



# Grain Transportation Report

A weekly publication of the Agricultural Marketing Service  
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## WEEKLY HIGHLIGHTS

December 22, 2022

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### STB Issues Final Rules for Small Rate Disputes

On December 19, the Surface Transportation Board (STB) [adopted](#) final rules implementing two streamlined approaches for shippers and railroads to resolve rate disputes, worth up to \$4 million in relief over 2 years: a voluntary arbitration program and a procedure known as Final Offer Rate Review (FORR). The voluntary arbitration program will begin only if all seven Class I carriers commit—within 50 days of the final rule’s *Federal Register* publication date—to participating for 5 years. (If all Class I carriers commit, they will be exempt from the FORR procedure.) The final rule establishing the arbitration program takes effect 30 days from its *Federal Register* publication date, and the final rule establishing the FORR procedure takes effect 60 days from its *Federal Register* publication date. According to the STB Chair, “The two rules attempt to strike a balance between the competing interests of various stakeholders”—particularly, between shippers’ preference for FORR and the railroads’ preference for a voluntary arbitration program. He further observed that both rules “offer relief under similar timeframes, allow for flexibility to use different methodologies, and have the same monetary limits.”

### Diesel Prices Continue To Decline

For the 6th straight week, diesel prices continued to decline. For the week ending December 19, the U.S. average [diesel fuel price](#) decreased 15.8 cents from the previous week to \$4.596 per gallon—97.0 cents above the same week last year. Following the previous 2 weeks’ declines of 17.4 cents and 21.3 cents, this was the third week in a row the diesel price had a double-digit drop, as well as the first time since February 28 the price dipped below \$4.60 per gallon. In the Midwest, the diesel price fell 17.4 cents per gallon to \$4.477, which was also the lowest Midwest price since February 28, when it was \$3.968.

### Amid Expansion, Savannah Port Overhauls Ocean Terminal

The Port of Savannah [plans to invest \\$410 million](#) in upgrading one of its terminals to accommodate larger ships, while transforming the port’s infrastructure, by 2025, to deal almost exclusively with container cargo. (See, also, [Grain Transportation Report, April 14, 2022](#), third highlight.) Approved by the Georgia Ports Authority’s governing board on December 5, the project will convert the ocean terminal to handle container cargo, and the terminal’s berths will be upgraded to service two large ships simultaneously, using eight new ship-to-shore cranes. Although incoming cargo has begun to subside amid inflation and shifting consumer habits, August and October were two of the Savannah port’s busiest months ever. Between January and October of 2022, the Port of Savannah exported approximately 40,000 TEUS of containerized grain, making it the fifth largest gateway for exporting containerized grain.

### Illinois Waterway Announces 2023 Consolidated Closure

Starting June 1, 2023, the Brandon Road Lock and Dam, the Dresden Island Lock and Dam, and the Marseilles Lock and Dam [will close for approximately 120 days](#) to perform significant repairs. The Brandon Road Lock and Dam will install new vertically framed upper miter gates, modify gate sills, and replace miter gate machinery. The Dresden Lock and Dam will install new upper miter gates, replace miter gate machinery, rehabilitate an electrical system, and configure a culvert valve with a new bulkhead. The Marseilles Lock and Dam will install an electrical crossover. In 2020, over [11.3 million tons of grain](#) moved through the Illinois Waterway, including 6.2 million tons of corn and 4.9 million tons of soybeans.

## Snapshots by Sector

### Export Sales

For the week ending December 8, [unshipped balances](#) of wheat, corn, and soybeans for marketing year (MY) 2022/23 totaled 35.64 million metric tons (mmt), down 24 percent from the same time last year and down 5 percent from last week. Net [corn export sales](#) for MY 2022/23 were 0.959 mmt, up 39 percent from last week. Net [soybean export sales](#) were 2.943 mmt, up 72 percent from last week. Net weekly [wheat export sales](#) were 0.469 mmt, up significantly from last week.

### Rail

U.S. Class I railroads originated 23,806 [grain carloads](#) during the week ending December 10. This was a 9-percent decrease from the previous week, 4 percent fewer than last year, and 7 percent fewer than the 3-year average.

Average January shuttle [secondary railcar](#) bids/offers (per car) were \$950 above tariff for the week ending December 15. This was \$333 more than last week and \$53 lower than this week last year.

### Barge

For the week ending December 17, [barged grain movements](#) totaled 790,368 tons. This was 3 percent higher than the previous week and 4 percent less than the same period last year.

For the week ending December 17, 520 grain barges [moved down river](#)—the same as last week. There were 987 grain barges [unloaded](#) in the New Orleans region, 37 percent more than last week.

### Ocean

For the week ending December 15, 30 [oceangoing grain vessels](#) were loaded in the Gulf—9 percent fewer than the same period last year. Within the next 10 days (starting December 16), 53 vessels were expected to be loaded—12 percent fewer than the same period last year.

As of December 15, the rate for shipping a metric ton (mt) of grain from the U.S. Gulf to Japan was \$57.00. This was relatively unchanged from the previous week. The rate from the Pacific Northwest to Japan was \$32.00 per mt, unchanged from the previous week.

# Feature Article/Calendar

## Wheat Transportation Costs Fell From Second to Third Quarter 2022

From second quarter to third quarter 2022 (quarter to quarter), transportation costs for shipping wheat from Kansas and North Dakota to Japan decreased through the Pacific Northwest (PNW routes) and U.S. Gulf (Gulf routes). Mainly driven by a drop in ocean freight rates, transportation costs for the Gulf routes also fell from third quarter 2021 to third quarter 2022 (year to year). Transportation costs for the PNW routes rose from year to year due to an increase rail and truck freight rates. Both quarter to quarter and year to year, total landed costs (farm value plus transportation costs) for all routes were up. The sharp year-to-year increases in total landed costs (for routes of all origins) occurred mainly because of higher farm values (tables 1 and 2).

### Transportation Costs

**Quarter to quarter.** Quarter to quarter, PNW-route transportation costs for shipping wheat decreased 7 percent from Kansas and fell 5 percent from North Dakota. Gulf-route costs were down 11 percent from Kansas and down 9 percent from North Dakota.

**Year to year.** Year to year, PNW-route transportation costs increased 5 percent from Kansas and rose 9 percent from North Dakota. Gulf-route transportation costs fell 2 percent from Kansas and fell 4 percent from North Dakota.

Table 1: Quarterly rate comparisons for shipping Kansas and North Dakota wheat to Japan through the PNW

| Mode                       | Kansas        |         |         |                     |                  | North Dakota  |         |         |                     |                  |
|----------------------------|---------------|---------|---------|---------------------|------------------|---------------|---------|---------|---------------------|------------------|
|                            | 2021          | 2022    | 2022    | Year-to-year change | Quarterly change | 2021          | 2022    | 2022    | Year-to-year change | Quarterly change |
|                            | 3rd qtr       | 2nd qtr | 3rd qtr |                     |                  | 3rd qtr       | 3rd qtr | 2nd qtr |                     |                  |
|                            | \$/metric ton |         |         |                     |                  | \$/metric ton |         |         |                     |                  |
| Truck                      | 13.19         | 23.40   | 19.07   | 44.58               | -18.50           | 13.19         | 23.40   | 19.07   | 44.58               | -18.50           |
| Rail <sup>1</sup>          | 63.51         | 67.34   | 70.04   | 10.28               | 4.01             | 57.52         | 63.84   | 68.38   | 18.88               | 7.11             |
| Ocean vessel               | 44.56         | 45.20   | 37.93   | -14.88              | -16.08           | 44.56         | 45.20   | 37.93   | -14.88              | -16.08           |
| Transportation costs       | 121.26        | 135.94  | 127.04  | 4.77                | -6.55            | 115.27        | 132.44  | 125.38  | 8.77                | -5.33            |
| Farm value <sup>2</sup>    | 158.37        | 227.44  | 315.63  | 99.30               | 38.78            | 161.06        | 237.49  | 345.76  | 114.68              | 45.59            |
| Total landed cost          | 279.63        | 363.38  | 442.67  | 58.31               | 21.82            | 276.33        | 369.93  | 471.14  | 70.50               | 27.36            |
| Transport % of landed cost | 43.36         | 37.41   | 28.70   |                     |                  | 41.71         | 35.80   | 26.61   |                     |                  |

Table 2: Quarterly rate comparisons for shipping Kansas and North Dakota wheat to Japan through the U.S. Gulf

| Mode                       | Kansas        |         |         |                     |                  | North Dakota  |         |         |                     |                  |
|----------------------------|---------------|---------|---------|---------------------|------------------|---------------|---------|---------|---------------------|------------------|
|                            | 2021          | 2021    | 2022    | Year-to-year change | Quarterly change | 2021          | 2022    | 2022    | Year-to-year change | Quarterly change |
|                            | 3rd qtr       | 2nd qtr | 3rd qtr |                     |                  | 3rd qtr       | 2nd qtr | 3rd qtr |                     |                  |
|                            | \$/metric ton |         |         |                     |                  | \$/metric ton |         |         |                     |                  |
| Truck                      | 13.19         | 23.40   | 19.07   | 44.58               | -18.50           | 13.19         | 23.40   | 19.07   | 44.58               | -18.50           |
| Rail <sup>1</sup>          | 42.07         | 47.05   | 49.82   | 18.42               | 5.89             | 57.72         | 57.60   | 62.28   | 7.90                | 8.13             |
| Ocean vessel               | 81.71         | 79.61   | 64.90   | -20.57              | -18.48           | 81.71         | 79.61   | 64.90   | -20.57              | -18.48           |
| Transportation costs       | 136.97        | 150.06  | 133.79  | -2.32               | -10.84           | 152.62        | 160.61  | 146.25  | -4.17               | -8.94            |
| Farm value <sup>2</sup>    | 158.37        | 227.44  | 315.63  | 99.30               | 38.78            | 161.06        | 237.49  | 345.76  | 114.68              | 45.59            |
| Total landed cost          | 295.34        | 377.50  | 449.42  | 52.17               | 19.05            | 313.68        | 398.10  | 492.01  | 56.85               | 23.59            |
| Transport % of landed cost | 46.38         | 39.75   | 29.77   |                     |                  | 48.65         | 40.34   | 29.73   |                     |                  |

<sup>1</sup> Rail tariff rates include fuel surcharges and revisions for heavy-axle railcars and shuttle trains. The rail tariff rate is a base price of rail freight rates, but during periods of high rail demand or car shortages, high auction and secondary market rates could exceed the base rail tariffs per car.

<sup>2</sup> USDA, National Agricultural Statistics Service is the source for wheat prices for North Dakota (mainly hard red spring) and Kansas (mainly hard red winter).

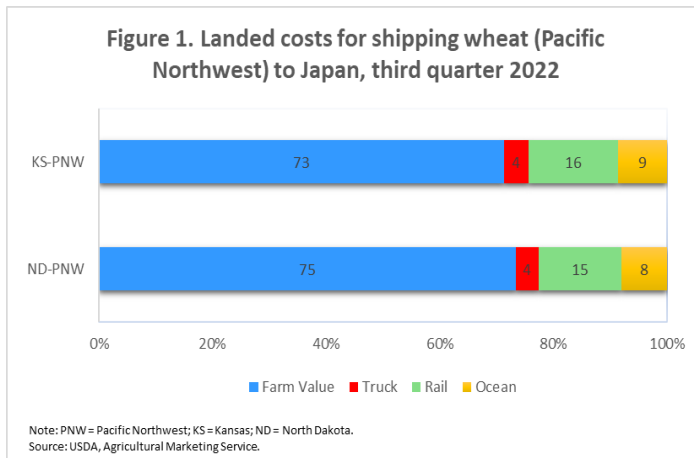
Note: PNW = Pacific Northwest; qtr = quarter

Source: USDA, Agricultural Marketing Service.

### PNW Landed Costs

Third quarter-2022 total landed costs for shipping wheat by PNW routes were \$443 per metric ton (mt) from Kansas and \$471 per mt from North Dakota (table 1). Quarter to quarter, PNW-route landed costs were up 22 percent from Kansas and up 27 percent from North Dakota. Year to year, PNW-route landed costs rose 58 percent from Kansas and 71 percent from North Dakota, because of higher farm values.

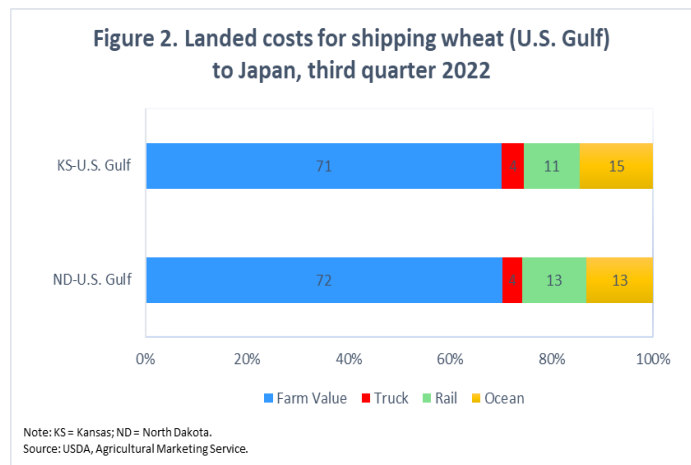
Wheat farm values for both States were well above last year (figs. 1 and 2). As a share of landed costs, third-quarter 2022 farm values—at 71 percent from Kansas and 73 percent from North Dakota—rose from last year.



Substantial declines in PNW-route ocean rates—both quarter to quarter (16 percent) and year to year (15 percent)—were due to decreased demand for bulk shipping, lower demand for ocean vessels, and uncertainty generated by the Russia-Ukraine war ([Grain Transportation Report \(GTR\), November 10, 2022](#)). Ocean transport’s share of total PNW-route landed costs from Kansas and North Dakota was well below the same time last year.

### U.S. Gulf Landed Costs

Total landed costs to ship wheat through the Gulf routes were \$449/mt from Kansas and \$492/mt from North Dakota. Quarter to quarter, total Gulf-route landed costs were up 19 percent from Kansas and up 24 percent from North Dakota. Year to year, Gulf-route landed costs rose 52 percent from Kansas and rose 57 percent from North Dakota (table 2). Third-quarter 2022 farm values represented 70 percent of Gulf-route landed costs from both Kansas and North Dakota—higher than last year for both origins (fig. 2).



Gulf-route ocean rates fell 18 percent quarter to quarter and dropped 21 percent year to year. Gulf-route rail rates increased quarter to quarter from both Kansas and North Dakota. Year to year, ocean transport’s share of Gulf-route landed costs was down notably from each origin.

### Third-Quarter 2022 Wheat Inspections

According to USDA’s Federal Grain Inspection Service, third-quarter 2022 wheat inspected for export to Japan totaled 0.605 million metric tons (mmt), up 17 percent quarter to quarter, but down 16 percent year to year. Japan accounted for 9 percent of total U.S. third-quarter 2022 wheat inspections, which were 6.9 mmt (down 14 percent year to year). The year-to-year decline in total wheat exports to all destinations was mainly composed of reduced shipments to Africa and Asia ([GTR, November 3, 2022](#)). U.S. wheat exports for marketing year (MY) 2022/23 are expected to decline from MY 2021/22, according to USDA’s December [World Agricultural Supply and Demand Estimates](#).

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# Grain Transportation Indicators

Table 1

## Grain transport cost indicators<sup>1</sup>

| For the week ending | Truck |             | Rail    |  | Barge | Ocean |         |
|---------------------|-------|-------------|---------|--|-------|-------|---------|
|                     |       | Non-Shuttle | Shuttle |  |       | Gulf  | Pacific |
| 12/21/22            | 308   | 337         | 297     |  | 520   | 255   | 227     |
| 12/14/22            | 319   | 337         | 289     |  | 509   | 256   | 227     |

<sup>1</sup>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.

Source: USDA, Agricultural Marketing Service.

Table 2

## Market Update: U.S. origins to export position price spreads (\$/bushel)

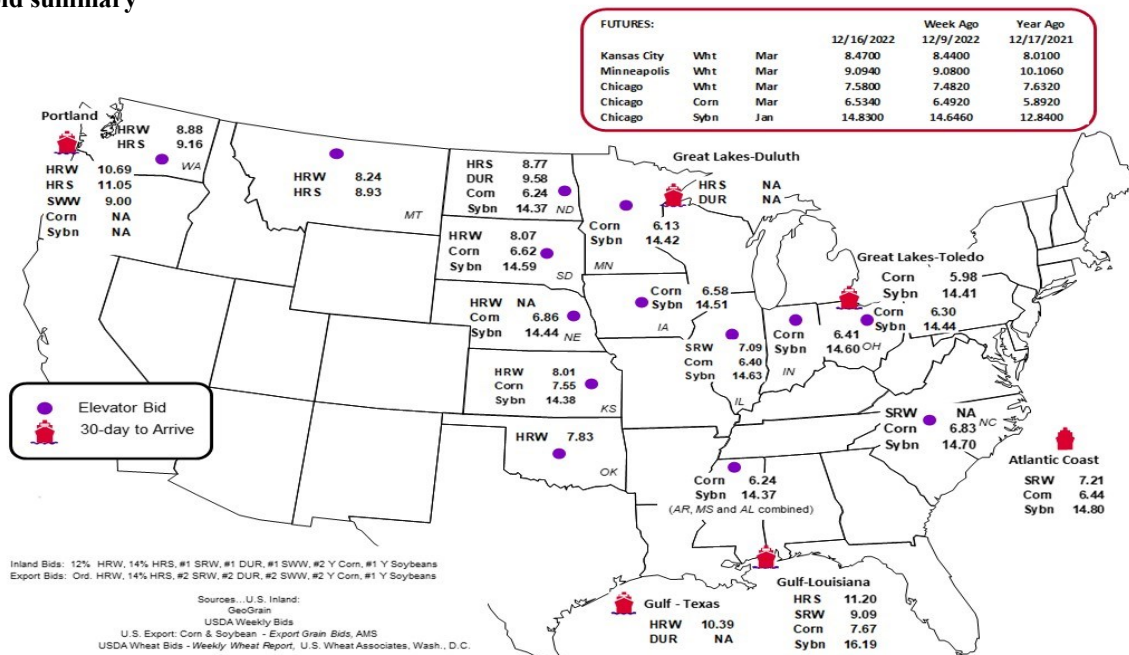
| Commodity | Origin-destination | 12/16/2022 | 12/9/2022 |
|-----------|--------------------|------------|-----------|
| Corn      | IL-Gulf            | -1.27      | -1.24     |
| Corn      | NE-Gulf            | -0.81      | -0.76     |
| Soybean   | IA-Gulf            | -1.68      | -1.57     |
| HRW       | KS-Gulf            | -2.38      | -2.40     |
| HRS       | ND-Portland        | -2.28      | -2.26     |

Note: nq = no quote; n/a = not available; HRW = hard red winter wheat; HRS = hard red spring wheat.

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

## Class I rail carrier grain car bulletin (grain carloads originated)

| For the week ending:<br>12/10/2022 | East   |         | West    |        |         | U.S. total | Canada  |         |
|------------------------------------|--------|---------|---------|--------|---------|------------|---------|---------|
|                                    | CSXT   | NS      | BNSF    | KCS    | UP      |            | CN      | CP      |
| This week                          | 2,346  | 3,140   | 11,620  | 1,187  | 5,513   | 23,806     | 6,428   | 6,287   |
| This week last year                | 2,240  | 2,658   | 12,599  | 1,481  | 5,895   | 24,873     | 4,300   | 4,118   |
| 2022 YTD                           | 87,782 | 121,968 | 542,979 | 62,400 | 282,487 | 1,097,616  | 199,720 | 199,991 |
| 2021 YTD                           | 88,527 | 114,561 | 577,828 | 60,723 | 302,663 | 1,144,302  | 199,545 | 231,154 |
| 2022 YTD as % of 2021 YTD          | 99     | 106     | 94      | 103    | 93      | 96         | 100     | 87      |
| Last 4 weeks as % of 2021*         | 109    | 140     | 90      | 89     | 89      | 96         | 178     | 148     |
| Last 4 weeks as % of 3-yr. avg.**  | 118    | 119     | 92      | 105    | 96      | 98         | 143     | 120     |
| Total 2021                         | 93,935 | 120,673 | 609,890 | 64,818 | 318,002 | 1,207,318  | 209,711 | 242,533 |

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

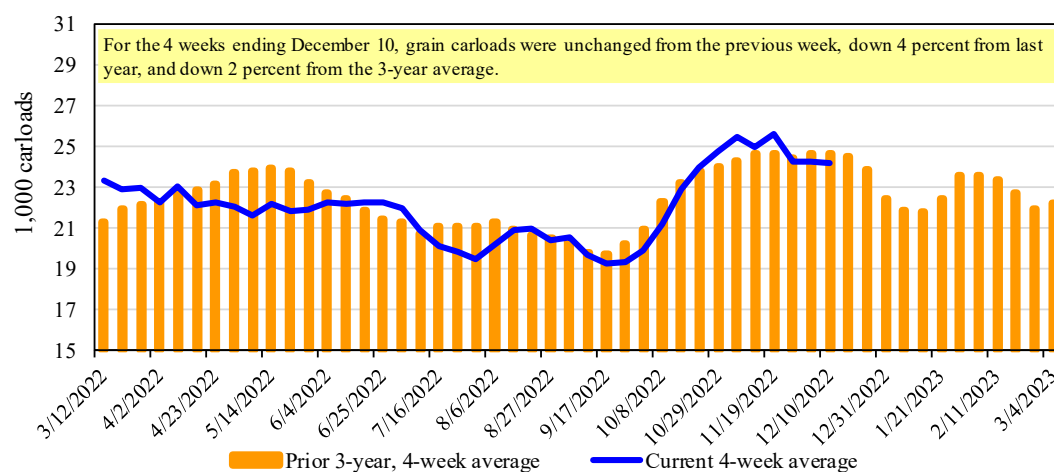
\*\*The past 4 weeks as a percent of the same period from the prior 3-year average. YTD = year-to-date; avg. = average; yr. = year.

Note: NS = Norfolk Southern; KCS = Kansas City Southern; UP = Union Pacific; CN = Canadian National; CP = Canadian Pacific.

Source: Association of American Railroads.

Figure 2

## Total weekly U.S. Class I railroad grain carloads



Source: Association of American Railroads.

Table 4

## Railcar auction offerings<sup>1</sup> (\$/car)<sup>2</sup>

| For the week ending:<br>12/15/2022 |                      | Delivery period |          |          |          |          |          |        |         |
|------------------------------------|----------------------|-----------------|----------|----------|----------|----------|----------|--------|---------|
|                                    |                      | Jan-23          | Jan-22   | Feb-23   | Feb-22   | Mar-23   | Mar-22   | Apr-23 | Apr-22  |
| BNSF <sup>3</sup>                  | COT grain units      | 199             | 68       | 142      | 0        | 54       | 0        | no bid | no bids |
|                                    | COT grain single-car | 811             | 219      | 684      | 37       | 243      | 0        | 0      | 0       |
| UP <sup>4</sup>                    | GCAS/Region 1        | no offer        | no offer | no offer | no offer | no offer | no offer | n/a    | n/a     |
|                                    | GCAS/Region 2        | no offer        | no offer | no offer | no offer | no offer | no offer | n/a    | n/a     |

<sup>1</sup>Auction offerings are for single-car and unit train shipments only.

<sup>2</sup>Average premium/discount to tariff, last auction. n/a = not available.

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

<sup>4</sup>UP - GCAS = Union Pacific Railroad Grain Car Allocation System.

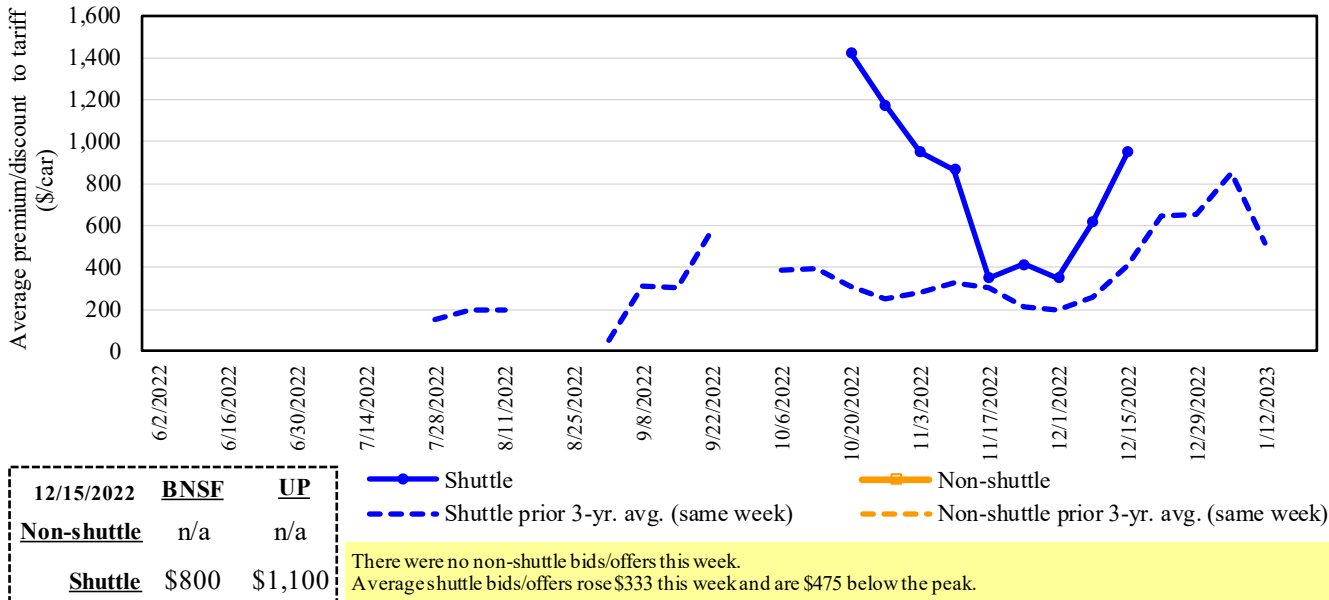
Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

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

Source: USDA, Agricultural Marketing Service.

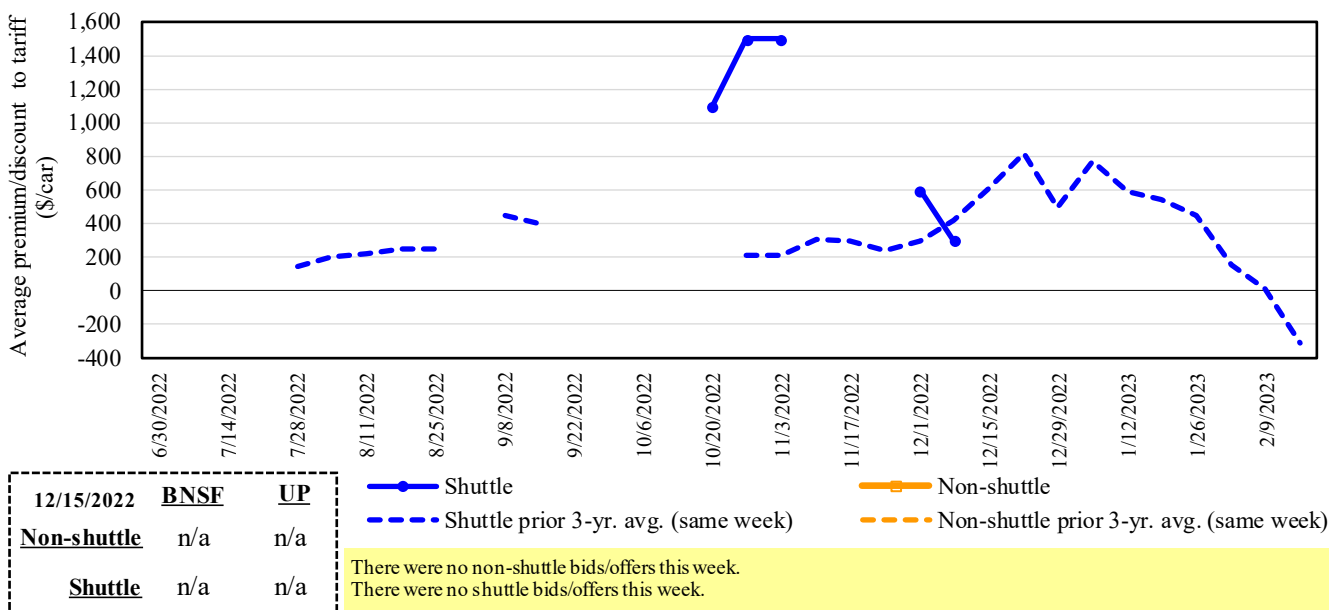
The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

**Figure 3**  
**Secondary market bids/offers for railcars to be delivered in January 2023**



Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = year; BNSF = BNSF Railway; UP = Union Pacific Railroad.  
 Source: USDA, Agricultural Marketing Service.

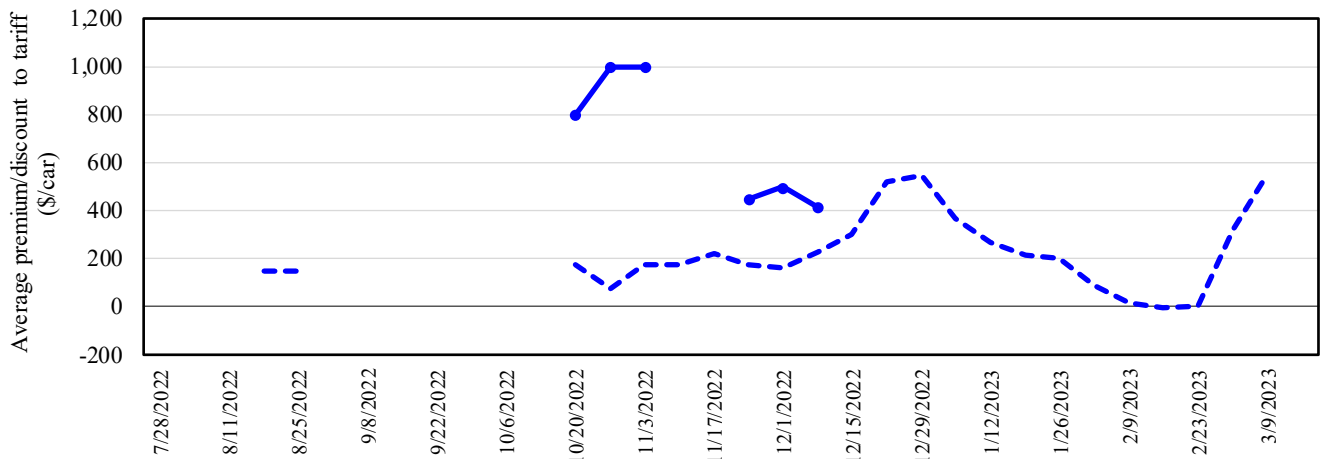
**Figure 4**  
**Secondary market bids/offers for railcars to be delivered in February 2023**



Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = year; BNSF = BNSF Railway; UP = Union Pacific Railroad.  
 Source: USDA, Agricultural Marketing Service.

Figure 5

Secondary market bids/offers for railcars to be delivered in March 2023



|                    | BNSF | UP  |
|--------------------|------|-----|
| <b>12/15/2022</b>  |      |     |
| <b>Non-shuttle</b> | n/a  | n/a |
| <b>Shuttle</b>     | 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.

Note: Non-shuttle bids include unit-train and single-car bids. n/a = not available; avg. = average; yr. = year; BNSF = BNSF Railway; UP = Union Pacific Railroad.  
 Source: USDA, Agricultural Marketing Service.

Table 5

Weekly secondary railcar market (\$/car)<sup>1</sup>

| For the week ending: |                            | Delivery period |        |        |        |              |        |
|----------------------|----------------------------|-----------------|--------|--------|--------|--------------|--------|
|                      |                            | Jan-23          | Feb-23 | Mar-23 | Apr-23 | May-23       | Jun-23 |
| Non-shuttle          | <b>BNSF-GF</b>             | 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 2021 | n/a             | n/a    | n/a    | n/a    | n/a          | n/a    |
|                      | <b>UP-Pool</b>             | 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 2021 | n/a             | n/a    | n/a    | n/a    | n/a          | n/a    |
| Shuttle              | <b>BNSF-GF</b>             | <b>800</b>      | n/a    | n/a    | n/a    | <b>(150)</b> | n/a    |
|                      | Change from last week      | 183             | n/a    | n/a    | n/a    | 0            | n/a    |
|                      | Change from same week 2021 | (356)           | n/a    | n/a    | n/a    | n/a          | n/a    |
|                      | <b>UP-Pool</b>             | <b>1,100</b>    | 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 2021 | 250             | n/a    | n/a    | n/a    | n/a          | n/a    |

<sup>1</sup> 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;

BNSF = BNSF Railway; UP = Union Pacific Railroad.

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. Together with **fuel surcharges** and any **auction and secondary rail** values, the tariff rail rate constitutes 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. However, during times of high rail demand or short supply, high auction and secondary rail values can exceed the cost of the tariff rate plus fuel surcharge.

Table 6

**Tariff rail rates for unit and shuttle train shipments<sup>1</sup>**

| December 2022        | Origin region <sup>3</sup> | Destination region <sup>3</sup> | Tariff rate/car | Fuel surcharge per car | Tariff plus surcharge per: |                     | Percent change Y/Y <sup>4</sup> |
|----------------------|----------------------------|---------------------------------|-----------------|------------------------|----------------------------|---------------------|---------------------------------|
|                      |                            |                                 |                 |                        | metric ton                 | bushel <sup>2</sup> |                                 |
| <b>Unit train</b>    |                            |                                 |                 |                        |                            |                     |                                 |
| Wheat                | Wichita, KS                | St. Louis, MO                   | \$3,695         | \$319                  | \$39.86                    | \$1.08              | 4                               |
|                      | Grand Forks, ND            | Duluth-Superior, MN             | \$3,858         | \$149                  | \$39.79                    | \$1.08              | 10                              |
|                      | Wichita, KS                | Los Angeles, CA                 | \$7,490         | \$765                  | \$81.98                    | \$2.23              | 13                              |
|                      | Wichita, KS                | New Orleans, LA                 | \$4,600         | \$561                  | \$51.25                    | \$1.39              | 7                               |
|                      | Sioux Falls, SD            | Galveston-Houston, TX           | \$7,226         | \$628                  | \$77.99                    | \$2.12              | 12                              |
|                      | Colby, KS                  | Galveston-Houston, TX           | \$4,850         | \$614                  | \$54.26                    | \$1.48              | 7                               |
|                      | Amarillo, TX               | Los Angeles, CA                 | \$5,121         | \$855                  | \$59.34                    | \$1.62              | 7                               |
| Corn                 | Champaign-Urbana, IL       | New Orleans, LA                 | \$4,000         | \$634                  | \$46.02                    | \$1.17              | 7                               |
|                      | Toledo, OH                 | Raleigh, NC                     | \$8,551         | \$697                  | \$91.83                    | \$2.33              | 14                              |
|                      | Des Moines, IA             | Davenport, IA                   | \$2,655         | \$134                  | \$27.70                    | \$0.70              | 8                               |
|                      | Indianapolis, IN           | Atlanta, GA                     | \$6,593         | \$523                  | \$70.67                    | \$1.80              | 14                              |
|                      | Indianapolis, IN           | Knoxville, TN                   | \$5,564         | \$339                  | \$58.62                    | \$1.49              | 12                              |
|                      | Des Moines, IA             | Little Rock, AR                 | \$4,250         | \$394                  | \$46.12                    | \$1.17              | 10                              |
|                      | Des Moines, IA             | Los Angeles, CA                 | \$6,130         | \$1,148                | \$72.28                    | \$1.84              | 12                              |
| Soybeans             | Minneapolis, MN            | New Orleans, LA                 | \$5,431         | \$984                  | \$63.71                    | \$1.73              | 59                              |
|                      | Toledo, OH                 | Huntsville, AL                  | \$7,037         | \$497                  | \$74.81                    | \$2.04              | 12                              |
|                      | Indianapolis, IN           | Raleigh, NC                     | \$7,843         | \$706                  | \$84.90                    | \$2.31              | 15                              |
|                      | Indianapolis, IN           | Huntsville, AL                  | \$5,689         | \$335                  | \$59.82                    | \$1.63              | 12                              |
|                      | Champaign-Urbana, IL       | New Orleans, LA                 | \$4,865         | \$634                  | \$54.61                    | \$1.49              | 8                               |
| <b>Shuttle train</b> |                            |                                 |                 |                        |                            |                     |                                 |
| Wheat                | Great Falls, MT            | Portland, OR                    | \$4,393         | \$440                  | \$47.99                    | \$1.31              | 15                              |
|                      | Wichita, KS                | Galveston-Houston, TX           | \$4,311         | \$343                  | \$46.21                    | \$1.26              | 5                               |
|                      | Chicago, IL                | Albany, NY                      | \$7,090         | \$658                  | \$76.94                    | \$2.09              | 16                              |
|                      | Grand Forks, ND            | Portland, OR                    | \$6,051         | \$760                  | \$67.64                    | \$1.84              | 16                              |
|                      | Grand Forks, ND            | Galveston-Houston, TX           | \$5,399         | \$792                  | \$61.47                    | \$1.67              | 8                               |
|                      | Colby, KS                  | Portland, OR                    | \$5,923         | \$1,007                | \$68.82                    | \$1.87              | 6                               |
| Corn                 | Minneapolis, MN            | Portland, OR                    | \$5,660         | \$926                  | \$65.40                    | \$1.66              | 22                              |
|                      | Sioux Falls, SD            | Tacoma, WA                      | \$5,620         | \$848                  | \$64.23                    | \$1.63              | 21                              |
|                      | Champaign-Urbana, IL       | New Orleans, LA                 | \$4,170         | \$634                  | \$47.70                    | \$1.21              | 13                              |
|                      | Lincoln, NE                | Galveston-Houston, TX           | \$4,360         | \$494                  | \$48.20                    | \$1.22              | 19                              |
|                      | Des Moines, IA             | Amarillo, TX                    | \$4,670         | \$496                  | \$51.30                    | \$1.30              | 10                              |
|                      | Minneapolis, MN            | Tacoma, WA                      | \$5,660         | \$918                  | \$65.32                    | \$1.66              | 22                              |
|                      | Council Bluffs, IA         | Stockton, CA                    | \$5,580         | \$950                  | \$64.84                    | \$1.65              | 23                              |
| Soybeans             | Sioux Falls, SD            | Tacoma, WA                      | \$6,350         | \$848                  | \$71.47                    | \$1.95              | 19                              |
|                      | Minneapolis, MN            | Portland, OR                    | \$6,400         | \$926                  | \$72.75                    | \$1.98              | 20                              |
|                      | Fargo, ND                  | Tacoma, WA                      | \$6,250         | \$754                  | \$69.55                    | \$1.89              | 18                              |
|                      | Council Bluffs, IA         | New Orleans, LA                 | \$5,095         | \$731                  | \$57.85                    | \$1.57              | 9                               |
|                      | Toledo, OH                 | Huntsville, AL                  | \$5,277         | \$497                  | \$57.33                    | \$1.56              | 17                              |
|                      | Grand Island, NE           | Portland, OR                    | \$5,730         | \$1,031                | \$67.14                    | \$1.83              | 15                              |

<sup>1</sup>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.

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

<sup>3</sup>Regional economic areas are defined by the Bureau of Economic Analysis (BEA).

<sup>4</sup>Percentage change year over year (Y/Y) calculated using tariff rate plus fuel surcharge.

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



Table 7

**Tariff rail rates for U.S. bulk grain shipments to Mexico**

| Date: December 2021 |              |                      | Tariff rate per car <sup>1</sup> | Fuel surcharge per car <sup>2</sup> | Tariff rate plus fuel surcharge per: |                     | Percent change <sup>4</sup> Y/Y |
|---------------------|--------------|----------------------|----------------------------------|-------------------------------------|--------------------------------------|---------------------|---------------------------------|
| Commodity           | Origin state | Destination region   |                                  |                                     | metric ton <sup>3</sup>              | bushel <sup>3</sup> |                                 |
| Wheat               | MT           | Chihuahua, CI        | \$7,699                          | \$0                                 | \$78.67                              | \$2.14              | 4                               |
|                     | OK           | Cuautilan, EM        | \$6,900                          | \$230                               | \$72.85                              | \$1.98              | 6                               |
|                     | KS           | Guadalajara, JA      | \$7,619                          | \$719                               | \$85.19                              | \$2.32              | 7                               |
|                     | TX           | Salinas Victoria, NL | \$4,420                          | \$138                               | \$46.57                              | \$1.27              | 4                               |
| Corn                | IA           | Guadalajara, JA      | \$9,102                          | \$663                               | \$99.77                              | \$2.53              | 6                               |
|                     | SD           | Celaya, GJ           | \$8,300                          | \$0                                 | \$84.81                              | \$2.15              | 2                               |
|                     | NE           | Querretaro, QA       | \$8,322                          | \$462                               | \$89.75                              | \$2.28              | 5                               |
|                     | SD           | Salinas Victoria, NL | \$6,905                          | \$0                                 | \$70.55                              | \$1.79              | 0                               |
|                     | MO           | Tlalnepantla, EM     | \$7,687                          | \$450                               | \$83.14                              | \$2.11              | 5                               |
|                     | SD           | Torreón, CU          | \$7,825                          | \$0                                 | \$79.95                              | \$2.03              | 2                               |
| Soybeans            | MO           | Bojay (Tula), HG     | \$8,647                          | \$614                               | \$94.63                              | \$2.57              | 5                               |
|                     | NE           | Guadalajara, JA      | \$9,207                          | \$646                               | \$100.67                             | \$2.74              | 5                               |
|                     | IA           | El Castillo, JA      | \$9,510                          | \$0                                 | \$97.17                              | \$2.64              | 1                               |
|                     | KS           | Torreón, CU          | \$8,109                          | \$466                               | \$87.61                              | \$2.38              | 5                               |
| Sorghum             | NE           | Celaya, GJ           | \$7,932                          | \$597                               | \$87.15                              | \$2.21              | 6                               |
|                     | KS           | Querretaro, QA       | \$8,108                          | \$287                               | \$85.77                              | \$2.18              | 3                               |
|                     | NE           | Salinas Victoria, NL | \$6,713                          | \$231                               | \$70.94                              | \$1.80              | 3                               |
|                     | NE           | Torreón, CU          | \$7,225                          | \$438                               | \$78.29                              | \$1.99              | 6                               |

<sup>1</sup>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.

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

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

<sup>4</sup>Percentage change calculated using tariff rate plus fuel surcharge; Y/Y = year over year.

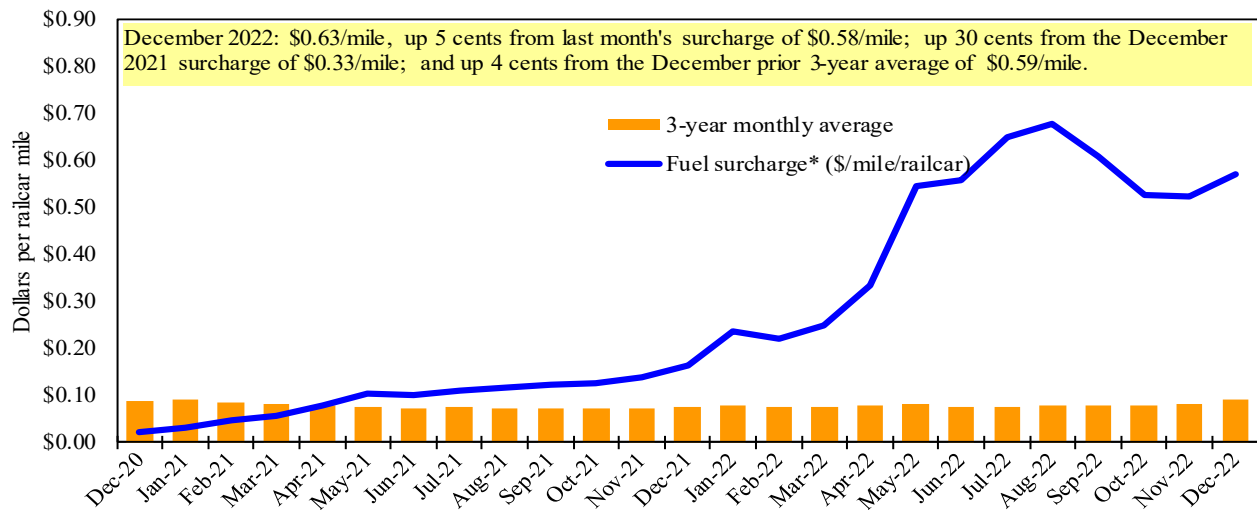
<sup>5</sup> As of January 1, both BNSF and Union Pacific changed their billing and reporting of rates to Mexico.

As we incorporate the change, Table 7 updates will be delayed.

Sources: BNSF Railway, Union Pacific Railroad, Kansas City Southern.

Figure 6

**Railroad fuel surcharges, North American weighted average<sup>1</sup>**



<sup>1</sup> 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.

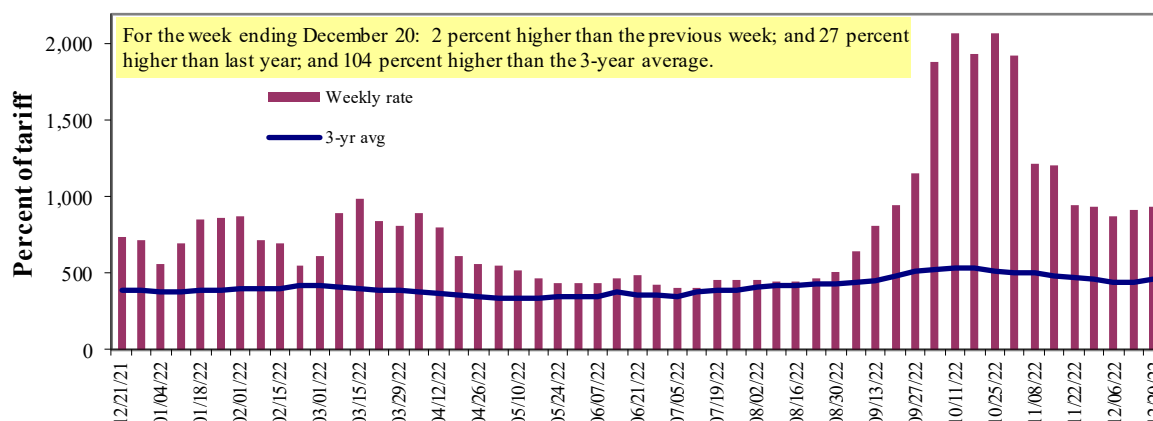
\*\*CSX strike price changed from \$2.00/gal. to \$3.75/gal. starting January 1, 2015.

Sources: BNSF Railway, Canadian National Railway, CSX Transportation, Canadian Pacific Railway, Union Pacific Railroad, Kansas City Southern Railway, Norfolk Southern Corporation.

# Barge Transportation

Figure 7

## Illinois River barge freight rate<sup>1,2</sup>



<sup>1</sup>Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); <sup>2</sup>4-week moving average of the 3-year average.

\*Source: USDA, Agricultural Marketing Service.

Table 8

### Weekly barge freight rates: Southbound only

|  |                          | Twin Cities | Mid-Mississippi | Lower Illinois River | St. Louis | Cincinnati | Lower Ohio | Cairo-Memphis |
|--|--------------------------|-------------|-----------------|----------------------|-----------|------------|------------|---------------|
| <b>Rate<sup>1</sup></b>                          | 12/20/2022               | -           | 835             | 936                  | 843       | 809        | 809        | 650           |
|  | 12/13/2022               | -           | 825             | 916                  | 852       | 831        | 831        | 695           |
| <b>\$/ton</b>                                    | 12/20/2022               | -           | 44.42           | 43.43                | 33.64     | 37.94      | 32.68      | 20.41         |
|  | 12/13/2022               | -           | 43.89           | 42.50                | 33.99     | 38.97      | 33.57      | 21.82         |
| <b>Current week % change from the same week:</b> |                          |             |                 |                      |           |            |            |               |
|  | Last year                | -           | 24              | 27                   | 16        | 22         | 22         | 18            |
|  | 3-year avg. <sup>2</sup> | -           | 80              | 104                  | 128       | 94         | 94         | 98            |
| <b>Rate<sup>1</sup></b>                          | January                  | -           | -               | 882                  | 714       | 714        | 714        | 596           |
|  | March                    | -           | 673             | 643                  | 542       | 599        | 599        | 504           |

<sup>1</sup>Rate = percent of 1976 tariff benchmark index (1976 = 100 percent); <sup>2</sup>4-week moving average; ton = 2,000 pounds; "-" data not available.  
Source: USDA, Agricultural Marketing Service.

### Figure 8 Benchmark tariff rates

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

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

Map Credit: USDA, Agricultural Marketing Service

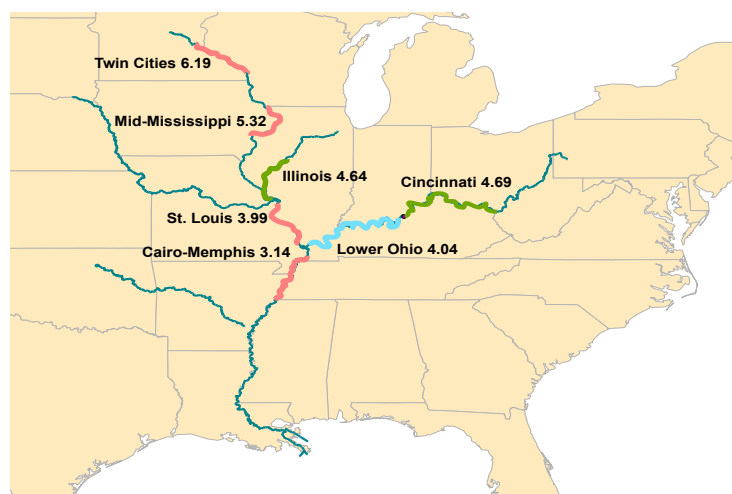
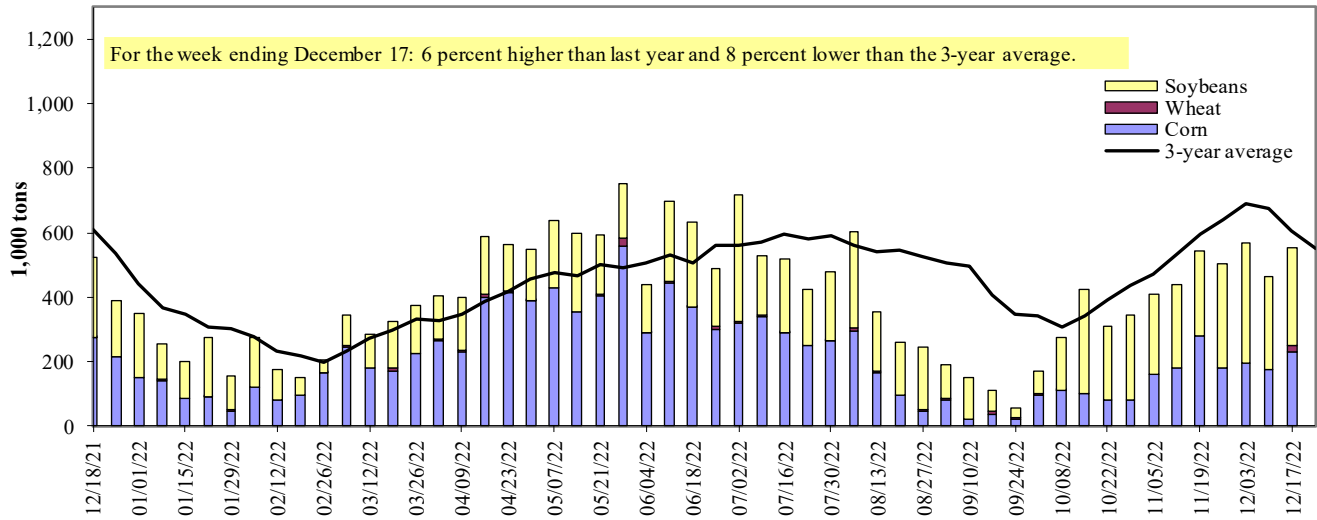


Figure 9

**Barge movements on the Mississippi River<sup>1</sup> (Locks 27 - Granite City, IL)**



<sup>1</sup> The 3-year average is a 4-week moving average.

Note: The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.

Source: U.S. Army Corps of Engineers.

Table 9

**Barge grain movements (1,000 tons)**

| For the week ending 12/17/2022         | Corn   | Wheat | Soybeans | Other | Total  |
|--|--------|-------|----------|-------|--------|
| <b>Mississippi River</b>               |        |       |          |       |        |
| Rock Island, IL (L15)                  | 17     | 0     | 6        | 0     | 23     |
| Winfield, MO (L25)                     | 51     | 8     | 141      | 0     | 201    |
| Alton, IL (L26)                        | 205    | 8     | 323      | 0     | 536    |
| Granite City, IL (L27)                 | 230    | 20    | 304      | 0     | 554    |
| <b>Illinois River (La Grange)</b>      | 152    | 0     | 168      | 0     | 320    |
| <b>Ohio River (Olmsted)</b>            | 79     | 2     | 132      | 0     | 213    |
| <b>Arkansas River (L1)</b>             | 0      | 10    | 14       | 0     | 24     |
| Weekly total - 2022                    | 309    | 32    | 450      | 0     | 790    |
| Weekly total - 2021                    | 391    | 41    | 391      | 0     | 822    |
| 2022 YTD <sup>1</sup>                  | 16,041 | 1,556 | 13,872   | 229   | 31,699 |
| 2021 YTD <sup>1</sup>                  | 22,951 | 1,610 | 10,683   | 278   | 35,521 |
| 2022 as % of 2021 YTD                  | 70     | 97    | 130      | 82    | 89     |
| Last 4 weeks as % of 2021 <sup>2</sup> | 73     | 70    | 124      | 5     | 97     |
| Total 2021                             | 23,516 | 1,634 | 11,325   | 297   | 36,772 |

<sup>1</sup> Weekly total, YTD (year-to-date), and calendar year total include MI/27, OH/Olmsted, and AR/1; Other refers to oats, barley, sorghum, and rye. Total may not add exactly due to rounding.

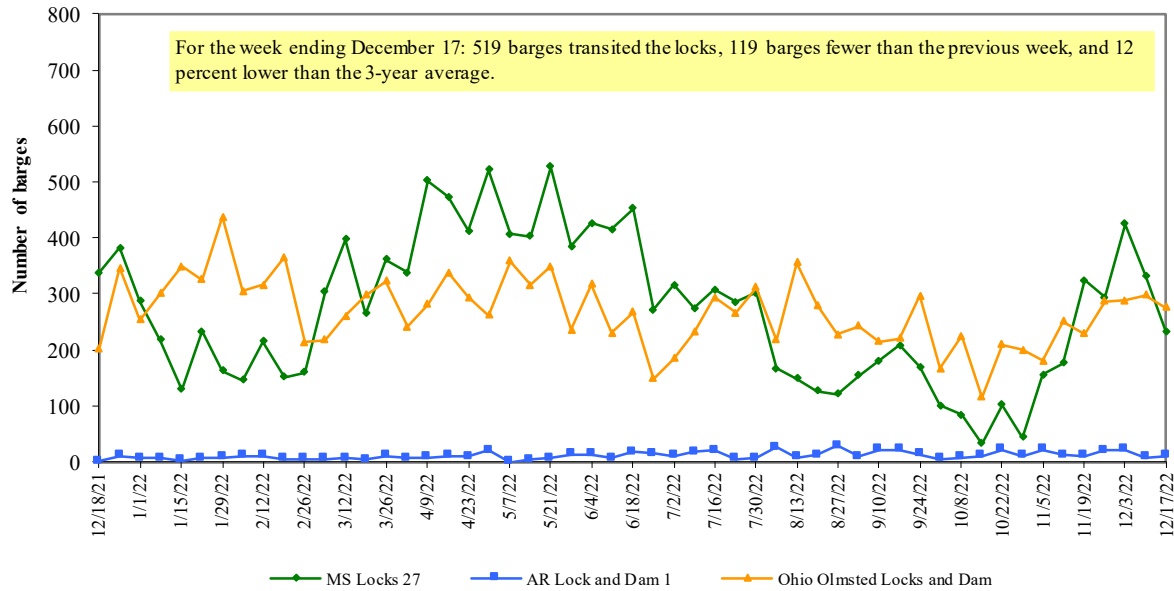
<sup>2</sup> As a percent of same period in 2021.

Note: L (as in "L15") refers to a lock, locks, or locks and dam facility. The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.

Source: U.S. Army Corps of Engineers.

Figure 10

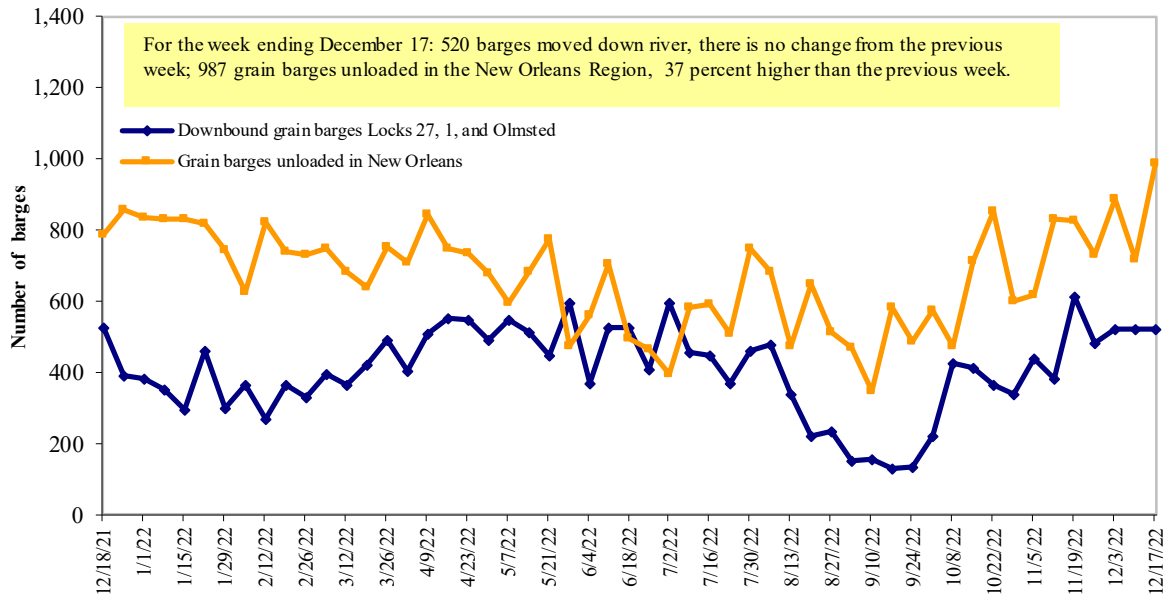
**Upbound empty barges transiting Mississippi River Locks 27, Arkansas River Lock and Dam 1, and Ohio River Olmsted Locks and Dam**



Note: The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.  
 Source: U.S. Army Corps of Engineers.

Figure 11

**Grain barges for export in New Orleans region**



Note: Olmsted = Olmsted Locks and Dam. The U.S. Army Corps of Engineers has recently migrated its lock and vessel database and has noted the latest data may be revised in coming weeks.  
 Source: U.S. Army Corps of Engineers and USDA, Agricultural Marketing 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 10

**Retail on-highway diesel prices, week ending 12/19/2022 (U.S. \$/gallon)**

| Region | Location                   | Price | Change from |          |
|--------|----------------------------|-------|-------------|----------|
|        |                            |       | Week ago    | Year ago |
| I      | East Coast                 | 4.847 | -0.160      | 1.236    |
|        | New England                | 5.257 | -0.226      | 1.624    |
|        | Central Atlantic           | 5.316 | -0.189      | 1.524    |
|        | Lower Atlantic             | 4.637 | -0.142      | 1.141    |
| II     | Midwest                    | 4.477 | -0.174      | 0.985    |
| III    | Gulf Coast                 | 4.205 | -0.139      | 0.866    |
| IV     | Rocky Mountain             | 4.860 | -0.167      | 1.129    |
|        | West Coast                 | 5.138 | -0.149      | 0.757    |
| V      | West Coast less California | 4.877 | -0.171      | 0.936    |
|        | California                 | 5.437 | -0.125      | 0.669    |
| Total  | United States              | 4.596 | -0.158      | 0.970    |

<sup>1</sup>Diesel fuel prices include all taxes. Prices represent an average of all types of diesel fuel.

Note: On June 13, the Energy Information Administration implemented a new methodology to estimate weekly on-highway diesel fuel prices.

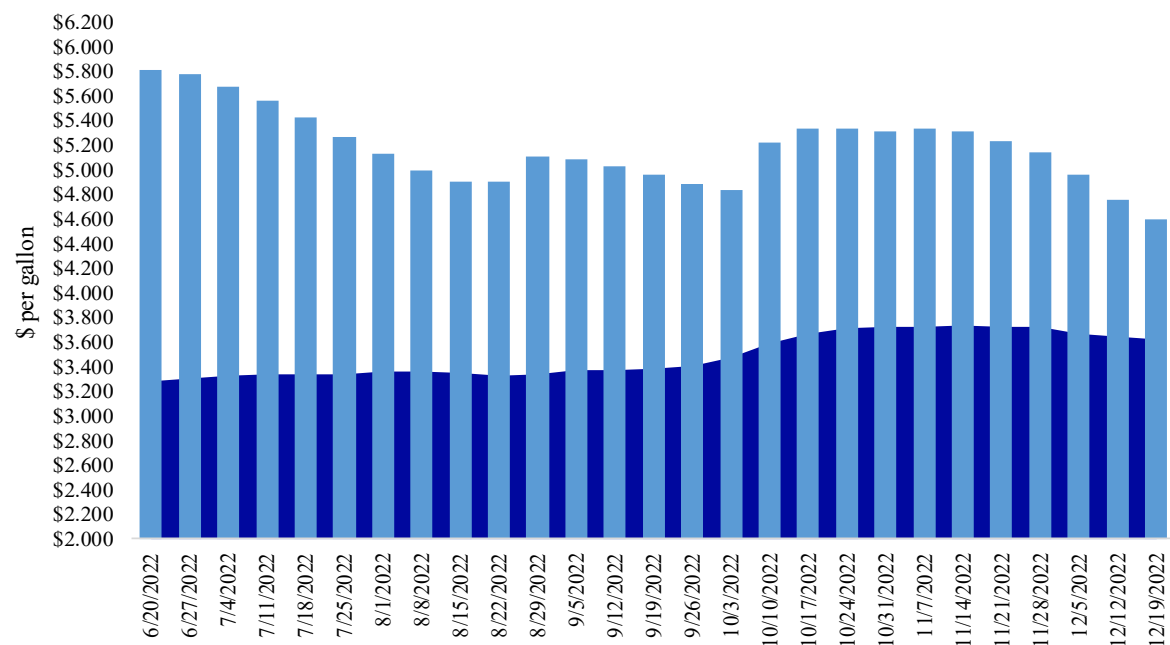
Source: U.S. Department of Energy, Energy Information Administration.

Figure 12

## Weekly diesel fuel prices, U.S. average

For the week ending December 19, the U.S. average diesel fuel price decreased 15.8 cents from the previous week to \$4.596 per gallon, 97.0 cents above the same week last year.

■ Last year    ■ Current year  
\$3.626        \$4.596



Note: On June 13, the Energy Information Administration implemented a new methodology to estimate weekly on-highway diesel fuel prices.

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

# Grain Exports

Table 11

## 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 |        |          |         |
| <b>Export balances<sup>1</sup></b>                   |       |       |       |       |     |           |        |          |         |
| 12/8/2022  | 890   | 594   | 1,371 | 1,156 | 92  | 4,102     | 12,739 | 18,798   | 35,639  |
| This week year ago                                   | 2,195 | 686   | 1,184 | 797   | 36  | 4,897     | 26,867 | 14,691   | 46,455  |
| <b>Cumulative exports-marketing year<sup>2</sup></b> |       |       |       |       |     |           |        |          |         |
| 2022/23 YTD  | 2,971 | 1,698 | 2,928 | 2,283 | 129 | 10,008    | 7,264  | 23,019   | 40,291  |
| 2021/22 YTD  | 3,901 | 1,537 | 2,850 | 1,928 | 97  | 10,312    | 11,645 | 25,358   | 47,315  |
| YTD 2022/23 as % of 2021/22                          | 76    | 111   | 103   | 118   | 133 | 97        | 62     | 91       | 85      |
| Last 4 wks. as % of same period 2021/22              | 40    | 80    | 117   | 139   | 272 | 82        | 47     | 127      | 76      |
| Total 2021/22  | 7,172 | 2,786 | 5,254 | 3,261 | 196 | 18,669    | 59,764 | 57,189   | 135,622 |
| Total 2020/21  | 8,422 | 1,790 | 7,500 | 6,438 | 656 | 24,807    | 66,958 | 60,571   | 152,335 |

<sup>1</sup> Current unshipped (outstanding) export sales to date.

<sup>2</sup> Shipped export sales to date.

Note: marketing year: wheat = 6/01-5/31, corn and soybeans = 9/01-8/31. YTD = year-to-date; wks. = weeks; HRW= hard red winter; SRW = soft red winter; HRS= hard red spring; SWW= soft white wheat; DUR= durum.

Source: USDA, Foreign Agricultural Service.

Table 12

## Top 5 importers<sup>1</sup> of U.S. corn

| For the week ending 12/08/2022                               | Total commitments <sup>2</sup> |                    | % change<br>current MY<br>from last MY | Exports <sup>3</sup><br>3-yr. avg.<br>2019-21 |
|--|--------------------------------|--------------------|--|---|
|  | 2022/23<br>current MY          | 2021/22<br>last MY |  |   |
|  | 1,000 mt -                     |                    |  |   |
| Mexico   | 9570.2                         | 11,503             | (17)                                   | 15,227  |
| China  | 3717                           | 12,210             | (70)                                   | 12,616  |
| Japan  | 1570                           | 3,148              | (50)                                   | 10,273  |
| Columbia   | 318                            | 2,187              | (85)                                   | 4,398   |
| Korea  | 20                             | 72                 | (72)                                   | 2,563   |
| <b>Top 5 importers</b>                                       | <b>15,195</b>                  | <b>29,120</b>      | <b>(48)</b>                            | <b>45,077</b>                                 |
| <b>Total U.S. corn export sales</b>                          | <b>20,003</b>                  | <b>38,512</b>      | <b>(48)</b>                            | <b>56,665</b>                                 |
| % of projected exports                                       | 38%                            | 61%                |  |   |
| Change from prior week <sup>2</sup>                          | <b>959</b>                     | <b>1,949</b>       |  |   |
| <b>Top 5 importers' share of U.S. corn<br/>export sales</b>  | <b>76%</b>                     | <b>76%</b>         |  | <b>80%</b>                                    |
| <b>USDA forecast December 2022</b>                           | <b>52,799</b>                  | <b>62,875</b>      | <b>(16)</b>                            |   |
| <b>Corn use for ethanol USDA forecast,<br/>December 2022</b> | <b>133,985</b>                 | <b>135,281</b>     | <b>(1)</b>                             |   |

<sup>1</sup>Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2021/22; marketing year (MY) = Sep 1 - Aug 31.

<sup>2</sup>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.

<sup>3</sup>FAS marketing year ranking reports (carryover plus accumulated export); yr. = year; avg. = average.

Note: A red number in parentheses indicates a negative number; mt = metric ton.

Source: USDA, Foreign Agricultural Service.

Table 13

**Top 5 importers<sup>1</sup> of U.S. soybeans**

| For the week ending 12/8/2022                                  | Total commitments <sup>2</sup> |                    | % change<br>current MY<br>from last MY | Exports <sup>3</sup><br>3-yr. avg.<br>2019-21 |
|--|--------------------------------|--------------------|--|---|
|  | 2022/23<br>current MY          | 2021/22<br>last MY |  |   |
|  |                                |                    |  | - 1,000 mt -                                  |
| China  | 24,695                         | 22,268             | 11                                     | 27,283  |
| Mexico   | 3,244                          | 2,677              | 21                                     | 4,929   |
| Egypt  | 746                            | 1,751              | (57)                                   | 3,553   |
| Japan  | 1,317                          | 1,112              | 18                                     | 2,266   |
| Indonesia  | 619                            | 618                | 0                                      | 2,116   |
| <b>Top 5 importers</b>   | <b>30,621</b>                  | <b>28,425</b>      | <b>8</b>                               | <b>40,147</b>                                 |
| <b>Total U.S. soybean export sales</b>                         | <b>41,817</b>                  | <b>40,049</b>      | <b>4</b>                               | <b>54,231</b>                                 |
| % of projected exports   | 75%                            | 68%                |  |   |
| change from prior week <sup>2</sup>                            | <b>2,943</b>                   | <b>1,309</b>       |  |   |
| <b>Top 5 importers' share of U.S.<br/>soybean export sales</b> | <b>73%</b>                     | <b>71%</b>         |  | <b>74%</b>                                    |
| <b>USDA forecast, December 2022</b>                            | <b>55,722</b>                  | <b>58,801</b>      | <b>(5)</b>                             |   |

<sup>1</sup>Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2021/22; marketing year (MY) = Sep 1 - Aug 31.

<sup>2</sup>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 revisions from previous week's outstanding sales and/or accumulated sales.

<sup>3</sup>FAS marketing year ranking reports (carryover plus accumulated export); yr. = year; avg. = average.

Note: A red number in parentheses indicates a negative number; mt = metric ton.

Source: USDA, Foreign Agricultural Service.

Table 14

**Top 10 importers<sup>1</sup> of all U.S. wheat**

| For the week ending 12/8/2022                                 | Total Commitments <sup>2</sup> |                    | % change<br>current MY<br>from last MY | Exports <sup>3</sup><br>3-yr. avg.<br>2019-21 |
|---|--------------------------------|--------------------|--|---|
|   | 2022/23<br>current MY          | 2021/22<br>last MY |  |   |
|   |                                |                    |  | - 1,000 mt -                                  |
| Mexico  | 2,386                          | 2,752              | (13)                                   | 3,566   |
| Philippines   | 1,686                          | 2,278              | (26)                                   | 2,985   |
| Japan   | 1,515                          | 1,740              | (13)                                   | 2,453   |
| China   | 616                            | 848                | (27)                                   | 1,537   |
| Nigeria   | 663                            | 1,573              | (58)                                   | 1,528   |
| Korea   | 976                            | 940                | 4                                      | 1,459   |
| Taiwan  | 547                            | 602                | (9)                                    | 1,106   |
| Indonesia   | 299                            | 66                 | 355                                    | 711   |
| Thailand  | 502                            | 436                | 15                                     | 703   |
| Colombia  | 406                            | 490                | (17)                                   | 621   |
| <b>Top 10 importers</b>                                       | <b>9,595</b>                   | <b>11,725</b>      | <b>(18)</b>                            | <b>16,669</b>                                 |
| <b>Total U.S. wheat export sales</b>                          | <b>14,110</b>                  | <b>15,210</b>      | <b>(7)</b>                             | <b>22,763</b>                                 |
| % of projected exports  | 67%                            | 70%                |  |   |
| change from prior week <sup>2</sup>                           | <b>469</b>                     | <b>651</b>         |  |   |
| <b>Top 10 importers' share of U.S.<br/>wheat export sales</b> | <b>68%</b>                     | <b>77%</b>         |  | <b>73%</b>                                    |
| <b>USDA forecast, December 2022</b>                           | <b>21,117</b>                  | <b>21,798</b>      | <b>(3)</b>                             |   |

<sup>1</sup>Based on USDA, Foreign Agricultural Service (FAS) marketing year ranking reports for 2020/21; Marketing year (MY) = Jun 1 - May 31.

<sup>2</sup>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 revisions from the previous week's outstanding and/or accumulated sales.

<sup>3</sup>FAS marketing year final reports (carryover plus accumulated export); yr. = year; avg. = average.

Note: A red number in parentheses indicates a negative number.

Source: USDA, Foreign Agricultural Service.

Table 15

## Grain inspections for export by U.S. port region (1,000 metric tons)

| Port regions                  | For the week ending<br>12/15/22 | Previous<br>week* | Current week<br>as % of previous | 2022 YTD*      | 2021 YTD*      | 2022 YTD as<br>% of 2021 YTD | Last 4-weeks as % of: |                  | 2021 total*    |
|-------------------------------|---------------------------------|-------------------|----------------------------------|----------------|----------------|------------------------------|-----------------------|------------------|----------------|
|                               |                                 |                   |                                  |                |                |                              | Last year             | Prior 3-yr. avg. |                |
| <b>Pacific Northwest</b>      |                                 |                   |                                  |                |                |                              |                       |                  |                |
| Wheat                         | 215                             | 111               | 193                              | 9,714          | 13,070         | 74                           | 105                   | 71               | 13,243         |
| Corn                          | 199                             | 57                | 352                              | 9,345          | 13,049         | 72                           | 63                    | 83               | 13,420         |
| Soybeans                      | 498                             | 646               | 77                               | 13,747         | 13,692         | 100                          | 97                    | 108              | 14,540         |
| <b>Total</b>                  | <b>912</b>                      | <b>814</b>        | <b>112</b>                       | <b>32,806</b>  | <b>39,811</b>  | <b>82</b>                    | <b>93</b>             | <b>95</b>        | <b>41,203</b>  |
| <b>Mississippi Gulf</b>       |                                 |                   |                                  |                |                |                              |                       |                  |                |
| Wheat                         | 8                               | 26                | 32                               | 4,017          | 3,125          | 129                          | 67                    | 49               | 3,202          |
| Corn                          | 358                             | 280               | 128                              | 29,809         | 37,752         | 79                           | 67                    | 72               | 38,498         |
| Soybeans                      | 881                             | 967               | 91                               | 28,530         | 25,331         | 113                          | 90                    | 85               | 27,159         |
| <b>Total</b>                  | <b>1,247</b>                    | <b>1,273</b>      | <b>98</b>                        | <b>62,356</b>  | <b>66,208</b>  | <b>94</b>                    | <b>83</b>             | <b>81</b>        | <b>68,858</b>  |
| <b>Texas Gulf</b>             |                                 |                   |                                  |                |                |                              |                       |                  |                |
| Wheat                         | 62                              | 35                | 177                              | 3,361          | 3,751          | 90                           | 168                   | 154              | 3,888          |
| Corn                          | 47                              | 0                 | n/a                              | 648            | 592            | 110                          | 136                   | 168              | 627            |
| Soybeans                      | 53                              | 0                 | n/a                              | 597            | 1,610          | 37                           | 90                    | 67               | 1,611          |
| <b>Total</b>                  | <b>161</b>                      | <b>35</b>         | <b>463</b>                       | <b>4,606</b>   | <b>5,953</b>   | <b>77</b>                    | <b>125</b>            | <b>105</b>       | <b>6,126</b>   |
| <b>Interior</b>               |                                 |                   |                                  |                |                |                              |                       |                  |                |
| Wheat                         | 35                              | 58                | 61                               | 2,752          | 2,922          | 94                           | 82                    | 95               | 2,973          |
| Corn                          | 126                             | 165               | 77                               | 8,526          | 9,787          | 87                           | 72                    | 83               | 10,157         |
| Soybeans                      | 133                             | 180               | 74                               | 6,730          | 6,273          | 107                          | 88                    | 92               | 6,525          |
| <b>Total</b>                  | <b>295</b>                      | <b>403</b>        | <b>73</b>                        | <b>18,008</b>  | <b>18,982</b>  | <b>95</b>                    | <b>79</b>             | <b>88</b>        | <b>19,656</b>  |
| <b>Great Lakes</b>            |                                 |                   |                                  |                |                |                              |                       |                  |                |
| Wheat                         | 0                               | 1                 | 15                               | 339            | 517            | 66                           | 60                    | 37               | 536            |
| Corn                          | 0                               | 0                 | n/a                              | 148            | 145            | 102                          | 0                     | 0                | 145            |
| Soybeans                      | 45                              | 47                | 95                               | 759            | 552            | 138                          | n/a                   | 216              | 592            |
| <b>Total</b>                  | <b>45</b>                       | <b>48</b>         | <b>93</b>                        | <b>1,246</b>   | <b>1,214</b>   | <b>103</b>                   | <b>197</b>            | <b>101</b>       | <b>1,273</b>   |
| <b>Atlantic</b>               |                                 |                   |                                  |                |                |                              |                       |                  |                |
| Wheat                         | 0                               | 0                 | n/a                              | 168            | 128            | 131                          | 0                     | 0                | 128            |
| Corn                          | 0                               | 7                 | 0                                | 297            | 84             | 353                          | 367                   | n/a              | 85             |
| Soybeans                      | 95                              | 137               | 70                               | 2,652          | 2,077          | 128                          | 102                   | 130              | 2,184          |
| <b>Total</b>                  | <b>95</b>                       | <b>144</b>        | <b>66</b>                        | <b>3,118</b>   | <b>2,289</b>   | <b>136</b>                   | <b>104</b>            | <b>129</b>       | <b>2,397</b>   |
| <b>U.S. total from ports*</b> |                                 |                   |                                  |                |                |                              |                       |                  |                |
| Wheat                         | 320                             | 231               | 139                              | 20,351         | 23,513         | 87                           | 101                   | 76               | 23,969         |
| Corn                          | 730                             | 508               | 144                              | 48,773         | 61,408         | 79                           | 68                    | 78               | 62,932         |
| Soybeans                      | 1,705                           | 1,977             | 86                               | 53,015         | 49,534         | 107                          | 95                    | 95               | 52,612         |
| <b>Total</b>                  | <b>2,755</b>                    | <b>2,716</b>      | <b>101</b>                       | <b>122,139</b> | <b>134,456</b> | <b>91</b>                    | <b>88</b>             | <b>88</b>        | <b>139,512</b> |

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

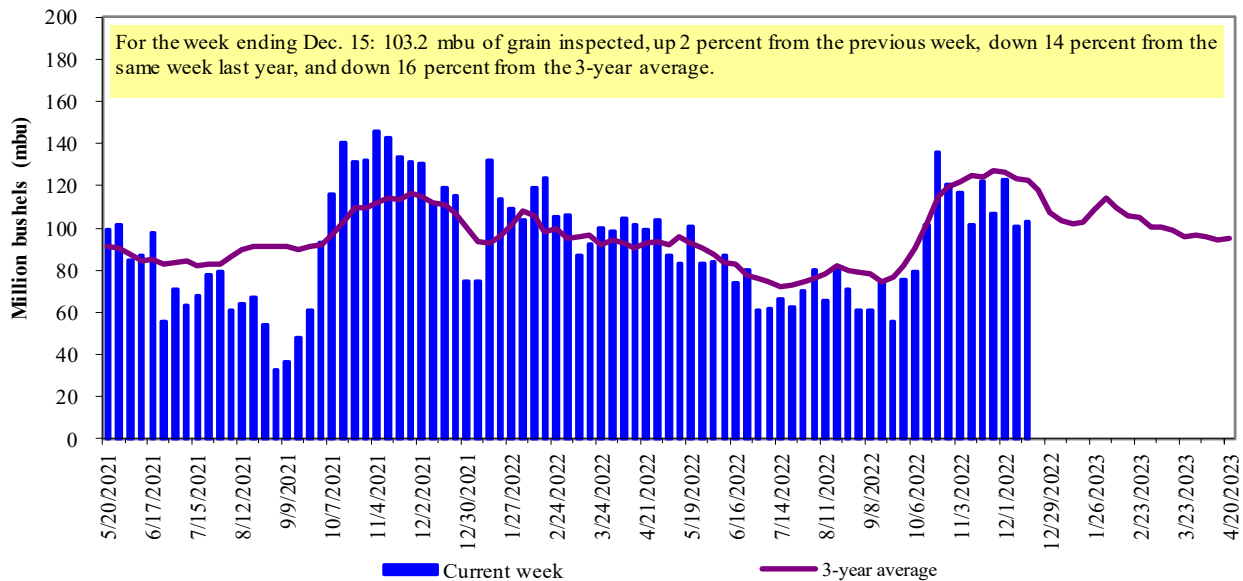
Source: USDA, Federal Grain Inspection Service; YTD= year-to-date; n/a = not applicable or no change.

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 55 percent of the U.S. export grain shipments departed through the U.S. Gulf region in 2019.



Figure 13

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

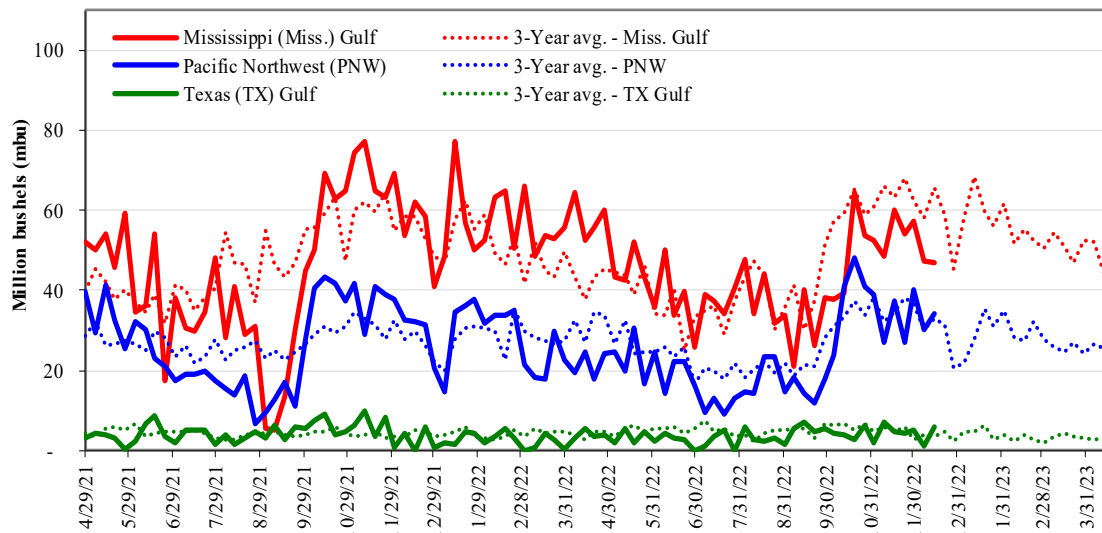


Note: 3-year average consists of 4-week running average.

Source: USDA, Federal Grain Inspection Service.

Figure 14

**U.S. Grain inspections: U.S. Gulf and PNW<sup>1</sup> (wheat, corn, and soybeans)**



| Week ending 12/15/22 inspections (mbu): |      | Percent change from:        |         |         |         |
|---|------|-----------------------------|---------|---------|---------|
| MS Gulf:                                | 46.8 | Last wk:                    | down 2  | up 373  | up 8    |
| PNW:                                    | 34.0 | Last Year (same wk):        | down 25 | up 9958 | down 15 |
| TX Gulf:                                | 6.0  | 3-yr avg. (4-wk. mov. Avg): | down 26 | up 53   | down 22 |
|   |      |                             |         |         | down 1  |

Source: USDA, Federal Grain Inspection Service.

# Ocean Transportation

Table 16

**Weekly port region grain ocean vessel activity (number of vessels)**

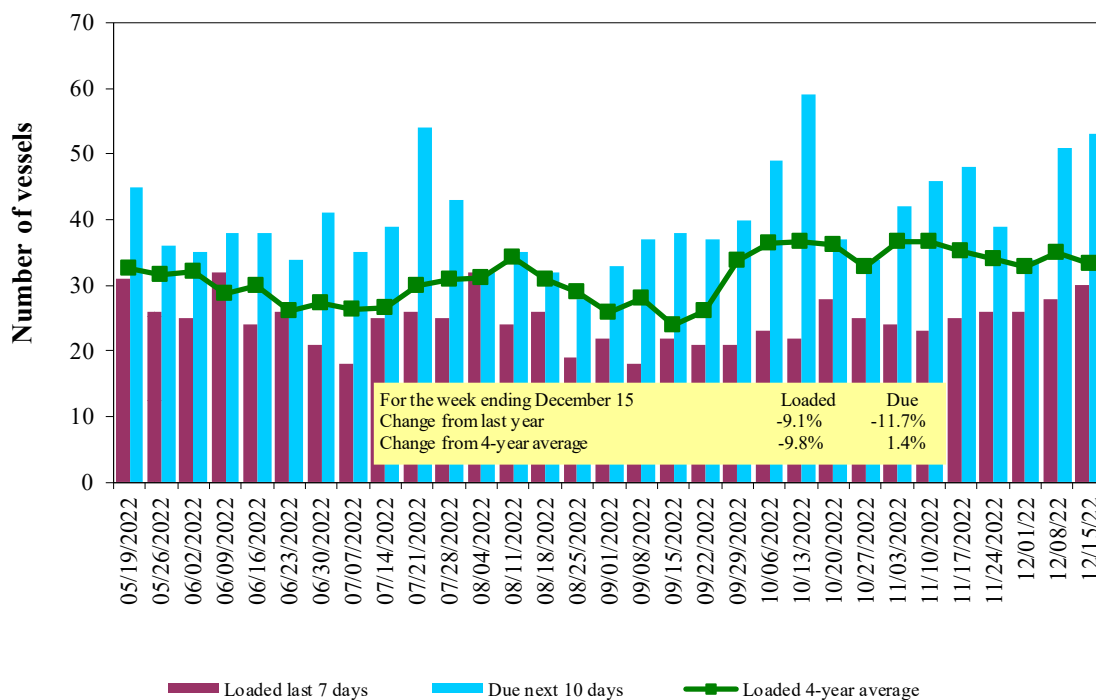
| Date         | Gulf      |          |           | Pacific Northwest |
|--------------|-----------|----------|-----------|-------------------|
|              | In port   | Loaded   | Due next  | In port           |
|              |           | 7-days   | 10-days   |                   |
| 12/15/2022   | 35        | 30       | 53        | 12                |
| 12/8/2022    | 30        | 28       | 51        | 16                |
| 2021 range   | (10...57) | (5...48) | (15...69) | (4...27)          |
| 2021 average | 34        | 32       | 49        | 15                |

Note: The data is voluntarily collected and may not be complete.

Source: USDA, Agricultural Marketing Service.

Figure 15

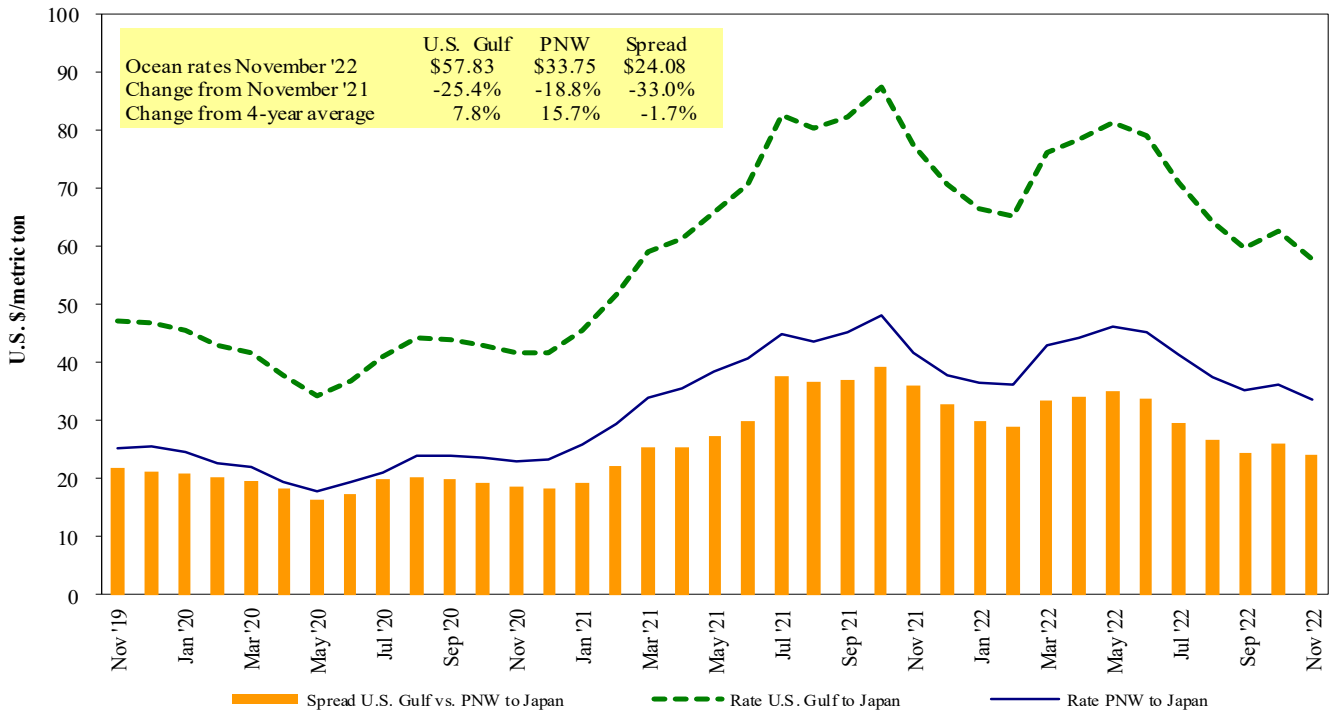
**U.S. Gulf<sup>1</sup> vessel loading activity**



<sup>1</sup>U.S. Gulf includes Mississippi, Texas, and East Gulf  
Source: USDA, Agricultural Marketing Service.

Figure 16

**Grain vessel rates, U.S. to Japan**



Note: PNW = Pacific Northwest.

Source: O'Neil Commodity Consulting.

Table 17

**Ocean freight rates for selected shipments, week ending 12/17/2022**

| Export region | Import region | Grain types  | Loading date    | Volume loads (metric tons) | Freight rate (US\$/metric ton) |
|---------------|---------------|--------------|-----------------|----------------------------|--------------------------------|
| U.S. Gulf     | Japan         | Heavy grain  | Nov 1/10, 2022  | 50,000                     | 79.25                          |
| U.S. Gulf     | Japan         | Heavy grain  | Jul 20/30, 2022 | 50,000                     | 81.50                          |
| U.S. Gulf     | Japan         | Heavy grain  | Jun 1/10, 2022  | 50,000                     | 89.65                          |
| U.S. Gulf     | Japan         | Heavy grain  | May 1/20, 2022  | 50,000                     | 78.90                          |
| U.S. Gulf     | S. China      | Corn         | Aug 1/10, 2022  | 68,000                     | 71.00                          |
| U.S. Gulf     | Djibouti      | Sorghum      | Oct 5/15, 2022  | 13,920                     | 94.08*                         |
| U.S. Gulf     | Djibouti      | Wheat        | Nov 5/15, 2022  | 22,500                     | 102.88*                        |
| U.S. Gulf     | Honduras      | Soybean Meal | Feb 18/28, 2022 | 7,820                      | 57.15*                         |
| U.S. Gulf     | S. Korea      | Heavy grain  | Jun 1/Jul, 2022 | 55,000                     | 82.75                          |
| U.S. Gulf     | Sudan         | Sorghum      | Mar 1/10, 2022  | 35,790                     | 149.97*                        |
| PNW           | Yemen         | Wheat        | Jul 10/20, 2022 | 27,000                     | 169.50*                        |
| Brazil        | N. China      | Heavy grain  | Mar 18/27, 2022 | 64,000                     | 56.85                          |
| Argentina     | Taiwan        | Corn         | May 1/Jun, 2022 | 65,000                     | 85.00                          |

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

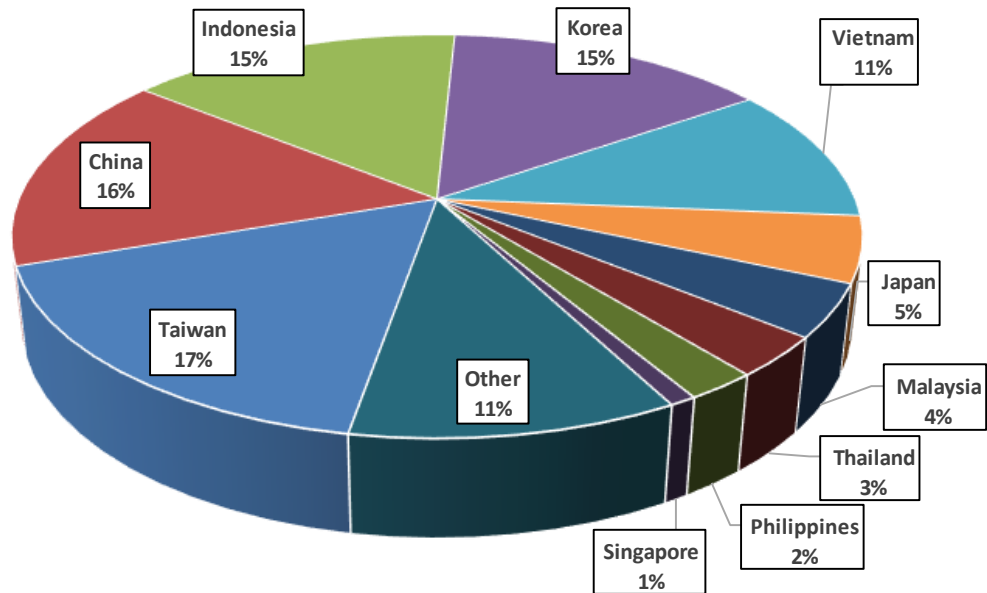
Note: Rates shown are per metric ton (2,204.62 lbs. = 1 metric ton), free on board (F.O.B), except where otherwise indicated;

op = option.

Source: Maritime Research, Inc.

In 2020, containers were used to transport 10 percent of total U.S. waterborne grain exports. Approximately 66 percent of U.S. waterborne grain exports in 2020 went to Asia, of which 14 percent were moved in containers. Approximately 95 percent of U.S. waterborne containerized grain exports were destined for Asia.

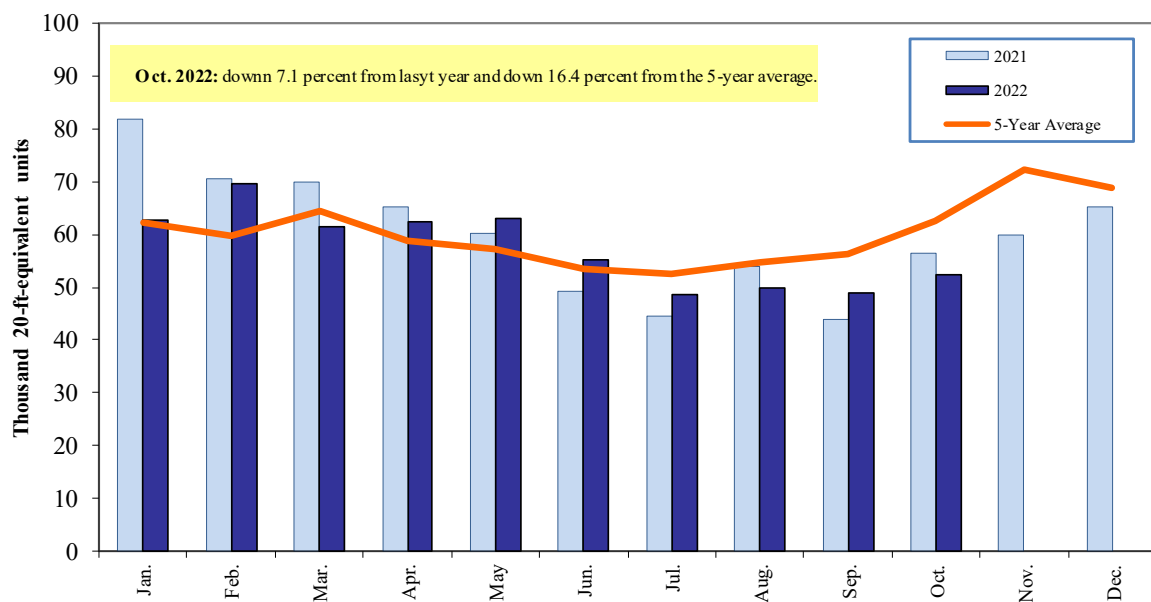
**Figure 17**  
**Top 10 destination markets for U.S. containerized grain exports, Jan-Oct 2022**



Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: '1001', '100190', '1002', '100200', '1003', '100300', '1004', '100400', '1005', '100590', '1007', '100700', '110100', '1102', '110220', '110290', '1201', '120100', '120190', '120810', '230210', '230310', '230330', '2304', and '230990'.

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

**Figure 18**  
**Monthly shipments of U.S. containerized grain exports**



Note: The following Harmonized Tariff Codes are used to calculate containerized grains movements: '1001', '100190', '1002', '100200', '1003', '100300', '1004', '100400', '1005', '100590', '1007', '100700', '110100', '1102', '110220', '110290', '1201', '120100', '120190', '120810', '230210', '230310', '230330', '2304', and '230990'.

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

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