



# Wheat Outlook: March 2024

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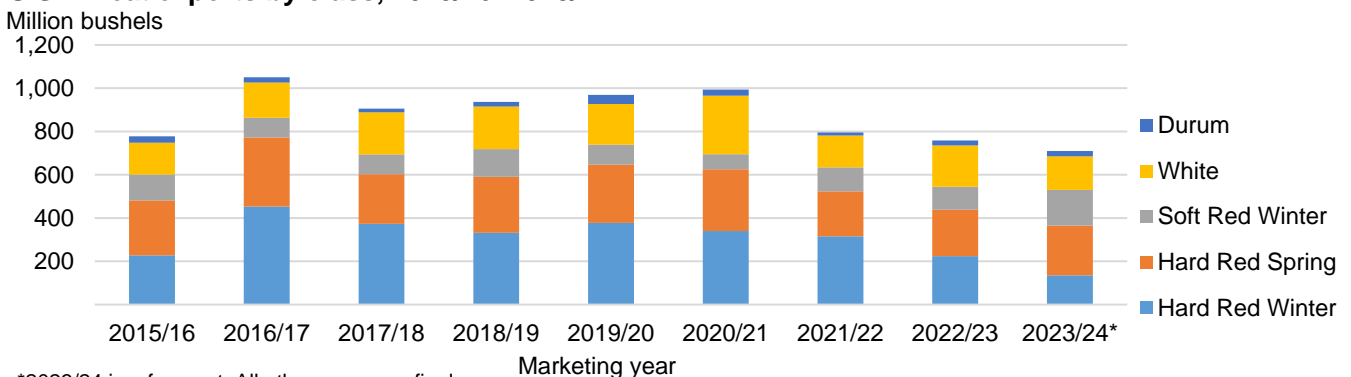
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## U.S. Wheat Exports at Historic Low in 2023/24

U.S. all-wheat exports are lowered this month 15 million bushels to 710 million and remain the lowest since 1971/72. Hard Red Winter (HRW) exports are forecast at 135 million bushels, the lowest ever (by-class records extend back to 1973/74) as drought reduced supplies in consecutive seasons and competitor supplies have remained much lower priced. HRW exports, normally the largest class of shipments, are now forecast as the fourth largest out of the five classes (figure 1). Hard Red Spring is forecast as the largest class of exports this year at 230 million, which is slightly below its recent 5-year average. White exports this year are also projected below average at 155 million bushels as supplies of that class were affected by drought this year, albeit not as significantly as 2 years ago. Durum exports are forecast a relatively stable 25 million bushels. Conversely, Soft Red Winter (SRW) exports are forecast at 165 million bushels, down 10 million bushels this month, but still the highest in a decade. SRW exports this year have been buoyed by large supplies and significant sales to China between October and December 2023, although some of those sales were cancelled recently.

Figure 1  
**U.S. wheat exports by class, 2015/16–2023/24**



\*2023/24 is a forecast. All other years are final.  
 Source: USDA, World Agricultural Outlook Board.

## Domestic Changes at a Glance:

- There is no change to U.S. wheat production this month (table 1).
- U.S. all-wheat imports for 2023/24 are unchanged from the February forecast at 145 million bushels with the pace of total imports generally on target to meet the current projection. Official U.S. all-wheat imports for June 2023–January 2024, calculated with data from the U.S. Department of Commerce, Bureau of the Census (Census Bureau), are estimated at 96 million bushels, up 17 percent from the same months in 2022/23. The following by-class adjustments are applied based on the pace of trade: Hard Red Winter (HRW) is lowered 2 million bushels to 23 million; Soft Red Winter (SRW) is lowered 2 million bushels to 8 million; Durum is boosted 4 million bushels to 44 million.
- All-wheat exports for the United States in 2023/24 are projected at 710 million bushels, down 15 million bushels from the February forecast. Official U.S. wheat exports for June 2023–January 2024, calculated with data from the Census Bureau, are estimated at 429 million bushels, 19 percent below the 527 million bushels during the same period in marketing year 2022/23. Based on the pace of export sales, SRW is lowered 10 million bushels to 165 million bushels and Hard Red Winter (HRW) is lowered 5 million bushels to 135 million bushels. Supporting the reduction in SRW exports, USDA, Foreign Agricultural Service announced a total of 130,000 metric tons of SRW sales to China were cancelled on March 7.
- There are no changes to U.S. domestic use this month.
- The 2023/24 season-average farm price is lowered \$0.05 per bushel to \$7.15. The January 2024 all-wheat average farm price is reported at \$6.79 per bushel based in the latest USDA, NASS *Agricultural Prices* report, unchanged from \$6.79 in December 2023. Wheat futures declined in the last month, but the 5-year average of marketing weights suggests that approximately 84 percent of the crop for the marketing year was sold during June 2023–January 2024.

**Table 1**

**U.S. wheat supply and use at a glance 2022/23 and 2023/24 (in million bushels)**

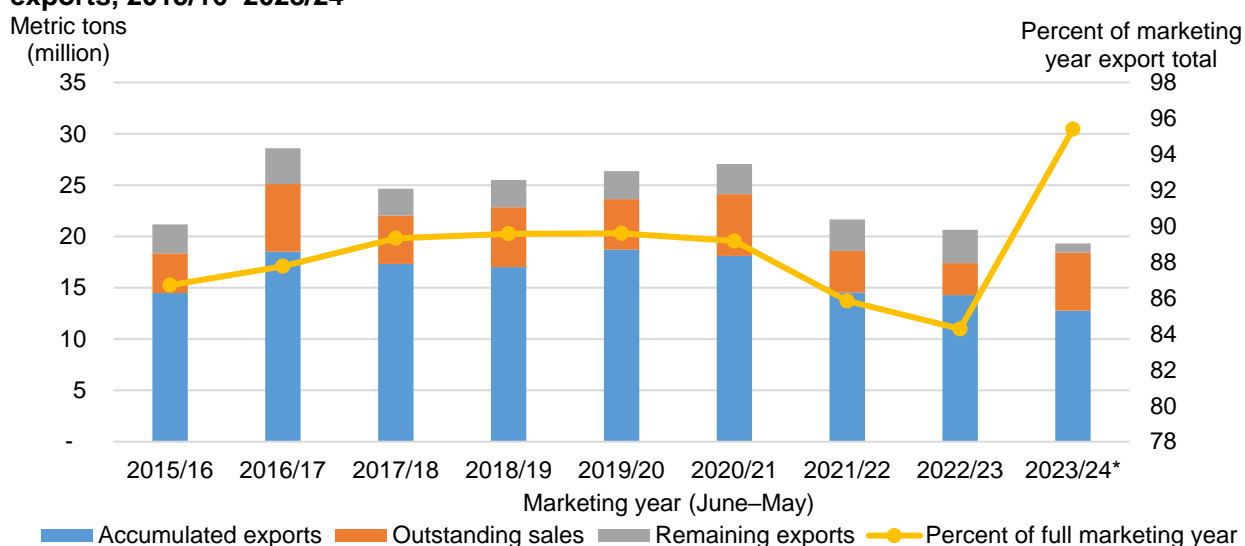
Balance sheet item	2022/23 March	2023/24 February	2023/24 March	Month-to-month change	Comments
<b>Supply, total</b>					<b>June–May marketing year</b>
Beginning stocks	674	570	570	0	
Production	1,650	1,812	1,812	0	
Imports	122	145	145	0	Total imports on pace to reach all-wheat import forecast; lower imports for Hard Red Winter (HRW) and Soft Red Winter (SRW) offset by larger expected Durum imports
Supply, total	2,446	2,527	2,527	0	
<b>Demand</b>					
Food	973	960	960	0	
Seed	68	64	64	0	
Feed and residual	77	120	120	0	
Domestic, total	1,118	1,144	1,144	0	
Exports	759	725	710	-15	Slowing pace of export sales and shipments for SRW (down 10 million bushels) and HRW (down 5 million bushels)
Use, total	1,876	1,869	1,854	-15	
Ending stocks	570	658	673	+15	Stocks forecast up 18 percent from the previous year, but still at the second lowest level in 10 years
Season-average farm price	\$8.83	\$7.20	\$7.15	-\$0.05	Price lowered reflecting expectations for cash and futures prices for the remaining months of the marketing year

Source: USDA, Economic Research Service calculations and USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

## U.S. Export Sales Weakening, Shipments Lagging

U.S. cumulative export sales, as reported in the USDA, Foreign Agricultural Service (FAS) *U.S. Export Sales*, are ahead of the same period last year, but the actual shipment pace lags. Total U.S. commitments (the sum of accumulated exports and outstanding sales) are at 18.4 million metric tons (MMT) as of February 29, up 6 percent from the same point last year. Driving this increase, outstanding sales are at 5.7 million metric tons, 82 percent above last year. The current year outstanding sales figure includes a large amount of SRW commitments to China, 130,000 metric tons of which were cancelled on March 7, 2024. On the other hand, accumulated exports are at 12.8 million metric tons, 11 percent below the previous year. Total commitments at this point in the year account for 95 percent of the full MY export forecast, well above 84 percent last year (figure 2).

Figure 2  
**Cumulative exports sales through February 29 and full marketing year exports, 2015/16–2023/24**



\*Data for 2023/24 are calculated based on the current export forecast for the year.

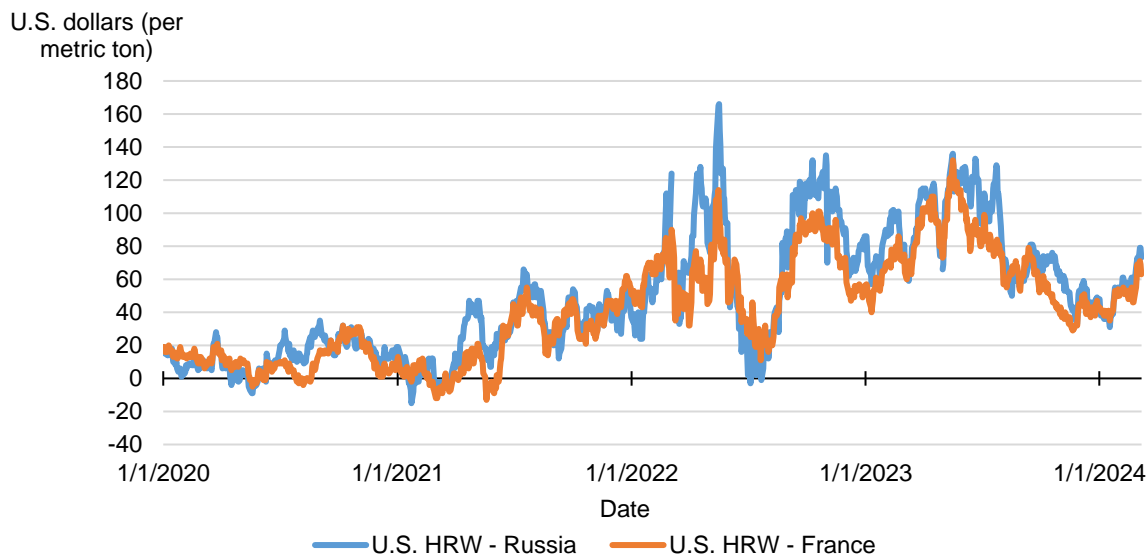
Note: Accumulated exports and outstanding sales are as of week 40, exact dates vary by year. Remaining exports is the difference between total commitments as of that date (based on USDA, Foreign Agricultural Service, *U.S. Export Sales* data) and the full marketing year exports (calculated based on data from the U.S. Department of Commerce, Bureau of the Census).

Source: USDA, Economic Research Service calculations; USDA, Foreign Agricultural Service, *U.S. Export Sales*; U.S. Department of Commerce, Bureau of the Census.

The official USDA forecast for exports was reduced in recognition that additional net sales of U.S. wheat to be sold and shipped in the current marketing year are likely to be minimal. One factor contributing to this expectation is the widening price disparity between the United States and key competitors such as Russia and the European Union (figure 3).

Figure 3

### Price spread between U.S. Hard Red Winter and key competitors, 2020–24



HRW = Hard Red Winter.

Notes: This chart depicts the freight-on-board (FOB) price difference between U.S. HRW and key competitors Russia and France. 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. Agricultural Outlook Forum Projections Released

On February 15, USDA released its *Agricultural Outlook Forum* projections for the 2024/25 marketing year (table 2). Area planted is projected down with weaker pricing for reducing the incentive for producers to plant wheat. Much of this reduction is based on the January 12, USDA, NASS *Winter Wheat and Canola Seedings* report that showed winter wheat seedings down 6 percent from the previous year. Harvested area is forecast higher with the expectation that the harvested-to-planted ratio will return to a more typical level after being well below normal in 2023/24. Yields are also forecast up in 2024/25 with the assumption of a return to trend yield after drought affected different growing regions during 2021/22 through 2023/24. Following the historic trend, food use is projected to grow slowly. Feed and residual use is projected 10 million bushels lower at 110 million on the assumption that wheat will be uncompetitively priced against abundant corn supplies. Exports are forecast higher, but still historically low, with abundant supplies from key competitors expected to continue undermining the U.S. share of the global wheat market.

Table 2 USDA Agricultural Outlook Forum wheat forecasts, February 2024				
Attribute	2022/23	2023/24	2024/25	Year-to-year change
Area planted (million acres)	45.8	49.6	47.0	(2.6)
Area harvested (million acres)	35.5	37.3	38.4	1.1
Yield (bushels per acre)	46.5	48.6	49.5	0.9
	Million bushels			
Beginning stocks	674	570	658	88
Production	1,650	1,812	1,900	88
Imports	122	145	120	(25)
Total supply	2,446	2,527	2,678	151
Domestic use (total)	1,118	1,144	1,134	(10)
-Food use	973	960	962	2
-Seed use	68	64	62	(2)
-Feed and residual	77	120	110	(10)
Exports	759	725	775	50
Total use	1,876	1,869	1,909	40
Ending stocks	570	658	769	111
Stocks-to-use (percent)	30.4	35.2	40.3	5.1
Average farm price (U.S. dollars per bushel)	8.83	7.20	6.00	(1.20)
Note: The March revisions to the <i>World Agricultural Supply and Demand Estimates</i> data for 2023/24 are not depicted in this table. Data are shown in June–May marketing years.				
Source: USDA, Economic Research Service; USDA, World Agricultural Outlook Board.				

Ending stocks are projected higher and the season-average price is forecast at \$6.00 per bushel, the lowest since 2020/21. Note that the data in table 2 does not reflect the March *World Agricultural Supply and Demand Estimates (WASDE)* revisions to 2023/24. These changes would raise the 2024/25 ending stocks by an additional 15 million bushels.

# International Outlook

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## Global Wheat Production Slightly Up, Still Second on Record

Global wheat production for 2023/24 is slightly higher this month, up 1.0 million metric tons (MMT) to 786.7 MMT with increases for **Australia**, **Russia** and **Argentina** that are partially offset by reductions for the **European Union** and **Serbia**. This month's estimate continues to be the second largest output recorded after 2022/23. (figure 4).

This month, **Russia's** wheat production for 2023/24 is projected 0.5 MMT higher to reach 91.5 million. Based on the second published statistics issued by the Russian Statistical Agency (ROSSTAT), spring wheat yield was revised higher from last month, bringing total spring wheat production to 27.5 MMT for 2023/24. Winter wheat output is unchanged this month at 64.0 MMT. Winter wheat on average accounts for 70 percent of total wheat production in Russia and spring wheat for 30 percent. Record yields for spring wheat are a major contributor to this month's revision.

**Australia's** production estimate is up 0.5 MMT to 26.0 million based on an upward revision to yields. This revision is in line with the latest estimate from the Australia Bureau of Agricultural and Resource Economics (ABARES), which in their March 2024 *Australian Crop Report* informed of mixed wheat crop quality across the different growing regions. A better-than-expected high protein grade wheat crop was reported in Western and Southern Australia while lower protein white grade wheat is grown in Victoria and parts of New South Wales, regions affected by heavy rainfall and wet conditions during harvest time (October and November).

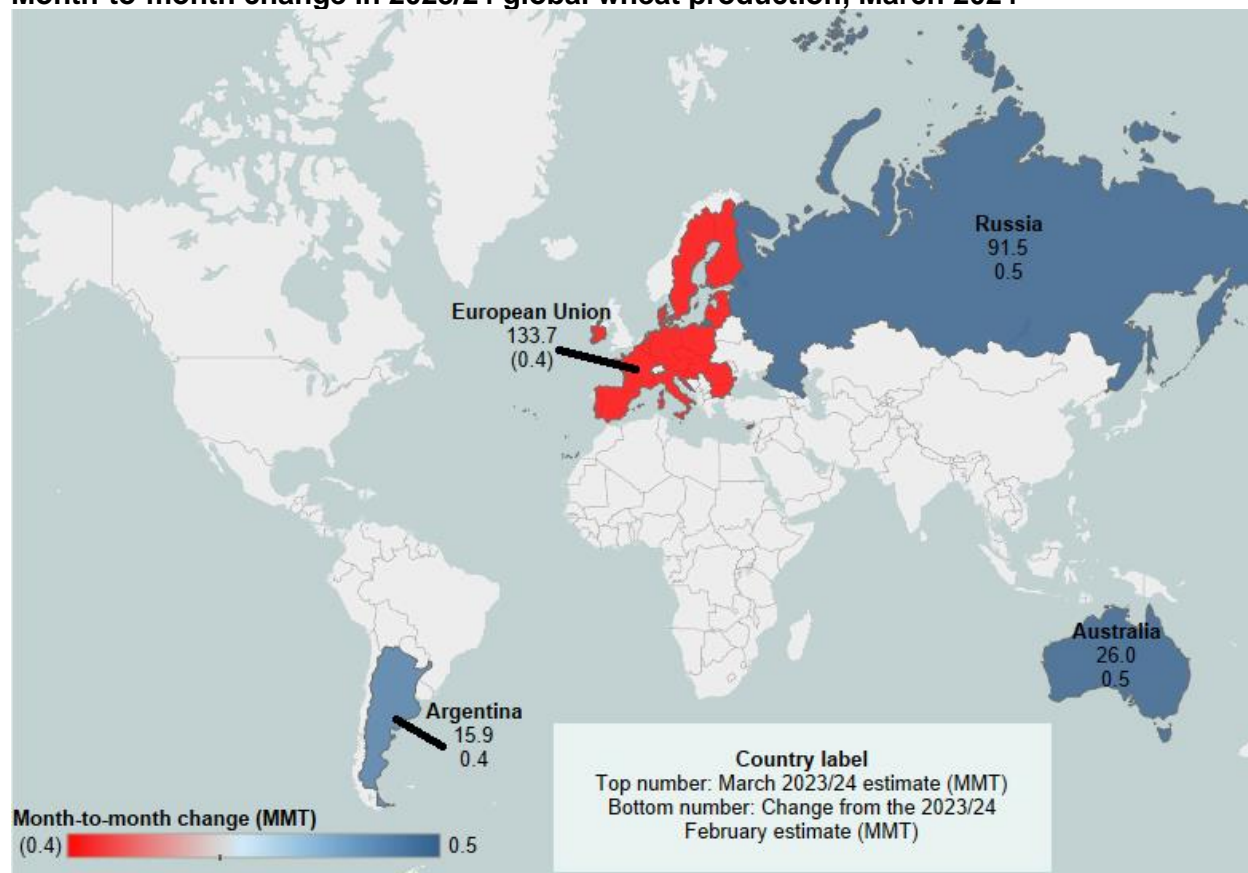
With 2023/24 wheat harvest complete, wheat production in **Argentina** is projected up 0.4 MMT to a total 15.9 MMT on higher reported area by the Argentina Ministry of Agriculture.

Wheat production for the **European Union** is reduced by 0.4 MMT to 133.7 MMT with downward revisions in yields across several member states. Member States' production included a variety of offsetting changes. Highlights include large reductions for **Sweden** and **Denmark** wheat crops this month which more than offset increases for **Hungary** and **Lithuania**.

**Serbia's** wheat production is estimated at 3.4 MMT in 2023/24, a 4-percent decrease from last month on lower area harvested.

Figure 4

### Month-to-month change in 2023/24 global wheat production, March 2024



MMT=million metric tons.

Note: Changes less than 0.2 MMT are not included.

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

## Higher Global Trade for 2023/24 with the United States Revised Lower

Global wheat exports for the July–June 2023/24 international trade year are up 1.4 MMT to 215.4 MMT driven by larger exports from **Ukraine, Australia, Turkey and Moldova**. **Ukraine's** exports are projected up by 1.0 MMT to 16.0 million on a strong pace of shipments and continued competitiveness to other markets. **Australia's** forecast is up 0.5 to 23.5 MMT as exportable supplies are estimated to be larger with an upward revision to production this month, while **Turkey** and **Moldova** see an increase in exports based on the current pace of sales.

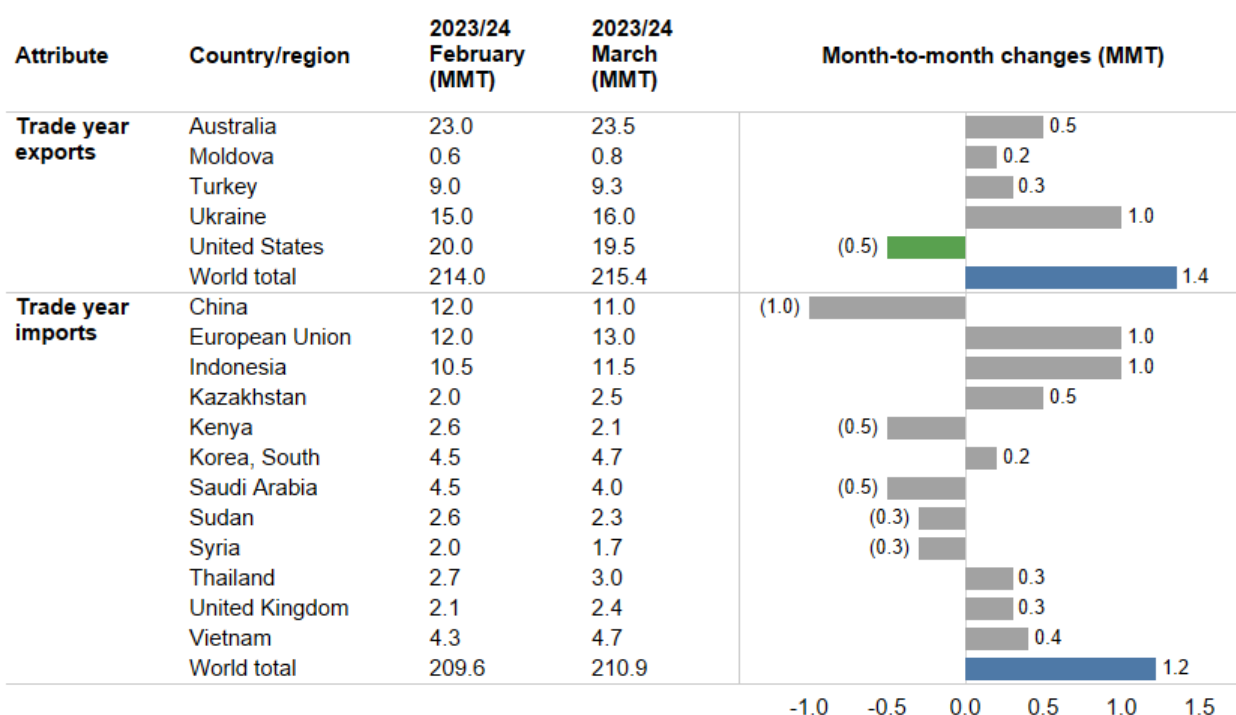
Partially offsetting these changes are a decrease of 0.5 MMT for the **United States** wheat exports estimate for the 2023/24 trade year to a forecasted 19.5 MMT (down 15 million bushels for the local June–May marketing year to 710 million bushels), the lowest level recorded since 1971/72. The domestic section of this report has detailed information on **U.S.** wheat exports.



Wheat imports are projected higher for several importing countries this month. **Indonesia** and the **European Union's** wheat imports are raised 1.0 MMT each on the strong pace of purchases to date. **Kazakhstan** wheat imports are raised on increased trade with Russia. **Vietnam, Thailand** and **South Korea** imports are raised on higher feed and residual use while stronger food, seed, and industrial (FSI) use has contributed to higher imports for the **United Kingdom**.

**China's** wheat imports are lowered on a slow pace of imports reported to date. **Saudi Arabia, Sudan** and **Kenya** imports are lowered this month on a slow pace of trade, attributed to reduced FSI use. **Syria's** imports are trimmed on a slow pace of trade with lower feed and residual use expected.

Figure 5  
**Month-to-month change in 2023/24 wheat trade, March 2024**



MMT = million metric tons.

Note: Changes less than 0.2 MMT are not included; month-to-month change is the difference between March 2024 and February 2024 estimates.

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

## Global Wheat Stocks Lower for 2023/24

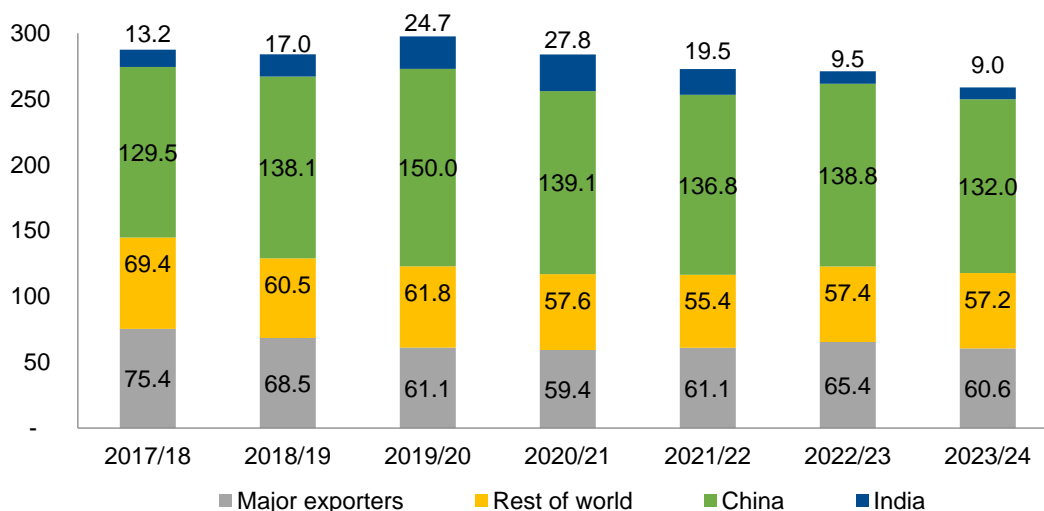
The global wheat consumption forecast for 2023/24 is projected up 1.5 MMT this month to 799.0 MMT with larger feed and residual use partly offset by a fractional reduction in global FSI use. Competitive feed wheat prices have led to a 1.6 MMT upward revision to global feed and residual use to 162.1 MMT led by the **European Union (EU), Indonesia, Kazakhstan, South Korea, Pakistan, Thailand, and Vietnam**. Higher feed and residual for the **EU** is also supported by larger imports from **Ukraine**. Stronger feed and residual in **Kazakhstan** is based on reduced grain quality with rains at harvest affecting the 2023/24 crop. These increases are partly offset by reductions in **Ukraine** and **Syria** of 0.3 MMT each and **Turkey** by 0.2 MMT. Global wheat FSI use is slightly down 0.3 MMT to 636.0 MMT driven by small reductions for **Kenya, Sudan, Saudi Arabia and Bolivia** which are partly offset by increases from **Indonesia** and the **United Kingdom** of 0.4 and 0.1 MMT, respectively.

Global wheat ending stocks for 2023/24 are revised down 0.6 MMT to 258.8 MMT, the lowest in 8 years. The largest revisions include a decrease of 1.0 MMT for **China** followed by **Ukraine** and the **EU** with 0.7 and 0.4 MMT, respectively. Ending stocks for **Russia** are raised by 0.5 MMT on higher projected output for 2023/24. **Argentina, the United States, Indonesia, and the United Kingdom**, among others, see smaller increases in ending stocks this month.

Figure 6

### Global ending stocks, 2017/18–2023/24

Metric tons  
(million)



Note: 2023/24 data are forecasts. Major exporters include Argentina, Australia, Canada, the European Union, Kazakhstan, Russia, Ukraine, and the United States.

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

# Feature Article

## U.S. Census of Agriculture: Highlighting Changing Trends in Wheat Farming

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### Changing Dynamics for the Wheat Farming Sector

On February 13, 2024, the USDA, National Agricultural Statistics Service (NASS) released the results of the 2022 Census of Agriculture. The Census of Agriculture is conducted every 5 years and consists of a comprehensive accounting of U.S. farms and ranches as well as the individuals involved with agricultural production. Following are major highlights of changes on wheat farms.

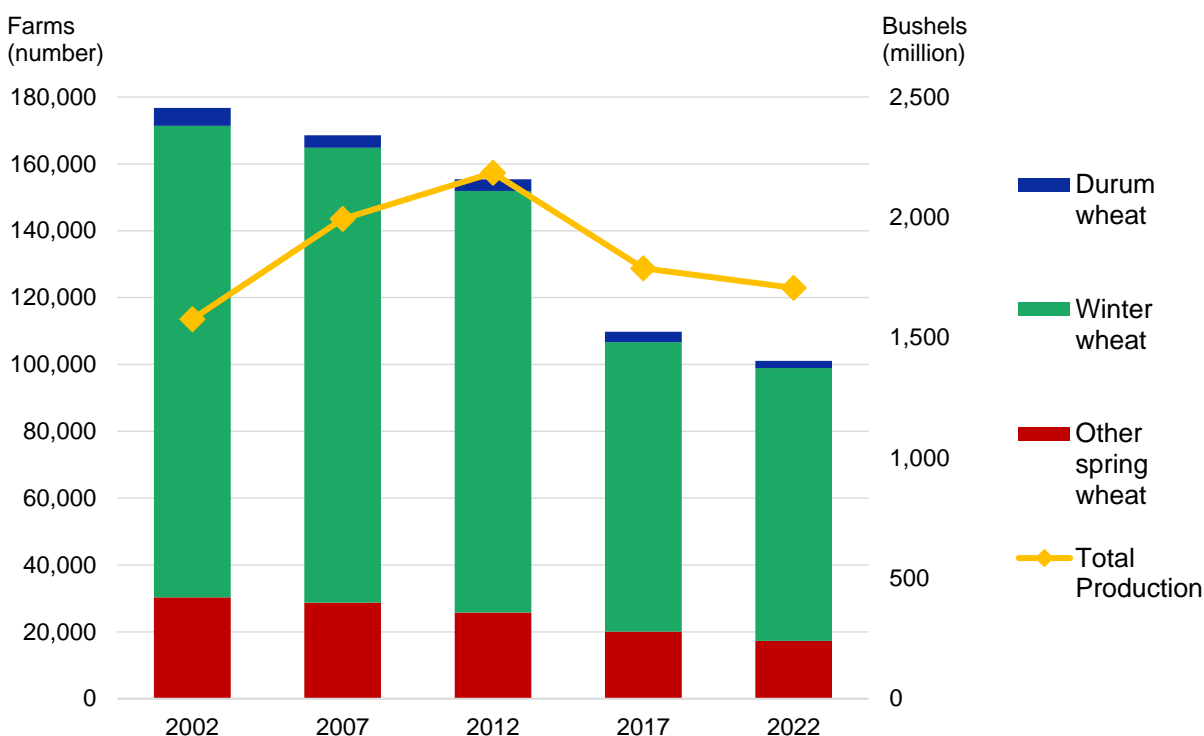
The number of wheat farms in the United States has declined substantially over time. Since 2002, the total number of wheat farms fell by more than 40 percent, from 169,528 in 2002 to 97,014 in 2022, and also more than 7 percent lower from 104,792 farms in 2017. During the same time period, wheat production is down slightly, but has been variable year to year. Annual wheat production ranged from about 1.6 billion bushels in marketing year 2002/03 to as much as 2.5 billion bushels in 2008/09. Notably wheat production has not topped 2.0 billion bushels from 2017/18 to 2023/24. Much of the decline in U.S. wheat production has been the result of lower area harvested, which dropped from 56 million acres in marketing year 2008/09 to a low of 35.5 million acres in 2022/23. Area harvested has remained below 40 million acres from marketing year 2017/18 through 2023/24.

One major reason for the decline in wheat production and area over time is that wheat has become a rotational crop that is mixed into rotations with more profitable corn or soybean crops. According to the USDA, Economic Research Service's commodity cost and returns estimates, the value of production less operating cost, which is a measure of profitability, has grown from \$101.72 per acre in 2017 to \$185.26 per acre in 2022. The same measure of profitability for corn has more than doubled from \$273.77 per acre to \$654.46 per acre, more than 3 times that of wheat. The value of production less operating costs for soybeans has also grown from \$296.64 per acre in 2017 to \$441.53 per acre in 2022. Additional factors include changing farming practices, the development of seed varieties for corn and soybeans that are more conducive to growing conditions in areas traditionally planted to wheat, and other technological developments.

The reduction in the number of farms reporting wheat harvested area occurred across all classes. The number of farms producing Durum wheat saw the largest percentage reduction, down nearly 60 percent from the 2002 Census and 30 percent from the 2017 Census. The next largest reduction was in other spring wheat farms with a 43-percent reduction from 2002 and a 14-percent reduction from the 2017 Census of Agriculture (figure 7).

Figure 7

**U.S. wheat farms by wheat class, 2002–2022**



Note: The totals in this figure may be higher than the total number of farms that reported wheat sales due to some farms growing more than one class of wheat.

Source: USDA, National Agricultural Statistics Service, Census of Agriculture.

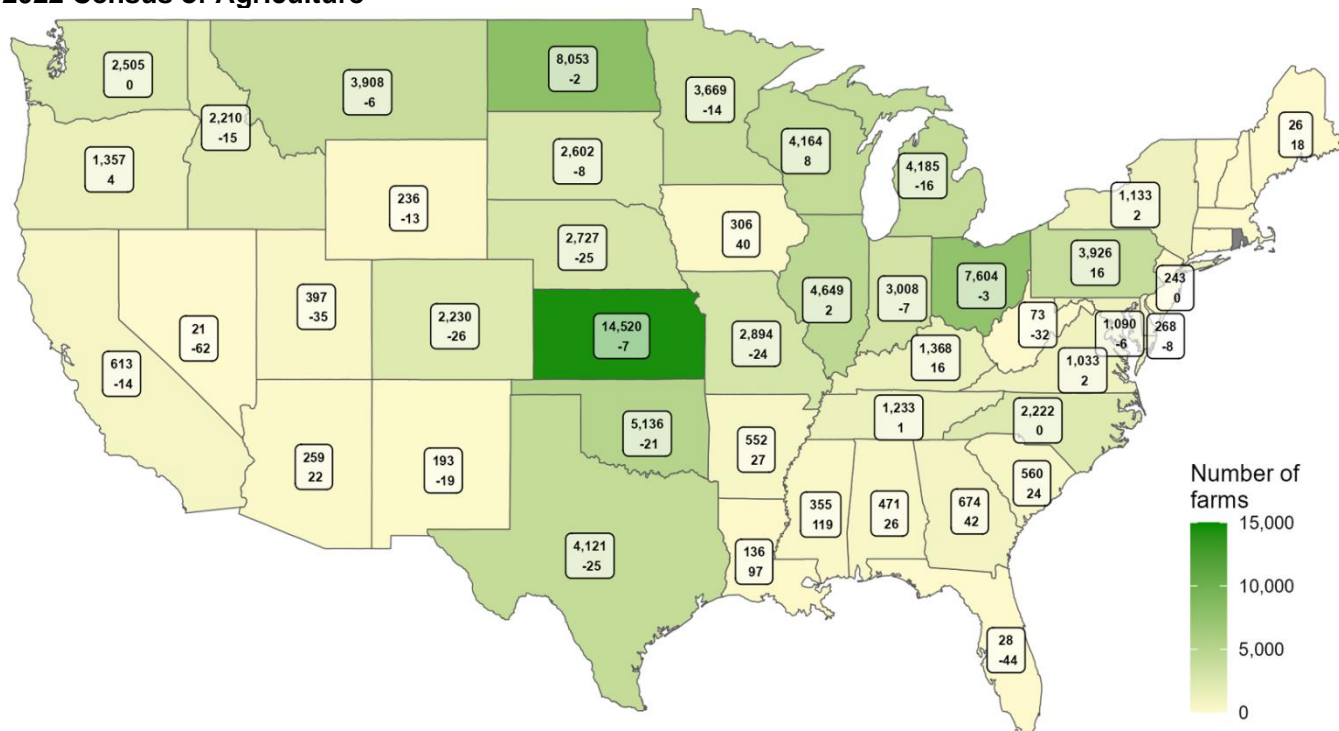
According to the 2022 Census of Agriculture, 8 States accounted for 54 percent of the total number of wheat operations in 2022. Kansas alone accounts for 15 percent, or 14,520, wheat operations, followed by North Dakota and Ohio with 8,053 and 7,604 total operations, respectively.

Increases in the number of wheat operations were recorded for several States in the southeast United States, with States such as Louisiana and Mississippi doubling the number of farms that grow wheat. While these percentage increases are high, the total number of operations is still relatively low compared with the largest wheat-producing States. Among the States with the largest increases in total number of farms are Pennsylvania, Wisconsin, Georgia, Mississippi, and Kentucky. States with substantial percent change decreases in the total number of wheat

operations relative to the 2017 census were Nevada, Florida, Utah, West Virginia, Colorado, Texas, Nebraska, Missouri, and Oklahoma, each of which (except for Nevada, Florida, Utah, and West Virginia) are major HRW producing States. Kansas, the State with the most wheat operations, saw a 7-percent reduction in the number of operations in 2022 compared with the 2017 Census of Agriculture (figure 8) while Texas and Oklahoma had the largest decreases in the total number of farms that produced wheat.

Figure 8

**Number of Continental U.S. wheat farms and percentage change from 2017 Census by State, 2022 Census of Agriculture**

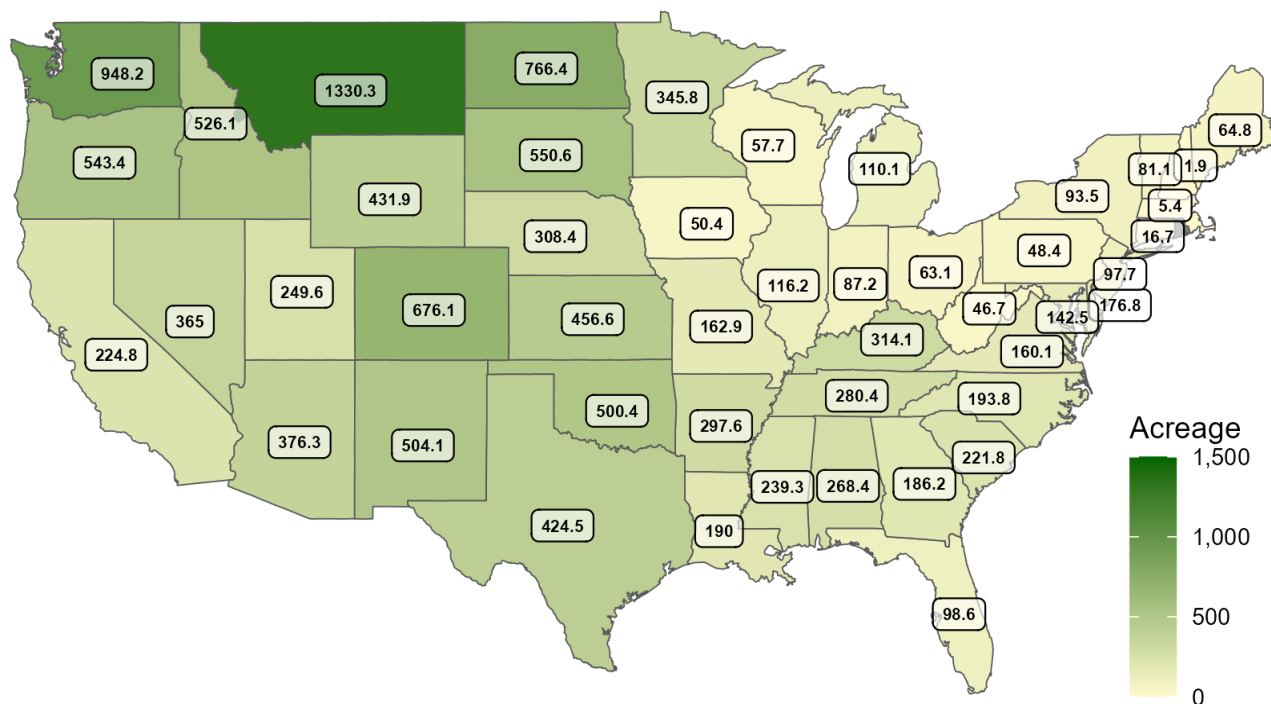


Note: Labels only included for States with more than 20 operations for 2022. Alaska (3 farms) and Hawaii (No data available) are not included due to the low number of wheat farms.  
 Top number: Number of Operations with Area Harvested. Bottom number: percentage change from 2017 U.S. Census of Agriculture  
 Source: USDA, Economic Research Service calculations based on USDA, National Agricultural Statistics Service data.

On average, the States with the highest wheat area per farm are located in the northern States such as Montana, Washington, and North Dakota. Each of these States has an average wheat area of 750 or more acres per wheat-producing farm. States located in the eastern half of the United States tend to grow fewer acres of wheat per farm, with several States in the Corn Belt growing 100 acres of wheat or less per farm (figure 9). Producers in these regions tend to focus more on corn and soybeans than those in the dryer climates in western States.

Figure 9

**Average wheat area per Continental U.S farm that grows wheat for grain by State, 2022**



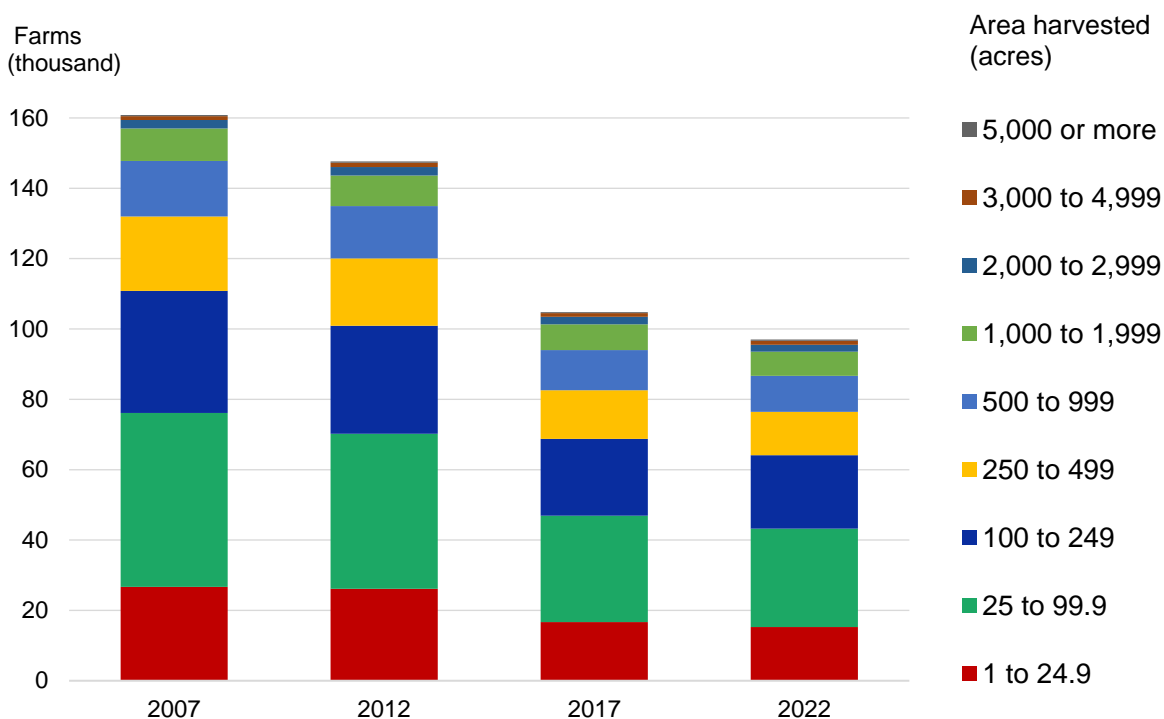
Note: Wheat area is calculated as total wheat acres for each State divided by the number of farms in each State. Alaska (3 farms) and Hawaii (no data available) are not included due to the low number of wheat farms. Source: USDA, Economic Research Service calculations based on USDA, National Agricultural Statistics Service data.

## Number of smaller farms shrinking faster than larger farms

The number of smaller farms is shrinking at a faster rate than larger farms. Between 2017 and 2022, all but the largest wheat farms (specifically, those from 1 to 2,999 acres) saw reductions anywhere from 4 percent for farms between 100 and 249 acres to 11 percent lower for farms in the 250-to-499- acres category (figure 10). The largest farms, those with acreage of 3,000 or more, saw an increase compared to the 2017 Census. Farms in the 3000-to-4,999-acres category saw an increase of 12 percent, while those with 5,000 or more acres saw a 24- percent increase for the 2022 Census of Agriculture relative to 2017. In summary, smaller farms are disappearing at a faster pace while larger farms are increasing in number. Simultaneously, rural or nonmetropolitan areas, particularly those in the Midwest and some parts of the Great Plains,

are also experiencing an outward migration, according to a recent USDA, Economic Research Service report.<sup>1</sup>

Figure 10  
**Number of U.S wheat farms by area harvested, 2007–2022**



Source: USDA, National Agricultural Statistics Service, Census of Agriculture.

Overall, the 2022 Census of Agriculture shows a continuation of a much longer-term trend. The number of wheat farms continues to shrink across all but the largest farm sizes. The average farm size continues to grow as the number of smaller farms declines and larger farms increase in number.

<sup>1</sup> Davis, J.C., Cromartie, J., Farrigan, T., Genetin, B., Sanders, A., & Winikoff, J.B. (2023). *Rural America at a glance: 2023 edition* (Report No. EIB-261). U.S. Department of Agriculture, Economic Research Service

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