



Grain Transportation Report

A weekly publication of the Agricultural Marketing Service

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March 9, 2017

WEEKLY HIGHLIGHTS

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Increased Soybean Inspections Push Total Exports Higher

For the week ending March 2, **total inspections of grain** (corn, wheat, and soybeans) for export from major U.S. export regions reached 2.9 million metric tons (mmt), up 7 percent from the previous week, up 15 percent from the same time last year, and 16 percent above the 3-year average. Total soybean inspections jumped 31 percent from the previous week as shipments to Asia rebounded. Inspections of corn and wheat decreased only 1 percent each compared to the past week. Grain inspections in the Pacific Northwest (PNW) increased 36 percent from the previous week, while Mississippi Gulf inspections increased 10 percent. Rail deliveries of grain to the PNW and Mississippi Gulf ports were also up notably. Outstanding export sales (unshipped) continued to decrease for corn, wheat, and soybeans.

Louis Dreyfus Opens a New Terminal

On March 6, 2017, Louis Dreyfus Company LLC (LDC) inaugurated a truck-to-barge facility in West Memphis, AR. The 800,000-bushel state-of-the-art terminal is a delivery point for crops grown around the mid-Delta region. It is operational, receiving, storing, and shipping corn and soybeans along with other agricultural products grown in the region. The new facility is an addition to the network of LDC's export facility in Baton Rouge, LA. A covered belt conveyor, with a capacity of 60,000 bushels per hour that runs almost 3,000 feet overhead, connects the elevator to the barge-loading station. The facility is located on the west side of the Mississippi River levee, which protects it from flooding and can accommodate the addition of rail service in the future.

Warmer Temperatures May Open Upper Mississippi River Sooner than Average

During February, temperatures throughout much of the Midwest have averaged above normal resulting in an early melting of the ice accumulations in the Upper Mississippi River. USDA's latest [Weekly Weather and Crop Bulletin](#) indicates that temperatures from February 26 to March 4 were more than 6°F above average in parts of the Great Plains and Mississippi River Valley. The U.S. Army Corps of Engineers (Corps) St. Paul District has reported less ice than normal at Lake Pepin. The thickness of the ice is an indication of the possible re-opening on the Upper Mississippi River. Lake Pepin ice is traditionally the last hurdle for the northbound barge traffic reaching St. Paul, MN, because the lake ice is usually much thicker due to the slow moving current. The Upper Mississippi River has opened as early as March 4 (1983, 1984, and 2000). In 2014, the navigation season on the Upper Mississippi River did not open until April 16 due to historic ice thickness at Lake Pepin. Since 1978, the average start date of the navigation season has been March 22.

Snapshots by Sector

Export Sales

For the week ending February 23 **unshipped balances** of wheat, corn, and soybeans totaled 34.3 mmt, up 61 percent from the same time last year. Net weekly **wheat export sales** were .353 mmt, down 27 percent from the previous week. Net **corn export sales** were .692 mmt, down 7 percent from the previous week, and net **soybean export sales** were .427 mmt, up 27 percent from the past week.

Rail

U.S. Class I railroads originated 21,307 **grain carloads** for the week ending February 25, down 7 percent from the previous week, unchanged from last year, and unchanged from the 3-year average.

Average March shuttle **secondary railcar** bids/offers per car were \$2,258 above tariff for the week ending March 2, up \$471 from last week, and \$2,447 higher than last year. Average secondary non-shuttle railcar bids/offers per car were \$75 above tariff, \$116 higher than last year. There were no non-shuttle bids/offers last week.

Barge

For the week ending March 4, **barge grain movements** totaled 816,786 tons, 52 percent higher than the last week, and up 86 percent from the same period last year.

For the week ending March 4, 509 grain barges **moved down river**, up 55 percent from last week, 823 grain barges were **unloaded in New Orleans**, up 1 percent from the previous week.

Ocean

For the week ending March 2, 47 **ocean-going grain vessels** were loaded in the Gulf, 24 percent more than the same period last year. Sixty-four vessels are expected to be loaded within the next 10 days, 16 percent more than the same period last year.

For the week ending March 2, the ocean freight rate for shipping bulk grain from the Gulf to Japan was \$37.25 per metric ton, 2 percent more than the previous week. The cost of shipping from the PNW to Japan was \$19.75 per metric ton, 4 percent more than the previous week.

Fuel

During the week ending March 6, average **diesel fuel prices** remained unchanged from previous week at \$2.58 per gallon, 56 cents higher than the same week last year.

Feature Article/Calendar

China Bought More U.S. Soybeans as the Landed Costs Fell

China bought more U.S. soybeans as the landed costs fell in both the United States and Brazil during the fourth quarter of 2016. Compared to the previous quarter, the landed costs of shipping soybeans from Minneapolis, MN, and Davenport, IA, to Hamburg, Germany, each decreased 4 percent (table 1). The landed costs from North Mato Grosso (North MT), and South Goiás (South GO), Brazil, to the same destination decreased 9 and 4 percent from the previous quarter, respectively (table 1). The landed costs of shipping from Minneapolis, MN, and Davenport, IA, to Shanghai, China, through the U.S. Gulf each fell 3 percent during the quarter, while those from Fargo, ND, and Sioux Falls, SD, through the Pacific Northwest (PNW) each fell 2 percent, respectively (table 2). Compared to the previous quarter, the landed costs from North MT and South GO, Brazil, to Shanghai decreased 9 and 4 percent, respectively (table 2).

Table 1-Quarterly costs of transporting soybeans from U.S. and Brazil to Hamburg, Germany

| | 2015 | 2016 | 2016 | Percent change | | 2015 | 2016 | 2016 | Percent change | |
|--|----------------------|----------------------|----------------------|----------------|---|----------------------|----------------------|----------------------|----------------|--------------|
| | 4 th qtr. | 3 rd qtr. | 4 th qtr. | Yr. to Yr. | Qtr. to Qtr. | 4 th qtr. | 3 rd qtr. | 4 th qtr. | Yr. to Yr. | Qtr. to Qtr. |
| United States (via U.S. Gulf) | | | | | | | | | | |
| Minneapolis, MN | | | | | Davenport, IA | | | | | |
| | -\$/mt- | | | | | -\$/mt- | | | | |
| Truck | 8.38 | 10.58 | 10.58 | 26.25 | 0.00 | 8.38 | 10.58 | 10.58 | 26.25 | 0.00 |
| Barge | 34.05 | 32.96 | 31.93 | -6.23 | -3.13 | 25.51 | 25.45 | 23.63 | -7.37 | -7.15 |
| Ocean ¹ | 13.81 | 15.10 | 14.83 | 7.39 | -1.79 | 13.81 | 15.10 | 14.83 | 7.39 | -1.79 |
| Total transportation | 56.24 | 58.64 | 57.34 | 1.96 | -2.22 | 47.70 | 51.13 | 49.04 | 2.81 | -4.09 |
| Farm Value ² | 314.77 | 353.84 | 337.92 | 7.35 | -4.50 | 315.02 | 359.48 | 344.90 | 9.49 | -4.06 |
| Landed Cost ³ | 371.01 | 412.48 | 395.26 | 6.54 | -4.17 | 362.72 | 410.61 | 393.94 | 8.61 | -4.06 |
| Transport % of landed cost | 15.16 | 14.22 | 14.51 | | | 13.15 | 12.45 | 12.45 | | |
| Brazil | | | | | | | | | | |
| North MT⁴ - Santos⁵ | | | | | South GO⁴ - Paranagua⁵ | | | | | |
| | -\$/mt- | | | | | -\$/mt- | | | | |
| Truck | 76.94 | 85.01 | 60.57 | -21.28 | -28.75 | 45.06 | 47.61 | 34.77 | -22.84 | -26.97 |
| Ocean ⁶ | 17.00 | 16.50 | 23.00 | 35.29 | 39.39 | 17.00 | 16.50 | 24.00 | 41.18 | 45.45 |
| Total transportation | 93.94 | 101.51 | 83.57 | -11.04 | -17.67 | 62.06 | 64.11 | 58.77 | -5.30 | -8.33 |
| Farm Value ⁷ | 286.43 | 367.25 | 344.51 | 20.28 | -6.19 | 289.68 | 359.07 | 347.53 | 19.97 | -3.21 |
| Landed Cost | 380.37 | 468.76 | 428.08 | 12.54 | -8.68 | 351.74 | 423.18 | 406.30 | 15.51 | -3.99 |
| Transport % of landed cost | 24.70 | 21.66 | 19.52 | | | 17.64 | 15.15 | 14.46 | | |

¹Source: O'Neil Commodity Consulting

²Rail rates include fuel surcharges, but do not include the cost of purchasing empty rail cars in the secondary rail markets, which could exceed the rail tariff rate plus fuel surcharge shown in the table.

³Source: USDA/NASS

⁴Landed cost is total cost plus farm value

⁵Producing regions: MT = Mato Grosso, GO = Goiás

⁶Export ports

⁷Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS

⁸Source: Companhia Nacional de Abastecimento (CONAB) www.conab.gov.br

Note: Total may not add exactly due to rounding

The landed costs of the U.S. soybeans to Europe were pushed down by a combination of decreases in transportation costs and farm values (table 1). In addition to reduced barge rates, ocean rates from the U.S. Gulf to Europe declined during the quarter causing the transportation rates to fall. While transportation costs from the U.S. Gulf and PNW to China increased during the quarter, farm values decreased even more, causing landed costs to fall (table 2). The increases in transportation costs were due to higher rail tariff rates, and higher ocean freight rates from both the U.S. Gulf and PNW to China, compared to the previous quarter. Transportation costs of shipping soybeans from Brazil to both Europe and China fell during the fourth quarter, compared to the previous quarter due to reduced ocean truck rates that more than offset the increased ocean freight rates. Year-to-year landed costs increased in the United States and Brazil as soybean farm values improved from a year ago in both countries.

The transportation shares of the landed costs were comparable in both countries as the U.S. share ranged from 13 to 20 percent, and Brazil's ranged from 14 to 20 percent (tables 1 and 2).

Table 2-Quarterly costs of transporting soybeans from U.S. and Brazil to Shanghai, China

| | 2015 | 2016 | 2016 | Percent change | | 2015 | 2016 | 2016 | Percent change | |
|--|----------------------|----------------------|----------------------|----------------|--------------|---|----------------------|----------------------|----------------|--------------|
| | 4 th qtr. | 3 rd qtr. | 4 th qtr. | Yr. to Yr. | Qtr. to Qtr. | 4 th qtr. | 3 rd qtr. | 4 th qtr. | Yr. to Yr. | Qtr. to Qtr. |
| United States (via U.S. Gulf) | | | | | | | | | | |
| Minneapolis, MN | | | | | | Davenport, IA | | | | |
| | --\$/mt-- | | | | | --\$/mt-- | | | | |
| Truck | 8.38 | 10.58 | 10.58 | 26.25 | 0.00 | 8.38 | 10.58 | 10.58 | 26.25 | 0.00 |
| Barge | 34.05 | 32.96 | 31.93 | -6.23 | -3.13 | 25.51 | 25.45 | 23.63 | -7.37 | -7.15 |
| Ocean ¹ | 27.77 | 28.27 | 32.60 | 17.39 | 15.32 | 27.77 | 28.27 | 32.60 | 17.39 | 15.32 |
| Total transportation | 70.20 | 71.81 | 75.11 | 6.99 | 4.60 | 61.66 | 64.30 | 66.81 | 8.35 | 3.90 |
| Farm Value ² | 314.77 | 353.84 | 337.92 | 7.35 | -4.50 | 315.02 | 359.48 | 344.90 | 9.49 | -4.06 |
| Landed Cost ³ | 384.97 | 425.65 | 413.03 | 7.29 | -2.96 | 376.68 | 423.78 | 411.71 | 9.30 | -2.85 |
| Transport % of landed cost | 18.24 | 16.87 | 18.19 | | | 16.37 | 15.17 | 16.23 | | |
| Via PNW | | | | | | | | | | |
| Fargo, ND | | | | | | Sioux Falls, SD | | | | |
| Truck | 8.38 | 10.58 | 10.58 | 26.25 | 0.00 | 8.38 | 10.58 | 10.58 | 26.25 | 0.00 |
| Ocean | 14.90 | 15.53 | 17.51 | 17.52 | 12.75 | 14.90 | 15.33 | 17.51 | 17.52 | 14.22 |
| Rail ⁴ | 53.68 | 53.08 | 54.32 | 1.19 | 2.34 | 54.80 | 54.13 | 55.27 | 0.86 | 2.11 |
| Total transportation | 76.96 | 79.19 | 82.41 | 7.08 | 4.07 | 78.08 | 80.04 | 83.36 | 6.76 | 4.15 |
| Farm Value | 304.97 | 342.70 | 329.35 | 7.99 | -3.90 | 308.65 | 344.04 | 332.53 | 7.74 | -3.35 |
| Landed Cost | 381.93 | 421.89 | 411.76 | 7.81 | -2.40 | 386.73 | 424.08 | 415.89 | 7.54 | -1.93 |
| Transport % of landed cost | 20.15 | 18.77 | 20.01 | | | 20.19 | 18.87 | 20.04 | | |
| Brazil | | | | | | | | | | |
| North MT⁵ - Santos⁶ | | | | | | South GO⁵ - Paranagua⁶ | | | | |
| | --\$/mt-- | | | | | --\$/mt-- | | | | |
| Truck | 76.94 | 85.01 | 60.57 | -21.28 | -28.75 | 45.06 | 47.61 | 34.77 | -22.84 | -26.97 |
| Ocean ⁷ | 20.00 | 12.50 | 20.00 | 0.00 | 60.00 | 20.50 | 14.50 | 21.50 | 4.88 | 48.28 |
| Total transportation | 96.94 | 97.51 | 80.57 | -16.89 | -17.37 | 65.56 | 62.11 | 56.27 | -14.17 | -9.40 |
| Farm Value ⁸ | 286.43 | 367.25 | 344.51 | 20.28 | -6.19 | 289.68 | 359.07 | 347.53 | 19.97 | -3.21 |
| Landed Cost | 383.37 | 464.76 | 425.08 | 10.88 | -8.54 | 355.24 | 421.18 | 403.80 | 13.67 | -4.13 |
| Transport % of landed cost | 25.29 | 20.98 | 18.95 | | | 18.46 | 14.75 | 13.94 | | |

¹Source: O'Neil Commodity Consulting

²Source: USDA/NASS

³Landed cost is transportation cost plus farm value

⁴Rail rates include fuel surcharges, but do not include the cost of purchasing empty rail cars in the secondary rail markets, which could exceed the rail tariff rate plus fuel surcharge shown in the table.

⁵Producing regions: MT = Mato Grosso, GO = Goiás

⁶Export ports

⁷Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS

⁸Source: Companhia Nacional de Abastecimento (CONAB) www.conab.gov.br

Note: Total may not add exactly due to rounding

Market Analysis and Outlook

Compared to the same period a year ago, China imported 22 percent more soybeans from the United States during the fourth quarter of 2016. The annual imports from the United States increased by 31 percent from 2015 to 2016. From October to December 2016, China imported 22.2 million metric tons (mmt) of soybeans from the United States, and 35.9 mmt during all of 2016 (FAS, GATS Data). The value of China's soybean imports during the fourth quarter was \$9.03 billion, and \$14.20 billion for all 4 quarters of 2016. Those values exceeded last year's values by 35 percent as soybean values appreciated over the year. Despite a forecasted increase in domestic soybean production and China's recent sale of stored oilseed and oilseed product reserves (*USDA, FAS GAIN Report #: CH16052*), the demand for U.S. soybeans is likely to remain strong as China begins to implement anti-dumping duties on Distiller's Dried Grains with Solubles (DDGS). Lower imports of DDGS may increase the Chinese demand for soybean meal and boost the growth in soybean imports (*USDA, FAS GAIN Report #: CH16045*).

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Rail Transportation

Table 3

Rail Deliveries to Port (carloads)¹

| For the Week Ending | Mississippi | | Pacific | Atlantic & | Total | Week ending | Cross-Border |
|---|-------------|------------|-----------|------------|---------|------------------|---------------------|
| | Gulf | Texas Gulf | Northwest | East Gulf | | | Mexico ³ |
| 03/01/2017 ^p | 940 | 1,874 | 7,593 | 538 | 10,945 | 2/25/2017 | 1,742 |
| 02/22/2017 ^r | 609 | 2,057 | 5,706 | 407 | 8,779 | 2/18/2017 | 2,140 |
| 2017 YTD ^r | 7,476 | 17,201 | 55,932 | 6,535 | 87,144 | 2017 YTD | 18,224 |
| 2016 YTD ^r | 4,791 | 13,673 | 53,926 | 6,188 | 78,578 | 2016 YTD | 16,246 |
| 2017 YTD as % of 2016 YTD | 156 | 126 | 104 | 106 | 111 | % change YTD | 112 |
| Last 4 weeks as % of 2016 ² | 161 | 125 | 101 | 94 | 108 | Last 4wks % 2016 | 96 |
| Last 4 weeks as % of 4-year avg. ² | 111 | 154 | 121 | 81 | 122 | Last 4wks % 4 yr | 121 |
| 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.

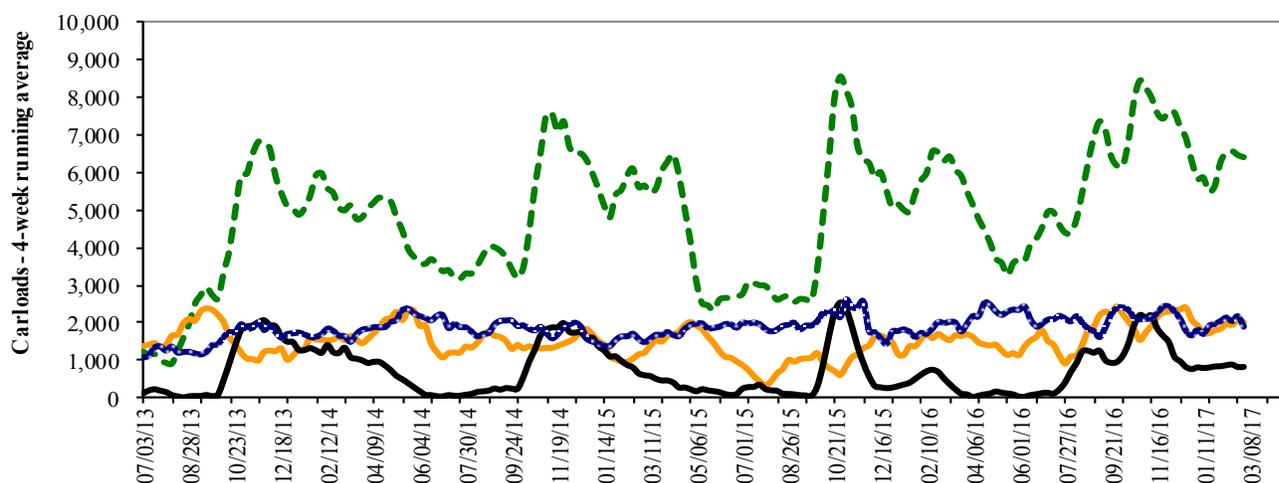
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available

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



- Pacific Northwest: 4 wks. ending 3/1--up 1 from same period last year, up 21% from 4-year average
- Texas Gulf: 4 wks. ending 3/1--up 25% from same period last year, up 54% from 4-year average
- Miss. River: 4 wks. ending 3/1--up 61% from same period last year, up 11% from 4-year average
- Cross-border: 4 wks. ending 2/25--down 4% from same period last year, up 21% from 4-year average

Source: Transportation & Marketing Programs/AMS/USDA

Table 4

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

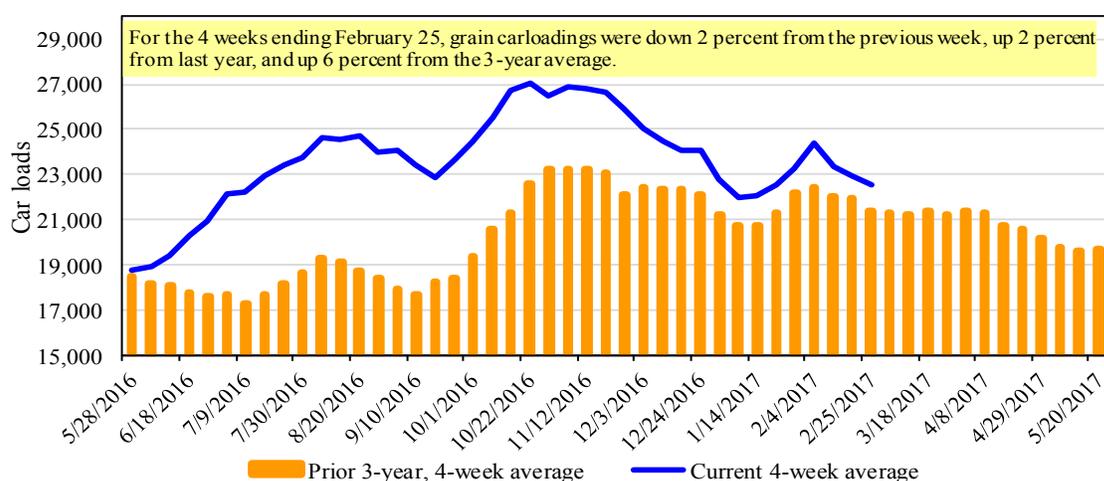
| For the week ending: 2/25/2017 | East | | West | | | U.S. total | Canada | |
|-----------------------------------|--------|---------|---------|--------|---------|------------|---------|---------|
| | CSXT | NS | BNSF | KCS | UP | | CN | CP |
| This week | 2,115 | 2,360 | 9,719 | 709 | 6,404 | 21,307 | 3,907 | 3,567 |
| This week last year | 1,791 | 3,010 | 10,330 | 831 | 5,359 | 21,321 | 3,477 | 4,492 |
| 2017 YTD | 16,406 | 22,422 | 88,111 | 8,095 | 48,453 | 183,487 | 30,164 | 33,166 |
| 2016 YTD | 16,070 | 22,955 | 88,192 | 6,947 | 42,857 | 177,021 | 27,809 | 34,642 |
| 2017 YTD as % of 2016 YTD | 102 | 98 | 100 | 117 | 113 | 104 | 108 | 96 |
| Last 4 weeks as % of 2016* | 107 | 86 | 98 | 115 | 115 | 102 | 114 | 96 |
| Last 4 weeks as % of 3-yr avg.** | 109 | 88 | 106 | 107 | 112 | 106 | 105 | 95 |
| Total 2016 | 95,179 | 150,876 | 590,779 | 45,246 | 300,836 | 1,182,916 | 194,013 | 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: 3/2/2017 | | Delivery period | | | | | | | |
|----------------------------------|-----------------------------------|-----------------|---------|---------|---------|---------|---------|---------|---------|
| | | Mar-17 | Mar-16 | Apr-17 | Apr-16 | May-17 | May-16 | Jun-17 | Jun-16 |
| BNSF ³ | COT grain units | no bids | 0 | no bids |
| | COT grain single-car ⁵ | 127 | 0 | 80 | 0 | 77 | 0 | 67 | 0-7 |
| UP ⁴ | GCAS/Region 1 | no offer | no bids | n/a | n/a |
| | GCAS/Region 2 | no offer | no bids | n/a | n/a |

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

²Average premium/discount to tariff, last auction

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

⁴UP - GCAS = Grain Car Allocation System

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

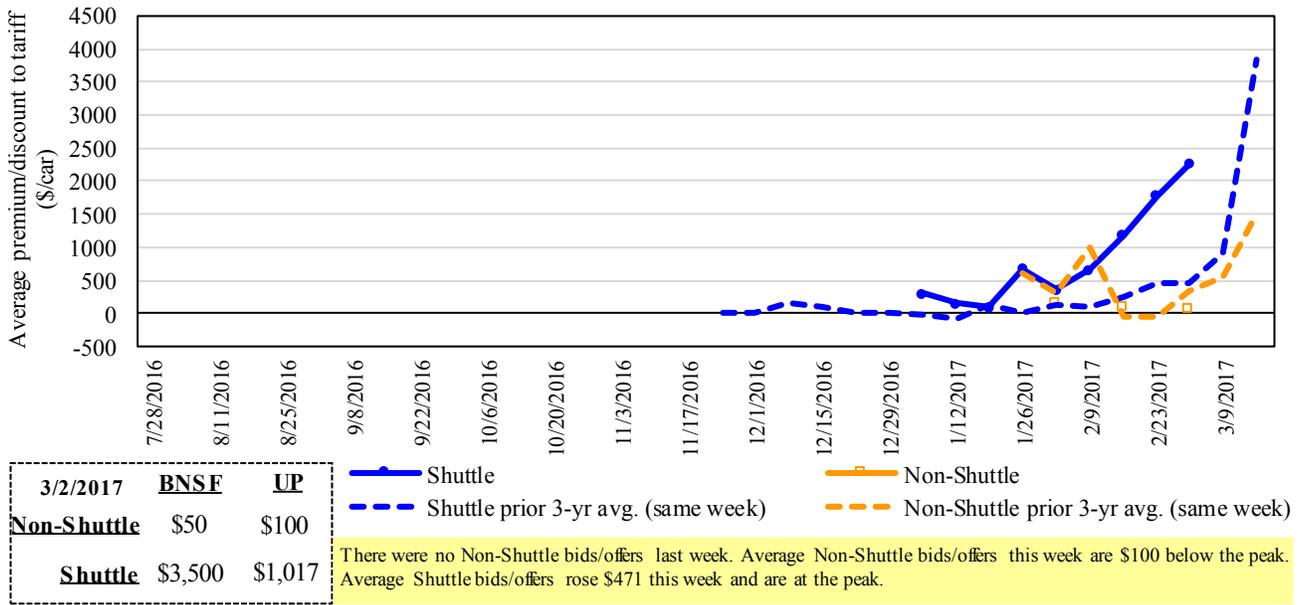
Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

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

Source: Transportation & Marketing Programs/AMS/USDA.

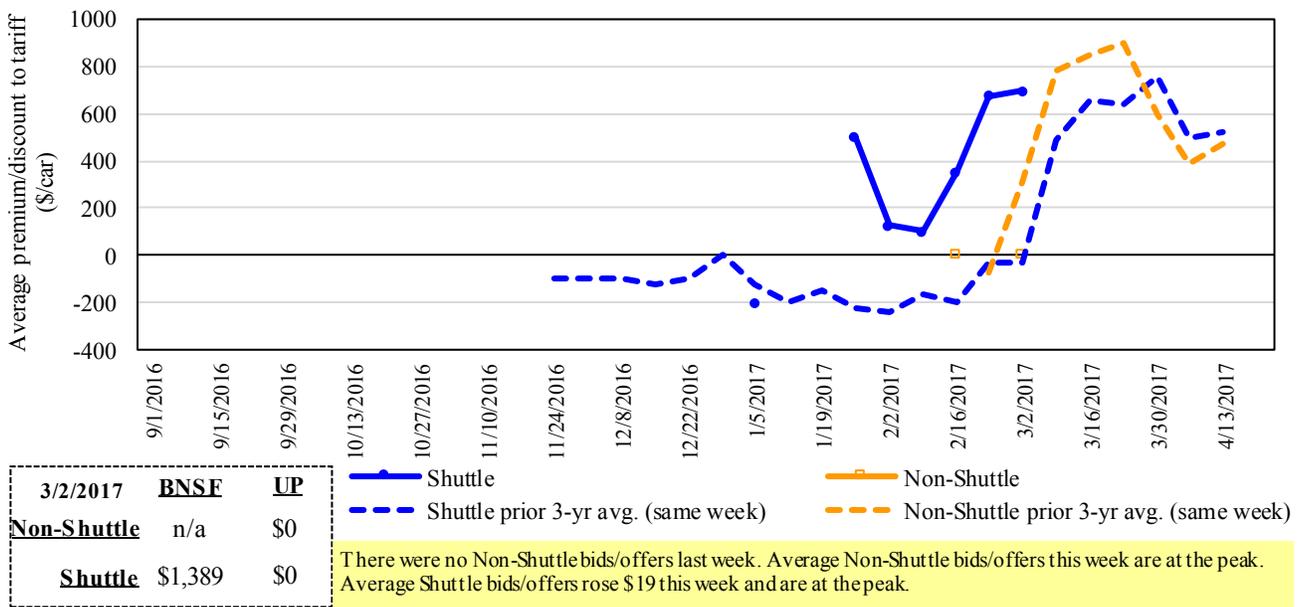
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

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



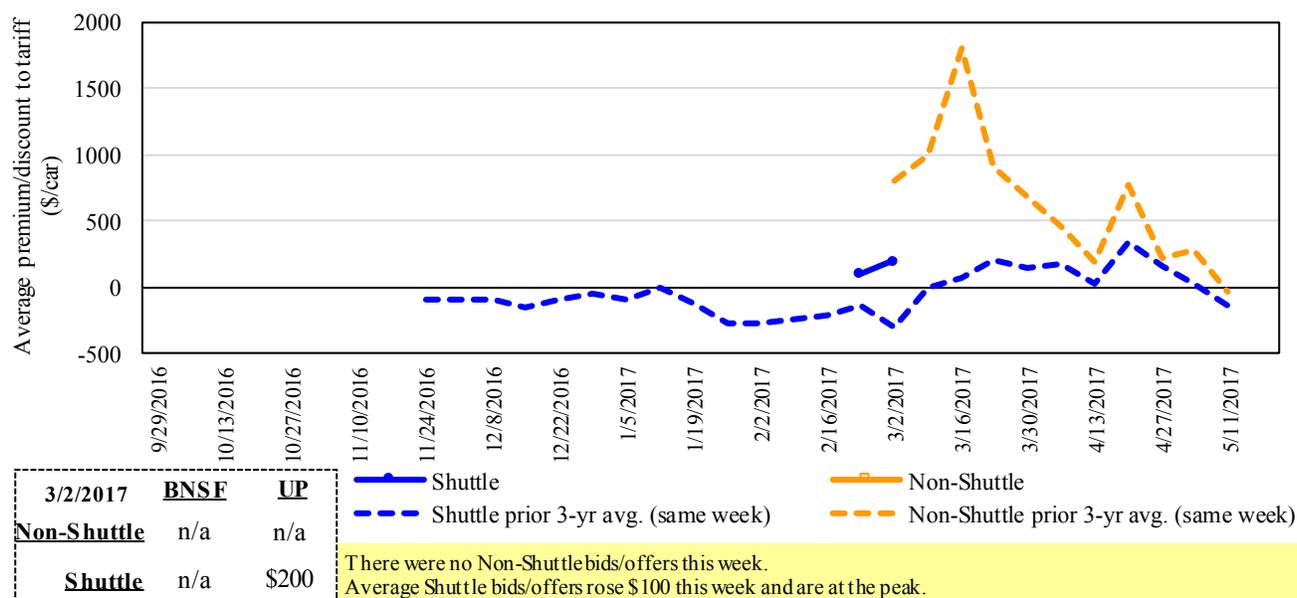
Non-shuttle bids include unit-train and single-car bids. n/a = not available.
 Source: Transportation & Marketing Programs/AMS/USDA

Figure 5
Bids/Offers for Railcars to be Delivered in 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 6
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

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

| For the week ending: | | Delivery period | | | | | |
|----------------------|----------------------------|-----------------|-------------|------------|------------|------------|------------|
| | | 3/2/2017 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 |
| Non-shuttle | BNSF-GF | 50 | n/a | n/a | n/a | n/a | n/a |
| | Change from last week | n/a | n/a | n/a | n/a | n/a | n/a |
| | Change from same week 2016 | 69 | n/a | n/a | n/a | n/a | n/a |
| | UP-Pool | 100 | 0 | n/a | n/a | n/a | n/a |
| | Change from last week | n/a | n/a | n/a | n/a | n/a | n/a |
| | Change from same week 2016 | 163 | 75 | n/a | n/a | n/a | n/a |
| Shuttle | BNSF-GF | 3500 | 1389 | n/a | n/a | n/a | n/a |
| | Change from last week | 800 | 539 | n/a | n/a | n/a | n/a |
| | Change from same week 2016 | 3653 | 1514 | n/a | n/a | n/a | n/a |
| | UP-Pool | 1017 | 0 | 200 | n/a | n/a | n/a |
| | Change from last week | 142 | (500) | 100 | n/a | n/a | n/a |
| | Change from same week 2016 | 1242 | 225 | 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 |
| | 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 |
| Soybeans | 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 | 4 |
| | 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

| 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 | |
| Date: March, 2017 | | | | | | | |
| 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

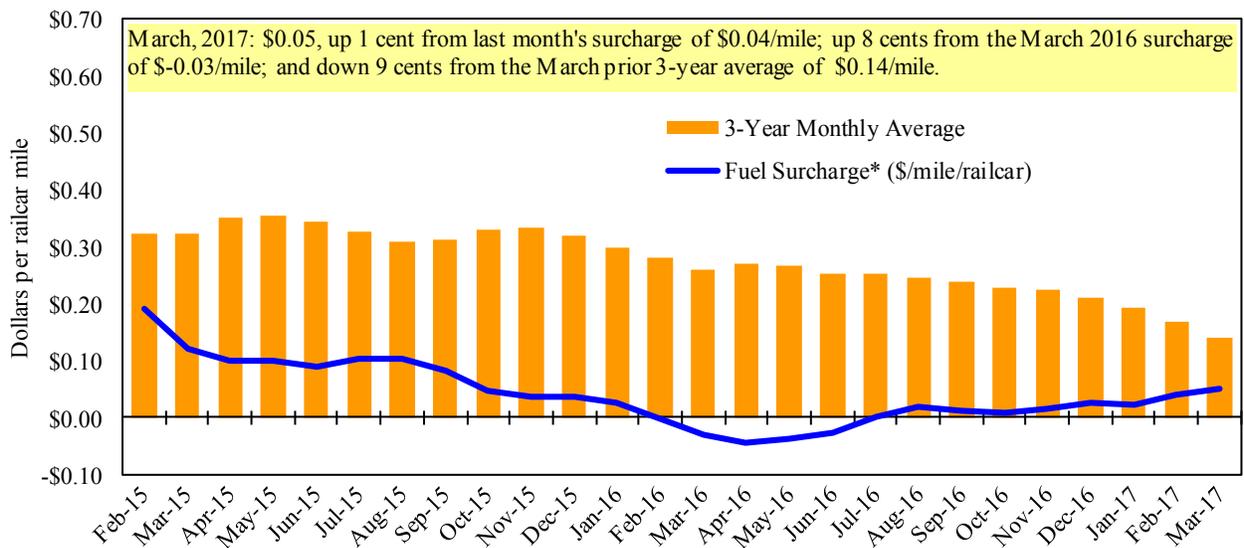
³Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

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.

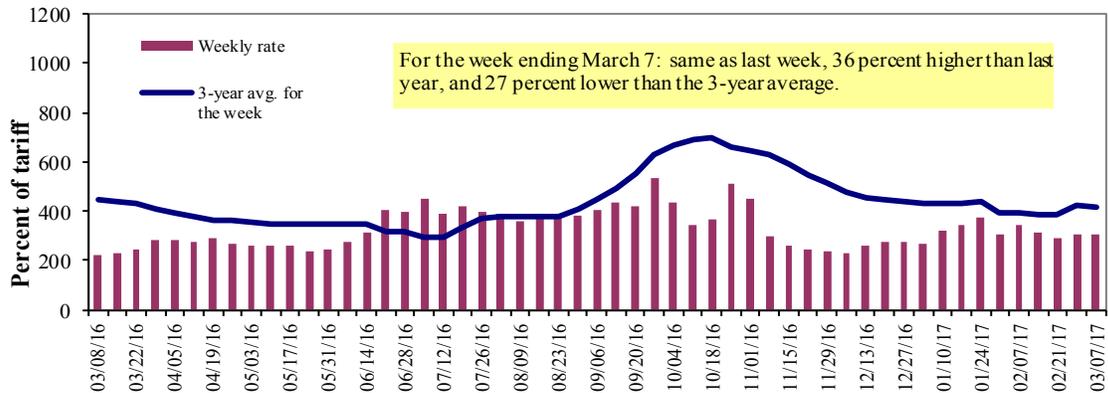
**CSX strike price changed from \$2.00/gal. to \$3.75/gal. starting January 1, 2015.

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 | 3/7/2017 | - | 308 | 307 | 215 | 255 | 255 | 180 |
| | 2/28/2017 | - | - | 308 | 213 | 238 | 238 | 183 |
| \$/ton | 3/7/2017 | - | 16.39 | 14.24 | 8.58 | 11.96 | 10.30 | 5.65 |
| | 2/28/2017 | - | - | 14.29 | 8.50 | 11.16 | 9.62 | 5.75 |
| Current week % change from the same week: | | | | | | | | |
| | Last year | - | 31 | 36 | 41 | 38 | 38 | 20 |
| | 3-year avg. ² | - | - | -27 | -33 | -26 | -26 | -31 |
| Rate¹ | April | 335 | 295 | 285 | 195 | 207 | 207 | 168 |
| | June | 330 | 288 | 275 | 198 | 223 | 223 | 165 |

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:

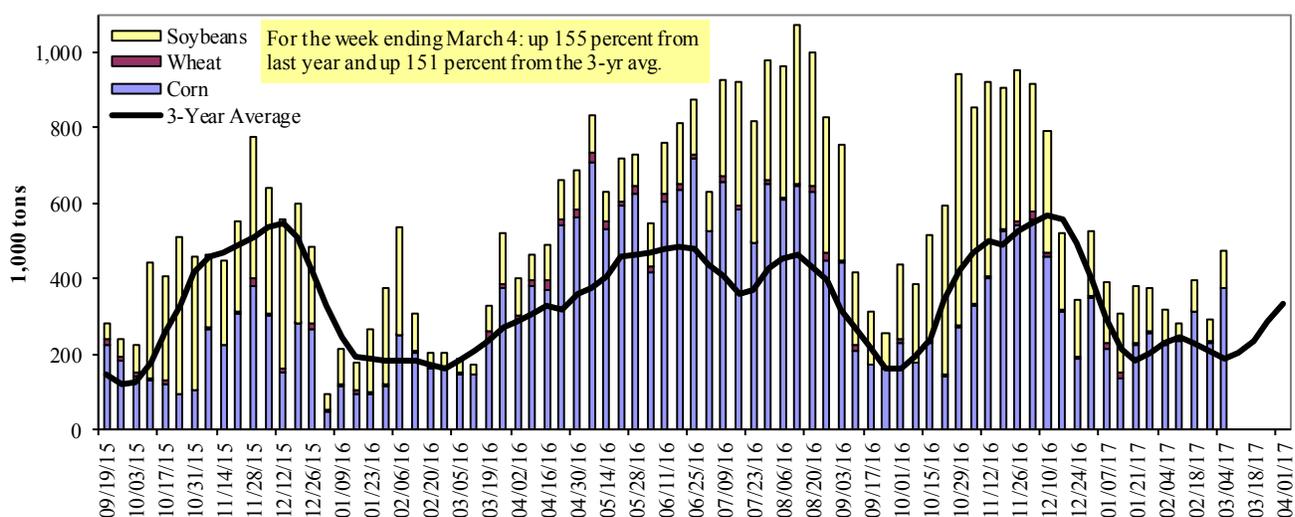
$$(\text{Rate} * 1976 \text{ tariff benchmark rate per ton})/100$$

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 3/4/2017 | Corn | Wheat | Soybeans | Other | Total |
|--|--------|-------|----------|-------|--------|
| Mississippi River | | | | | |
| Rock Island, IL (L15) | 0 | 0 | 0 | 0 | 0 |
| Winfield, MO (L25) | 59 | 0 | 25 | 0 | 84 |
| Alton, IL (L26) | 377 | 0 | 79 | 2 | 458 |
| Granite City, IL (L27) | 377 | 0 | 99 | 2 | 478 |
| Illinois River (L8) | 212 | 0 | 62 | 0 | 274 |
| Ohio River (L52) | 148 | 14 | 119 | 0 | 281 |
| Arkansas River (L1) | 1 | 20 | 36 | 0 | 57 |
| Weekly total - 2017 | 526 | 34 | 255 | 2 | 817 |
| Weekly total - 2016 | 283 | 27 | 118 | 11 | 438 |
| 2017 YTD ¹ | 3,279 | 303 | 2,624 | 118 | 6,324 |
| 2016 YTD | 2,615 | 178 | 2,526 | 34 | 5,354 |
| 2017 as % of 2016 YTD | 125 | 170 | 104 | 352 | 118 |
| Last 4 weeks as % of 2016 ² | 143 | 120 | 133 | 145 | 138 |
| Total 2016 | 24,136 | 2,030 | 16,668 | 344 | 43,178 |

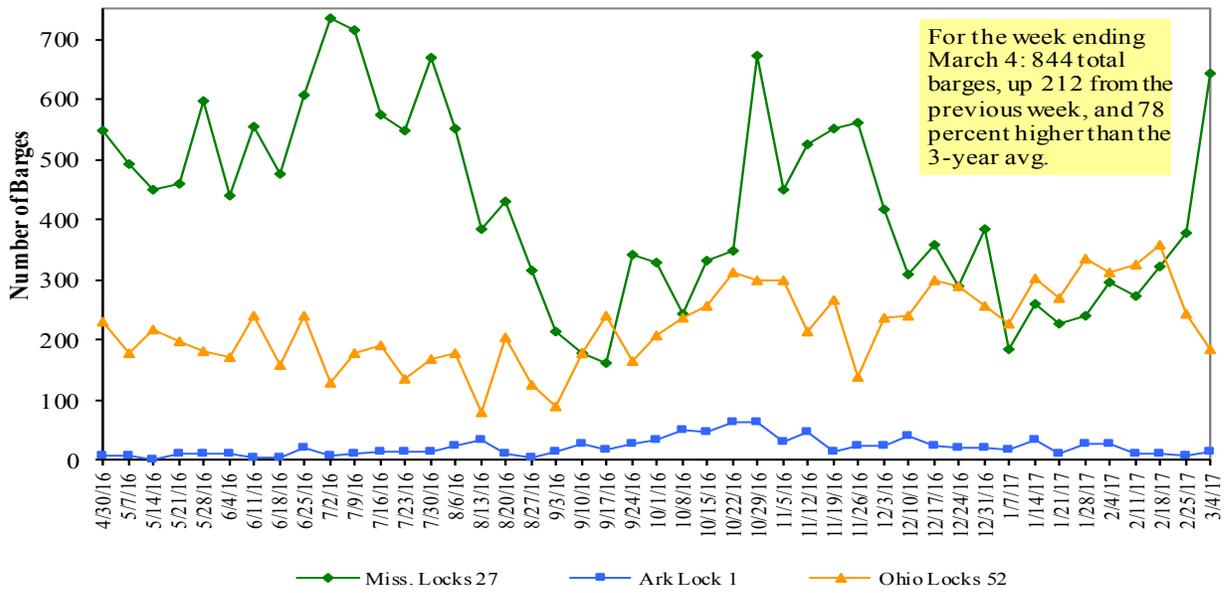
¹ Weekly total, YTD (year-to-date) and calendar year total includes Miss/27, Ohio/52, and Ark/1; "Other" refers to oats, barley, sorghum, and rye.

² As a percent of same period in 2016.

Note: Total may not add exactly, due to rounding

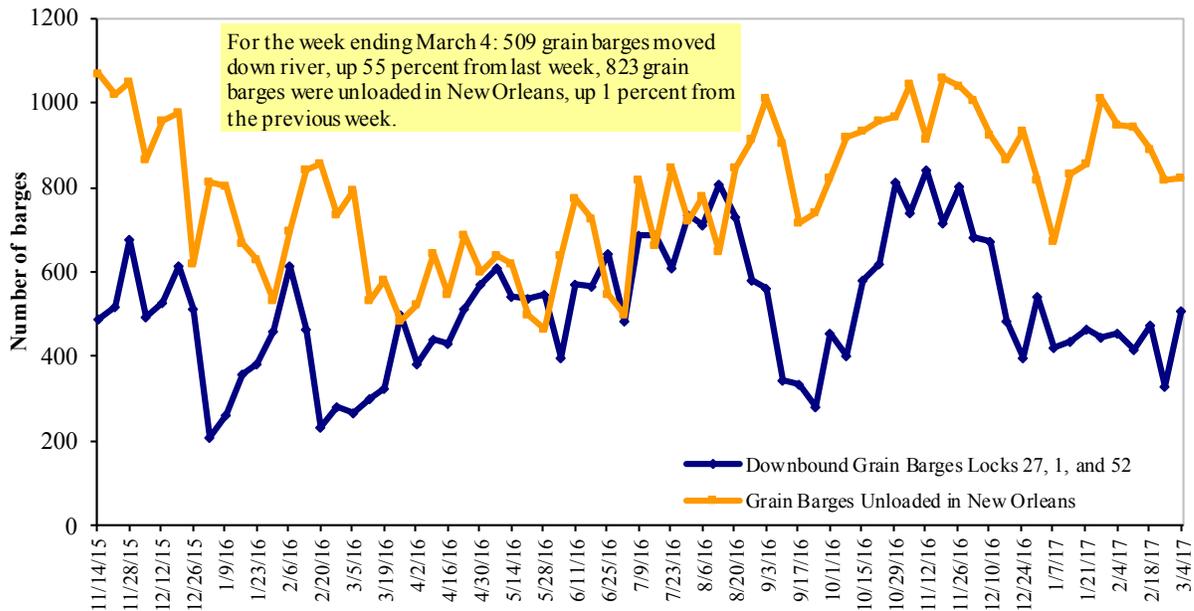
Source: U.S. Army Corps of Engineers

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 3/6/2017(US \$/gallon)

| Region | Location | Price | Change from | |
|--------|----------------------------|-------|-------------|----------|
| | | | Week ago | Year ago |
| I | East Coast | 2.633 | -0.002 | 0.556 |
| | New England | 2.646 | -0.012 | 0.499 |
| | Central Atlantic | 2.780 | 0.008 | 0.592 |
| | Lower Atlantic | 2.525 | -0.008 | 0.546 |
| II | Midwest ² | 2.502 | 0.003 | 0.519 |
| III | Gulf Coast ³ | 2.429 | -0.004 | 0.522 |
| IV | Rocky Mountain | 2.625 | 0.043 | 0.698 |
| V | West Coast | 2.877 | 0.000 | 0.658 |
| | West Coast less California | 2.779 | 0.007 | 0.682 |
| | California | 2.956 | -0.006 | 0.640 |
| Total | U.S. | 2.579 | 0.002 | 0.558 |

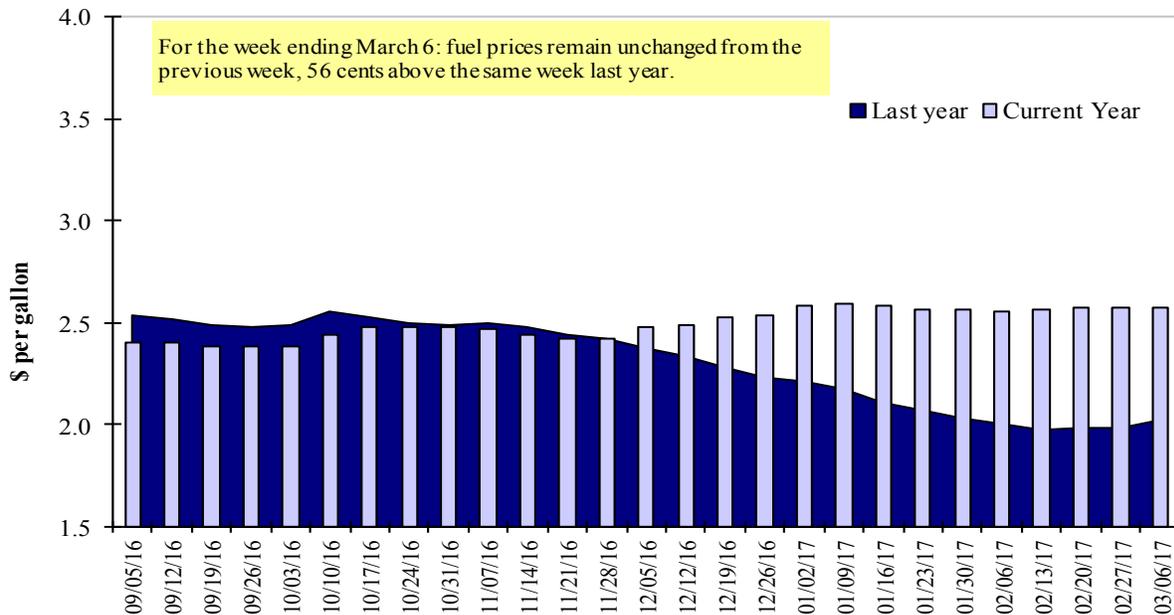
¹Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

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 | | | | | | | | | |
| 2/23/2017 | 2,227 | 528 | 2,440 | 1,373 | 76 | 6,644 | 18,652 | 9,009 | 34,306 |
| This week year ago | 1,114 | 415 | 1,534 | 774 | 120 | 3,956 | 12,875 | 4,417 | 21,248 |
| Cumulative exports-marketing year² | | | | | | | | | |
| 2016/17 YTD | 7,865 | 1,622 | 5,332 | 2,938 | 340 | 18,096 | 24,756 | 43,493 | 86,346 |
| 2015/16 YTD | 4,052 | 2,507 | 4,389 | 2,573 | 548 | 14,070 | 14,775 | 37,900 | 66,744 |
| YTD 2016/17 as % of 2015/16 | 194 | 65 | 121 | 114 | 62 | 129 | 168 | 115 | 129 |
| Last 4 wks as % of same period 2015/16 | 204 | 142 | 161 | 178 | 97 | 173 | 152 | 222 | 171 |
| 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 2/23/2017 | 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 | 10,812 | 9,758 | 11 | 11,204 |
| Japan | 7,878 | 4,612 | 71 | 11,284 |
| Korea | 3,625 | 785 | 362 | 3,931 |
| Colombia | 3,010 | 3,203 | (6) | 4,134 |
| Peru | 2,114 | 1,169 | 81 | 2,109 |
| Top 5 Importers | 27,438 | 19,526 | 41 | 32,662 |
| Total US corn export sales | 43,408 | 27,650 | 57 | 46,633 |
| % of Projected | 77% | 57% | | |
| Change from prior week | 692 | 1,098 | | |
| Top 5 importers' share of U.S. corn export sales | 63% | 71% | | 70% |
| USDA forecast, February 2017 | 56,616 | 48,295 | 17 | |
| Corn Use for Ethanol USDA forecast, February 2017 | 135,890 | 132,233 | 3 | |

(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/esrquery/>. Total commitments change from prior week could include revisions from previous week's outstanding sales or accumulated sales.

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

Table 14

Top 5 Importers¹ of U.S. Soybeans

| For the week ending 2/23/2017 | 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 | 34,258 | 26,717 | 28 | 29,033 |
| Mexico | 2,801 | 2,394 | 17 | 3,295 |
| Indonesia | 1,370 | 1,066 | 29 | 2,065 |
| Japan | 1,614 | 1,583 | 2 | 1,994 |
| Netherlands | 1,105 | 1,227 | (10) | 1,644 |
| Top 5 importers | 41,148 | 32,986 | 25 | 38,032 |
| Total US soybean export sales | 52,503 | 42,317 | 24 | 48,389 |
| % of Projected | 94% | 80% | | |
| Change from prior week | 427 | 440 | | |
| Top 5 importers' share of U.S. soybean export sales | 78% | 78% | | 79% |
| USDA forecast, February 2017 | 55,858 | 52,752 | 6 | |

(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 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 2/23/2017 | 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 | 2,322 | 2,143 | 8 | 2,743 |
| Mexico | 2,705 | 2,005 | 35 | 2,660 |
| Philippines | 2,328 | 1,860 | 25 | 2,156 |
| Brazil | 1,129 | 386 | 192 | 2,076 |
| Nigeria | 1,286 | 1,386 | (7) | 1,978 |
| Korea | 1,190 | 1,095 | 9 | 1,170 |
| China | 1,061 | 567 | 87 | 1,770 |
| Taiwan | 890 | 834 | 7 | 1,005 |
| Indonesia | 848 | 426 | 99 | 776 |
| Colombia | 725 | 571 | 27 | 679 |
| Top 10 importers | 14,482 | 11,273 | 28 | 17,013 |
| Total US wheat export sales | 24,741 | 18,026 | 37 | 24,485 |
| % of Projected | 89% | 85% | | |
| Change from prior week | 353 | 344 | | |
| Top 10 importers' share of U.S. wheat export sales | 59% | 63% | | 69% |
| USDA forecast, February 2017 | 27,929 | 21,117 | 32 | |

(n) indicates negative number.

¹ Based on FAS Marketing Year Ranking Reports for 2015/16 - www.fas.usda.gov; Marketing year = Jun 1 - May 31.² Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query--
<http://www.fas.usda.gov/esrquery/>. Total commitments change 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 03/02/17 | 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 | 362 | 164 | 221 | 2,047 | 1,962 | 104 | 110 | 99 | 12,325 |
| Corn | 359 | 288 | 125 | 2,055 | 938 | 219 | 206 | 169 | 12,009 |
| Soybeans | 275 | 282 | 98 | 2,773 | 3,598 | 77 | 67 | 87 | 14,447 |
| Total | 997 | 733 | 136 | 6,875 | 6,498 | 106 | 105 | 110 | 38,782 |
| Mississippi Gulf | | | | | | | | | |
| Wheat | 120 | 118 | 102 | 795 | 611 | 130 | 142 | 165 | 3,480 |
| Corn | 909 | 965 | 94 | 6,458 | 4,075 | 158 | 164 | 151 | 31,420 |
| Soybeans | 565 | 363 | 156 | 6,966 | 7,178 | 97 | 67 | 76 | 35,278 |
| Total | 1,595 | 1,446 | 110 | 14,219 | 11,864 | 120 | 106 | 111 | 70,178 |
| Texas Gulf | | | | | | | | | |
| Wheat | 58 | 258 | 23 | 910 | 387 | 235 | 329 | 143 | 6,019 |
| Corn | 30 | 30 | 100 | 211 | 128 | 165 | 106 | 161 | 1,669 |
| Soybeans | 0 | 0 | n/a | 0 | 92 | 0 | 0 | 0 | 1,105 |
| Total | 88 | 288 | 31 | 1,121 | 607 | 185 | 230 | 134 | 8,792 |
| Interior | | | | | | | | | |
| Wheat | 24 | 32 | 73 | 316 | 209 | 151 | 106 | 119 | 1,543 |
| Corn | 114 | 151 | 76 | 1,086 | 958 | 113 | 101 | 105 | 7,197 |
| Soybeans | 81 | 83 | 97 | 915 | 739 | 124 | 117 | 110 | 4,577 |
| Total | 219 | 267 | 82 | 2,317 | 1,906 | 122 | 107 | 108 | 13,317 |
| Great Lakes | | | | | | | | | |
| Wheat | 0 | 0 | n/a | 0 | 0 | n/a | n/a | 0 | 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 | 0 | n/a | 0 | 0 | n/a | n/a | 0 | 2,681 |
| Atlantic | | | | | | | | | |
| Wheat | 0 | 0 | n/a | 36 | 98 | 36 | 0 | 1 | 315 |
| Corn | 0 | 0 | n/a | 0 | 9 | 0 | 0 | 0 | 294 |
| Soybeans | 49 | 16 | 309 | 572 | 602 | 95 | 83 | 64 | 2,269 |
| Total | 49 | 16 | 309 | 608 | 710 | 86 | 62 | 54 | 2,878 |
| U.S. total from ports² | | | | | | | | | |
| Wheat | 564 | 572 | 99 | 4,103 | 3,267 | 126 | 132 | 116 | 24,867 |
| Corn | 1,413 | 1,434 | 99 | 9,810 | 6,108 | 161 | 160 | 148 | 53,173 |
| Soybeans | 970 | 743 | 131 | 11,226 | 12,210 | 92 | 70 | 80 | 58,587 |
| Total | 2,948 | 2,749 | 107 | 25,139 | 21,585 | 116 | 107 | 110 | 136,627 |

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

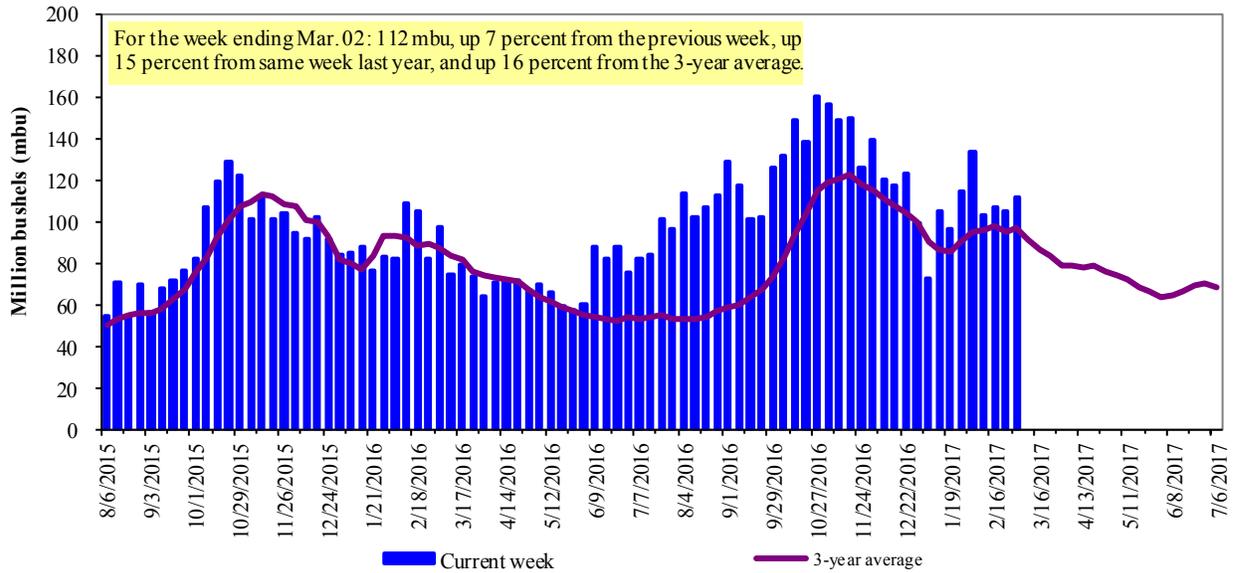
Source: Grain Inspection, Packers and Stockyards Administration/USDA (www.gipsa.usda.gov); YTD= year-to-date; n/a = not applicable

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

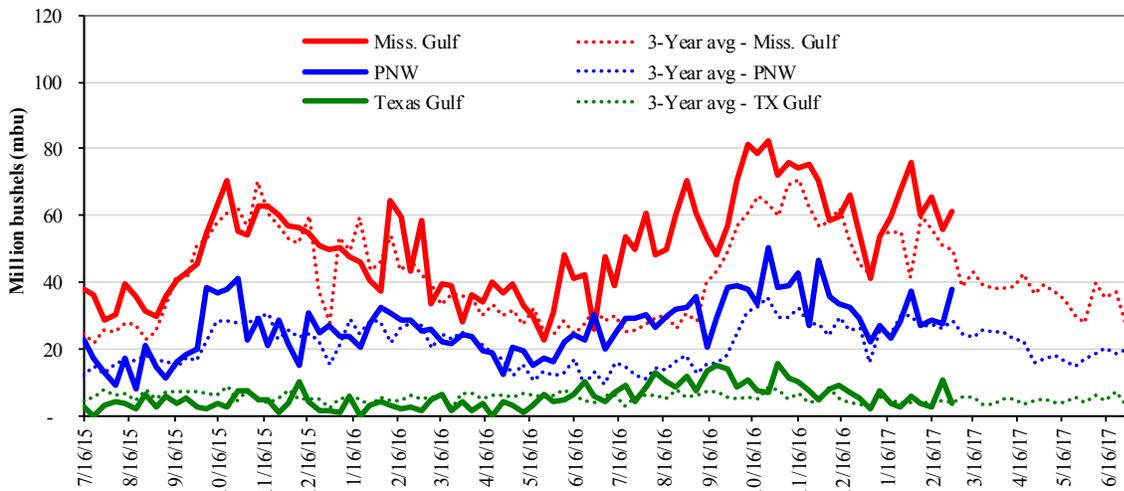
U.S. grain inspected for export (wheat, corn, and soybeans)



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 03/02/17 inspections (mbu): | Percent change from: | MS Gulf | TX Gulf | U.S. Gulf | PNW |
|---|-----------------------------|---------|---------|-----------|-------|
| Mississippi Gulf: | Last Week: | up 10 | down 69 | down 3 | up 36 |
| PNW: | Last Year (same week): | up 4 | up 128 | up 7 | up 48 |
| Texas Gulf: | 3-yr avg. (4-wk. mov. Avg): | up 13 | down 13 | up 11 | up 39 |

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

Ocean Transportation

Table 17

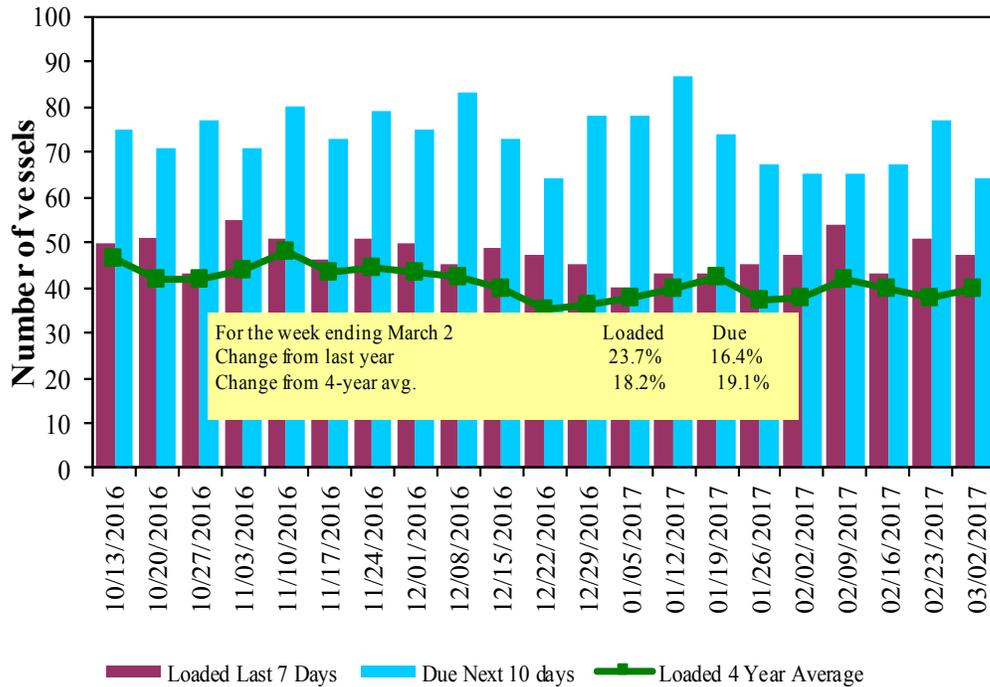
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

| Date | Gulf | | | Pacific Northwest | Vancouver B.C. |
|------------|----------|---------------|------------------|-------------------|----------------|
| | In port | Loaded 7-days | Due next 10-days | In port | In port |
| 3/2/2017 | 51 | 47 | 64 | 36 | n/a |
| 2/23/2017 | 52 | 51 | 77 | 44 | 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

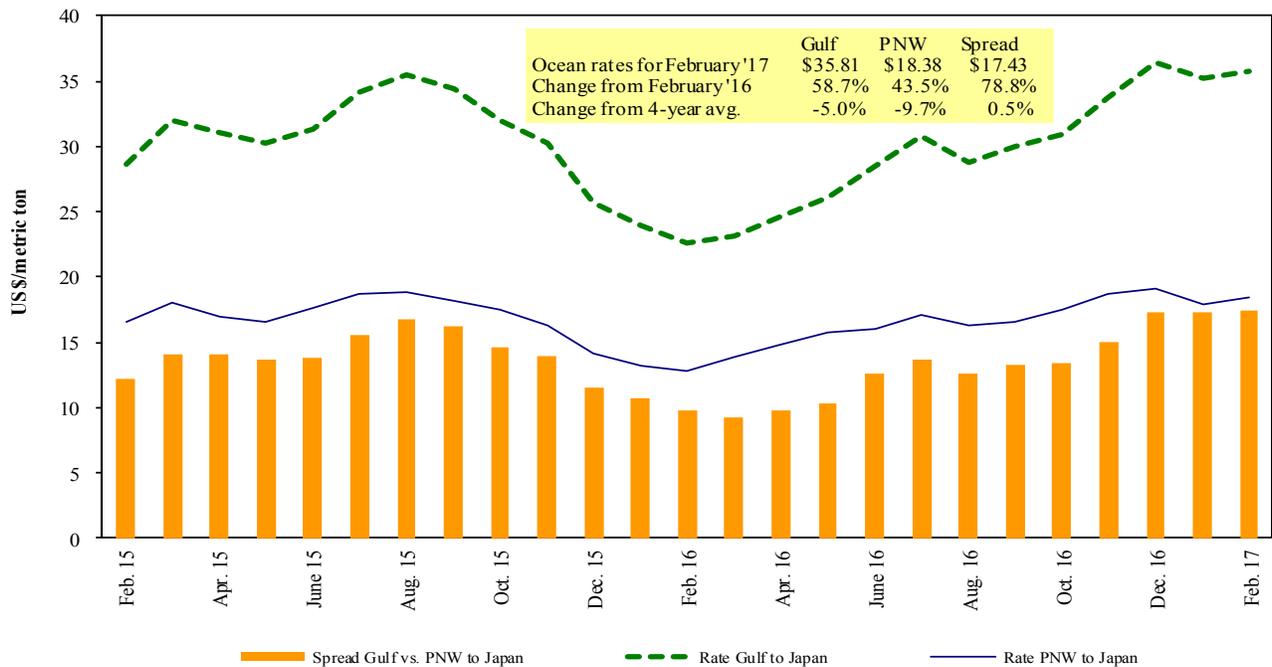
U.S. Gulf Vessel Loading Activity



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 3/4/2017

| Export region | Import region | Grain types | Loading date | Volume loads (metric tons) | Freight rate (US\$/metric ton) |
|---------------|---------------|-------------|---------------|----------------------------|--------------------------------|
| U.S. Gulf | China | Heavy Grain | Feb 15/28 | 60,000 | 23.50 |
| U.S. Gulf | China | Heavy Grain | Dec 19/24 | 66,000 | 33.90 |
| U.S. Gulf | China | Heavy Grain | Dec 15/24 | 65,000 | 34.50 |
| U.S. Gulf | China | Heavy Grain | Dec 14/20 | 53,000 | 34.00 |
| U.S. Gulf | China | Heavy Grain | Dec 12/20 | 63,000 | 36.00 |
| U.S. Gulf | China | Heavy Grain | Dec 10/20 | 63,000 | 35.75 |
| U.S. Gulf | Cote d'Ivoire | Rice | Jun 19/29 | 6,000 | 93.33* |
| U.S. Gulf | Djibouti | Sorghum | Feb 20/28 | 29,210 | 53.39* |
| 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 | China | Heavy Grain | Feb 20/28 | 60,000 | 25.15 |
| Brazil | China | Heavy Grain | Feb 20/28 | 60,000 | 22.50 |
| Brazil | China | Heavy Grain | Feb 8/18 | 60,000 | 23.85 |
| Brazil | China | Soybeans | Feb 1/10 | 60,000 | 24.20 |
| 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 |
| 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

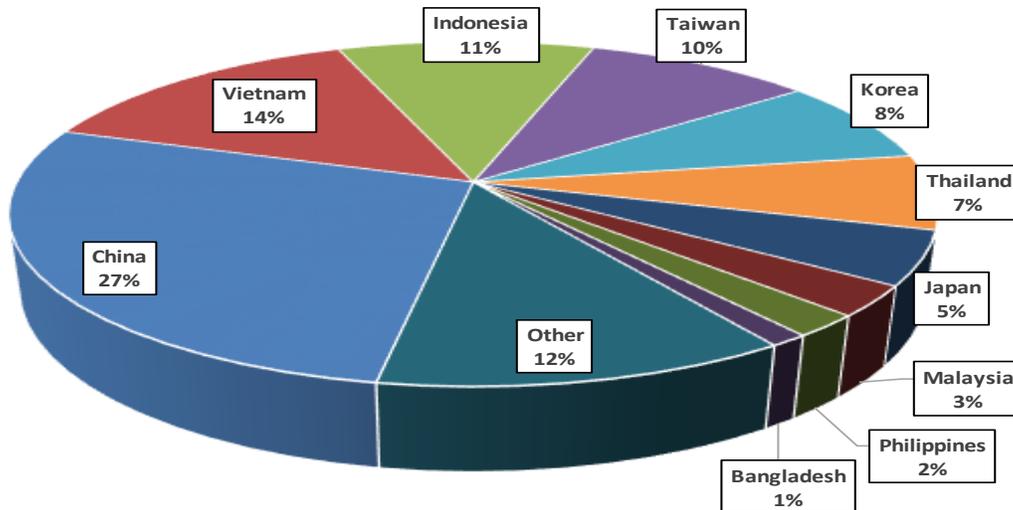
*50 percent of food aid from the United States is required to be shipped on U.S.-flag vessels.

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

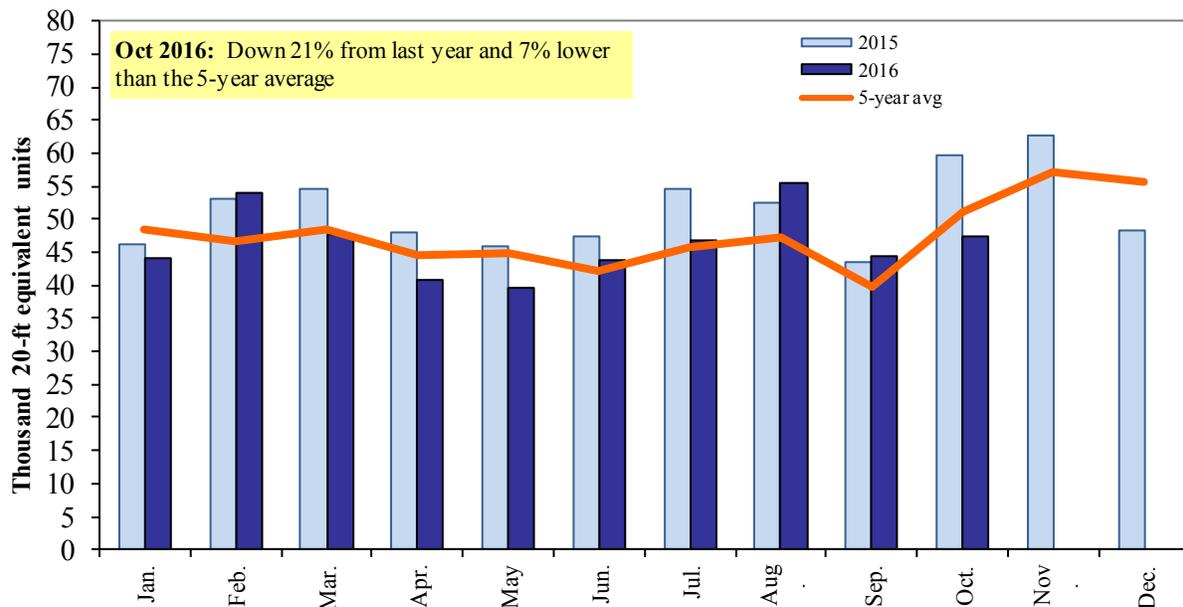


Source: USDA/Agricultural Marketing Service/Transportation Services Division analysis of Port Import Export Reporting Service (PIERS) data

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.

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