheat and soybeans), iron ore, and coal. While total volume (36.2 mmt) fell 3.4 percent in 2016 compared to 2015, grain tonnage increased 3.8 percent. In 2016, 2.7 mmt of grain (44 percent wheat, 34 percent soybeans, and 22 percent corn) were inspected for export in U.S. ports on the Great Lakes, up 21 percent from 2015 (**GTR Table 16**).

Snapshots by Sector

Export Sales

For the week ending March 16, **unshipped balances** of wheat, corn, and soybeans totaled 31.9 mmt, up 57 percent from the same time last year. Net weekly **wheat export sales** were .419 mmt, up 59 percent from the previous week. Net **corn export sales** were 1.35 mmt, up 12 percent from the previous week, and net **soybean export sales** were .738 mmt, up 56 percent from the past week.

Rail

U.S. Class I railroads originated 23,243 **grain carloads** for the week ending March 18, down 4 percent from the previous week, up 8 percent from last year, and up 5 percent from the 3-year average.

Average April shuttle **secondary railcar** bids/offers per car were \$219 above tariff for the week ending March 23, up \$416 from last week, and \$394 higher than last year. Average secondary non-shuttle railcar bids/offers per car were \$25 below tariff, down \$38 from last week. There were no non-shuttle bids/offers this week last year.

Barge

For the week ending March 25, **barge grain movements** totaled 1,066,227 tons, 22 percent higher than the last week, and up 37 percent from the same period last year.

For the week ending March 25, 668 grain barges **moved down river**, up 22 percent from last week, 793 grain barges were **unloaded in New Orleans**, up 21 percent from the previous week.

Ocean

For the week ending March 23, 44 **ocean-going grain vessels** were loaded in the Gulf, 16 percent more than the same period last year. Fifty-two vessels are expected to be loaded within the next 10 days, 18 percent more than the same period last year.

For the week ending March 23, the ocean freight rate for shipping bulk grain from the Gulf to Japan was \$38.00 per metric ton, 1 percent less than the previous week. The cost of shipping from the PNW to Japan was \$20.50 per metric ton, 2 percent less than the previous week.

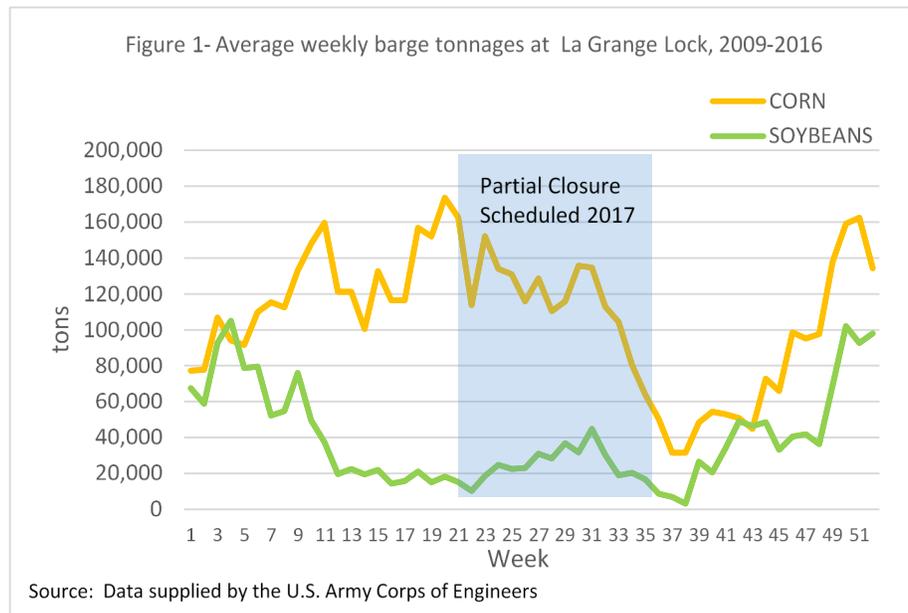
Fuel

During the week ending March 27, average **diesel fuel prices** decreased 1 cent from previous week at \$2.53 per gallon, 41 cents higher than the same week last year.

Feature Article/Calendar

La Grange Lock Partial Closure and Impact on Grain Shipments

Due to necessary repairs, the U.S. Army Corps of Engineers (USACE) has scheduled a partial closure of La Grange Lock on the Illinois Waterway (IW) this summer. The repair work will stop traffic during a 10-hour period and re-open for a 14-hour period each day. This may slow grain barge movements as farmers sell off stored grain in anticipation of the harvest of 2017-18 crops. Figure 1 shows the average weekly tonnages of down-bound corn and soybeans at La Grange Lock during calendar years 2009-2016. The partial closure is scheduled to begin in June and be completed by August, roughly during weeks 21-35 of the calendar year. The partial closure will occur during the gradual decline in corn shipments that typically occurs during summer. Because soybeans are not stored for long periods, they do not have a similar pattern to corn in terms of a gradual summer shipment decline, but similar to corn do increase at harvest time in September and October.



With the selling of old crop between June 1 and September 1 being seasonally slow, it is feasible for IW grain shippers to continue shipping by barge during the planned closure period even though navigation conditions will be limited to only part of each day. This means that because of the season when the closures are planned they are not expected to be a significant logistical or economic disadvantage. Nevertheless, if the partial lock closure becomes a significant issue, shippers may choose to ship on the Ohio River or by rail, albeit likely at a higher cost. For example, some major and regional rail lines in western Illinois can provide rail service to transport grain to the Mississippi Gulf, or re-route to other export outlets. In 2016, the number of railroad grain carloadings was relatively smaller during the weeks when La Grange Lock is scheduled to close, which suggests rail may have the capability to pick up the extra deliveries (**GTR Figure 3**). However, considerations of freight rates, contracts between grain merchandisers, spreads, familiarity, and availability to adjust the logistics may affect the effectiveness and decisions to switch to rail.

On the bright side, the scheduled repairs will

	Miss 25	La Grange	Miss 26	Miss 25 percent of Miss 26	La Grange percent of Miss 26	Miss 25 & La Grange percent of Miss 26
	million tons					
2009	14.8	9.6	26.6	56%	36%	92%
2010	12.8	9.3	23.8	54%	39%	93%
2011	12.0	7.9	20.8	58%	38%	96%
2012	11.8	6.8	20.1	59%	34%	93%
2013	6.5	5.0	12.2	53%	41%	94%
2014	9.1	8.2	19.7	46%	42%	88%
2015	12.9	6.7	21.7	60%	31%	90%
2016	19.9	9.7	31.5	63%	31%	94%

Source: Data supplied by the U.S. Army Corps of Engineers

significantly boost the reliability of the lock for shippers to continue moving grains to the Gulf ports for the export markets. Table 1 shows the annual tonnages of grain at Mississippi (MS) River Lock 25, La Grange Lock, and Mississippi Locks 26 (also known as Melvin Price Locks). From 2009 to 2016, MS Lock 25 contributed 46 to 63 percent of MS Lock 26 tonnages, while La Grange contributed 31 to 42 percent. Together, the two locks contribute 88 to 96 percent of MS Locks 26 tonnages.¹ In 2016, the amount of down-bound grain that transited the La Grange Lock was equivalent to 6 percent of all grain exports, with MS Lock 25 volumes equivalent to 13 percent and MS Locks 26 equivalent to 20 percent.

The recent study sponsored by USDA's AMS, [Economic Impacts Analysis of Inland Waterways Disruptions on the Transport of Corn and Soybeans](#), examined the reduced regional and national economic activity resulting from unplanned hypothetical navigation disruptions on the Upper Mississippi River-Illinois Waterway.² The study looked at impacts on U.S. corn and soybean stakeholders and certain sectors of the transportation industry if long-term disruptions were to occur because of lock closures for major unanticipated repairs. The two locks studied were the La Grange Lock on the IW and MS River Lock 25 (see figure 2). As a result of a complete unplanned closure, the

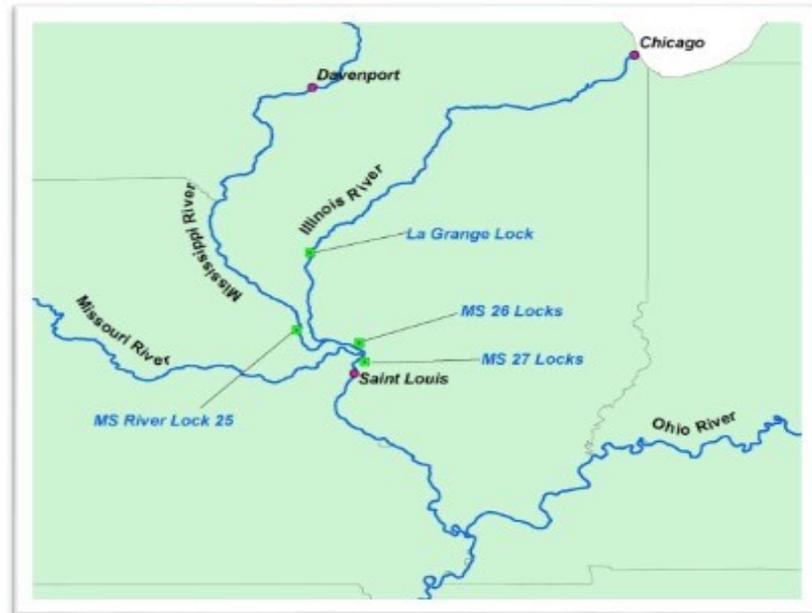


Figure 2- Selected locks on Upper Mississippi River and Illinois Waterway

study showed that a drop in corn and soybeans prices could range between 13 to 44 cents per bushel depending upon the duration of the disruption and the extent to which rail rates increase when grain is diverted away from the river. In addition, the study showed that closing the locks would reduce the number of jobs, labor income, and total industry output for the U.S economy.

Fortunately, USACE has planned the partial closure of the La Grange Lock on the Illinois Waterway (IW) during a seasonally slow period this summer and therefore the repairs are not expected to cause significant problems for those shippers that choose to move grain during that period.

Nick.Marathon@ams.usda.gov, Matt.Chang@ams.usda.gov

¹ Locks 26 has a main lock and an auxiliary lock. The main lock is 1,200 feet long and 110 feet wide and the auxiliary lock is 600 feet long and 110 feet wide. Comparatively, Lock 25 and La Grange are each 110 feet wide and 600 feet long.

² A summary and the complete report can be found at <https://www.ams.usda.gov/sites/default/files/media/EconomicImpactsAnalysisInlandWaterwaysSummary.pdf>.

Grain Transportation Indicators

Table 1

Grain Transport Cost Indicators¹

For the week ending	Truck	Rail		Barge	Ocean		
		Unit	Train	Shuttle	Gulf	Pacific	
03/29/17	170	261		220	142	170	145
03/22/17	170	263		202	149	172	149

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)

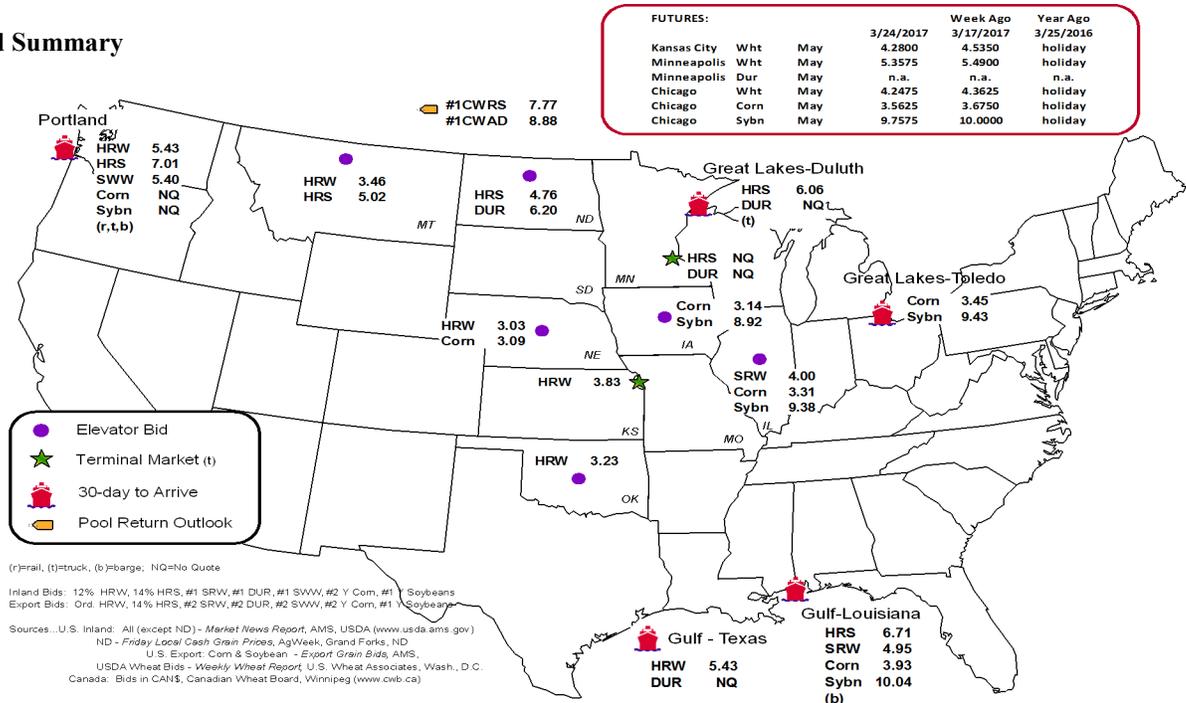
Commodity	Origin--Destination	3/24/2017	3/17/2017
Corn	IL--Gulf	-0.62	-0.67
Corn	NE--Gulf	-0.84	-0.89
Soybean	IA--Gulf	-1.12	-1.17
HRW	KS--Gulf	-1.60	-1.55
HRS	ND--Portland	-2.25	-2.20

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		Pacific	Atlantic &	Total	Week ending	Cross-Border Mexico ³
	Gulf	Texas Gulf	Northwest	East Gulf			
03/22/2017 ^p	1,167	2,346	4,698	580	8,791	3/18/2017	2,100
03/15/2017 ^r	798	2,223	6,312	402	9,735	3/11/2017	2,181
2017 YTD ^r	10,591	24,081	74,543	8,037	117,252	2017 YTD	24,428
2016 YTD ^r	5,076	18,782	71,445	7,433	102,736	2016 YTD	21,613
2017 YTD as % of 2016 YTD	209	128	104	108	114	% change YTD	113
Last 4 weeks as % of 2016 ²	1,029	134	111	143	129	Last 4wks % 2016	112
Last 4 weeks as % of 4-year avg. ²	249	157	128	98	138	Last 4wks % 4 yr	125
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.

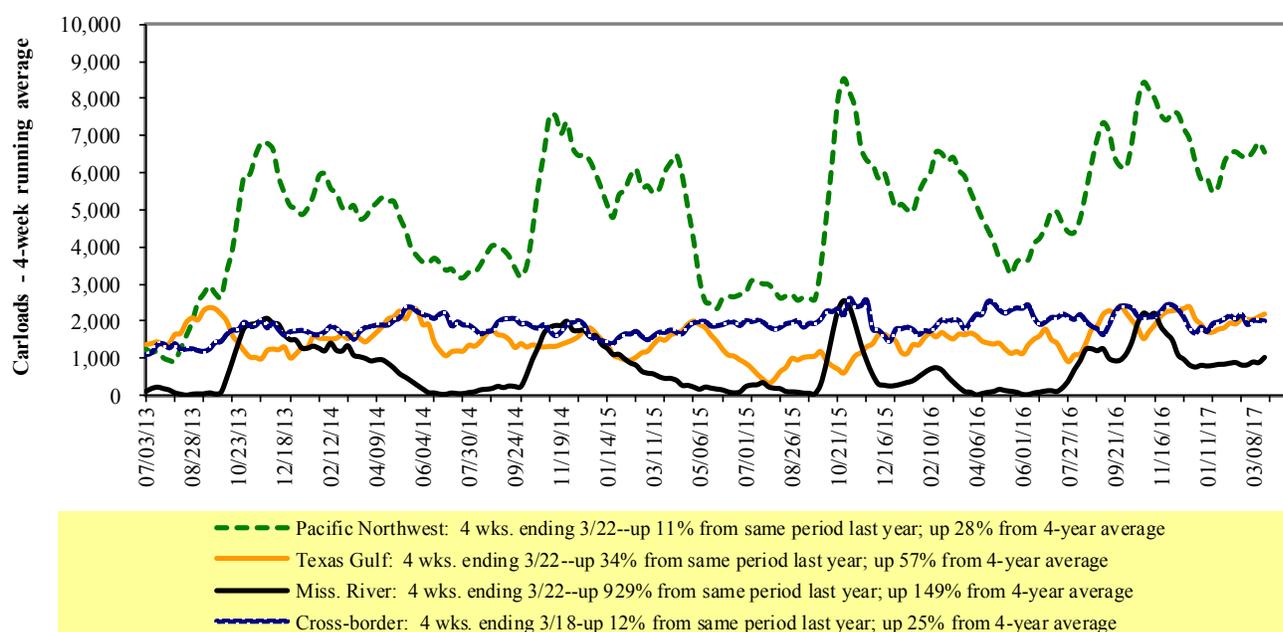
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

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)

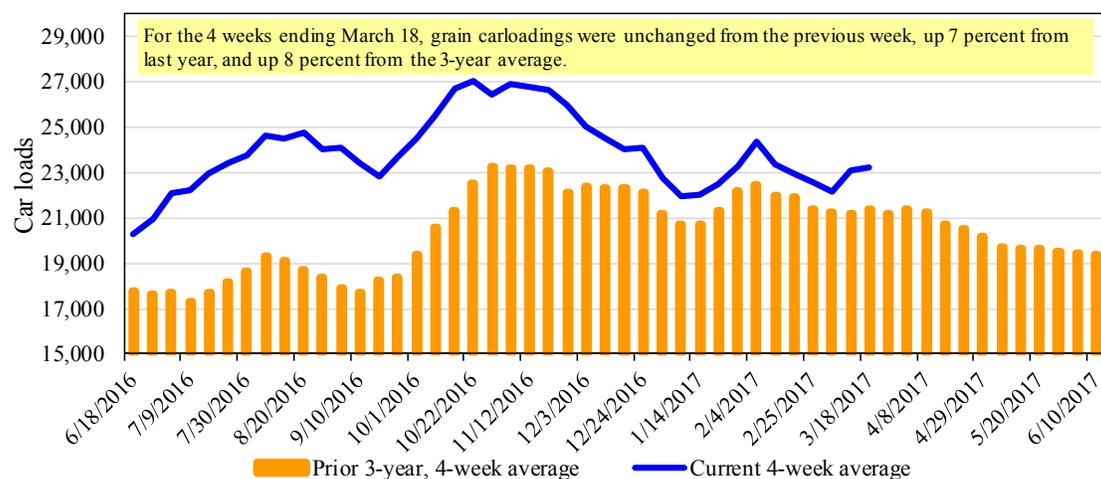
For the week ending: 3/18/2017	East		West			U.S. total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,839	2,843	10,754	973	6,834	23,243	4,078	4,034
This week last year	1,805	2,942	11,090	872	4,783	21,492	2,903	4,704
2017 YTD	21,675	30,740	122,599	11,185	68,770	254,969	42,730	45,658
2016 YTD	21,751	31,156	121,763	9,726	58,289	242,685	37,271	47,578
2017 YTD as % of 2016 YTD	100	99	101	115	118	105	115	96
Last 4 weeks as % of 2016*	99	95	101	105	129	107	127	92
Last 4 weeks as % of 3-yr avg.**	98	90	109	108	122	108	110	94
Total 2016	95,179	150,919	590,779	45,246	300,836	1,182,959	193,986	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 Offerings¹ (\$/car)²

For the week ending: 3/23/2017		Delivery period							
		Apr-17	Apr-16	May-17	May-16	Jun-17	Jun-16	Jul-17	Jul-16
BNSF ³	COT grain units	0	no bids	1	no bids				
	COT grain single-car ⁵	13	0	no bids	no bids	no bids	no bids	11	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

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.

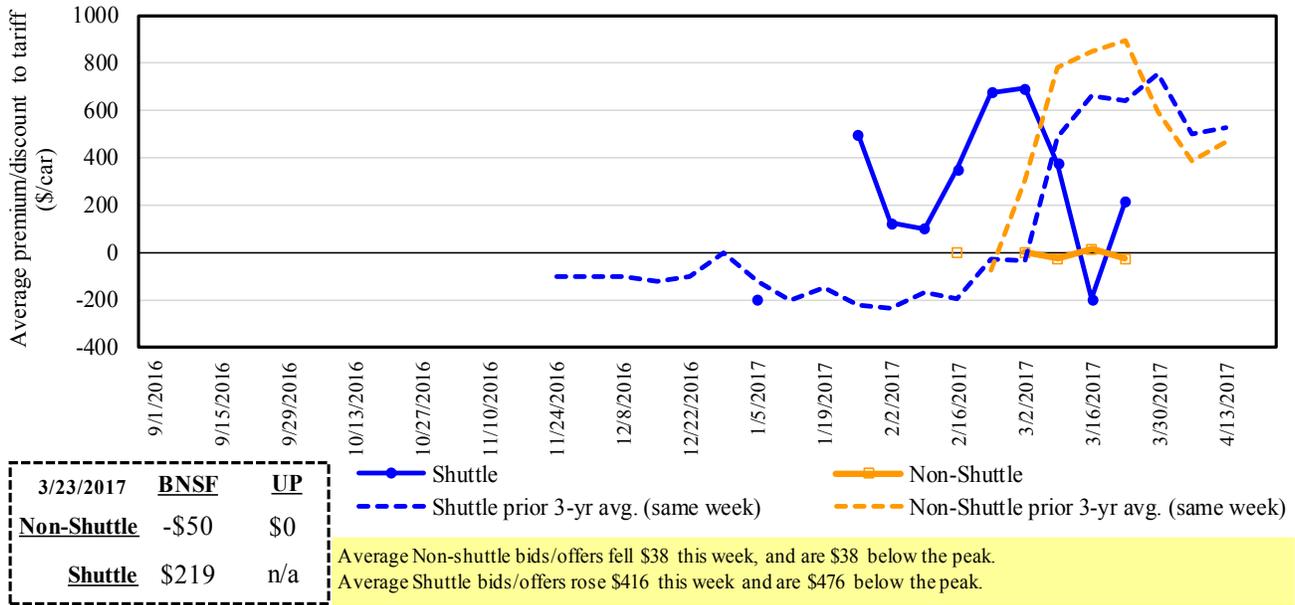
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

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

Source: Transportation & Marketing Programs/AMS/USDA.

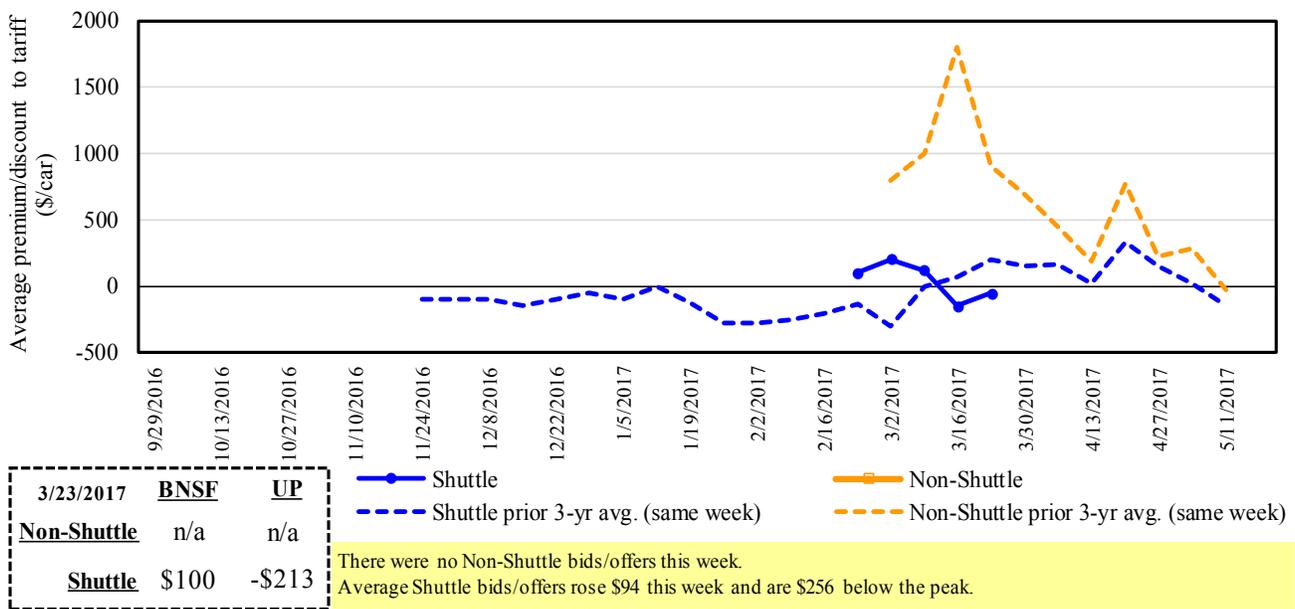
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

Figure 4
Bids/Offers for Railcars to be Delivered in April 2017, Secondary Market



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

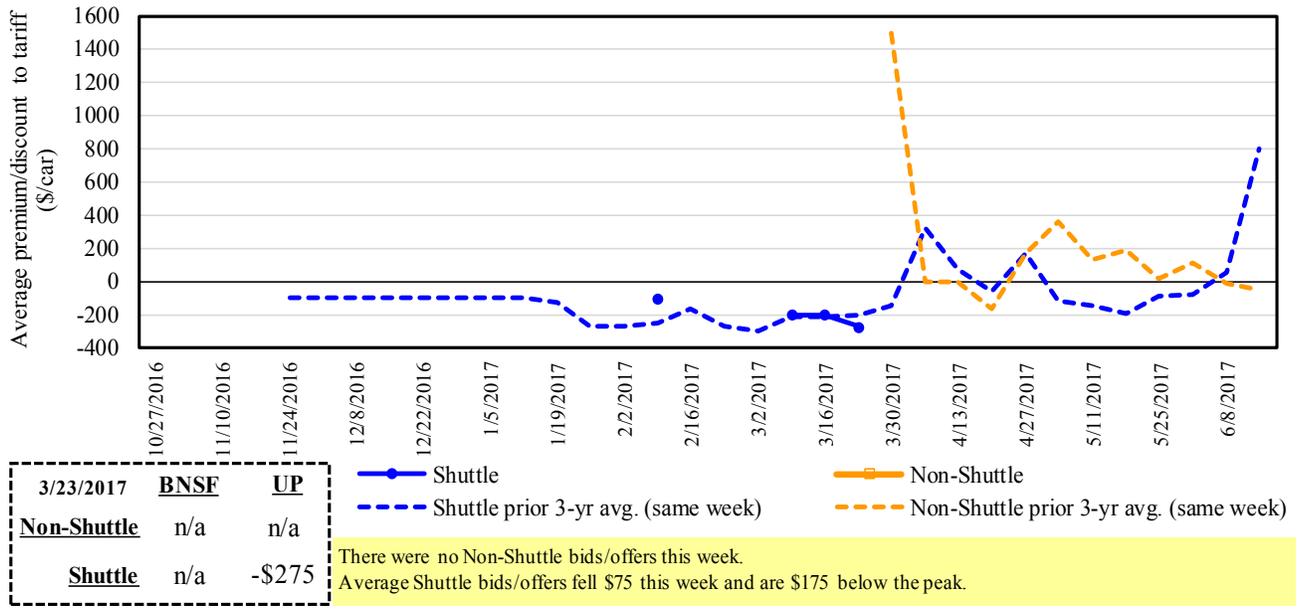
Figure 5
Bids/Offers for Railcars to be Delivered in May 2017, Secondary Market



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 June 2017, Secondary Market



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: 3/23/2017		Delivery period					
		Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17
Non-shuttle	BNSF-GF	(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 2016	n/a	n/a	n/a	n/a	n/a	n/a
	UP-Pool	0	n/a	n/a	n/a	n/a	n/a
	Change from last week	0	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	219	100	n/a	n/a	n/a	n/a
	Change from last week	313	n/a	n/a	n/a	n/a	n/a
	Change from same week 2016	419	n/a	n/a	n/a	n/a	n/a
	UP-Pool	n/a	(213)	(275)	n/a	n/a	n/a
	Change from last week	n/a	(63)	(75)	n/a	n/a	n/a
	Change from same week 2016	n/a	(63)	n/a	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

March, 2017	Origin region*	Destination region*	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per:		Percent change Y/Y ³
					metric ton	bushel ²	
Unit train							
Wheat	Wichita, KS	St. Louis, MO	\$3,770	\$51	\$37.94	\$1.03	6
	Grand Forks, ND	Duluth-Superior, MN	\$4,143	\$9	\$41.23	\$1.12	17
	Wichita, KS	Los Angeles, CA	\$6,950	\$46	\$69.47	\$1.89	2
	Wichita, KS	New Orleans, LA	\$4,408	\$89	\$44.66	\$1.22	6
	Sioux Falls, SD	Galveston-Houston, TX	\$6,686	\$38	\$66.77	\$1.82	5
	Northwest KS	Galveston-Houston, TX	\$4,676	\$98	\$47.40	\$1.29	6
	Amarillo, TX	Los Angeles, CA	\$4,875	\$136	\$49.76	\$1.35	6
Corn	Champaign-Urbana, IL	New Orleans, LA	\$3,681	\$101	\$37.55	\$0.95	3
	Toledo, OH	Raleigh, NC	\$6,061	\$0	\$60.19	\$1.53	0
	Des Moines, IA	Davenport, IA	\$2,258	\$21	\$22.63	\$0.57	5
	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	\$63	\$35.72	\$0.91	4
	Des Moines, IA	Los Angeles, CA	\$5,202	\$182	\$53.47	\$1.36	7
	Minneapolis, MN	New Orleans, LA	\$3,634	\$74	\$36.83	\$1.00	-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	\$101	\$45.64	\$1.24	5
Shuttle Train							
Wheat	Great Falls, MT	Portland, OR	\$3,953	\$26	\$39.52	\$1.08	2
	Wichita, KS	Galveston-Houston, TX	\$4,071	\$21	\$40.63	\$1.11	7
	Chicago, IL	Albany, NY	\$5,492	\$0	\$54.54	\$1.48	0
	Grand Forks, ND	Portland, OR	\$5,611	\$46	\$56.17	\$1.53	3
	Grand Forks, ND	Galveston-Houston, TX	\$5,931	\$47	\$59.37	\$1.62	3
	Northwest KS	Portland, OR	\$5,643	\$160	\$57.63	\$1.57	6
	Corn	Minneapolis, MN	Portland, OR	\$5,000	\$56	\$50.20	\$1.28
Sioux Falls, SD		Tacoma, WA	\$4,960	\$51	\$49.76	\$1.26	4
Champaign-Urbana, IL		New Orleans, LA	\$3,481	\$101	\$35.57	\$0.90	3
Lincoln, NE		Galveston-Houston, TX	\$3,700	\$30	\$37.04	\$0.94	6
Des Moines, IA		Amarillo, TX	\$3,895	\$79	\$39.46	\$1.00	5
Minneapolis, MN		Tacoma, WA	\$5,000	\$55	\$50.20	\$1.28	4
Council Bluffs, IA		Stockton, CA	\$4,740	\$57	\$47.64	\$1.21	7
Soybeans	Sioux Falls, SD	Tacoma, WA	\$5,600	\$51	\$56.12	\$1.53	6
	Minneapolis, MN	Portland, OR	\$5,650	\$56	\$56.66	\$1.54	6
	Fargo, ND	Tacoma, WA	\$5,500	\$45	\$55.07	\$1.50	5
	Council Bluffs, IA	New Orleans, LA	\$4,525	\$116	\$46.09	\$1.25	5
	Toledo, OH	Huntsville, AL	\$4,226	\$0	\$41.97	\$1.14	0
	Grand Island, NE	Portland, OR	\$5,460	\$164	\$55.85	\$1.52	5

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

Date: March, 2017			Tariff rate/car ¹	Fuel surcharge per car ²	Tariff plus surcharge per:		Percent change ⁴ Y/Y
Commodity	Origin state	Destination region			metric ton ³	bushel ³	
Wheat	MT	Chihuahua, CI	\$7,459	\$0	\$76.21	\$2.07	0
	OK	Cuautitlan, EM	\$6,638	\$70	\$68.54	\$1.86	3
	KS	Guadalajara, JA	\$7,180	\$268	\$76.10	\$2.07	5
	TX	Salinas Victoria, NL	\$4,258	\$43	\$43.94	\$1.19	4
Corn	IA	Guadalajara, JA	\$8,187	\$220	\$85.90	\$2.18	0
	SD	Celaya, GJ	\$7,580	\$0	\$77.45	\$1.97	-3
	NE	Queretaro, QA	\$7,909	\$145	\$82.30	\$2.09	2
	SD	Salinas Victoria, NL	\$6,635	\$0	\$67.79	\$1.72	1
	MO	Tlalnepantla, EM	\$7,268	\$142	\$75.71	\$1.92	2
	SD	Torreon, CU	\$7,180	\$0	\$73.36	\$1.86	-1
Soybeans	MO	Bojay (Tula), HG	\$8,647	\$232	\$90.72	\$2.47	2
	NE	Guadalajara, JA	\$8,942	\$235	\$93.77	\$2.55	0
	IA	El Castillo, JA	\$8,960	\$0	\$91.55	\$2.49	-5
	KS	Torreon, CU	\$7,489	\$157	\$78.12	\$2.12	2
Sorghum	NE	Celaya, GJ	\$7,164	\$197	\$75.21	\$1.91	0
	KS	Queretaro, QA	\$7,608	\$87	\$78.62	\$2.00	2
	NE	Salinas Victoria, NL	\$6,213	\$70	\$64.19	\$1.63	2
	NE	Torreon, CU	\$6,607	\$144	\$68.98	\$1.75	1

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.

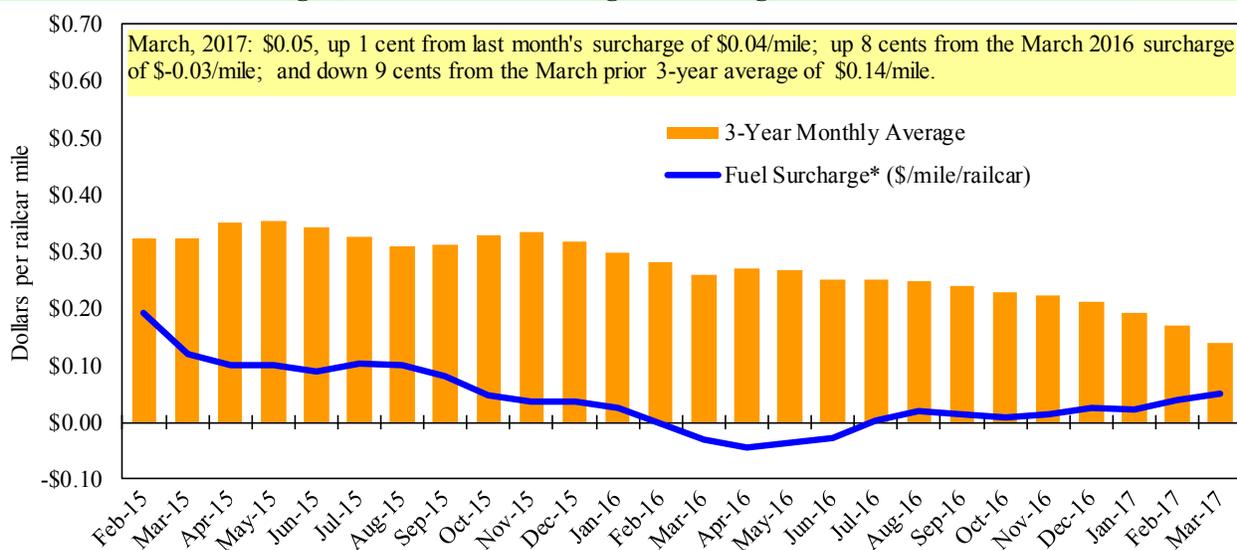
²Fuel surcharge adjusted to reflect the change in Ferrocarril Mexicano, S.A. de C.V railroad fuel surcharge policy as of 10/01/2009

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.

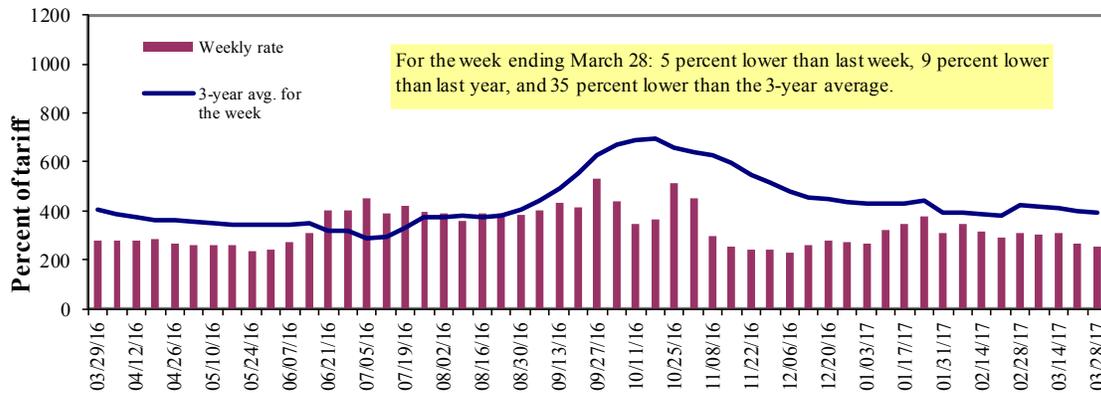
**CSX strike price changed from \$2.00/gal. to \$3.75/gal. starting January 1, 2015.

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	3/28/2017	315	260	255	180	208	208	170
	3/21/2017	333	283	268	213	243	243	175
\$/ton	3/28/2017	19.50	13.83	11.83	7.18	9.76	8.40	5.34
	3/21/2017	20.61	15.06	12.44	8.50	11.40	9.82	5.50
Current week % change from the same week:								
	Last year	-6	-8	-9	-14	-1	-1	-8
	3-year avg. ²	-	-	-35	-42	-34	-34	-34
Rate¹	April	308	260	255	185	200	200	168
	June	315	268	263	190	208	208	173

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

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.

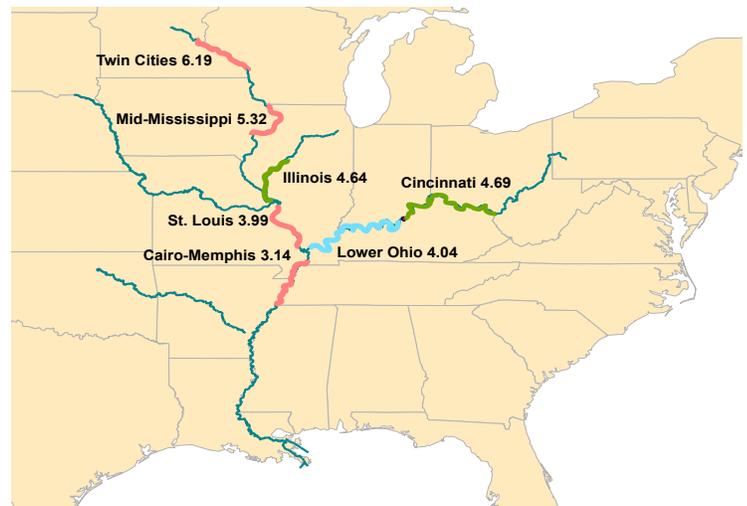
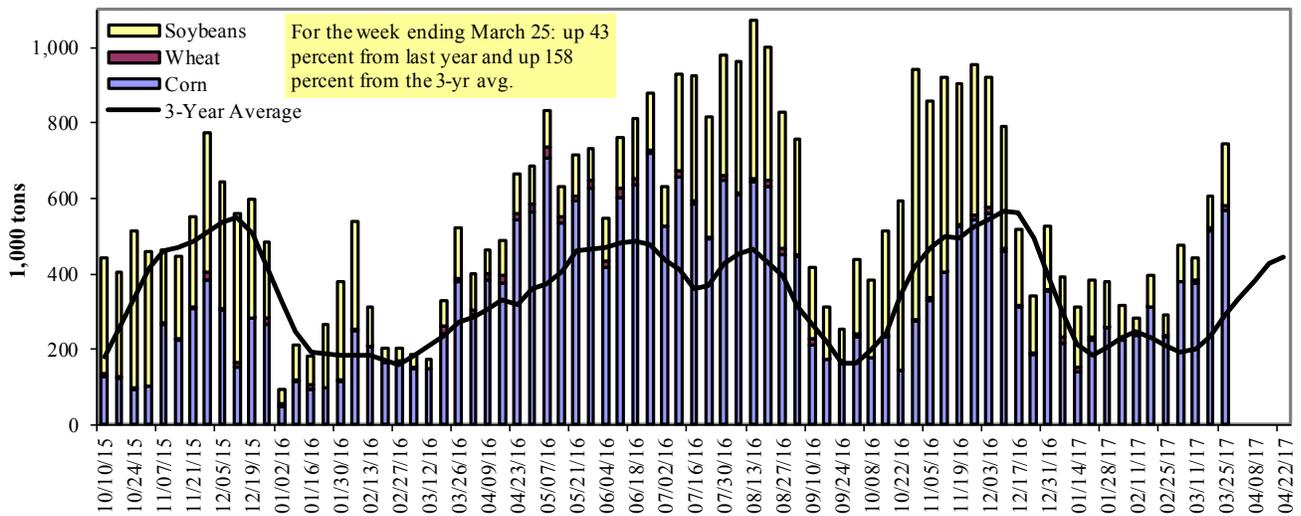


Figure 10

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 3/25/2017	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	165	2	70	2	238
Winfield, MO (L25)	258	3	97	0	358
Alton, IL (L26)	535	13	150	0	698
Granite City, IL (L27)	566	13	166	0	745
Illinois River (L8)	257	10	46	0	313
Ohio River (L52)	138	21	101	0	260
Arkansas River (L1)	4	27	30	0	60
Weekly total - 2017	709	61	297	0	1,066
Weekly total - 2016	515	46	218	0	780
2017 YTD ¹	5,167	471	3,347	128	9,114
2016 YTD	3,752	314	3,024	45	7,136
2017 as % of 2016 YTD	138	150	111	283	128
Last 4 weeks as % of 2016 ²	170	124	159	53	162
Total 2016	24,136	2,030	16,668	344	43,178

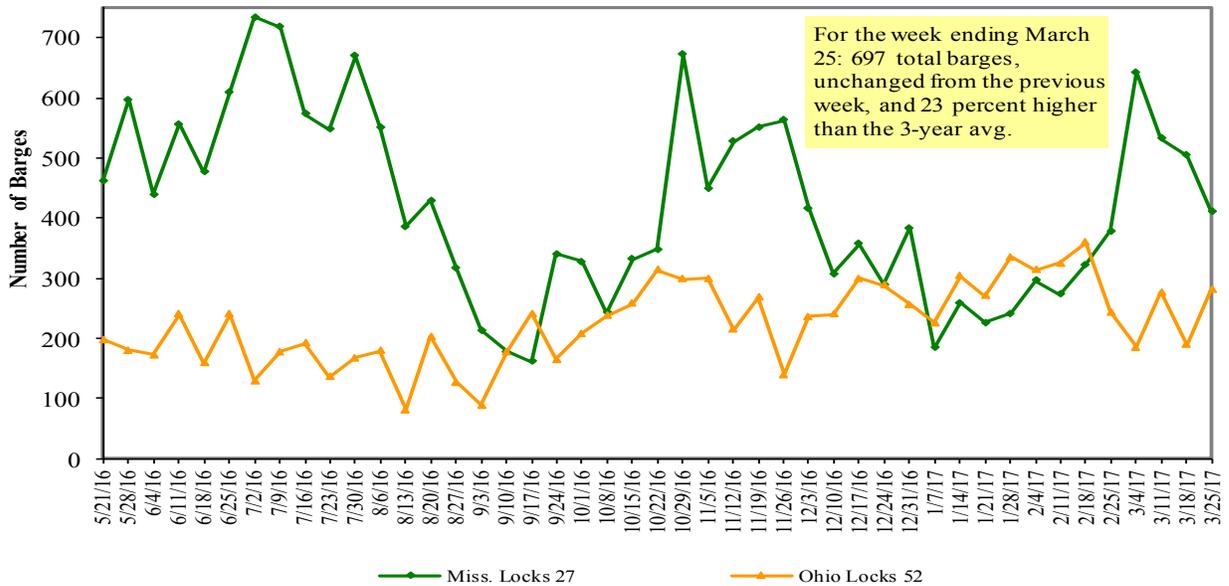
¹ Weekly total, YTD (year-to-date) and calendar year total includes Miss/27, Ohio/52, and Ark/1; "Other" refers to oats, barley, sorghum, and rye.

² As a percent of same period in 2016.

Note: Total may not add exactly, due to rounding

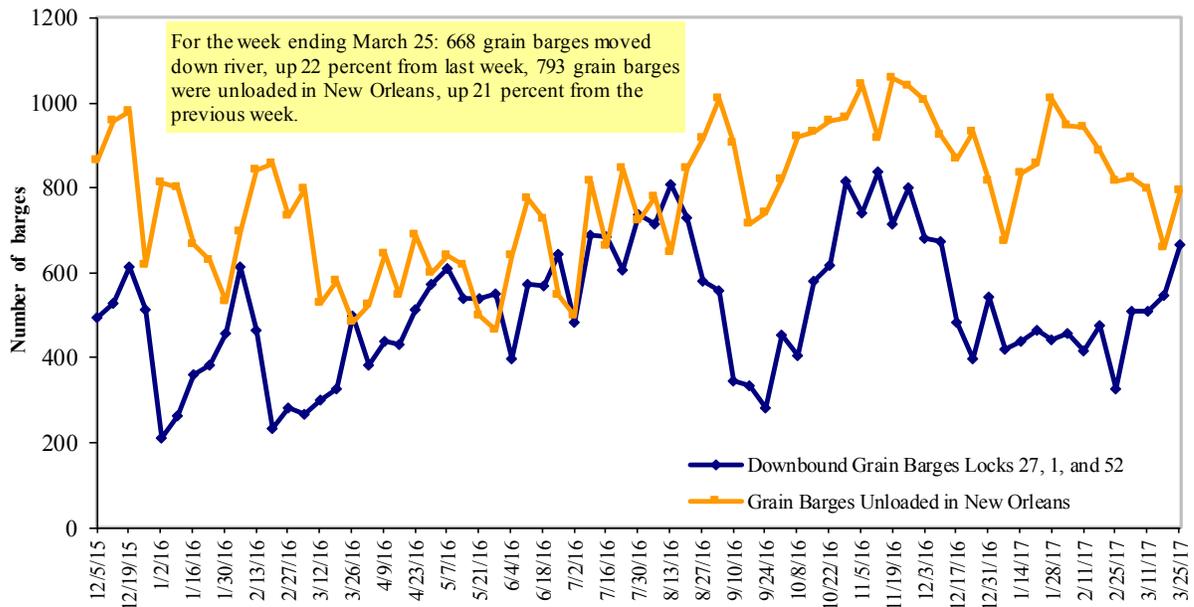
Source: U.S. Army Corps of Engineers

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 Prices¹, Week Ending 3/27/2017(US \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	2.586	-0.014	0.407
	New England	2.593	-0.029	0.352
	Central Atlantic	2.724	-0.014	0.432
	Lower Atlantic	2.487	-0.011	0.406
II	Midwest ²	2.464	-0.006	0.381
III	Gulf Coast ³	2.378	-0.002	0.377
IV	Rocky Mountain	2.597	0.007	0.503
V	West Coast	2.822	-0.004	0.507
	West Coast less California	2.703	0.001	0.526
	California	2.919	-0.009	0.494
Total	U.S.	2.532	-0.007	0.411

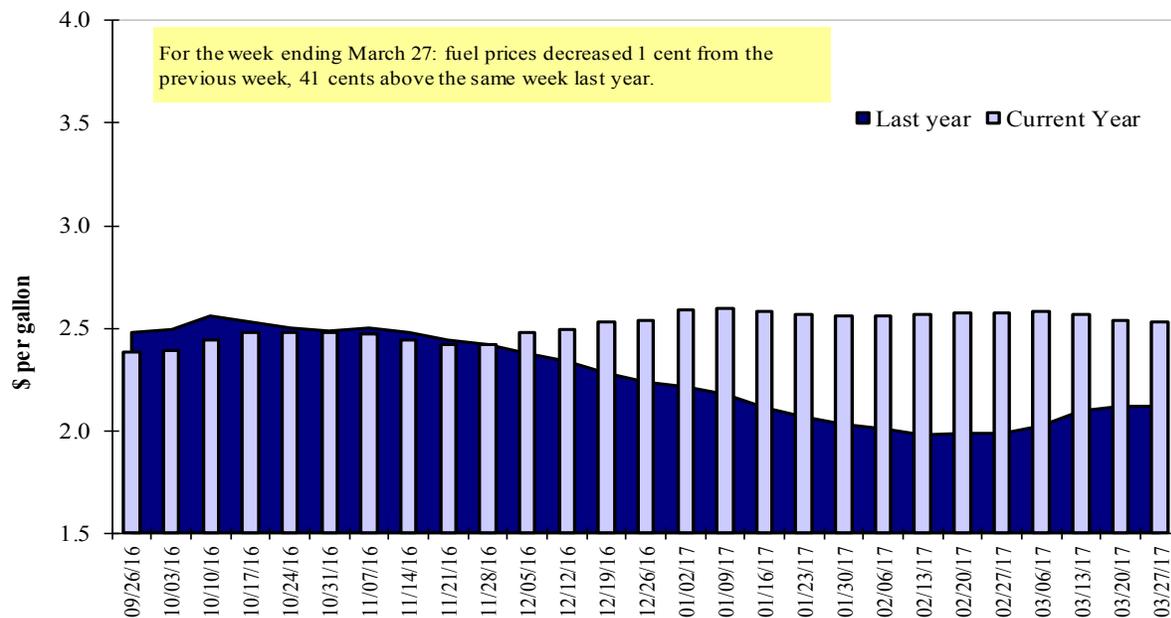
¹Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

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									
3/16/2017	2,080	538	1,978	1,327	78	6,000	17,579	8,297	31,876
This week year ago	948	341	1,458	831	100	3,679	13,154	3,457	20,290
Cumulative exports-marketing year²									
2016/17 YTD	8,452	1,781	6,067	3,119	366	19,785	29,128	45,901	94,813
2015/16 YTD	4,423	2,632	4,806	2,829	571	15,259	17,699	40,246	73,204
YTD 2016/17 as % of 2015/16	191	68	126	110	64	130	165	114	130
Last 4 wks as % of same period 2015/16	226	157	152	166	88	173	136	246	180
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 3/16/2017	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 -
Mexico	11,440	10,408	10	11,204
Japan	8,731	5,707	53	11,284
Korea	4,524	913	396	3,931
Colombia	3,339	3,647	(8)	4,134
Peru	2,204	1,315	68	2,109
Top 5 Importers	30,238	21,989	38	32,662
Total US corn export sales	46,707	30,853	51	46,633
% of Projected	82%	64%		
Change from prior week ²	1,347	803		
Top 5 importers' share of U.S. corn export sales	65%	71%		70%
USDA forecast, March 2017	56,616	48,295	17	
Corn Use for Ethanol USDA forecast, March 2017	137,160	132,690	3	

(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/>. 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 Importers¹ of U.S. Soybeans

For the week ending 3/16/2017	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	34,758	26,953	29	29,033
Mexico	3,074	2,724	13	3,295
Indonesia	1,544	1,192	30	2,065
Japan	1,762	1,701	4	1,994
Netherlands	1,384	1,353	2	1,644
Top 5 importers	42,522	33,923	25	38,032
Total US soybean export sales	54,198	43,703	24	48,389
% of Projected	98%	83%		
Change from prior week ²	738	411		
Top 5 importers' share of U.S. soybean export sales	78%	78%		79%
USDA forecast, March 2017	55,177	52,752	5	

(n) indicates negative number.

¹Based on FAS Marketing Year Ranking Reports for 2015/16 - 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/. 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 3/16/2017	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	2,496	2,310	8	2,743
Mexico	2,933	2,107	39	2,660
Philippines	2,415	2,041	18	2,156
Brazil	1,184	404	193	2,076
Nigeria	1,332	1,389	(4)	1,978
Korea	1,186	1,128	5	1,170
China	1,233	669	84	1,770
Taiwan	891	937	(5)	1,005
Indonesia	935	516	81	776
Colombia	780	590	32	679
Top 10 importers	15,386	12,091	27	17,013
Total US wheat export sales	25,785	18,938	36	24,485
% of Projected	92%	90%		
Change from prior week ²	419	369		
Top 10 importers' share of U.S. wheat export sales	60%	64%		69%
USDA forecast, March 2017	27,929	21,117	32	

(n) indicates negative number.

¹Based on FAS Marketing Year Ranking Reports for 2015/16 - www.fas.usda.gov; Marketing year = Jun 1 - May 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 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 03/23/17	Previous Week ¹	Current Week as % of Previous	2017 YTD	2016 YTD	2017 YTD as % of 2016 YTD	Last 4-weeks as % of:		2016 Total
							Last Year	Prior 3-yr. avg.	
Pacific Northwest									
Wheat	261	389	67	2,962	2,681	110	130	128	12,325
Corn	353	370	96	3,219	1,358	237	272	202	12,009
Soybeans	186	161	115	3,188	4,308	74	70	71	14,447
Total	800	920	87	9,369	8,348	112	138	128	38,782
Mississippi Gulf									
Wheat	50	83	60	1,041	816	128	121	107	3,480
Corn	1,049	803	131	9,248	5,934	156	146	149	31,420
Soybeans	287	538	53	8,308	8,021	104	119	116	35,278
Total	1,385	1,424	97	18,598	14,772	126	134	134	70,178
Texas Gulf									
Wheat	227	158	143	1,507	662	228	208	151	6,019
Corn	30	0	n/a	241	189	128	99	123	1,669
Soybeans	0	0	n/a	0	92	0	n/a	n/a	1,105
Total	257	158	162	1,747	942	185	191	148	8,792
Interior									
Wheat	32	45	71	430	279	154	125	144	1,543
Corn	93	156	59	1,501	1,364	110	98	110	7,197
Soybeans	69	73	94	1,184	974	122	109	106	4,577
Total	194	275	71	3,115	2,617	119	105	112	13,317
Great Lakes									
Wheat	0	8	0	8	0	n/a	n/a	2729	1,186
Corn	0	0	n/a	0	0	n/a	n/a	n/a	584
Soybeans	0	0	n/a	0	0	n/a	n/a	n/a	910
Total	0	8	0	8	0	n/a	n/a	2729	2,681
Atlantic									
Wheat	0	0	n/a	36	123	29	0	0	315
Corn	0	0	n/a	0	14	1	2	1	294
Soybeans	42	10	407	651	772	84	66	65	2,269
Total	42	10	409	687	909	76	50	50	2,878
U.S. total from ports²									
Wheat	570	683	83	5,983	4,561	131	138	128	24,867
Corn	1,525	1,329	115	14,209	8,859	160	157	154	53,173
Soybeans	584	783	75	13,332	14,168	94	99	98	58,587
Total	2,679	2,795	96	33,524	27,587	122	132	128	136,627

¹ Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

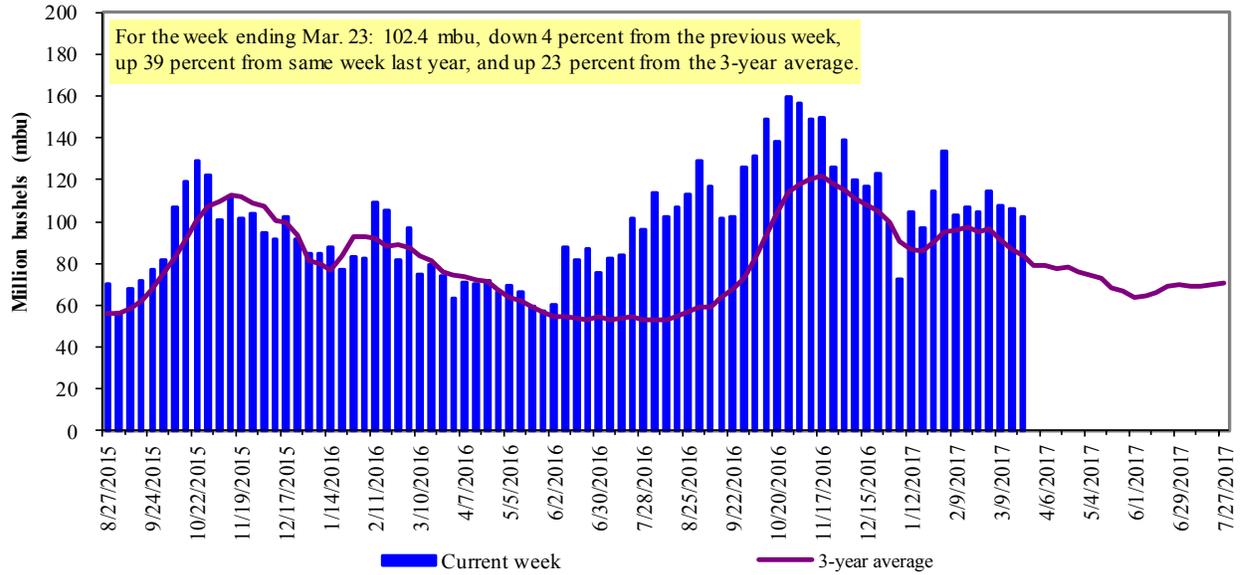
Source: Grain Inspection, Packers and Stockyards Administration/USDA (www.gipsa.usda.gov); YTD= year-to-date; n/a = not applicable

² Total only includes regions shown above.

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

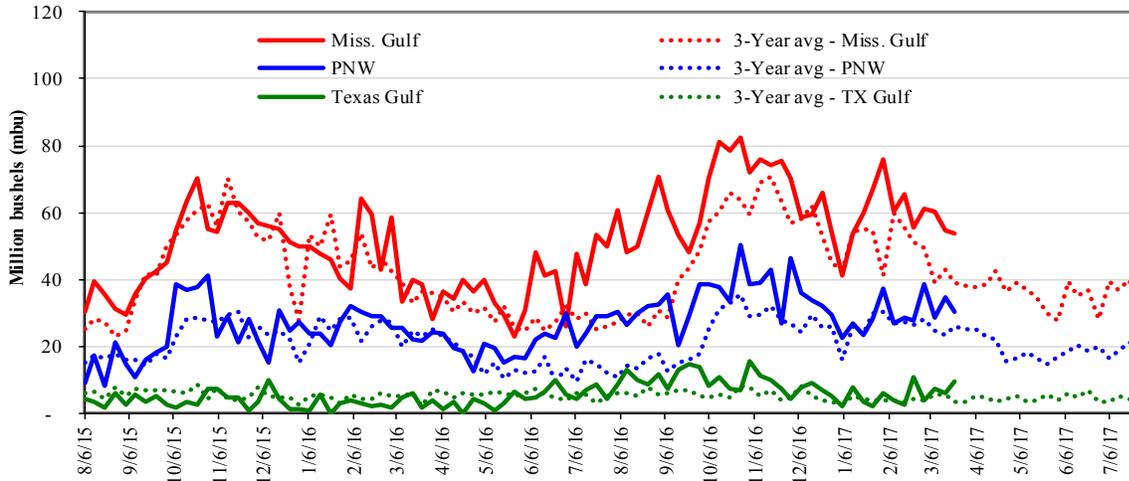
U.S. grain inspected for export (wheat, corn, and soybeans)



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 PNW¹ (wheat, corn, and soybeans)



Week ending 03/23/17 inspections (mbu):		Percent change from:				
Mississippi Gulf:	53.7	Last Week:	MS Gulf	TX	U.S. Gulf	PNW
PNW:	30.3	Last Year (same	down 1	up 64	up 5	down 13
Texas Gulf:	9.5	3-yr avg. (4-wk. mov.	up 38	up 529	up 57	up 41
			up 26	up 114	up 34	up 19

Source: Grain Inspection, Packers and Stockyards Administration/USDA (www.gipsa.usda.gov)
¹The 3-year average is based on a 4-week running average

Ocean Transportation

Table 17

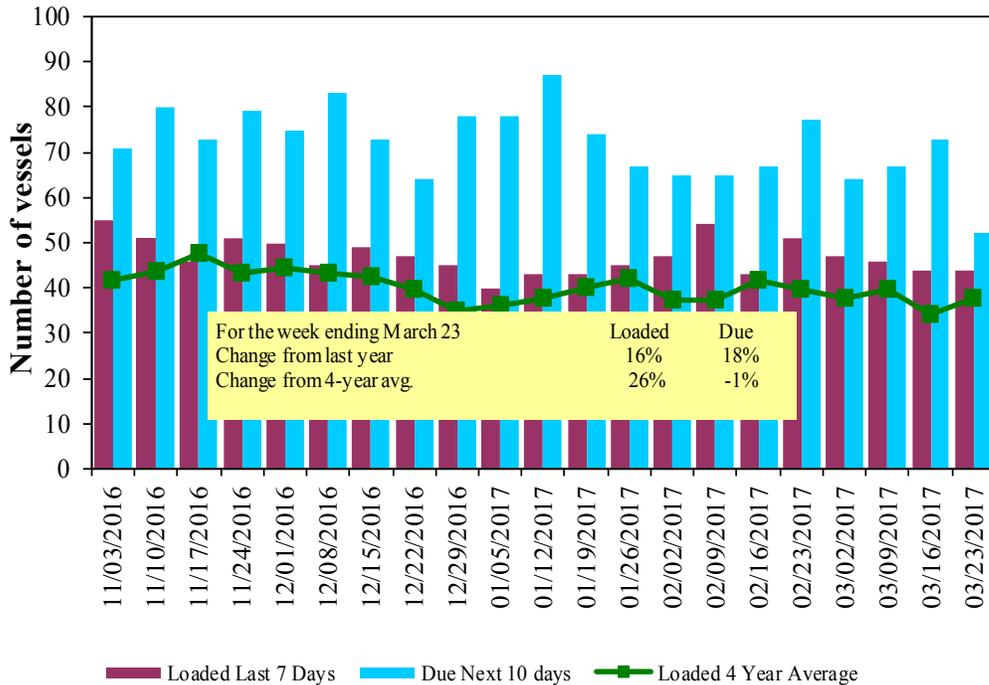
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

Date	Gulf			Pacific Northwest	Vancouver B.C.
	In port	Loaded 7-days	Due next 10-days	In port	In port
3/23/2017	64	44	52	37	n/a
3/16/2017	58	44	73	35	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

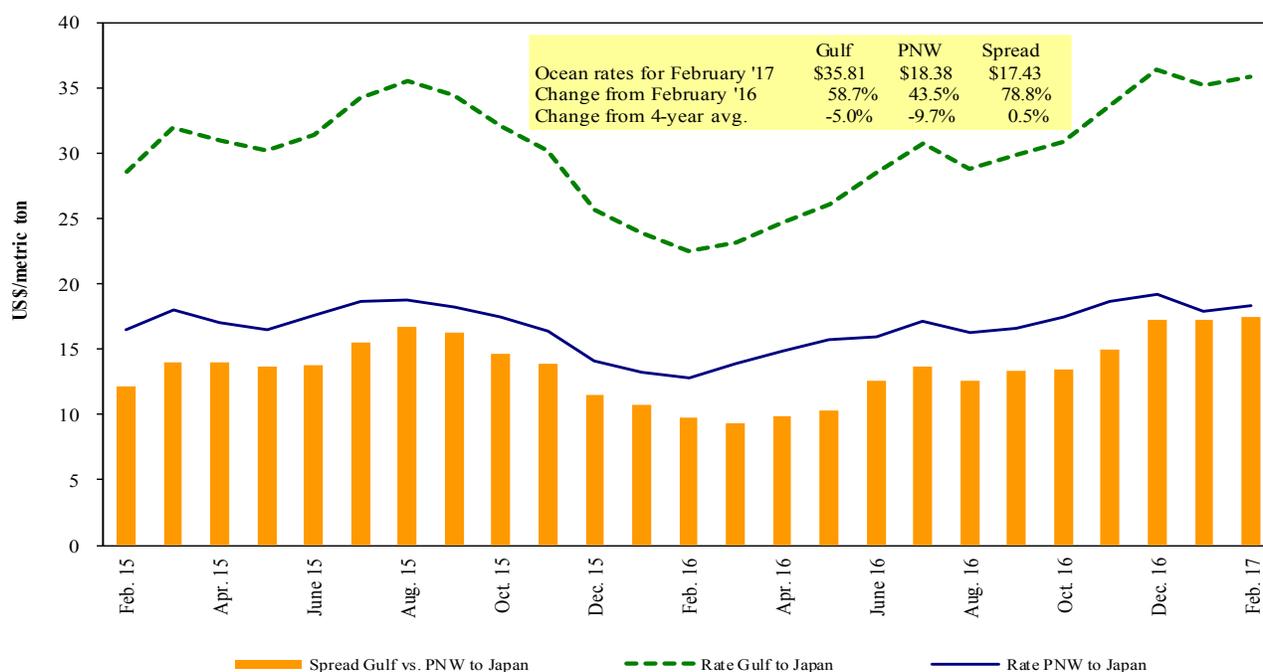
U.S. Gulf Vessel Loading Activity



Source: Transportation & Marketing Programs/AMS/USDA
¹U.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 3/25/2017

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	Cote d'Ivoire	Rice	Jun 19/29	6,000	93.33*
PNW	Taiwan	Wheat	May 6/20	52,500	28.48
PNW	Taiwan	Wheat	Apr 19/May 3	50,350	29.12
Vancouver	China	Heavy Grain	Nov 1/10	50,000	31.50
Brazil	China	Heavy Grain	Mar 7/14	66,000	28.50
Brazil	China	Heavy Grain	May 1/5	60,000	23.50
Brazil	China	Heavy Grain	Mar 5/14	65,000	23.90 op 24.40
Brazil	South Korea	Heavy Grain	Mar 15/Apr 15	65,000	23.50
EC S. America	China	Heavy Grain	Mar 1/10	60,000	25.25
EC S. America	China	Heavy Grain	Feb 1/10	60,000	24.00
U.S. Gulf	Djibouti	Wheat	Mar 17/27	8,870	67.75*
U.S. Gulf	Berbera	Sorghum	Mar 17/27	34,860	47.75*
Bahia Blanca	Saudi Arabia	Barley	Mar 20/30	60,000	31.75
Brazil	China	Heavy Grain	Mar 21/30	60,000	26.30
Kavkaz	Tunisia	Wheat	Apr 3/10	25,000	16.75
Santos	Qingdao	Heavy Grain	Apr 1/15	60,000	29.50
Santos	China	Heavy Grain	Apr 10/15	60,000	28.00
U.S. Gulf	Northern China	Heavy Grain	Mar 15/20	53,000	39.00
Hamburg	Turkey	Wheat	Mar 5/10	60,000	12.50

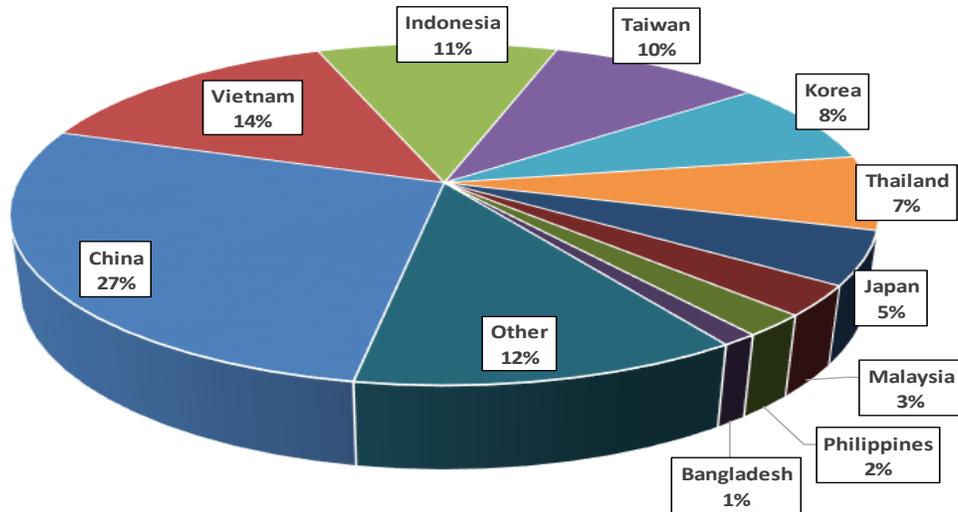
Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), F.O.B., except where otherwise indicated; op = option

*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.

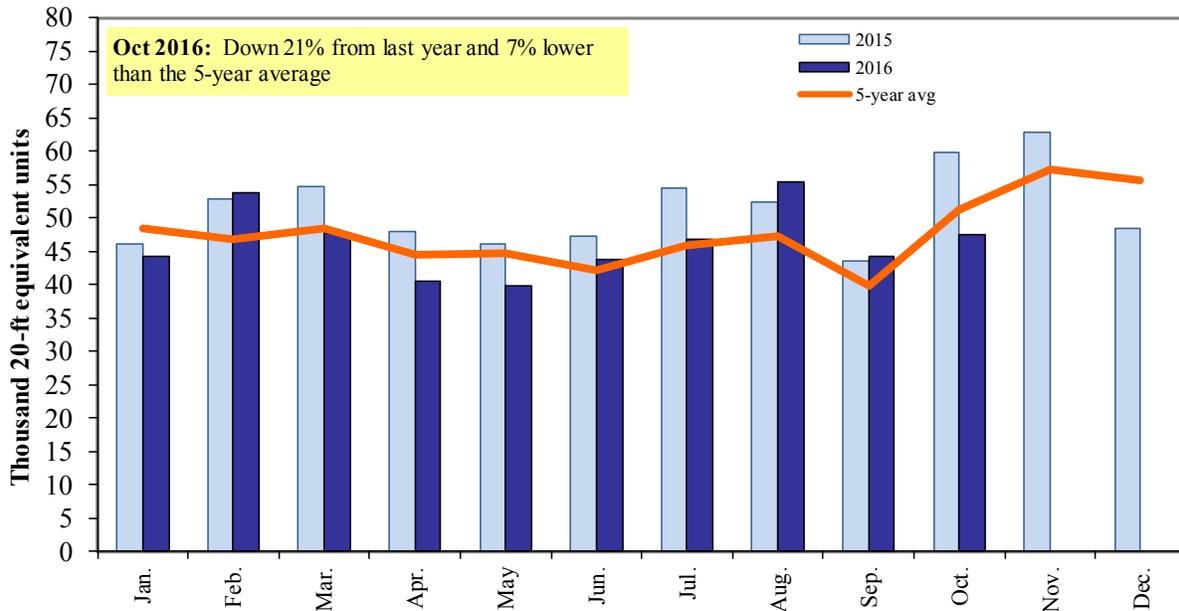
Figure 18
Top 10 Destination Markets for U.S. Containerized Grain Exports, January–October 2016



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.

Contacts and Links

Coordinators

Surajudeen (Deen) Olowolayemo surajudeen.olowolayemo@ams.usda.gov (202) 720 - 0119
Pierre Bahizi pierre.bahizi@ams.usda.gov (202) 690 - 0992

Weekly Highlight Editors

Surajudeen (Deen) Olowolayemo surajudeen.olowolayemo@ams.usda.gov (202) 720 - 0119
April Taylor april.taylor@ams.usda.gov (202) 720 - 7880
Nicholas Marathon nick.marathon@ams.usda.gov (202) 690 - 4430

Grain Transportation Indicators

Surajudeen (Deen) Olowolayemo surajudeen.olowolayemo@ams.usda.gov (202) 720 - 0119

Rail Transportation

Johnny Hill johnny.hill@ams.usda.gov (202) 690 - 3295
Jesse Gastelle jesse.gastelle@ams.usda.gov (202) 690 - 1144
Peter Caffarelli petera.caffarelli@ams.usda.gov (202) 690 - 3244

Barge Transportation

Nicholas Marathon nick.marathon@ams.usda.gov (202) 690 - 4430
April Taylor april.taylor@ams.usda.gov (202) 720 - 7880
Matt Chang matt.chang@ams.usda.gov (202) 720 - 0299

Truck Transportation

April Taylor april.taylor@ams.usda.gov (202) 720 - 7880
Sergio Sotelo sergioa.sotelo@ams.usda.gov (202) 756 - 2577

Grain Exports

Johnny Hill johnny.hill@ams.usda.gov (202) 690 - 3295

Ocean Transportation

Surajudeen (Deen) Olowolayemo surajudeen.olowolayemo@ams.usda.gov (202) 720 - 0119
(Freight rates and vessels)
April Taylor april.taylor@ams.usda.gov (202) 720 - 7880
(Container movements)

Subscription Information: Send relevant information to GTRContactUs@ams.usda.gov for an electronic copy (*printed copies are also available upon request*).

Preferred citation: U.S. Dept. of Agriculture, Agricultural Marketing Service. *Grain Transportation Report*. March 30, 2017. Web: <http://dx.doi.org/10.9752/TS056.03-30-2017>

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at How to File a Program Discrimination Complaint and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.