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By **Tanner Ehmke**  
**Will Sawyer**  
**Kenneth Scott Zuckerberg**  
*Knowledge Exchange*

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# Dollar Divergence: U.S. Dollar Index Does Not Reflect True Dollar Impact on U.S. Ag Exports

## Key Points:

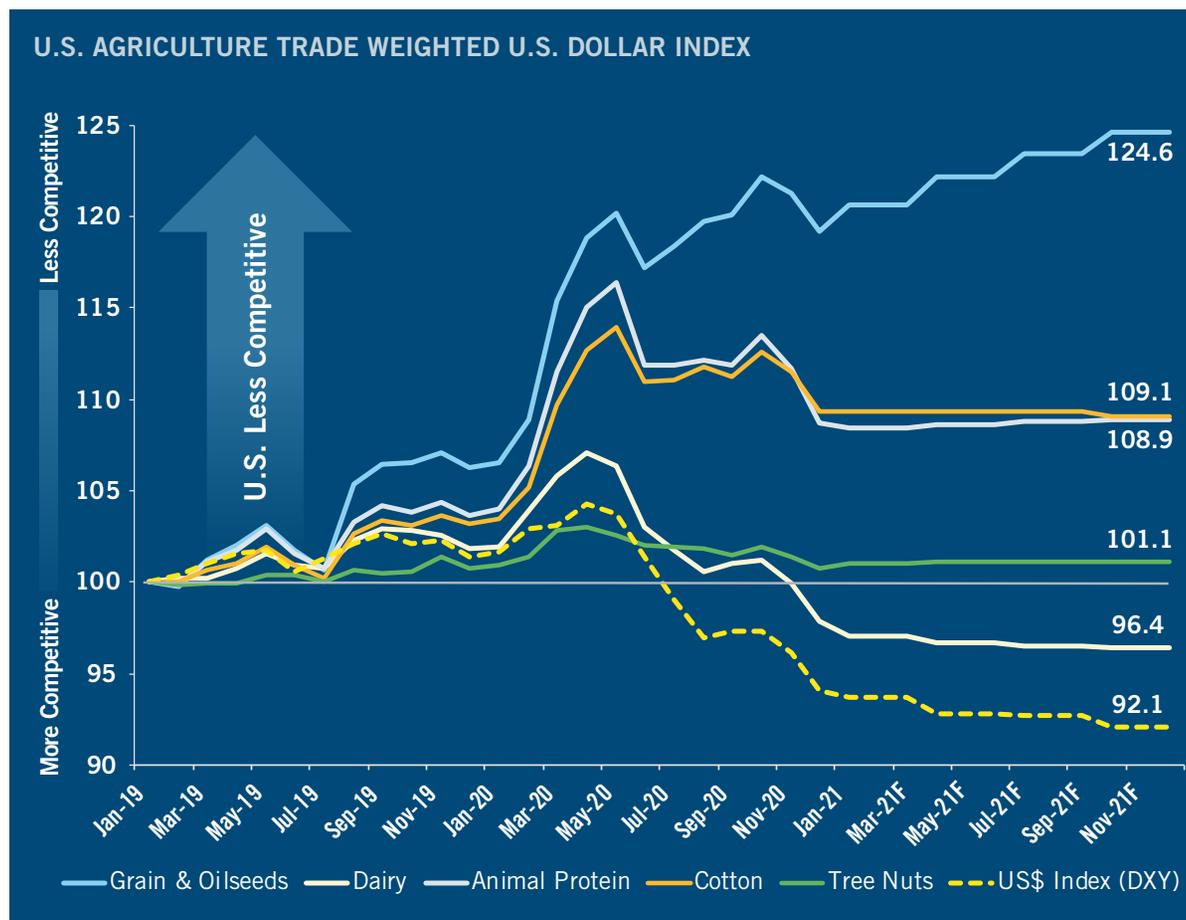
- The U.S. Dollar Index (DXY) saw rapid deflation in 2020 and has coincided with a rally in commodity prices. However, the DXY is a broad measure of the dollar that is heavily weighted against the euro and does not capture the impact of currency movements on specific agricultural commodity markets.
- CoBank’s trade-weighted indices for selected agricultural sectors reflect a currency environment that is expected to be positive for some agricultural exports in the year ahead, but is negative for others.
- While U.S. agricultural exports grew in 2020, commodities like grain, animal protein, and cotton experienced a modest currency headwind from ag exporting regions like South America and Eastern Europe, which is expected to continue in 2021.
- U.S. dairy products look to enjoy a more favorable foreign exchange outlook from currency strength in New Zealand and the EU, with U.S. tree nut exports expected to see tailwinds from stronger currencies in Australia and Iran.
- While foreign exchange rates may create headwinds or tailwinds for individual commodity markets, factors like weather, trade policy, and supply and demand fundamentals will continue to also be major markers.

## Introduction

U.S. dollar weakness commonly is inversely correlated with agricultural commodity markets. A weaker dollar makes U.S. agricultural products more competitive on the global export market. However, the broad DXY index that is heavily weighted to the euro does not adequately detail the potential impact on U.S. agricultural exports. Notably, the foreign exchange (FX) rates of key agricultural exporting countries that the U.S. competes with – such as Brazil, Argentina, Ukraine, and Russia – lost considerably more value than the U.S. dollar in 2020.

Using FX forecasts from Oxford Economics for each of the major competing agricultural exporting countries, CoBank research reveals a more nuanced effect of FX rates on U.S. grain, livestock, dairy, tree nuts, and cotton exports.

Importantly, fundamental factors like the rapid rebuilding of the Chinese hog herd, weather disruptions in key agricultural producing regions of the world, and trade wars also drive major differences in agricultural market behavior and may override the impacts of FX rates.



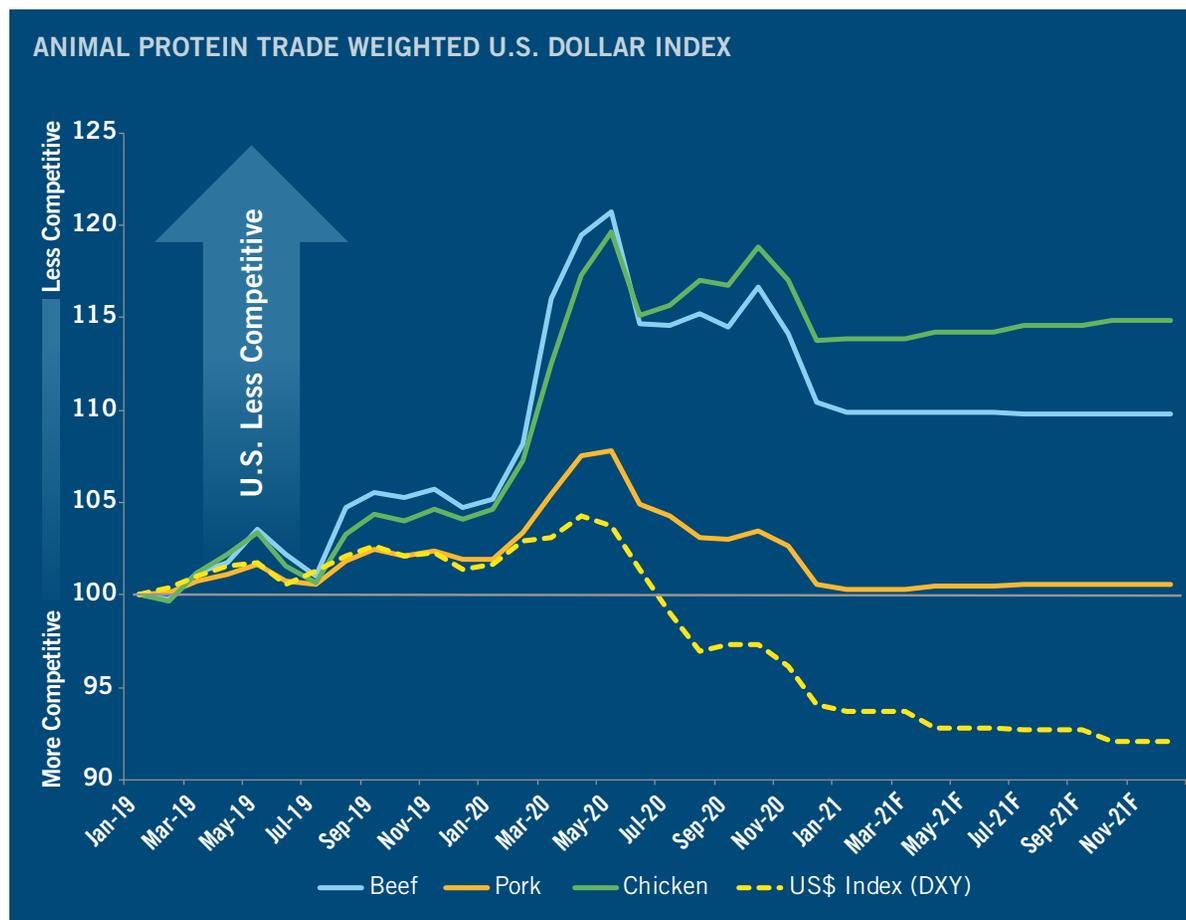
Source: USDA PSD, Oxford Economics, CoBank Estimates

## Animal Protein: Beef, Pork, Chicken

After a year of challenging currency dynamics in 2020, we expect U.S. animal protein exports to benefit from a modestly weaker dollar tailwind in 2021 as the animal protein trade weighted index is expected to weaken by 2%. The animal protein index strengthened by close to 9% in 2020 with the index peaking in April and May when the currencies of Brazil, Argentina and Australia lost significant value against the dollar.

In the final months of 2020, U.S. protein exports started to benefit from the strengthening of the Australian dollar and the euro against the U.S. dollar, helping animal protein exports to end the year on a high note. The outlook for a strong Australian dollar and euro in 2021 should make U.S. beef and pork exports the largest beneficiaries of a weaker dollar in the coming year.

In addition to currency, a more normal year for U.S. meat processing capacity, the rebound in global foodservice demand, and the trend in China's meat and poultry imports will be the primary drivers of a good year for U.S. protein exports in 2021.

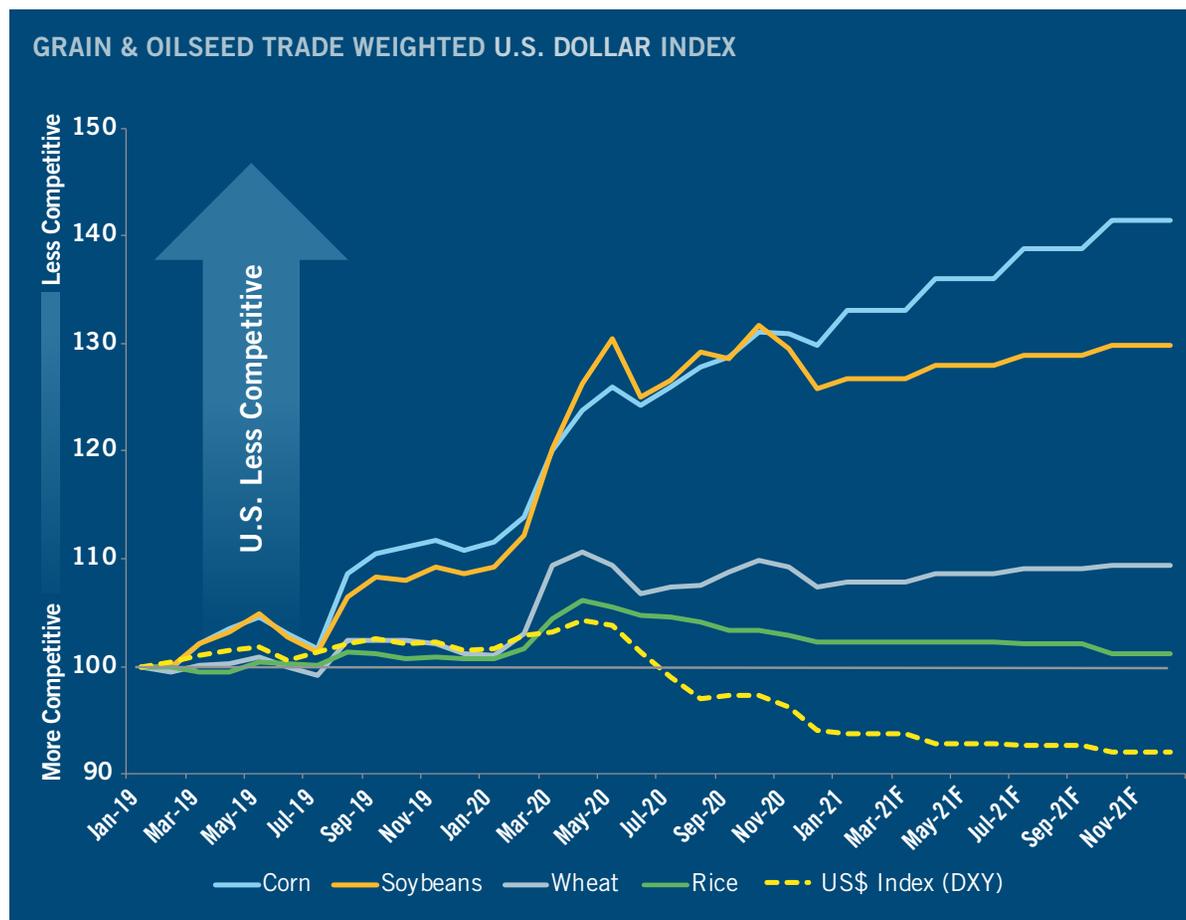


Source: USDA PSD, Oxford Economics, CoBank Estimates

## Grain and Oilseeds: Corn, Wheat, Soybeans, Rice

The U.S. trade weighted grain and oilseed (G&O) index stands out relative to other agriculture commodities studied in this report. The index strengthened by 14% in 2020 and is expected to do so by another 4%-5% in 2021, in contrast to other commodities' trade-weighted indices. The further strengthening is driven by corn and soybeans and the U.S. dollar's forecast strength relative to the currencies of Brazil, Argentina, and Ukraine (46% of the U.S. trade weighted G&O index.) The impact of currency for wheat and rice is neutral.

A casual observer could argue that corn and soybean exports will face headwinds in 2021 since index strength implies that U.S. exports become less price competitive. This was not the case in 2020 nor is it expected to be the case in 2021 due to Chinese demand. China has been aggressively buying U.S. grain for feed as it rebuilds its hog herd, leveraging its strong currency relative to the U.S. dollar despite the dollar's strength in relation to other currencies.

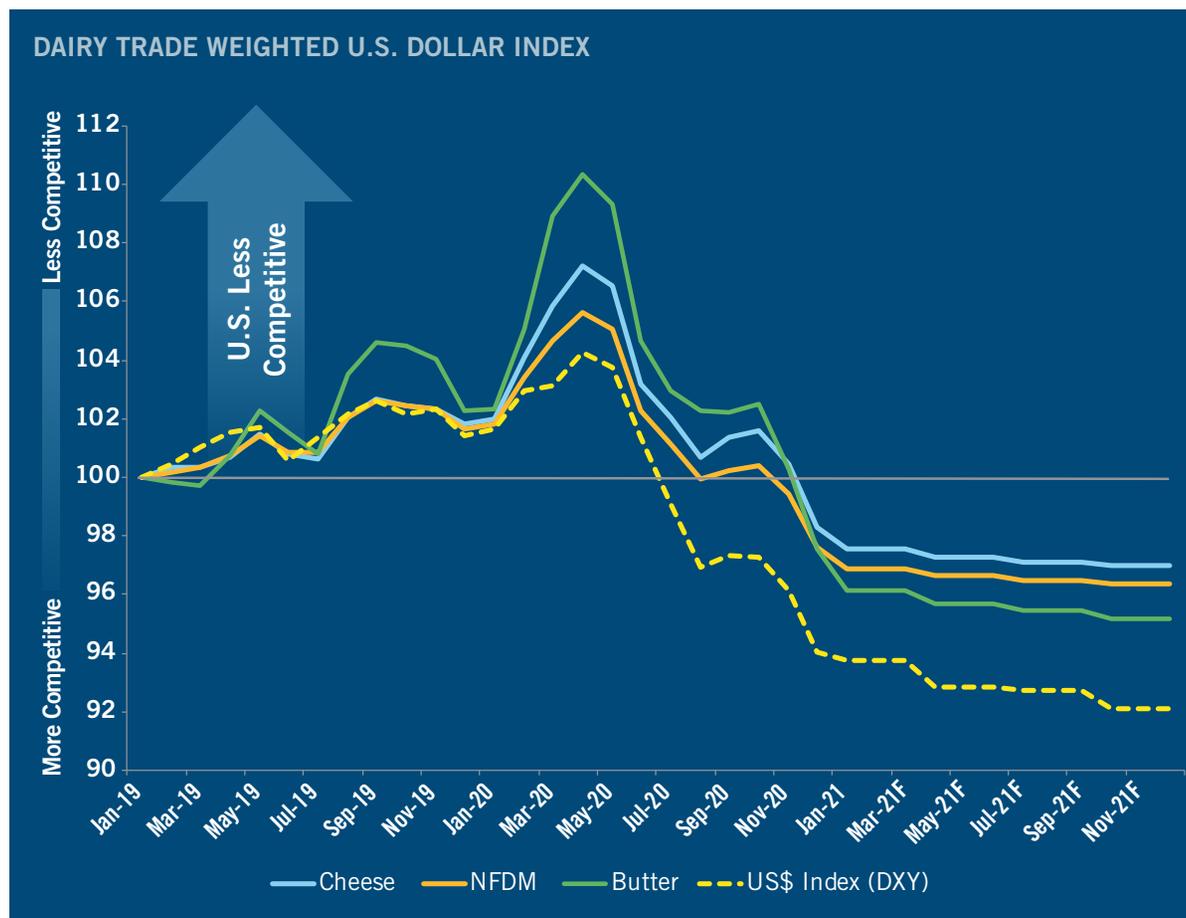


Source: USDA PSD, Oxford Economics, CoBank Estimates

## Dairy: Cheese, NFDM, Butter

With the EU and New Zealand being such dominant players in the global dairy trade, the euro and New Zealand dollar factor heavily in the trade-weighted currency index for dairy. Combined, the EU and New Zealand comprise 58% of world cheese exports, 51% of nonfat dry milk (NFDM) exports, and 77% of butter exports. By comparison, the U.S. claims 17% of the world cheese trade, 31% of NFDM exports, and only 4% of butter exports.

Both the euro and New Zealand dollar are projected to be stronger against the U.S. dollar in 2021, giving U.S. dairy a tailwind into the global export market, especially into key markets like South Korea, Japan, and Australia for cheese, Southeast Asia for NFDM, and South Korea for butter. With the U.S. being a net importer of butter – particularly from Ireland – a stronger euro will raise the cost to bring butter into the U.S. and potentially support domestic demand for U.S. butter.



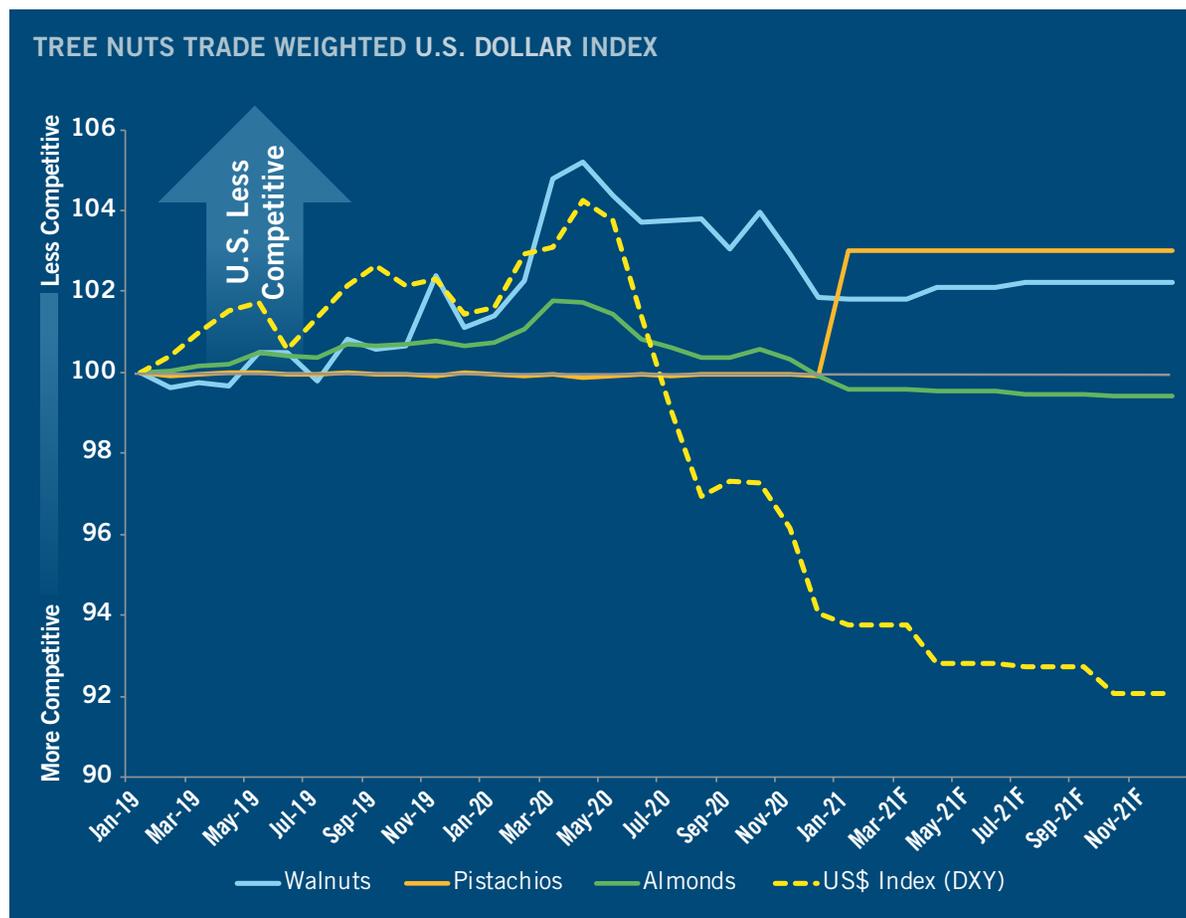
Source: USDA PSD, Oxford Economics, CoBank Estimates

## Tree Nuts: Almonds, Pistachios, Walnuts

The U.S. controls the vast majority of tree nut exports in the world, leaving importers with few choices for sourcing. The U.S. accounts for 87% of global almond exports, 65% of pistachio exports, and 51% of walnut exports. Currency tailwinds, though, may offer greater export opportunities in 2021.

Australia, the second biggest almond exporter in the world with 9% of global exports, is forecast to experience its currency strengthening, creating opportunities for the U.S. into Asian markets. U.S. walnuts are also expected to benefit with Chile (16% of global exports) and China (14% of exports) expected to struggle against stronger local currencies. But Ukraine (12% of walnut exports) may benefit from a weaker currency, creating a headwind for the U.S. into markets like the EU.

Iran, claiming 29% of global pistachios exports, is expected to see its currency weaken in the year ahead, potentially costing U.S. pistachio exporters market share in key markets like India.



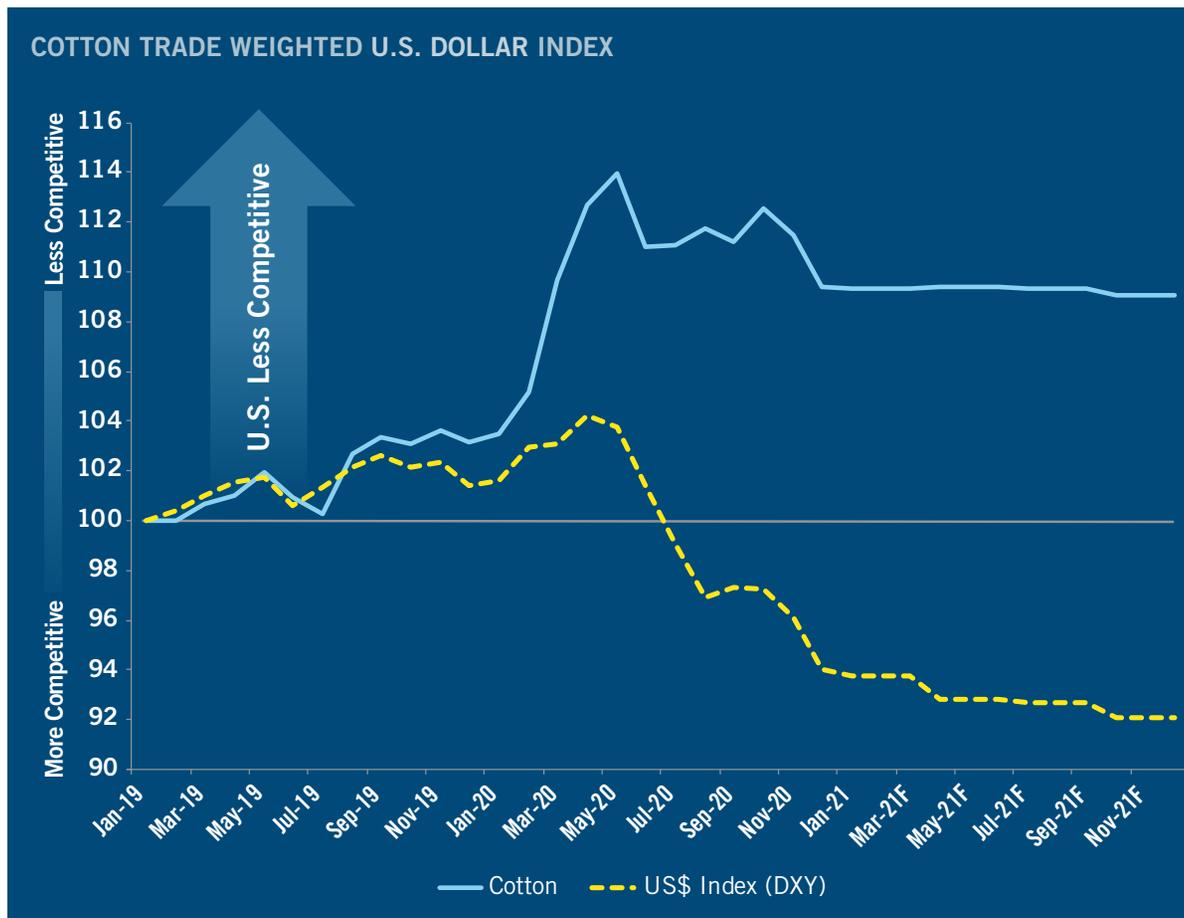
Source: USDA PSD, Oxford Economics, CoBank Estimates



## Cotton

U.S. cotton is heavily dependent on exports with more than 80% of U.S. cotton moving into the export market. The U.S. also commands the top place in global exports with more than a third of global market share. However, number-two Brazil, which claims 20% of global exports, is forecast to see continued weakness in the real in 2021, which will be a headwind for the U.S. into markets like China, Vietnam, and Pakistan.

Potential strength in the Indian rupi, however, offers export opportunities for the U.S. While India is the world's top cotton producer with 9% of global export market share, India is also a notable importer from the U.S. Nearby Australia, with 2% global export market share, is also seen experiencing a currency headwind and potentially opening export opportunities into India, China, and Southeast Asia.



Source: USDA PSD, Oxford Economics, CoBank Estimates

## Methodology

The commodity indices created by CoBank's Knowledge Exchange Division are intended to capture how changes in foreign exchange rates impact the price competitiveness of U.S. agricultural exports. They were inspired in part by a concept used by the U.S. Meat Export Federation.

The competition in global agriculture trade varies widely by each commodity as does each market's share within the global trade of that commodity. Each index is weighted by the major exporters of that commodity over the last three years. The outlook for 2021 is based on exchange rate forecasts from Oxford Economics. When the index rises above 100, then U.S. exports of that commodity have lost price competitiveness against their competition and vice versa when the index falls below 100.

These indices are not intended to incorporate every facet of price competitiveness but only to isolate the impact of foreign exchange on the competitiveness of U.S. agricultural exports amongst its key competitors.

### GLOBAL AGRICULTURE EXPORT MARKETSHARE BY COMMODITY (2018-2020)

	Grain & Oilseeds				Dairy			Animal Protein			Cotton	Tree Nuts		
	Corn	Soybeans	Wheat	Rice	Cheese	NFDM	Butter	Beef	Pork	Chicken		Pistachios	Walnuts	Almonds
United States	34.1%	33.3%	15.6%	9.2%	18.1%	33.2%	4.0%	21.6%	32.6%	33.7%	49.1%	69.2%	54.5%	87.1%
Argentina	22.4%	5.6%	7.5%	-	-	-	-	-	-	-	-	-	-	-
Australia	-	-	7.6%	-	8.3%	6.1%	-	25.0%	-	-	7.0%	-	-	8.6%
Belarus	-	-	-	-	12.3%	5.6%	8.5%	-	-	-	-	-	-	-
Brazil	23.8%	54.4%	-	-	-	-	-	35.9%	10.2%	38.3%	26.8%	-	-	-
Canada	-	2.9%	15.0%	-	-	-	-	7.8%	15.0%	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-	-	-	-	-	17.4%	1.0%
China	-	-	-	-	-	-	-	-	-	-	-	-	14.9%	-
European Union	2.2%	-	17.5%	-	44.8%	38.9%	25.1%	-	39.5%	15.0%	4.5%	-	-	2.5%
India	-	-	-	37.8%	-	-	4.1%	-	-	-	12.6%	-	-	-
Iran	-	-	-	-	-	-	-	-	-	-	-	30.8%	-	-
Kazakhstan	-	-	4.4%	-	-	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	2.8%	-	-	-	-	-
New Zealand	-	-	-	-	16.5%	16.2%	58.3%	9.7%	-	-	-	-	-	-
Pakistan	-	-	-	12.7%	-	-	-	-	-	-	-	-	-	-
Paraguay	-	3.8%	-	-	-	-	-	-	-	-	-	-	-	-
Russia	-	-	21.7%	-	-	-	-	-	-	-	-	-	-	-
Thailand	-	-	-	20.7%	-	-	-	-	-	8.7%	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-	4.4%	-	-	-	0.8%
Ukraine	17.5%	-	10.8%	-	-	-	-	-	-	-	-	-	13.2%	-
Vietnam	-	-	-	19.6%	-	-	-	-	-	-	-	-	-	-

Source: USDA PSD

## Contributors

Knowledge Exchange is an innovative knowledge-sharing initiative that is designed to provide strategic insights about trends, structural change, and policy directives within the key rural industries served by CoBank.

It draws upon the expertise within CoBank and the rest of the Farm Credit System, the broad perspective of outside consultants and academics, and the first-hand knowledge and experience of our customers to enhance our collective understanding of emerging business opportunities and risks.



### Tanner Ehmke

*Manager,  
Knowledge Exchange Division*



### Will Sawyer

*Lead Economist, Animal Protein  
Knowledge Exchange Division*



### Kenneth Scott Zuckerberg

*Lead Economist, Grain and Farm Supply  
Knowledge Exchange Division*



**CoBank's Knowledge Exchange Division welcomes readers' comments and suggestions.  
Please send them to [KEDRESEARCH@cobank.com](mailto:KEDRESEARCH@cobank.com).**

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