United States Department of Agriculture

Grain Transportation Report

A weekly publication of the Agricultural Marketing Service

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October 3, 2019

Contents

The next release is October 10, 2019

WEEKLY HIGHLIGHTS

Corn Drives Increase in Total Grain Inspections

For the week ending September 26, **total inspections of grain** (corn, wheat, and soybeans) for export from all major U.S. export regions reached 1.9 million metric tons (mmt). Inspections are up 11 percent from the previous week, down 22 percent from last year, and 26 percent below the 3-year average. Corn inspections, which jumped 70 percent from the previous week, drove the increase in total inspections of grain. U.S. exports of corn to Asia and Latin America rebounded 378 percent and 55 percent, respectively, from the previous week. Soybean inspections increased 6 percent from week to week, but inspections of wheat decreased 5 percent. Grain inspections in the Mississippi Gulf increased 21 percent from the past week, but Pacific Northwest (PNW) inspections decreased 15 percent.

Bonneville Lock and Dam Facility Reopens

On September 30, the U.S. Army Corps of Engineers (USACE) reopened the Bonneville Lock and Dam, located on the Columbia River in Oregon. USACE had closed the facility on September 5 because of a crack in a lock wall. Since 2001, food and farm products represent over 65 percent of barged goods reaching PNW ports via the Columbia River system. Of these food and farm products, wheat and vegetables are the largest shares. Although the total September 2019 volume was far lower than September 2018, the amount passing through after the September 30 reopening more than tripled the total from the rest of September 2019.

Recent Regulatory Announcements from the STB

Over the past few weeks, the Surface Transportation Board (STB) has opened four dockets of importance to agricultural and other shippers. Two of the dockets are proposals to improve rate review procedures and make them more accessible. First is Ex Parte (EP) 755, in which STB proposes a new procedure called "final offer rate review" for challenging the reasonableness of railroad rates in smaller cases. Second is EP 756, where STB proposes a streamlined market dominance approach for use in all rate reasonableness proceedings. Comments in both proceedings are due by November 12. Third, STB also announced a hearing on revenue adequacy, set for December 12, 2019 (see EP 761). Notices of intention to speak at the hearing are due by October 31. Written submission are due by November 26. Last, STB proposed revisions to its methodology for determining the rail industry's cost of capital (see EP 664 Sub-No. 4). Comments are due by November 5.

Snapshots by Sector

Export Sales

For the week ending September 19, **unshipped balances** of wheat, corn, and soybeans totaled 22.9 mmt. This indicates a 37-percent decrease in outstanding sales from the same time last year. Net **corn export sales** reached .494 mmt, down 64 percent from the past week. Net **soybean export sales** were 1.04 mmt, down 40 percent from the previous week. Net weekly **wheat export sales** reached .283 mmt, down 1 percent from the from the previous week.

Rail

U.S. Class I railroads originated 19,018 **grain carloads** during the week ending September 21. This is a 4-percent increase from the previous week, 18 percent less than last year, and 16 percent lower than the 3-year average.

Average October shuttle **secondary railcar** bids/offers (per car) were $269 below tariff for the week ending September 26. This is $100 less than last week and $569 lower than this week last year. There were no non-shuttle bids/offers this week.

Barge

For the week ending September 28, **barge grain movements** totaled 564,835 tons. This is a 13-percent increase from the previous week and 36 percent more than the same period last year.

For the week ending September 28, 355 grain barges **moved down river**. This is 28 more barges than the previous week. There were 681 grain barges **unloaded in New Orleans**, 8 percent more than the previous week.

Ocean

For the week ending September 26, 29 **ocean-going grain vessels** were loaded in the Gulf. This is 9 percent fewer than the same period last year. Thirty-nine vessels are expected to be loaded within the next 10 days (starting September 27). This is 38 percent fewer than the same period last year.

As of September 26, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was $51.50. This is 1 percent less than the previous week. The rate from PNW to Japan was $28.75 per mt, 3 percent less than the previous week.

Fuel

For the week ending September 30, the U.S. average **diesel fuel price** decreased 1.5 cents from the previous week to $3.066 per gallon. This price is 24.7 cents less than the same week last year.

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Feature Article/Calendar

Containerized Grain Update

The landscape of the containerized grain export market has changed dramatically over the past 2 years. Demand for containerized grains has fallen, and destination markets have shifted. Grain exporters are working with importers to grow current markets and expand to new markets where possible—all while navigating the everchanging ocean freight structure and costs.

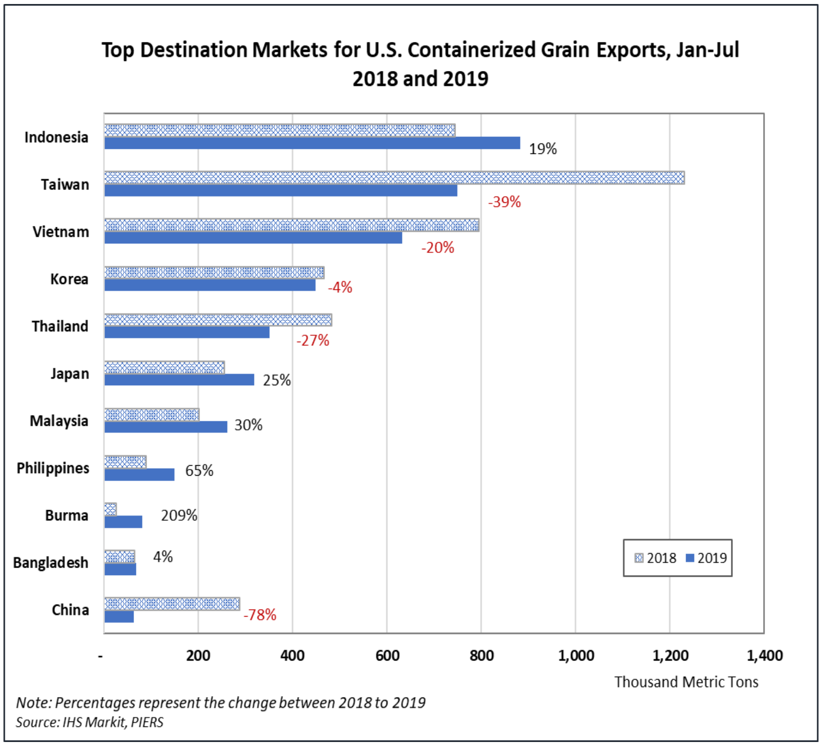
Containerized grain exports have been slow throughout most of 2019, except for strong movements in January and April. Year-to-date (Jan-Jul) shipments are 13 percent below last year and 2 percent lower than the 5-year average. Soybeans remain the top commodity for containerized grain shipments, followed closely by dried distillers' grains with solubles (DDGS) (see table above). Year over year, containerized soybeans increased to each of the top 10 destinations with the exception of Taiwan, where containerized soybeans fell more than 50 percent, a decrease that accounted for the majority of the overall 11-percent drop. By contrast, containerized DDGS shipments fell to many of the top 10 destination markets—notably, Vietnam, Thailand, and Taiwan. In some cases, the data suggest some markets may have shifted demand from DDGS to soybeans. Exporters report DDGS supply has been low this year owing to many idle ethanol plants in the Midwest. Overall containerized grain exports showed some impressive gains in traditionally smaller markets such as the Philippines, Burma, and Malaysia (see figure below).

U.S. Containerized Waterborne Grain Exports, Jan-Jul, 2019

HTS Code	Description	Metric Tons	Containers	Share (percent)	Percent change from 2018
120100	Soybeans	1,546,153	115,087	34	-11
230330	Distillers Grains	1,471,034	112,708	33	-12
230990	Animal Feed	490,249	44,763	11	-11
100590	Corn	483,825	39,569	11	-17
120810	Soybean meal and flours	279,367	21,988	6	-15
	Other	254,343	20,744	6	-23
	Total	**4,524,972**	**354,859**	**100**	**-13**

Source: IHS Markit, PIERS

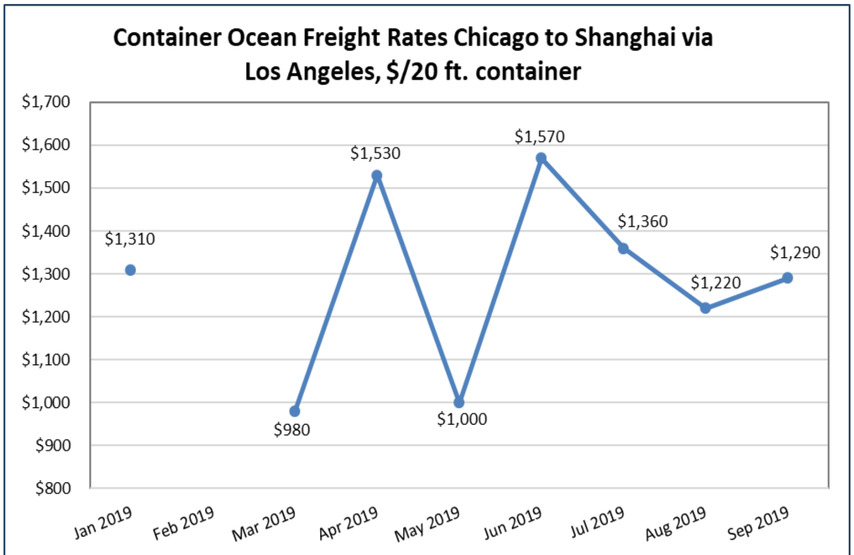
Note: HTS=Harmonized Tariff Code, Containers calculated in 20-foot equivalent units.



Note: Percentages represent the change between 2018 to 2019
Source: IHS Markit, PIERS

Ocean Freight Market

Ocean freight rates for containerized movements from the Midwest to Shanghai, China, saw relatively dramatic changes through the first half of the year. These rate shifts were likely reactions to the tariff announcements and tariff delays that took place after the first of the year. Through the summer, rates slowly fell with a slight uptick in September (see figure below). Because of reportedly slow demand, rates are expected to continue to soften through the end of the year. However, in the months ahead, exporters will face two unknown challenges: (1) carriers' choices on managing vessel capacity during the slow season, and (2) the impact of the International Maritime Organization's vessel emissions restriction taking effect on January 1, 2020.



Note: February data are unavailable.

Source: Drewry Supply Chain Advisors, Container Freight Rate Insight

Carriers have two main strategies for managing vessel capacity, blank sailing and laying up ships. Throughout 2019, carriers have used blank sailing extensively to manage overcapacity in the market. This practice allows carriers to limit capacity temporarily by either skipping a port along the set weekly route or skipping the entire route for a week. This practice has become more common over the past few years, and is particularly attractive to carriers, but quite disruptive for exporters because often little notice is provided. Additionally, carriers will lay up vessels during the typical slow season, which occurs toward the end of one year and the beginning of the next year. Laying up vessels is pulling vessels out of service for a period of time. This practice helps balance supply and demand but is costly for the carriers and is not sustainable for extended periods of time. Finally, newly built vessels scheduled for delivery over the next few months will keep pressure on carriers to make efficient use of these costly assets.

A relatively small percentage of the global vessel fleet is being pulled to be retrofitted with emissions scrubbers to meet the January 1, 2020, sulfur reduction mandate also known as IMO 2020. It is still unknown what effect the IMO 2020 mandate will have on bunker fuel prices and ultimately the shippers' overall freight rate. In the fourth quarter, many carriers will purchase and burn compliant fuel in preparation for the January 1 deadline. In response, carriers have announced bunker fuel surcharges to compensate for an expected increase in fuel cost. However, with slow demand and immense pressure on vessel capacity management, it may be difficult for carriers to realize these rate increases in practice.
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Grain Transportation Indicators

Table 1

Grain Transport Cost Indicators[1]

	Truck	Rail		Barge	Ocean	
For the week ending		Unit Train	Shuttle		Gulf	Pacific
10/02/19	206	n/a	209	200	230	204
09/25/19	207	n/a	213	207	234	209

[1]Indicator: Base year 2000 = 100; Weekly updates include truck = diesel ($/gallon); rail = near-month secondary rail market bid and monthly tariff rate with fuel surcharge ($/car); barge = Illinois River barge rate (index = percent of tariff rate); ocean = routes to Japan ($/metric ton); n/a = not available.
USDA, Agricultural Marketing Service.

Table 2

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

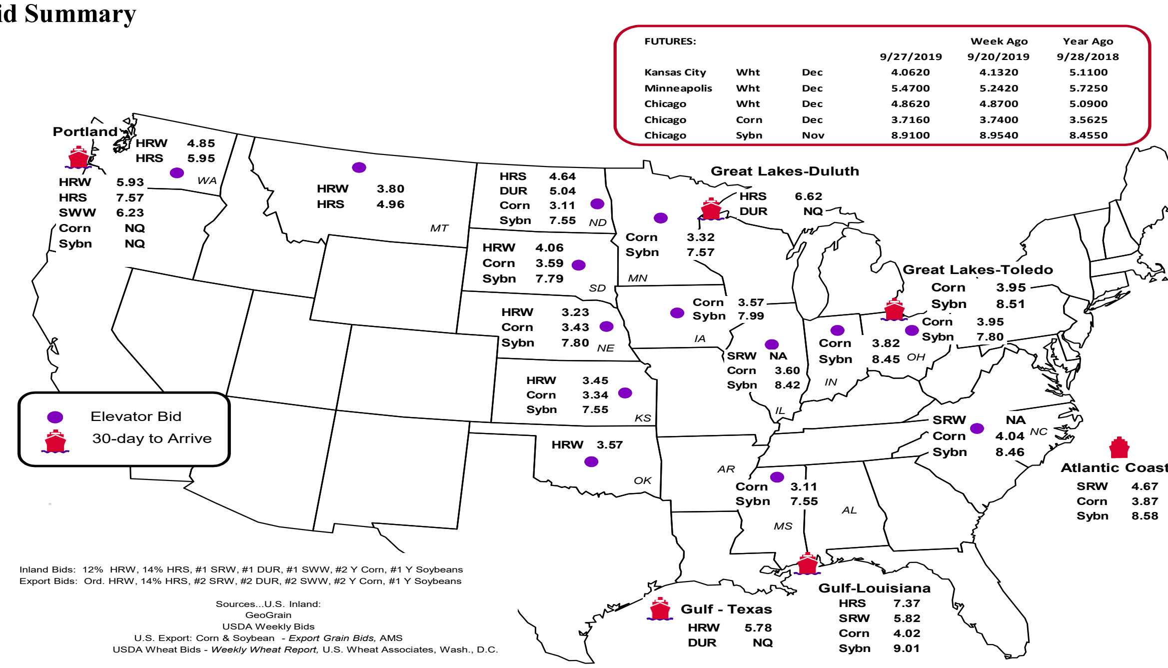
Commodity	Origin–Destination	9/27/2019	9/20/2019
Corn	IL–Gulf	-0.42	-0.46
Corn	NE–Gulf	-0.59	-0.63
Soybean	IA–Gulf	-1.02	-1.01
HRW	KS–Gulf	-2.33	-2.25
HRS	ND–Portland	-2.93	-2.54

Note: nq = no quote; n/a = not available
Source: USDA, Agricultural Marketing Service.

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

Figure 1

Grain Bid Summary



Rail Transportation

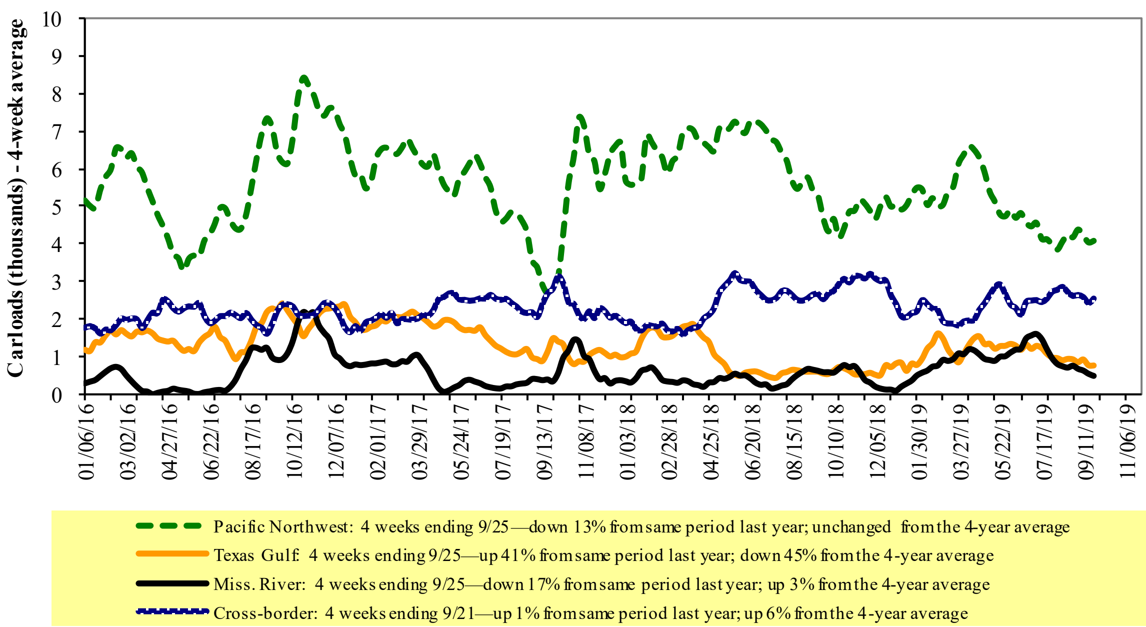
Table 3
Rail Deliveries to Port (carloads)[1]

For the Week Ending	Mississippi Gulf	Texas Gulf	Pacific Northwest	Atlantic & East Gulf	Total	Week ending	Cross-Border Mexico[3]
9/25/2019[p]	667	774	4,223	78	5,742	9/21/2019	2,696
9/18/2019[r]	346	491	3,577	169	4,583	9/14/2019	2,208
2019 YTD[r]	35,253	42,723	191,763	13,495	283,234	2019 YTD	92,562
2018 YTD[r]	16,682	38,492	247,543	15,156	317,873	2018 YTD	90,597
2019 YTD as % of 2018 YTD	211	111	77	89	89	% change YTD	102
Last 4 weeks as % of 2018[2]	83	141	87	61	90	Last 4wks % 2018	101
Last 4 weeks as % of 4-year avg.[2]	103	55	100	67	89	Last 4wks % 4 yr	106
Total 2018	22,118	46,532	310,449	21,432	400,531	Total 2018	129,116
Total 2017	28,796	75,543	287,267	21,312	412,918	Total 2017	119,661

[1]Data is incomplete as it is voluntarily provided.
[2] Compared with same 4-weeks in 2018 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 Grupo Mexico.
YTD = year-to-date; p = preliminary data; r = revised data; n/a = not available.
Source: USDA, Agricultural Marketing Service.

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: USDA, Agricultural Marketing Service.

Table 4

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

For the week ending:	East		West			U.S. total	Canada	
9/21/2019	CSXT	NS	BNSF	KCS	UP		CN	CP
This week	1,747	1,879	9,808	1,012	4,572	19,018	3,314	4,274
This week last year	1,676	2,106	12,240	1,267	6,029	23,318	5,014	4,404
2019 YTD	68,913	104,897	415,998	42,546	193,611	825,965	153,163	167,746
2018 YTD	71,796	97,408	471,302	35,762	199,471	875,739	148,446	176,659
2019 YTD as % of 2018 YTD	96	108	88	119	97	94	103	95
Last 4 weeks as % of 2018*	102	84	84	137	88	88	61	100
Last 4 weeks as % of 3-yr avg.**	110	88	87	122	84	89	74	99
Total 2018	98,978	133,278	635,458	48,638	267,713	1,184,065	211,809	244,697

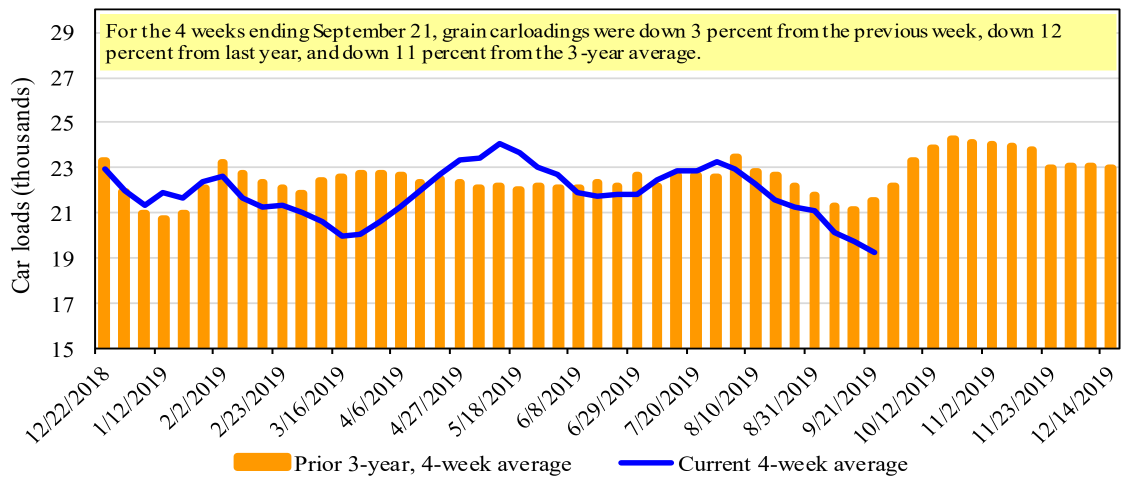
*The past 4 weeks of this year as a percent of the same 4 weeks last year.

**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

Figure 3

Total Weekly U.S. Class I Railroad Grain Car Loadings



Source: Association of American Railroads.

Table 5

Railcar Auction Offerings[1] ($/car)[2]

For the week ending: 9/26/2019		Oct-19	Oct-18	Nov-19	Nov-18	Dec-19	Dec-18	Jan-20	Jan-19
		Delivery period							
BNSF[3]	COT grain units	0	0	no bid	no bids	no bid	no bids	no offer	no bids
	COT grain single-car	1	0	0	27	0	14	no offer	11
UP[4]	GCAS/Region 1	no offer	no offer	no offer	no offer	no offer	no offer	n/a	n/a
	GCAS/Region 2	no bid	no offer	no bid	no offer	no offer	no offer	n/a	n/a

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

[2]Average premium/discount to tariff, last auction. n/a = not available.

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

[4]UP - GCAS = Grain Car Allocation System.

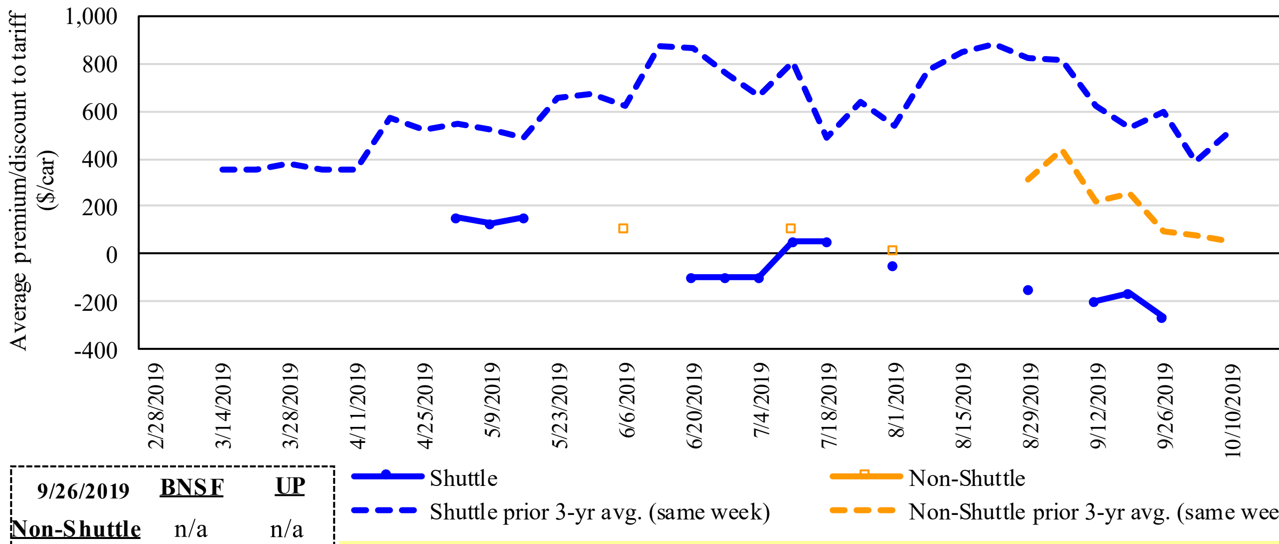
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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

Source: USDA, Agricultural Marketing Service.

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 October 2019, Secondary Market

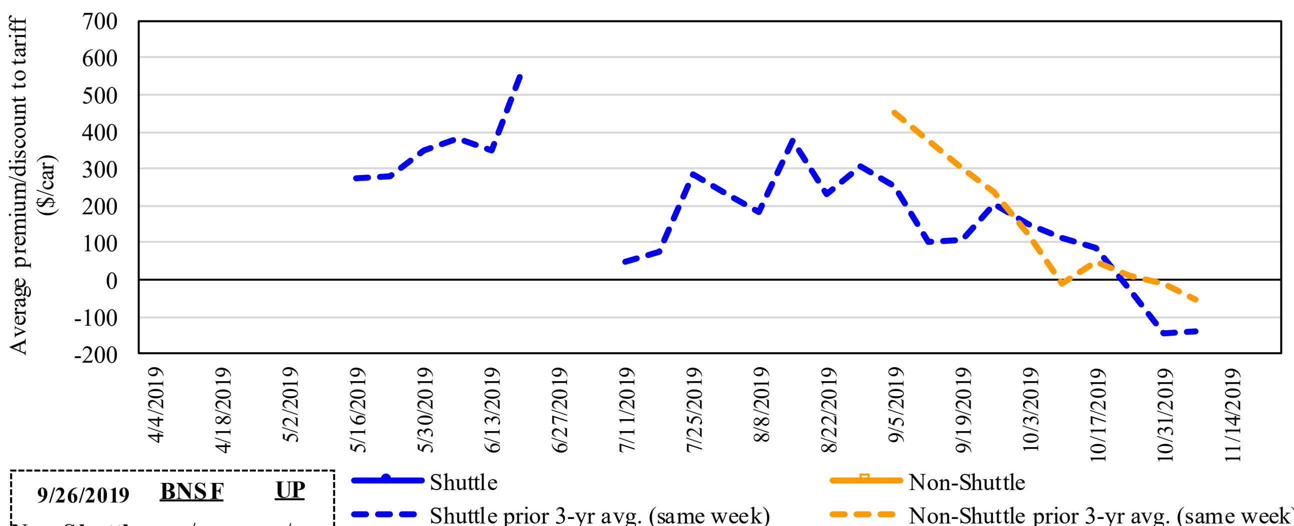


9/26/2019	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	-$269	n/a

There were no non-shuttle bids/offers this week.
Average shuttle bids/offers fell $100 this week and are $419 below the peak.

Non-shuttle bids include unit-train and single-car bids. n/a = not available.
Source: USDA, Agricultural Marketing Service.

Figure 5
Bids/Offers for Railcars to be Delivered in November 2019, Secondary Market

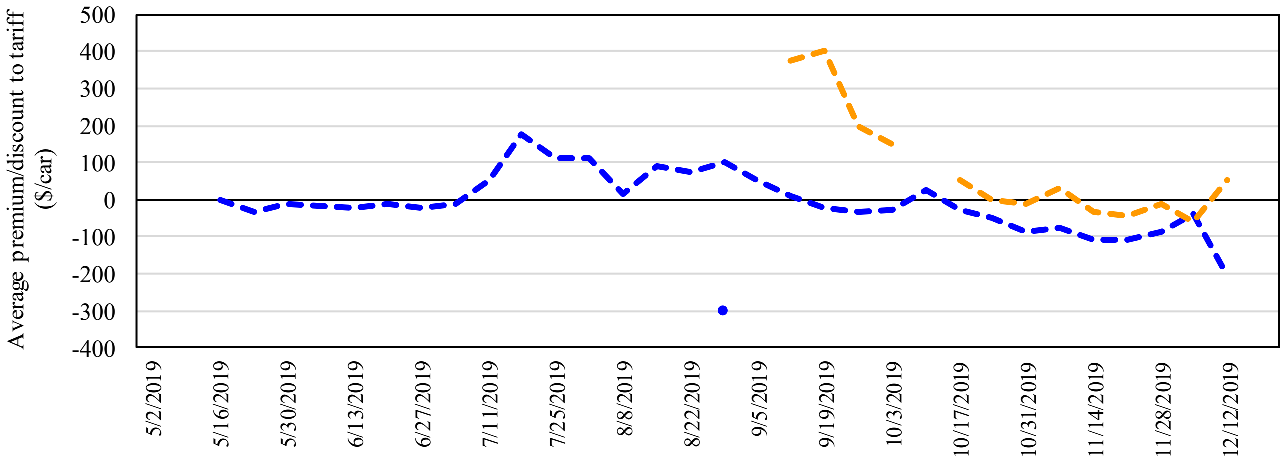


9/26/2019	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	n/a	n/a

There were no non-shuttle bids/offers this week.
There were no shuttle bids/offers this week.

Non-shuttle bids include unit-train and single-car bids. n/a = not available.
Source: USDA, Agricultural Marketing Service.

Figure 6
Bids/Offers for Railcars to be Delivered in December 2019, Secondary Market



9/26/2019	BNSF	UP
Non-Shuttle	n/a	n/a
Shuttle	n/a	n/a

Shuttle
Shuttle prior 3-yr avg. (same week)
Non-Shuttle
Non-Shuttle prior 3-yr avg. (same week)

There were no non-shuttle bids/offers this week.
There were no shuttle bids/offers this week.

Non-shuttle bids include unit-train and single-car bids. n/a = not available.
Source: USDA, Agricultural Marketing Service.

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

	For the week ending: 9/26/2019	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
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 2018	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 2018	n/a	n/a	n/a	n/a	n/a	n/a
Shuttle	**BNSF-GF**	**(269)**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
	Change from last week	(6)	n/a	n/a	n/a	n/a	n/a
	Change from same week 2018	(435)	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 2018	n/a	n/a	n/a	n/a	n/a	n/a

[1]Average premium/discount to tariff, $/car-last week.

Note: Bids listed are market indicators only and are not guaranteed prices. n/a = not available; GF = guaranteed freight; Pool = guaranteed pool.

Data from James B. Joiner Co., Tradewest Brokerage Co.

Source: USDA, Agricultural Marketing Service.

The **tariff rail rate** is the base price of freight rail service and—together with **fuel surcharges** and any **auction and secondary rail** values—constitute the full cost of shipping by rail. Typically, auction and secondary rail values are a small fraction of the full cost of shipping by rail relative to the tariff rate. High auction and secondary rail values, during times of high rail demand or short supply, can exceed the cost of the tariff rate plus fuel surcharge.

Table 7

Tariff Rail Rates for Unit and Shuttle Train Shipments[1]

October, 2019	Origin region[3]	Destination region[3]	Tariff rate/car	Fuel surcharge per car	Tariff plus surcharge per: metric ton	Tariff plus surcharge per: bushel[2]	Percent change Y/Y[4]
Unit train							
Wheat	Wichita, KS	St. Louis, MO	$3,983	$96	$40.51	$1.10	-1
	Grand Forks, ND	Duluth-Superior, MN	$4,333	$0	$43.03	$1.17	2
	Wichita, KS	Los Angeles, CA	$7,240	$0	$71.90	$1.96	1
	Wichita, KS	New Orleans, LA	$4,525	$169	$46.61	$1.27	-1
	Sioux Falls, SD	Galveston-Houston, TX	$6,976	$0	$69.28	$1.89	1
	Northwest KS	Galveston-Houston, TX	$4,801	$185	$49.52	$1.35	-1
	Amarillo, TX	Los Angeles, CA	$5,121	$258	$53.41	$1.45	-1
Corn	Champaign-Urbana, IL	New Orleans, LA	$3,900	$191	$40.63	$1.03	-4
	Toledo, OH	Raleigh, NC	$6,816	$0	$67.69	$1.72	4
	Des Moines, IA	Davenport, IA	$2,415	$40	$24.38	$0.62	6
	Indianapolis, IN	Atlanta, GA	$5,818	$0	$57.78	$1.47	3
	Indianapolis, IN	Knoxville, TN	$4,874	$0	$48.40	$1.23	4
	Des Moines, IA	Little Rock, AR	$3,800	$119	$38.92	$0.99	-2
	Des Moines, IA	Los Angeles, CA	$5,680	$346	$59.84	$1.52	-2
Soybeans	Minneapolis, MN	New Orleans, LA	$3,631	$179	$37.83	$1.03	-13
	Toledo, OH	Huntsville, AL	$5,630	$0	$55.91	$1.52	3
	Indianapolis, IN	Raleigh, NC	$6,932	$0	$68.84	$1.87	3
	Indianapolis, IN	Huntsville, AL	$5,107	$0	$50.71	$1.38	3
	Champaign-Urbana, IL	New Orleans, LA	$4,645	$191	$48.03	$1.31	-3
Shuttle Train							
Wheat	Great Falls, MT	Portland, OR	$4,143	$0	$41.14	$1.12	2
	Wichita, KS	Galveston-Houston, TX	$4,361	$0	$43.31	$1.18	2
	Chicago, IL	Albany, NY	$7,074	$0	$70.25	$1.91	20
	Grand Forks, ND	Portland, OR	$5,801	$0	$57.61	$1.57	1
	Grand Forks, ND	Galveston-Houston, TX	$6,121	$0	$60.78	$1.65	1
	Northwest KS	Portland, OR	$6,012	$304	$62.72	$1.71	0
Corn	Minneapolis, MN	Portland, OR	$5,180	$0	$51.44	$1.31	0
	Sioux Falls, SD	Tacoma, WA	$5,140	$0	$51.04	$1.30	0
	Champaign-Urbana, IL	New Orleans, LA	$3,820	$191	$39.83	$1.01	-1
	Lincoln, NE	Galveston-Houston, TX	$3,880	$0	$38.53	$0.98	0
	Des Moines, IA	Amarillo, TX	$4,220	$150	$43.39	$1.10	3
	Minneapolis, MN	Tacoma, WA	$5,180	$0	$51.44	$1.31	0
	Council Bluffs, IA	Stockton, CA	$5,000	$0	$49.65	$1.26	0
Soybeans	Sioux Falls, SD	Tacoma, WA	$5,850	$0	$58.09	$1.58	2
	Minneapolis, MN	Portland, OR	$5,900	$0	$58.59	$1.59	2
	Fargo, ND	Tacoma, WA	$5,750	$0	$57.10	$1.55	2
	Council Bluffs, IA	New Orleans, LA	$4,875	$220	$50.60	$1.38	1
	Toledo, OH	Huntsville, AL	$4,805	$0	$47.72	$1.30	4
	Grand Island, NE	Portland, OR	$5,860	$311	$61.28	$1.67	1

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

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

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

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

Source: BNSF Railway, Canadian National Railway, CSX Transportation, and Union Pacific Railroad.

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: metric ton[3]	Tariff plus surcharge per: bushel[3]	Percent change[4] Y/Y
Date: October, 2019							
Wheat	MT	Chihuahua, CI	$7,509	$0	$76.72	$2.09	3
	OK	Cuautitlan, EM	$6,775	$132	$70.58	$1.92	0
	KS	Guadalajara, JA	$7,534	$606	$83.17	$2.26	5
	TX	Salinas Victoria, NL	$4,329	$80	$45.05	$1.22	0
Corn	IA	Guadalajara, JA	$8,902	$518	$96.25	$2.44	6
	SD	Celaya, GJ	$8,140	$0	$83.17	$2.11	3
	NE	Queretaro, QA	$8,278	$271	$87.35	$2.22	1
	SD	Salinas Victoria, NL	$6,905	$0	$70.55	$1.79	0
	MO	Tlalnepantla, EM	$7,643	$264	$80.79	$2.05	1
	SD	Torreon, CU	$7,690	$0	$78.57	$1.99	3
Soybeans	MO	Bojay (Tula), HG	$8,547	$484	$92.27	$2.51	5
	NE	Guadalajara, JA	$9,172	$505	$98.87	$2.69	5
	IA	El Castillo, JA	$9,490	$0	$96.97	$2.64	4
	KS	Torreon, CU	$7,964	$349	$84.94	$2.31	4
Sorghum	NE	Celaya, GJ	$7,772	$458	$84.09	$2.13	4
	KS	Queretaro, QA	$8,108	$165	$84.53	$2.15	1
	NE	Salinas Victoria, NL	$6,713	$133	$69.94	$1.77	1
	NE	Torreon, CU	$7,157	$324	$76.44	$1.94	3

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

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

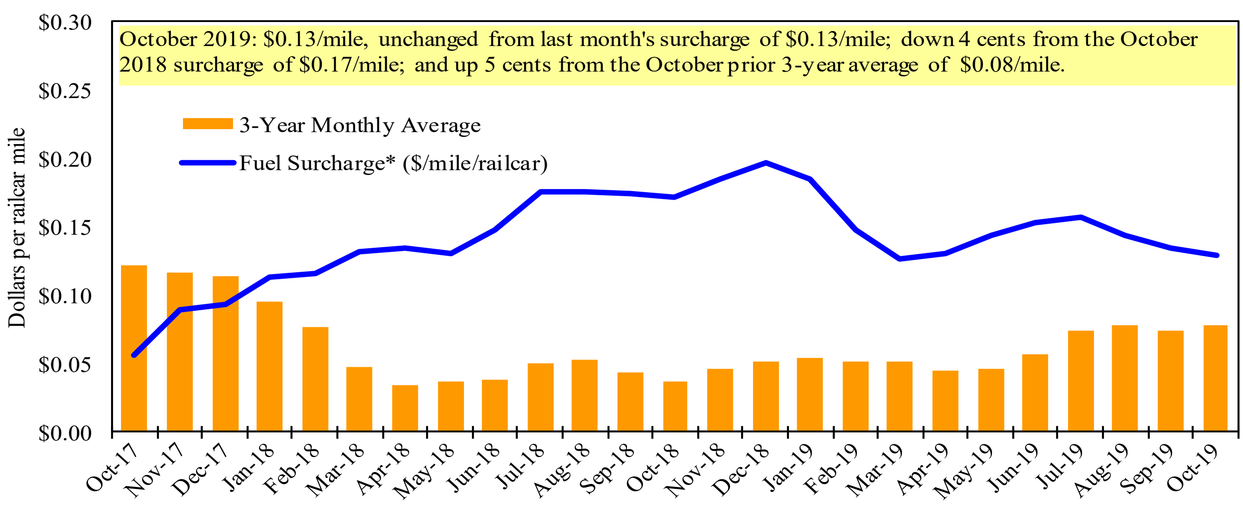
[3]Approximate load per car = 97.87 metric tons: Corn & Sorghum 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

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

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

Figure 7

Railroad Fuel Surcharges, North American Weighted Average[1]

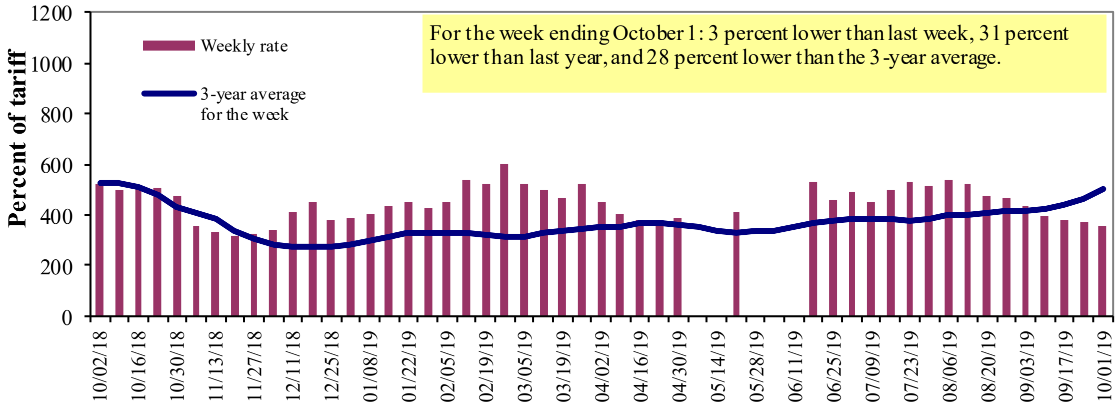


[1] Weighted by each Class I railroad's proportion of grain traffic for the prior year.
* Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.
**CSX strike price changed from $2.00/gal. to $3.75/gal. starting January 1, 2015.
Sources: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

Barge Transportation

Figure 8

Illinois River Barge Freight Rate[1,2]



[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average of the 3-year average.

Source: USDA, Agricultural Marketing Service

Table 9

Weekly Barge Freight Rates: Southbound Only

		Twin Cities	Mid-Mississippi	Lower Illinois River	St. Louis	Cincinnati	Lower Ohio	Cairo-Memphis
Rate[1]	10/1/2019	358	406	360	340	431	431	364
	9/24/2019	375	408	372	353	392	392	375
$/ton	10/1/2019	22.16	21.60	16.70	13.57	20.21	17.41	11.43
	9/24/2019	23.21	21.71	17.26	14.08	18.38	15.84	11.78
Current week % change from the same week:								
	Last year	-30	-24	-31	-24	-13	-13	-6
	3-year avg. [2]	-31	-20	-28	-19	-17	-17	-15
Rate[1]	November	379	384	379	313	364	364	273
	January	-	-	375	275	304	304	260

[1]Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); [2]4-week moving average; ton = 2,000 pounds; "-" n/a due to closure

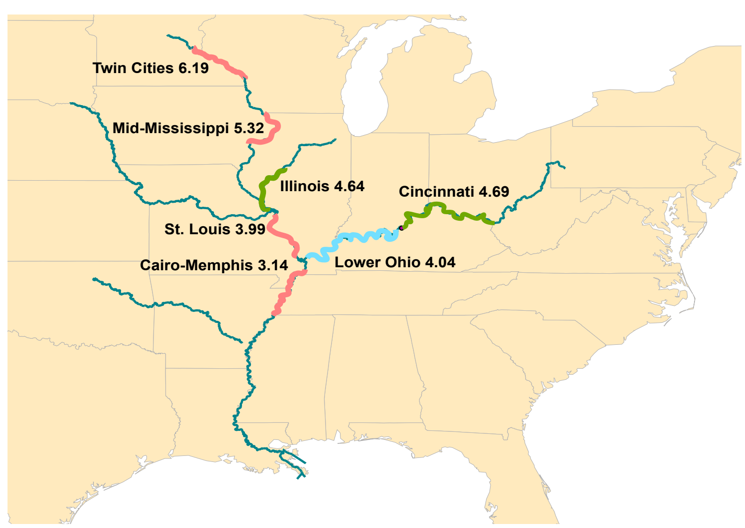
* - Current weekly rate is a nominal value, reflecting the anticipation of improved navigation conditions

Source: USDA, Agricultural Marketing Service.

Figure 9
Benchmark tariff rates

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

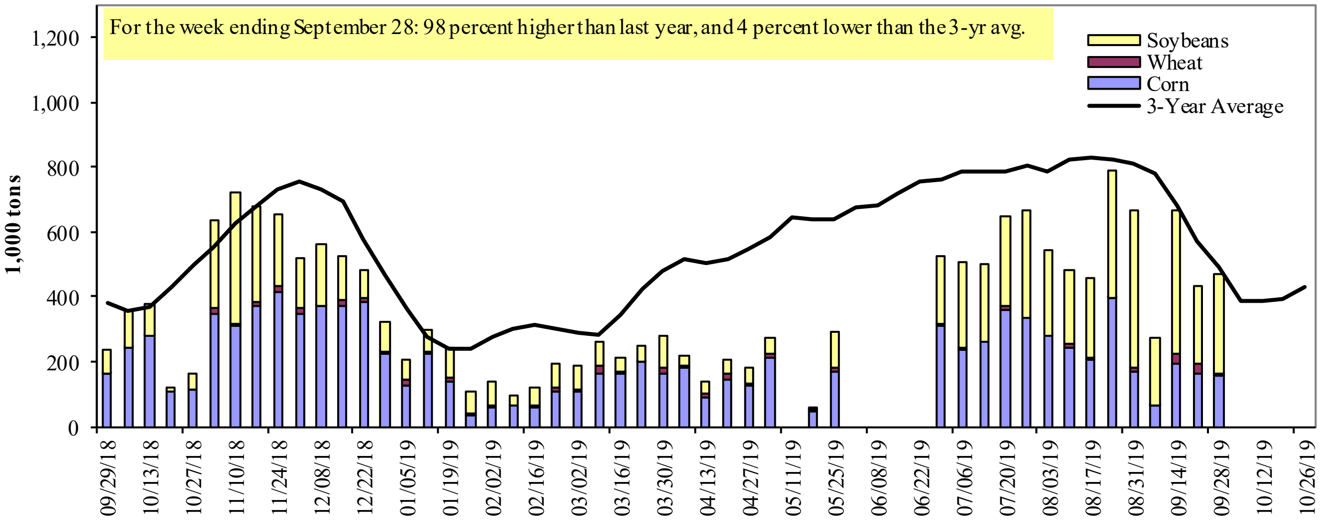
Select applicable index from market quotes included in tables on this page. The 1976 benchmark rates per ton are provided in map.



Map Credit: USDA, Agricultural Marketing Service

Figure 10

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



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

Source: U.S. Army Corps of Engineers

Table 10

Barge Grain Movements (1,000 tons)

For the week ending 09/28/2019	Corn	Wheat	Soybeans	Other	Total
Mississippi River					
Rock Island, IL (L15)	42	8	89	0	139
Winfield, MO (L25)	106	5	248	0	359
Alton, IL (L26)	131	8	292	0	431
Granite City, IL (L27)	155	8	309	0	472
Illinois River (LAGRANGE)	27	3	17	0	47
Ohio River (OLMSTED)	48	4	28	0	80
Arkansas River (L1)	0	1	11	0	13
Weekly total - 2019	204	13	348	0	565
Weekly total - 2018	269	15	131	0	415
2019 YTD[1]	9,354	1,298	9,304	131	20,086
2018 YTD[1]	18,439	1,387	9,224	88	29,138
2019 as % of 2018 YTD	51	94	101	149	69
Last 4 weeks as % of 2018[2]	34	87	162	680	74
Total 2018	23,349	1,674	12,819	133	37,975

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

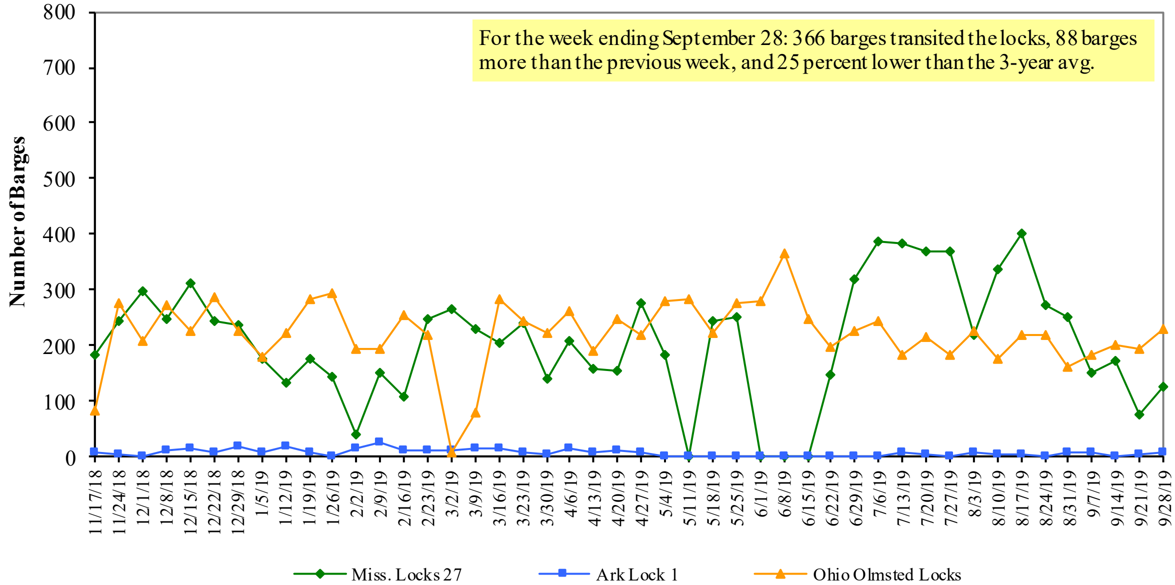
[2] As a percent of same period in 2018.

Note: 1. Total may not add exactly, due to rounding.
2. Starting from 11/24/2018, weekly movement through Ohio 52 is replaced by Olmsted.

Source: U.S. Army Corps of Engineers

Figure 11

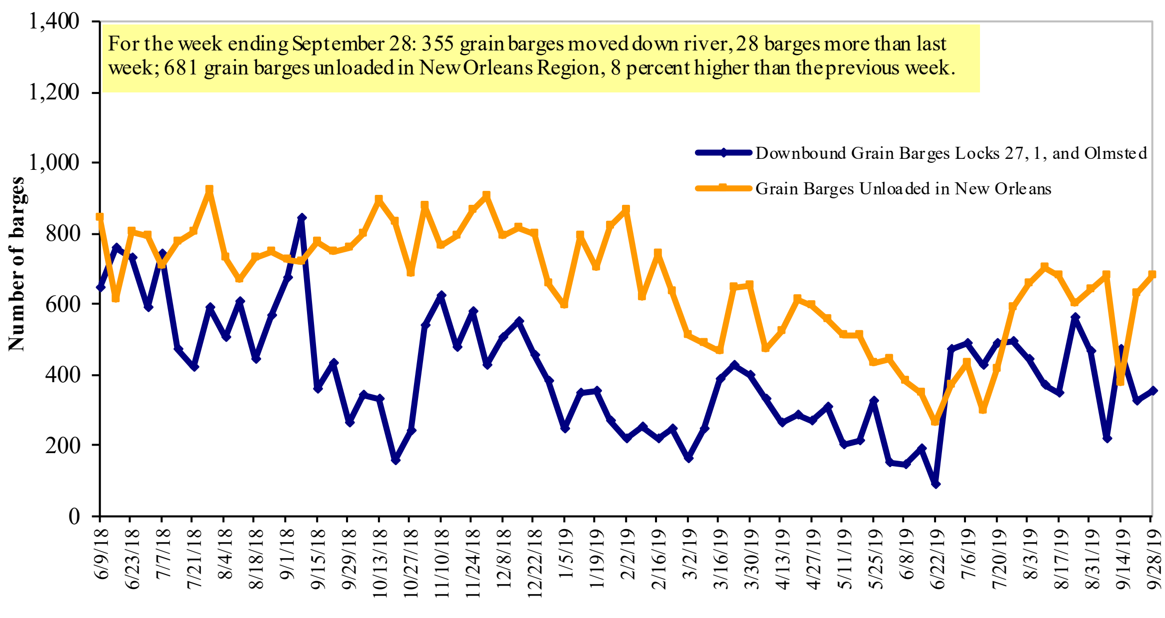
Upbound Empty Barges Transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam



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 USDA, Agricultural Market Service.

Truck Transportation

The **weekly diesel price** provides a proxy for trends in U.S. truck rates as diesel fuel is a significant expense for truck grain movements.

Table 11

Retail on-Highway Diesel Prices, Week Ending 9/30/2019 (US $/gallon)

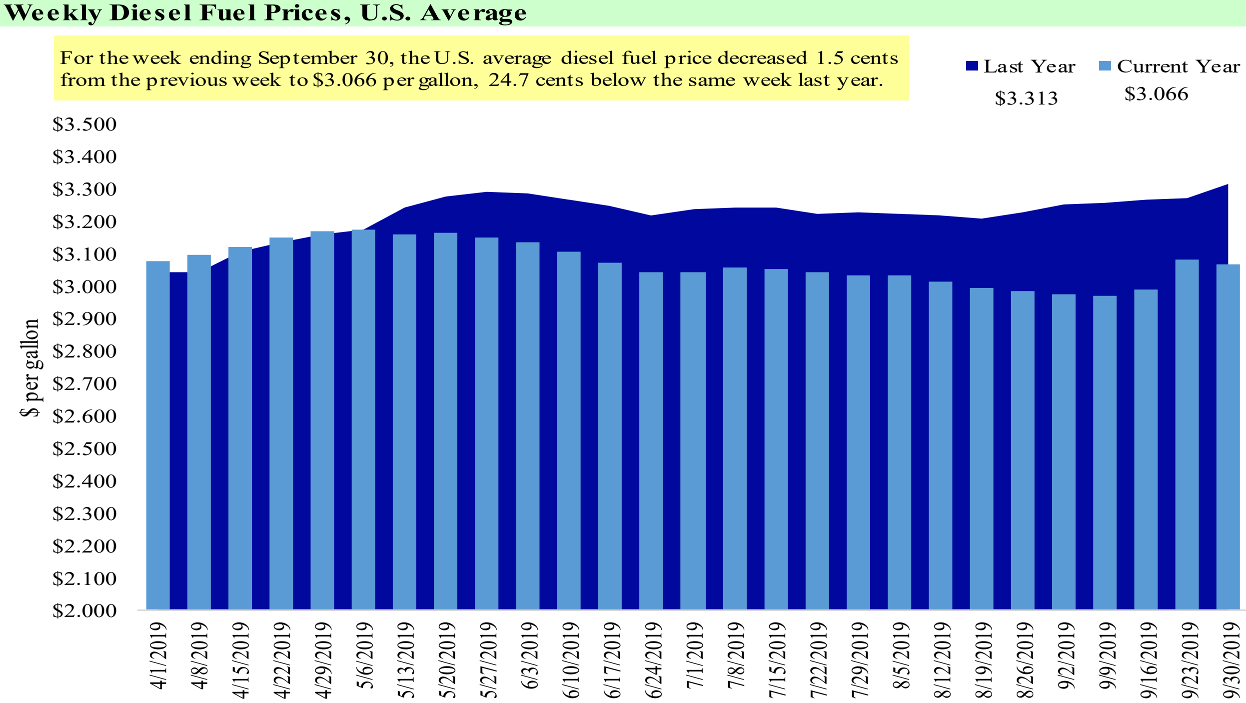
Region	Location	Price	Change from Week ago	Change from Year ago
I	East Coast	3.065	-0.018	-0.227
	New England	3.056	-0.014	-0.249
	Central Atlantic	3.238	-0.014	-0.209
	Lower Atlantic	2.948	-0.023	-0.232
II	Midwest	2.987	-0.005	-0.291
III	Gulf Coast	2.827	-0.031	-0.252
IV	Rocky Mountain	3.032	-0.002	-0.335
V	West Coast	3.645	-0.005	-0.157
	West Coast less California	3.228	-0.010	-0.278
	California	3.976	0.000	-0.062
Total	U.S.	3.066	-0.015	-0.247

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

Source: U.S. Department of Energy, Energy Information Administration.

Figure 13

Weekly Diesel Fuel Prices, U.S. Average



Source: U.S. Department of Energy, Energy Information Administration, Retail On-Highway Diesel Prices.

Grain Exports

Table 12

U.S. Export Balances and Cumulative Exports (1,000 metric tons)

For the week ending	Wheat HRW	Wheat SRW	Wheat HRS	Wheat SWW	Wheat DUR	All wheat	Corn	Soybeans	Total
Export Balances[1]									
9/19/2019	1,323	645	1,522	935	281	4,705	8,000	10,146	22,852
This week year ago	1,385	636	1,420	1,118	123	4,681	15,104	16,287	36,073
Cumulative exports-marketing year[2]									
2019/20 YTD	3,431	954	1,904	1,355	227	7,871	1,149	2,072	11,092
2018/19 YTD	1,756	722	1,913	1,649	144	6,183	3,164	2,380	11,727
YTD 2019/20 as % of 2018/19	195	132	100	82	158	127	36	87	95
Last 4 wks as % of same period 2018/19	99	103	116	84	251	105	39	49	52
2018/19 Total	8,591	3,204	6,776	5,164	479	24,214	48,924	46,189	119,327
2017/18 Total	9,150	2,343	5,689	4,854	384	22,419	57,209	56,214	135,842

[1] Current unshipped (outstanding) export sales to date.

[2] Shipped export sales to date; new marketing year now in effect for wheat, corn, and soybeans.

Note: YTD = year-to-date. Marketing Year: wheat = 6/01-5/31, corn & soybeans = 9/01-8/31.

Source: USDA, Foreign Agricultural Service.

Table 13

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

For the week ending 9/19/2019	Total Commitments[2] 2019/20 Current MY	Total Commitments[2] 2018/19 Last MY	% change current MY from last MY	Exports[3] 3-year avg 2016-2018
	- 1,000 mt -			
Mexico	4,975	5,581	(11)	14,659
Japan	1,170	2,752	(57)	11,955
Korea	70	1,545	(95)	4,977
Colombia	258	516	(50)	4,692
Peru	0	472	(100)	2,808
Top 5 Importers	**6,472**	**10,865**	**(40)**	**39,091**
Total US corn export sales	**9,149**	**18,268**	**(50)**	**54,024**
% of Projected	18%	35%		
Change from prior week[2]	**494**	**1,713**		
Top 5 importers' share of U.S. corn export sales	71%	59%		72%
USDA forecast, September 2019	**52,163**	**52,417**	**(0)**	
Corn Use for Ethanol USDA forecast, September 2019	**138,430**	**136,525**	**1**	

(n) indicates negative number.

[1]Based on USDA, Foreign Agricultural Service (FAS) Marketing Year Ranking Reports for 2018/19; Marketing year (MY) = Sep 1 - Aug 31.

[2]Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query. Total commitments change (net sales) from prior week could include revisions from previous week's outstanding sales or accumulated sales.

[3]FAS Marketing Year Ranking Reports .

Table 14

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

For the week ending 9/19/2019	Total Commitments[2] 2019/20 Current MY	2018/19 Last MY	% change current MY from last MY	Exports[3] 3-yr avg. 2016-2018
	- 1,000 mt -			- 1,000 mt -
China	1,664	1,454	14	25,733
Mexico	2,142	2,266	(5)	4,271
Indonesia	327	649	(50)	2,386
Japan	596	629	(5)	2,243
Egypt	523	389	34	1,983
Top 5 importers	**5,251**	**5,386**	**(3)**	**36,616**
Total US soybean export sales	**12,219**	**18,667**	**(35)**	**53,746**
% of Projected	25%	39%		
Change from prior week[2]	**1,038**	**871**		
Top 5 importers' share of U.S. soybean export sales	43%	29%		**68%**
USDA forecast, September 2019	**48,365**	**47,548**	**102**	

(n) indicates negative number.

[1]Based on USDA, Foreign Agricultural Service (FAS) Marketing Year Ranking Reports for 2018/19 ; Marketing year (MY) = Sep 1 - Aug 31.

[2]Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query. The total commitments change (net sales) from prior week could include reivisions from previous week's outstanding sales and/or accumulated sales.

[3] FAS Marketing Year Final Reports. (Carryover plus Accumulated Exports).

Table 15

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

For the week ending 9/19/2019	Total Commitments[2] 2019/20 Current MY	2018/19 Last MY	% change current MY from last MY	Exports[3] 3-yr avg 2016-2018
	- 1,000 mt -			- 1,000 mt -
Philippines	1,489	1,696	(12)	3,047
Mexico	1,908	1,305	46	3,034
Japan	1,260	1,331	(5)	2,695
Nigeria	775	525	48	1,564
Indonesia	234	383	(39)	1,381
Korea	745	849	(12)	1,355
Taiwan	559	496	13	1,164
Egypt	92	0	n/a	821
Thailand	375	542	(31)	747
Iraq	262	305	(14)	574
Top 10 importers	**7,700**	**7,432**	4	**16,382**
Total US wheat export sales	**12,576**	**10,864**	**16**	**24,388**
% of Projected	47%	43%		
Change from prior week[2]	**283**	**657**		
Top 10 importers' share of U.S. wheat export sales	61%	68%		67%
USDA forecast, September 2019	**26,567**	**25,504**	**4**	

(n) indicates negative number.

[1] Based on USDA, Foreign Agricultural Service(FAS) Marketing Year Ranking Reports for 2018/19; Marketing year = Jun 1 - May 31.
[2] Cumulative Exports (shipped) + Outstanding Sales (unshipped), FAS Weekly Export Sales Report, or Export Sales Query. Total commitments change (net sales) from prior week could include revisions from the previous week's .
outstanding and/or accumulated sales.

[3] FAS Marketing Year Final Reports .
Source: USDA, Foreign Agriculltural Service.

Table 16

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

Port Regions	For the Week Ending 09/26/19	Previous Week*	Current Week as % of Previous	2019 YTD*	2018 YTD*	2019 YTD as % of 2018 YTD	Last 4-weeks as % of: Last Year	Last 4-weeks as % of: Prior 3-yr. avg.	2018 Total*
Pacific Northwest									
Wheat	200	362	55	10,209	9,667	106	101	86	13,315
Corn	44	15	301	6,918	16,209	43	5	6	20,024
Soybeans	131	63	206	7,594	6,400	119	169	149	7,719
Total	**375**	**440**	**85**	**24,721**	**32,276**	**77**	**64**	**64**	**41,058**
Mississippi Gulf									
Wheat	92	17	532	3,763	2,993	126	141	109	3,896
Corn	212	93	228	16,726	26,525	63	41	44	33,735
Soybeans	767	774	99	19,538	18,343	107	112	94	28,124
Total	**1,071**	**884**	**121**	**40,027**	**47,861**	**84**	**79**	**73**	**65,755**
Texas Gulf									
Wheat	115	37	312	5,177	2,311	224	237	66	3,198
Corn	0	0	n/a	563	621	91	58	20	730
Soybeans	0	0	n/a	2	69	2	n/a	0	69
Total	**115**	**37**	**312**	**5,742**	**3,000**	**191**	**190**	**55**	**3,997**
Interior									
Wheat	21	54	38	1,453	1,233	118	78	71	1,614
Corn	136	122	111	5,708	6,668	86	75	75	8,650
Soybeans	127	114	111	5,120	4,976	103	131	171	6,729
Total	**284**	**291**	**97**	**12,281**	**12,878**	**95**	**92**	**97**	**16,993**
Great Lakes									
Wheat	63	43	147	811	657	124	81	97	894
Corn	0	0	n/a	0	345	0	0	0	404
Soybeans	8	20	40	473	576	82	46	92	1,192
Total	**71**	**63**	**113**	**1,284**	**1,578**	**81**	**63**	**80**	**2,491**
Atlantic									
Wheat	0	1	0	37	69	53	194	132	69
Corn	1	1	41	96	103	94	5	4	138
Soybeans	1	2	47	990	1,438	69	18	15	2,047
Total	**2**	**5**	**33**	**1,123**	**1,609**	**70**	**15**	**12**	**2,253**
U.S. total from ports*									
Wheat	491	514	95	21,450	16,930	127	114	84	22,986
Corn	393	231	170	30,012	50,471	59	37	38	63,682
Soybeans	1,034	975	106	33,716	31,802	106	116	104	45,879
Total	**1,917**	**1,720**	**111**	**85,178**	**99,203**	**86**	**78**	**72**	**132,547**

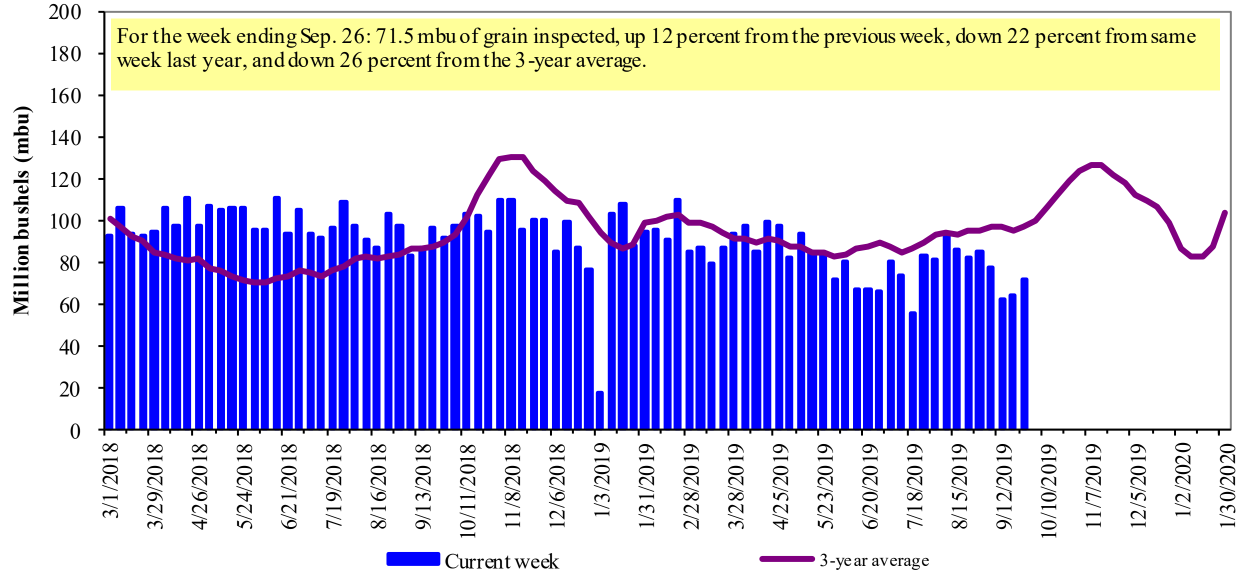
*Data includes revisions from prior weeks; some regional totals may not add exactly due to rounding.

Source: USDA, Federal Grain Inspection Service; YTD= year-to-date; n/a = not applicable or no change.

The United States exports approximately one-quarter of the grain it produces. On average, this includes nearly 45 percent of U.S.-grown wheat, 50 percent of U.S.-grown soybeans, and 20 percent of the U.S.-grown corn. Approximately 53 percent of the U.S. export grain shipments departed through the U.S. Gulf region in 2018.

Figure 14

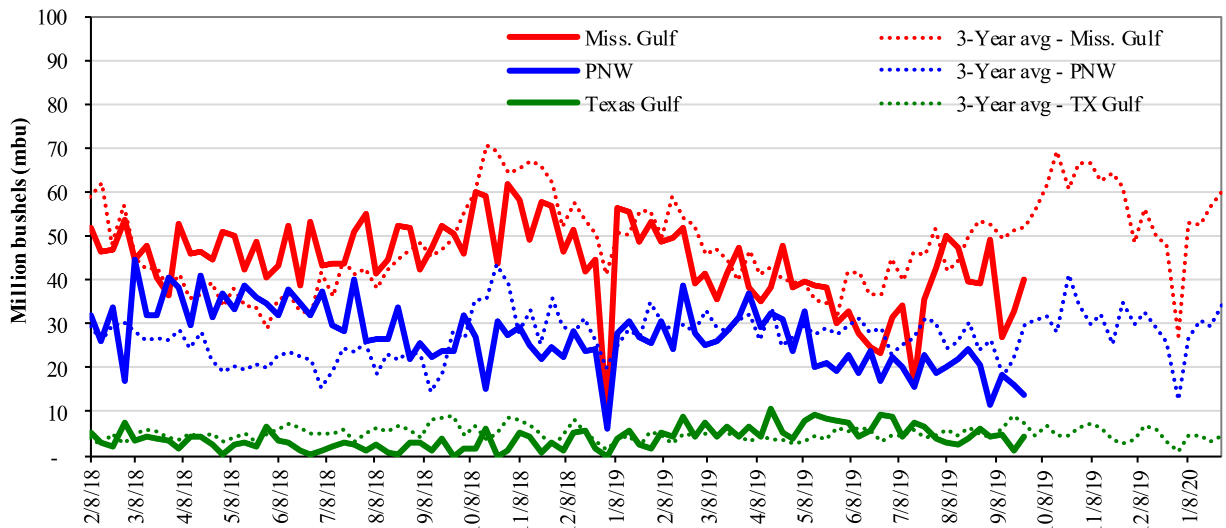
U.S. grain inspected for export (wheat, corn, and soybeans)



Source: USDA, Federal Grain Inspection Service.
Note: 3-year average consists of 4-week running average.

Figure 15

U.S. Grain Inspections: U.S. Gulf and PNW[1] (wheat, corn, and soybeans)



Week ending 09/26/19 inspections (mbu):		Percent change from:	MS Gulf	TX Gulf	U.S. Gulf	PNW
Mississippi Gulf:	39.9	Last Week:	up 22	up 212	up 29	down 14
PNW:	13.9	Last Year (same week):	down 21	n/a	down 13	down 42
Texas Gulf:	4.2	3-yr avg. (4-wk. mov. Avg):	down 22	down 37	down 24	down 42

Source: USDA, Federal Grain Inspection Service.

Ocean Transportation

Table 17

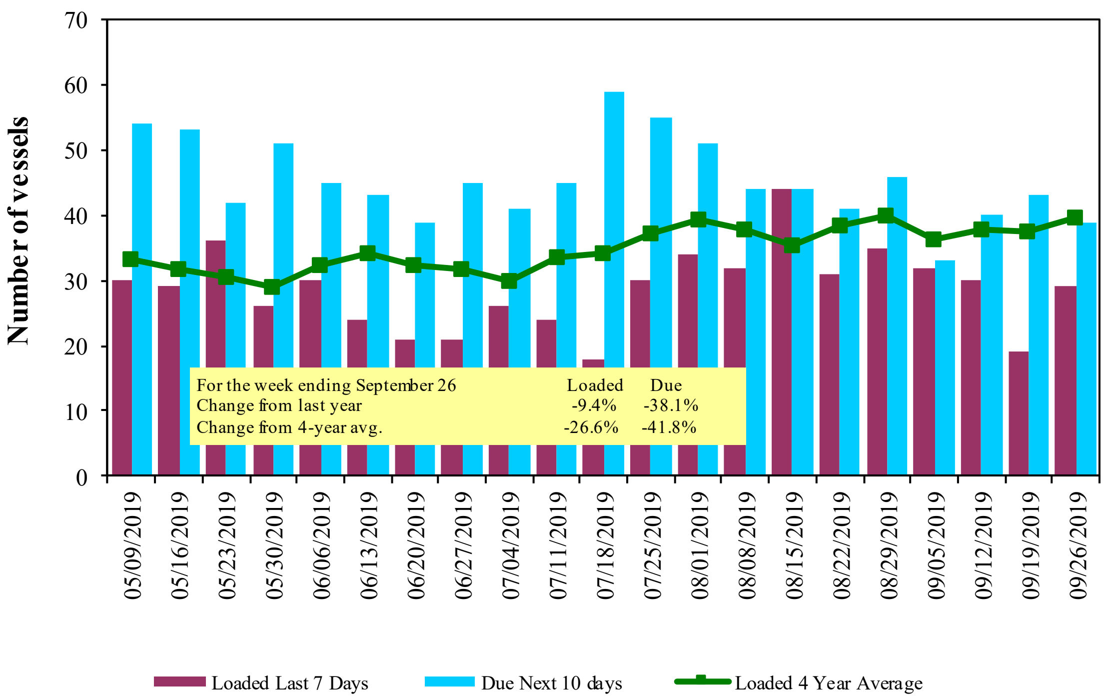
Weekly Port Region Grain Ocean Vessel Activity (number of vessels)

	Gulf			Pacific Northwest
Date	In port	Loaded 7-days	Due next 10-days	In port
9/26/2019	41	29	39	15
9/19/2019	34	19	43	18
2018 range	(23..88)	(24..41)	(38..67)	(4..30)
2018 avg.	40	34	54	17

Source: USDA, Agricultural Marketing Service

Figure 16

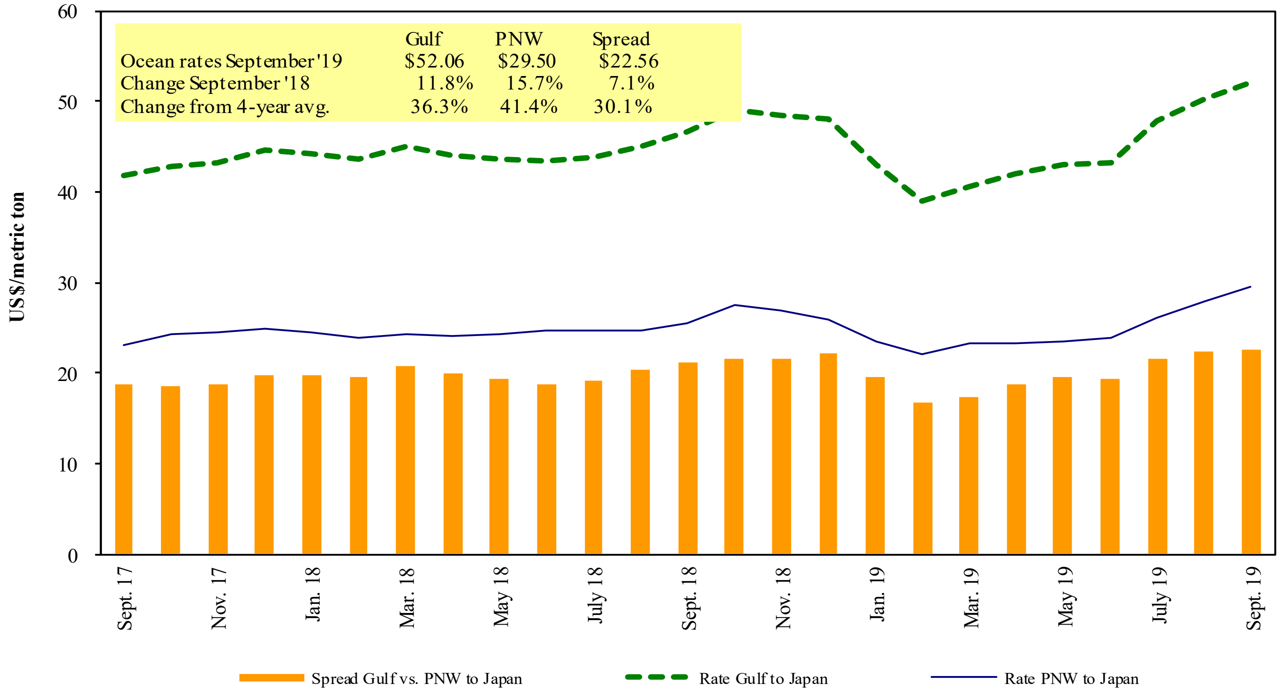
U.S. Gulf[1] Vessel Loading Activity



[1]U.S. Gulf includes Mississippi, Texas, and East Gulf.
Source: USDA, Agricultural Marketing Service.

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 09/28/2019

Export region	Import region	Grain types	Loading date	Volume loads (metric tons)	Freight rate (US$/metric ton)
U.S. Gulf	Bangladesh	Wheat	Dec 10/20	48,990	79.92*
U.S. Gulf	China	Heavy Grain	Jun 1/30	63,000	42.00
U.S. Gulf	Pt Sudan	Sorghum	Sep 20/30	24,960	58.15*
U.S. Gulf	Djibouti	Wheat	Aug 19/29	20,000	85.66*
U.S. Gulf	Somaliland	Sorghum	Sep 20/30	32,240	61.75*
PNW	Bangladesh	Wheat	Dec 10/20	23,080	74.44*
PNW	Philippines	Soybean Meal	Oct 31/31	15,390	49.82*
PNW	Vietnam	Soybean Meal	Oct 21/31	3,200	49.82*
PNW	Yemen	Wheat	Sep 5/15	35,380	59.59*
PNW	Yemen	Wheat	Sep 20/30	35,000	62.19*
Brazil	China	Heavy Grain	Oct 1/10	65,000	32.00
Brazil	China	Heavy Grain	Jun 10/20	65,000	33.00
Brazil	China	Heavy Grain	Apr 20/May 5	63,000	33.00

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

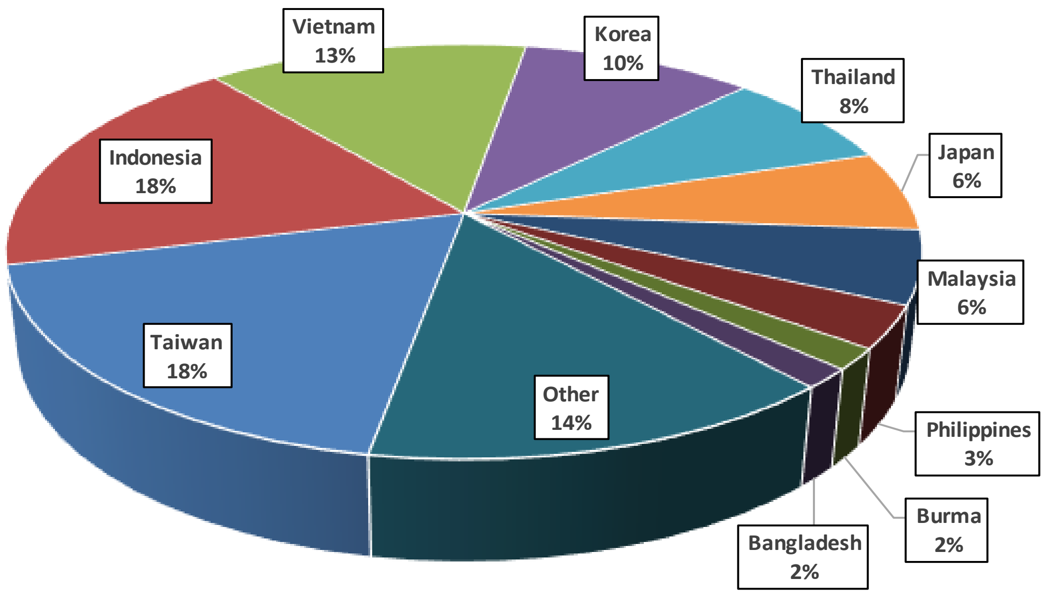
Note: Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), F.O.B., except where otherwise indicated; op = option.

Source: Maritime Research Inc.

In 2018, containers were used to transport 8 percent of total U.S. waterborne grain exports. Approximately 55 percent of U.S. waterborne grain exports in 2018 went to Asia, of which 13 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, Jan-Jul 2019

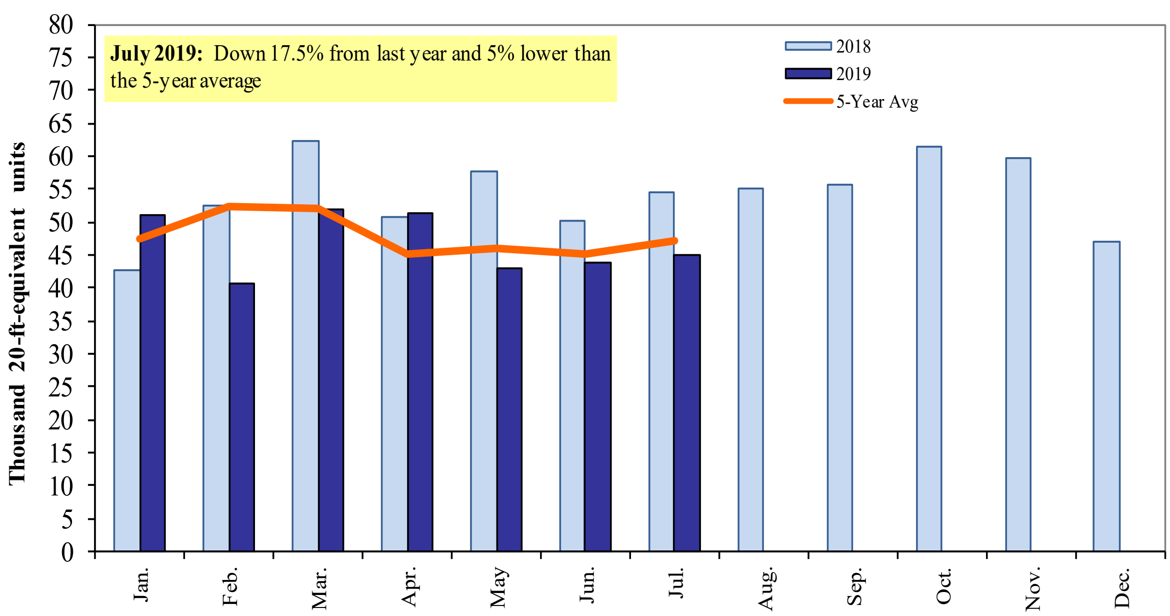


Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: 1001, 100190, 1002, 1003 100300, 1004, 100400, 1005, 100590, 1007, 100700, 1102, 110100, 230310, 110220, 110290, 1201, 120100, 230210, 230990, 230330, and 120810.

Source: USDA, Agricultural Marketing Service, Transportation Services Division analysis of PIERS data.

Figure 19

Monthly Shipments of Containerized Grain to Asia



Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: 100190, 100200, 100300, 100400, 100590, 100700, 110100, 110220, 110290, 120100, 120810, 230210, 230310, 230330, and 230990.

Source: USDA, Agricultural Marketing Service, Transportation Services Division analysis of PIERS data.

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