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Wheat Outlook: November 2023

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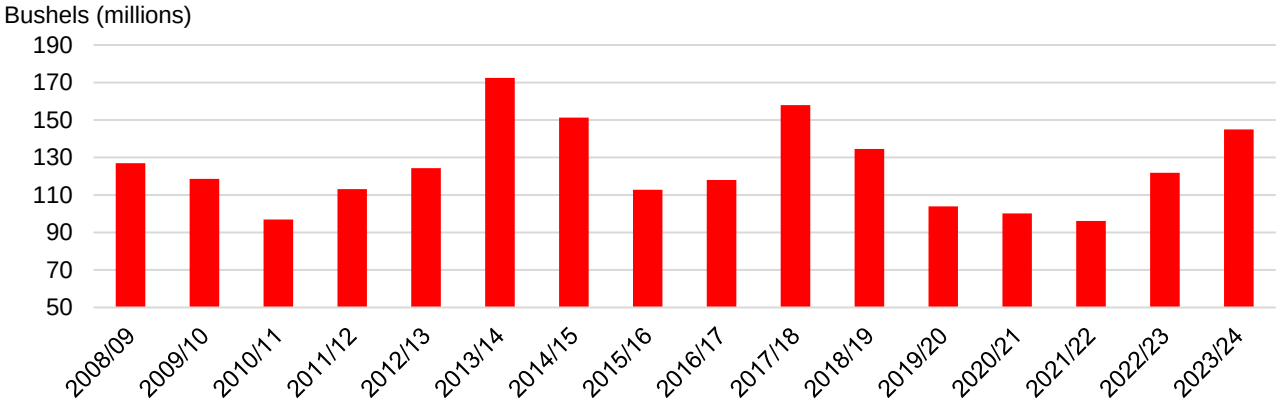
In this report:

U.S. Imports Forecast at Highest Level in 6 Years

U.S. all-wheat imports are forecast at 145 million bushels, the largest since 2017/18. This year's higher import forecast is driven by unusually large imports from the European Union. After drought affected production of U.S. Hard Red Winter (HRW) wheat in consecutive seasons, elevated prices motivated millers in select locations to seek out high-protein supplies from nontraditional sources. HRW imports for 2023/24 are forecast at a record 25 million bushels (records go back to 1973/74), up from just 5 million bushels last year. This trade flow (origin and class of wheat) is atypical, as U.S. wheat imports are normally dominated by Hard Red Spring (HRS) and Durum imports from neighboring Canada. For reference, U.S. wheat imports in 2017/18 were elevated due to large imports of both HRS and Durum from Canada as drought reduced supplies of both classes in the United States.

Figure 1

United States all-wheat imports, 2008/09–2023/24



Note: 2023/24 data are forecasts.
Source: USDA, Economic Research Service; USDA, World Agricultural Outlook Board.

Domestic Changes at a Glance:

- There is no change to U.S. wheat production this month (table 1). Wheat production for marketing year 2023/24 will be finalized in the January 12, 2024, USDA National Agricultural Statistics Service (NASS) *Crop Production* report.
- U.S. all-wheat imports for 2023/24 are raised 10 million bushels to 145 million on the fast pace of imports to date. Based on the pace of trade for the respective classes, Hard Red Spring (HRS), Hard Red Winter (HRW), and Soft Red Winter (SRW) are each raised 5 million bushels to 65 million, 25 million, and 10 million bushels, respectively. Conversely, Durum imports are lowered 5 million bushels to 40 million on continued slow trade with Canada. Official U.S. all-wheat imports for June–September 2023, calculated with data from the U.S. Department of Commerce, Bureau of the Census, are estimated at 51 million bushels, up 28 percent from the same months in 2022.
- All-wheat exports for the United States in 2023/24 are projected at 700 million bushels, unchanged from the October forecast. Official U.S. wheat exports for June–September 2023, calculated with data from the Census Bureau are estimated at 233 million bushels, 28 percent below the 323 million bushels during June–September 2022.
- Food use is revised lower by 4 million bushels to 970 million based on lower-than-expected wheat milled for flour as reported in the November 1 USDA, NASS *Flour Milling Products* report. By-class changes are applied for HRW (up 4 million bushels to 378 million), SRW (down 6 million bushels to 164 million), and Durum (down 2 million bushels to 83 million).
- The 2023/24 season-average farm price is lowered $0.10 per bushel to $7.20. The September all-wheat average farm price is reported at $7.07 per bushel based on the latest USDA, NASS *Agricultural Prices* report, down from $7.35 in August 2023. U.S. wheat prices continue to be pressured by abundant competitor supplies and relatively slow export sales.

Table 1

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

Balance sheet item	2022/23 November	2023/24 October	2023/24 November	Month-to-month change	Comments
Supply, total					**June–May marketing year**
Beginning stocks	698	582	582	0	
Production	1,650	1,812	1,812	0	
Imports	122	135	145	+10	Pace of trade: Hard Red Spring, Hard Red Winter, and Soft Red Winter all raised, while Durum lowered
Supply, total	2,470	2,529	2,539	+10	
Demand					
Food	973	974	970	-4	Lower-than-expected wheat grind data in the USDA, National Agricultural Statistics Service *Flour Milling Products* report
Seed	68	65	65	0	
Feed and residual	89	120	120	0	
Domestic, total	1,130	1,159	1,155	-4	
Exports	759	700	700	0	
Use, total	1,888	1,859	1,855	-4	
Ending stocks	582	670	684	+14	Ending stocks forecast up 18 percent from last year, but still well below the recent 5-year average
Season-average farm price	$8.83	$7.30	$7.20	-$0.10	Higher projected stocks as well as expectations for futures and cash prices for the remainder of the marketing year

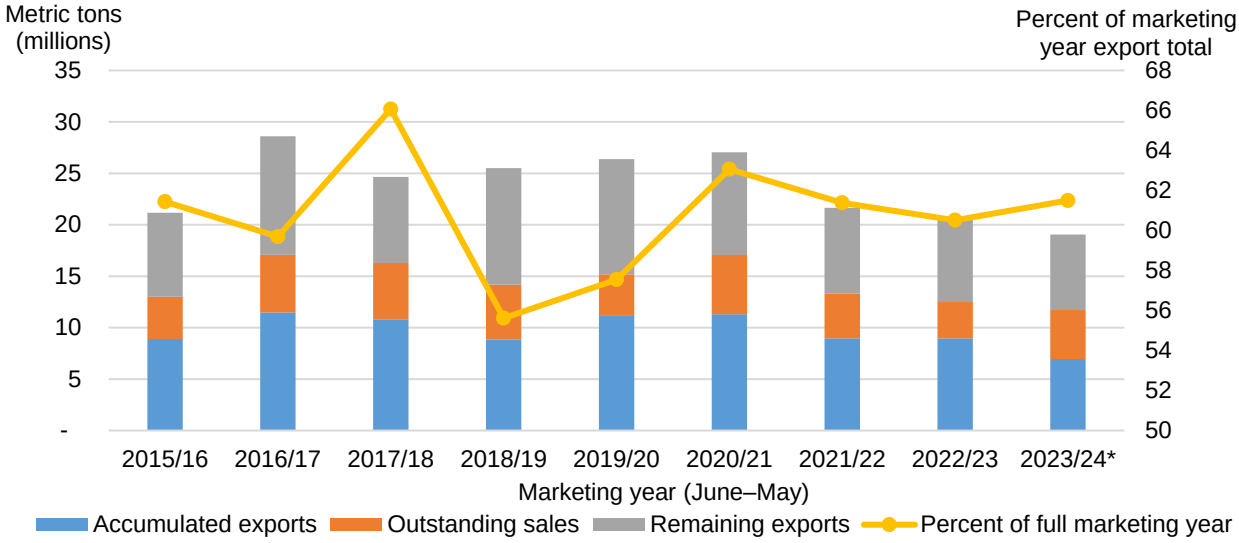
Source: USDA, Economic Research Service calculations and USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates.*

U.S. Export Sales Pace Picking Up Slightly

U.S. export sales, as reported in the USDA, Foreign Agricultural Service (FAS) *U.S. Export Sales* report, remain behind last year but have picked up in recent weeks. Total U.S. commitments (the sum of accumulated exports and outstanding sales) are at 11.7 million metric

tons, down 6 percent from the same point last year. The full marketing year (MY) forecast at 700 million bushels is 8 percent below the 759 million bushels exported in the previous year. Total commitments at this point account for 62 percent of the full MY estimate, compared with 61 percent a year ago (figure 2). The recent 5-year average (2018/19–2022/23) is for total commitments at this point to represent 60 percent of the full MY forecast. U.S. sales have recently been buoyed by sales of SRW to China. USDA has opted to keep the export forecast unchanged this month with the recognition that abundant competitor supplies overhang the global market, limiting the export potential.

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



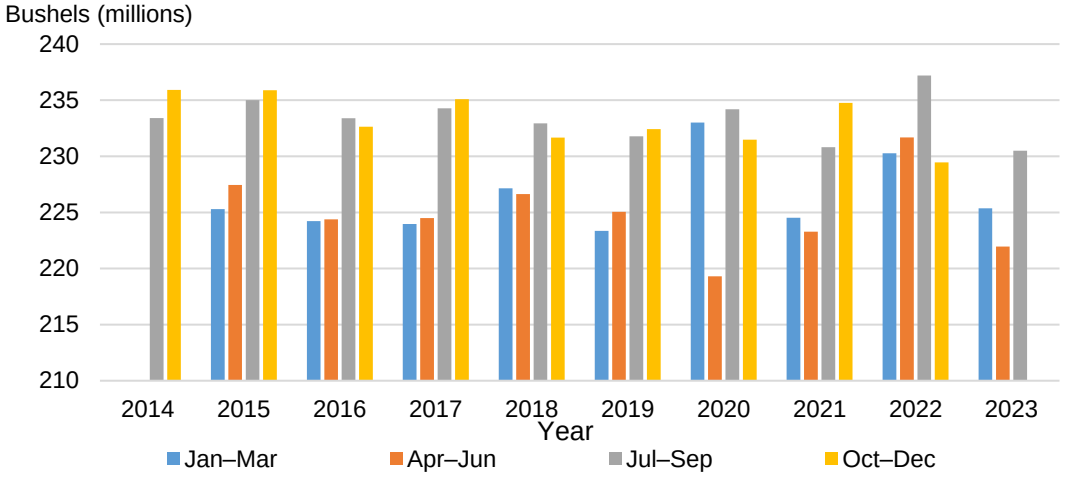
Note: Accumulated exports and outstanding sales are as of week 23, exact dates vary by year. Remaining exports is the difference between total commitments as of that date (based on USDA, Foreign Agricultural Service, *U.S. Export Sales* data) and the full marketing year exports (calculated based on data from the U.S. Department of Commerce, Bureau of the Census).
*Data for 2023/24 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.

Food Use Revised Lower on Pace of Flour Grind

The November 1 USDA, NASS *Flour Milling Products* report showed smaller-than-expected wheat use for milling in the July–September quarter. Quarterly wheat milled was up 4 percent from the previous quarter but down 3 percent from the same quarter last year (figure 3). Wheat milled for flour in the July–September quarter was the lowest for that quarter since the USDA, NASS flour milling dataset began in 2014. Durum wheat ground for flour and semolina production during the July–September quarter was up 11 percent from the previous quarter and 2 percent above the same period last year.

Figure 3

U.S. wheat milled for flour, by year and quarter, 2014–23



Note: Data from this source was unavailable before July 2014.
Source: USDA, National Agricultural Statistics Service, *Flour Milling Products*.

The USDA, Economic Research Service calculates monthly all-wheat food use based on data from the USDA, NASS *Flour Milling Products* report, along with net imports of wheat flour and products, as well as an estimated level of nonmilled food use. U.S. all-wheat food use for June-September is calculated at 320 million bushels (table 2), down 3 percent from the same period last year and slightly below the recent 5-year average. Durum food use is calculated at 26 million bushels for that same period, also down slightly from last year and the recent 5-year average. Consequently, all-wheat food use is projected 4 million bushels lower at 970 million, while Durum food use is reduced 2 million bushels to 83 million.

Table 2: U.S. wheat food use, million bushels, 2013/14–2023/24

Marketing year	June–September	Marketing year total	Percent of total
2013/14	315	955	33.0
2014/15	320	958	33.4
2015/16	322	957	33.6
2016/17	318	949	33.5
2017/18	320	964	33.2
2018/19	320	954	33.6
2019/20	319	962	33.2
2020/21	323	961	33.7
2021/22	318	971	32.7
2022/23	331	973	34.0
5-year average	322	964	33.4
2023/24	320	970	32.9

Note: 5-year average refers to marketing years 2018/19 through 2022/23.

Source: USDA, Economic Research Service calculations; USDA, National Agricultural Statistics Service.

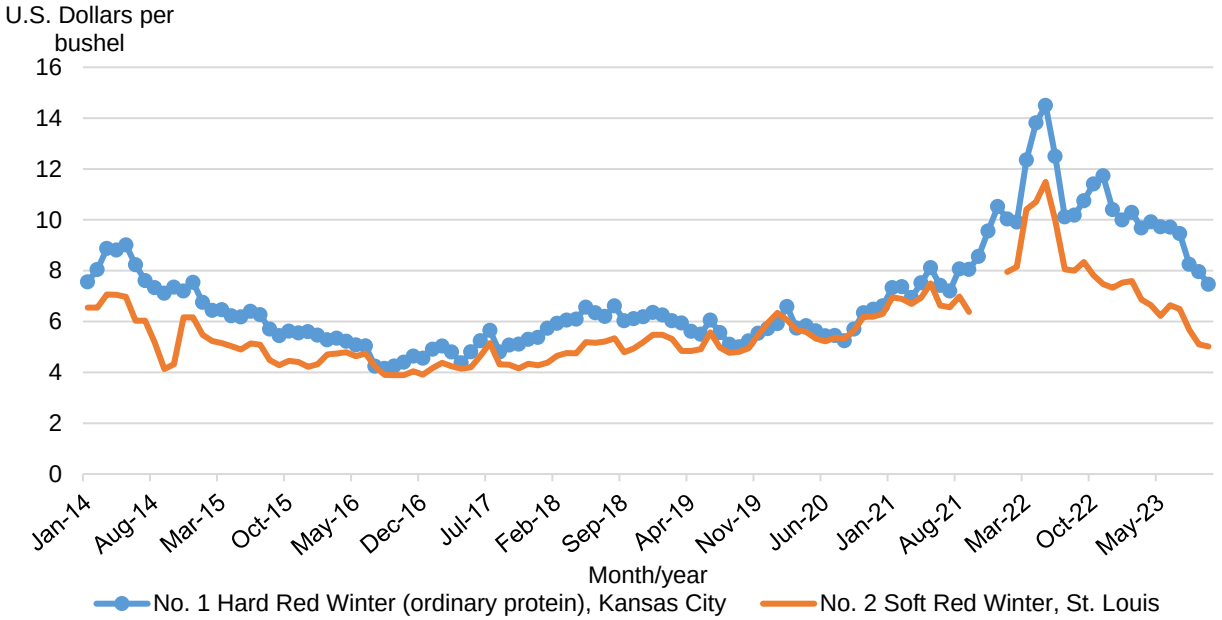
By-class changes to food use projections were driven by ongoing pricing and crop quality considerations. U.S. HRW food use is raised 4 million bushels to 378 million, while SRW food use is lowered 6 million bushels to 164 million (table 3). SRW food use is still forecast to be the highest since 2006/07 as this class of wheat continues to be priced at a substantial discount to HRW (figure 4). However, the premium of HRW over SRW has declined in recent months. Moreover, millers appear to be limited in the amount of SRW that can be included in mill grinds based on availability of higher-protein wheat.

Table 3
U.S. wheat food use, by class, 2019/20–2023/24

	Final	Final	Final	Final	October	November	*Change*
Class	2019/20	2020/21	2021/22	2022/23	2023/24	2023/24	*2023/24*
	Bushels (millions)						
HRW	378.2	376.8	410.6	373.9	374.0	378.0	*4.0*
HRS	265.0	263.0	245.0	266.0	260.0	260.0	*0.0*
SRW	148.0	148.0	154.0	163.0	170.0	164.0	*-6.0*
White	85.0	85.0	83.0	85.0	85.0	85.0	*0.0*
Durum	85.4	87.7	78.8	84.7	85.0	83.0	*-2.0*
Total	961.6	960.5	971.4	972.6	974.0	970.0	*-4.0*

HRW = Hard Red Winter; HRS = Hard Red Spring; SRW = Soft Red Winter.
Source: USDA, National Agricultural Statistics Service and USDA, Economic Research Service calculations.

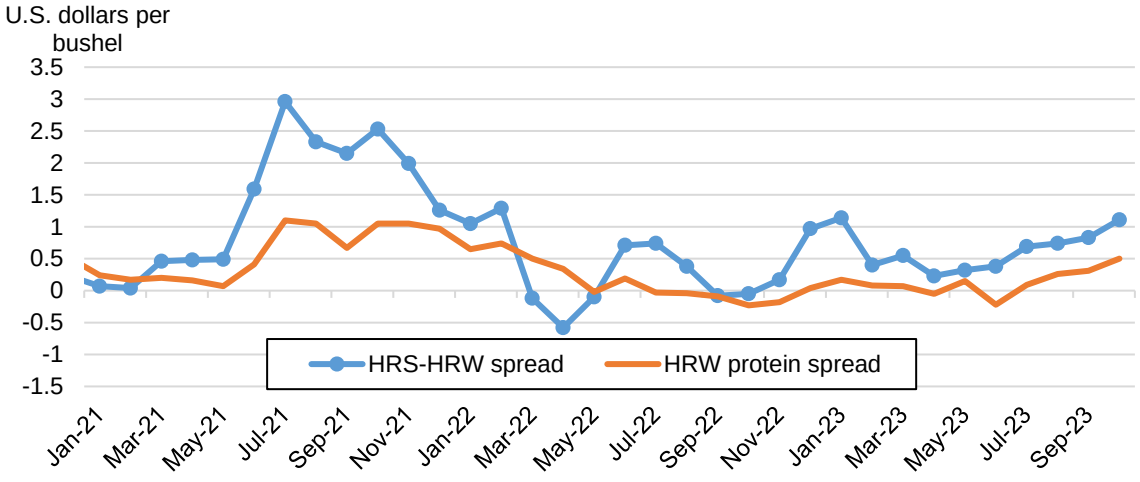
Figure 4
U.S. Hard Red Winter and Soft Red Winter prices, January 2014–October 2023



Note: Prices are monthly averages of daily quotes.
Source: USDA, Economic Research Service calculations using data from USDA, Agricultural Marketing Service.

This year's HRW crop was beset by drought, which tends to result in lower yields and a grain with higher protein levels. When higher protein wheat is more widely available, the associated price premium tends to fall. Earlier in 2023, when high protein HRW was relatively abundant, the price for HRW with 13 percent (high) protein was nearly the same price as grain with ordinary protein[1] (figure 5). Industry sources indicate that, in similar market situations, blending above average amounts of lower-protein, and lower-cost SRW with the smaller shares of high protein HRW is common and is reflected in mill grind notions associated with earlier months of the current marketing year. More recently, HRW with a slightly more normal protein content has returned to the market, signaling that previously abundant higher protein wheat supplies are being used. Millers seek a target protein level in the mill grind. As higher protein HRW supplies abate, relatively more average and lower-protein level grain is used to achieve the target protein level. In accordance, relatively more HRW is required in the mill grind mix, boosting proportional HRW content in the quarterly and annual food use calculation. Further, the price difference between ordinary HRW and 14 percent protein HRS wheat has also grown, providing additional support for greater inclusion of HRW in mill grind. The premium for HRS over HRW is still substantially lower than it was in late 2021 and early 2022, a period characterized by drought in HRS-producing regions which made the higher-protein spring wheat particularly expensive.

Figure 5
Price differential based on protein levels for wheat classes



HRS = Hard Red Spring; HRW = Hard Red Winter.
Note: Data presented here are monthly averages of daily quotes from USDA, Agricultural Marketing Service (AMS). HRS-HRW spread is the price differential between HRS wheat (14 percent protein) in Minneapolis and HRW (ordinary protein) in Kansas City. HRW protein spread is the price difference between 13 percent protein and ordinary protein for HRW wheat, Kansas City. For HRW, ordinary protein is less than 11 percent, or not specified.
Source: USDA, Economic Research Service calculations using data from USDA, AMS.

[1] For the purposes of the USDA, Agricultural Marketing Service price data, HRW ordinary protein is defined as less than 11 percent, or not specified.

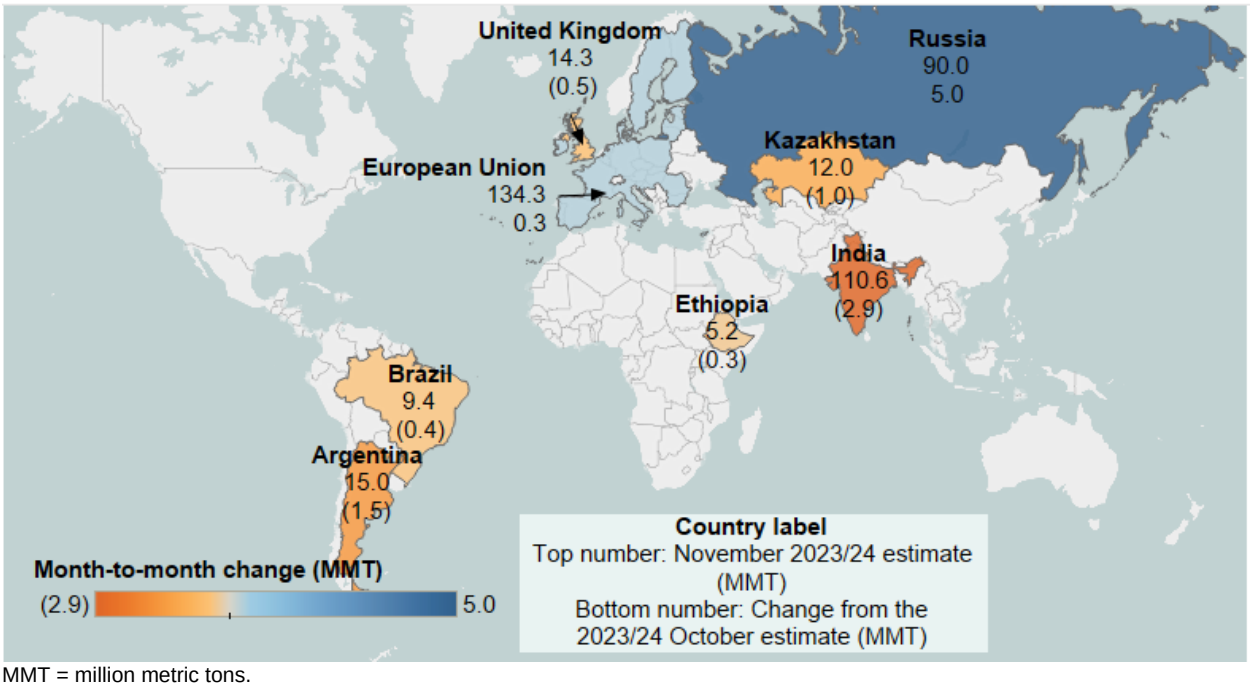
International Outlook

Global Wheat Production Lowered

The 2023/24 global wheat production is forecast down 1.5 million metric tons (MMT) to 782.0 MMT with smaller harvests for **India**, **Argentina**, **Kazakhstan**, the **United Kingdom**, and **Brazil** more than offsetting an upward revision to **Russia** (figure 6). India is revised down 2.9 MMT to 110.6 MMT, incorporating the final estimate from the Ministry of Agriculture. Argentina is reduced 1.5 MMT to 15.0 MMT based on lower yield resulting from prolonged dry conditions. Recent rainfall may have helped stabilize production in the Buenos Aires Province but appears to be too late for the Córdoba and Santa Fe Provinces, which tend to be planted and harvested earlier. Kazakhstan is down 1.0 MMT to 12.0 MMT, and Brazil is lowered 0.4 MMT to 9.4 MMT. Both countries experienced rain late in the production cycle, which is expected to reduce productivity and grain quality. The United Kingdom is lowered 0.5 MMT to 14.3 MMT on lower yield and area estimates from the official data source (the Agriculture and Horticulture Development Board). Russia is revised upward 5.0 MMT to 90.0 MMT based on harvest results with Russia's Ministry of Agriculture reporting that total wheat harvest is 97 percent complete as of November 2.

Figure 6

Month-to-month change in 2023/24 global wheat production, November 2023



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.

Global Wheat Consumption Lowered

Marketing year (MY) 2023/24 global wheat consumption is up 1.3 MMT to 792.5 MMT with larger feed and residual use more than offsetting a slight reduction in food, seed, and industrial (FSI) use. To match the statistics presented in the *World Agricultural Supply and Demand Estimates (WASDE*) report, adjusted consumption is calculated based on differences between exports and imports on a local MY basis. The aggregate difference, also referred to as "unaccounted trade," is revised down 1.3 MMT to 0.3 MMT as global exports are lowered while imports are up marginally. Total consumption plus unaccounted trade results in an adjusted consumption of 792.8 MMT, down fractionally from the October estimate.

Global feed and residual use is up 1.4 MMT to 157.8 MMT on a large upward revision to Russia's feed and residual (up 2.0 MMT to 20.0 MMT) based on its larger crop. Partly offsetting this revision, Kazakhstan is lowered 0.5 MMT to 1.0 MMT on lower domestic supplies. Global FSI use is lowered 0.1 MMT to 634.7 MMT on a multitude of smaller revisions. The largest revision is for India (up 0.6 MMT to 103.2 MMT) with larger consumption expected based on the recent announcement of the extension of food security programs.

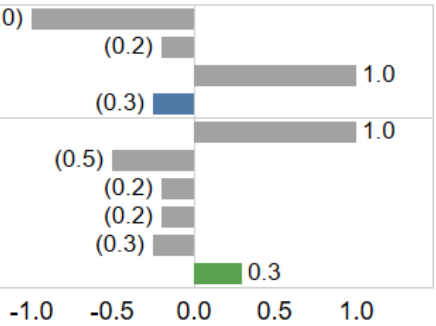
Global Wheat Trade Down Slightly

Global wheat trade in trade year (TY) 2023/24 (July/June) is lowered 0.3 MMT to 209.0 MMT (figure 7). Smaller supplies in **Argentina** drive down its export potential. **Ukraine** is raised based on the pace of shipments as exports flow through various modes of transportation. Shipments through the Black Sea have continued to a limited degree in spite of Russia's departure from the Black Sea Grain Initiative. **Egypt's** exports are revised slightly lower based on reduced flour demand from nearby markets. **China's** imports are increased based on the fast pace of purchases related to grain-quality issues in the domestic crop. Imports for **Egypt** are lowered based on pace of trade and limited foreign currency supplies. **Iran's** imports are reduced slightly on a slower recent pace and expectations for reduced FSI consumption. Imports are also lowered for the **Philippines** based on reduced demand for feed wheat. High prices in **Sri Lanka** are believed to be constraining imports and FSI consumption in that country.

Figure 7

Month-to-month change in 2023/24 wheat trade, November 2023

Attribute	Country/region	2023/24 October (MMT)	2023/24 November (MMT)	Month-to-month changes (MMT)
Trade year exports	Argentina	10.5	9.5	(1.0)
	Egypt	0.8	0.6	(0.2)
	Ukraine	11.0	12.0	1.0
	World total	209.2	209.0	(0.3)
Trade year imports	China	11.0	12.0	1.0
	Egypt	12.0	11.5	(0.5)
	Iran	4.0	3.8	(0.2)
	Philippines	6.1	5.9	(0.2)
	Sri Lanka	1.4	1.2	(0.3)
	United States	3.6	3.9	0.3



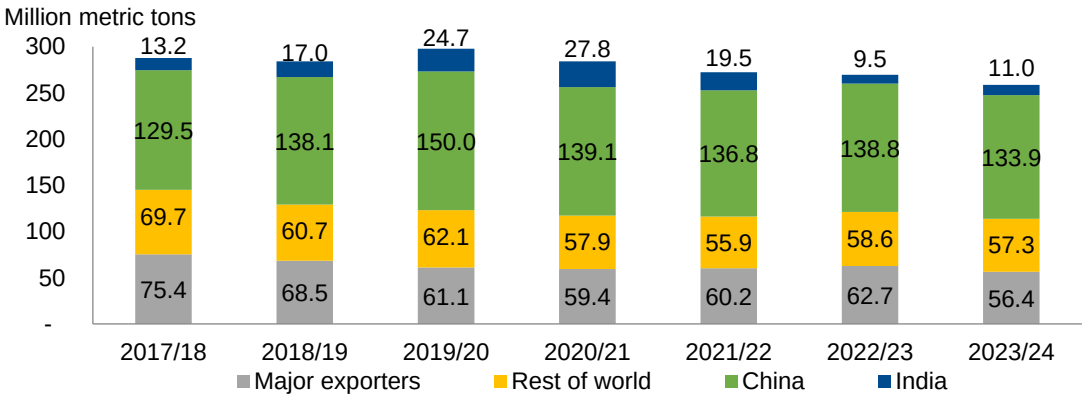
MMT = million metric tons.
Note: Changes less than 0.2 MMT are not included; month-to-month change is the difference between November 2023 and October 2023 estimates.
Source: USDA, Economic Research Service; USDA, Foreign Agricultural Service, Production, Supply and Distribution database.

Global Ending Stocks Forecast Larger

Global ending stocks are raised 0.6 MMT to 258.7 MMT (figure 8), largely driven by higher ending stocks for major exporters—up 3.4 MMT to 56.4 MMT. The largest revision among major exporters is for **Russia**, whose stocks are up 3.0 MMT to 11.9 MMT on larger production. The ending stock estimate for **Ukraine** is lowered 1.0 MMT to 3.1 MMT with expectations for larger exports. Outside of the major exporters, **China's** ending stocks are forecast up 1.0 MMT with larger imports. Stocks for **India** are revised 3.0 MMT lower to 11.0 MMT based on the smaller production estimate and expectations for larger consumption. Global ending stocks are still forecast to be the smallest since 2015/16.

Figure 8

Global ending stocks, 2017/18–2023/24



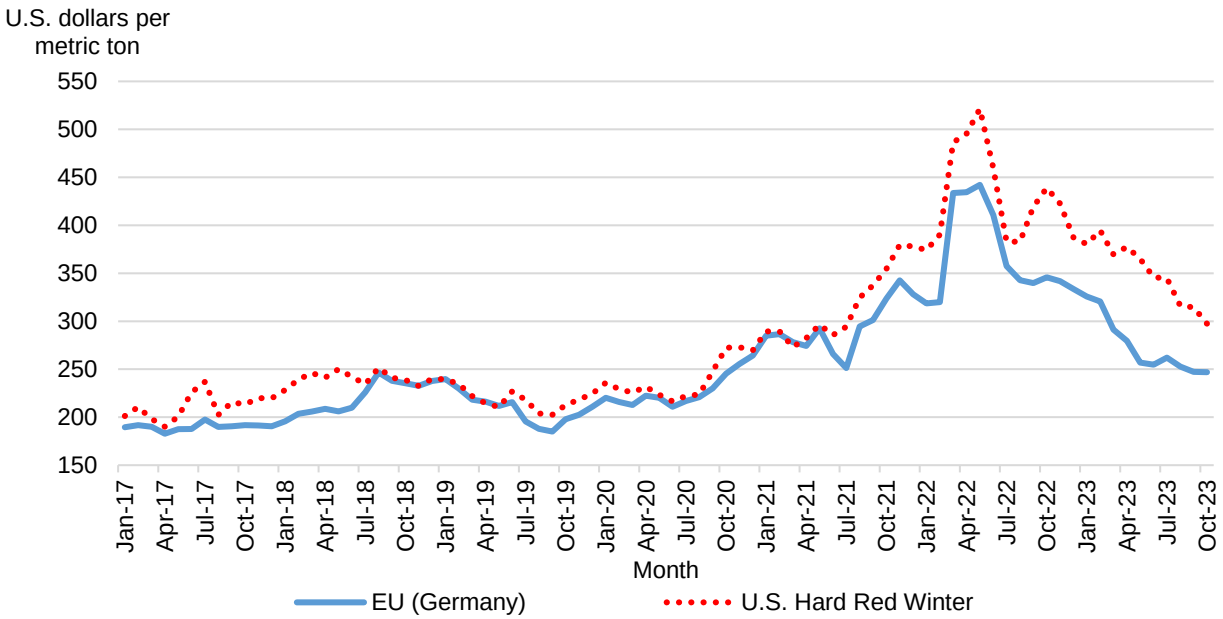
Note: 2023/24 data are forecasts. Major exporters include Argentina, Australia, Canada, the European Union, Kazakhstan, Russia, Ukraine, and the United States.
Source: USDA, Economic Research Service; USDA, Foreign Agricultural Service, *Production, Supply and Distribution* database.

Feature Article: Import Code Allocation Changed in Response to 2023/24 Trade Flows

Changing Trade Dynamics

In marketing years 2022/23 and 2023/24, U.S. Hard Red Winter (HRW) crops were stymied by major droughts that reduced yields and the proportion of planted wheat acres that were harvested. As a result, production volumes were reduced and HRW prices rose enough to become uncompetitive with some other U.S. wheat classes. Domestic millers adjusted their typical mill grinds, using more of the abundant Soft Red Winter (SRW) class as well as Hard Red Spring (HRS). Nonetheless, there is still a strong need for HRW in mill grinds, causing millers to look elsewhere to supplement domestic supplies. U.S. HRW export prices became very uncompetitive with comparable wheat supplies from the European Union (EU) (figure 9). Consequent to relatively high prices, HRW exports are forecast at the lowest level on record (by-class records extend to 1973/74). Furthermore, this strong price differential provided a price incentive for mills to consider nontraditional sources of imports.

Figure 9
U.S. and EU wheat prices, January 2017–October 2023



U.S. = United States. EU = European Union.
Note: Prices shown are the monthly average of daily freight-on-board quotes. The price quote from Germany is used to represent the EU; Poland and Germany have been the two major EU wheat suppliers to the United States this year.
Source: USDA, Economic Research Service calculations using data from International Grains Council.

Typically, almost all U.S. wheat imports are accounted for by Canada, primarily consisting of spring wheat and Durum. However, as overseas prices became more attractive in some locations in the United States in 2023, some U.S. buyers began to purchase wheat from the European Union (EU), specifically Poland and Germany. These countries typically produce higher protein wheat, which industry sources believe is intended to supplement U.S. HRW for domestic milling use. Some of these transactions are likely to have been agreed upon in the summer of 2023 when the freight-on-board (FOB) price differential between the U.S. HRW and EU sources was at its largest ($108/metric ton in May 2023). The gap has narrowed since then with HRW now holding only a $51/metric ton premium in October. From June through September 2023, 244,000 metric tons (MT) (9 million bushels) of EU wheat have been imported with more purchases reported to in process and forthcoming through the balance of the marketing year.

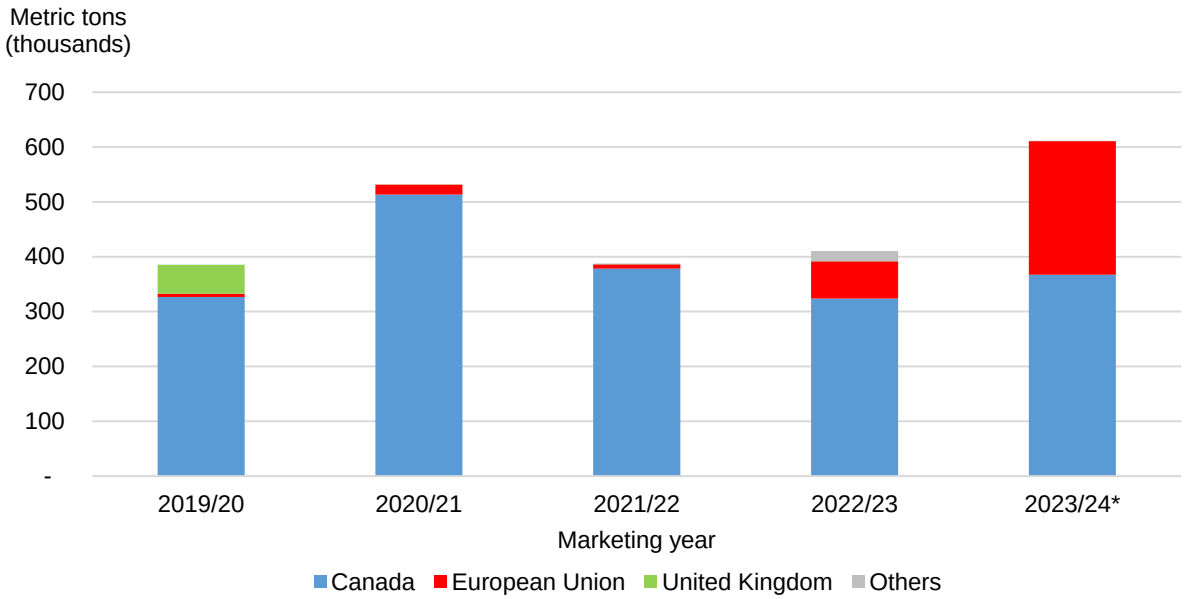
Challenges for Tracking U.S. By-Class Imports

The aforementioned wheat shipments have been imported using the Harmonized Tariff System (HTS) code 1001990097 (Wheat or meslin, except seed, not elsewhere specified). This code does not explicitly pertain to one class of wheat, but rather it has been assigned based on country of origin and usage. In the recent past, imports entering the United States under this code were allocated 75 percent to HRS and 25 percent to SRW. In most years, this HTS code is mainly used for imports from Canada (figure 10). The bulk of the imports from Canada under this code originate from the Prairie Provinces, which typically produce spring wheat most comparable to U.S. HRS.[2] Smaller trade volumes originate from Eastern Canada, which would more closely represent U.S. SRW imports. Given typical trade flows, the allocation of 75 percent to HRS and 25 percent to SRW was consistent with production patterns observed in Canada. With the surge in EU imports in this marketing year and associated differences in variety production patterns, a review of the wheat by-class allocation for the trade code in question, is warranted. Considering where the wheat imported from the EU originated, it is understood that

[2] Note that HTS 10-digit trade does not specify the Canadian province of origin. However, the aforementioned HTS 10-digit code makes up most of the trade in the underlying 6-digit Harmonized System (HS) code 100199. Canada's export data for this 6-digit HS code details the provinces from which the grain is exported. The vast majority of trade in the HS-6 code is from the Prairie Provinces (Alberta, Manitoba, and Saskatchewan). For more information, see the August 2018 Wheat Outlook special article that discusses trade flows of the HTS code 1001990096, a predecessor to the HTS code 1001990097 discussed here.

the imported wheat most closely resembles HRW. Accordingly, the relative wheat by-class allocation of the HTS code in question will be 40 percent to Hard Red Winter, 45 percent to HRS, and 15 percent to SRW to better reflect market realities for the 2023/24 marketing year.

Figure 10
U.S. imports of HTS 1001990097 by country of origin, 2019/20–2023/24



HTS = Harmonized Tariff System.
Note: This graph displays imports for HTS code 1001990097 for January 2022–present and HTS code 1001990096 for earlier periods.
*Marketing year-to-date (June–September available).
Source: USDA, Economic Research Service calculations using data from USDA, Foreign Agricultural Service, Global Agricultural Trade System.

In a typical year, shipments from the EU represent only a small portion of HTS code 1001990097 imports. For marketing year 2022/23, trade from the EU appeared in the later months, but it still represented only 17 percent of the imports for the season. In 2023/24, imports from the EU now represent 40 percent of the imports through 4 months. Monthly imports from the EU under this code peaked in July at 128,000 MT but declined to 32,000 MT in August and 61,000 MT in September. As noted earlier, U.S. HRW prices have converged slightly with other wheat suppliers in recent months, which has the potential to slow demand for imported EU wheat.

Data Methodology Change

Based on the market dynamics, the USDA, Economic Research Service (ERS) by-class import allocations are changed only for marketing year 2023/24. For this marketing year alone, USDA, ERS will now allocate 40 percent of the trade to HRW. The remaining portion will be allocated

per the usual ratio, resulting in an allocation of 45 percent to HRS and 15 percent to SRW. This by-class import allocation change is not intended to be applied to any future marketing years. The 2023/24 import allocation (and assumptions for future marketing years) could be adjusted later if trade patterns shift notably from current expectations.

Suggested Citation

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