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Feed Outlook: October 2021

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Projected U.S. Feed Grain Supply Slightly Higher for 2021/22 on More Production and Carryin

Projected corn production is raised to 15,019 million bushels for 2021/22, according to the National Agricultural Statistics Service's most recent *Crop Production* report. Projected corn use for 2021/22 is lowered to 14,780 million bushels, with lower domestic use partially offset by higher exports. The projected season-average farm price for 2021/22 remains at $5.45 per bushel—an increase from the $4.53 per bushel reported for 2020/21. Projected sorghum production for 2021/22 is raised to 471 million bushels on higher yield forecasts. Projected feed and residual use and ending stocks are both raised, as well, with the season-average farm price lowered from $5.85 per bushel to $5.45.

World 2021/22 coarse grain production is projected lower this month. While foreign corn production revisions are mostly offsetting, output for all other coarse grain is projected lower. U.S. corn exports are projected higher, while trade-year-basis foreign corn grain trade is reduced—led by lower ***Brazilian***, ***Russian***, and ***Ukrainian*** exports. Barley trade is partly shifting from ***Canada*** and ***Russia*** to ***Australia***, as the latter continues to reshape its barley export trade map in response to China's imposition of tariffs on Australian barley that render imports by private enterprises economically unviable.

Domestic Outlook

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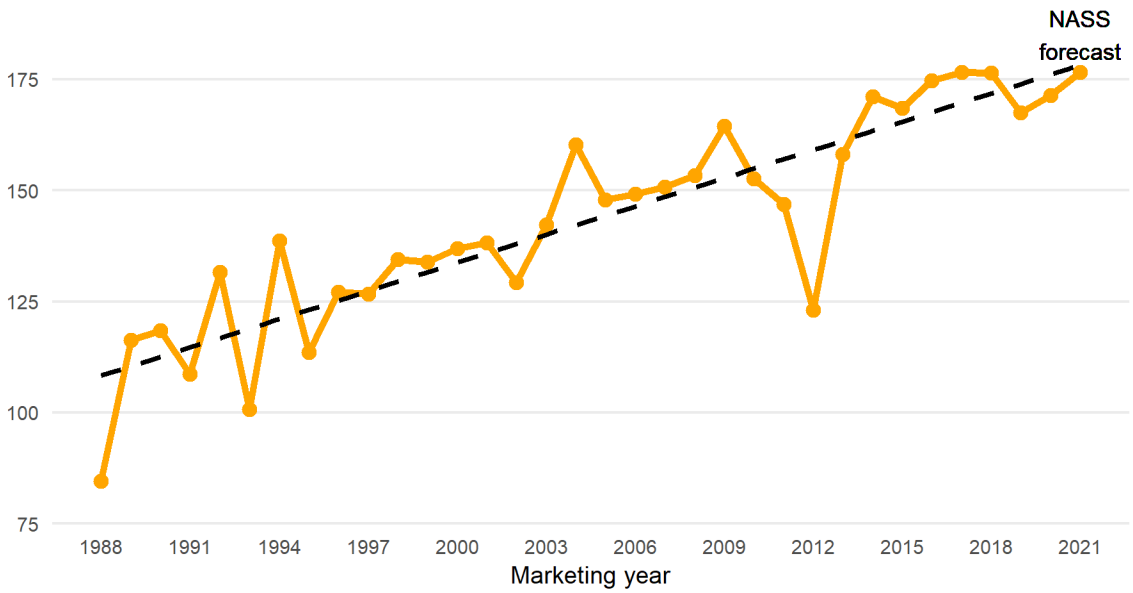
U.S. Corn Production Raised Slightly for 2021/22

Corn supplies are projected to be higher in 2021/22 according to the latest *World Agricultural Supply and Demand Estimates* (*WASDE*), with both beginning stocks and production slightly higher than the previous report. Corn production in 2021/22 is projected to total 15,019 million bushels according to the National Agricultural Statistics Service's (NASS) latest *Crop Production* report. The total represents a 23-million-bushel increase from the September *Crop Production* report.

The increase in projected production is due to a raised national yield forecast—now at 176.5 bushels per acre compared with the September forecast of 176.3 bushels. Area harvested remains unchanged from September at 85.1 million acres.

Figure 1
Corn yields, United States, 1988 to 2021 projection
Bushels per acre



Source: USDA, National Agricultural Statistics Service.

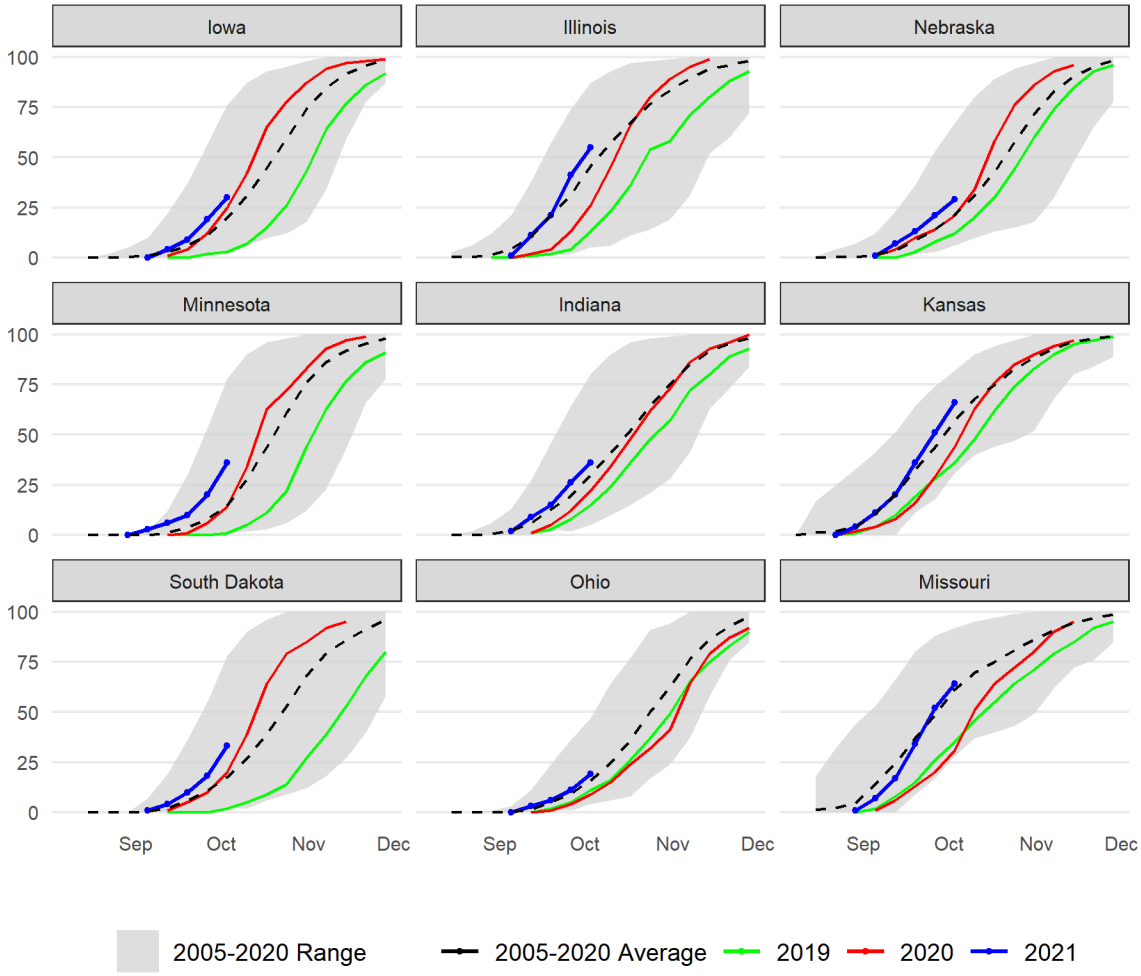
The corn harvest continues to move at a steady rate through early October. According to NASS's *Crop Progress* report, through October 3, the U.S. corn harvest was 29 percent complete compared with 15 percent in 2020/21 and a post-2005 average of 21 percent. The

same trends hold for most of the major corn-producing States as well—with the harvest pace ahead of 2020/21 and in line with longer-term averages. The trends in the *Crop Progress* report are corroborated by NASS's Objective Yield Survey data in the *Crop Production* report. The report shows that 90 percent of corn samples processed in a lab for the October report were either in the dent or mature stage of development. This rate is consistent with a typical harvest.

Figure 2

Corn harvest progress by State, 2005 to 2021

Percent complete

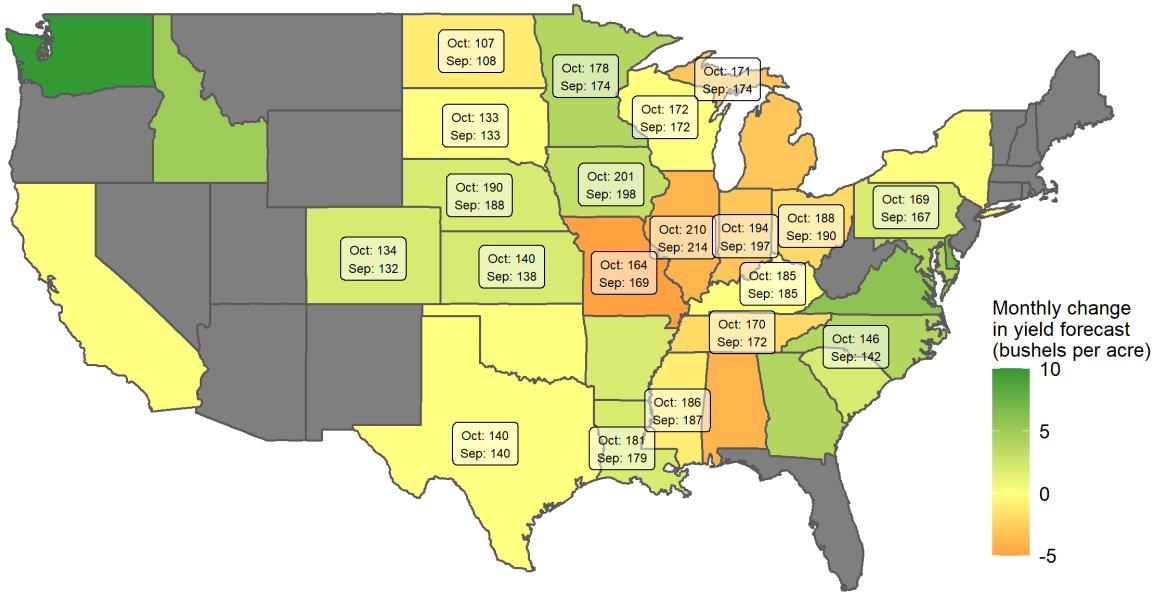


Source: USDA, National Agricultural Statistics Service.

Yield forecasts in the Eastern Corn Belt were reduced, including in: Illinois (down 4 bushels per acre to 210), Indiana (down 3 bushels per acre to 194), and Ohio (down 2 bushels per acre to 188). Changes to forecasts for Western Corn Belt States were predominantly raised, including: Iowa (raised 3 bushels per acre to 201), Minnesota (raised 4 bushels per acre to 178), Nebraska (raised 2 bushels acre to 190), while South Dakota remained unchanged at 133 bushels per acre.

Figure 3

U.S. corn forecast yield and month-to-month change, bushels per acre, by State, 2021/22 crop marketing year

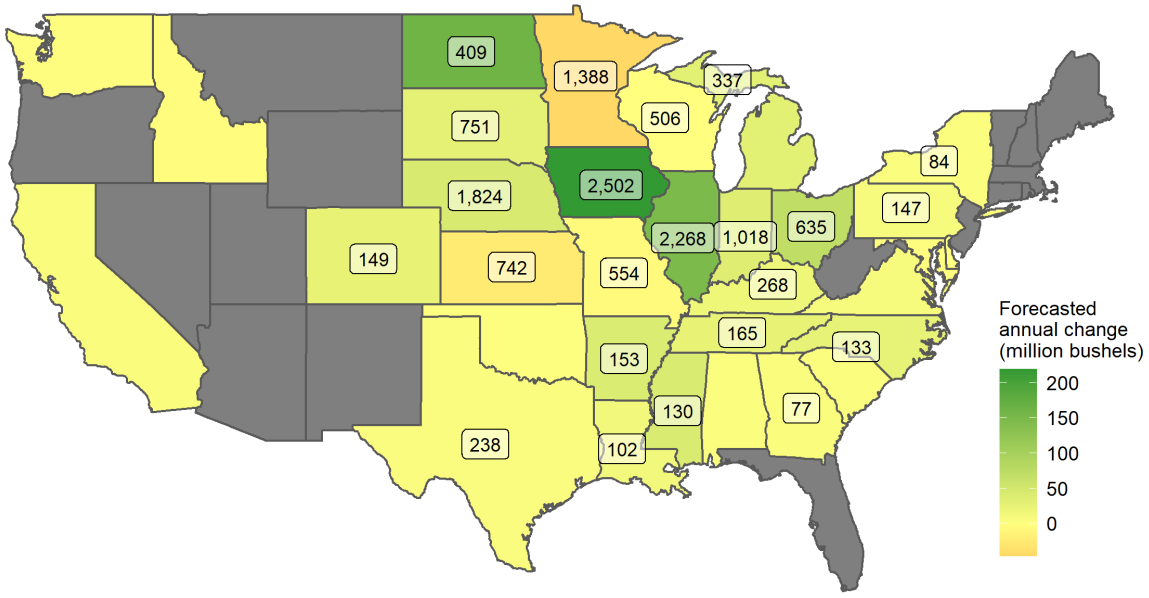


Source: USDA, National Agricultural Statistics Service.

Drought conditions during the summer in the Western Corn Belt continue to be a significant part of the 2021/22 market. Yield forecasts for Minnesota, South Dakota, and North Dakota remain significantly lower than the 2020/21 crop and historical trends. Corn production in these States is partially offset by higher planted area, particularly in the Dakotas. Production is higher than a year ago in most States; particularly in Iowa (which saw a below-trend yield in 2020/21). However, tighter September 1 stocks—particularly away from the Mississippi River transportation complex—will likely be compounded by the weather-induced lower yields for many of the Western Corn Belt States. As the harvest concludes and the marketing year progresses, local cash-market prices and basis levels should be the mechanism to move corn from well-supplied areas to ones with local deficits.

Figure 4

U.S. corn production 2021 crop marketing year forecast and annual change, million bushels



Note: Labels included only for States forecast to produce more than 75 million bushels in 2021.
Source: USDA, National Agricultural Statistics Service.

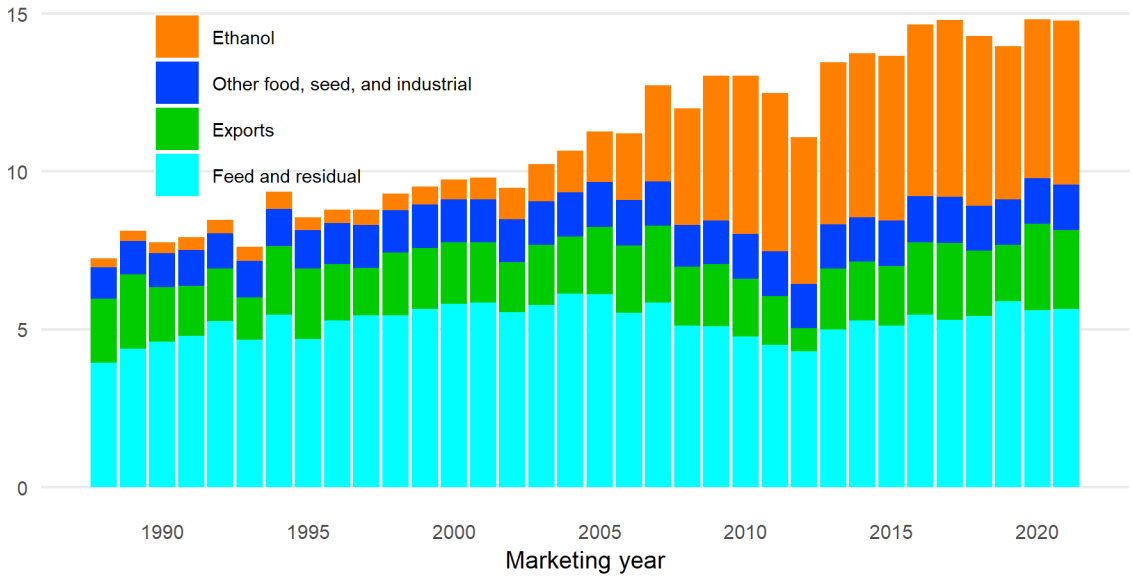
Ending Stocks for 2020/21 Raised, but Reported at Lowest Levels Since 2013/14

Corn ending stocks for 2020/21 are estimated at 1,236 million bushels, based on NASS's latest *Grain Stocks* report, released on September 30. The published number represents a 50-million-bushel increase from the estimate in the September *WASDE*. The number represents the smallest ending stocks level since 2013/14 (1,232 million bushels) and, at 8.3 percent, the smallest stocks-to-use ratio since 2012/13 (7.4 percent). Total use for 2020/21 is estimated at 14,819 million bushels, slightly beating the previous record in 2017/18 at 14,798 million bushels.

Figure 5

U.S. corn utilization

Billion bushels



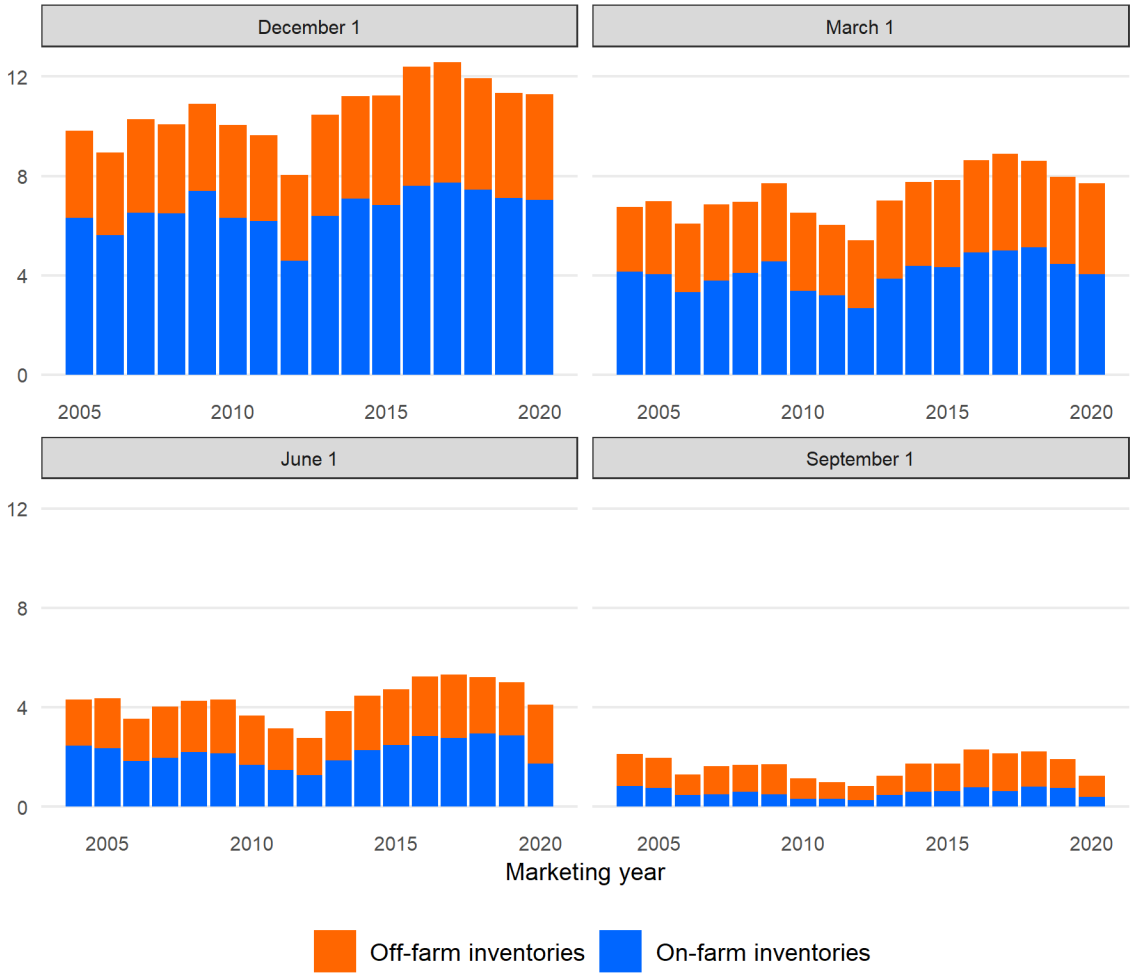
Note: 2020/21 is estimated, 2021/22 is projected.
Source: USDA, Economic Research Service.

Of the total reported ending stocks, only 395 million bushels were stored on-farm on September 1, with the remaining stored in commercial storage facilities. This number was down sharply from the 2020/21 level of 751 million bushels, reflecting the strong market prices. For additional discussion on prices and marketing patterns, see the prices discussion of this report.

Figure 6

U.S. corn inventories, quarterly, on-farm versus off-farm

Billion bushels



Source: USDA, National Agricultural Statistics Service.

Food, Seed, and Industrial Use Raised on Higher Milling Uses

Food, seed, and industrial use of corn is projected to total 6,630 million bushels for 2021/22, a 5-million-bushel increase from September. This total includes 5,200 million bushels projected for fuel ethanol use—unchanged from September. The increase is due to partially offsetting changes in projected milled products, including: 420 million bushels for high-fructose corn syrup (HFCS) (down 5 million bushels), 360 million bushels for glucose and dextrose (unchanged), and 245 million bushels for starch (up 10 million bushels).

The changes to 2021/22 projections are primarily due to changes in estimates for 2020/21, with the completion of the marketing year. Food, seed, and industrial use is estimated at 6,438 million bushels—a 1-million-bushel decrease from the September report. Annually, HFCS corn

use grew less than 1 percent from 2019/20 to 420 million bushels; glucose and dextrose use increased 2 percent to 363 million bushels; and starch increased 8 percent to 251 million bushels.

Corn used for fuel ethanol is estimated 5,032 million bushels in 2020/21, a 3-million-bushel decrease from September. The total is based on complete marketing-year data from NASS's *Crushings* report. This total represents a nearly 4-percent increase from 2020/21, but is still 6-percent lower than 2018/19 levels.

Feed and Residual Use Forecasts Reduced for 2020/21 and 2021/22

Feed and residual corn use for 2020/21 is estimated at 5,597 million bushels, a 128-million-bushel reduction from the September *WASDE.* The change is the result of the September 1 stock data, as well as a 71-million-bushel reduction to 2020/21 corn production estimates, both of which were released in the latest *Grain Stocks* report. Feed and residual use is calculated as the remainder from the reported ending stock and other reported supply and use categories. The category captures corn disappearance for livestock feeding and animal agriculture. It also captures any disappearance that occurs along the supply chain due to spoilage, shrinkage, or other statistical discrepancies that occur between data reporting systems.

Feed and residual use is projected to be 5,650 million bushels for 2021/22, a 50-million-bushel reduction from the September *WASDE*. The change keeps the current projection in line with the 2020/21 estimate.

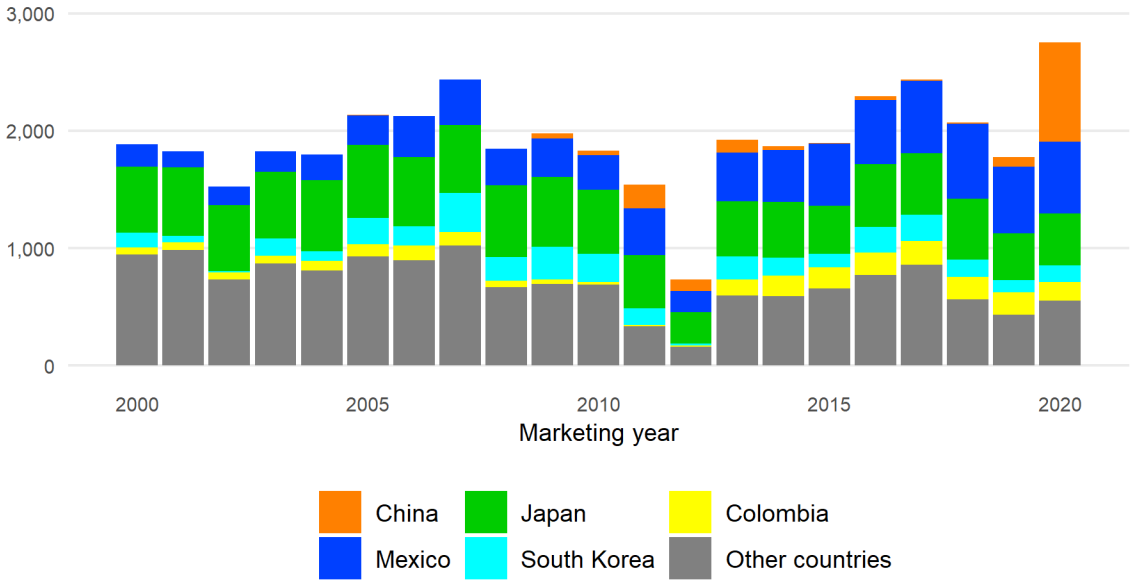
Corn Exports Total Record Volume in 2020/21

Corn exports in 2020/21 totaled 2,753 million bushels according to the U.S. Census Bureau, with data for the entire marketing year being reported. This number marks a new record for U.S. corn exports, beating the previous mark of 2,437 million bushels set in 2017/18. U.S. exports benefited from strong feed demand from China, coupled with production issues in other major exporting countries—notably Brazil and Ukraine.

Figure 7

U.S. corn exports, September through August, marketing years 2000 to 2020

Million bushels



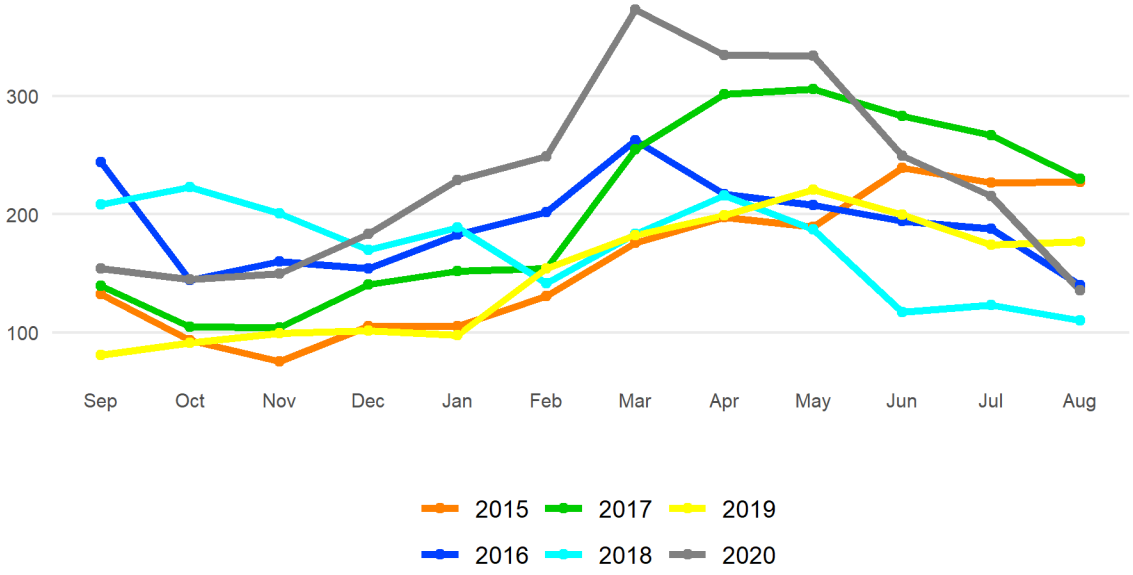
Source: U.S. Department of Commerce, Bureau of the Census.

Export shipments did pare back in the final quarter of the marketing year, mainly due to high prices and the anticipation of additional corn supplies coming to market during the Northern Hemisphere's fall harvest. Likewise, Hurricane Ida made landfall in Louisiana on August 30, during the transition between the 2 marketing years. The storm affected the operations of many key grain export terminals located on the Mississippi River. Export capacity continues to come back online but isn't expected to dramatically impact the outlook for 2021/22 corn exports, since the peak export period for corn is typically later in the season.

Figure 8

U.S. corn exports, total, monthly

Million bushels



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

Corn exports for 2021/22 are projected at 2,500 million bushels, a 25-million-bushel increase from September, but lower than the 2020/21 record total. For additional discussion on U.S. trade and global corn markets, see the International Outlook section of this report.

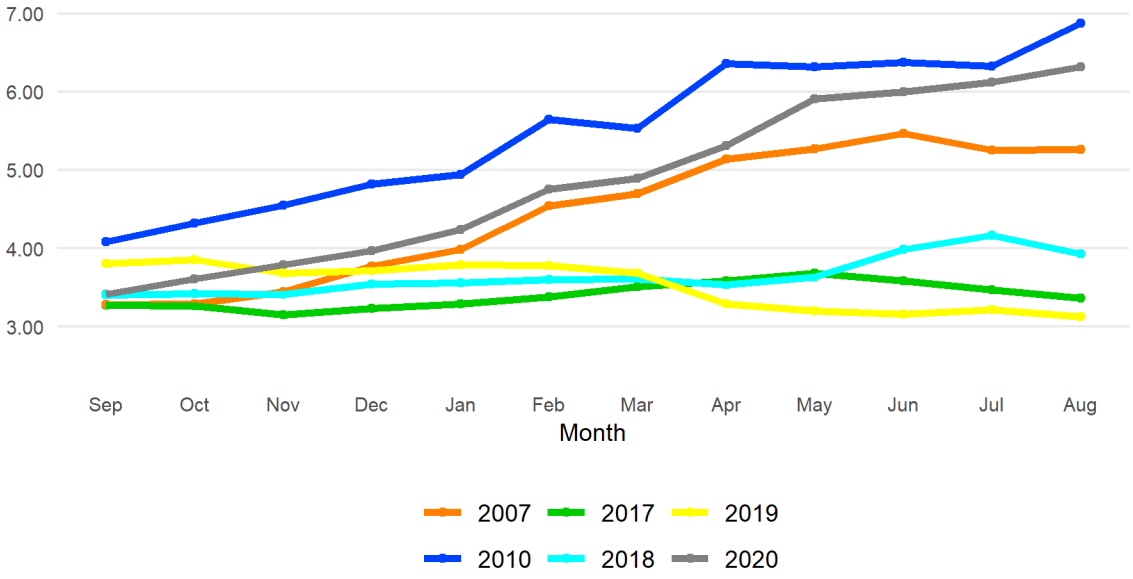
Season-Average Farm Price Projected to Increase in 2021/22 After Rising Throughout the 2020/21 Marketing Year

The season-average farm price of corn for 2020/21 was $4.53 per bushel, according to the latest NASS *Agricultural Prices* report released on September 30—raised $0.08 from the September *WASDE* estimate. In an atypical trend from most marketing years, monthly farmer prices received for corn increased substantially and steadily over the course of the marketing year—from $3.41 per bushel in September 2020 to $6.32 by August 2021. While similar increasing trends also occurred in 2007 and 2010, the range of monthly prices for 2020/21 was greater than either of those years.

Figure 9

Price received for corn, monthly

U.S. dollars per bushel



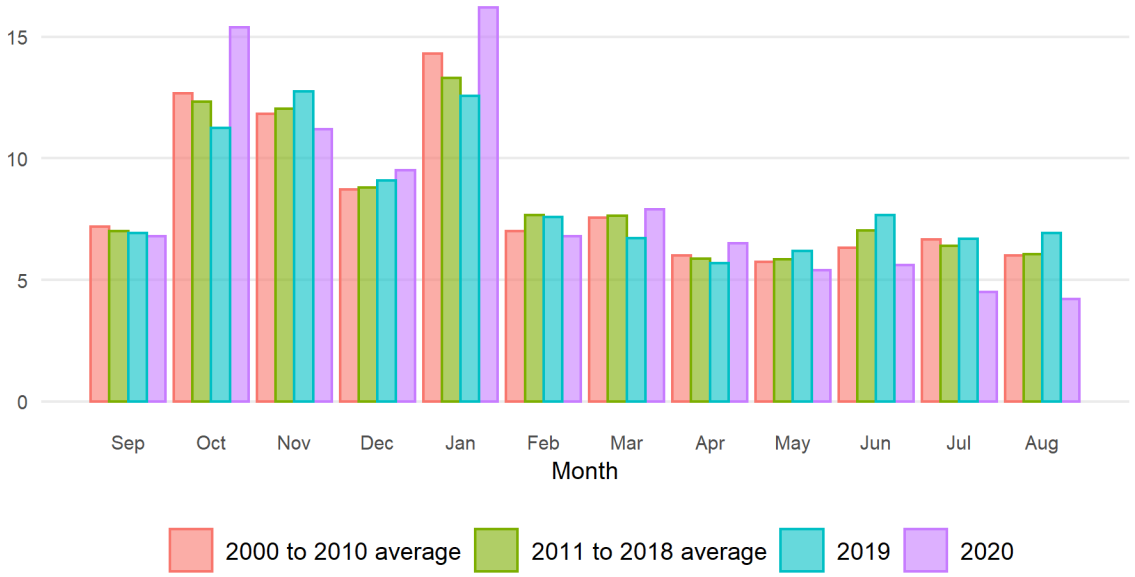
Source: USDA, National Agricultural Statistics Service.

The September 30 report also published the marketing percentages for 2020/21. The reported marketing percentages provide the weights that generate the annual season-average farm price. Notably, a higher percentage of corn marketings occurred in the first half of the marketing year than usual. October and January marketings were much larger than historical trends since 2000. As a result, less corn was marketed by farmers in the final quarter of the marketing year. The volume of sales over the summer months corresponds to the relatively low on-farm September 1 corn inventories, which indicated there were very few supplies in farmer's possession to bring to market.

Figure 10

Corn season-average marketing weights, marketing year 2000 to 2020

Percent



Source: USDA, National Agricultural Statistics Service.

The skew of earlier marketings in 2020/21 (relative to historical trends) exacerbates the difference between the season-average farm price and the simple average of reported cash prices—which for Central Illinois averaged $5.47 per bushel in 2020/21, according to the USDA's Agricultural Marketing Service (AMS). The simple average of the cash price does not take into account the distribution of sales or any forward pricing that occurs over the course of the year. Meanwhile, the season-average farm price is designed to capture the total value of the corn crop and the revenues of corn sales at the farm-gate level.

The season-average farm price for corn in 2021/22 is projected at $5.45 per bushel. In contrast to 2020/21, cash- and forward-contract prices heading into the marketing year have been at elevated levels. The current projection is predicated on the expectation that early-season marketings will reflect the forward-contract prices witnessed during the growing season and the cash-market prices reported during the harvest season.

Higher Sorghum Ending Stocks for 2020/21, Raising Inventories for 2021/22

The sorghum balance sheet for 2020/21 crop saw minor changes from the September *WASDE* release, based on the release of official data through August 2021. Exports are lowered 1 million bushels to a total of 284 million bushels, based on U.S. Census Bureau data. Ending

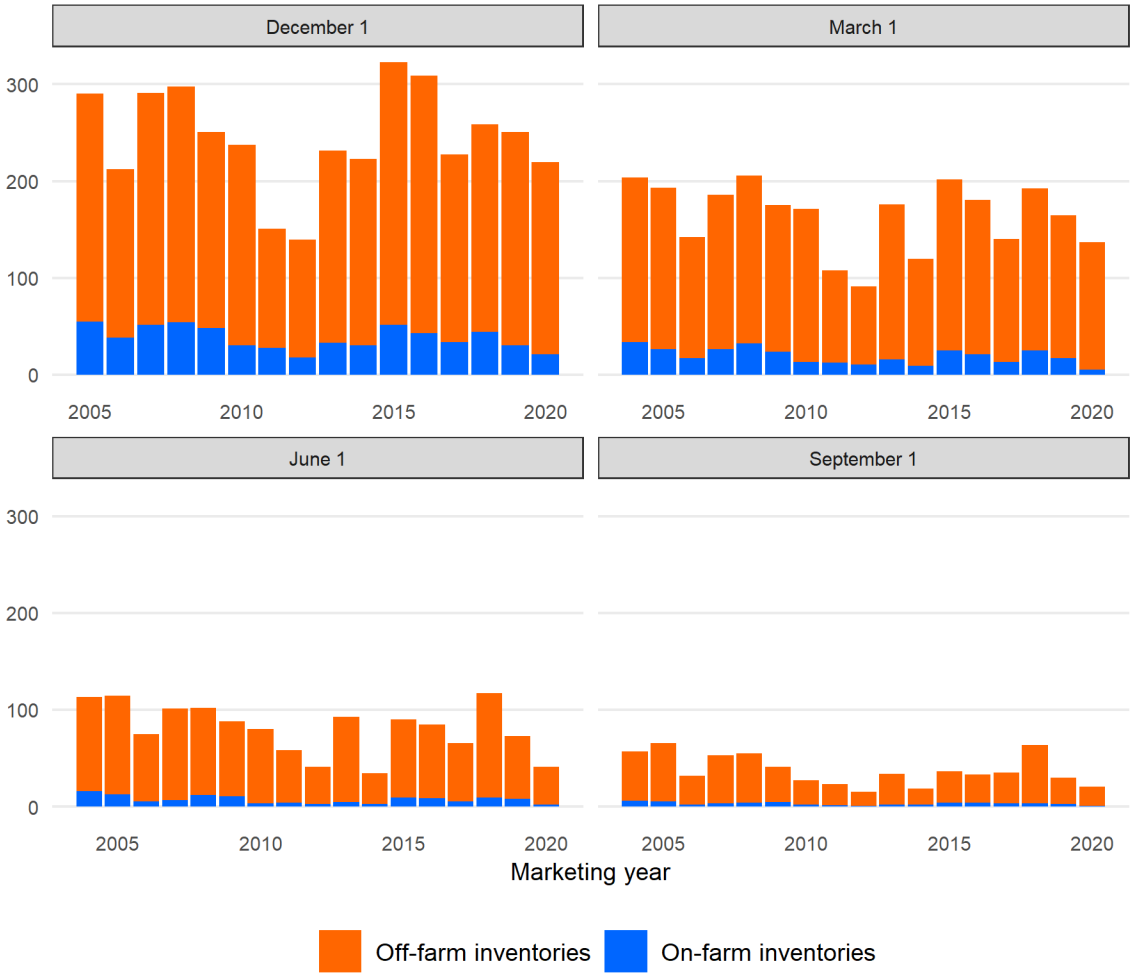
stocks are 20 million bushels, 7 million bushels higher than the September estimates, according to NASS's September *Grain Stocks* report published on September 30. As a result, feed and residual use for 2020/21 is lowered 6 million bushels to 89 million bushels.

NASS estimates on-farm inventories, in terms of volume and as a proportion of total stocks, are the lowest in the last 5 years. The reduction illustrates the strong market demand over the 2020/21 market year.

Figure 11

U.S. sorghum inventories, quarterly, on-farm versus off-farm

Million bushels



Source: USDA, National Agricultural Statistics Service.

Sorghum Production Increased, Exports Unchanged for 2021/22

The October *WASDE* report projects sorghum production of 471 million bushels, up 17 million bushels from September. The increase in sorghum production comes from an increase in the projected average yield of 2.6 bushels per harvested acre in yield to 72.3 bushels per acre, according to the NASS' October *Crop Production* report. Harvested acreage remains unchanged at 6.5 million acres.

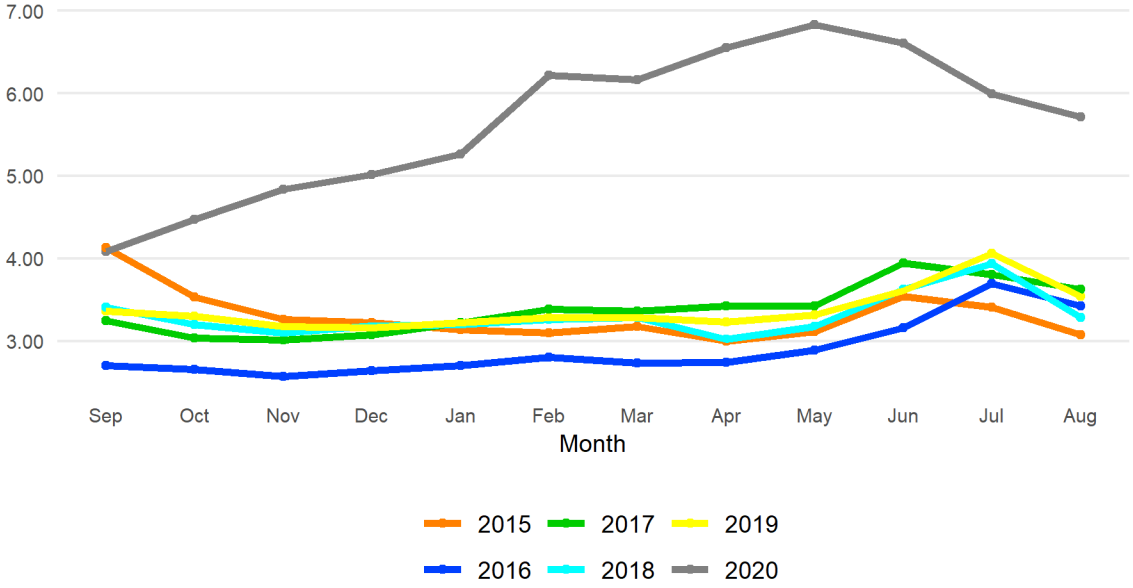
Beginning stocks for the 2021/22 marketing year are increased by 7 million bushels to 20 million bushels. When combined with the raised production projection, total sorghum supply for 2021/22 is 24 million bushels higher than September.

U.S. sorghum feed and residual use for 2021/22 is revised up to 125 million bushels compared to the September *WASDE* report. Projected exports remain unchanged at 320 million bushels.

The 2021/22 sorghum season-average farm price is projected at $5.45 per bushel, down $0.40 from the September *WASDE* report, as market prices have declined relative to corn.

Figure 12

Price received for sorghum, monthly



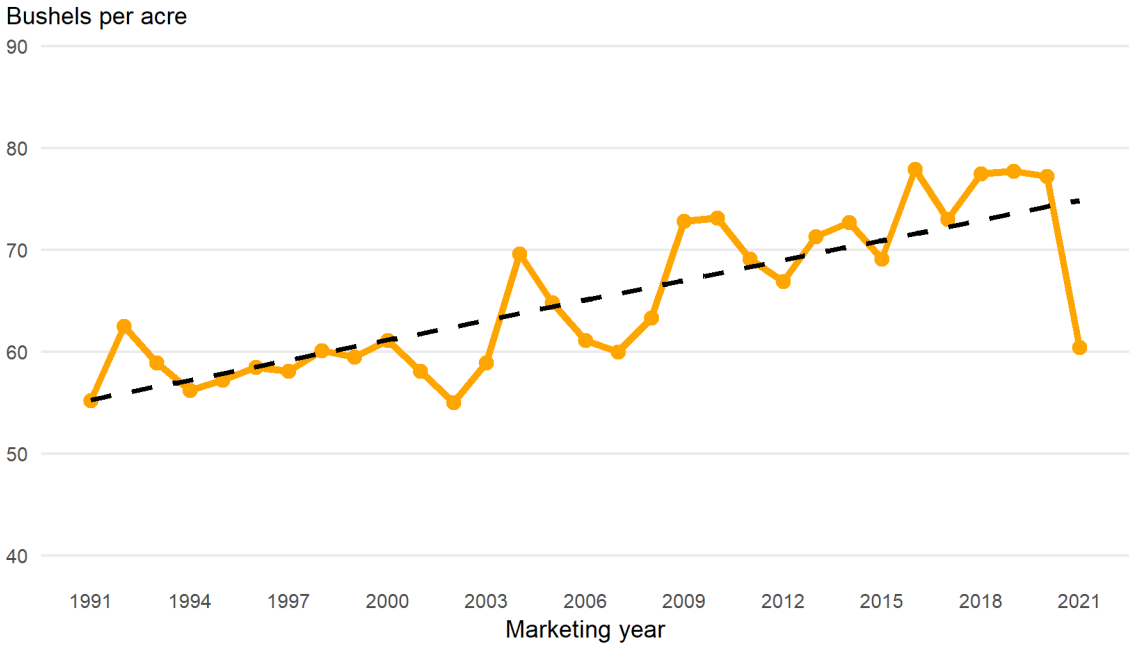
Source: USDA, National Agricultural Statistics Service.

Barley Yields for 2021/22 Lowest Since 2007/08

Barley production for 2021/22 is raised 12 million bushels to 118 million, based on the NASS *Small Grains Summary* published on September 30. The report raised the yield 8 bushels per acre, which was partially offset by a 0.1-million-acre reduction, now totaling nearly 1.9 million acres. The yield of 60.4 bushels per acre represents the lowest yield since 2007/08, as drought conditions in the Northern Plains and Pacific Northwest were detrimental in some of the key barley-producing regions of the country.

Figure 13

Barley yields, United States, bushels per acre, 1988 to 2021



Source: USDA, National Agricultural Statistics Service.

Total barley use for 2021/22 is raised 7 million bushels to 136 million bushels—although it is down substantially from the 2020/21 use of 186 million bushels. The month-to-month increase is due to higher food, seed, and industrial use and exports. Food, seed, and industrial use is raised 5 million bushels to 115, matching the raised estimate of 147 million bushels for 2020/21. Exports are raised 2 million bushels to 9 million bushels, as additional shipments to Canada are expected as a result of poor barley production in that market. The season-average farm price of barley for 2021/22 is projected to be $5.30 per bushel—down $0.15 from the previous month's projection.

Tight Oat Supplies in North America Reduce Feed Use, Projected Ending Stocks for 2021/22

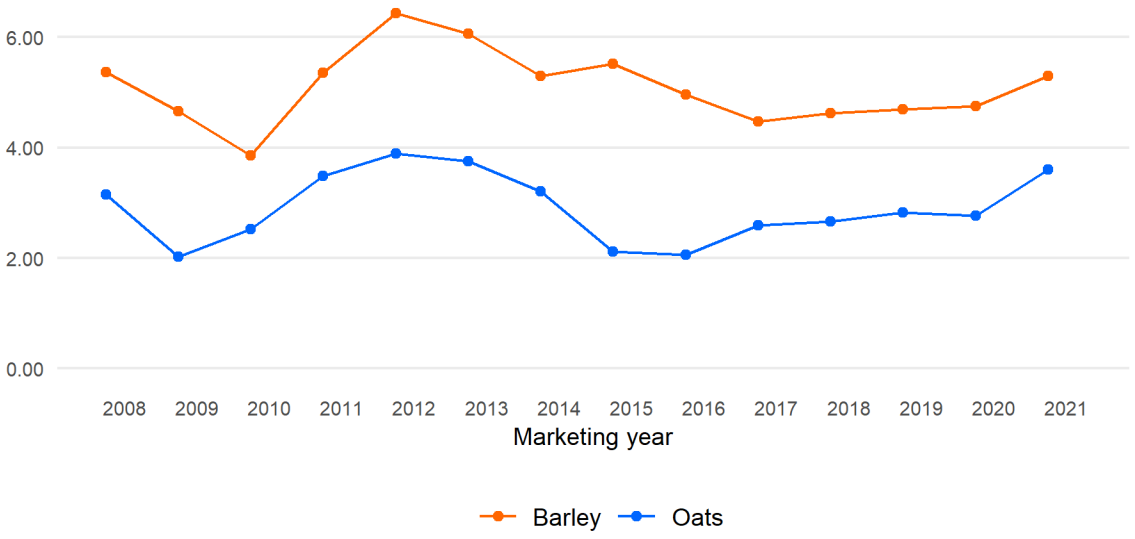
Oat production is projected at 40 million bushels for 2020/21, according to the NASS *Small Grains Summary*, released on September 30. This is a 1-million-bushel decrease from the September *WASDE* projection. Yields are raised from 57.4 bushels per acre in the September *WASDE* to 61.3 bushels in the final report. Harvested area for 2021/22 came in at 650,000 acres, compared with 722,000 acres projected prior. Imports are reduced 5 million bushels to 69 million bushels due to similar production and supply limitations in Canada, the top foreign supplier for the United States. The production prospects for both the United States and Canada result in a sharp reduction in oat supplies for the U.S. market. Total oat supplies for 2021/22 are projected to be 147 million bushels, compared with the 2020/21 estimate of 188 million bushels. This amount is the lowest total supply level on record.

Relatively small supplies are expected to result in tight inventories and use. Feed and residual use for 2021/22 is projected to be 40 million bushels—a 5-million-bushel reduction from September and a sharp drop from the 2020/21 level of 68 million bushels. Ending stocks are projected to be 25 million bushels—a 3-million-bushel decline from September and the lowest level on record. As a result, the season-average farm price for oats is projected at $3.60, unchanged from September.

Figure 14

U.S. season-average farm price for barley and oats, marketing year

U.S. dollars per bushel



Note: 2020=estimate, 2021=projected.
Source: USDA, National Agricultural Statistics Service.

Total Grain Feed and Residual Use Projected to Increase in 2021/22, Grain Consuming Animal Units Lower

Grain-consuming animal units (GCAU) for 2021/22 are projected at 100.8 million units, down from the current estimate for 2020/21 of 101.3 million units. Both figures are lowered from the September forecasts of 101.1 million and 101.5 million units, respectively. The monthly change is primarily due to lower hog units partially offsetting higher units from cattle-on-feed.

Total feed grain and wheat feed and residual use totals are also lower than the September number. The totals are projected at 150.5 million metric tons (MT) for 2021/22 and estimated at 149.2 million MT for 2020/21. The reductions from the September forecast are largely due to less feed and residual use from the corn and wheat markets.

International Outlook

Olga Liefert

Ukrainian Corn Yields Projected Lower

Global coarse grain output is projected 2.9 million tons lower relative to last month. With higher U.S coarse grain output, foreign (global minus U.S.) coarse grain production for 2021/22 is projected 4.1 million tons lower this month. While foreign corn production revisions are mostly offsetting, the output for all other coarse grain is projected lower. This month, most of the decline in coarse grain projected output is for ***Ukrainian*** corn, ***Russian*** corn and barley, ***Canadian*** barley and oats, ***Indian*** millet and sorghum, and ***Argentine*** sorghum. These reductions are partly offset by higher ***European Union (EU)***, ***Canadian***, ***Venezuelan***, and ***Serbian*** corn production (see tables A1 and A2 below).

Corn production in ***Ukraine*** is projected 1 million tons lower than September, but is still at a record of 38 million tons this month. Although this volume is 7.3 million tons higher than 2020/21, yields are projected lower than in either 2018 or 2019, the highest yields on record. The weather—both temperature and precipitation—was generally favorable throughout this year's growing season. The lack of extreme heat in most areas in Ukraine was also considered beneficial for corn development. The Vegetation Health Index (VHI)—which indicates yield potential, as well as model results based on both VHI and weather—has been pointing to excellent corn yields throughout the season. However, the harvest results so far this year do not support this favorable assessment, and with about 15 percent of the country's corn harvested, yields are projected lower than last month's assessment.

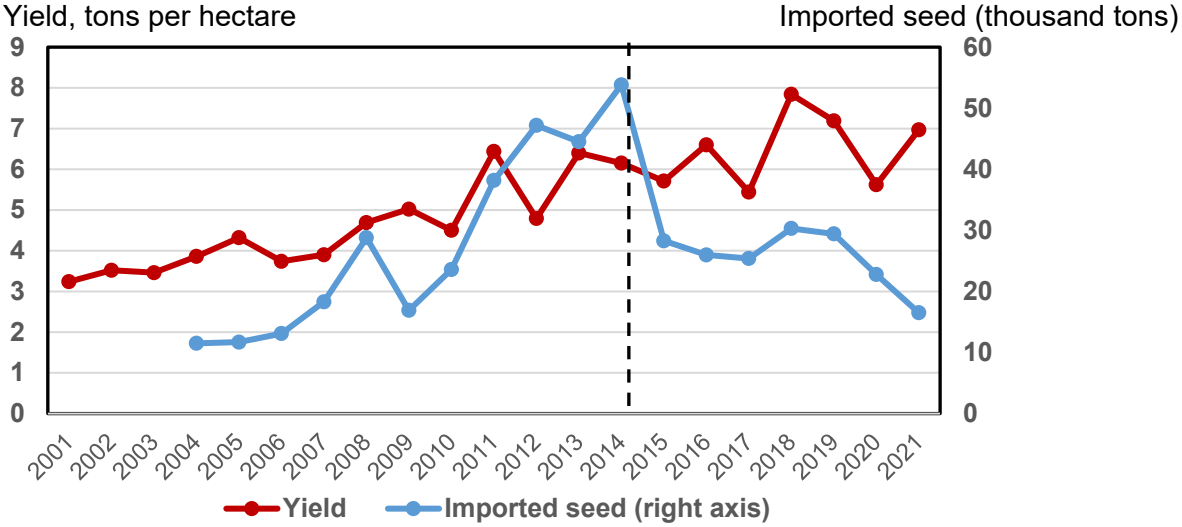
During the period from 2000 to 2010, corn yields in Ukraine rose substantially, driven by new technologies and the use of hybrid seeds (genetically modified corn is banned in Ukraine). However, yield growth became less pronounced during the last 10 years, which could be happening for a number of reasons.

One important factor in slowing corn yield growth could be the Ukrainian legislation on land ownership. Until recently, Ukrainian producers could not fully own land, and thereby also not buy and sell it. Producers either leased land or were given rights to farm the land previously owned by the state collective farms (kolkhozes) of the Soviet period. The absence of land ownership discouraged investment and motivated less productive and responsible ways of using land.

Following an almost 20-year standstill, the Ukrainian Parliament (Verkhovna Rada) finally adopted a law on agricultural land circulation. Beginning July 1, 2021, citizens of Ukraine are allowed to purchase agricultural land plots, though not exceeding 100 hectares (220 acres) per person. The second stage of the land market reform is set to start on January 1, 2024, when land can also be acquired by legal entities (e.g., agroholdings). However, foreigners will still not be allowed to buy agricultural land in Ukraine, as the bulk of the population is opposed to that option. If the new land reform proceeds in a meaningful way, it could increase the productivity of Ukrainian agriculture and help reverse the current deceleration in the growth rate of corn yields, as the incentive of private ownership would support investment and stewardship of the land by the owner/producer.

Another major part of the Ukrainian corn yield story is the use of improved hybrid seeds. Importation of such seeds started to grow around 2010, at about the same time that corn area took off. However, in 2014, the Ukrainian currency (hryvnia) began to depreciate sharply, which made imported seeds much more expensive to domestic producers. That, in turn, created a strong incentive for the country develop its own seed industry. After 2014, the country relied increasingly on domestically produced hybrid seeds for economic reasons, while reducing seed imports. While the use of hybrid seeds has pushed corn yields up, it appears that locally produced seeds generally underperform imported seeds, which slows yield growth. Despite record-high area, hybrid seed imports in 2021 are the lowest in 15 years and about 70 percent off the peak in 2014 (see figure 15), a sharp 2-year decline that could be also related to the current global trade disruptions for all types of inputs.

Figure 15
Imports of quality hybrid seed have been on the decline in Ukraine



Source: USDA, Foreign Agricultural Service, *Production, Supply, and Distribution database*; Trade Data Monitor.

Other factors affecting corn yields in Ukraine are the disruption in fertilizer use because of shifting imports away from Russia (formerly the major supplier of nitrogen to Ukraine), high input prices, and the financial challenges faced by farmers—all of which could cut into the optimal use of inputs. All the issues just discussed (among others) could play a role in the lowering of the previously high growth rate of Ukrainian corn yields after about 2014. These issues could also help explain this year's lackluster harvest results (if realized) in an otherwise generally favorable weather year. The changes in global, foreign, and U.S coarse grain production (by type of grain) are presented in table A1, while country changes are presented in table A2.

Table A1 - World and U.S. coarse grain production changes (2021/22), October 2021

	Region or country	Production	Change from previous month[1]	YoY Change[2]	Comments
		Million tons			c
Coarse grain production (total)					
↓	**World**	**1,494.0**	**-2.9**	**+67.6**	
↓	**Foreign**	**1097.1**	**-4.1**	**+43.6**	Partly offsetting changes are made for a number of countries and commodities. See table A2.
↑	**United States**	**396.9**	**+1.2**	**+24.0**	See section on U.S. domestic output.
World production of coarse grains by type of grain					
CORN					
↑	**World**	**1,198.2**	**+0.4**	**+82.7**	
↓	**Foreign**	**816.7**	**-0.1**	**+59.7**	Reduced production prospects in Ukraine, Russia, and Guatemala are mostly offset by higher output in the EU[3], Serbia, Canada, and Venezuela. See table A2.
↑	**United States**	**381.5**	**+0.5**	**+23.0**	See section on U.S. domestic output.
BARLEY					
↓	**World**	**148.0**	**-1.3**	**-12.6**	
↓	**Foreign**	**145.4**	**-1.6**	**-11.4**	Lower Canadian, Russian, and EU[3] output, with a small offsetting increase for Iranian production. See table A2.
↑	**United States**	**2.6**	**+0.3**	**-1.2**	See section on U.S. domestic output.
SORGHUM					
↓	**World**	**65.7**	**-0.1**	**+3.2**	
↓	**Foreign**	**53.7**	**-0.5**	**+0.7**	Lower output for Argentina and India, with a small offsetting change for Uruguay. See table A2.
↑	**United States**	**12.0**	**+0.4**	**+2.5**	See section on U.S. domestic output.
OATS					
↓	**World**	**22.8**	**-0.6**	**-2.8**	
↓	**Foreign**	**22.2**	**-0.6**	**-2.4**	Lower oats output is projected for Canada. See table A2.
	United States	**0.6**	**Fractional**	**-0.4**	See section on U.S. domestic output.
RYE					
↓	**World**	**13.7**	**-0.1**	**-0.8**	
	Foreign	**13.4**	**Fractional**	**-0.8**	A fractional change for Canada.
↓	**United States**	**0.3**	**-0.1**	**Fractional**	See section on U.S. domestic output.
MILLET					
↓	**World/Foreign**	**29.8**	**-1.3**	**-2.0**	Lower output projected for India. See table A2.

[1]Change from previous month. [2]YoY: year-over-year changes. [3]EU: European Union.

For changes and notes by country, see table A2.

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

Table A2 - Coarse grain foreign production changes by country for 2021/22, October 2021						
	Type of crop	Crop year	Production	Change in forecast[1]	YoY[2] change	Comments
			Million tons			
Coarse grain production by country and by type of grain						
UKRAINE						
↓	**Corn**	*Oct-Sep*	**38.0**	**-1.0**	**+7.7**	A reduction is based on initial harvest reports that suggest reduced expected yields (see report text).
RUSSIA						
↓	**Corn**	*Oct-Sep*	**15.0**	**-0.5**	**+1.1**	With about 30 percent of corn harvested, the reports indicate lower-than-expected yields.
↓	**Barley**	*Jul-Jun*	**17.3**	**-0.7**	**-3.3**	Harvest is almost complete, with reports indicating lower-than-expected yields.
EUROPEAN UNIION (EU)						
↑	**Corn**	*Oct-Sep*	**66.3**	**+0.8**	**-1.9**	Harvest results indicate higher **Polish** and **Romanian** production, partly offset by lower **French** and **Bulgarian** corn output.
↓	**Barley**	*Jul-Jun*	**54.3**	**-0.3**	**-1.2**	Barley harvest is over in the Eurpean Union. Lower-than-projected output in Spain and Finland more than offsets higher production for **Hungary and Romania**. Based on official reports.
SERBIA						
↑	**Corn**	*Oct-Sep*	**6.2**	**+0.2**	**-1.9**	Favorable growing conditions are expected to boost yields.
CANADA						
↑	**Corn**	*Oct-Sep*	**14.0**	**+0.4**	**+0.4**	Excellent growing conditions in Ontario are expected to boost country yields to record-high.
↓	**Barley**	*Aug-Jul*	**7.1**	**-0.7**	**-3.6**	Hot and dry weather in the Prairies took a toll on yields, now expected at the lowest level since 2002/03. Yields are updated based on harvest reports. Harvest is virtually over.
↓	**Oats**	*Aug-Jul*	**2.3**	**-0.6**	**-2.3**	Yields are updated based on harvest reports to the lowest since 2002/03. Harvest is ahead of the last 2 years.
VENEZUELA						
↑	**Corn**	*Oct-Sep*	**0.8**	**+0.3**	**+0.3**	Reported better fertilizer availability and use are expected to improve yields, despite the continuing political disruption.
GUATEMALA						
↓	**Corn**	*Jul-Jun*	**1.6**	**-0.3**	**Fractional**	Area under corn is projected lower; dryness in some producing areas is expected to limit yields.
INDIA						
↓	**Millet**	*Jan-Dec*	**11.5**	**-1.3**	**-1.7**	An adjustment is made based on the official Government estimate, with a substantial decline in area.
↓	**Sorghum**	*Jul-Jun*	**4.4**	**-0.2**	**-0.4**	An adjustment is made based on the official Government estimate, with lower projected area.
ARGENTINA						
↓	**Sorghum**	*Mar-Feb*	**3.8**	**-0.4**	**+0.4**	Lower officially reported area for 2020/21 implies reduced projected area for 2021/22.
IRAN						
↑	**Barley**	*Jul-Jun*	**3.1**	**+0.1**	**-0.5**	An adjustment is made based on the official area estimate.

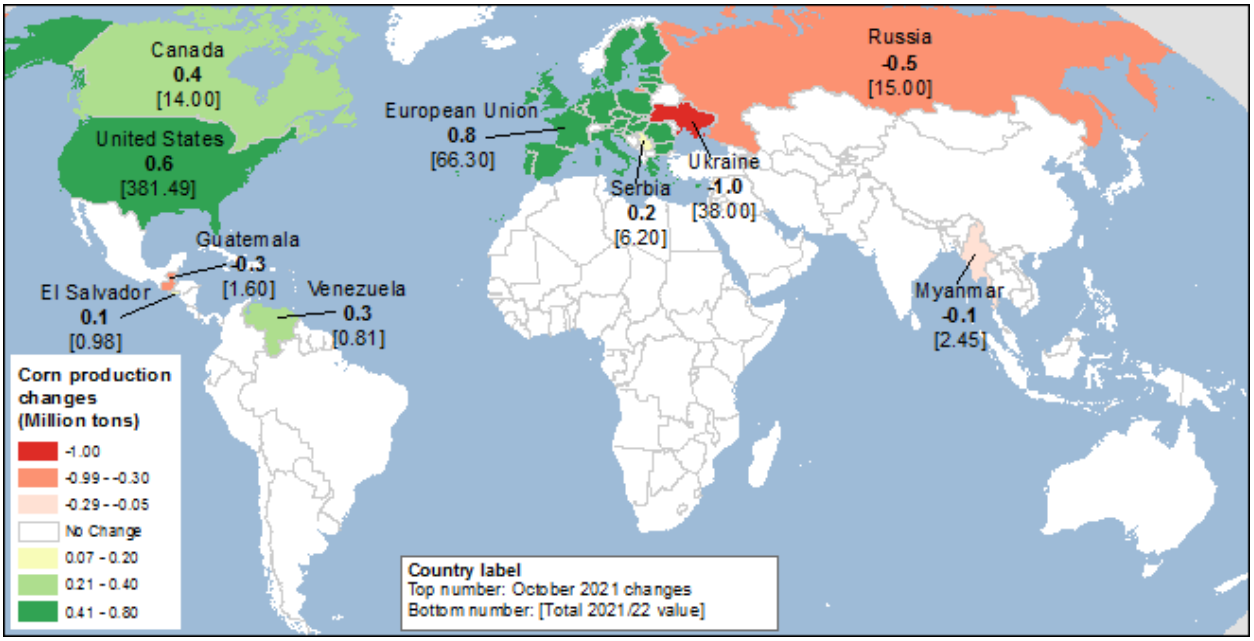
[1]Change from previous month. Smaller changes are made for several countries, see maps A1, A2 for changes in ***corn*** and ***barley***.

[2] YoY: year-over-year changes.

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

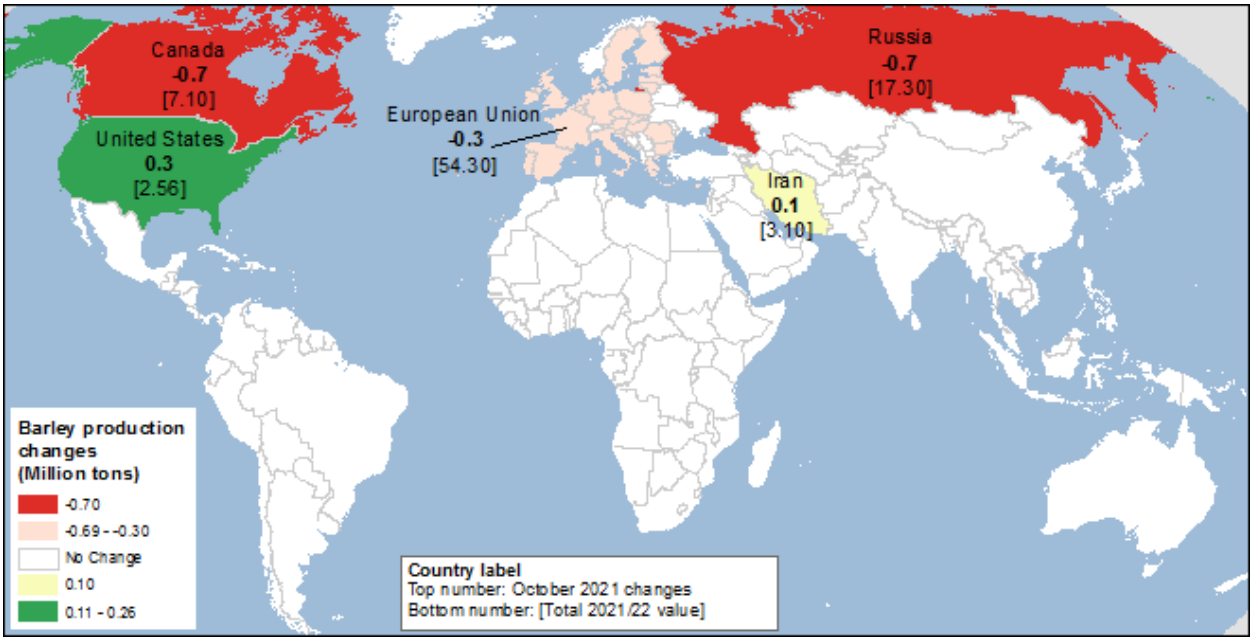
For a visual display of this month's changes in corn and barley productions, see maps A and B.

Map A – Corn production changes for 2021/22, October 2021



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

Map B – Barley production changes for 2021/22, October 2021



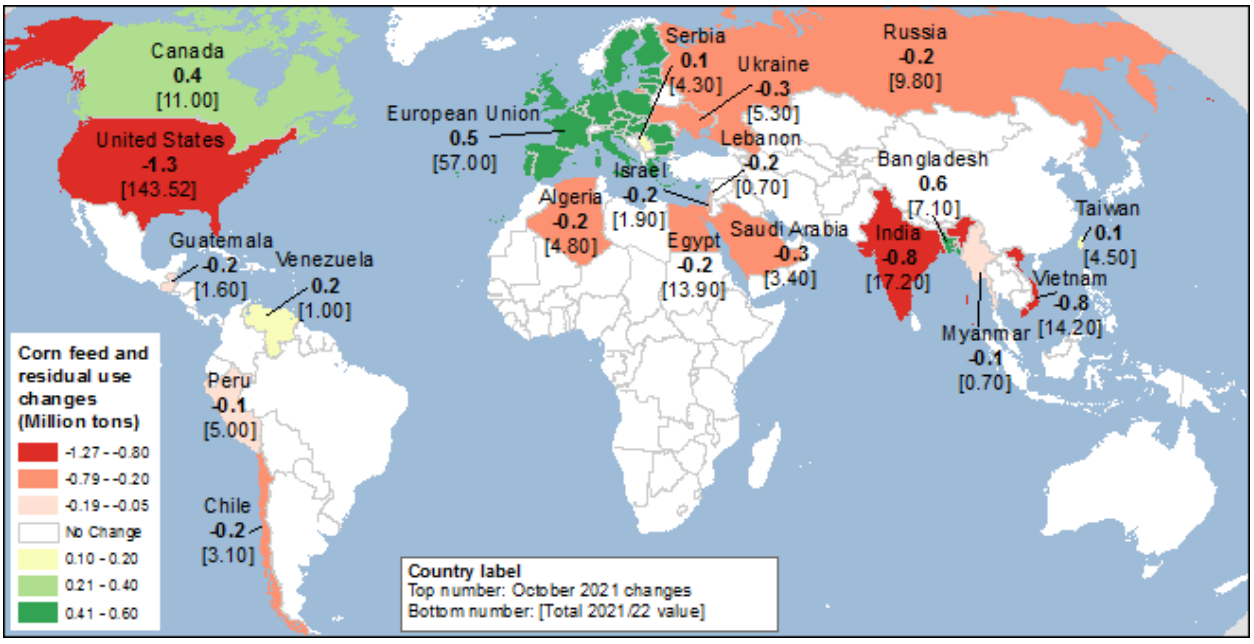
Source: USDA, Foreign Agricultural Service, *Production, Supply and Distribution database*.

Coarse Grain Use Projected Lower

Global coarse grain use in 2021/22 is projected down 3.6 million tons this month to 1,486 million. Given that domestic use in the United States is projected 0.7 million tons lower (see domestic section of the report), foreign use of coarse grain is down 2.9 million tons this month.

Foreign coarse grain use projections are revised for multiple countries this month, with partly offsetting changes. Feed use prospects are projected down, reducing foreign coarse grain feed and residual use 3.6 million tons. The largest decline for coarse grain feed use comes from ***Australia***, where the brisk pace of barley exports is expected to leave less grain for domestic consumption. Corn feed use is projected lower for ***Vietnam*** and ***Iran***, reflecting the lower pace of reported imports. Another large change is for ***India***, where corn feed use is reduced—with a higher-than-projected pace of exports to ***Bangladesh***—where feed use is raised accordingly. In ***Ukraine*** and ***Russia***, lower corn use is expected (along with reduced output), while higher corn use is forecast for the ***European Union*** and ***Canada***, as well as several other countries. With higher projected imports, barley feed use is increased for ***Turkey***—although it is still much lower than in the previous 2 years, owing to the lowest barley output in 5 years. Barley feed use for ***Saudi Arabia*** is reduced for 2 consecutive years because of lower projected imports. See map C below for an at-a-glance view of this month's changes in corn feed and residual use.

Map C – Corn feed and residual changes for 2021/22, October 2021



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

Food, seed, and Industrial (FSI) use for foreign countries for coarse grain is also projected lower, down 1.7 million tons, mainly on account of ***India***. With millet and sorghum production down, a decline is projected for the country's FSI consumption of these two grains.

Coarse Grain Stocks Projected Higher

World 2021/22 **coarse grain** ending stocks are forecast to increase 3.7 million tons this month to 327.5 million, driven mainly by higher beginning stocks, that are up 3 million tons. Higher global 2020/21 ending stocks (and consequently, 2021/22 beginning stocks) are increased largely on account of the United States (stocks' increase is based on the September *Grain Stocks* report), and on China, where higher projected corn imports for 2020/21 pushed projected stocks up by almost 1 percent (or 2 million tons). Total foreign **corn** ending stocks are projected higher by 1.8 million tons this month to 263.6 million, which is 5.1 million tons higher than last year, mainly because of year-to-year increase in China. Changes in other countries are collectively offsetting.

World Corn Trade Down, U.S. Exports Projected Higher

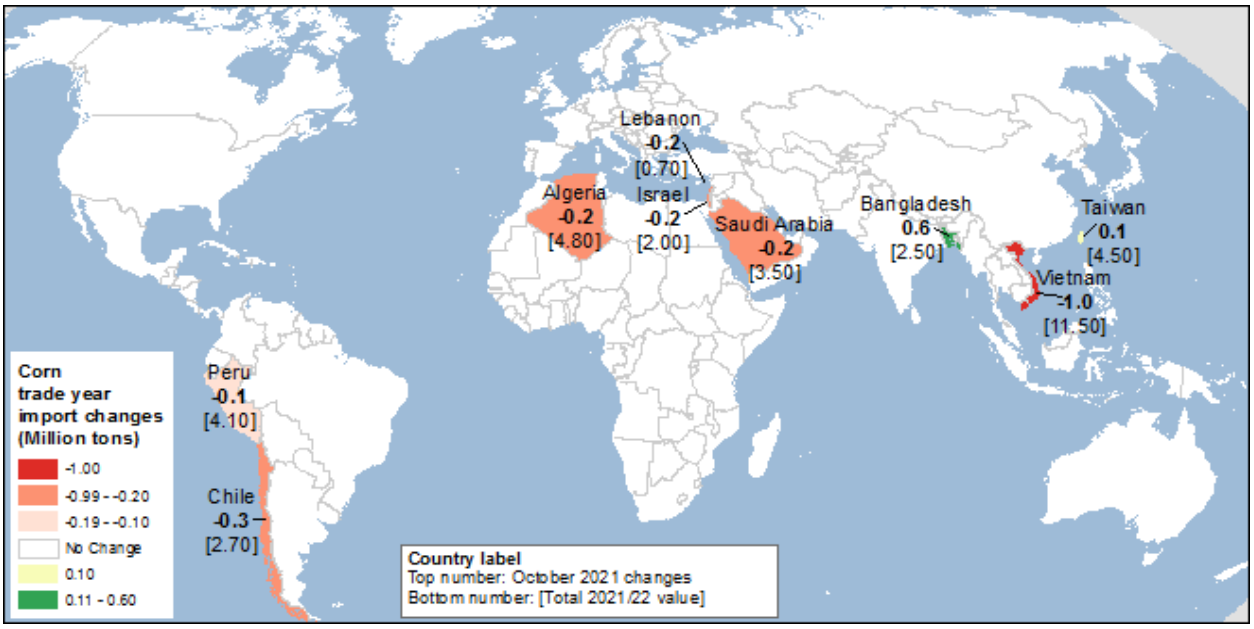
World corn trade projected for the 2021/22 October-September international trade year (TY) is reduced 1.5 million tons this month to still a record of 190.9 million, and 8.1 million tons above the 2020/21 previous record.

Brazilian exports are reduced again this month, to 31 million tons, as export data through September was lower than expected. Corn exports by ***Brazil*** are down 2 million tons this month for the October-September 2021/22 international trade year. For 2020/21, the lowest corn supplies in 7 years are expected to weigh down on Brazilian exports through February, the end of its 2020/21 local marketing year, and 5 months into the 2021/22 October-September trade year. The current pace of corn exports from Brazil is lower than previously expected. For the Brazilian local March-February marketing year, a corn export reduction is applied to 2020/21—while for the local 2021/22 corn year, exports are unchanged and still projected at the all-time-high of 43 million tons.

Output-related changes reduce ***Ukrainian*** and ***Russian*** corn exports, while an increase in ***European Union*** exports is partly offsetting. ***India's*** accelerated corn sales to its neighboring countries (***Bangladesh***, ***Nepal***, and ***Malaysia***) boost its exports for both 2020/21 and 2021/22 to a level not seen in 6 years, supported by expectations of continued relatively high world market prices for corn. The custom statistics data for ***Vietnam*** indicate lower corn exports to

neighboring countries. See map D below for an at-a-glance view of this month's changes in corn imports.

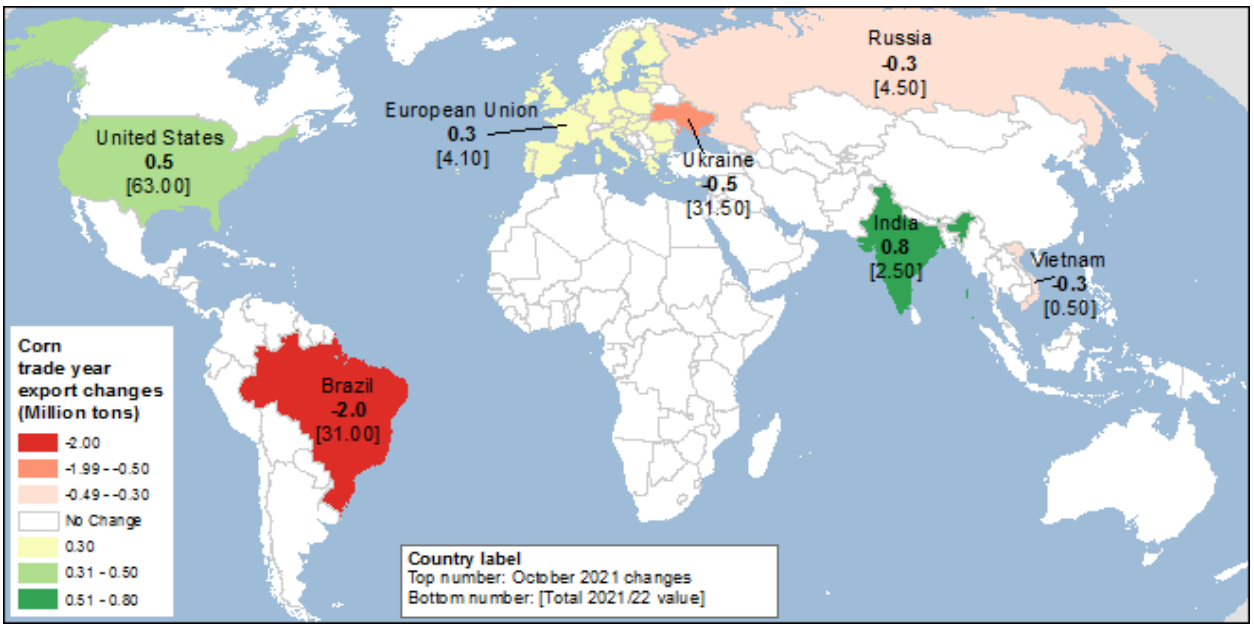
Map D – Corn trade year (TY) import changes for 2021/22, October 2021



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

On the demand side, the largest reductions this month are for projected corn imports by ***Vietnam*** (based on customs data) and ***Chile***. For these countries, the 2020/21 corn imports turned out to be lower than expected. Using realistic expectations for a year-over-year growth, projected corn imports for 2021/22 for these countries are also reduced. Similar, although smaller, reductions are also made for a number of countries. Partly offsetting the decline, corn imports are projected higher for ***Bangladesh***, reflecting a larger-than-expected amount of corn coming from India. See map E below for an at-a-glance view of this month's changes in corn imports.

Map E – Corn trade year (TY) export changes for 2021/22, October 2021



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

Barley global trade for the 2021/22 international trade year is projected slightly higher this month, by 0.1 million tons, though 1.7 million tons lower compared to 2020/21. The adjustments reflect this month's shift in barley exports from ***Canada*** and ***Russia*** to ***Australia***. For Canada and Russia, the reduction in exports follows production changes. For Australia, the brisk pace of barley exports to Japan, Saudi Arabia, Vietnam, Iran, and many other new and traditional destinations push export estimates for both 2020/21 and 2021/22 higher, as Australia continues to reshape its barley exports trade map in response to China's imposition of tariffs on Australian barley that render imports by private enterprises economically. Note that China's imports of sorghum and oats from Australia not only continue but are growing.

With higher supplies and reduced expectations for Brazilian exports in the first part of the trade year (as well as for Ukrainian exports), U.S. corn export prospects for 2021/22 are increased this month, up 0.5 million tons to 63 million (for the September-August local marketing year, exports rise by 25 million bushels to 2,500 million). U.S. export projections for all other coarse grains for 2021/22 are unchanged. With lower Canadian supplies, U.S. imports of oats are projected 0.1 million tons lower this month at 1.2 million.

For the 2020/21 trade year, ***U.S.* corn** exports are reduced further by 2.1 million tons, to a still record-high of 68.3 million. A much lower export pace in September happened in the aftermath of Hurricane Ida at the end of August. The revised record exports are still 21.3 million higher than in 2019/20.

Suggested Citation

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