



Feed Outlook

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Strong Global Prices and Foreign Demand Raise Projected Corn Exports

U.S. corn exports are projected to be 2,600 million bushels in 2020/21, which would be a record if realized. The 50-million-bushel increase in exports from the previous month reduces projected ending stocks to 1,502 million bushels. The projected season-average farm price for corn is increased to \$4.30 per bushel. U.S. exports are also increased for sorghum and barley, as strong foreign demand and high prices draw more domestic production to export markets.

Global trade of feed grains for 2020/21 is raised 3.6 million tons from the previous month. Chinese coarse grain imports are raised 6.7 million tons, as high domestic prices and strong demand from the domestic-livestock sector are resulting in higher imports and additional purchases. Higher imports from China are partially offset by lower imports in the European Union, Japan, South Korea, and Saudi Arabia—based primarily on higher prices and increased competition in the global market. High global prices and strong foreign demand result in raised coarse grain exports for the United States, India, Argentina, Brazil, and South Africa.

Domestic Outlook

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Minimal Balance Sheet Changes for Corn Market this Month

U.S. corn supplies for 2020/21 were unchanged this month at 16,127 million bushels. As anticipated, the National Agricultural Statistics Service (NASS) released no new data on corn production since the January *World Agricultural Supply and Demand Estimates* (WASDE).

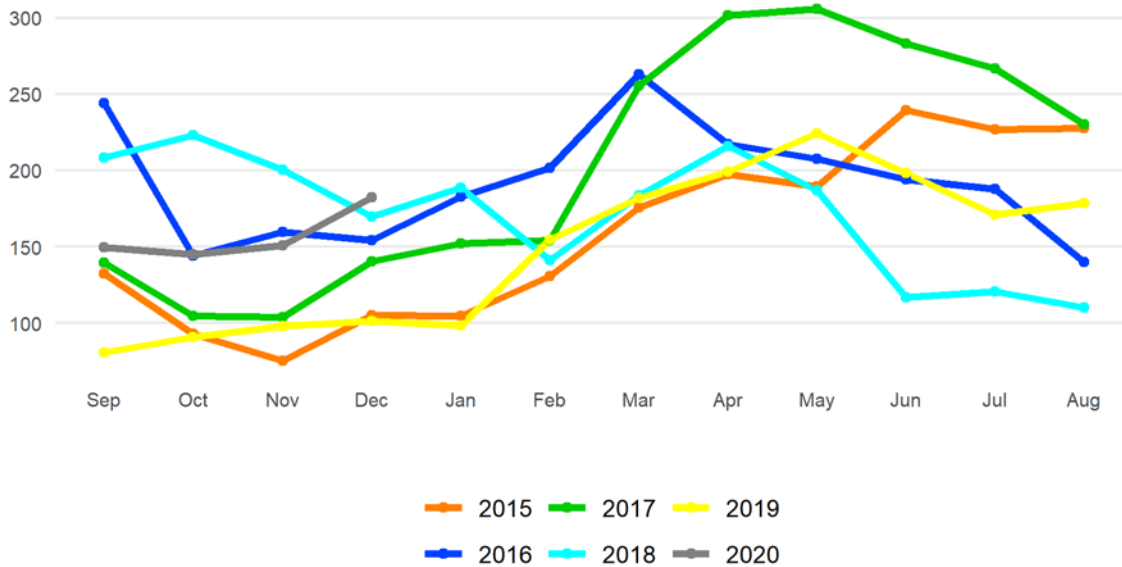
Projected 2021 Corn Exports Break Records

U.S. corn exports are raised 50 million bushels to 2,600 million. If realized, this increase is the highest ever, besting the previous record set in 2017/18 by 162 million bushels. Export prospects improved due to increased shipments to China this year, culminating in 38.8 million bushels in December to that country, as reported by the Census Bureau. September through December shipments to China reached 124 million bushels, compared with less than a million during the same period in 2019/20. Total U.S. exports through December are 628 million bushels, compared with 371 million during the same period in 2019/20. USDA Agriculture Marketing Service Export Inspections through February 4 indicate a strong pace of exports since the New Year.

Figure 1

U.S. corn exports, total, monthly

Million bushels



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

Tighter Corn Stocks Boost Price for 2020/21

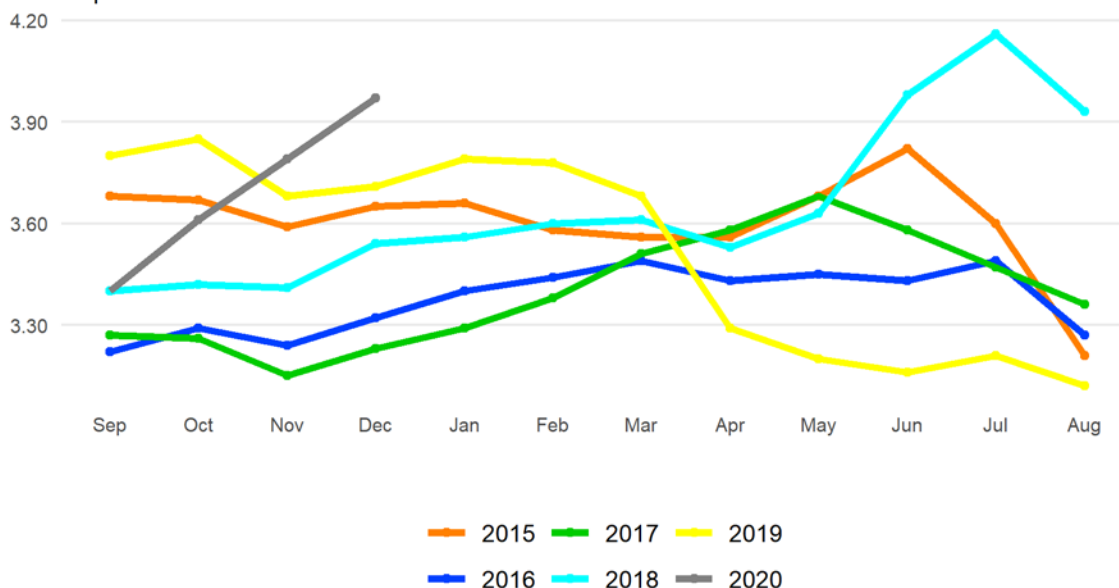
As a result of the higher exports, projected ending stocks for 2020/21 are lowered 50 million bushels this month to 1,502 million, the lowest since 2013/14.

The 50-million reduction in projected carryout is reflected in a \$0.10 per bushel increase in the season-average price received by farmers for corn to \$4 .30 per bushel. The national-average price received for corn by farmers has steadily increased between the beginning of the marketing year in September, through the latest report from NASS in December. The December average price was \$3.97.

Figure 2

Price received for corn, monthly

Dollars per bushel



Source: USDA, National Agricultural Statistics Service.

Ethanol Exports Surge on Purchases by China

Corn used for fuel ethanol in 2020/21 remains at 4,950 million bushels, unchanged from the previous month. Weekly data published by the U.S. Department of Energy's Energy Information Administration (EIA) show that ethanol production has remained steady through early February—although it remains at a reduced level compared with the same period a year prior. Net inputs of ethanol have trended lower in recent weeks, in line with lower consumption rates of motor gasoline, resulting in a buildup of ethanol inventories.

Figure 3

Weekly totals of U.S. ethanol production, net inputs, and ending stocks

Million gallons



Source: Energy Information Administration, U.S. Department of Energy.

The U.S. has seen increased trade activity for ethanol, with domestic demand still lagging—and in some cases, to markets where exporters do not consistently ship. U.S. exports of fuel ethanol to China and Hong Kong surged to in December, representing 21.9 percent of total exports for the month. Combined, the two countries were the largest destination for U.S. ethanol—followed by Canada, South Korea, and Brazil. 2020/21 total U.S. ethanol exports through December have reached 402 million gallons, 7.9 percent lower than last year’s level at this point.

Ethanol from Sorghum Cut as Exports Continue to Impress

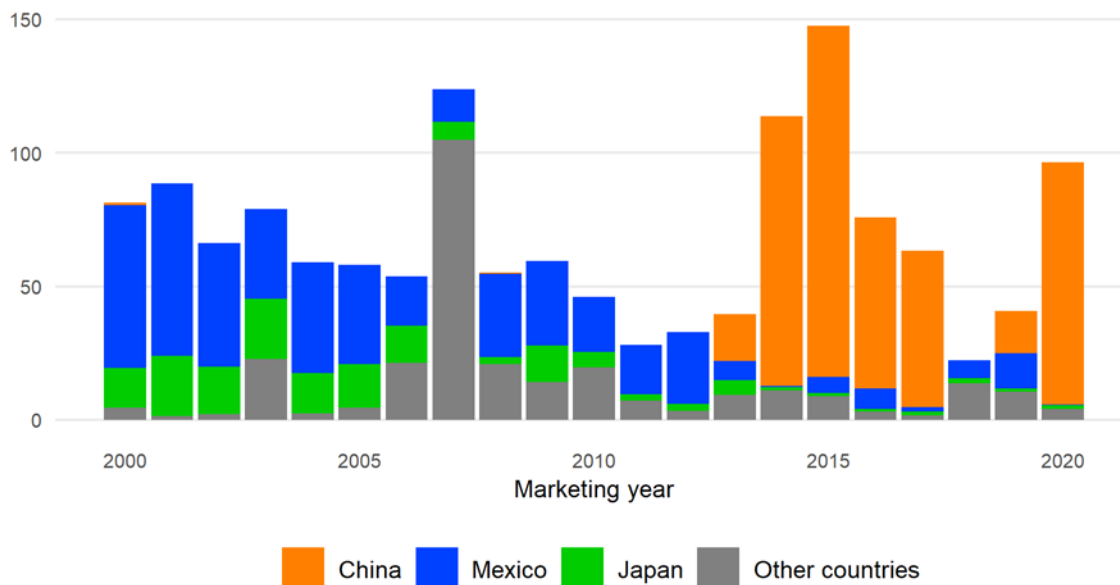
U.S. sorghum production in 2021/21 remains unchanged at 373.0 million bushels. Strong exports continue to highlight the global demand for sorghum, with most of the exports heading to China. Due to low reported levels of domestic use through December and high cash market

prices that reduce processor margins, sorghum use for ethanol is cut by 5.0 million bushels to 8.0 million bushels. These 5.0 million bushels are diverted into exports, which are now forecast at 295.0 million bushels. The season-average farm price is revised up by \$0.10 to \$4.80 per bushel.

Figure 4

U.S. sorghum exports, September through December, marketing years 2000 to 2020

Million bushels



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

Barley Exports Increased Slightly as Export Demand Remains Strong

Barley exports are forecast up by 1.0 million bushels to 9.0 million for 2020/21. Much of the strength in the barley export market is due to China’s larger import quantities, and its influence on trade flows and prices globally. With the strength of the feed grains sector in general, the domestic barley season-average price is revised up \$0.10 to \$4.70 per bushel in 2020/21.

International Outlook

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Coarse Grain Production Raised Primarily on Changes in Southern Hemisphere

With the Northern Hemisphere harvest season concluding by the end of 2020, the coarse grain production outlook turns to the Southern Hemisphere's summer crop production. Global coarse grain production for 2020/21 is projected to be 1,438.9 million tons—0.4 million tons larger than the previous month.

World **corn** production is projected 0.2 million tons higher for 2020/21, totaling 1,134.1 million tons. Corn production in **South Africa** is up 0.5 million tons, to 16.5 million, accounting for the most significant change in the outlook. The increased production in South Africa is based on higher area from favorable conditions during the planting season that allowed addition. This is partially offset by a reduction in **Paraguay**, by 0.4 million tons to 4.2 million tons, due to lower expected yields caused by dry conditions.

Corn production in **Brazil**—the largest Southern Hemisphere corn producer—is projected at 109.0 million tons, unchanged from the previous month. Additional harvested area is expected in Brazil, however, offset by lower yields. Dry conditions have affected Southern Brazil during its first crop, which is currently being harvested. However, high domestic and global corn prices are expected to incentivize growers to plant additional area for the country's second corn crop—particularly in Brazil's Center-West region that plants a substantial amount of corn after its soybean harvest, which is currently underway. Reduced yield projections are based on the slower planting progress of the second-crop corn in that region.

World **barley** production for 2020/21 is raised 0.2 million tons to 157.4 million. The only substantial change to the production outlook occurred in **Argentina**, where production is increased 0.4 million tons to 4.1 million. The raised production projection is based on domestic authorities reporting more harvested area from the crop that just concluded its harvest.

Table A1 - World and U.S. coarse grain production at a glance (2020/21), February 2021

	Region or country	Production	Change from previous month ¹	YoY Change ²	Comments
<i>Million tons</i>					
Coarse grain production (total)					
↑	World	1438.9	+0.4	+27.3	
↑	Foreign	1064.3	+0.4	+12.2	Small increase due to several relatively small changes, primarily for corn and barley production. See table A2.
	United States	374.6	No change	+15.1	See section on U.S. domestic output.
World production of coarse grains by type of grain					
CORN					
↑	World	1134.1	+0.2	+17.5	
↑	Foreign	773.8	+0.2	+3.2	Favorable weather conditions during the planting season in South Africa boost area projections. This is offset by dry conditions in Paraguay that have reduced the yield prospects as the crop enters the harvest season. See table A2.
	United States	360.3	No change	+14.3	See section on U.S. domestic output.
BARLEY					
↑	World	157.4	+0.2	+0.8	
↑	Foreign	153.8	+0.2	+0.9	Higher production, primarily due to higher production in Argentina, based on higher area that is partly offset by lower yields. The increases are offset by lower production in Kazakhstan, the EU ³ , and Chile.
	United States	3.6	No change	-0.2	See section on U.S. domestic output.
RYE					
↑	World	14.3	+0.1	+2.0	
↑	Foreign	14.0	+0.1	+2.0	Minor changes to Canada and Kazakhstan, as a result of post-harvest reporting by respective domestic authorities.
	United States	0.3	No change	Fractional	See section on U.S. domestic output.
¹ Change from previous month. ² YoY: year-over-year changes. ³ EU: European Union, EU-27 + United Kingdom (U.K.).					
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.					

Table A2 - Coarse grain foreign production by country at a glance for 2020/21, February 2021

	Type of crop	Crop year	Production	Change in forecast ¹	YoY ² change	Comments
<i>Million tons</i>						
Coarse grain production by country and by type of grain						
SOUTH AFRICA						
↑	Corn	May-Apr	16.5	+0.5	+0.5	Favorable weather conditions during the planting season result in higher expected harvested area.
ARGENTINA						
↑	Barley	Dec-Nov	4.1	+0.4	+0.3	Higher area by domestic reporting authority after the completed barley harvest.
PARAGUAY						
↓	Corn	Jun-May	4.2	-0.4	+0.4	Reduced yield due to dry conditions reported throughout the major growing regions of the country.
¹ Change from previous month. Smaller changes are made for several countries.						
² YoY: year-over-year changes.						
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.						

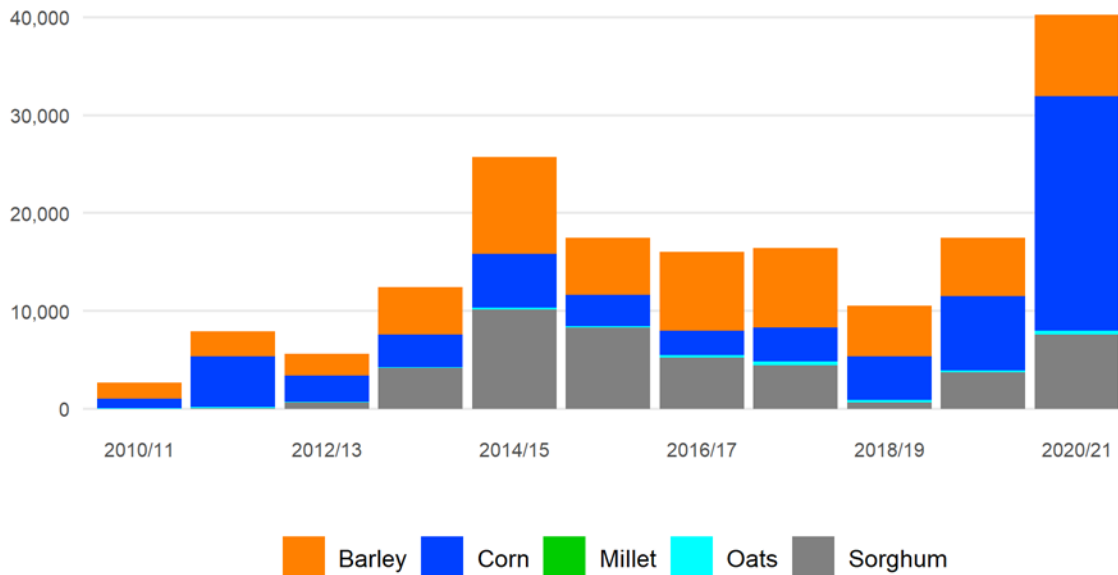
Global Corn Trade Raised Due to High Prices and Strong Demand from China

Global coarse grain trade in 2020/21 continues to be driven by strong demand from **China**. High domestic prices and reports of increased demand for livestock feed have resulted in a substantial increase in imports and announced sales of corn, barley, sorghum, and other feedstuffs for the current marketing year. China is projected to import 40.3 million tons of corn, barley, oats, and sorghum in 2020/21. This is more than double 2019/20 imports, when China imported 17.5 million tons. This change—coupled with lower coarse grain production and exports in the Black Sea region of Europe due to hot and dry growing conditions in several key production regions—has substantially impacted 2020/21 feed grain trade. Price levels across the world are substantially higher than they were a year ago; China has increased its market share of trade for nearly every feed-grain commodity in 2020/21; and other significant import markets have seen their import outlooks reduced due to higher prices and increased competition.

Figure 5

Coarse grain imports into China, 2010/11 to 2020/21

Metric tons



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

World **corn** trade for the October-September international trade year 2020/21 is increased 2.8 million tons to 184.2 million. Imports to **China** are increased 6.5 million tons to 24.0 million. Increased imports by China are primarily offset by decreases to the **European Union** (2.5

million tons), **South Korea** (0.5 million tons), **Japan** (0.4 million tons), **India** (0.2 million tons), **Saudi Arabia** (0.2 million tons), and **Turkey** (0.2 million tons).

Corn exports for 2020/21 for the **United States** are increased by 1.0 million tons to 65.0 million, based on additional sales reported during the current marketing year, including several large sales to China announced in recent weeks. **Indian** exports are raised 0.9 million tons to 1.5 million, reflecting increased shipments to South Asian markets. Exports by **Argentina** and **Brazil** are raised 0.5 million tons each, to 32.0 million and 40.5 million tons, respectively. These increases are based on higher reported shipments made through January—the tail end of each countries' local marketing year. **South African** corn exports are also raised 0.2 million tons, due to the raised corn production outlook for that country.

Global Barley and Sorghum Trade also Driven by Changes to China's Imports

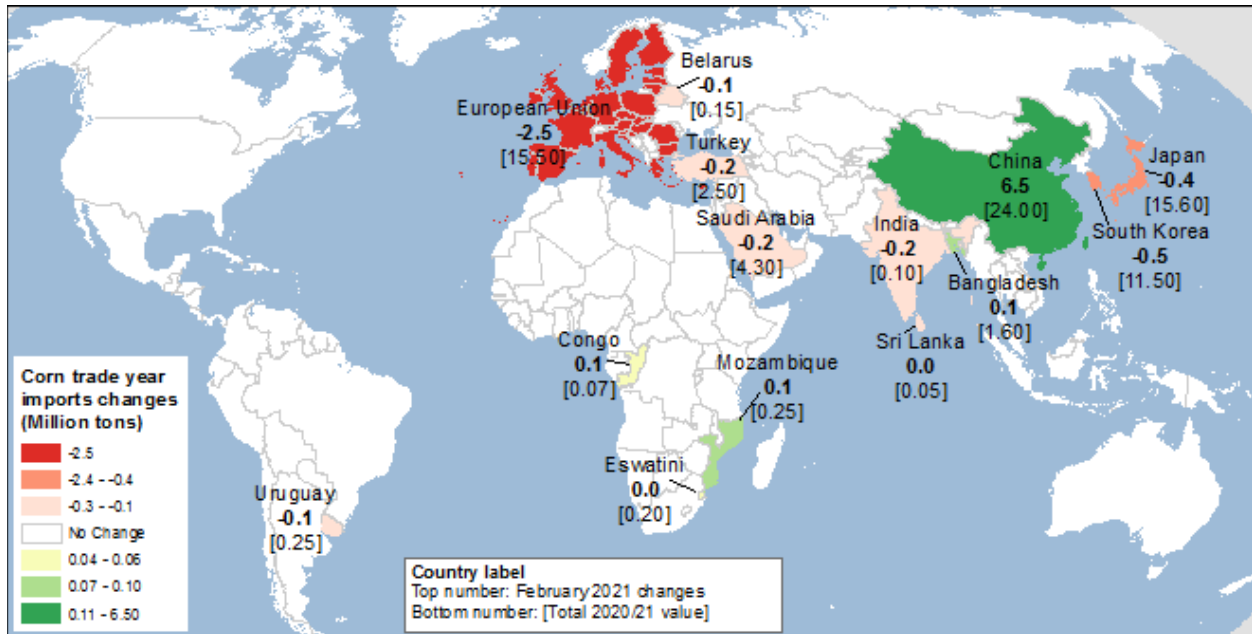
World **barley** trade in 2020/21 for the October-September international year is projected up 0.6 million tons to 29.8 million. The increase is due to projected imports by **China**, increasing 1.3 million tons to 8.3 million. This is partially offset by reductions for **Saudi Arabia** (0.4 million tons) and **Iran** (0.3 million tons). Barley exports are raised for **Canada** (0.3 million tons), the **European Union** (0.3 million tons), and **Argentina** (0.2 million tons). Partly offsetting these increases is a reduction in **Kazakhstan** barley exports by 0.3 million tons to 1.2 million.

World **sorghum** trade in 2020/21 is raised 0.1 million tons to 9.6 million. Similar to other grains, **China's** imports are raised 0.2 million tons to 7.6 million, with partially offsetting reductions for **Mexico** (0.1 million tons) and the **European Union** (0.1 million tons). **U.S.** projected sorghum exports are raised 0.1 million tons to 7.6 million tons, as high prices draw supplies away from domestic ethanol production and toward export markets.

Table B - Coarse grain trade by country and commodity at a glance for 2020/21, February

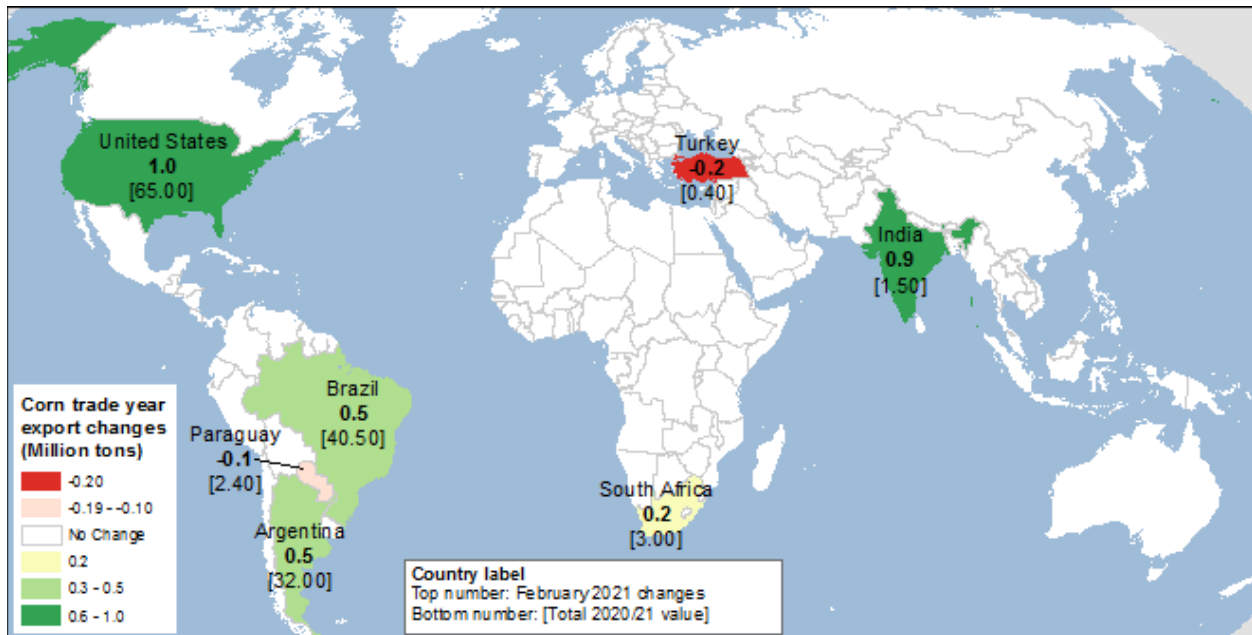
	Trade	Change in forecast ¹	YoY ² change	Comments
	<i>Million tons</i>			<i>October-September international trade year</i>
Coarse grain trade (total)				
↑ World	226.7	+3.6	+13.8	
↑ Foreign	153.8	+2.5	-6.4	
United States	72.8	+1.1	+20.2	
Coarse grain imports by country and by type of grain				
CHINA				
↑ Corn	24.0	+6.5	+16.4	High domestic grain prices, increasing feed demand, and strong pace of reported shipments and sales increase expected coarse grain imports.
↑ Barley	8.3	+1.3	+2.3	
↑ Sorghum	7.6	+0.2	+3.9	
EUROPEAN UNION (EU) + UNITED KINGDOM				
↓ Corn	15.5	-2.5	-3.1	Lower pace of imports due to high global corn prices, fewer supplies available from Eastern European exporters, and increased competition from China.
SOUTH KOREA				
↓ Corn	11.5	-0.5	-0.4	High global corn prices, increased global competition from China, and domestic cases of high-pathogen avian influenza (HPAI) reduce expected entries of imported corn.
SAUDI ARABIA				
↓ Barley	7.2	-0.4	-0.1	Slower pace of imports, as global barley prices rise.
JAPAN				
↓ Corn	15.6	-0.4	-0.2	Domestic cases of HPAI reduce feed domestic demand.
Coarse grain exports by country and by type of grain				
INDIA				
↑ Corn	1.5	+0.9	+0.4	Higher reported shipments to bordering markets, in particular Bangladesh.
ARGENTINA				
↑ Corn	29.5	+0.5	-7.9	Stronger-than-expected pace of shipments in January, along with strong demand from China.
↑ Barley	2.7	+0.2	+0.1	Higher projected production and strong global prices allow for increased foreign shipments.
BRAZIL				
↑ Corn	40.5	+0.5	+6.3	Strong shipments reported through January, leading up to the beginning of the local marketing year beginning in March.
EUROPEAN UNION (EU) + UNITED KINGDOM				
↑ Barley	6.8	+0.3	+0.3	Increased pace of shipments through November to China, North Africa, and Mexico, raise expected exports.
CANADA				
↑ Barley	3.3	+0.3	+0.7	Strong pace of exports reported, primarily due to demand from China and strong global prices.
SOUTH AFRICA				
↑ Corn	3.0	+0.2	+0.5	Larger projected production allow for increased shipments to global markets.
¹ Change from previous month. Smaller changes are made for several countries, see map A and B for changes in <i>corn</i> .				
² YoY: year-over-year changes.				
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.				

Map A – Corn trade year (TY) import changes for 2020/21, February 2021



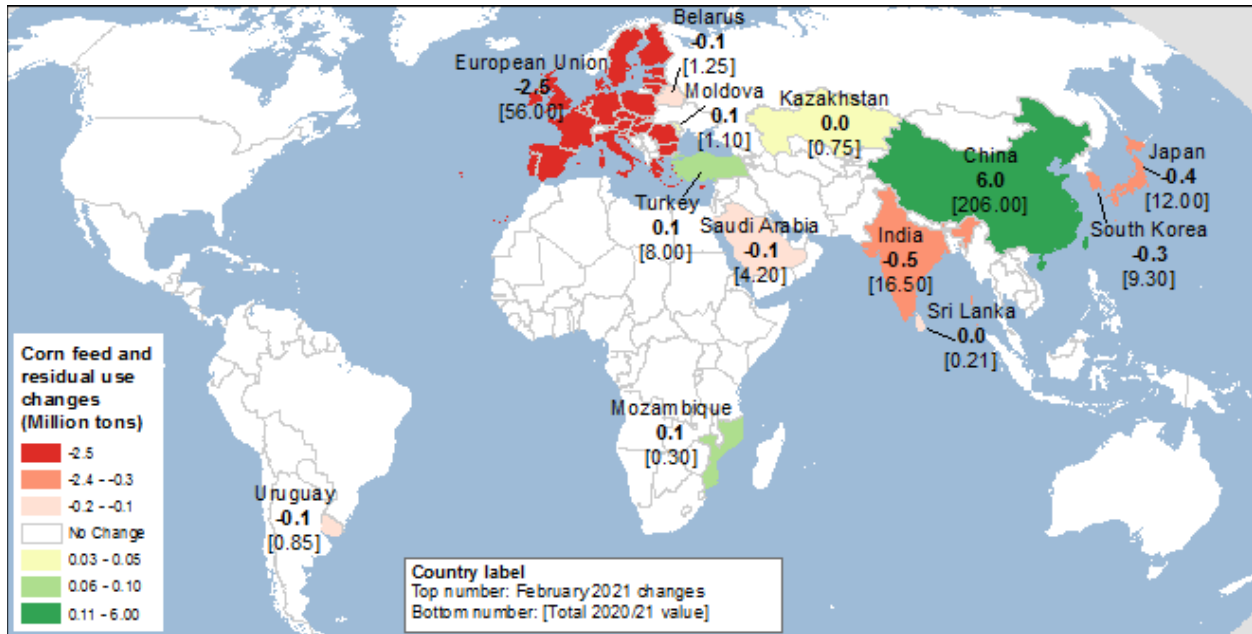
Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution online database.

Map B – Corn trade year (TY) export changes for 2020/21, February 2021



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

Map C – Coarse grain domestic feed use changes for 2020/21, February 2021



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

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