



Grain Transportation Report

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

Contact Us

March 31 2016

WEEKLY HIGHLIGHTS

Contents

Article/
Calendar

Grain
Transportation
Indicators

Rail

Barge

Truck

Exports

Ocean

Brazil

Mexico

Grain Truck/Ocean
Rate Advisory

Data Links

Specialists

Subscription
Information

The next
release is
April 7, 2016

Grain Barges Rates Remain Below Average for First Quarter

As of March 29, barge rates for export grain from major interior origins are between 29 to 57 percent below the 5-year average. Barge operators have indicated a continued weakened demand for barge services that began late October- early November. As of March 29, St. Louis export grain barge rates were 210 percent of tariff (\$8.38 per ton), 44 percent lower than the 5-year average of 302 percent of tariff (\$12.05 per ton). Barge rates did see a rally during the last 2 weeks as barge supply was adjusting to more traffic to the open portions of the Upper Mississippi River that was closed during the winter. In addition, rain-induced high water conditions on the lower Mississippi River restricted tow sizes, slowed barge logistics for river export facilities, which also contributed to increased barge rates.

St. Lawrence Seaway Open

The St. Lawrence Seaway opened last week for its 58th season. Extending 2,340 miles, the Great Lakes St. Lawrence Seaway System is an avenue to connect northern U.S. shippers to international markets. Dominant commodities moving through the locks and channels include iron ore, coal, limestone, and grain. In 2015, 2.2 million tons of grain (44 percent wheat, 22 percent corn, and 33 percent soybeans) were inspected for export in ports on the Great Lakes, about the same volume as 2014 ([Table 16](#)). For more information on grain transportation through the system, see [Grain Transportation Report, dated 07/03/14](#).

Grain Inspections Down but Above Last Year

For the week ending March 24, **total inspections of grain** (corn, wheat, soybeans) for export from all major export regions reached 1.9 million metric tons (mmt), down 9 percent from the past week, up 8 from last year, and 5 percent below the 3-year average. Wheat inspections dropped 30 percent from the previous week as shipments to Africa and Latin America receded. Inspections of corn and soybeans decreased only 2 percent from the past week. Pacific Northwest (PNW) grain inspections decreased 7 percent from the past week, and Mississippi Gulf grain inspections dropped 3 percent. During the last 4 weeks, however, total inspections of grain were 7 percent above last year and 6 percent above the 3-year average. Outstanding export sales (unshipped) of grain were up slightly for wheat but down for corn and soybeans.

Snapshots by Sector

Export Sales

During the week ending March 17, **unshipped balances** of wheat, corn, and soybeans totaled 20.3 mmt, down 19 percent from the same time last year. Net weekly **wheat export sales** of .369 mmt were up 73 percent from the previous week. Net **corn export sales** were .803 mmt, down 35 percent from the previous week, and net **soybean export sales** were .411 mmt, down 34 percent from the past week.

Rail

U.S. Class I railroads originated 21,494 **grain carloads** for the week ending March 19, down 1 percent from the previous week, down 11 percent from last year, and up 9 percent from the 3-year average.

Average April shuttle **secondary railcar bids/offers** per car were \$175 below tariff for the week ending March 24, up \$31 from last week, and \$110 lower than last year. There were no non-shuttle secondary railcar bids/offers this week.

Barge

For the week ending March 26, **barge grain movements** totaled 779,706 tons, 52 percent higher than last week, and up 25 percent from the same period last year.

For the week ending March 26, 500 grain barges **moved down river**, up 53 percent from last week; 485 grain barges were **unloaded in New Orleans**, down 16 percent from the previous week.

Ocean

For the week ending March 24, 38 **ocean-going grain vessels** were loaded in the Gulf, 3 percent more than the same period last year. Forty-four vessels are expected to be loaded within the next 10 days, 19 percent less than the same period last year.

For the week ending March 24, the ocean freight rate for shipping bulk grain from the Gulf to Japan was \$23.00 per metric ton, unchanged from the previous week. The cost of shipping from the PNW to Japan was \$14.00 per metric ton, unchanged from the previous week.

Fuel

During the week ending March 28, U.S. average **diesel fuel prices** were unchanged from the previous week at \$2.12 per gallon, down \$0.70 from the same week last year.

Feature Article/Calendar

Grain and Oilseed Rail Shipment Sizes and Distances – An Update

Introduction

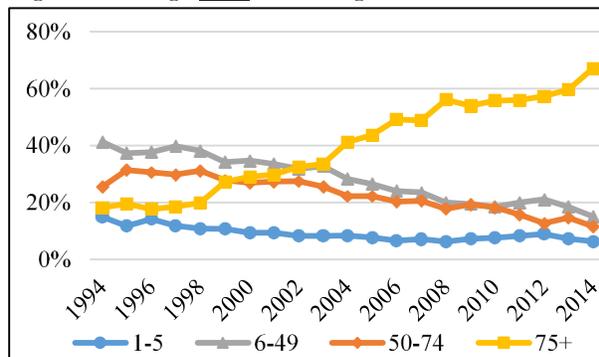
Since the partial deregulation of railroads in the 1980s, railroads have been continuously innovating ways to reduce costs by capturing economies of scale. It is common knowledge within the industry that railroads have increasingly relied on unit trains (50+ cars of a single commodity) and shuttle trains (single origin-destination unit trains) to reduce costs. It is less well known how these innovations have affected not only grain movements in aggregate, but also specific grain commodities. In 2013, USDA-AMS published a [study](#) on grain and oilseed rail shipments by size and distance from 1994 through 2009. This article updates that study with data through 2014 and focuses on the significant changes that have occurred in train shipment size and distance for barley, corn, sorghum, soybeans, and wheat.*

Shipment Sizes

Corn, soybeans, and sorghum stood out in the original study because their shipments were predominately and increasingly 75+ car trains. This trend has continued for each of those commodities. The 75+ car trains made up 54 percent of shipments of corn in 2009, and 67 percent of shipments of corn in 2014. The same category increased from 62 percent to 68 percent for soybeans, and from 79 percent to 91 percent for sorghum. At the same time, all three of these commodities show a continued decline in the less-than-75-cars categories. Figure 1 shows corn train length trends and also illustrates trends in soybeans and sorghum.

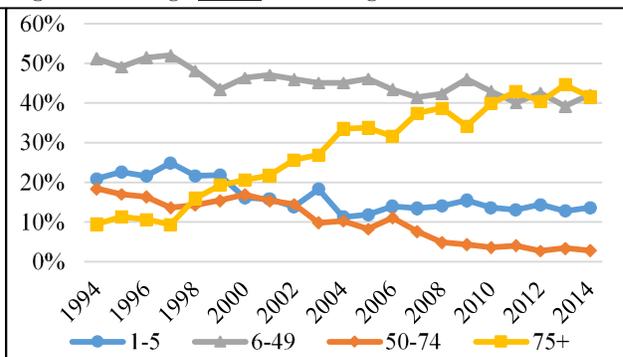
The original study found that between 1994 and 2009, wheat's dominant shipment size of 6-49 cars remained relatively the same throughout the period, even with a growing share in the 75+ category. However, between 2011 and 2014, the 75+ car trains and 6-49 car trains nearly tied for the largest share at just over 40 percent each; in 2011 and 2013, the 75+ category was the largest (see Figure 2).

Figure 1: Average Corn Train Lengths



Source: STB, Carload Waybill Sample

Figure 2: Average Wheat Train Lengths



Source: STB, Carload Waybill Sample

Distance Hauled

The average distance traveled by grain shipments has increased almost every year since 1994. The average shipment distance for all commodities was 679 miles in 1994 and 939 miles in 2014. However, growth in distances has been slower in later years. This generally corresponds to weak grain exports, and a larger share of shipments moving shorter distances domestically. Distance growth began to strengthen again in 2014, as exports increased.

The trip length of wheat movements has been more stable than all of the other commodities. Wheat shipments are dominated by distances between 501-1,000 miles, which have hovered around 50 percent of all shipments

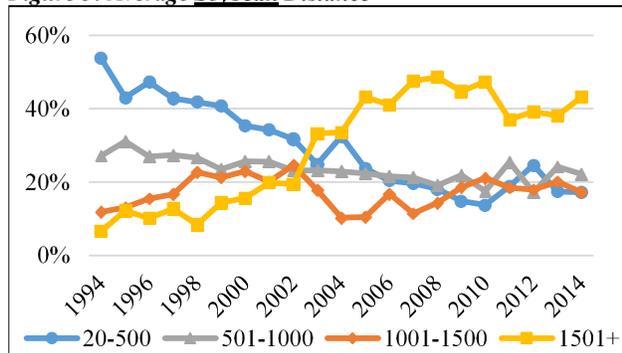
* Another trend not explored in this article is the shift to larger 286,000-pound loaded railcars for shipping grain. For more information, see [“The Shift to Larger Railcars for the Shipment of Grain”](#) (August 2013).

since 1998. However, in line with the broader trends, longer distance wheat shipments (1,000-1,500 miles) have grown as a share of total shipments since 2009, up from 19 percent to 29 percent by 2014. At the same time, the share of shorter distance wheat shipments (50-500 miles) has been nearly constantly declining since 1994.

Most soybeans hauled by rail continue to travel more than 1,501 miles, but earlier increases seen during the 2000's have been more varied since 2010 (see Figure 3). Another notable difference over the last 5 years includes the growing share of sorghum transported 501-1,000 miles by rail, which was 54 percent in 2009 and 74 percent in 2014.

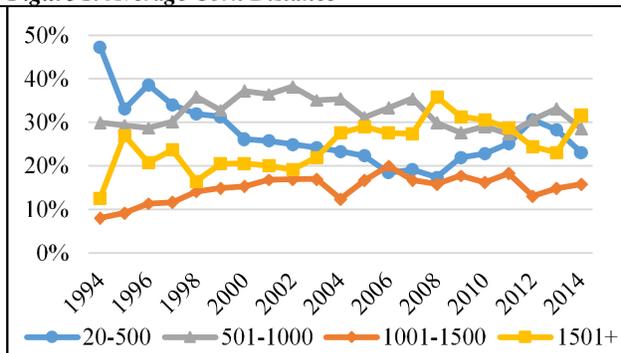
Compared to the others, corn shipment distances are the most evenly distributed among the distance categories; in 2014, 32 percent of corn's shipments by rail travelled 1,501+ miles, 29 percent 501-1,000 miles, and 23 percent 20-500 miles. Up until 2008, 1,501+ mile shipments were replacing 20-500 mile shipments, but that trend reversed to some degree starting in 2009. Corn followed the general trend toward longer distance movements with the largest share of shipments in 1,501+ category by 2014 (see Figure 4).

Figure 3: Average Soybean Distance



Source: STB, Carload Waybill Sample

Figure 1: Average Corn Distance



Source: STB, Carload Waybill Sample

Conclusion

The patterns across sizes and shipments generally suggest that railroads are using more unit and shuttle train shipments. Commodities with longer shipment distances also tend to be relying on longer trains. Soybeans, for instance, have seen a simultaneous increase in 75+ car trains and 1,501+ mile distances.

As discussed in the original study, these trends in shipment size and distance are possibly the result of commodity trends in production and exports. Soybeans, for instance, have seen greater production and increased exports, enabling those shippers to take advantage of railroad economies of scale. Wheat, in contrast, has been relatively stable in production and exports, which explains why wheat shipment sizes and distances in comparison have been relatively stable. The share of wheat shuttle shipments has grown over time, but not as much as for other commodities. Fewer wheat millers have had the ability to incorporate large trains.

Corn is the only exception to this general trend. The majority of corn shipments are more equally spread across short and long trains with longer trains growing in share over the past few years, while corn distances do not show any obvious long-term trends. A possible explanation is the rise of demand for corn from ethanol, which relied more heavily on shorter shipments and may have driven the small reversal in corn trends between 2009 and 2012.

Jesse.Gastelle@ams.usda.gov, PeterA.Caffarelli@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
03/30/16	142	254	195	156	103	99
03/23/16	142	254	193	138	103	99

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	3/24/2016	3/18/2016
Corn	IL--Gulf	-0.51	-0.50
Corn	NE--Gulf	-0.75	-0.74
Soybean	IA--Gulf	-1.02	-1.05
HRW	KS--Gulf	-1.12	-1.12
HRS	ND--Portland	-1.78	-1.75

Note: nq = no quote

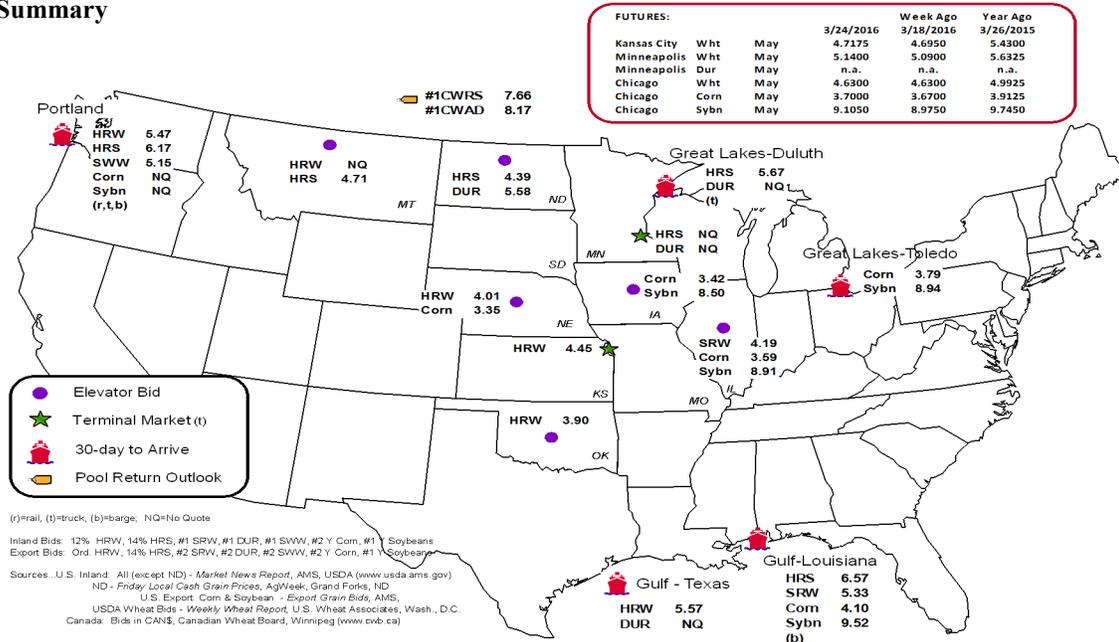
Source: Transportation & Marketing Programs/AMS/USDA

n/a: quotes are not available due to the holiday

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				
3/23/2016 ^p	4	897	5,668	554	7,123	3/19/2016	1,569	
3/16/2016 ^r	3	1,815	5,196	201	7,215	3/12/2016	1,862	
2016 YTD ^r	5,076	17,794	71,445	7,433	101,748	2016 YTD	21,613	
2015 YTD ^r	8,741	14,699	68,058	9,262	100,760	2015 YTD	19,167	
2016 YTD as % of 2015 YTD	58	121	105	80	101	% change YTD	113	
Last 4 weeks as % of 2015 ²	22	93	98	68	91	Last 4wks % 2015	105	
Last 4 weeks as % of 4-year avg. ²	22	116	122	67	106	Last 4wks % 4 yr	102	
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.

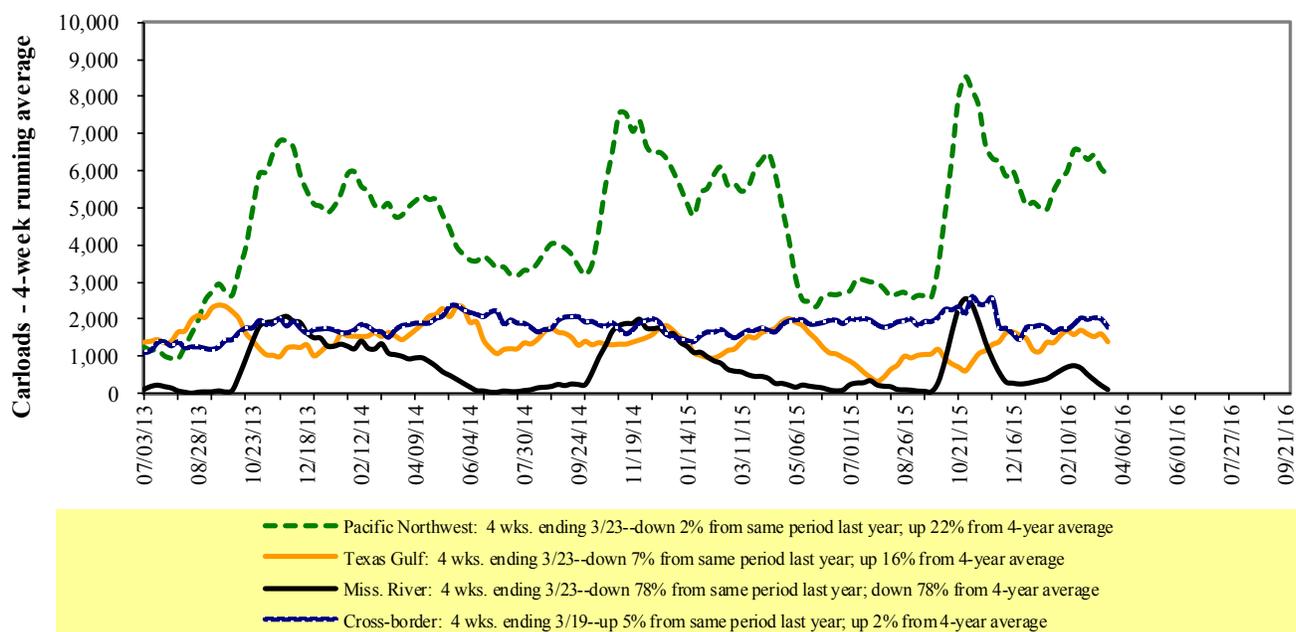
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

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

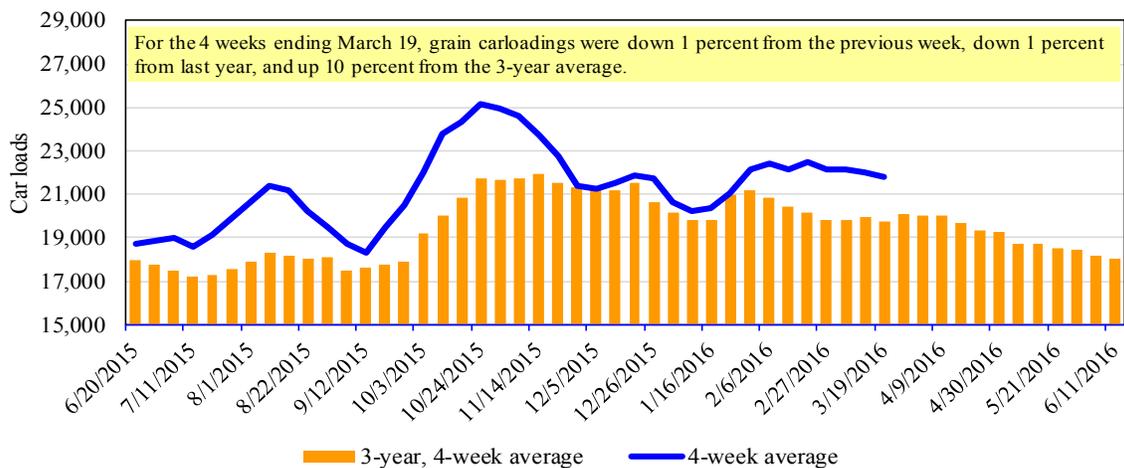
Class I Rail Carrier Grain Car Bulletin (grain carloads originated)

For the week ending:	East		West			U.S. total	Canada	
	3/19/2016	CSXT	NS	BNSF	KCS		UP	CN
This week	1,805	2,944	11,090	872	4,783	21,494	2,930	4,704
This week last year	2,333	3,172	12,310	672	5,600	24,087	4,075	3,698
2016 YTD	21,751	31,108	121,763	9,726	58,289	242,637	37,375	47,578
2015 YTD	23,810	33,404	121,451	9,201	62,337	250,203	45,708	47,517
2016 YTD as % of 2015 YTD	91	93	100	106	94	97	82	100
Last 4 weeks as % of 2015*	100	96	99	112	96	99	76	105
Last 4 weeks as % of 3-yr avg.**	108	101	115	127	105	110	86	99
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:		<u>Delivery period</u>							
3/24/2016		Apr-16	Apr-15	May-16	May-15	Jun-16	Jun-15	Jul-16	Jul-15
BNSF ³	COT grain units	no bids	no bids	no bids	no bids	no bids	5	no bids	9
	COT grain single-car ⁵	0	6	no bids	4	no bids	25	no bids	37 . . 150
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.

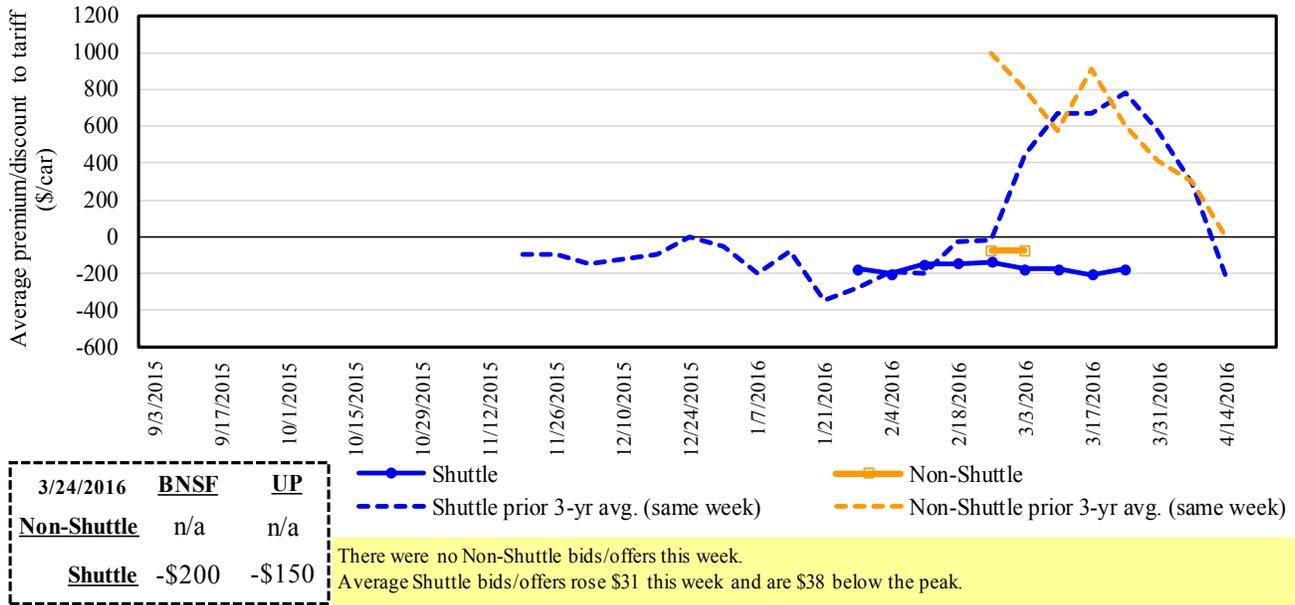
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

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

Source: Transportation & Marketing Programs/AMS/USDA.

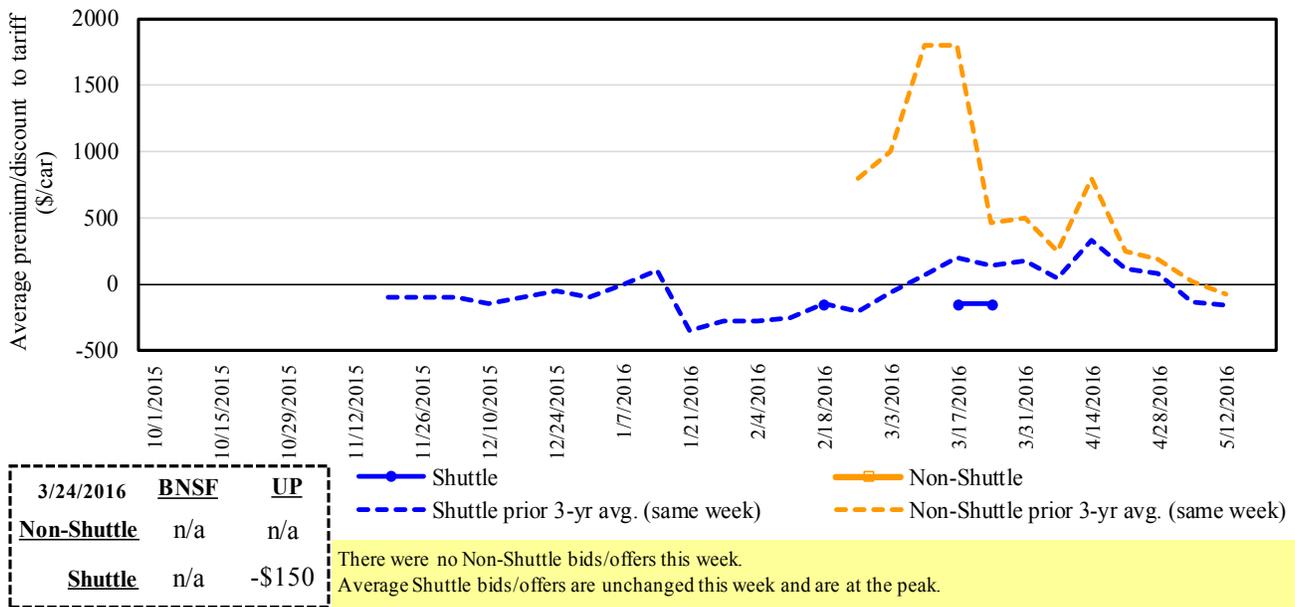
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

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



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

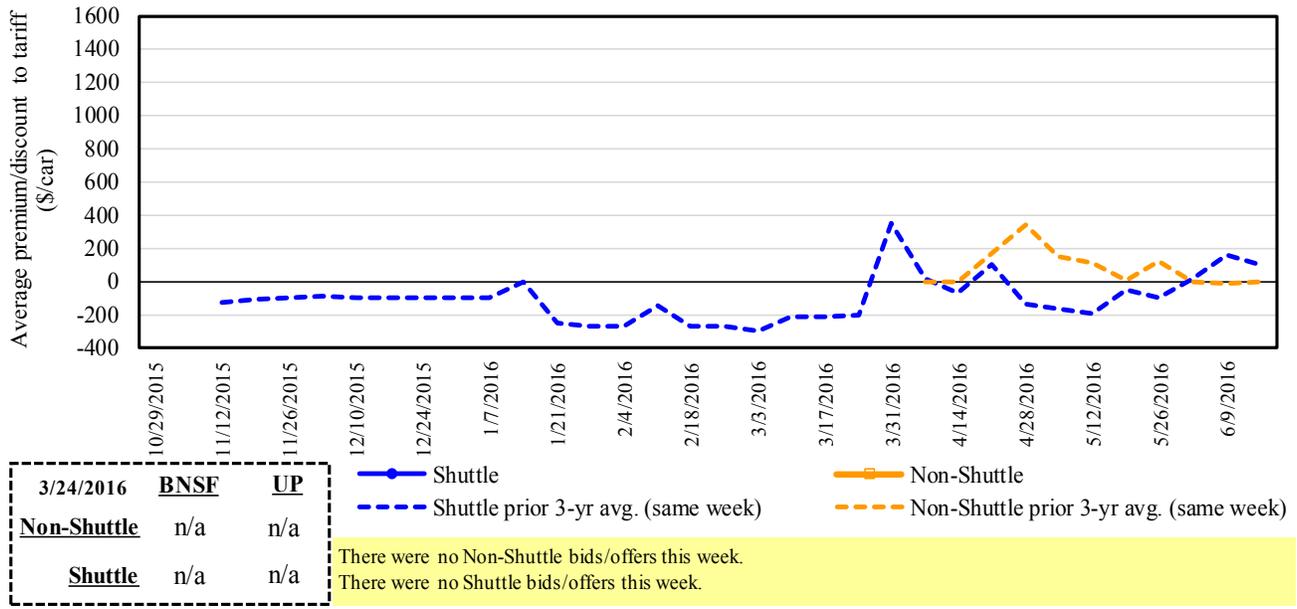
Figure 5
Bids/Offers for Railcars to be Delivered in May 2016, Secondary Market



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 2016, 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:		Delivery period					
		3/24/2016	Apr-16	May-16	Jun-16	Jul-16	Aug-16
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 2015	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 2015	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	BNSF-GF	(200)	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 2015	(175)	n/a	n/a	n/a	n/a	n/a
	UP-Pool	(150)	(150)	n/a	n/a	n/a	n/a
	Change from last week	56	0	n/a	n/a	n/a	n/a
	Change from same week 2015	(44)	88	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

Effective date:		Origin region*	Destination region*	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per:		Percent change Y/Y ³
3/1/2016						metric ton	bushel ²	
Unit train								
Wheat	Wichita, KS	St. Louis, MO	\$3,605	\$0	\$35.80	\$0.97	4	
	Grand Forks, ND	Duluth-Superior, MN	\$3,563	-\$24	\$35.15	\$0.96	-3	
	Wichita, KS	Los Angeles, CA	\$6,950	-\$122	\$67.80	\$1.85	6	
	Wichita, KS	New Orleans, LA	\$4,243	\$0	\$42.14	\$1.15	1	
	Sioux Falls, SD	Galveston-Houston, TX	\$6,486	-\$100	\$63.41	\$1.73	7	
	Northwest KS	Galveston-Houston, TX	\$4,511	\$0	\$44.80	\$1.22	1	
	Amarillo, TX	Los Angeles, CA	\$4,710	\$0	\$46.77	\$1.27	-1	
Corn	Champaign-Urbana, IL	New Orleans, LA	\$3,681	\$0	\$36.55	\$0.93	5	
	Toledo, OH	Raleigh, NC	\$6,061	\$0	\$60.19	\$1.53	5	
	Des Moines, IA	Davenport, IA	\$2,168	\$0	\$21.53	\$0.55	-2	
	Indianapolis, IN	Atlanta, GA	\$5,004	\$0	\$49.69	\$1.26	2	
	Indianapolis, IN	Knoxville, TN	\$4,311	\$0	\$42.81	\$1.09	2	
Soybeans	Des Moines, IA	Little Rock, AR	\$3,444	\$0	\$34.20	\$0.87	1	
	Des Moines, IA	Los Angeles, CA	\$5,052	\$0	\$50.17	\$1.27	-2	
	Minneapolis, MN	New Orleans, LA	\$3,929	\$0	\$39.02	\$1.06	0	
	Toledo, OH	Huntsville, AL	\$5,051	\$0	\$50.16	\$1.37	5	
	Indianapolis, IN	Raleigh, NC	\$6,178	\$0	\$61.35	\$1.67	6	
Shuttle Train	Indianapolis, IN	Huntsville, AL	\$4,529	\$0	\$44.98	\$1.22	1	
	Champaign-Urbana, IL	New Orleans, LA	\$4,395	\$0	\$43.64	\$1.19	6	
Wheat	Great Falls, MT	Portland, OR	\$3,953	-\$70	\$38.56	\$1.05	2	
	Wichita, KS	Galveston-Houston, TX	\$3,871	-\$55	\$37.90	\$1.03	7	
	Chicago, IL	Albany, NY	\$5,492	\$0	\$54.54	\$1.48	11	
	Grand Forks, ND	Portland, OR	\$5,611	-\$122	\$54.51	\$1.48	2	
	Grand Forks, ND	Galveston-Houston, TX	\$5,931	-\$127	\$57.64	\$1.57	-8	
	Northwest KS	Portland, OR	\$5,478	\$0	\$54.40	\$1.48	-1	
Corn	Minneapolis, MN	Portland, OR	\$5,000	-\$148	\$48.18	\$1.22	-7	
	Sioux Falls, SD	Tacoma, WA	\$4,960	-\$136	\$47.91	\$1.22	-7	
	Champaign-Urbana, IL	New Orleans, LA	\$3,481	\$0	\$34.57	\$0.88	5	
	Lincoln, NE	Galveston-Houston, TX	\$3,600	-\$79	\$34.96	\$0.89	-3	
	Des Moines, IA	Amarillo, TX	\$3,795	\$0	\$37.69	\$0.96	-1	
	Minneapolis, MN	Tacoma, WA	\$5,000	-\$147	\$48.19	\$1.22	-7	
	Council Bluffs, IA	Stockton, CA	\$4,640	-\$152	\$44.57	\$1.13	-3	
Soybeans	Sioux Falls, SD	Tacoma, WA	\$5,490	-\$136	\$53.17	\$1.45	-7	
	Minneapolis, MN	Portland, OR	\$5,510	-\$148	\$53.25	\$1.45	-7	
	Fargo, ND	Tacoma, WA	\$5,380	-\$121	\$52.23	\$1.42	-7	
	Council Bluffs, IA	New Orleans, LA	\$4,425	\$0	\$43.94	\$1.20	10	
	Toledo, OH	Huntsville, AL	\$4,226	\$0	\$41.97	\$1.14	6	
	Grand Island, NE	Portland, OR	\$5,360	\$0	\$53.23	\$1.45	-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	4
	OK	Cuautitlan, EM	\$6,514	\$0	\$66.55	\$1.81	-4
	KS	Guadalajara, JA	\$6,995	\$70	\$72.19	\$1.96	-3
	TX	Salinas Victoria, NL	\$4,142	\$0	\$42.32	\$1.15	4
Corn	IA	Guadalajara, JA	\$8,397	\$49	\$86.30	\$2.19	-2
	SD	Celaya, GJ	\$7,840	\$0	\$80.11	\$2.03	-1
	NE	Queretaro, QA	\$7,879	\$0	\$80.50	\$2.04	0
	SD	Salinas Victoria, NL	\$6,545	\$0	\$66.87	\$1.70	8
	MO	Tlalnepantla, EM	\$7,238	\$0	\$73.96	\$1.88	0
	SD	Torreon, CU	\$7,240	\$0	\$73.98	\$1.88	1
Soybeans	MO	Bojay (Tula), HG	\$8,652	\$54	\$88.95	\$2.42	2
	NE	Guadalajara, JA	\$9,142	\$52	\$93.93	\$2.55	0
	IA	El Castillo, JA	\$9,470	\$0	\$96.76	\$2.63	0
	KS	Torreon, CU	\$7,439	\$30	\$76.31	\$2.07	1
Sorghum	NE	Celaya, GJ	\$7,344	\$41	\$75.45	\$1.91	-3
	KS	Queretaro, QA	\$7,563	\$0	\$77.27	\$1.96	8
	NE	Salinas Victoria, NL	\$6,168	\$0	\$63.02	\$1.60	8
	NE	Torreon, CU	\$6,672	\$25	\$68.42	\$1.74	-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.

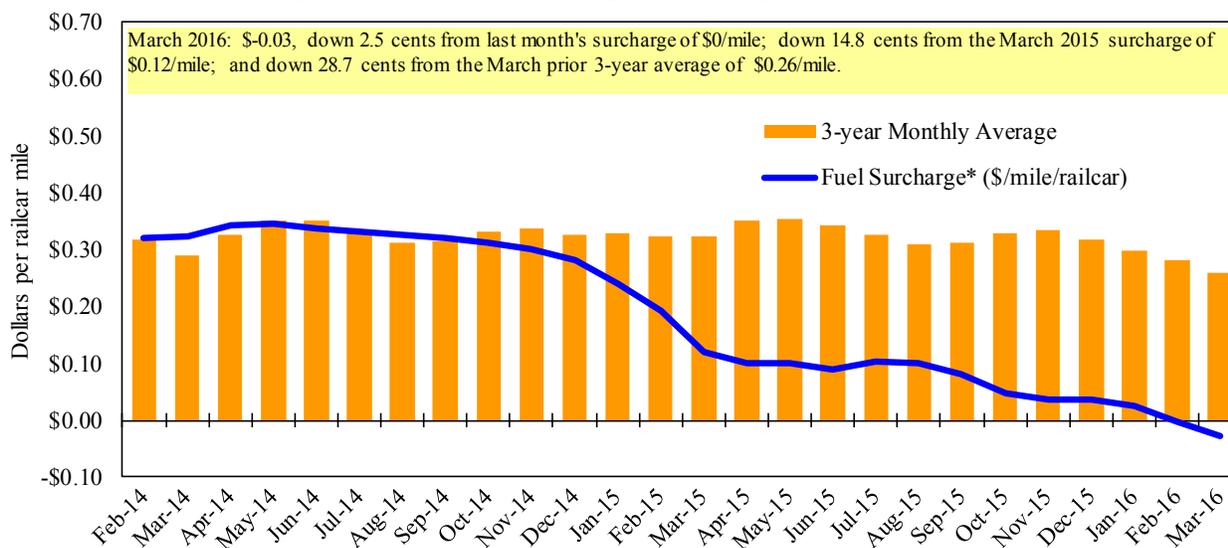
²Fuel surcharge adjusted to reflect the change in Ferrocarril Mexicano, S.A. de C.V railroad fuel surcharge policy as of 10/01/2009

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.

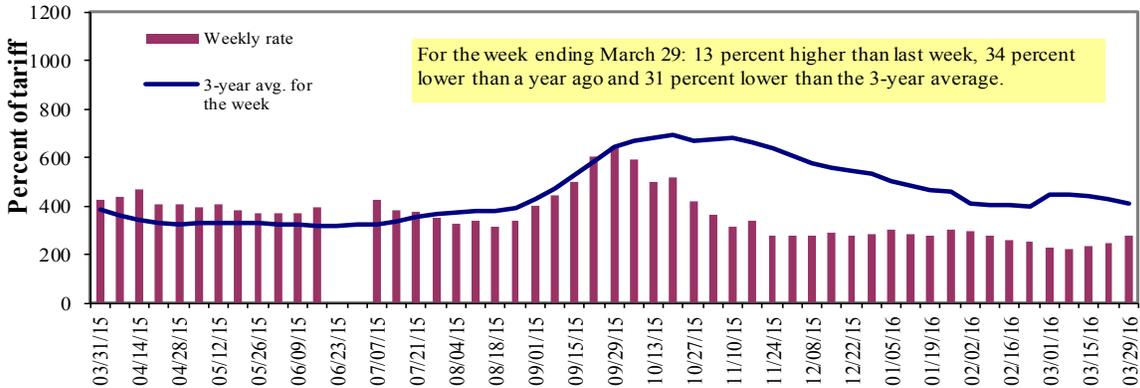
**CSX strike price changed from \$2.00/gal. to \$3.75/gal. starting January 1, 2015.

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	3/29/2016	335	283	280	210	210	210	185
	3/22/2016	317	262	248	178	197	187	167
\$/ton	3/29/2016	20.74	15.06	12.99	8.38	9.85	8.48	5.81
	3/22/2016	19.62	13.94	11.51	7.10	9.24	7.55	5.24
Current week % change from the same week:								
	Last year	-24	-32	-34	-39	-41	-41	-40
	3-year avg. ²	-	14	-31	-37	-34	-34	-30
Rate¹	April	320	278	270	200	205	205	178
	June	320	273	265	195	205	205	175

¹Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); ²4-week moving average; ton = 2,000 pounds; missing data due to winter closure or flooding

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.

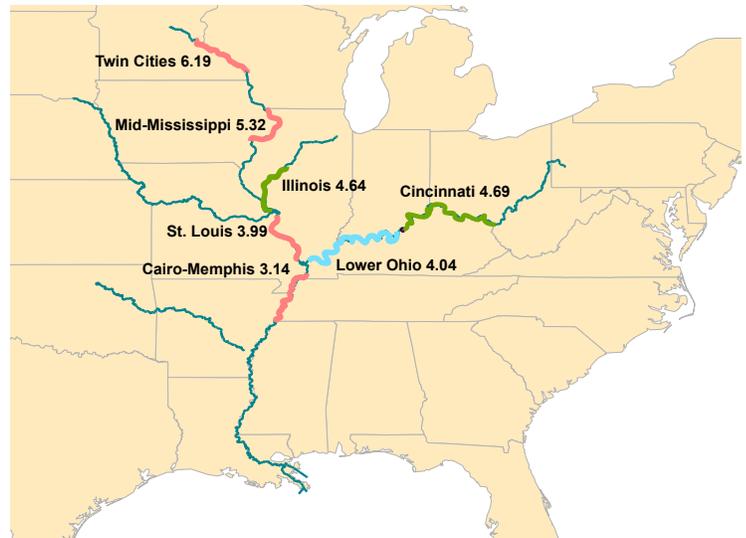
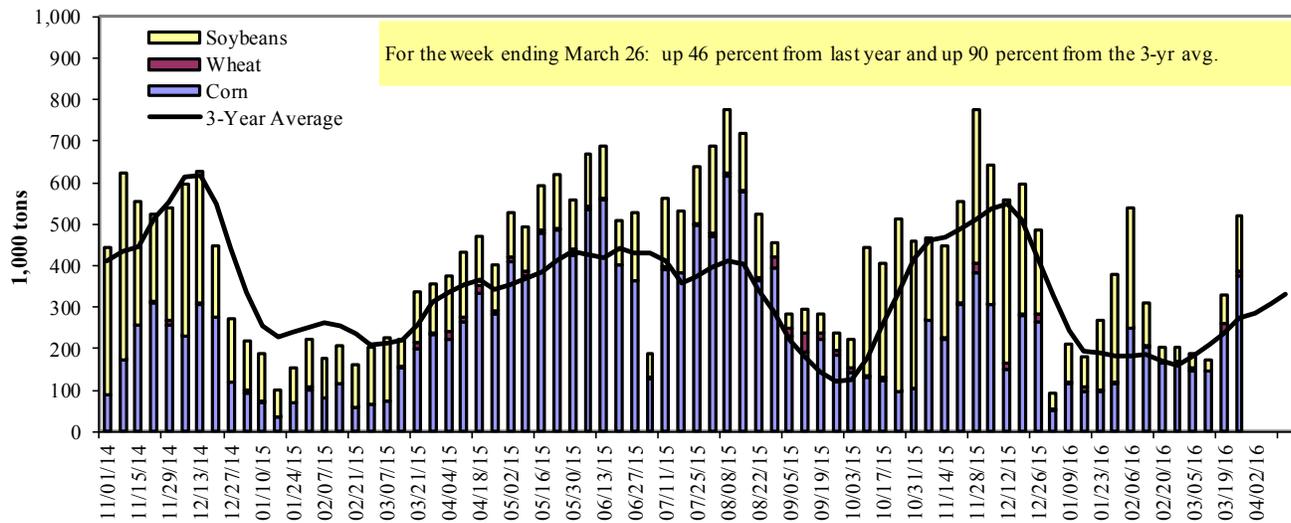


Figure 10

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 3/26/2016	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	74	6	28	0	109
Winfield, MO (L25)	198	8	88	0	294
Alton, IL (L26)	380	11	159	0	550
Granite City, IL (L27)	377	11	133	0	522
Illinois River (L8)	75	3	28	0	106
Ohio River (L52)	138	9	58	0	205
Arkansas River (L1)	0	27	27	0	53
Weekly total - 2016	515	46	218	0	780
Weekly total - 2015	397	24	191	11	623
2016 YTD ¹	3,752	314	3,024	45	7,136
2015 YTD	3,223	260	3,062	58	6,604
2016 as % of 2015 YTD	116	121	99	78	108
Last 4 weeks as % of 2015 ²	121	168	80	145	108
Total 2015	19,215	1,686	14,191	359	35,451

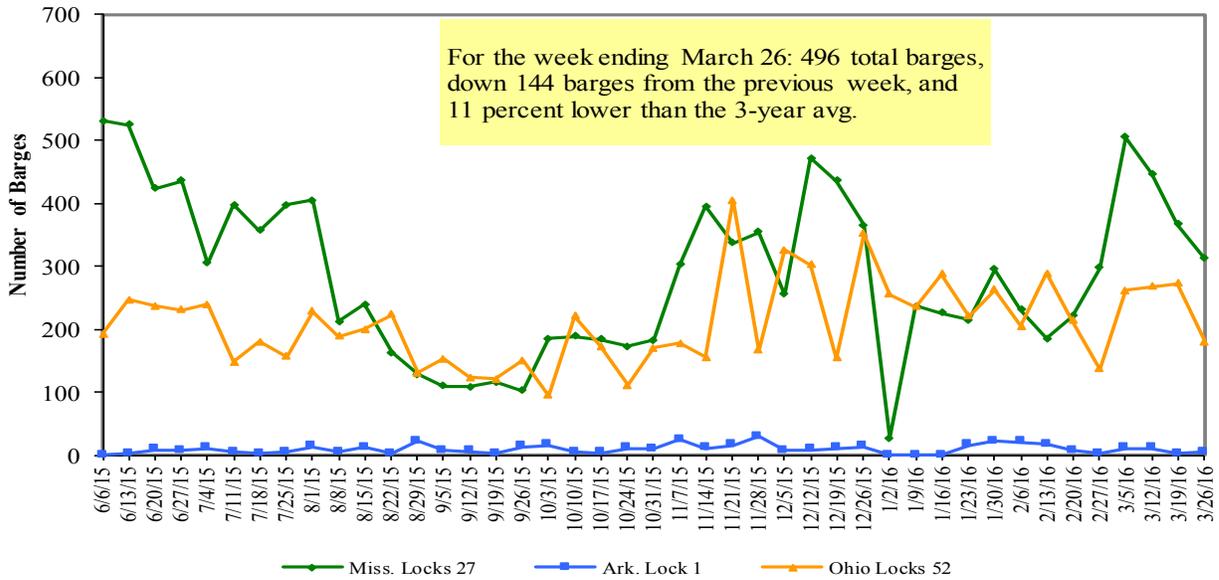
¹ Weekly total, YTD (year-to-date) and calendar year total includes Miss/27, Ohio/52, and Ark/1; "Other" refers to oats, barley, sorghum, and rye.

² As a percent of same period in 2015.

Note: Total may not add exactly, due to rounding

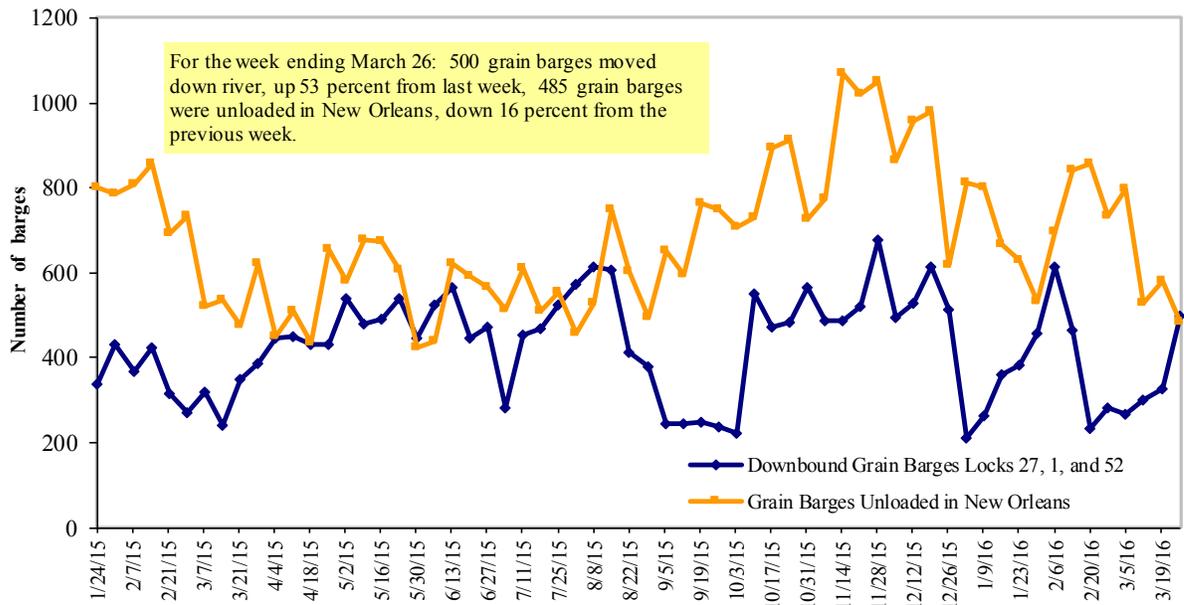
Source: U.S. Army Corps of Engineers

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 3/28/2016 (US \$/gallon)

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	2.179	0.007	-0.813
	New England	2.241	0.013	-0.923
	Central Atlantic	2.292	0.012	-0.887
	Lower Atlantic	2.081	0.002	-0.734
II	Midwest ²	2.077	-0.013	-0.650
III	Gulf Coast ³	2.001	0.010	-0.674
IV	Rocky Mountain	2.094	0.038	-0.649
V	West Coast	2.315	0.004	-0.630
	West Coast less California	2.177	-0.002	-0.581
	California	2.425	0.007	-0.671
Total	U.S.	2.121	0.002	-0.703

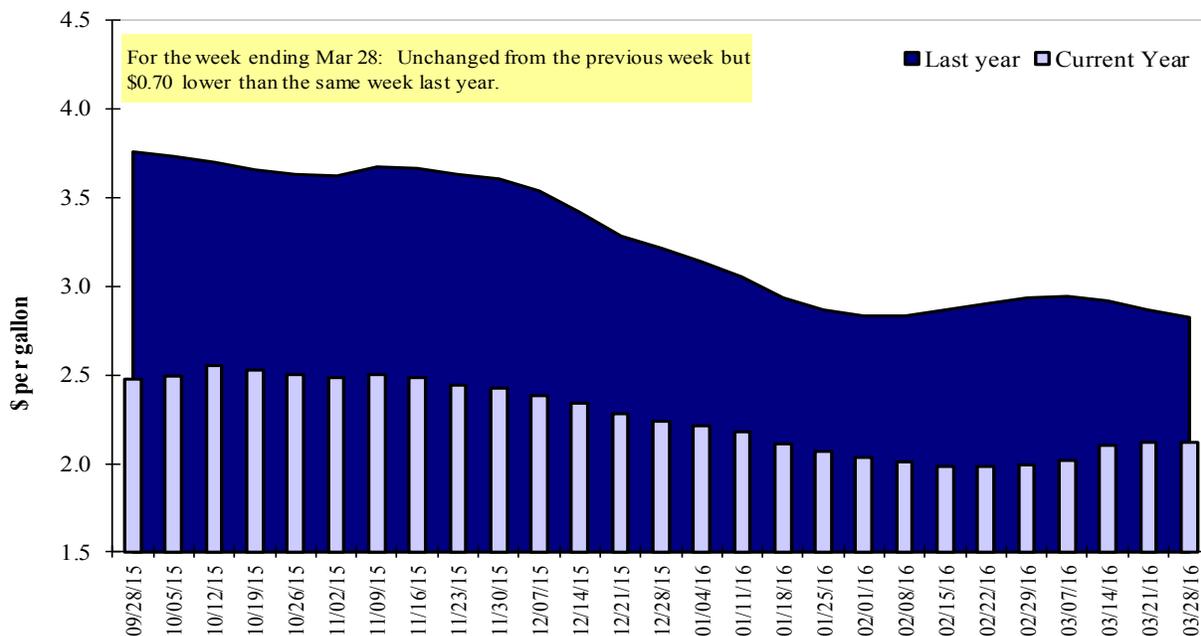
¹Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

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									
3/17/2016	948	341	1,458	831	100	3,679	13,154	3,457	20,290
This week year ago	1,468	687	1,656	606	111	4,528	15,176	5,242	24,946
Cumulative exports-marketing year²									
2015/16 YTD	4,423	2,632	4,806	2,829	571	15,259	17,699	40,370	73,328
2014/15 YTD	5,590	2,979	5,849	3,235	567	18,220	21,806	43,201	83,227
YTD 2015/16 as % of 2014/15	79	88	82	87	101	84	81	93	88
Last 4 wks as % of same period 2014/15	71	56	90	127	94	84	86	73	83
2014/15 Total	7,009	3,654	7,250	3,758	665	22,336	45,205	49,614	117,155
2013/14 Total	11,465	7,307	6,338	4,367	486	29,963	46,868	44,478	121,309

¹ Current unshipped (outstanding) export sales to date

² Shipped export sales to date; 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 3/17/2016	Commitments ²		% change current MY from last MY	Exports ³ 3-year avg 2011-2013
	2015/16	2014/15		
	Current MY	Last MY		
	- 1,000 mt -			- 1,000 mt -
Japan	5,707	7,975	(28)	10,079
Mexico	10,408	8,802	18	8,145
Korea	913	2,385	(62)	2,965
Colombia	3,647	3,148	16	3,461
Taiwan	659	1,230	(46)	1,238
Top 5 Importers	21,333	23,541	(9)	25,887
Total US corn export sales	30,853	36,982	(17)	34,445
% of Projected	73%	78%		
Change from prior week	803	435		
Top 5 importers' share of U.S. corn export sales	69%	64%		75%
USDA forecast, March 2016	41,985	47,430	(11)	
Corn Use for Ethanol USDA forecast, March 2016	132,715	132,309	0	

(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/>

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 3/17/2016	Total Commitments ²		% change current MY from last MY	Exports ³ 3-yr avg. 2011-13
	2015/16 Current MY	2014/15 Last MY		
	- 1,000 mt -			- 1,000 mt -
China	26,953	29,919	(10)	24,211
Mexico	2,724	2,759	(1)	2,971
Indonesia	1,192	1,512	(21)	1,895
Japan	1,701	1,564	9	1,750
Taiwan	1,091	1,113	(2)	1,055
Top 5 importers	33,661	36,868	(9)	31,882
Total US soybean export sales	43,827	48,443	(10)	39,169
% of Projected	95%	96%		
Change from prior week	411	506		
Top 5 importers' share of U.S. soybean export sales	77%	76%		81%
USDA forecast, March 2016	46,049	50,218	(8)	

(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/>³FAS 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 3/17/2016	Total Commitments ²		% change current MY from last MY	Exports ³ 3-yr avg 2012-2014
	2015/16 Current MY	2014/15 Last MY		
	- 1,000 mt -			- 1,000 mt -
Japan	2,310	2,963	(22)	3,113
Mexico	2,107	2,653	(21)	2,807
Nigeria	1,389	1,906	(27)	2,512
Philippines	2,041	2,210	(8)	2,105
Brazil	404	1,534	(74)	2,091
Korea	1,128	1,208	(7)	1,273
Taiwan	937	981	(4)	1,007
Indonesia	516	629	(18)	751
Colombia	590	547	8	662
Thailand	507	609		618
Top 10 importers	11,422	14,629	(22)	16,939
Total US wheat export sales	18,938	22,748	(17)	26,361
% of Projected	90%	98%		
Change from prior week	369	102		
Top 10 importers' share of U.S. wheat export sales	60%	64%		64%
USDA forecast, March 2016	21,117	23,270	(9)	

(n) indicates negative number.

¹Based on FAS Marketing Year Ranking Reports - 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/esrquery/>³FAS 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 03/24/16	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	221	261	85	2,655	2,913	91	107	98	10,985
Corn	121	121	100	1,358	2,168	63	47	81	7,232
Soybeans	208	207	100	4,308	3,578	120	133	115	11,809
Total	550	589	93	8,322	8,659	96	88	99	30,027
Mississippi Gulf									
Wheat	51	60	85	816	975	84	75	54	4,504
Corn	709	660	107	5,934	6,287	94	134	124	26,701
Soybeans	244	314	78	8,021	8,394	96	117	118	29,593
Total	1,004	1,033	97	14,772	15,656	94	121	112	60,797
Texas Gulf									
Wheat	41	133	31	662	796	83	81	67	3,724
Corn	0	31	0	189	149	127	113	148	596
Soybeans	0	0	n/a	92	210	44	n/a	n/a	864
Total	41	164	25	942	1,155	82	85	74	5,184
Interior									
Wheat	6	41	15	280	283	99	118	130	1,388
Corn	126	170	74	1,354	1,282	106	117	139	6,201
Soybeans	65	75	87	985	997	99	132	91	3,518
Total	197	285	69	2,619	2,562	102	122	117	11,106
Great Lakes									
Wheat	0	0	n/a	0	13	0	0	0	997
Corn	0	0	n/a	0	0	n/a	n/a	n/a	485
Soybeans	0	0	n/a	0	0	n/a	n/a	0	733
Total	0	0	n/a	0	13	0	0	0	2,216
Atlantic									
Wheat	25	0	n/a	123	141	88	73	62	520
Corn	5	0	n/a	14	20	70	47	78	277
Soybeans	80	12	684	777	796	98	134	116	2,053
Total	110	12	901	914	956	96	108	97	2,850
U.S. total from ports**									
Wheat	344	495	70	4,537	5,121	89	94	80	22,118
Corn	960	981	98	8,848	9,905	89	102	116	41,492
Soybeans	597	607	98	14,184	13,975	101	124	113	48,570
Total	1,902	2,083	91	27,569	29,001	95	107	106	112,180

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

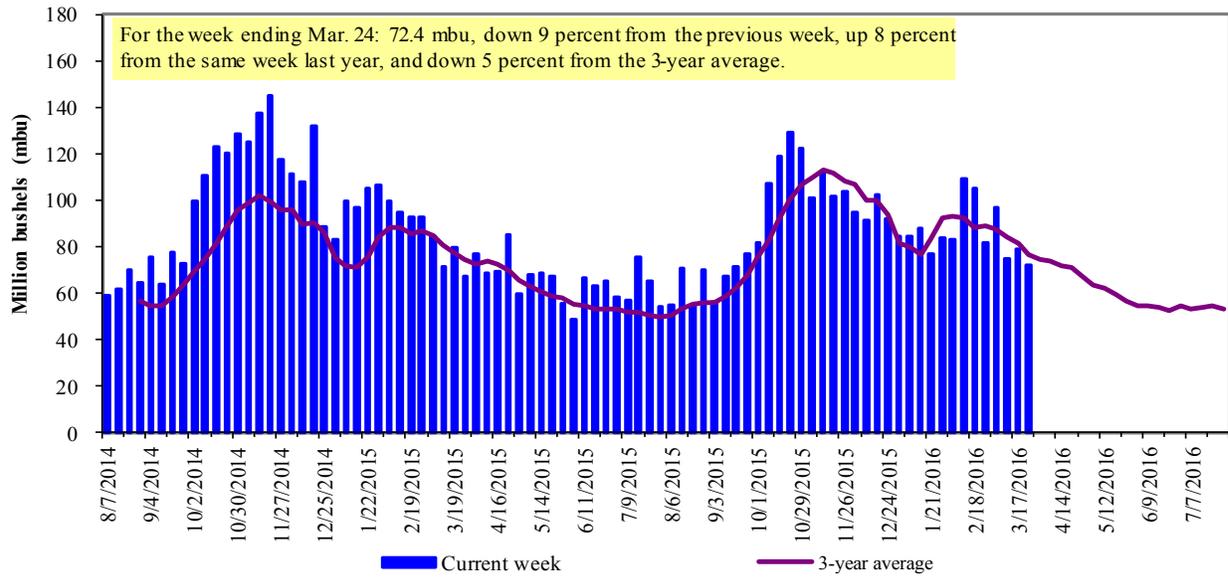
**Total only includes regions shown above

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

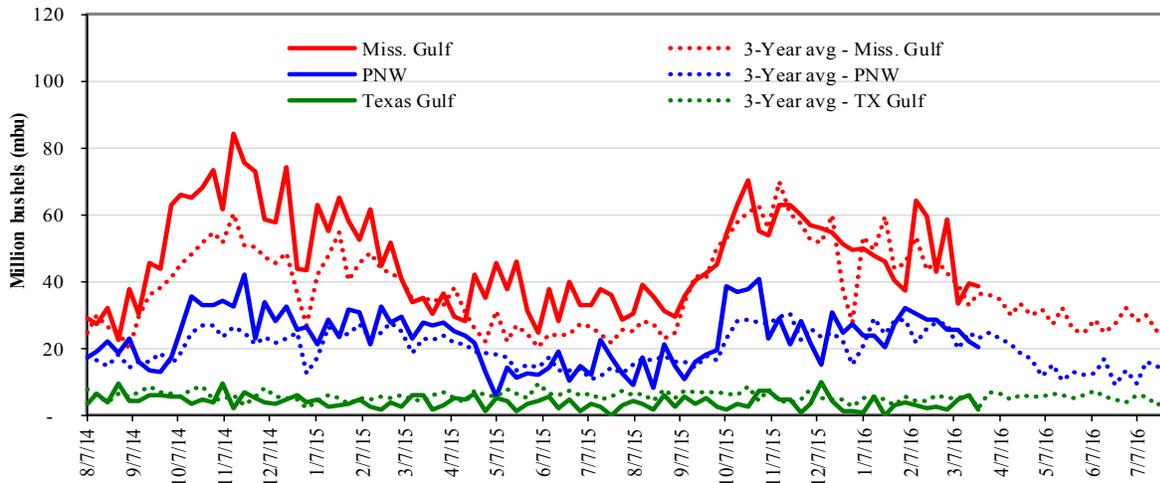
U.S. grain inspected for export (wheat, corn, and soybeans)



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 03/24/16 inspections (mbu):		Percent change from:				
Mississippi Gulf:	38.7	Last Week:	MS Gulf	TX Gulf	U.S. Gulf	PNW
PNW:	20.5	Last Year (same week):	down 2	down 75	down 12	down 7
Texas Gulf:	1.5	3-yr avg. (4-wk. mov. Avg):	up 27	up 2	up 26	down 24
			up 2	down 68	down 5	down 13

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

Ocean Transportation

Table 17

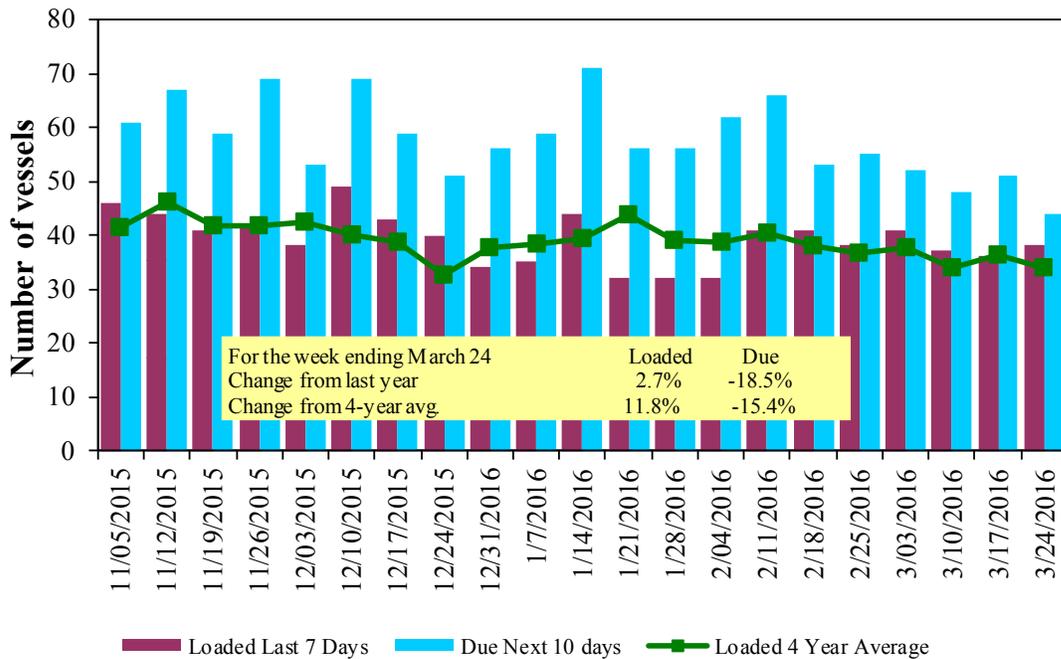
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

Date	Gulf			Pacific Northwest	Vancouver B.C.
	In port	Loaded 7-days	Due next 10-days	In port	In port
3/24/2016	39	38	44	17	n/a
3/17/2016	40	36	51	16	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

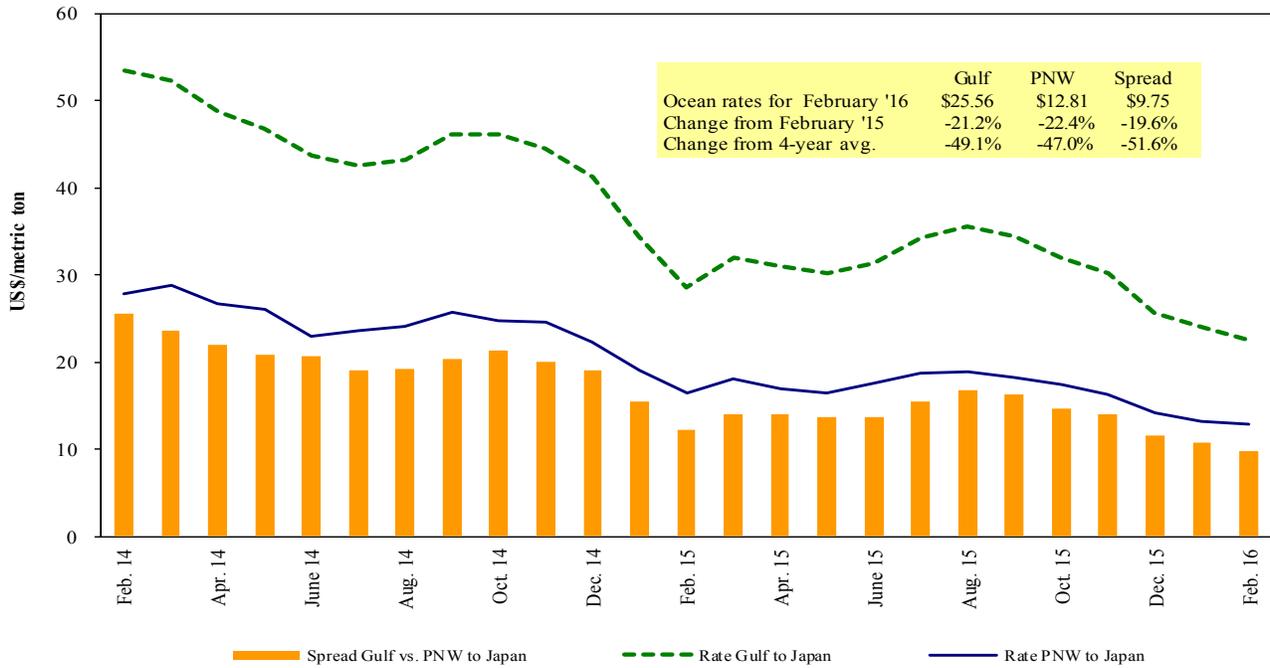
U.S. Gulf¹ Vessel Loading Activity



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 03/26/2016

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US\$/metric ton)
U.S. Gulf	Japan	Heavy Grain	April 5/18	52,000	21.25
U.S. Gulf	Japan	Heavy Grain	Apr 1/5	50,000	22.20
U.S. Gulf	Djibouti	Wheat ¹	Apr 4/14	34,000	128.76
U.S. Gulf	Djibouti	Sorghum	Apr 18/28	15,000	64.63
PNW	Algeria	Wheat	Feb 10/20	51,500	13.15
Brazil	China	Heavy Grain	May 1/6	60,000	14.75
Brazil	China	Heavy Grain	Apr 1/10	60,000	14.00
Brazil	China	Heavy Grain	Apr 1/10	60,000	13.90
Brazil	China	Heavy Grain	Mar 15/30	60,000	13.75
Brazil	China	Heavy Grain	Mar 15/30	60,000	13.25
Brazil	China	Heavy Grain	Mar 1/10	60,000	13.25
EC S America	China	Heavy Grain	May/June	60,000	14.75
EC S America	China	Heavy Grain	Feb/Mar 16	60,000	18.50
France	Algeria	Wheat	Mar 20/23	31,500	12.75
River Plate	Egypt	Heavy Grain	Mar 23/30	48,000	17.00
River Plate	Algeria	Corn	Mar 15/25	40,000	18.75

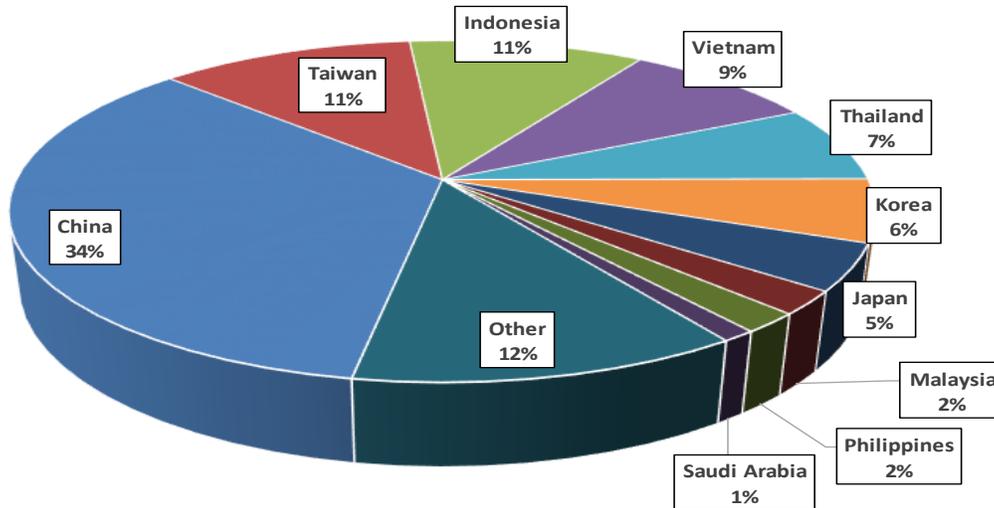
Rates shown are for metric ton (2,204.62 lbs. = 1 metric ton), F.O.B., except where otherwise indicates; op = option

¹ 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 2014, containers were used to transport 7 percent of total U.S. waterborne grain exports. Approximately 63 percent of U.S. waterborne grain exports in 2014 went to Asia, of which 11 percent were moved in containers. Approximately 95 percent of U.S. waterborne containerized grain exports were destined for Asia.

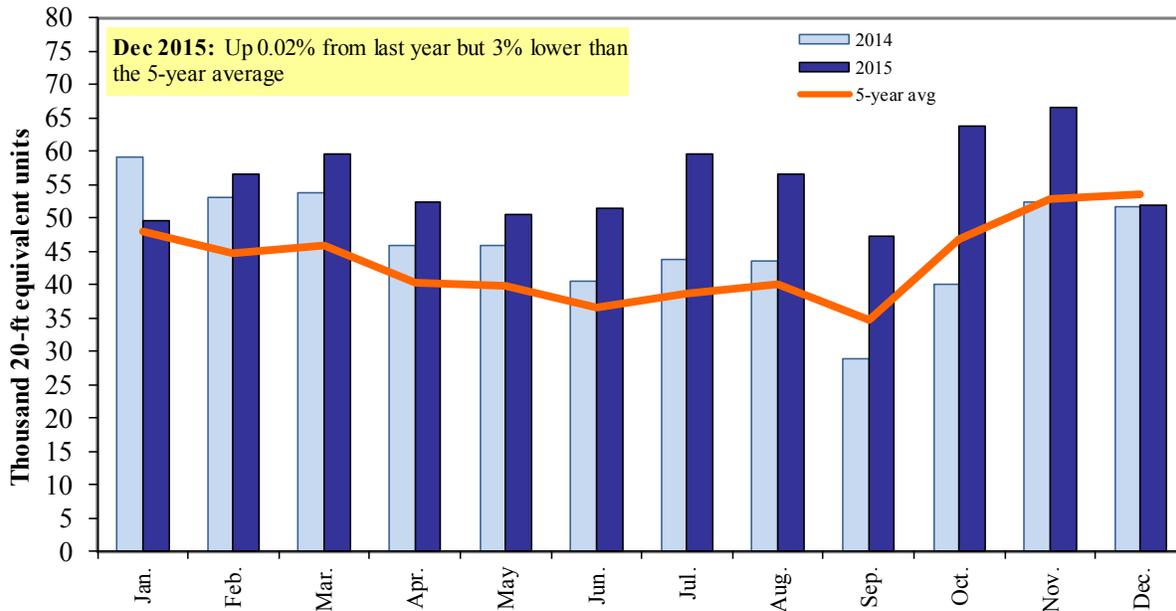
Figure 18
Top 10 Destination Markets for U.S. Containerized Grain Exports, January–December 2015



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

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)

Contributing Analysts

Sergio Sotelo sergioa.sotelo@ams.usda.gov (202) 756 - 2577

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 31, 2016. Web: <http://dx.doi.org/10.9752/TS056.03-31-2016>

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.