



# Feed Outlook: May 2024

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## U.S. Feed Grain Supplies Are Expected To Increase in 2024/25

U.S. feed grain production is projected to be lower than a year ago due to lower expected acreage in 2024/25. Although production is down, the supply of feed grain is projected to be above the 2023/24 level. Corn is driving the increase in feed grain stocks and overall supply, following a record production year in 2023/24. Larger supplies are expected to prompt greater feed grain use, and ending stocks are projected higher for 2024/25, at 56.4 million metric tons, up 2.3 million metric tons from the already large ending stocks estimated at the end of 2023/24.

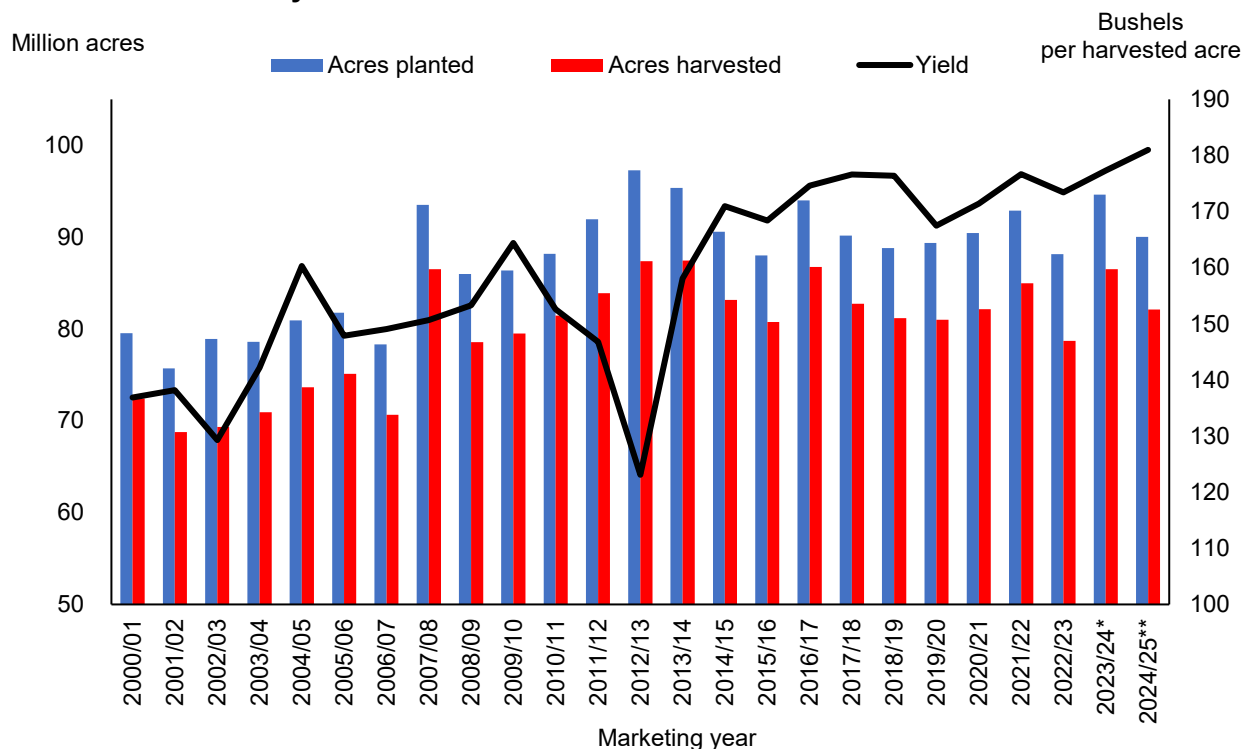
**Global** coarse grain production in 2024/25 is projected to reach 1,512.6 million tons, up 10.5 million tons from the previous year. Although U.S. coarse grain production in 2024/25 is expected to slip, it is more than offset by higher **foreign** production (global minus the United States), driven mostly by Brazil and the European Union. Expected lower export volumes for Argentina, Brazil, Russia, and Ukraine are projected to benefit the 2024/25 U.S. corn export campaign. Growth in global corn feed use more than offsets the projected reduction in food, seed, and industrial use. The net result is projected growth in corn domestic consumption and lower projected ending-global stocks.

# Domestic Outlook

## 2024/25 U.S. Corn Production Is Expected To be Lower on Reduced Area

In 2024/25, the U.S. corn crop is projected 482 million bushels below the 2023/24 production level, at 14,860 million bushels. The survey-based forecast from producers in the USDA National Agricultural Statistics Service's (NASS) *Prospective Plantings* report indicates for corn planted acreage to be 90.0 million acres, down 4.6 million acres from 2023/24. Corn-harvested acreage is projected at 82.1 million acres, based on historical abandonment and use for silage. The U.S. corn yield for 2024/25 is forecast at 181 bushels per acre, unchanged from the trend yield presented at USDA's Outlook Forum in February (see figure 1). Plantings started and progressed well at the start of April in the Western Corn Belt, and then slowed coming into May due to widespread storms. On the other hand, drier conditions in parts of the Eastern Corn Belt allowed plantings to progress after a slow start in April. Plantings in the southern and eastern States have progressed at or above average pace. These factors have allowed U.S. farmers to plant 36 percent of the intended U.S. corn crop acreage, as of the May 6 NASS *Crop Progress* report. The observed pace of plantings is 6 percentage points below last year, and 3 percentage points below the last 5-year average. Thanks to an overall good start of plantings in April, 12 percent of the overall U.S. corn crop has emerged, versus 10 percent a year ago. Furthermore, the recent rains in the Western Corn Belt have significantly helped soil moisture levels in needed areas and reduced the percentage of the crop under drought conditions, with 14 percent of the corn crop under drought conditions compared to 29 percent a year ago, according to USDA's World Agricultural Outlook Board report *Agriculture in Drought* on May 9.

Figure 1  
**U.S. corn acres and yields**



Note: Asterisk (\*) denotes estimate, (\*\*) denotes forecast.

Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, *Planting Intentions* report, and World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

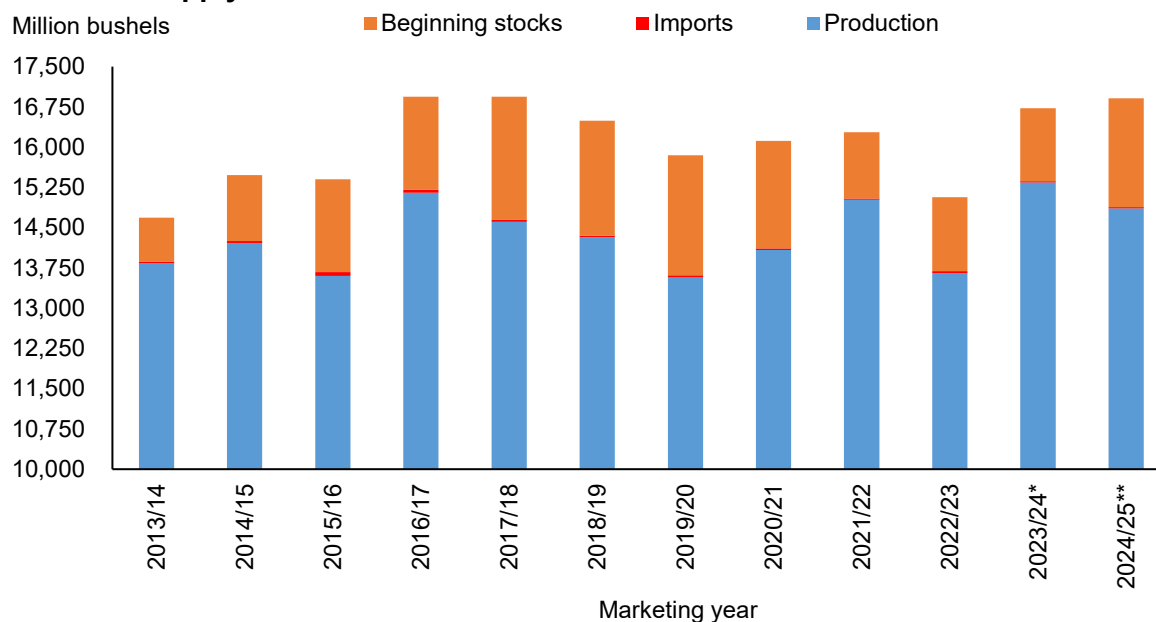
## Large Beginning Stocks Are Expected in 2024/25

2023/24 ending stocks are estimated at 2,022 million bushels, lower by 100 million bushels from the April USDA, *World Agricultural Supply and Demand Estimates (WASDE)* report.

Nonetheless, the 2024/25 U.S. corn-marketing year is expected to start with sizeable beginning stocks, 662 million bushels above the 2023/24 beginning stocks. U.S. corn imports are expected to remain stable in 2024/25 at 25 million bushels—unchanged from 2023/24 (see figure 2).

Thus, U.S. corn supply is projected to be 180 million bushels higher in 2024/25, after accounting for the partially offsetting year-over-year changes in beginning stocks and production. This larger supply is expected to place downward pressure on U.S. corn prices, incentivizing higher U.S. corn use.

Figure 2  
**U.S. corn supply**



Note: Asterisk (\*) denotes estimate, (\*\*) denotes forecast.

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

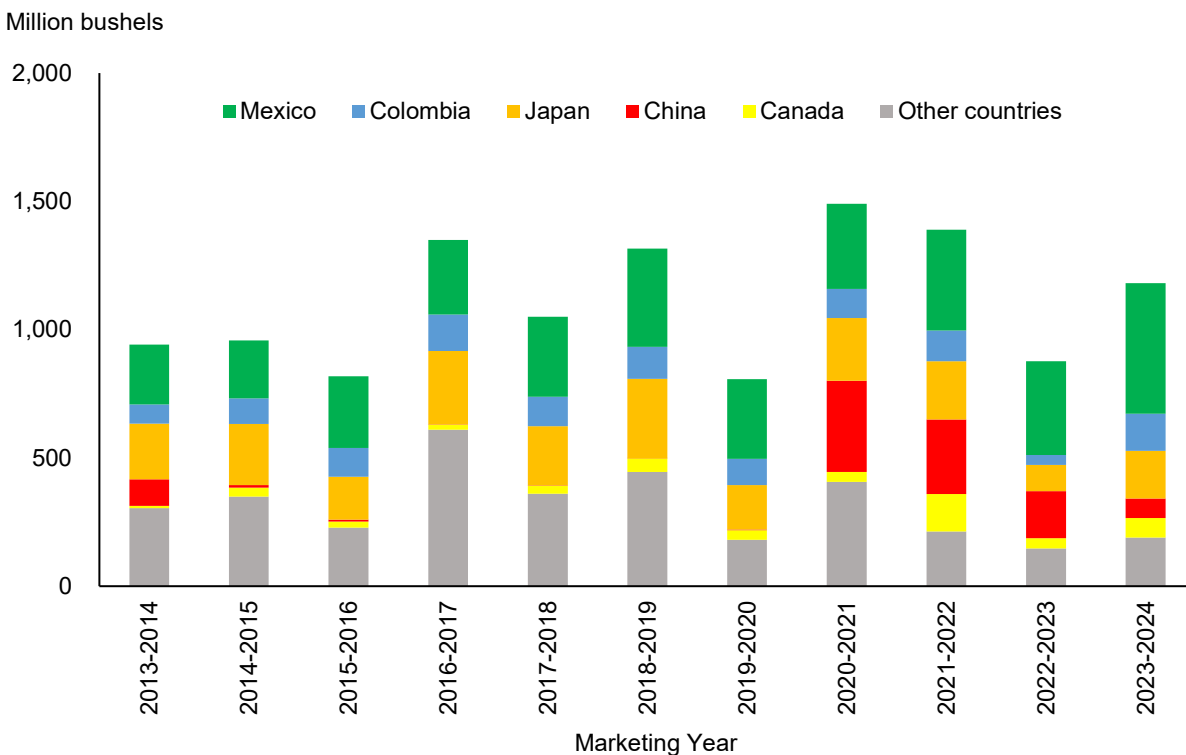
## Corn Exports Are Up for 2023/24 and 2024/25 on Strong Demand

The 2023/24 corn export estimate is raised by 50 million bushels from the April *WASDE* report to 2,150 million bushels. U.S. corn exports totaled 1,181 million bushels through March, according to data from the U.S. Department of Commerce, Bureau of the Census. U.S. corn exports are well above 876 million bushels exported in the same period in 2022/23.

Furthermore, total commitments of corn exports (accumulated exports shipped, combined with remaining outstanding sales), reported by USDA's Foreign Agricultural Service (FAS) as of May 2, stands at 1,875 million bushels compared to 1,511 million bushels at the same time last year.

Due in part to Mexico's poor corn harvest, cumulative U.S. corn exports to Mexico in 2023/24 (September-March) have exceeded last year's volume by 145 million bushels, totaling 509 million bushels. Accounting for 43 percent of total U.S. exports thus far, Mexico is the top destination for U.S. corn exports in 2023/24. After Mexico, top U.S. corn export destinations include Colombia, Japan, China, and Canada (in respective order by largest volume). U.S. corn exports to China were 77 million bushels, well below the levels exported during the same period in the last 3 years (see figure 3).

Figure 3  
**U.S. corn exports, September through March**



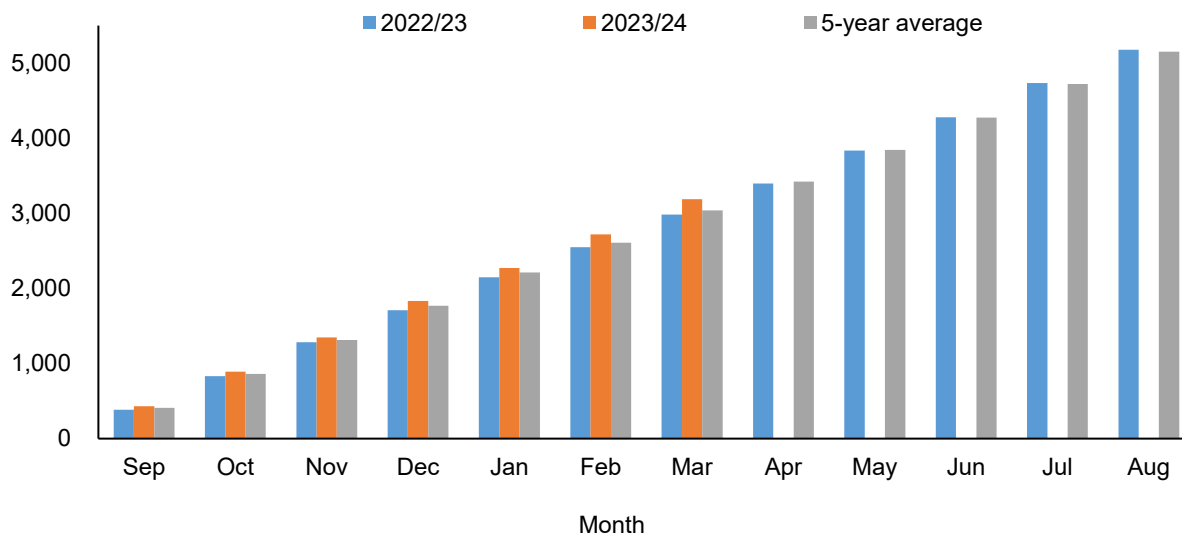
Source: U.S. Department of Commerce, Bureau of the Census.

Exports of corn in 2024/25 are projected to be 2,200 million bushels, 50 million bushels above the current marketing year. Mexico is expected to continue strong corn imports from the United States (with continuing demand from the feed industry) as it recovers from this year’s low production level. Furthermore, projections of lower corn export volumes for Argentina, Brazil, Russia, and Ukraine support a higher 2024/25 U.S. corn export forecast (see [International section](#)).

## Domestic Use Is Higher for 2023/24 and 2024/25

The 2023/24 food, seed, and industrial corn use (FSI) is raised by 50 million bushels this month to 6,855 million bushels, with similar expectations for 2024/25. NASS’s *Grain Crushings and Co-Products Production* data show 3,187 million bushels of corn used to produce ethanol through March, representing a 7-percent increase in corn used to produce ethanol versus a year ago (see figure 4).

Figure 4  
**Cumulative U.S. corn for ethanol use**  
 Million bushels



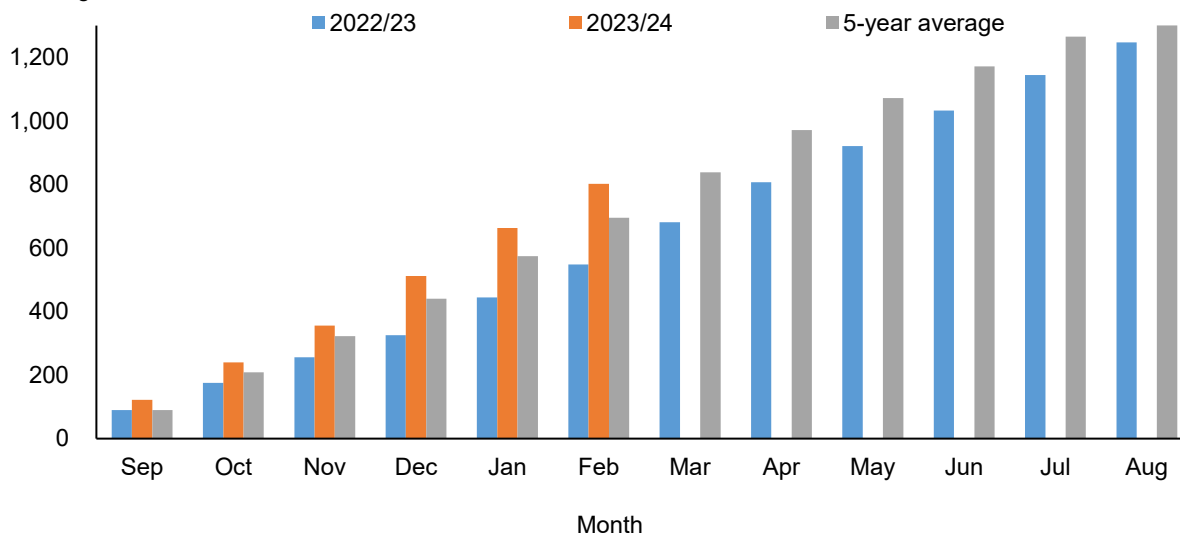
Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, *Grain Crushings and Co-Products* Production report.

With strong levels of crushing, and, considering that low corn and ethanol prices (compared to gasoline) foster favorable blending margins, the 2023/24 corn use for ethanol production is raised by 50 million bushels from the April *WASDE* report, at 5,450 million bushels. Strong ethanol exports also support U.S. ethanol production (see figure 5). Supply and demand expectations for 2024/25 U.S. corn are expected to cultivate similar demand for corn use in ethanol production. Thus, based on expectations of essentially flat motor gasoline consumption, the 2024/25 ethanol use for corn is expected at 5,450 million bushels. Lastly, 2024/25 corn feed and residual usage is expected at 5,750 million bushels, 50 million bushels more than in 2023/24, on larger supply and continuing feed demand for corn at low prices.

Figure 5

### U.S. cumulative ethanol exports

Million gallons



Source: USDA, Economic Research Service using data from U.S. Department of Energy, Energy Information Administration, *U.S. Exports of Fuel Ethanol*.

## Large 2024/25 Corn Stocks-to-Use Ratio Weighs on Prices

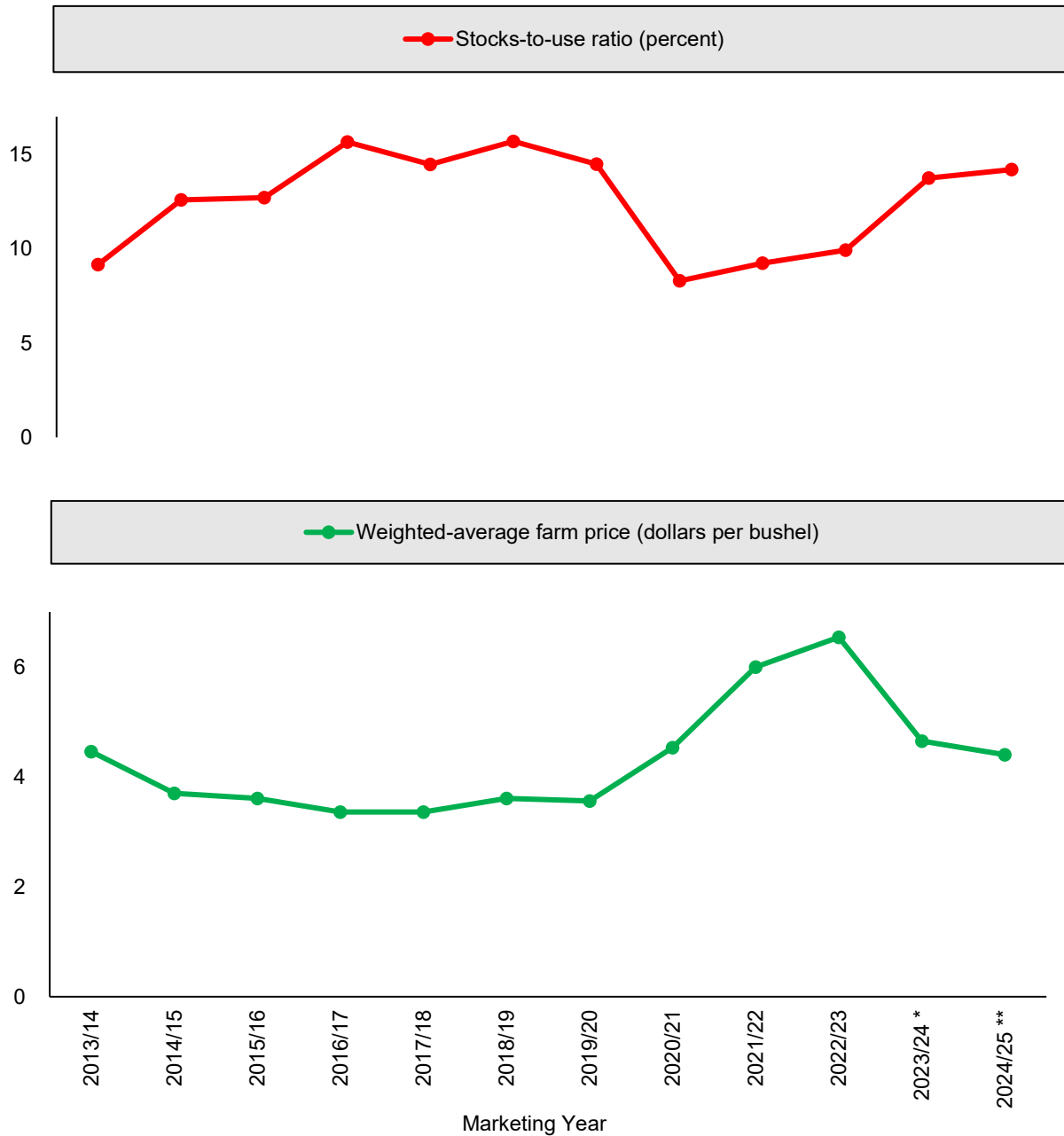
Ultimately, ending stocks for the 2024/25 corn marketing year are projected to be 80 million bushels more than a year ago. The projected 2024/25 ending stocks-to-use ratio is 14.2 percent. The stocks-to-use ratio is higher than the current estimate of the 2023/24 U.S. corn marketing year at 13.7 percent.

For 2023/24 the season-average farm price for corn is estimated at \$4.65 per bushel. This price is lowered \$0.05 per bushel from the April *WASDE* report to align with reported prices to date and expectations of future market conditions until the end of the marketing year. With a larger stocks-to-use ratio projected, the 2024/25 season-average farm price is projected to be \$4.40 per bushel, down 25 cents from 2023/24 (see figure 6).

Figure 6

### U.S. corn stocks-to-use and farm prices

Percent or dollars per bushel



Note: (\*) denotes estimate, (\*\*) denotes forecast.

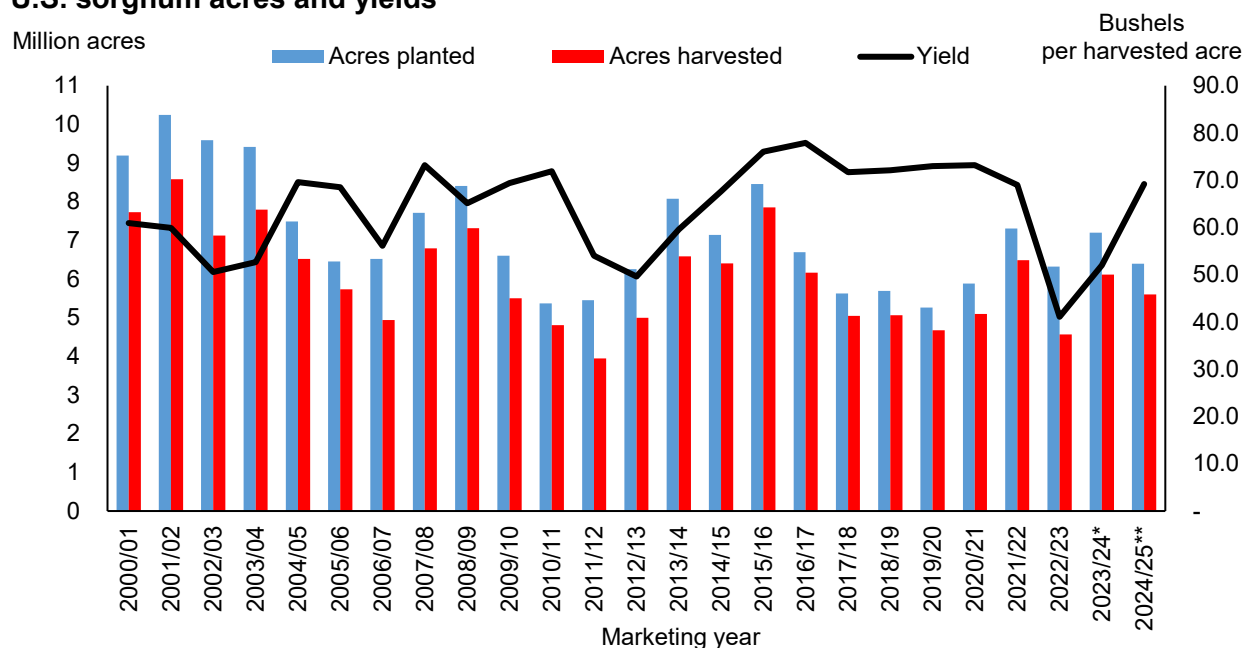
Source: USDA *World Agricultural Supply and Demand Estimates* report.



# Improved Drought Conditions Drive Higher Sorghum Production on Lower Acres

NASS's *Prospective Plantings* report indicates a decrease of 0.80 million acres of sorghum planted from a year ago, with acres planted at 6.395 million. Harvested acres are projected at 5.6 million acres. Yields are forecast at 69.3 bushels per acre, based on the 2004–23 median yield (see figure 7). Plantings have progressed in a timely manner, according to NASS's *Crop Progress* report as of May 6. Most of the sorghum crop, 71 percent, has been planted in Texas, and 23 percent of the entire U.S. crop is in the ground. The U.S. average pace of plantings is on pace with a year ago and 1 percentage point ahead of the 5-year average. Starting off this year's planting and growing season, drought conditions affecting areas of production have not been as severe as the last couple of years. Sorghum areas in areas of moderate to severe droughts currently stand at 53 percent, according to the May 9 USDA, World Agricultural Outlook Board report *Agriculture in Drought* report. This number compares to 77 percent a year ago and 90 percent a couple of years ago where drought conditions ranged from moderate, severe, extreme, and exceptional. Drought conditions going forward will remain important to monitor, as drought conditions remain in Kansas, given the State's importance in overall U.S. sorghum acreage and production.

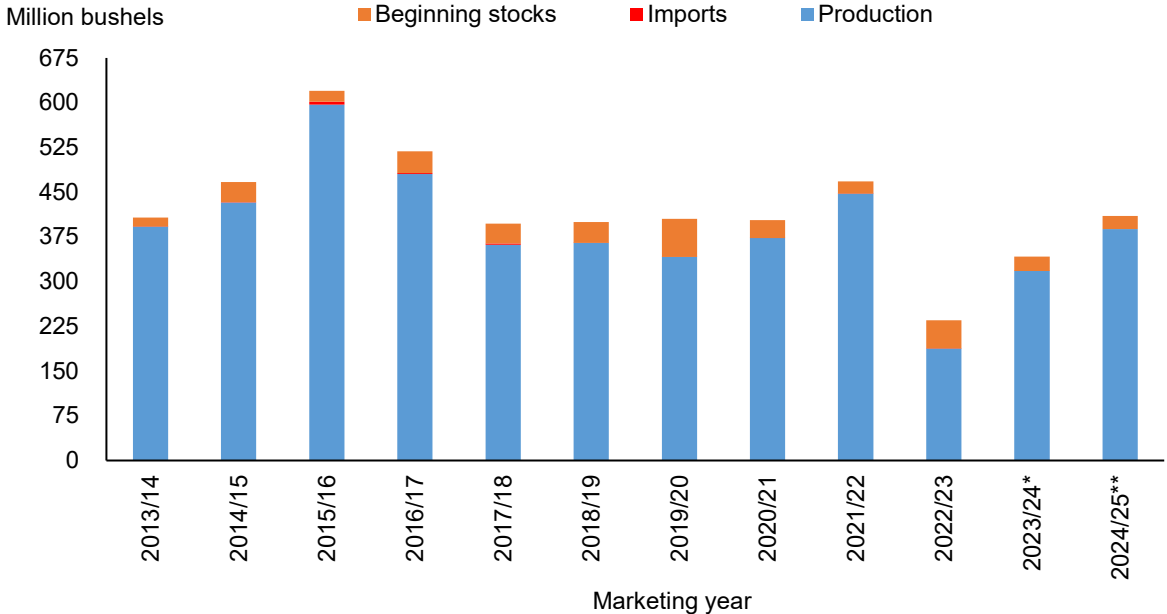
Figure 7  
**U.S. sorghum acres and yields**



Note: Asterisk (\*) denotes estimate, (\*\*) denotes forecast.  
Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, *Planting Intentions* report, and World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

2024/25 U.S. sorghum production is projected at 388 million bushels, 70 million bushels above a year ago, as the effect of the expected recovery in yields more than offsets the effect of the loss of acres on production. With 22 million bushels of stocks estimated to be carried into 2024/25, the supply of U.S. sorghum in 2024/25 is expected to exceed last year's available supply by 68 million bushels (see figure 8).

Figure 8  
**U.S. sorghum supply**

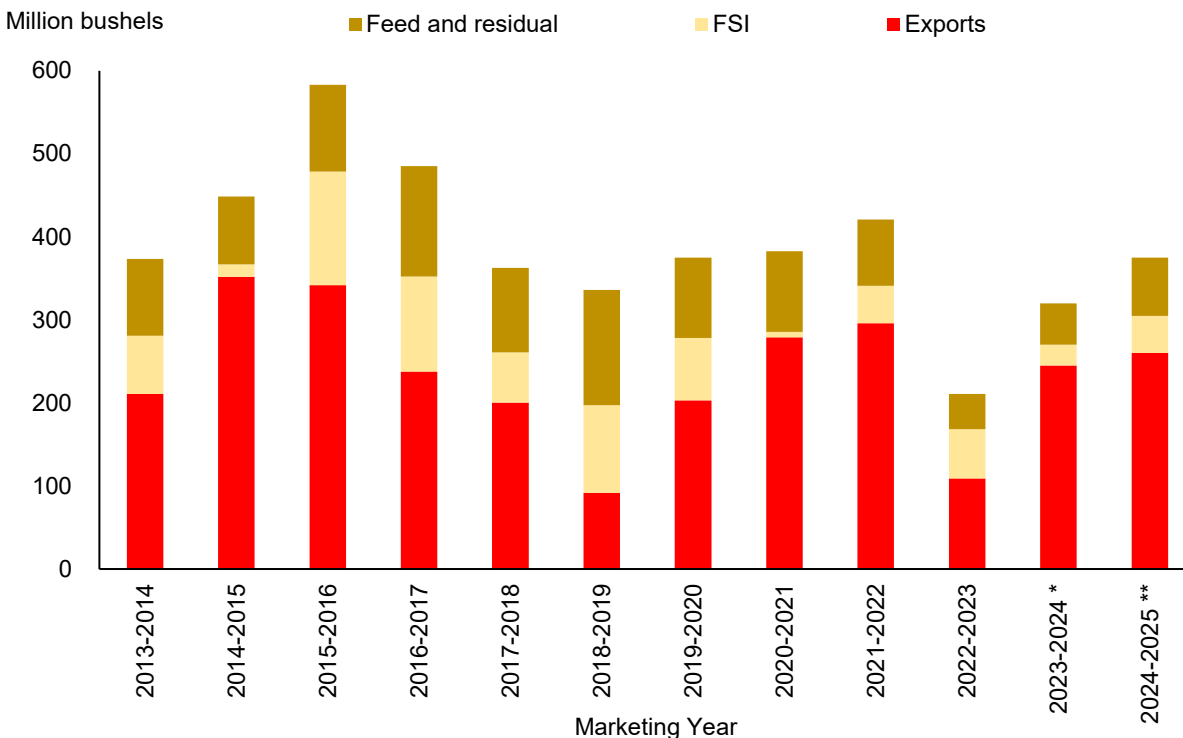


Note: Asterisk (\*) denotes estimate, (\*\*) denotes forecast.  
Source: USDA, Economic Research Service using data from USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

Projecting a more readily available supply of sorghum, the United States is expected to remain competitive in the global trade market. Consequently, U.S. exports are expected to grow by 15 million bushels in 2024/25 to 260 million bushels. After coming back from 2 poor years of production due to drought and low yields, a larger share of total supply is also expected to be used domestically for feed and residual use, as well as for FSI (see figure 9).

The current estimate of 2023/24 sorghum exports remains unchanged at 245 million bushels. While sales of sorghum for exports have slowed down in the last few weeks, 203 million bushels of sorghum have been already committed, exported, or sold, for exports.

Figure 9  
**U.S. sorghum use**



Note: (\*) denotes estimate, (\*\*) denotes forecast.  
 Source: ERS calculations based on USDA *World Agricultural Supply and Demand Estimates* report.

## 2024/25 Sorghum Season-Average Price Is Down With Higher Feed Grain Supplies

The sorghum stocks-to-use ratio is expected at 9.3 percent in 2024/25 compared to 6.9 percent in 2023/24. With the expected recovery in the 2024/25 U.S. sorghum production (as well as larger supply of corn) sorghum prices received by farmers are expected to be lower in 2024/25, at \$4.40 per bushel. This price compares to \$4.90 per bushel in 2023/24, which is up \$0.05 per bushel from the April *WASDE* report, on account of reported prices to date and future market expectations for the remainder of the marketing year.

## Large Beginning Stocks and Smaller 2024/25 Barley Production

Barley is forecast to start its 2024/25 season with 76 million bushels carried over from the previous crop year. If realized, this would be the largest volume of barley stocks carried over since 2020/21. Total production of barley for the upcoming year, however, is expected to be

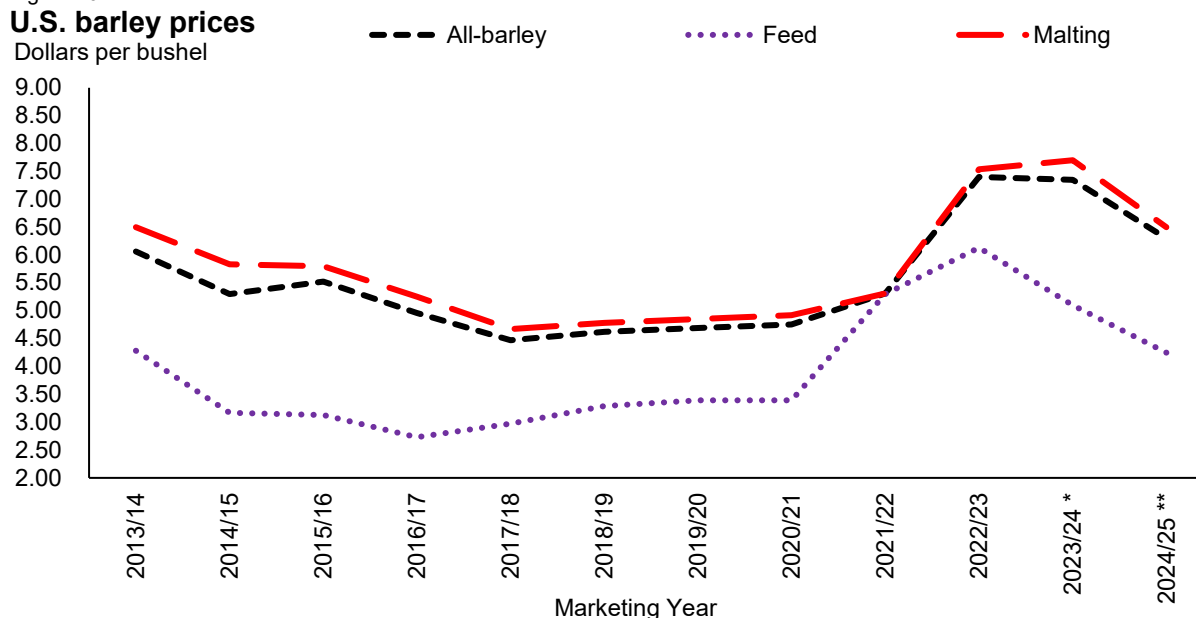
lower than in 2023/24 due to a significant reduction in planted acres. Acres planted are forecast to be 17 percent below last season, according to NASS *Prospective Plantings* report. Planting pace of the 2024/25 crop has progressed well, with 47 percent of the crop in the ground as of NASS's May 6 *Crop Progress* report. Planting progress exceeds last year by 14 percentage points and the 5-year average period by 3 percentage points. Yields are forecast at 76.7 bushels per acre, using trend, versus 72.4 bushels per acre a year ago. As a result, overall barley production is forecast at 161 million bushels for 2024/25, 24 million bushels below 2023/24. Based on the observed pace of barley imports to date, 2023/24 imports of barley are lowered to 14 million bushels, down 1 million bushels from the April *WASDE* barley import forecast. Barley imports for 2024/25 are expected to remain at 14 million bushels. The net effect is a 14 million reduction in total supply projected for 2024/25.

Domestic usage of barley is projected to decrease in tandem with supply. Overall usage of barley for feed and residual and FSI in 2024/25 is projected at 170 million bushels, with a combined reduction of 15 million bushels in usage from the current year. Ending stocks for 2024/25 are projected at 78 million bushels, 2 million above last year. With projections for ample stocks of barley, as well as other feed grains, all-barley prices received by farmers are forecast at \$6.30 per bushel for 2024/25 versus \$7.35 per bushel during 2023/24. Feed-barley prices for 2024/25 of \$4.25 per bushel are down from this year's estimate of \$5.10, in conjunction with an expectation of a larger feed grain supply. Malting-barley prices are projected at \$6.50 per bushel, down from \$7.70 in 2023/24 (see figure 10).

Figure 10

**U.S. barley prices**

Dollars per bushel



Note: (\*) denotes estimate, (\*\*) denotes forecast.

Source: USDA, Economic Research Service using data from Feed Grains Database, May 2024.

## Oats Supply Is Lower

Supply of oats in 2024/25 is projected to be 11 million bushels below the 2023/24 marketing year level. The decrease in supply is almost entirely attributed to a decrease in production, with beginning stocks forecast at 34 million bushels, only 1 million bushels below 2023/24. A smaller crop of 47 million bushels (versus 57 million) in 2023/24 is expected due to a combination of fewer acres being planted, and yields forecast using trend.

The 2024/25 U.S. oats crop is off to a good start, with plantings happening at a fast pace compared to last season. As of May 6, NASS indicated that 70 percent of the crop had been planted and 49 percent emerged, well above last year's progress at this same time (47 percent and 39 percent, respectively). Imports of oats, mainly from Canada, are forecast to remain unchanged at 75 million bushels. While Canada is expected to increase acres of oats planted from last year, acreage intended for oats remains lower than years past and beginning stocks in the country are well below the previous year.

With lower oats supply available, domestic demand is expected to be down 4 million bushels, at 127 million bushels, with lower expectations for feed and residual use. Oats exports are projected to be unchanged year on year at 2 million bushels. Ending oats stocks for 2024/25 are expected to be 27 million bushels, 4 million bushels below 2023/24.

Considering the most recent prices reported, the oats average price received by farmers for 2023/24 is raised 10 cents per bushel from the April *WASDE* report, to \$3.90. With no major changes expected in supply and demand, oats prices for 2024/25 are projected at \$3.60 per bushel.

# International Outlook

## Global Coarse Grain Production Is Expected To Grow in 2024/25

**Global** coarse grain production in 2024/25 is projected to reach 1,512.6 million tons, up 10.5 million tons from the previous year. Although U.S. coarse grain production in 2024/25 is expected to slip 11.1 million tons from 2023/24, **foreign** production (global minus the United States) is expected to increase by 21.6 million tons.

The projected growth in global coarse grain production is not bolstered by expectations of a larger 2024/25 corn crop. Although the largest reduction is expected in the U.S. corn crop, reduced corn output is projected for other major producers (and exporters) like Argentina, Ukraine, and Russia. Nevertheless, **foreign** corn production is expected to grow by 4 million metric tons in 2024/25, albeit by less than the amount the United States is expected to decline. A steep increase in global barley production is the largest contributor to growth in world coarse grain production, up 5.5 percent to 149.9 million metric tons. Sorghum, oats, and rye output are also projected higher than last year, offsetting lower corn output.

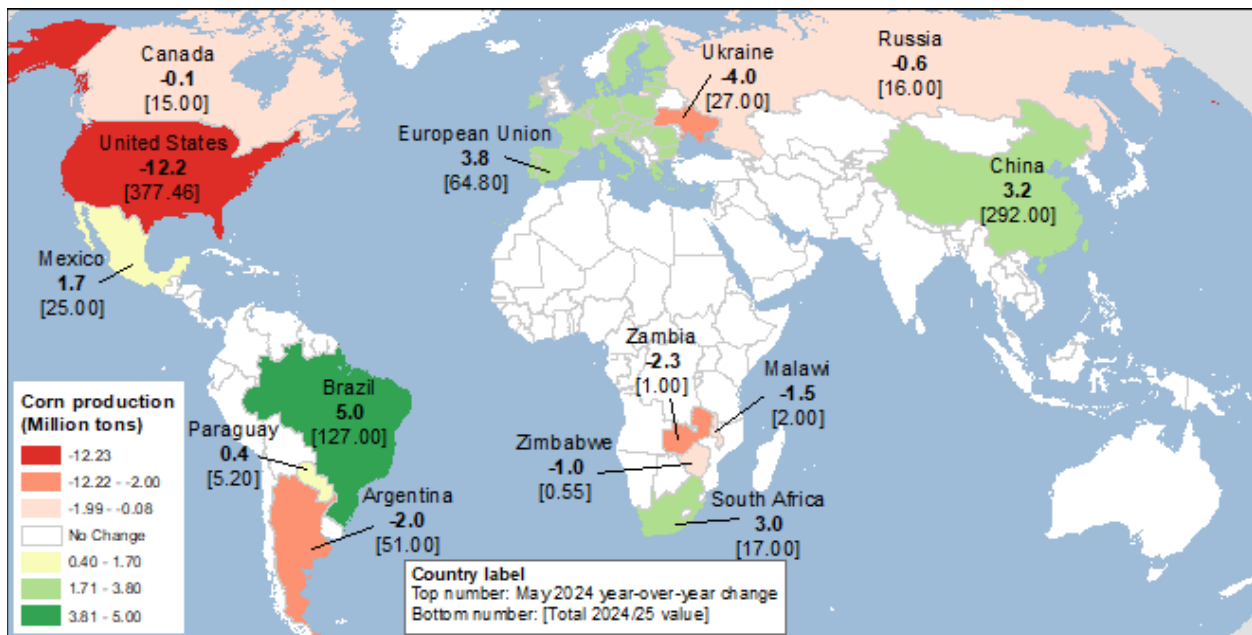
World corn area is projected 1 percent lower, with the largest reduction in the United States, followed by Sub-Saharan Africa and Argentina. The prospect of higher profit margins is expected to entice the United States, Argentina, and many other countries to shift area planted to oil crops in lieu of corn. Producers in Sub-Saharan Africa are expected to reduce harvested corn area by 4.5 percent in 2024/25, coming out of this year's drought.

Harvested sorghum area is expected to increase slightly in 2024/25, relative to 2023/24. Higher projected areas in Argentina, Ethiopia, and Nigeria are complemented by incremental changes in numerous other countries to slightly outpace expected declines in the United States, Zimbabwe, and India.

The May 2024 initial world coarse grain supply and demand projections are highly tentative since spring planting is still underway in the Northern Hemisphere and remains months away in the Southern Hemisphere (where the 2023/24 crop is still being harvested). Consequently, coarse grain **yields** are projected at trend levels for many countries, implying normal weather—average precipitation and temperatures. However, for fall planted coarse grains, such as winter barley in the Northern Hemisphere, yield prospects can be better assessed. In fact, conditions are favorable in the European Union—where 2/3 of the barley crop is planted in the winter.

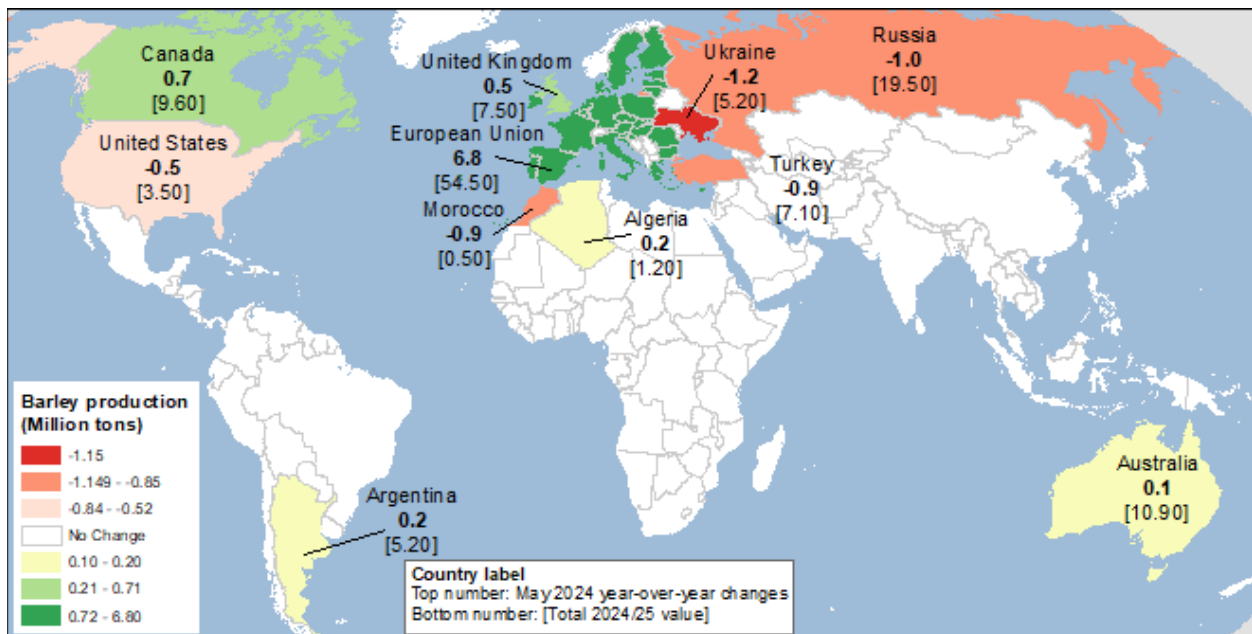
Maps A and B below visually present the forecasts for major corn and barley producers, and year-over-year changes in projected corn and barley output.

**Map A – Major changes in corn production for 2024/25**



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

**Map B – Major changes in barley production for 2024/25**



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

This is particularly evident for France and Germany. Combined with better conditions in Spain relative to last year, EU barley yields are projected higher for 2024/25 and contribute to an overall higher global barley yield forecast. The start of the spring season in North Africa brings mixed conditions. In particular, Morocco is experiencing a serious drought. Consequently, Morocco's barley output is projected at the lowest level since 2000/01 at 0.5 million tons and contributes to its record low coarse grain production forecast of 0.57 million tons—a 60 percent decline from 2023/24. This drought extends to western Algeria which is experiencing precipitation issues. The drought is strongest in the western portion of Africa, with conditions improving heading east. In Tunisia, for example, crops received favorable rainfall. In general, the Middle East has also benefited from abundant rainfall, supporting growing conditions thus far.

The average world coarse grain yield in 2024/25 is projected to reach 4.49 tons per hectare, fractionally higher than the 2023/24 estimated yield of 4.46 tons per hectare. Although the global corn yield is projected marginally higher in 2024/25 relative to last year, a return to trend yields is assumed. This includes Russia and Ukraine, where yields are expected to be slightly lower following 2023/24 highs.

Sorghum yields are also projected slightly higher in 2024/25, as the United States continues to recover from under-performing crops over the last 2 years and South Africa recovers from drought. Large boosts in EU oats yields—especially in Spain, Sweden, Denmark, and Germany—contribute to growth in 2024/25 global oats yields. An expected recovery in Australia and Canada further supports the boost in overall world oat yields. World rye yields are expected to slip slightly in 2024/25 as modest increases are only expected in the United States, Canada, and the European Union. Complemented by a boost in Kazakhstan, these expected increases in yields are not enough to offset declines elsewhere. The largest decline is expected in the United Kingdom with a reversion to a trend yield.

USDA monitors production of various commodities in more than 200 countries. USDA's Foreign Agricultural Service (FAS) records and continuously updates this data, which are reflected in FAS's *Production, Supply, and Distribution* database. The most important developments in the new forecast for major commodities are published in FAS's *World Agricultural Production* report.



## 2024/25 Regional/Country Coarse Grain Production Prospects

**China** is the largest coarse grain and corn producer after the United States, with 2024/25 coarse grain production projected to reach 300.3 million tons, up 3.2 million year over year. Corn constitutes the largest share of China's coarse grain production, accounting for 292.0 million tons in 2024/25. With yields expected to align with 2023/24, the corn output growth is driven by an expected increase in harvested area. Anticipations of growing corn production in China bring the harvested area forecast up just over 1 percent. Although there is growing support by the Chinese Government to produce corn and soybeans in select regions, a shortage of labor and aging farm workforce has slowed area growth. Moreover, China corn farmers produced an estimated [record] crop in 2023/24. Combined with hefty corn import volumes in 2023/24, China is expected to carry over a larger volume (up 4.8 million tons to 210.9 million tons) of stocks into 2024/25.

Coarse grain production in the **European Union** is projected sharply higher, up 12.2 million tons to 148.2 million in 2024/25. The European Union is expected to plant slightly more corn this year, largely accounted for by France. Although the area gain is partly offset by reduced yields, France—the largest corn producer in the region—is expected to account for 18 percent of the expected growth in EU corn output for 2024/25. A hefty contribution is also projected by Romania, with an expected recovery in yields boosting projected output by about 1 million tons to 11.3 million tons. While corn helps boost the expected increase in EU coarse grain output for 2024/25, projected gains in barley output account for nearly 55 percent of the total increase. Conditions in Spain are improved from last year, lifting yields and driving a large portion of the increase in EU barley production. The European Union is expected to slightly increase oats area harvested in 2024/25, further contributing to higher coarse grain output.

Coarse grain production for **Sub-Saharan Africa** for 2024/25 is estimated up 0.4 million tons year over year, to 124.9 million. At the end of 2023, this year's El Niño reached maturity—greatly impacting the south-central part of the African continent. Rainfall totals over the central part of the south of Africa were the lowest in the past four decades in many areas, including major producing areas in Zambia and Zimbabwe, placing this region in an exceptional (D4) drought. These conditions have wielded intense ramifications for many major producers, prompting national emergency declarations for Malawi, Zambia, and Zimbabwe. For reference, this phenomenon is being classified as worse than the 1992 El Niño drought (which was

considered the worst Southern African Development Community (SADC) food insecurity drought during the modern era).

Large reductions in harvested area are expected in major Sub-Saharan Africa corn producing regions, bringing total harvested area down by 4.5 percent relative to the already reduced 2023/24 estimate. For both Zambia and Zimbabwe, corn production is expected to fall by more than 60 percent, by more than 50 percent in Mozambique, and more than 40 percent in Malawi. Because South Africa follows a different crop calendar (the harvest of 2023/24 corn will start in May 2024), the impacts of this drought were limited to the 2023/24 crop. For the 2024/25 calendar, a slight uptick is expected in area, and with an expected return to trend yields, production is up by 3 million tons and offsets the majority of the projected decline in Sub-Saharan Africa corn output.

The **South America region**, one of the most dynamic and fast-growing corn producing areas in the world, is forecast to modestly increase coarse grain area by 1.5 percent and produce 210.7 million tons of coarse grains in 2024/25, 5.1 million tons higher than last year. Corn is the region's dominant grain, of which more than 90 percent is produced by **Argentina** and **Brazil**. Although Brazil is expected to grow corn acres in 2024/25, Argentina's harvested corn area is projected to fall as farmers are expected to plant alternative (soybean) crops with higher profit margins. Combined, Argentina and Brazil corn harvested area is projected to increase by 200,000 hectares year over year.

These countries' trend in corn yields is strong, but they are also prone to extreme weather conditions that affect yields. An expected return to trend yields for Argentina corn partly combats reduced area, bringing the 2024/25 production forecast to 51 million tons, representing a 2-million-ton year-over-year decline. Corn yields in Brazil are relatively unchanged in 2024/25. Combined with a 3.7 percent increase in harvested area, production prospects are raised 5 million tons over 2023/24 to 127.0 million tons.

**Ukraine's** 2024/25 coarse grain production is expected to sharply decline, down 5.3 million tons to 33 million. For the past few years, farmers in Ukraine have been disrupted by Russia's military invasion. One major impediment included difficulty obtaining inputs necessary for farming (e.g., fertilizers, agrochemicals, and seeds). However, such issues turned out to be not as pronounced—mitigating these concerns regarding reduced crop acreage. Although total planted crop area is projected to be similar to the previous year, the distribution of these crops is expected to change in 2024/25. The prospect of higher profitability is expected to incentivize farmers in Ukraine to increase oilseed production. Consequently, this comes at the expense of

projected corn and barley output—which are down 4.0 and 1.2 million tons, respectively, from last year.

**Russia** coarse grain production is projected to decline by just over 1 million tons in 2024/25, totaling 41.5 million tons. The winter barley planting campaign is complete and low rates of winterkill are expected, as periods of cold weather occurred during periods of snow. This contributes to reduced abandonment expectations for the winter barley crop.

Spring barley, on average, accounts for roughly 90 percent of total barley production in Russia. However, in some regions of Russia, it is common for winter and spring crops to compete for area. Due to higher winter wheat plantings, spring crops are expected to account for a slightly lower total area in 2024/25. As a result, overall barley area is projected 2-percent lower year over year. So far, weather has been mostly favorable across Russia's major spring barley growing regions. Because yields are expected to revert to trend levels from last year's higher levels, this compounds the projected decline in barley production to total 1 million tons, lower than last year and projected at 19.5 million tons in 2024/25.

Harvested corn area is projected to increase in **Russia** for 2024/25. Although area is expected to increase in 2024/25, corn yields are expected to fall below high levels from the 2023/24 crop and align with trend yields. These competing changes result in a net reduction of 3.6 percent in projected Russia corn output for 2024/25.

In **India**, where coarse grains are mostly used for food, a year-over-year increase in production of 0.6 million tons to 56.7 million tons is expected in 2024/25. With corn production expected to remain flat year over year, this increase can be attributed to a larger barley crop. For barley, the expected growth in harvested area more than offsets the slightly lower yield forecast, bringing the production forecast to over 2.1 million tons. Although millet area is 500,000 hectares lower than last year at 9 million hectares, a return to normal yield levels is expected to lift output levels by 5 percent. This growth in coarse grain output more than compensates for the year-over-year projected loss in sorghum output. With area down by more than 7 percent, the expected bump in yields is not enough to combat such a magnitude and draws sorghum output down to 4.2 million tons.

**Canada** is projected to produce 28.7 million tons of coarse grains in 2024/25, up 1.5 million. Planting intentions reported by Statistics Canada indicate increased area for corn and oats, but lower barley area. USDA estimates Canada corn harvested area nearly unchanged from last year at 1.5 million hectares.

## World Coarse Grain Use To Grow Modestly in 2024/25

Increased competition among exporters and steadily declining prices in 2023/24 boosted coarse grain feed and residual use projections around the globe. Prices are expected to remain attractive for users in 2024/25, and the growth rate in coarse grains feed consumption for the world is projected to be 2.5 percent, aligning with the consistent growth rate of just under 3 percent over the past two decades. This growth happens partly on account of an increase in (mainly corn) consumption in the United States (driven by the growing supplies and lower prices) and increased feed and residual use in China, Brazil, the European Union, and South Africa. Consumption of all coarse grains is projected higher for 2024/25, with an exception in world rye and mixed grains consumption.

China, the largest coarse grain feeder in the world, is expected to feed an additional 6.7 million tons of coarse grains (6 million tons more of corn, 0.5 million tons more of sorghum, 0.1 million tons more of barley, and less than 0.1 million tons more of oats). With expected recoveries in the 2024/25 EU corn and barley crops, feed use is expected to sharply increase—particularly for barley. As previously mentioned, the European Union is expected to lean more heavily on domestic supplies of coarse grains in 2024/25 than foreign supplies like in 2023/24.

Food and industrial use (FSI) of coarse grains is expected to increase by 0.5 million tons in 2024/25. Although offset by increases in other countries, the total expected decrease in FSI coarse grain consumption by Sub-Saharan Africa is nearly 1.9 million tons. The largest reductions are expected in Zambia, Malawi, and Zimbabwe.

Similarly, Zambia, Malawi, and Nigeria account for more than 80 percent of the 4.1-million-ton reduction in 2024/25 global corn FSI use forecast. Sizeable gains in sorghum and millet FSI use more than offset this reduction, with gains in oats and barley aiding in the year-over-year coarse grains FSI growth.

## Brazil and Argentina Production Forecasts Are Cut for 2023/24

Global coarse grain production for the current year 2023/24 is forecast at 1,502.1 million tons, down 3 million tons, mainly due to cuts in corn production estimates for Argentina and Brazil. Although corn output is projected to slip by 2 million tons in each country, India cuts the 4-million-ton reduction in half with area gains. As the Rabi crop is nearly harvested, there are indications that the second-crop area was higher than anticipated. India's projected corn area is

raised 0.6 million hectares, bringing the 2023/24 production forecast up by 2 million tons to 37.5 million. Information included in the most recent Food and Agriculture Organization of the United Nations (FAO) Crop and Food Supply Assessment Mission (CFSAM) report indicates that Sudan's sorghum area is 1.5 million hectares lower than anticipated. Combined with slightly lower yields, Sudan's sorghum output is 1.9 million tons lower this month. Coarse grain output is also cut this month for Nigeria, down 1.7 million tons to 19 million. This decrease is largely driven by a 0.95-million-ton reduction in the corn crop, with lower sorghum and millet accounting for the remaining 0.75 million tons.

While 2023/24 harvests in the Northern Hemisphere were generally completed months ago, important Southern Hemisphere crops are in critical stages of development. Brazil's 2023/24 second-crop (safrinha) corn is currently going through key reproductive stages. Ideal weather conditions in the Center-West, specifically Mato Grosso and Goiás, are expected to support strong yields. However, yields in the South (Paraná and Mato Grosso do Sul) are expected to suffer as a result of poorer weather conditions. The conflicting impacts are expected to be counteractive, keeping yields unchanged this month. However, area is trimmed by 0.4 million hectares to 21.5 million this month as high production costs and low domestic prices at the time of planting made corn relatively less attractive to producers. This change brings the 2023/24 Brazil corn production forecast down to 122.0 million tons.

The 2023/24 Argentina corn crop is also lowered this month, and estimated at 53 million tons. Although early planted corn crops are reporting good yields, adverse weather and wide-spread leafhopper(s) are expected to impact yields for later planted corn. By early May, an estimated 22 percent of the 2023/24 corn crop was harvested. Considering recent developments and their probable impacts, yields are lowered by 4 percent.

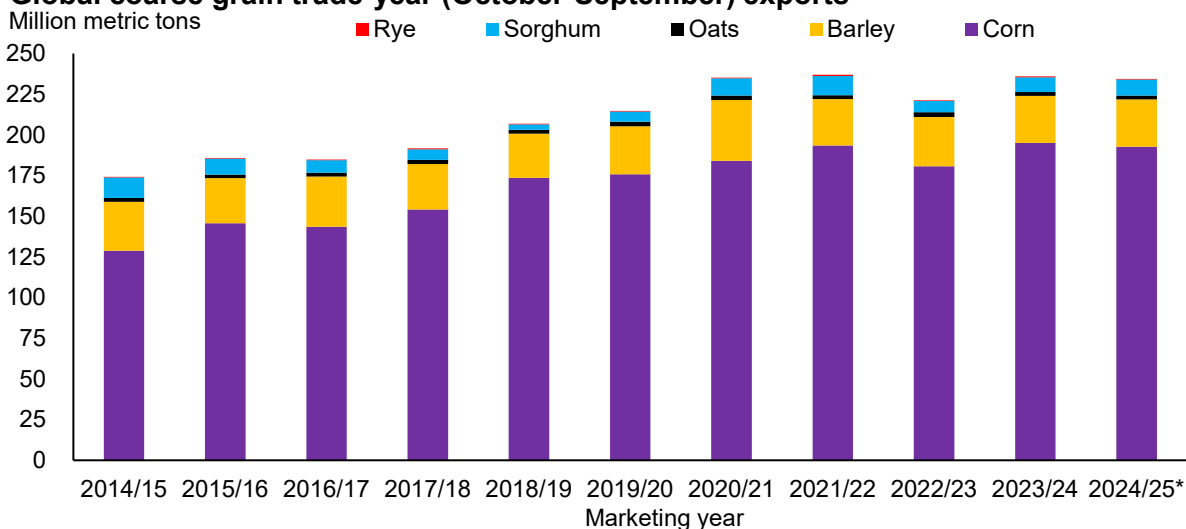
Reductions in corn production estimates for Argentina and Brazil are not expected to impact domestic corn use, but rather exports. More specifically, each country is expected to reduce 2023/24 (trade-year) export volumes by 1 million tons. Ukraine is expected to capture a portion of the global market share lost by these countries, bringing Ukraine's trade-year export forecast up by 1.5 million tons to 26 million.

# Global Coarse Grain Trade Is Projected To Slip in Trade Year 2024/25

Global coarse grain trade in October-September 2024/25 is projected to contract, falling 1.5 million tons to 234.4 million tons from the 2023/24 estimate (see figure 11). This reduction is primarily driven by expectations of lower corn trade. Rye trade prospects are also lower for 2024/25, however, the projected reduction pales in comparison to the anticipated decline in global corn trade. Exports in the October-September trade year are expected to rise for all other coarse grains.

Figure 11

## Global coarse grain trade-year (October-September) exports



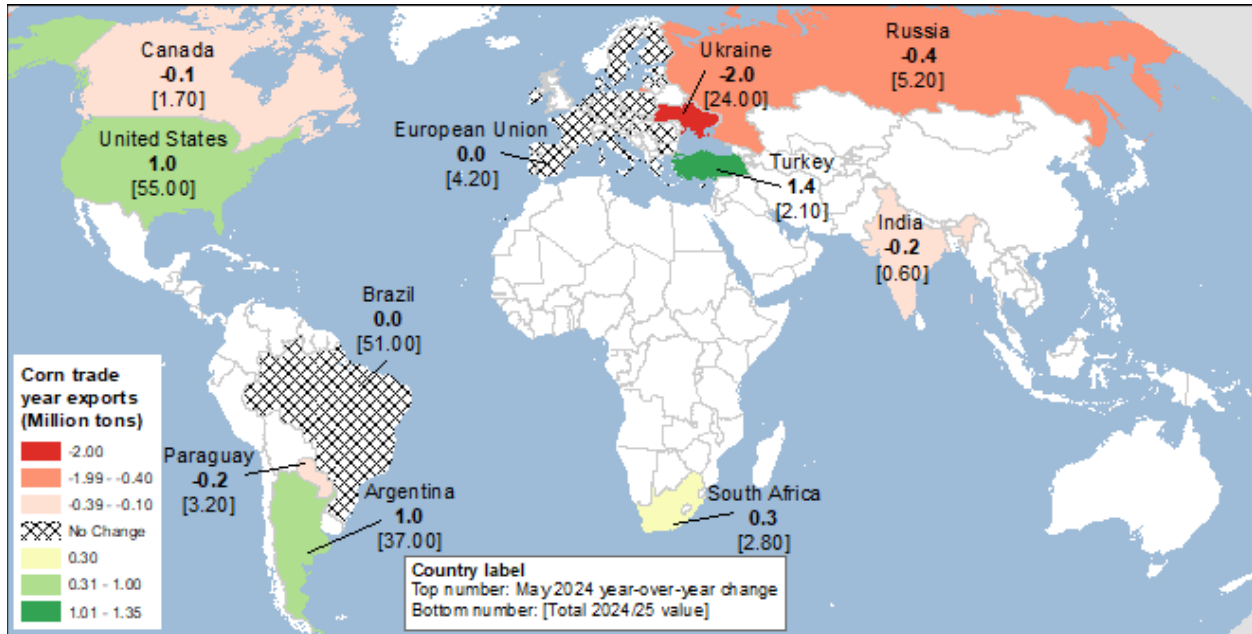
Note: Asterisk (\*) denotes forecast.

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

World corn exports for trade year 2024/25 are expected to fall in tandem with global output, down by 1.2 percent (or 2.4 million tons) to 192.7 million tons. This is prevalent in Ukraine and Russia, where lower beginning stocks are expected to exacerbate the impact of lower output on supplies available for export. Conversely, corn output is projected to increase in some importing countries, like the European Union—reducing reliance on foreign supplies to satisfy domestic needs. Lastly, ample supplies and subdued global corn prices in 2023/24 provided many importing countries with the opportunity to replenish stocks, impacting 2024/25 global export prospects.

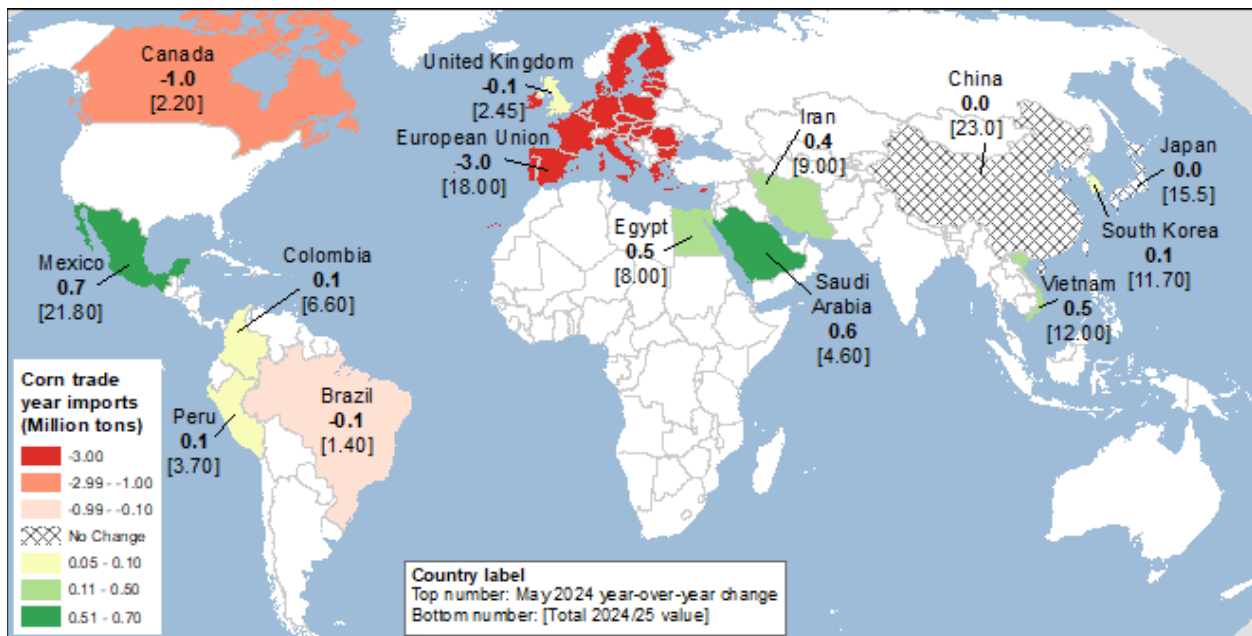
See map C for a summary of year-over-year changes in corn exports and map D for corn imports.

### Map C – Major changes in corn exports for 2024/25



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

### Map D – Major changes in corn imports for 2024/25



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

World barley trade is projected to remain relatively stable in trade year 2024/25, slightly up from 2023/24. A recovering EU barley crop is expected to satisfy domestic needs, while also capturing a larger share of the global export market. The projected increase in EU barley exports will largely account for the anticipated decline in Australia's contribution to global barley trade. Following an underperforming barley crop in 2023/24, Australia is expected to rebuild supplies in 2024/25. However, Australia's dwindling barley stocks limit the ability to boost exports. Russia is also expected to harvest fewer barley hectares in 2024/25, ultimately reducing output. With fewer supplies available, Russia's barley export forecast is lower in trade year 2024/25 relative to last year. Saudia Arabia, the world's second largest barley importer, is expected to benefit from larger barley exporters' supplies in 2024/25. After 4 consecutive years of declining barley imports, a rebound in imports (up to 400,000 tons to 3.0 million tons) is expected to lift overall supplies. Anticipations of a lower Australian barley crop are expected to impact the world's largest barley importer (China). China is expected to import a smaller volume of barley in 2024/25, down 2 percent to 10 million tons. If realized, China's imports would constitute 35 percent of total barley imports.

Global sorghum supplies are projected to rise in 2024/25. China, the world's largest sorghum importer, is expected to import 8.0 million tons in 2024/25, up 0.5 million tons from last year, because of expectations for lower global sorghum prices. Although the majority of sorghum trade exists between the U.S. and China, Australia and Argentina are expected to expand their contributions to the global sorghum export market in trade year 2024/25.



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