



Wheat Outlook: March 2023

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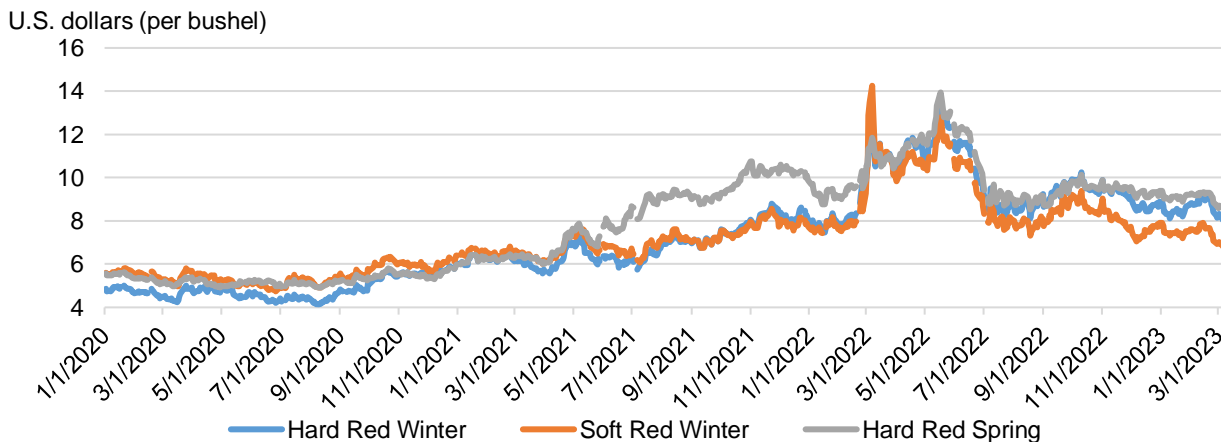
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U.S. Wheat Futures Declining from Historic Highs

U.S. Hard Red Winter (HRW) wheat futures recently declined to the lowest levels since mid-2021 after a period of substantial volatility. Futures, which were already elevated based on tight supplies in early 2022, were further exacerbated by the onset of the war between Russia and Ukraine, which led to massive market uncertainty and volatility. Starting in February 2022, futures rose to historic highs. HRW futures peaked in May 2022, with support also stemming from drought conditions in the Southern Plains. Futures subsided in mid-2022 with the onset of winter wheat harvests in key exporting countries. In recent months, prices were pressured by slow U.S. export sales amid abundant exportable supplies from key U.S. competitors, especially Russia, Australia, and Ukraine. While recent precipitation in key HRW-producing areas contributed to easing futures, ongoing drought remains a concern for markets, as does uncertainty on the continuation of Ukraine’s wheat shipments.

Figure 1
U.S. wheat futures prices, January 2020–March 2023



Note: Data are continuous futures from the Chicago Mercantile Exchange and the Minneapolis Grains Exchange
 Source: USDA, Economic Research Service using data from the International Grains Council.

Domestic Outlook

Domestic Changes at a Glance:

- No changes this month to the U.S. supply and demand balance sheet (table 1).
- The 2022/23 season-average farm price is unchanged at a record \$9.00 per bushel. The January 2023 farm price reported in the USDA, National Agricultural Statistics Service (NASS) *Agricultural Prices* publication was \$8.82 per bushel, down from \$8.98 in December 2022 and above \$8.48 in January 2022. While futures prices weakened in the last month, the 5-year average of marketing weights suggests that 84 percent of the crop has been sold. Basis remains strong in many locations amid slow farmer selling.

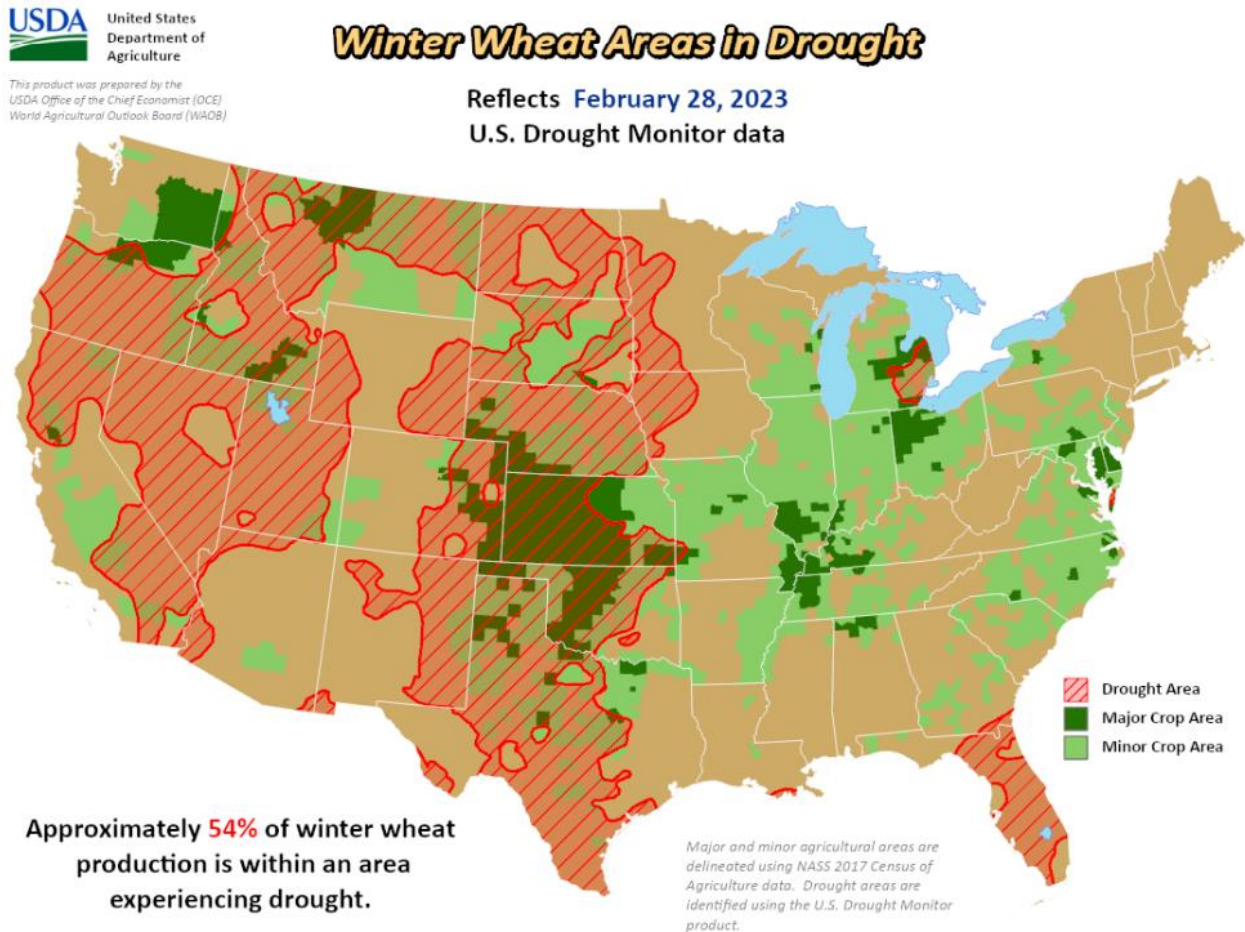
Balance sheet item	2021/22 March	2022/23 February	2022/23 March	Month-to-month change	Comments
Supply					June-May marketing year
Beginning stocks	845	698	698	0	
Production	1,646	1,650	1,650	0	
Imports	95	120	120	0	Imports on pace to meet projection
Supply, total	2,587	2,468	2,468	0	
Demand					
Food	972	975	975	0	
Seed	58	70	70	0	
Feed and residual	59	80	80	0	
Domestic, total	1,088	1,125	1,125	0	
Exports	800	775	775	0	Smallest wheat exports since 1971/72; slow pace of sales and uncompetitive pricing
Use, total	1,888	1,900	1,900	0	
Ending stocks	698	568	568	0	Lowest ending stocks since 2007/08
Season-average farm price	\$7.63	\$9.00	\$9.00	0	Record high

Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

2023/24 Winter Wheat Update

Drought continues to be a major issue for winter wheat production with 54 percent of the production estimated to be in regions experiencing drought as of February 28 (figure 2). This percentage declined in the last few months after peaking at 75 percent in November. Much of the Southern Plains, where the bulk of the HRW crop is produced, remains in drought.

Figure 2
Large portions of U.S. winter wheat area in drought



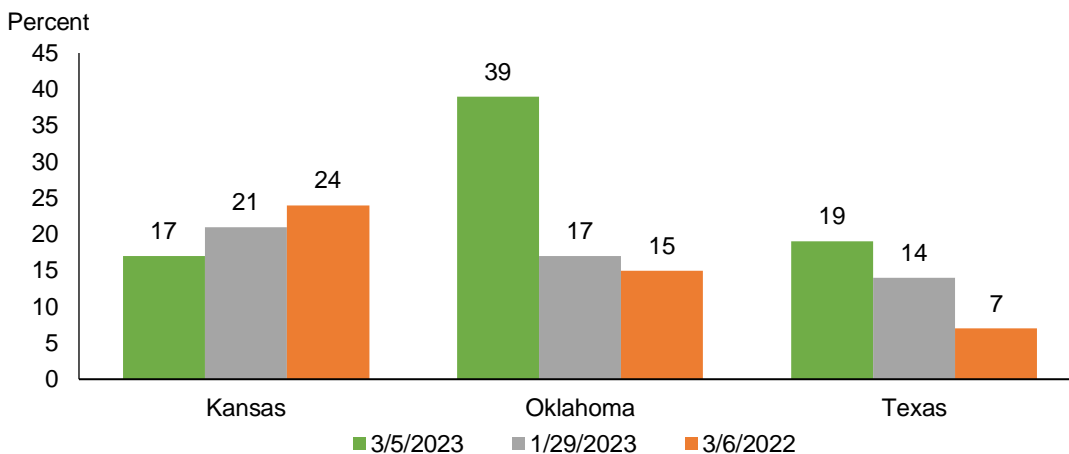
Note: This product was prepared by the USDA, Office of the Chief Economist (OCE), World Agricultural Outlook Board (WAOB). Major and minor agricultural areas are delineated using National Agricultural Statistics Service (NASS) 2017 Census of Agriculture data. Drought areas are identified using the U.S. Drought Monitor product.
Source: USDA, World Agricultural Outlook Board, Agricultural Weather and Assessments Group.

USDA, NASS issued updated crop ratings for some key production States as of March 5, 2023. Conditions for key HRW-producing States showed mixed trends from earlier in the year. Kansas crop conditions have worsened over the last month with only 17 percent rated good or excellent compared with 21 percent as of January 29 and 24 percent at this point last year (figure 3).

Conversely, reported good/excellent conditions for Oklahoma and Texas are improved compared with January 29 and this time last year. USDA, NASS provides select crop conditions updates during the winter months and will resume regular reporting with its weekly *Crop Progress*, published on April 3.

Figure 3

Winter wheat good/excellent condition ratings comparisons, 2022–2023

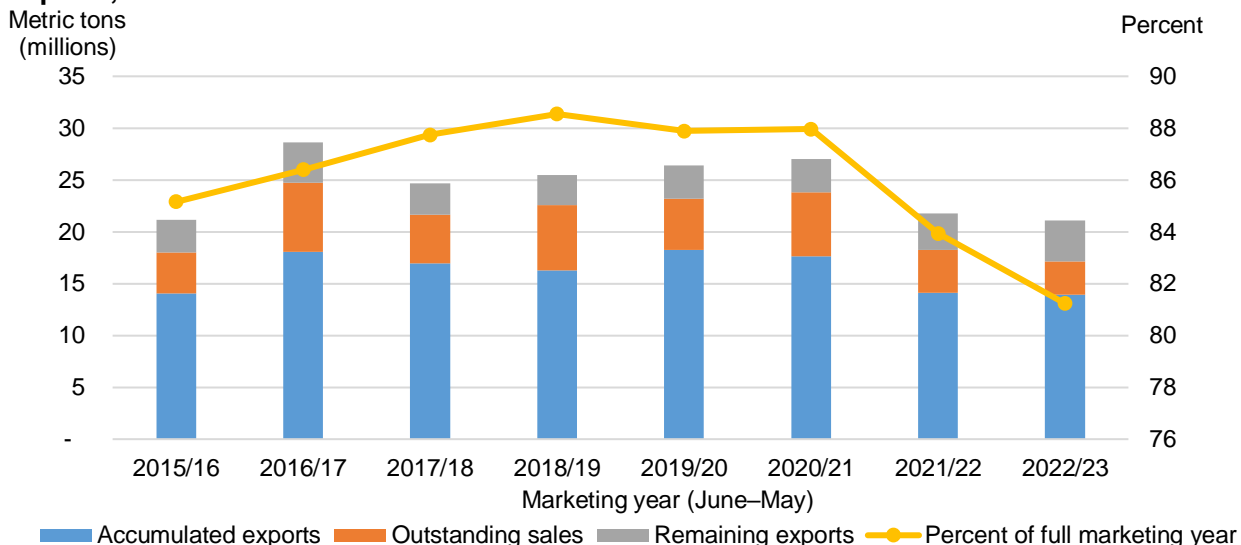


Source: USDA, Economic Research Service calculations; USDA, National Agriculture Statistics Service, *Quickstats* database.

U.S. Trade Pace Update

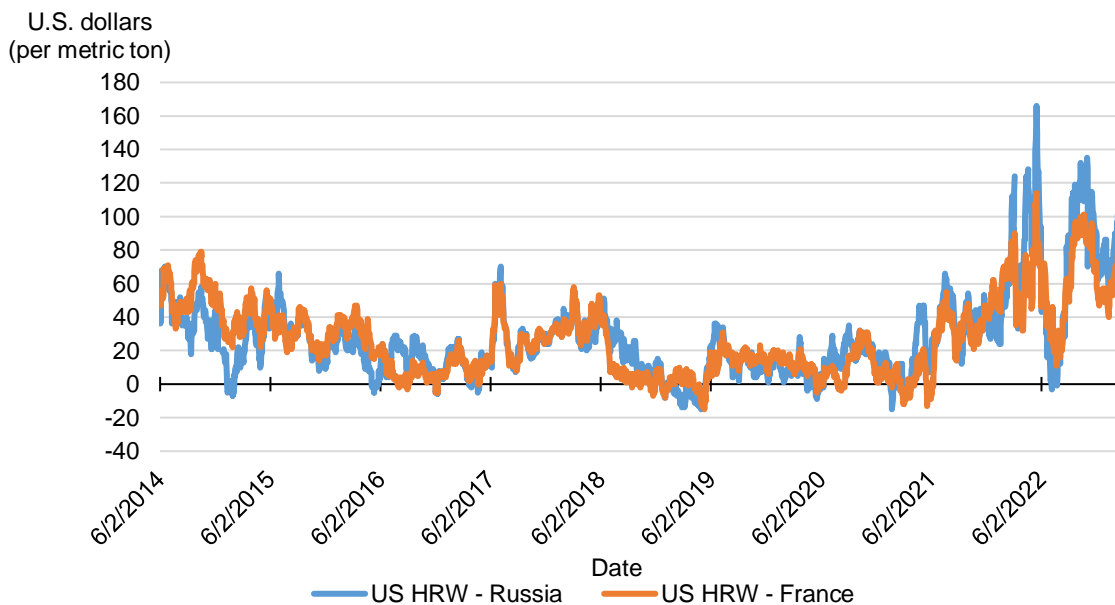
U.S. wheat export commitments, as reported by USDA, Foreign Agricultural Service (FAS) in the *U.S. Export Sales* report, are at 17.1 million MT as of February 23, down 6 percent from the same time last year. Total commitments at this point in the year represent 81 percent of the projected full year total (figure 4), below recent years at this point. However, these data do not include food aid donations, which could represent a larger percentage of the total in a year of low exports such as 2022/23. Accumulated exports as of February 23 are down only 2 percent from last year, while outstanding sales are down 22 percent. While U.S. prices eased in recent weeks, prices for key competitors followed a similar direction. U.S. freight-on-board (FOB) prices remain high relative to other suppliers, such as France and Russia, although the price spread narrowed slightly in recent weeks (figure 5).

Figure 4
Cumulative exports sales through February 23 and full marketing year exports, 2015/16–2022/23



Notes: Accumulated exports and outstanding sales are as of week 39, exact dates vary by year. Remaining exports is the difference between total commitments as of that date (based on USDA, Foreign Agricultural Service, *U.S. Export Sales* data) and the full marketing year exports (calculated based on data from U.S. Department of Commerce, Bureau of the Census). Remaining exports for 2022/23 are calculated based on the current export forecast for the year.
 Source: USDA, Economic Research Service calculations; USDA, Foreign Agricultural Service, *U.S. Export Sales*; U.S. Department of Commerce, Bureau of the Census.

Figure 5
Price spread between U.S. Hard Red Winter and key competitors, 2014–2022



HRW = Hard Red Winter.
 Notes: This chart depicts the freight-on-board (FOB) price difference between U.S. HRW and Russian wheat. The quotes used are U.S. Hard Red Winter, 11.5 percent protein, Gulf of Mexico; Black Sea 11.5 percent protein; and France, Grade 1, Rouen. Quotes are daily.
 Source: USDA, Economic Research Service calculations using data from the International Grains Council.

U.S. wheat exports for June 2022 through January 2023 reached 534 million bushels, down 3 percent from the same period last year. Official U.S. wheat trade statistics are based on data from the U.S. Department of Commerce, Bureau of the Census. February exports appear to be slightly higher based on export inspections data from the USDA, Federal Grain Inspections Service, as well as export sales data reported by USDA, FAS.

U.S. wheat imports for 2022/23 are unchanged at 120 million bushels, up from 95 million in 2021/22. By-class imports are unchanged this month. U.S. wheat imports for June 2022 through January 2023 totaled 82 million bushels, accounting for 69 percent of the full marketing year projection. Imports for these 8 months are up 26 percent from the same period last year.

U.S. Agricultural Outlook Forum Projections Released

On February 23, USDA released its *Agricultural Outlook Forum* projections for the 2023/24 marketing year. Production is forecast to rebound by 237 million bushels (14 percent) to 1.887 billion bushels (table 2).

	2021/22	2022/23	2023/24	Year-to-year change
Area planted (million acres)	46.7	45.7	49.5	3.8
Area harvested (million acres)	37.1	35.5	38.4	2.9
Yield (bushels per acre)	44.3	46.5	49.2	2.7
	Million bushels			
Beginning stocks	845	698	568	(130)
Production	1,646	1,650	1,887	237
Imports	95	120	120	-
Total supply	2,587	2,468	2,575	107
Domestic use (total)	1,088	1,125	1,142	17
-Food use	972	975	977	2
-Seed use	58	70	65	(5)
-Feed and residual	59	80	100	20
Exports	800	775	825	50
Total use	1,888	1,900	1,967	67
Ending stocks	698	568	608	40
Stocks-to-use (percent)	37.0	29.9	30.9	1.0
Average farm price (U.S. dollars per bushel)	7.63	9.00	8.50	(0.50)
Source: USDA, Economic Research Service; USDA, World Agricultural Outlook Board.				

Area planted is projected up with strong pricing for wheat providing incentive for producers. Much of this increase is driven by the January 12, USDA, NASS *Winter Wheat and Canola Seedings* report that showed winter wheat seedings up 11 percent from the previous year. Yields are also projected higher with a return to trend yield after drought conditions affected different regions in the two previous years. Following the historic trend, food use is projected to grow slowly. Feed and residual use is projected 20 million bushels higher at 100 million with larger supplies and the expectation that wheat may be competitively priced with feed grains in some locations during the June-August quarter. Exports are forecast up 50 million bushels to 825 million, which would still be historically low. Abundant supplies from key competitors are likely to continue to undermine the U.S. share of the global wheat market. Ending stocks are projected higher, but still relatively small. The 2023/24 season-average farm price is projected at \$8.50 per bushel, which is down from 2022/23 but would still be the second highest on record.

International Outlook

International Changes at a Glance:

- The 2022/23 global wheat production is raised 5.1 million metric tons (MMT) to 788.9 MMT driven by increases for **Kazakhstan**, **India**, and **Australia** based on updated government data.
 - Kazakhstan is raised 2.4 MMT to 16.4 MMT, which is the highest production since the record 22.7 MMT crop in 2011/12. Yields are raised to 1.28 metric ton per hectare on higher precipitation and moderate temperatures compared to last year.
 - The Government of India released updated production figures that showcased a 1.0 MMT increase from its previous estimate. Hot temperatures swept through India during key development phases and as a result, production is forecast at 104.0 MMT, down 5.6 MMT from 2021/22.
 - Australia's crop remains a record high and is forecast up 1.0 MMT to 39.0 MMT, based on the latest ABARES forecast issued in early March.
 - Other changes are for **Brazil** and **Argentina**. Brazil is up 0.5 MMT to a record 10.4 MMT based on updated government figures and peak growing conditions. While Argentina's production is up 0.4 MMT to 12.9 MMT this month, it is down 42 percent from 2021/22.
- Global consumption for 2022/23 is up 2.4 MMT to 787.7 MMT. To match the statistics presented in the *World Agricultural Supply and Demand Estimates (WASDE)* report, adjusted consumption is calculated based on the differences between exports and imports on a local marketing year (MY) basis. This difference, or the unaccounted trade, is lowered 0.4 MMT to 5.5 MMT for 2022/23 as MY imports are raised more than MY exports. Total consumption plus unaccounted trade results in an adjusted consumption of 793.2 MMT, up 2.0 MMT from the February estimate.
- Feed and residual use is up 0.7 MMT to 158.5 MMT driven by a 0.5 MMT increase for **Kazakhstan** to 2.0 MMT because of the larger crop. South Korea and Indonesia are both up 0.1 MMT to 2.5 MMT and 2.0 MMT, respectively, as wheat is priced competitively with other feed grain supplies.
- Food, seed, and industrial (FSI) use is up 1.6 MMT to 629.2 MMT. FSI use is raised for India (+1.4 MMT to 99.5 MMT) as it released 2.3 MMT out of its government stocks to tame domestic prices, which have risen to record levels. FSI use for Azerbaijan is raised

- 0.3 MMT to 3.1 million based on a strong pace of imports. **Bangladesh** is lowered 0.3 MMT to 6.5 MMT as high international prices have tempered the demand for wheat.
- Exports for the 2022/23 trade year (July/June) are raised 0.9 MMT to 212.4 MMT driven by a 1.5 MMT increase for **Kazakhstan** to 10.5 MMT as its larger production places it in a key position to supply Central and South Asian countries. **Australia** and **Brazil** are both up 0.5 MMT to 30.0 MMT and 4.4 MMT, respectively. Uncompetitive pricing and lower exportable supplies support a 1.0 MMT decline in **Argentina's** export forecast to 6.5 MMT. See figure 6 for the other major trade year changes.
 - Trade year (TY) imports increased by 1.3 MMT to 208.2 MMT with an increase for the **Saudi Arabia** (+0.5 MMT to 4.5 MMT) and **Kazakhstan** (+0.5 MMT to 2.0 MMT) only partially offset by a reduction for **Iran** (-0.5 MMT to 4.5 MMT).
 - Russia supplies nearly all of Kazakhstan's imports. From July through December 2022, Kazakhstan received 1.0 MMT from Russia and is projected to receive more through border trade.
 - Other TY import increases are for several Central Asia countries as FSI use is forecast higher and Kazakhstan has ample exportable supplies for these nearby destinations. See the latest *Grain: Markets and Trade* article by USDA, Foreign Agricultural Service for more information.
 - Imports for Thailand and Bangladesh are reduced this month as higher prices have implied reduced consumption through lower imports.
 - Global ending stocks for 2022/23 are down 2.1 MMT to 267.2 MMT as a decline in China's stocks is only partially offset by an increase to major exporters' ending stocks. World minus China stocks are at 127.6 MMT, the lowest since 2012/13.
 - **China's** 2022/23 stocks are lowered 5.0 MMT to 139.6 MMT driven by a decline in 2020/21 ending stocks. According to the National Grain Trade Center, more than 40 MMT was sold in the 2020/21 wheat auctions, compared to previous years that were under 10 MMT.
 - The higher stocks release resulted in an increase to the 2020/21 feed and residual use (+5.0 MMT to 45.0 MMT).
 - Major exporters' ending stocks are raised 2.5 MMT to 59.2 MMT as **Argentina's** stocks are boosted 1.3 MMT to 2.5 MMT on a production increase and lower exports. **Kazakhstan** is raised 0.8 MMT to 2.4 MMT and **Australia** is raised 0.5 MMT to 5.6 MMT as domestic production is boosted.
 - Table 3 presents details for the global 2022/23 supply and distribution.

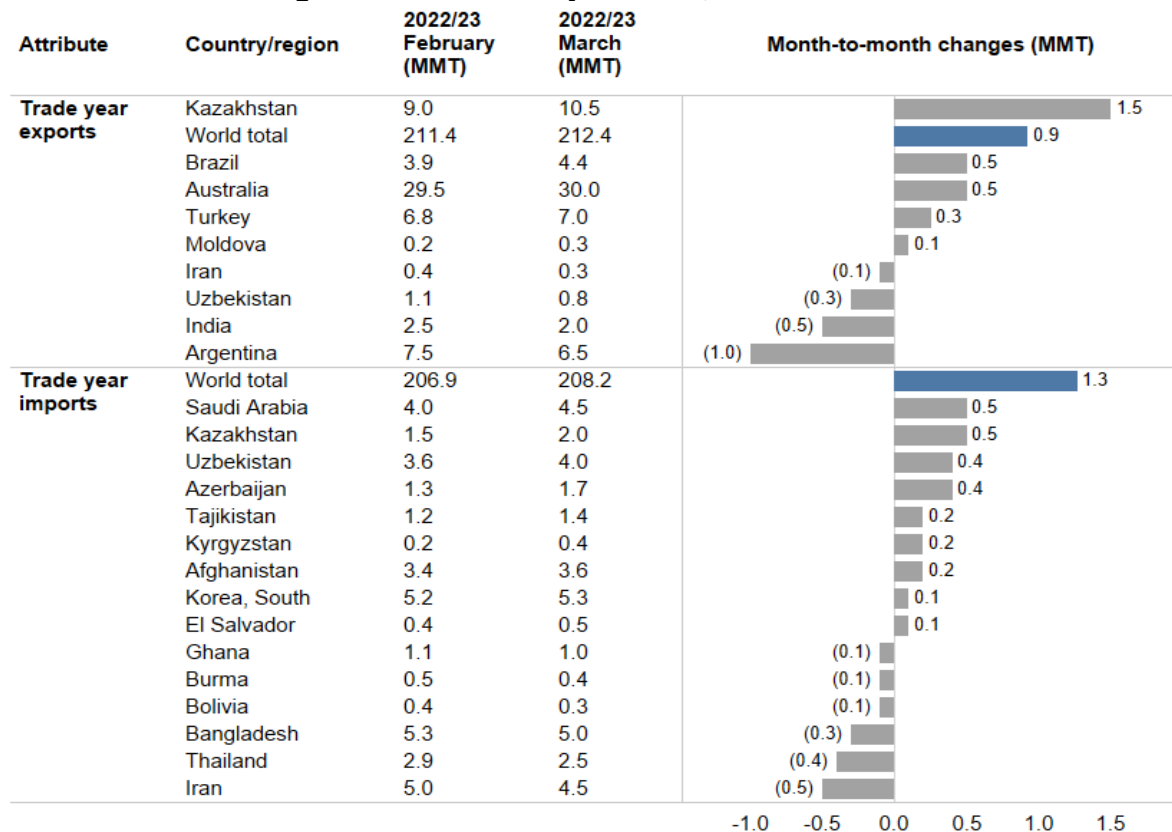
Table 3

Global 2022/23 wheat supply and use at a glance (in metric tons, million)

Balance sheet item	2021/22 March	2022/23 February	2022/23 March	Month-to- month change
Supply				
Beginning stocks	284.9	276.7	271.4	(5.3)
Production	779.2	783.8	788.9	5.1
Trade year imports	200.9	206.9	208.2	1.3
Demand				
Feed and residual use	160.3	157.8	158.5	0.7
Food, seed, and industrial use	628.8	627.5	629.2	1.6
Domestic, total use	789.0	785.3	787.7	2.4
Trade year exports	205.3	211.4	212.4	0.9
Ending stocks	271.4	269.3	267.2	(2.1)

Source: USDA, Economic Research Service; USDA, Foreign Agricultural Service, *Production, Supply and Distribution* database.

Figure 6

Month-to-month changes in 2022/23 trade year trade, March 2023

MMT=million metric tons.

Note: Changes less than 100,000 metric tons are not included; month-to-month change is the difference between the March 2023 and February 2023 estimates.

Source: USDA, Economic Research Service; USDA, Foreign Agricultural Service *Production, Supply and Distribution* database.

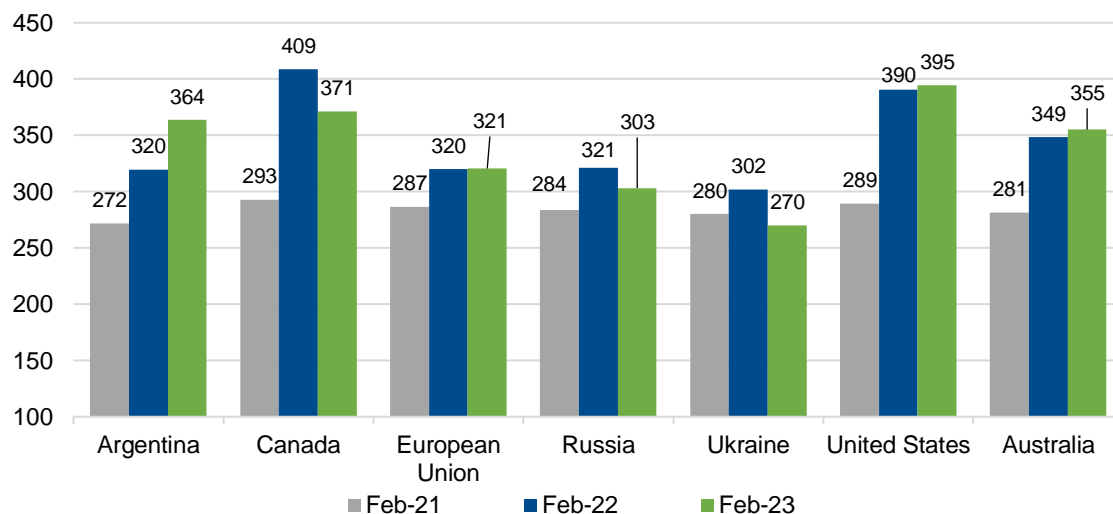
Wheat Price Responses to the Russia-Ukraine War

Following the start of the Russia-Ukraine war on February 24, 2022, global wheat prices spiked and then peaked in May 2022. A year later and prices have mostly recovered to pre-war levels (figure 7). In 2021/22, the United States and Canada were coming off drought-stricken wheat crops in 2021/22 and prices for both wheat-exporting countries were elevated above other major competitors. More recently, Canada's prices have returned to values lower than last February based on its bumper crop in 2022/23, enhancing the countries competitiveness in global export markets. In contrast, U.S. prices are slightly higher than a year ago as drought conditions continue to persist across the winter wheat belt, inhibiting competitiveness. Three consecutive record wheat crops have supported Australia's strong and growing position in global wheat export markets. A severe drought in Argentina has kept local wheat prices above most of the other major exporters at \$364 per metric ton, up 44 per metric ton from 2022. Russia's prices are slightly lower than a year ago due to a record crop. While Ukraine is able to export through the *Black Sea Grain Initiative*, large stocks and logistical challenges have continued to put downward pressure on prices resulting in its freight-on-board bids being \$10 per metric ton lower than February 2021.

Figure 7

International average monthly freight-on-board bids, February 2021–2023

U.S dollars per metric ton



Note: Freight on Board (FOB) quotes calculated as monthly averages, March 2022 partial average through March 8th, Quotes used: Argentina - 12.0 percent, up river; Australia - average of APW (Kwinana, Newcastle, and Port Adelaide); Canada - CWRS (13.5 percent) St. Lawrence; European Union - France grade 1; Russia - Milling 12.5 percent; Ukraine - <11.0 percent; United States - Hard Red Winter 11.5 percent Gulf.

Source: USDA, Economic Research Service calculations using International Grains Council quotes.

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