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Feed Outlook: March 2023

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U.S. Corn Exports Are Revised Down in March, Feed Grain Prices See Modest Declines

This month, there are no changes to the 2022/23 domestic supply or domestic use projections for corn, sorghum, barley, or oats. Corn exports for 2022/23 are revised down 75 million bushels in the March *World Agricultural Supply and Demand Estimates* (*WASDE*) report (to 1,850 million bushels), on a slow pace of sales and shipments thus far in the marketing year. With domestic use unchanged, the corn ending stocks forecast is raised commensurately to 1,342 million bushels. The 2022/23 projected season-average farm prices for both corn and oats are revised down this month to $6.60 per bushel and $4.75 per bushel, respectively. The projected season-average farm price for all barley (of $7.30 per bushel) and for sorghum (of $6.90 per bushel) are both unchanged from the February *WASDE* report.

Global corn production and trade are both projected lower this month. Hot temperatures and continued drought conditions are driving ***Argentine*** corn production projection down, which is partially offset by higher output for ***India*** and ***Paraguay***. Lower supplies have led to a decrease in ***Argentina's*** exports. ***U.S***. corn exports are also revised down, a reflection of the slow pace of exports and low outstanding sales so far this year. Lower corn exports by the ***United States*** and ***Argentina*** are partially offset by increases in exports by ***Brazil***, ***Ukraine***, and ***India***.

Domestic Outlook

Claire Hutchins

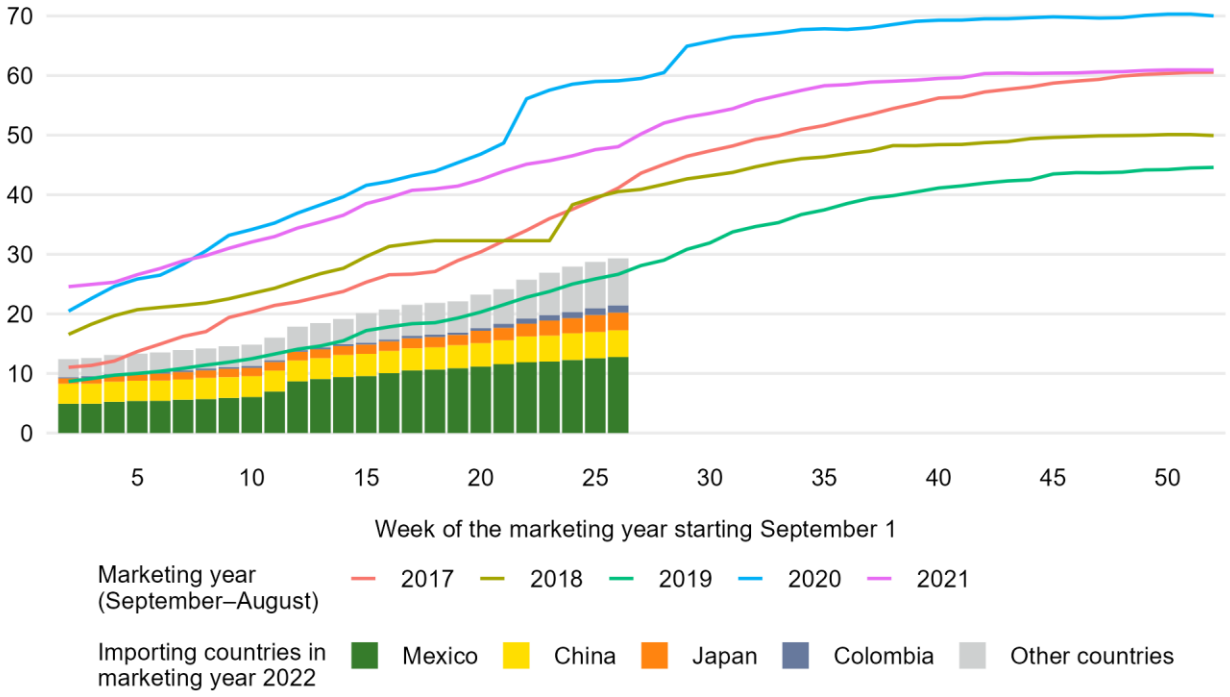
U.S. Corn Exports Slip Again in March on Lackluster Commercial Activity

The USDA, Foreign Agricultural Service (FAS) reported total U.S. corn export commitments (shipments plus outstanding sales) at 29.2 million metric tons as of February 23, 2023 (week 26 of the marketing year)—down 39 percent from last year and 31 percent below the 5-year average. At the beginning of the 2022/23 marketing year, U.S. corn exports were constrained by logistical problems and relatively uncompetitive prices. Since mid-January, U.S. price competitiveness has improved. However, corn export sales have been slow to respond, while reported export inspection shipments during January and February (combined) are well below the average shipped during the same period in 2020/21 and 2021/22.

Figure 1

Pace of total U.S. corn export commitments, by week and importing country, as of February 23, 2023, marketing years 2017–2022

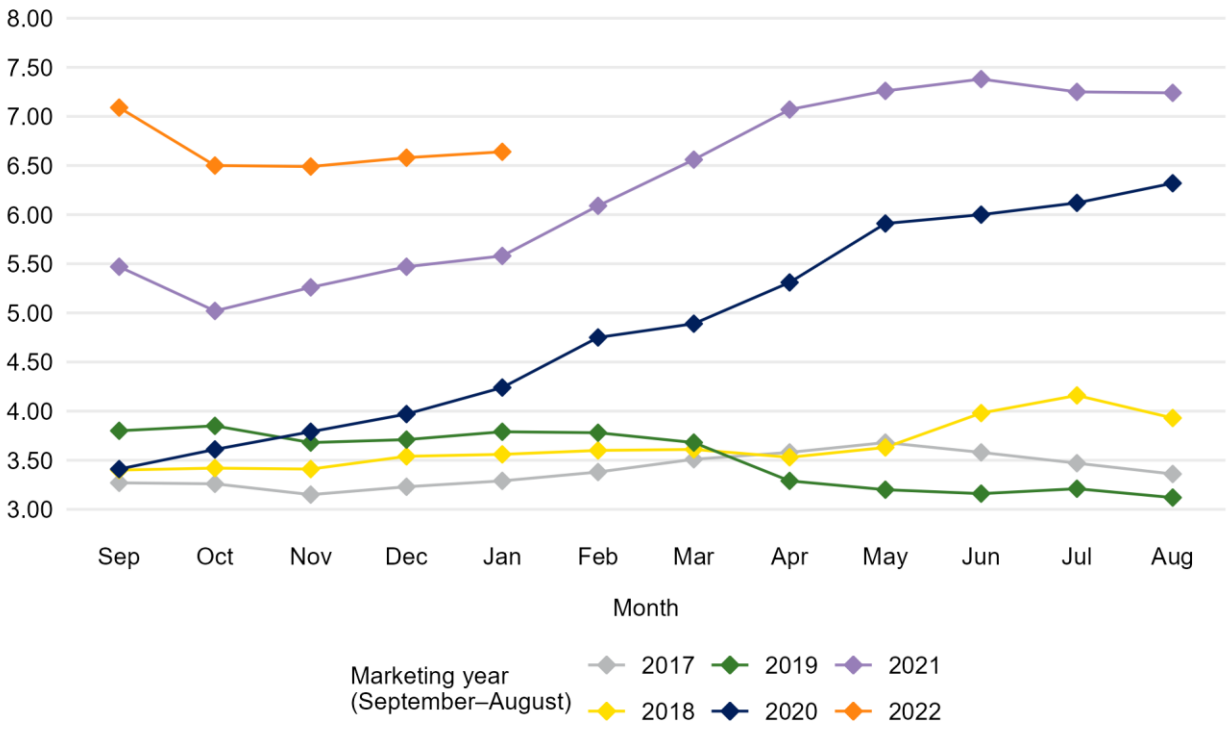
Million metric tons



Note: USDA, Foreign Agricultural Service (FAS) releases weekly U.S. export sales data. This information shows the real-time pace and commercial situation for U.S. agricultural exports. February 23, 2023 represents the 26th week of the marketing year.
Source: USDA, Economic Research Service calculations using data from FAS.

All domestic corn use categories are unchanged from the February *WASDE* report. The 2022/23 corn ending stocks forecast is raised 75 million bushels in March to 1,342 million bushels. The forecasted corn season-average farm price for 2022/23—of $6.60 per bushel—is down $0.10 from last month on relatively flat prices received between December 2022 and January 2023 (reported by the USDA, National Agricultural Statistics Service).

Figure 2
Price received for corn, by month and marketing year, 2017–2022
U.S. dollars per bushel



Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service.

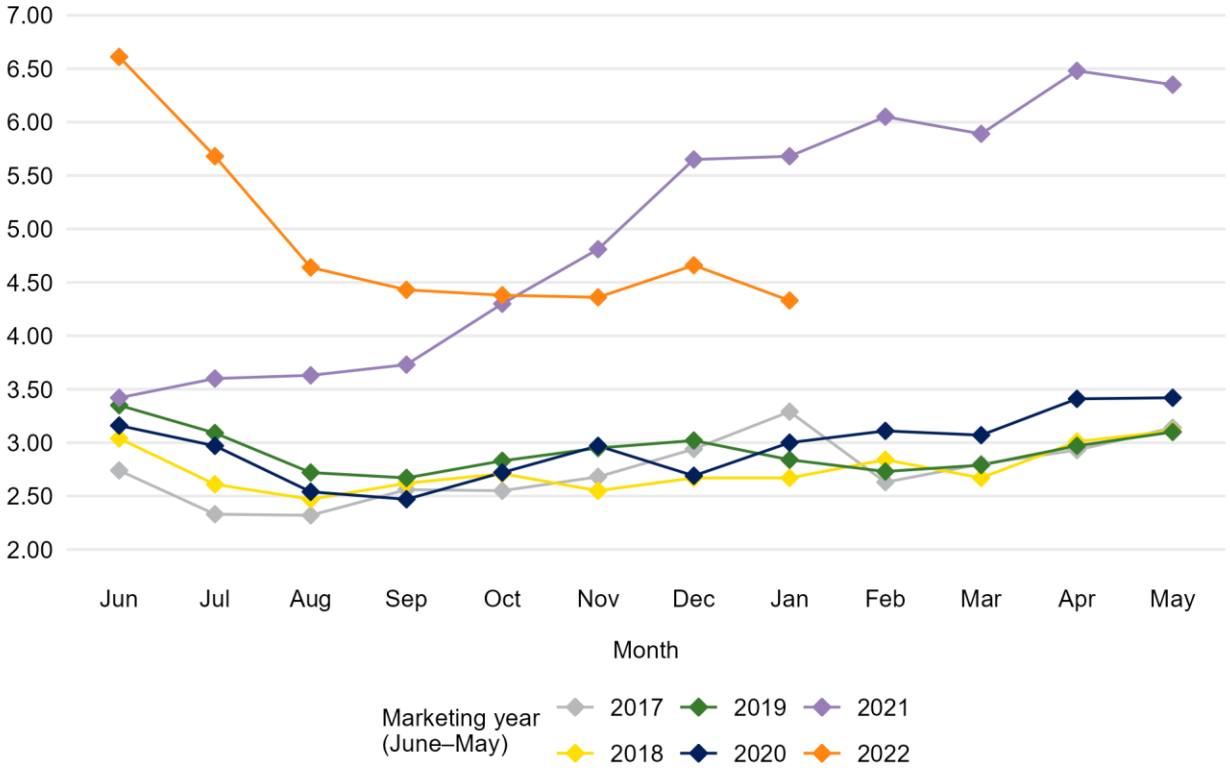
Sorghum and All Barley Prices Hold Strong in March, Oat Prices Are Lower

The 2022/23 season-average farm price for sorghum (of $6.90 per bushel) and all barley (of $7.30 per bushel) are unchanged from last month, but represent historic highs for both commodities on limited supplies and strong domestic demand for feed grains. The 2022/23 oats season-average farm price fell $0.10 from last month (to $4.75 per bushel), on trending weakness in the NASS monthly prices received through January 2023.

Figure 3

Price received for oats, by month, marketing years 2017–2022

U.S. dollars per bushel



Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service.

International Outlook

Angelica Williams

Global Coarse Grain Output Is Projected Lower

Global coarse grain production for 2022/23 is projected down 3.2 million tons this month to 1,439.6 million tons. Reductions in projected corn and sorghum supplies from ***Argentina*** more than offset the expected increase in corn supplies from India and Paraguay—and increases in barley supplies from ***Kazakhstan***, ***Australia*** and ***Argentina***. Coarse grain production in the ***United States*** is unchanged this month. Information on this month's changes in global, foreign, and U.S. coarse grain production are shown in table A1 below.

Table A1 - World and U.S. coarse grain production at a glance (2022/23), March 2023

	Region or country	Production	Change from previous month[1]	YoY Change[2]	Comments
		Million tons			
Coarse grain production (total)					
↓	**World**	**1,439.6**	**-3.2**	**-62.8**	
↓	**Foreign**	**1,081.2**	**-3.2**	**-23.5**	Partially offsetting changes are made for a number of countries and commodities. See table A2.
	United States	**358.5**	**No change**	**-39.2**	See section on U.S. domestic output.
World production of coarse grains by type of grain					
CORN					
↓	**World**	**1,147.5**	**-3.8**	**-68.5**	
↓	**Foreign**	**798.8**	**-3.8**	**-34.4**	Reductions in crop output from Argentina more than offset increases in India, Kazakhstan, Turkey, and Paraguay. See Table A2.
	United States	**348.8**	**No change**	**-34.1**	See section on U.S. domestic output.
BARLEY					
↑	**World**	**151.6**	**+1.2**	**+5.7**	
↑	**Foreign**	**147.8**	**+1.2**	**+4.5**	Higher production in Kazakhstan and Australia more than offsets lower production in South Africa. See table A2.
	United States	**3.8**	**No change**	**+1.2**	See section on U.S. domestic output.
SORGHUM					
↓	**World**	**58.0**	**-0.5**	**-3.9**	
↓	**Foreign**	**53.3**	**-0.5**	**+2.7**	Lower output is projected for Argentina and Australia. See table A2.
	United States	**4.8**	**No change**	**-6.6**	See section on U.S. domestic output.
MILLET					
↓	**World/Foreign**	**30.3**	**-0.2**	**+2.7**	Lower output is projected for India.

[1]Change from previous month. [2] YoY: year-over-year changes. [3] Totals may not add due to rounding.

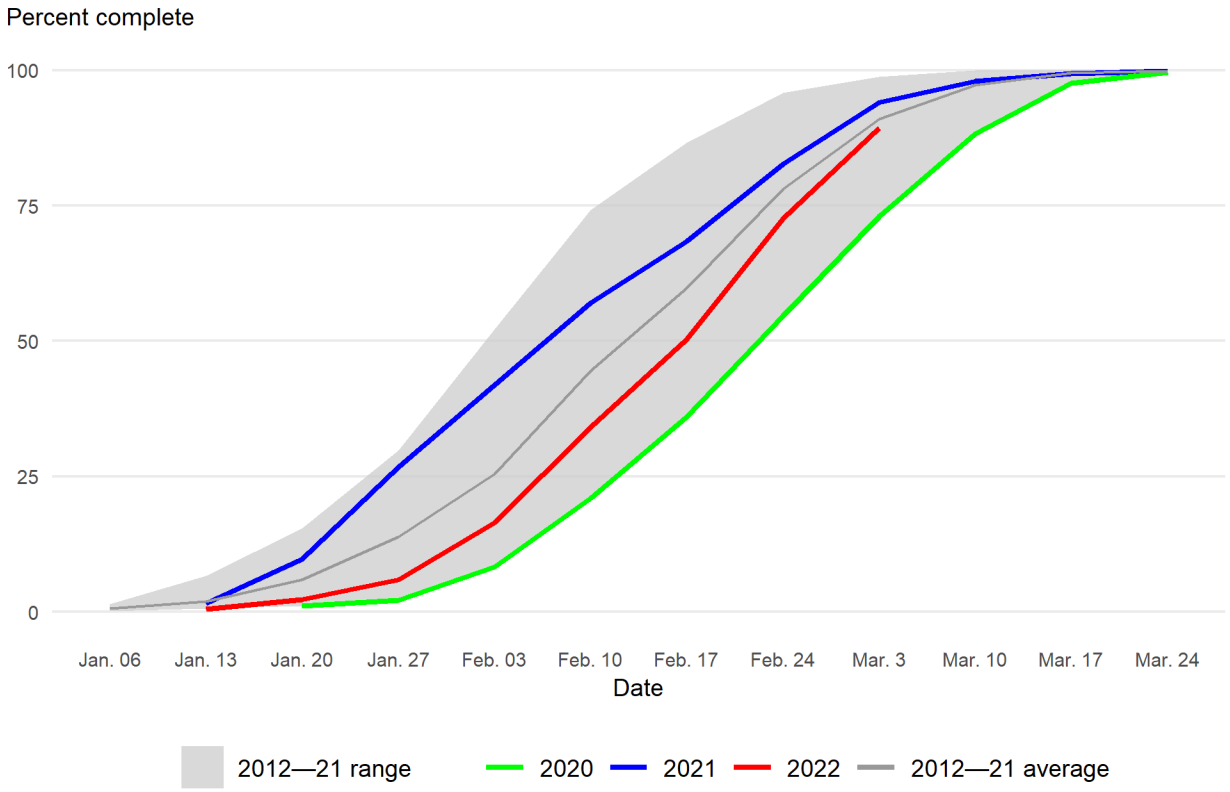
For changes and notes by country, see table A2.

Source: ERS calculations based on USDA, Foreign Agricultural Service, *Production, Supply and Distribution* database.

Argentine corn production is projected 7 million tons lower, to a total of 40 million tons for March. Sustained hot temperatures during February and early March have had a significant impact on corn yields. Estimated Argentine corn yields are down 18 percent from a year ago and are projected to be the lowest level since 2011/12.

Corn production in ***Brazil*** is unchanged this month, with an estimated output of 125 million tons for 2022/23. Planting progress of ***Brazil's*** second-crop corn (*safrinha*) has caught up in center-west regions of ***Brazil***, despite planting delays caused by rainfall for the country's soybean harvest. Corn planting progress started slower than the 10-year average in the Mato-Grosso region—which produces 44 percent of Brazil's second crop—but has picked up its planting pace since mid-February, to reach 89 percent complete as of March 3rd. See figure 4.

Figure 4
Corn second-crop planting progress in Mato Grosso Brazil, since 2012/13



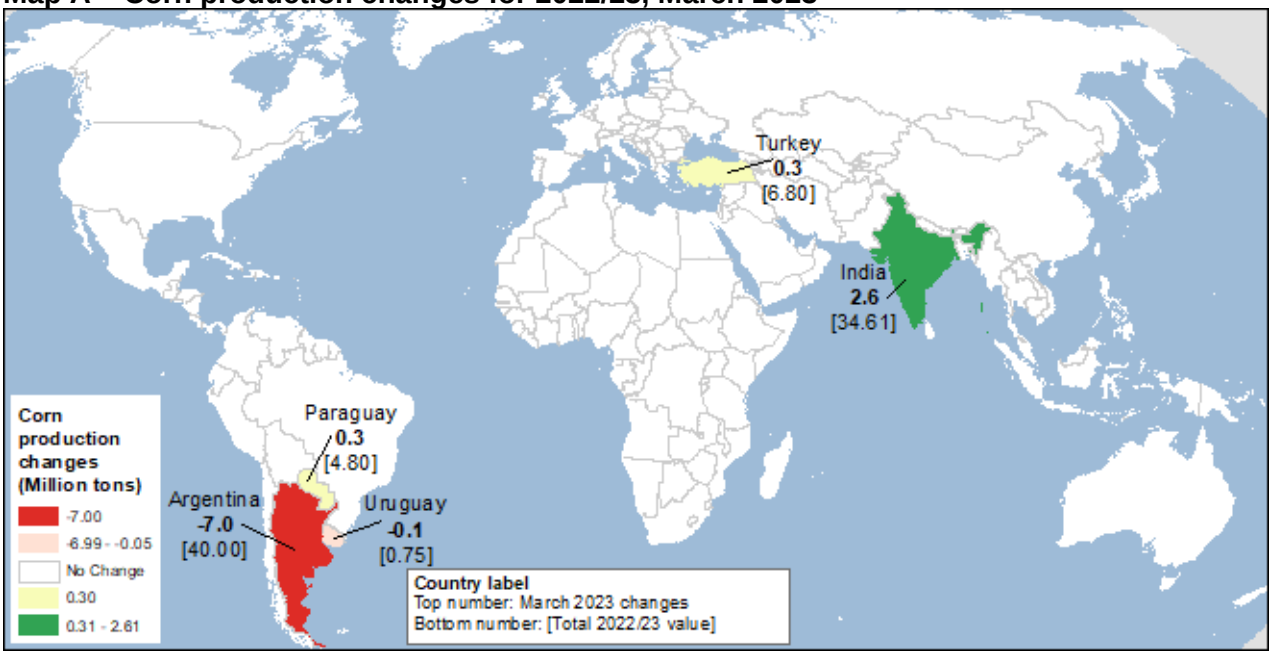
Source: Instituto Mato-grossense de Economia Agropecuária (IMEA).

Changes made for a number of individual countries this month for coarse grain production by type of grain are presented in table A2.

Table A2 - Coarse grain foreign production for 2022/23 at a glance, March 2023						
	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						
			ARGENTINA			
↓	**Corn**	*Mar-Feb*	**40.0**	**-7.0**	**-9.5**	Dry conditions in February are expected to further reduce yields and production (see report text).
↑	**Barley**	*Dec-Nov*	**4.5**	**+0.3**	**-0.8**	Increased production is projected, due to higher reported area, according to Ministry of Agriculture.
↓	**Sorghum**	*Mar-Feb*	**3.4**	**-0.1**	**No change**	Lower production is reported, based on reduced area harvested.
			INDIA			
↑	**Corn**	*Nov-Oct*	**34.6**	**+2.6**	**+0.9**	Higher projected area and yields are based on the second advanced estimate of the Indian Ministry of Agriculture.
↓	**Millet**	*Nov-Oct*	**11.8**	**-0.2**	**Slightly lower**	Lower yields are reported on the second advanced estimate of the Indian Ministry of Agriculture.
			AUSTRALIA			
↑	**Barley**	*Nov-Oct*	**14.1**	**+0.4**	**-0.2**	A revision is reported, based on higher yields that offset a reduced area and are in line with estimates reported by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES).
↓	**Sorghum**	*Mar-Feb*	**2.5**	**-0.4**	**-0.1**	A revision is reported, based on lower area and is in line with estimates reported by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES).
↑	**Oats**	*Nov-Oct*	**1.6**	**+0.2**	**-0.1**	A revision is reported, based on higher yields and is in line with estimates reported by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES).
			KAZAKHSTAN			
↑	**Barley**	*Jul-Jun*	**3.3**	**+0.6**	**+0.9**	Higher production is projected, based on increased yield and area reported by Government Stats Agency.
			PARAGUAY			
↑	**Corn**	*Jun-May*	**4.8**	**+0.3**	**-0.7**	Paraguay has an increase in corn poduction on higher area and yields.
			TURKEY			
↑	**Corn**	*Sep-Aug*	**6.8**	**+0.3**	**+0.3**	Due to slightly increased area and higher yields.
			URUGUAY			
↓	**Corn**	*Apr-Mar*	**0.8**	**-0.1**	**-0.1**	Uruguayan corn production is affected by the same dry conditions and high temperatures experienced by neighboring Argentina.
			SOUTH AFRICA			
↓	**Barley**	*Nov-Oct*	**0.3**	**-0.1**	**-0.1**	With the first production estimate released, barley yields are revised down to levels on par with previous year.
[1]Change from previous month. Smaller changes are made for several countries, see map A for changes in ***corn***.						
[2] YoY: year-over-year changes.						
Source: ERS calculations based on USDA, Foreign Agricultural Service, *Production, Supply and Distribution* database.						

See map A below for a visual display of this month's changes in corn production.

Map A – Corn production changes for 2022/23, March 2023



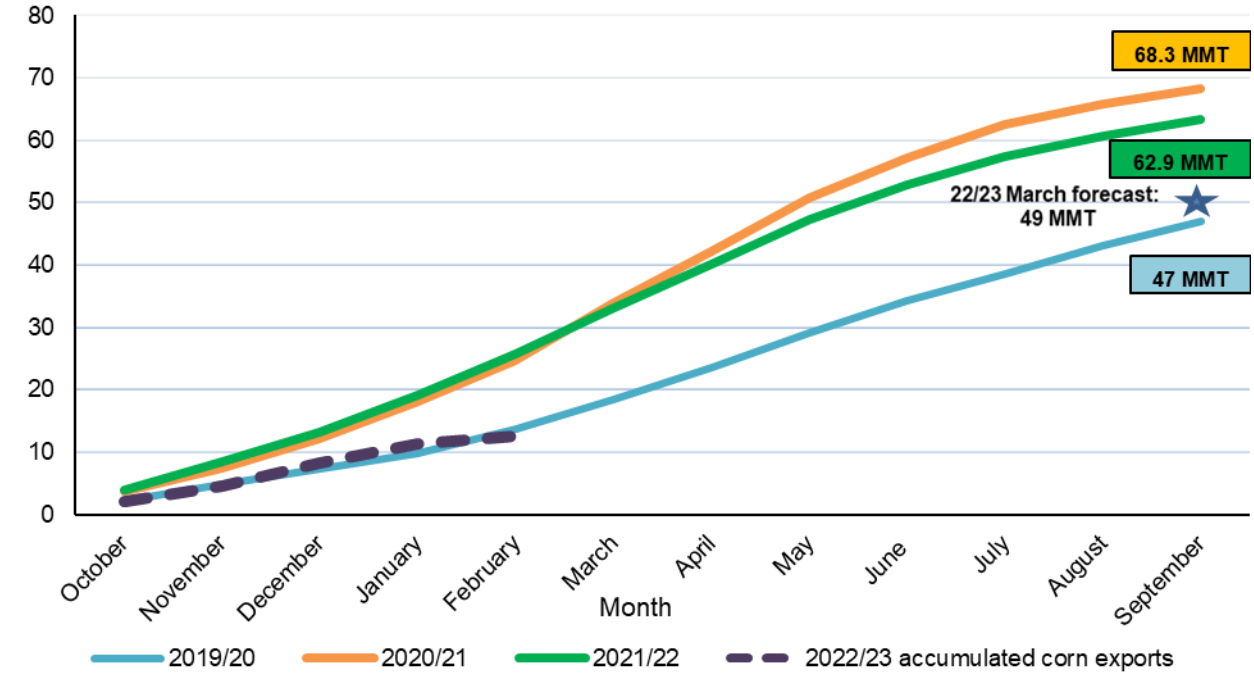
Source: USDA, Foreign Agricultural Service, *Production, Supply, and Distribution* database.

Global Corn Exports From Argentina and the United States Revised Lower

Global corn exports for the October-September 2022/23 international trade year are down 2.6 million tons this month, driven primarily by lower exports from ***Argentina*** and the ***United States***. Lower corn production in ***Argentina*** has driven projected exports down by 4 million tons to 29 million for the 2022/23 trade year, marking the country's lowest corn export level since 2017. Similarly, the ***U.S.*** corn export forecast for the 2022/23 October-September trade year is lowered by 2 million tons to a forecasted 49 million tons (down 75 million bushels for the local September-August marketing year to 1,850 million bushels), the lowest level since poor spring planting conditions reduced ***U.S***. corn production in 2019/20. Based on U.S. Bureau of the Census export data through January in combination with February inspections data, the pace of U.S. corn sales and shipments is significantly slower than both 2020/21 and 2021/22 and is more in line with the pace observed in 2019/20 (see figure 5 below). For detailed information on U.S. corn exports, refer to Domestic section of this report.

Figure 5. Accumulated U.S. corn exports, 2019/20—2022/23

Million metric tons (MMT)



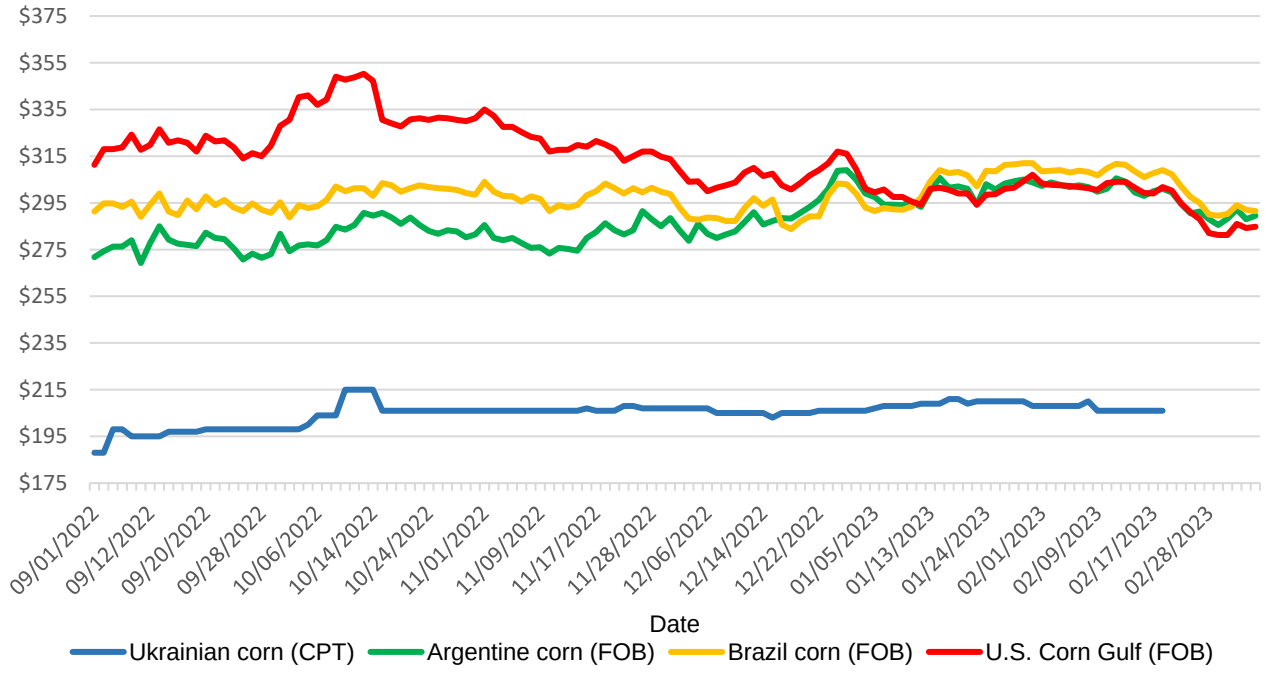
Note: 2022/23 U.S Census Corn Exports data are through January and U.S. Inspections are for February. At the time of March *World Agricultural Supply and Demand Estimates (WASDE)*, Census corn exports for January were not available.
Source: U.S Department of commerce, Bureau of Census.

Lower corn exports by the ***United States*** and ***Argentina*** are partially offset by increases in exports from ***Brazil***, ***Ukraine***, and ***India***. Projected October-September ***Brazilian*** corn exports are revised up 1 million metric tons from a month ago to 52 million. ***Brazil*** has seen a boost in corn exports in the first half of 2022/23 trade year. China began importing Brazilian corn, in part due to lower Brazilian corn port prices through mid-January (see figure 6 below), while the United States was (at the time) the highest priced corn supplier globally. In addition to price competitiveness, in October 2022, ***China*** officially decided to permit more than 100 Brazilian facilities to export corn to China.

India's corn exports are projected 1.2 million tons higher for 2022/23 due to expected higher supplies. The observed export pace to date (with 3 million tons of corn exported in February, according to the Ukraine Ministry of Agriculture) supports higher corn export prospects for ***Ukraine***, up 1 million tons this month.

Figure 6. Corn export prices by port of origin, September 2022—March 2023.

U.S. dollars per ton



CPT=carriage-paid-to
FOB=free-on-board
Source: USDA, Economic Research Service using data from AgriCensus.

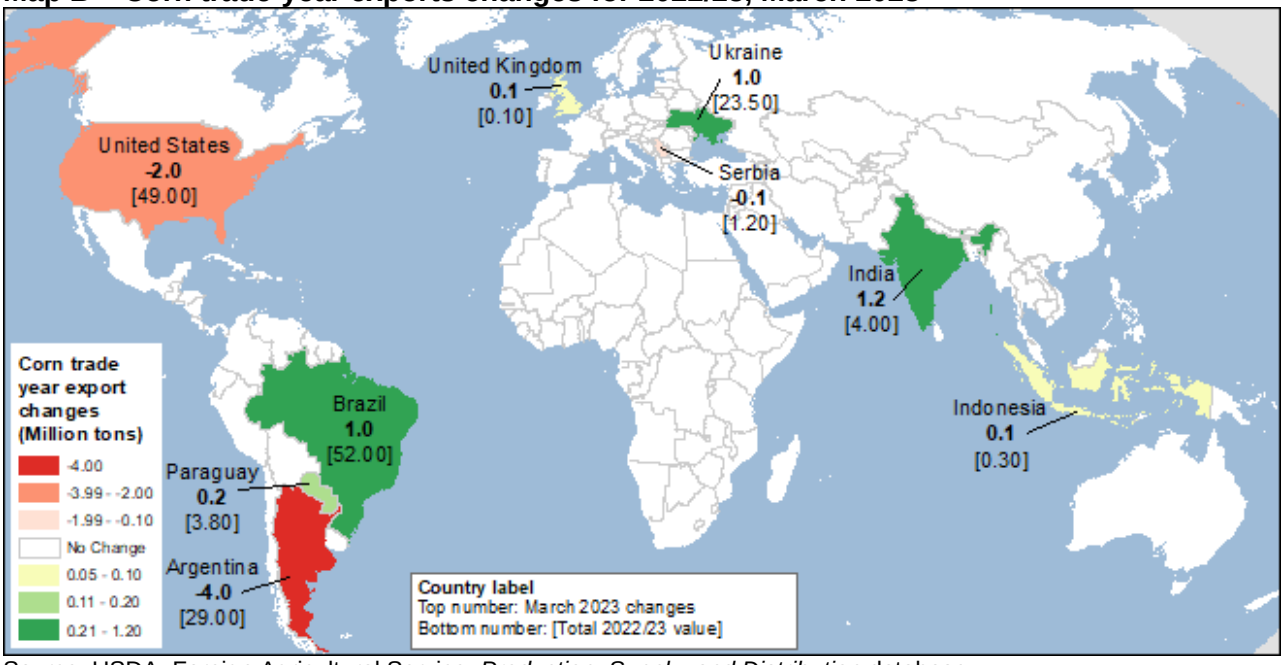
Corn imports are projected lower for several importing countries. ***Chile***, ***Columbia***, and ***Peru*** are impacted by nearby ***Argentina's*** lower corn exports; each 0.2 million tons lower this month. ***Egypt's***, ***Morocco's***, and ***Taiwan's*** corn imports are also down 0.2 million tons each, while ***Iran's*** and ***Malaysia's*** imports are revised 0.3 million tons lower. ***Turkey*** has the largest reduction in corn imports for 2022/23, with a 0.4-million-ton reduction.

Few changes were made to sorghum exports this month, with the biggest changes being a 0.2 and 0.1 million tons decrease in ***Australia's*** and ***Argentina's*** sorghum exports for the 2022/23 trade year. A reduction in global sorghum imports is driven primarily by reduced ***Australian and Argentine*** exports destined for ***China***, where imports are projected 0.3 million tons lower this month. The ***EU*** and UK sorghum imports are revised down fractionally, while ***Iraq*** sorghum imports are increased fractionally for 2022/23.

Global barley exports are up 0.4 million tons this month. Higher production has driven ***Australia's*** and ***Kazakhstan's*** exports up by 0.3 million tons each for 2022/23, offsetting the 0.2 million ton decrease in ***Russian*** barley exports.

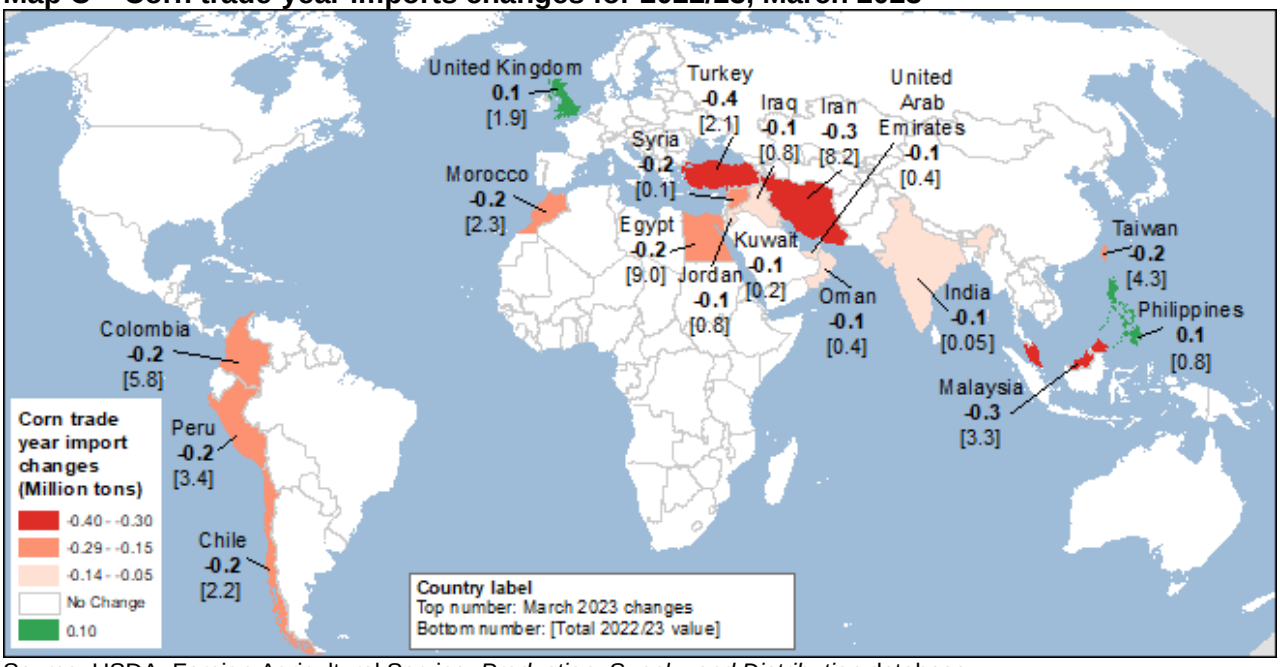
For a visual display on the changes in corn international trade-year exports and imports, see maps B and C below.

Map B – Corn trade-year exports changes for 2022/23, March 2023



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

Map C – Corn trade-year imports changes for 2022/23, March 2023



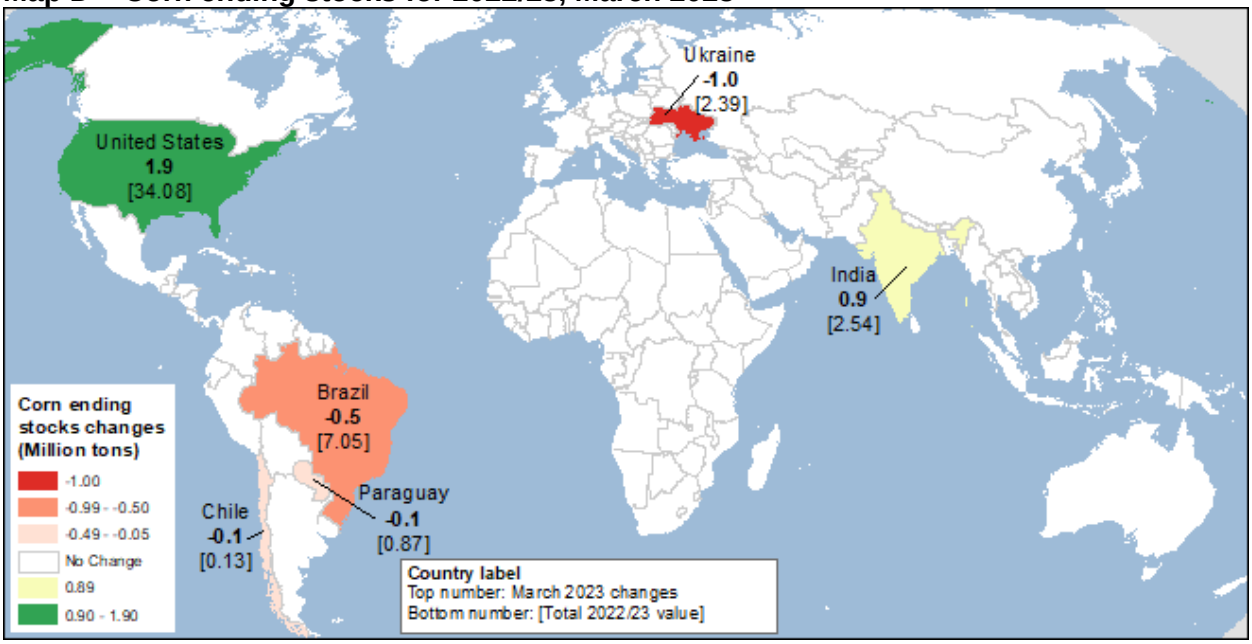
Source: USDA, Foreign Agricultural Service, *Production, Supply, and Distribution* database.

Increased U.S. Corn Stocks Drive Global Coarse Grain Stocks Higher

Global corn stocks for 2022/23 are revised up 1.2 million tons for this month, with increases for the ***United States*** and ***India*** only partially offset by reductions for ***Brazil*** and ***Ukraine***. Reduced U.S. corn exports have contributed to a boost in ***U.S.*** corn stocks of 1.9 million tons, bringing total stocks to levels just below those from a year ago. Corn ending stocks in ***India*** are increased by 0.9 million tons, driven by higher corn production. ***Ukraine's*** increase in exports has reduced the country's corn ending stocks by 1 million metric tons, while ***Brazil's*** ending stocks are reduced by 0.5 million tons this month.

For a visual display on the changes in corn ending stocks, see map D.

Map D – Corn ending stocks for 2022/23, March 2023



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

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