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Outlook

Outlook for U.S. Agricultural Trade

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FY 2021 U.S. Agricultural Exports Forecast Up \$5.5 Billion to \$140.5 Billion; Imports at \$136.0 Billion

U.S. agricultural exports in Fiscal Year (FY) 2021 are projected at \$140.5 billion, up \$5.5 billion from the revised forecast for FY 2020. This increase is primarily driven by higher exports of soybeans and corn. Soybean exports are forecast up \$4.2 billion from FY 2020 to \$20.4 billion, largely due to expected strong demand from China and reduced competition from Brazil. Corn exports are projected up \$700 million to \$9.0 billion on expectations of higher export volume. Horticultural product exports are forecast up \$500 million to \$35.0 billion with increasing sales of tree nuts and miscellaneous products. Livestock, poultry, and dairy exports are forecast up \$500 million to \$32.3 billion in FY 2021, led by higher beef and veal, variety meat, dairy, and poultry exports. Cotton exports are forecast down \$400 million to \$5.0 billion on smaller volume and unit values. Agricultural exports to China are forecast at \$18.5 billion, an increase of \$4.5 billion from FY 2020, largely on higher expected soybean sales. Agricultural exports to Canada and Mexico are forecast at \$21.0 billion and \$19.3 billion, respectively.

U.S. agricultural imports in FY 2021 are forecast at \$136.0 billion, \$4.3 billion higher than revised FY 2020 due largely to a \$3.9 billion increase in horticultural products, and a \$700 million increase in grain and feed imports.

For FY 2020, the export forecast of \$135.0 billion represents a reduction of \$1.5 billion from May's projection, mainly due to a reduction in the forecast for horticultural, beef and veal, and

soybean exports. Imports are adjusted up \$1.5 billion from the May forecast at \$131.7 billion resulting from a \$1.5 billion increase in horticultural products, and a \$400 million increase in beef and veal imports that equals the reduction in forecast imports of sugar and tropical products.

The forecasts in this report are based on policies in effect at the time of the August 12 *World Agricultural Supply and Demand Estimates* (WASDE) release and the U.S. production forecasts thereof.

Table 1—U.S. agricultural trade, fiscal years 2014–21, year ending September 30

| Item | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Forecast fiscal year* | | |
|------------------------|-------|-------|-------|-------|-------|-------|-----------------------|--------|--------|
| | | | | | | | 2020 | | 2021 |
| | | | | | | | May | August | August |
| <i>Billion dollars</i> | | | | | | | | | |
| Exports | 152.3 | 139.8 | 129.6 | 140.2 | 143.4 | 135.5 | 136.5 | 135.0 | 140.5 |
| Imports | 109.3 | 114.2 | 113.0 | 119.1 | 127.5 | 130.8 | 130.2 | 131.7 | 136.0 |
| Balance | 43.1 | 25.5 | 16.6 | 21.1 | 15.9 | 4.6 | 6.3 | 3.3 | 4.5 |

Note: Due to rounding, balance may not agree with import and export data.

*Reflects forecasts in the August 12, 2020, *World Agricultural Supply and Demand Estimates* report.

Sources: USDA, Economic Research Service and Foreign Agricultural Service analysis and forecasts using data from U.S. Department of Commerce, Bureau of the Census.

Economic Outlook

Economic Recovery to Vary Widely Across Regions in FY 2021

The outbreak of the global COVID-19 pandemic is forecast to cause the world's real gross domestic product (GDP) to decline in 2020 for the first time since 2009. While some economists believe the worst of the economic and public health shock has already been observed, with the GDP of many advanced economies falling at annualized nominal rates of greater than 30 percent during the second quarter of this year, there remains significant uncertainty as to the length and speed of the recovery. Despite an anticipated recovery in the growth rate for most economies in 2021, real GDP is expected to remain below levels seen before the global pandemic. The economic recovery will depend on public and private efforts to mitigate and contain the pandemic and to efficiently adapt economies to changing conditions.

The economies of the U.S. and Eurozone are forecast to decline by 5.8 and 7.1 percent, respectively, in 2020. Both economies rely heavily on the service sector for GDP growth. That sector has been especially hampered by declines in expenditures on health care, recreation, food services, and travel. The fiscal policy response in the United States has thus far supported record disposable income levels, helping maintain consumption levels of lower-income households and those whose jobs were negatively affected by the pandemic. Savings rates of higher-income individuals in the United States are at all-time highs. The economic outlook for both economies is forecast to improve in 2021, growing by 3.1 and 3.8 percent for the United States and Eurozone, respectively. Canada and Mexico are projected to experience significant declines in GDP in 2020, down 6.3 percent and 8.4 percent, respectively.

Real GDP in South America will decline during 2020, falling by 6.4 percent for Brazil, which has been hit hard by the virus. GDP decreases by, on average, 4.3 percent for the rest of South America. The economic recovery in 2021 will be shaped by the more limited fiscal responses of many national governments and an anticipated prolonged experience with combatting the virus. Argentina, whose GDP growth was negative before the arrival of COVID-19, is an exception to patterns seen in South America. Although Argentina's real GDP is forecast to decline by 8 percent in 2020, the debt restructuring deal made earlier this year will allow for a slightly faster economic rebound than observed in the rest of South America.

China is expected to have real GDP growth of 1.8 percent in 2020. While this means China's economy is forecast to avoid contracting, the growth rate remains markedly below the 5.7 percent real growth rate observed in 2019, which was the slowest rate in almost 30 years. In 2021, China's

real GDP growth is expected to rise above 5 percent, although the outlook is dependent on the rate of economic recovery in China's trading partners. Many Asian economies have outperformed much of the rest of the world thus far in 2020, with real GDP declines projected between 2 and 3 percent. However, the economic recovery in 2021 for this region is anticipated to be more modest, growing by just 2.4 percent. India is the exception as it continues to struggle with its COVID-19 mitigation efforts. India is the only Asian country projected to experience a continuing contraction of real GDP in 2021.

Falling oil prices have significantly influenced real GDP growth in the Middle East in 2020. Middle Eastern countries not reliant on oil revenues have also seen sharp declines in investment and remittances from abroad. With consumers and businesses worldwide reevaluating international and business travel, the oil industry is likely to recover more slowly from the effects of COVID-19 than many other sectors of the economy.

GDP in Sub-Saharan African economies is forecast to decline by 3.1 percent in 2020. Declines in exports and foreign investment have diminished the prospects of these economies. In 2021, economic growth in Sub-Saharan Africa is expected to turn positive as part of the global economic recovery.

Table 2--Macroeconomic variables affecting U.S. agricultural exports 1/

| Region/Country 3/ | Real exchange rate 2/ | | Real GDP per capita growth rate | | | Share of World | | Share of U.S. |
|---------------------------------------|-----------------------|-------------|---------------------------------|------------|------------------------------|-----------------|-------------|-------------------------|
| | 2020 | 2021 | 2020 | 2021 | 2020 Previous forecast | GDP | Population | Agricultural exports |
| | Percent change | | | | | 2017-19 average | | |
| World | 3.1 | -1.4 | -5.2 | 3.7 | -5.5 | | | |
| North America | 7.4 | 0.7 | -6.1 | 3.1 | -7.3 | 27.4 | 6.6 | 28.9 |
| United States | -- | -- | -5.8 | 3.1 | -7.1 | 23.9 | 4.4 | -- |
| Canada | 3.1 | -0.3 | -6.3 | 2.4 | -8.8 | 2.0 | 0.5 | 15.5 |
| Mexico | 12.7 | 1.7 | -8.4 | 3.1 | -9.6 | 1.5 | 1.7 | 13.4 |
| Emerging markets 4/ | 2.9 | -0.5 | 0.3 | 4.0 | -2.6 | 24.8 | 44.3 | 13.1 |
| Brazil | 27.3 | -6.8 | -6.4 | 2.2 | -6.9 | 2.2 | 2.8 | 0.5 |
| Russia | 5.7 | -2.2 | -4.8 | 2.1 | -7.1 | 1.7 | 1.9 | 0.1 |
| India | 0.8 | -0.7 | -1.2 | -2.1 | -2.1 | 3.2 | 17.4 | 1.0 |
| Indonesia | 2.5 | -0.7 | -2.3 | 2.9 | -1.7 | 1.2 | 3.5 | 2.2 |
| China | 1.7 | 0.0 | 1.8 | 5.8 | 0.4 | 16.5 | 18.6 | 9.3 |
| Europe & Central Asia | -1.5 | -3.2 | -6.9 | 3.6 | -8.4 | 25.5 | 11.2 | 8.8 |
| Eurozone | -2.0 | -3.9 | -7.1 | 3.8 | -8.5 | 14.5 | 4.5 | 8.2 |
| Ukraine | 0.8 | -0.4 | -4.2 | 2.2 | -8.1 | 0.1 | 0.6 | 0.3 |
| Turkey | 8.6 | 7.0 | -4.2 | 3.1 | -7.0 | 1.2 | 1.1 | 1.0 |
| Asia & Oceania | 0.9 | 0.1 | -4.1 | 2.4 | -1.6 | 34.8 | 54.5 | 43.6 |
| Japan | -0.1 | 2.3 | -5.1 | 2.3 | -5.3 | 5.5 | 1.7 | 9.5 |
| South Korea | 3.8 | -0.7 | -1.3 | 2.8 | -1.0 | 2.0 | 0.7 | 6.1 |
| Australia | 1.8 | -1.7 | -2.8 | 2.1 | -7.3 | 1.8 | 0.3 | 1.1 |
| Other Southeast Asia 5/ | 2.6 | -1.5 | -1.4 | 2.2 | -4.8 | 1.7 | 4.1 | 7.1 |
| Latin America | 10.2 | 0.7 | -5.9 | 2.5 | -6.8 | 4.6 | 8.1 | 11.0 |
| Argentina | 4.6 | 6.8 | -8.0 | 2.6 | -7.8 | 0.7 | 0.6 | 0.1 |
| Other South America 6/ | 45.0 | 21.9 | -4.3 | 2.4 | -6.3 | 1.1 | 1.6 | 3.7 |
| Middle East & North Africa | 0.7 | 1.6 | -3.3 | 4.1 | -8.5 | 5.2 | 7.0 | 6.4 |
| Sub-Saharan Africa | 5.7 | -2.1 | -3.1 | 2.8 | -3.0 | 2.2 | 14.2 | 1.2 |

1/ Real values have a 2015 base year. 2/ Local currency per U.S. dollar. A negative growth rate indicates a depreciation of the dollar. 3/ World real exchange rate is a U.S. agricultural exports-weighted index. 4/ Countries listed under "emerging markets" are also included under other listed regions. 5/ Includes Malaysia, Philippines, Thailand, and Vietnam. 6/ Includes Chile, Colombia, Peru, Bolivia, Paraguay, and Uruguay.

Sources: Calculations and compilation by USDA, Economic Research Service using data and forecasts from Reuters, IHS Markit, the International Monetary Fund, and Oxford Economics.

Export Products

Fiscal year (FY) 2021 U.S. grain and feed exports are forecast at \$31.0 billion, up \$1.1 billion from 2020 on higher corn, sorghum, and rice exports, while wheat exports are forecast to decline. Corn exports are forecast at \$9.0 billion in 2021, up \$700 million on expectations of competitive prices and larger export volumes. Sorghum exports are forecast at \$1.4 billion, up \$400 million from the FY 2020 estimate amid large early sales and the strong pace of shipments to China. Feed and fodder exports are forecast at \$8.1 billion, up \$100 million, as higher volume more than offsets lower unit values. Wheat exports are forecast at \$6.0 billion, down \$200 million mainly on lower volumes; unit values are also projected down slightly. Russia's second-largest wheat crop on record is likely to limit U.S. competitiveness in price-sensitive markets. The prospect of continued shipments to China is a bright spot for U.S. wheat trade, but exports to other Asian countries could be affected by large exportable supplies in Australia and Canada. Rice exports are forecast at \$1.9 billion, up \$100 million from the FY 2020 estimate on higher volumes based on a much larger crop and more competitive prices. Unit values are forecast lower, enabling larger shipments, especially to Western Hemisphere markets.

FY 2020 U.S. grain and feed exports are forecast at \$29.9 billion, up \$500 million from the May forecast, as higher wheat and corn exports more than offset lower rice exports. Corn exports are forecast at \$8.3 billion, up \$300 million on higher unit values and slightly higher volume. Sorghum exports are forecast at \$1.0 billion, unchanged from the previous quarter. Feed and fodder exports are forecast at \$8.0 billion, up \$200 million. Wheat exports are forecast at \$6.2 billion, up \$100 million on larger volume, which more than offsets marginally lower unit values. Large sales to Brazil and China have supported exports in recent months, but prices are not recovering due to pressure from abundant U.S. corn supplies. Rice exports are forecast at \$1.8 billion, down \$200 million from the May forecast, as volume is lowered on extremely tight old crop exportable supplies and high prices at the end of the marketing year, and expectations of a delayed new-crop harvest due to adverse spring weather in the Delta during planting.

FY 2021 oilseed and oilseed product exports are forecast at \$29.1 billion, up \$3.7 billion from 2020 primarily on higher soybean volume. Soybean export volume is forecast to rise nearly 30 percent year-over-year as growing demand in China and significantly reduced export volume forecast from Brazil opens the door for a substantial rise in U.S. exports. However, record U.S. soybean supplies are expected to push unit values lower. Total soybean export value is forecast at \$20.4 billion, a \$4.2 billion increase over FY 2020. Lower unit values are forecast to carry over into the products market. Export volumes for oilseed products, while remaining strong, are

expected to be down slightly from FY 2020, leading to a combined \$300 million decline in value. Soybean meal exports are forecast \$200 million lower at \$4.1 billion with soybean oil exports down \$100 million to \$0.9 billion.

The oilseeds and products FY 2020 forecast is revised down \$100 million from the May forecast to \$25.4 billion. Reduced soybean export value is partially offset by stronger soybean oil trade. A strong Brazil soybean export pace and weak currency added headwinds to U.S. sales over the past months.

FY 2021 cotton exports are forecast at \$5.0 billion, down \$400 million from 2020 due to lower volumes from a smaller crop and increased foreign competition. Unit values are also down due to sharply reduced demand from the economic slowdown caused by COVID-19 and record stocks outside of China.

FY 2020 U.S. cotton exports are forecast at \$5.4 billion, up \$200 million from the May forecast due to greater volumes. Brisk shipments to China underpin a stronger-than-expected pace.

FY 2021 livestock, poultry, and dairy exports are forecast up \$500 million from 2020 to \$32.3 billion on growth in beef, poultry products, and dairy. Beef exports are up \$200 million as higher volumes more than offset a decline in unit values. Pork exports are forecast unchanged at \$7.0 billion on stable volumes and lower unit values. Exports to China are expected to slow owing to ongoing hog herd rebuilding, while demand from other key markets may be constrained by weak economic growth. Poultry and poultry products are forecast \$100 million higher to \$5.1 billion on minor adjustments to poultry products. Dairy product exports are up \$100 million to \$6.6 billion due to stronger global import demand and increasing competitiveness of U.S. dairy products on global markets.

The FY 2020 livestock, poultry, and dairy export forecast is lowered \$600 million to \$31.8 billion as declines in beef and poultry more than offset gains by pork, dairy, and hides and skins. The beef export forecast is revised down \$500 million on lower volumes and lower prices. Pork export forecasts are up \$100 million from the May estimate on higher volume. The poultry and poultry product export forecast is reduced \$500 million to \$5.0 billion on lower prices for broiler and turkey meat. The dairy product export forecast is raised \$300 million due to higher volumes of skimmed milk powder, whey, and cheese.

FY 2021 forecast for horticultural products is \$35.0 billion, up \$500 million from 2020. Whole and processed tree nut exports are forecast \$300 million higher to \$9.0 billion on stronger shipments to Europe and Asia. Other horticultural product exports are forecast up \$400 million

to \$12.6 billion on higher exports of miscellaneous horticultural products (other food preparations, beer, and mixed seasonings) to Canada, Mexico, and the European Union (EU). Fresh fruit and vegetables as well as processed fruit and vegetable exports are each reduced \$100 million to \$6.9 billion and \$6.5 billion, respectively, on lower exports to Canada and Mexico.

The FY 2020 forecast for horticultural product exports is lowered \$1.0 billion to \$34.5 billion. Fresh fruit and vegetables are reduced \$100 million to \$7.0 billion on lower shipments to Mexico. Processed fruit and vegetables are lowered \$400 million to \$6.6 billion on smaller shipments to Canada and the EU. Whole and processed tree nuts are reduced \$400 million to \$8.7 billion on weaker almond and pistachio exports to Hong Kong. Other horticultural products are forecast down \$100 million to \$12.2 billion on lower miscellaneous horticultural products to Canada and Mexico.

Table 3--U.S. agricultural exports: Value and volume by commodity, 2019–2021

| Commodity | October–June | | Fiscal year 2019 | Forecast | | Forecast |
|-------------------------------------|-----------------------------|---------|---------------------|------------------|--------|------------------|
| | FY 2019 | FY 2020 | | Fiscal year 2020 | | Fiscal year 2021 |
| | | | May | August | August | |
| VALUE | | | | | | |
| | ---Billion dollars--- | | | | | |
| Grains and feeds 1/ | 23.270 | 22.319 | 30.025 | 29.4 | 29.9 | 31.0 |
| Wheat 2/ | 4.743 | 4.500 | 6.233 | 6.1 | 6.2 | 6.0 |
| Rice | 1.400 | 1.484 | 1.841 | 2.0 | 1.8 | 1.9 |
| Coarse grains 3/ | 7.829 | 6.898 | 9.479 | 9.0 | 9.4 | 10.5 |
| Corn | 7.478 | 6.087 | 8.996 | 8.0 | 8.3 | 9.0 |
| Feeds and fodders | 5.781 | 5.967 | 7.781 | 7.8 | 8.0 | 8.1 |
| Oilseeds and products 4/ | 19.372 | 19.846 | 25.833 | 25.5 | 25.4 | 29.1 |
| Soybeans | 12.550 | 12.642 | 16.997 | 16.5 | 16.2 | 20.4 |
| Soybean meal 5/ | 3.477 | 3.422 | 4.419 | 4.3 | 4.3 | 4.1 |
| Soybean oil | 0.539 | 0.797 | 0.676 | 0.9 | 1.0 | 0.9 |
| Livestock, poultry, and dairy | 22.438 | 23.882 | 30.161 | 32.4 | 31.8 | 32.3 |
| Livestock products | 14.459 | 15.171 | 19.362 | 20.7 | 20.3 | 20.6 |
| Beef and veal 6/ | 5.456 | 4.932 | 7.284 | 7.2 | 6.7 | 6.9 |
| Pork 6/ | 4.025 | 5.310 | 5.517 | 6.9 | 7.0 | 7.0 |
| Beef and pork variety meats 6/ | 1.155 | 1.230 | 1.562 | 1.7 | 1.6 | 1.7 |
| Hides, skins, and furs | 0.891 | 0.669 | 1.108 | 0.9 | 1.0 | 1.0 |
| Poultry and products | 3.770 | 3.833 | 5.136 | 5.5 | 5.0 | 5.1 |
| Broiler meat 6/ 7/ | 2.285 | 2.370 | 3.172 | 3.6 | 3.1 | 3.1 |
| Dairy products | 4.210 | 4.877 | 5.663 | 6.2 | 6.5 | 6.6 |
| Tobacco, unmanufactured | 0.600 | 0.514 | 0.755 | 0.7 | 0.7 | 0.7 |
| Cotton | 4.903 | 4.339 | 6.070 | 5.2 | 5.4 | 5.0 |
| Seeds | 1.613 | 1.362 | 1.892 | 1.8 | 1.7 | 1.7 |
| Horticultural products 8/ | 26.610 | 25.898 | 34.885 | 35.5 | 34.5 | 35.0 |
| Fruits and vegetables, fresh | 5.153 | 5.098 | 7.066 | 7.1 | 7.0 | 6.9 |
| Fruits and vegetables, processed 8/ | 5.164 | 4.961 | 6.861 | 7.0 | 6.6 | 6.5 |
| Tree nuts, whole and processed | 7.285 | 7.016 | 9.000 | 9.1 | 8.7 | 9.0 |
| Sugar and tropical products 9/ | 4.370 | 4.057 | 5.842 | 5.9 | 5.7 | 5.7 |
| Major bulk products 10/ | 32.217 | 30.525 | 41.618 | 39.5 | 39.7 | 44.5 |
| Total | 103.182 | 102.224 | 135.470 | 136.5 | 135.0 | 140.5 |
| VOLUME | | | | | | |
| | --- Million metric tons --- | | | | | |
| Wheat 2/ | 19.954 | 19.089 | 26.567 | 26.1 | 26.7 | 26.0 |
| Rice | 2.751 | 2.689 | 3.617 | 3.7 | 3.3 | 3.6 |
| Coarse grains 3/ | 43.080 | 38.401 | 51.648 | 52.4 | 53.1 | 63.4 |
| Corn | 41.218 | 34.172 | 49.124 | 47.0 | 47.5 | 56.5 |
| Feeds and fodders | 15.867 | 15.190 | 21.570 | 21.3 | 20.5 | 21.8 |
| Soybeans | 35.706 | 34.953 | 48.241 | 45.6 | 44.9 | 57.8 |
| Soybean meal 5/ | 9.549 | 9.777 | 12.191 | 12.2 | 12.4 | 12.2 |
| Soybean oil | 0.704 | 1.040 | 0.880 | 1.2 | 1.3 | 1.2 |
| Beef and veal 6/ | 0.755 | 0.702 | 1.015 | 1.0 | 0.9 | 1.0 |
| Pork 6/ | 1.525 | 1.951 | 2.056 | 2.5 | 2.6 | 2.6 |
| Beef and pork variety meats 6/ | 0.537 | 0.535 | 0.728 | 0.8 | 0.7 | 0.7 |
| Broiler meat 6/ 7/ | 2.410 | 2.483 | 3.214 | 3.3 | 3.3 | 3.2 |
| Tobacco, unmanufactured | 0.081 | 0.072 | 0.105 | 0.1 | 0.1 | 0.1 |
| Cotton | 2.719 | 2.725 | 3.425 | 3.3 | 3.5 | 3.4 |
| Major bulk products 10/ | 104.291 | 97.928 | 133.603 | 131.2 | 131.6 | 154.3 |

Total may not add due to rounding.

1/ Includes corn gluten feed and meal and processed grain products. 2/ Excludes wheat flour. 3/ Includes corn, barley, sorghum, oats, and rice. 4/ Excludes corn gluten feed and meal. 5/ Includes soy flours made from protein meals. 6/ Includes chilled, frozen, and processed meats. 7/ Includes only federally inspected product. 8/ Includes juices. 9/ Includes coffee and cocoa products, tea, and spices. 10/ Includes wheat, coarse grains, soybeans, cotton, and unmanufactured tobacco.

Sources: USDA, Economic Research Service and USDA, Foreign Agricultural Service analysis and forecasts using data from U.S. Department of Commerce, Bureau of the Census.

Regional Exports

Outlook for Fiscal Year 2021

Agricultural exports in FY 2021 are forecast at \$140.5 billion, an increase of \$5.5 billion over the revised FY 2020 estimate. Overall bulk export values are forecast to surge \$4.8 billion, primarily on higher export prospects for soybeans and corn. High-value product exports are forecast to increase \$700 million, led by higher projected exports for tree nuts and miscellaneous horticultural products. Canada, Mexico, and China are expected to remain the top three U.S. markets.

Asia

The export forecast for China is \$18.5 billion, \$4.5 billion higher than the revised FY 2020 estimate. Demand for soybeans is expected to grow while Brazilian supplies are forecast to decline, boosting U.S. soybean export prospects. Continued strong demand for corn, sorghum, and tree nuts also contributes to the higher forecast.

Exports to Japan and South Korea are both forecast up \$200 million from FY 2020, to \$11.8 billion and \$7.7 billion, respectively, primarily due to expected higher beef and corn sales.

Exports to Southeast Asia are forecast up \$100 million to \$13.2 billion, due to expected increases in dairy product sales to the Philippines.

Western Hemisphere

The export forecast for Canada is raised \$200 million to \$21.0 billion, largely due to expected higher sales of horticultural products. Exports to Mexico are forecast up \$300 million to \$19.3 billion for similar reasons.

Exports to South America are forecast up \$100 million to \$6.4 billion, on expectations of higher corn sales to Colombia.

Europe, Africa, the Middle East, and Oceania

Exports to the EU are forecast at \$11.4 billion, up \$200 million from FY 2020, on the strength of continued strong demand for horticultural products, particularly tree nuts.

Exports to the Middle East are projected at \$5.5 billion, unchanged from the revised FY 2020 forecast. Exports to Africa are forecast at \$4.3 billion, unchanged from the revised FY 2020 forecast. Exports to Oceania are projected to be unchanged at \$2.1 billion.

Revised Outlook for Fiscal Year 2020

The forecast for agricultural exports is reduced \$1.5 billion from May to \$135.0 billion.

Asia

Compared with the last quarter, exports to China are boosted \$1.0 billion to \$14.0 billion, mainly due to a quickening pace of meat product shipments in April–June and large new sales of bulk commodities.

Exports to Japan are down \$400 million to \$11.6 billion, primarily due to lower-than-expected corn sales. Exports to South Korea are lowered \$200 million on reduced corn, soybean, and beef sales. Exports to Taiwan are down \$200 million due to lower corn and cotton shipments. Exports to Southeast Asia are down \$300 million, as wheat and cotton shipments to Malaysia, and soybean meal and cotton sales to Vietnam are all more sluggish than expected. Exports to South Asia are down \$200 million as a result of reduced cotton sales to India, which more than offset higher cotton and soybean shipments to Pakistan.

Western Hemisphere

Exports to Canada are reduced by \$400 million from last quarter on lower-than-expected shipments to date, particularly of soybeans and corn. Weaker-than-expected demand for corn, cotton, and beef underscores the \$800-million reduction to the export estimate to Mexico.

Exports to South America are adjusted upward by \$200 million, on higher-than-expected sales of corn, soybean meal, and soybean oil to Venezuela and strong shipments of wheat and soybean oil to Colombia.

Europe, Africa, the Middle East, and Oceania

Exports to the EU are down \$300 million from the May projection to \$11.2 billion on lackluster demand for soybeans and soybean meal. The estimate for Other Europe is reduced by \$100 million on lower tobacco shipments to Switzerland.

Exports to the Middle East are down \$300 million due to lower-than-expected shipments to Turkey. The estimate for Africa is unchanged, as higher soybean sales to Egypt offset reduced wheat exports to Nigeria. Exports to Oceania are unchanged at \$2.1 billion.

Table 4--U.S. agricultural exports: Value by region, 2019–2021

| Country and region 1/ | October–June | | Fiscal year 2019 | Share of FY 2019 total | Forecast fiscal year | | 2021 August |
|------------------------------|------------------|----------------|---------------------|------------------------------|----------------------|--------------|----------------|
| | FY 2019 | FY 2020 | | | 2020 | | |
| | -- \$ Billion -- | | Percent | | -- \$ Billion -- | | |
| VALUE | | | | | | | |
| Asia | 41.583 | 43.622 | 54.787 | 40.4 | 56.6 | 56.3 | 61.3 |
| East Asia | 28.012 | 30.127 | 37.217 | 27.5 | 38.8 | 39.0 | 43.9 |
| Japan | 9.533 | 8.877 | 12.147 | 9.0 | 12.0 | 11.6 | 11.8 |
| China | 6.753 | 11.113 | 10.116 | 7.5 | 13.0 | 14.0 | 18.5 |
| Hong Kong | 2.782 | 1.857 | 3.513 | 2.6 | 2.5 | 2.5 | 2.5 |
| Taiwan | 2.739 | 2.498 | 3.611 | 2.7 | 3.6 | 3.4 | 3.4 |
| South Korea | 6.198 | 5.776 | 7.820 | 5.8 | 7.7 | 7.5 | 7.7 |
| Southeast Asia | 10.431 | 10.167 | 13.550 | 10.0 | 13.4 | 13.1 | 13.2 |
| Indonesia | 2.175 | 2.076 | 2.889 | 2.1 | 2.9 | 2.9 | 2.9 |
| Philippines | 2.161 | 2.258 | 2.869 | 2.1 | 3.0 | 3.0 | 3.1 |
| Malaysia | 0.876 | 0.838 | 1.148 | 0.8 | 1.3 | 1.1 | 1.1 |
| Thailand | 1.505 | 1.395 | 1.885 | 1.4 | 1.8 | 1.8 | 1.8 |
| Vietnam | 2.833 | 2.615 | 3.596 | 2.7 | 3.5 | 3.4 | 3.4 |
| South Asia | 3.139 | 3.327 | 4.020 | 3.0 | 4.4 | 4.2 | 4.2 |
| India | 1.331 | 1.053 | 1.782 | 1.3 | 1.8 | 1.5 | 1.5 |
| Western Hemisphere | 41.314 | 40.122 | 54.947 | 40.6 | 55.1 | 54.1 | 54.7 |
| North America | 29.805 | 29.280 | 39.994 | 29.5 | 41.0 | 39.8 | 40.3 |
| Canada | 15.729 | 15.387 | 20.997 | 15.5 | 21.2 | 20.8 | 21.0 |
| Mexico | 14.076 | 13.893 | 18.997 | 14.0 | 19.8 | 19.0 | 19.3 |
| Caribbean | 2.794 | 2.630 | 3.670 | 2.7 | 3.6 | 3.6 | 3.6 |
| Dominican Republic | 1.024 | 1.030 | 1.295 | 1.0 | 1.3 | 1.3 | 1.3 |
| Central America | 3.213 | 3.264 | 4.320 | 3.2 | 4.4 | 4.4 | 4.4 |
| South America | 5.502 | 4.948 | 6.962 | 5.1 | 6.1 | 6.3 | 6.4 |
| Brazil | 0.417 | 0.468 | 0.582 | 0.4 | 0.6 | 0.6 | 0.6 |
| Colombia | 2.113 | 2.220 | 2.664 | 2.0 | 2.7 | 2.8 | 2.9 |
| Peru | 0.835 | 0.607 | 1.021 | 0.8 | 0.8 | 0.8 | 0.8 |
| Venezuela | 0.136 | 0.248 | 0.174 | 0.1 | 0.2 | 0.3 | 0.3 |
| Europe/Eurasia | 11.038 | 9.316 | 13.796 | 10.2 | 12.6 | 12.2 | 12.4 |
| European Union-27+UK 2/ | 10.124 | 8.628 | 12.615 | 9.3 | 11.5 | 11.2 | 11.4 |
| Other Europe 3/ | 0.414 | 0.346 | 0.570 | 0.4 | 0.6 | 0.5 | 0.5 |
| FSU-12 4/ | 0.500 | 0.342 | 0.611 | 0.5 | 0.5 | 0.5 | 0.5 |
| Russia | 0.181 | 0.134 | 0.217 | 0.2 | 0.2 | 0.2 | 0.2 |
| Middle East | 4.532 | 4.228 | 5.746 | 4.2 | 5.8 | 5.5 | 5.5 |
| Turkey | 0.954 | 0.960 | 1.181 | 0.9 | 1.5 | 1.2 | 1.2 |
| Saudi Arabia | 1.011 | 0.968 | 1.318 | 1.0 | 1.3 | 1.2 | 1.2 |
| Africa | 3.180 | 3.419 | 4.060 | 3.0 | 4.3 | 4.3 | 4.3 |
| North Africa | 1.686 | 2.135 | 2.120 | 1.6 | 2.4 | 2.6 | 2.6 |
| Egypt | 1.188 | 1.435 | 1.473 | 1.1 | 1.5 | 1.7 | 1.7 |
| Sub-Saharan Africa | 1.494 | 1.284 | 1.940 | 1.4 | 1.9 | 1.7 | 1.7 |
| Nigeria | 0.441 | 0.330 | 0.551 | 0.4 | 0.6 | 0.4 | 0.4 |
| Oceania | 1.535 | 1.518 | 2.134 | 1.6 | 2.1 | 2.1 | 2.1 |
| Transshipments via Canada 5/ | 0.000 | 0.000 | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 103.182 | 102.224 | 135.470 | 100.0 | 136.5 | 135.0 | 140.5 |

Total may not add due to rounding.

1/ Projections are based primarily on trend or recent average growth analysis.

2/ 28 member nations of the European Union (EU) including the United Kingdom (UK), which will remain in the EU Customs Union during the transition period that is scheduled to end December 31, 2020, but may be extended.

3/ Major countries include Switzerland, Norway, Iceland, and former Yugoslav states.

4/ The 15 Republics of the Former Soviet Union (FSU) minus the 3 Baltic Republics.

5/ Transshipments through Canada have not been allocated to final destination, but are included in the total.

Sources: USDA, Economic Research Service and USDA, Foreign Agricultural Service analysis and forecasts using data from U.S. Department of Commerce, Bureau of the Census.

Import Products

The forecast for U.S. agricultural imports in FY 2021 is \$136.0 billion—\$4.3 billion higher than the revised forecast for FY 2020. This would establish a new record in nominal terms and continue a trend of increasing agricultural imports. The increase in the FY 2021 forecast compared with FY 2020 is due to increases in the forecasts for horticultural products and grains and feed which are forecast to be \$69.8 billion and \$14.7 billion, respectively.

The forecast for horticultural imports is increased \$3.9 billion above the FY 2020 forecast, led by higher fresh and processed fruits. Those forecasts are each \$500 million higher than their FY 2020 forecasts. Fresh and processed vegetables are forecast to increase \$800 million and \$300 million respectively. The large increase in the forecast fresh vegetables comes after an increase in FY 2020 imports compared to FY 2019. Imports of malt beer are down \$400 million in FY 2020 due to COVID-related slow-downs but are anticipated to recover in the following year.

For FY 2021, the forecast for U.S. imports of livestock, dairy, and poultry products is decreased by \$300 million to \$17.6 billion compared with the FY 2020 forecast. The FY 2021 forecast for beef and veal and cattle and calves decreased by \$200 million and \$100 million, respectively. Beef and veal product imports are forecast at \$6.3 billion, and cattle and calf imports are forecast at \$1.6 billion, for FY 2021. The forecast for dairy product imports is unchanged between the FY 2020 and FY 2021 forecasts at \$3.6 billion.

The forecast for U.S. imports of oilseed and oilseed products is constant across FY 2020 and FY 2021 at \$9.1 billion. For FY 2021, U.S. grain and feed imports are forecast at \$14.7 billion, \$700 million above the FY 2020 forecast on increased imports of wheat products and rice in early FY 2020. The forecast for U.S. imports of grain products in FY 2021 is \$10.0 billion. The forecast for sugar and tropical product imports in FY 2020 and 2021 is \$23.1 billion.

Table 5--U.S. agricultural imports: Value and volume by commodity, 2019–2020

| Commodity | October–March | | Fiscal year | Forecast | | Forecast |
|-------------------------------|---------------|---------|-------------|------------------|--------|------------------|
| | FY2019 | FY2020 | 2019 | Fiscal year 2020 | | Fiscal year 2021 |
| | | | | May | August | August |
| VALUE | | | | | | |
| ---Billion dollars--- | | | | | | |
| Livestock, dairy, and poultry | 13.393 | 13.573 | 17.779 | 17.6 | 17.9 | 17.6 |
| Livestock and meats | 10.102 | 10.302 | 13.277 | 13.1 | 13.6 | 13.2 |
| Cattle and calves | 1.452 | 1.440 | 1.750 | 1.6 | 1.7 | 1.6 |
| Swine | 0.244 | 0.201 | 0.311 | 0.3 | 0.2 | 0.3 |
| Beef and veal | 4.282 | 4.820 | 5.797 | 6.1 | 6.5 | 6.3 |
| Pork | 1.179 | 1.089 | 1.560 | 1.4 | 1.5 | 1.5 |
| Dairy products | 2.693 | 2.707 | 3.690 | 3.7 | 3.6 | 3.6 |
| Cheese | 1.175 | 1.241 | 1.346 | 1.3 | 1.3 | 1.3 |
| Grains and feed | 9.959 | 10.517 | 13.387 | 13.9 | 14.0 | 14.7 |
| Grain products | 6.895 | 7.152 | 9.376 | 9.7 | 9.8 | 10.0 |
| Oilseeds and products | 6.572 | 6.900 | 8.789 | 9.1 | 9.1 | 9.1 |
| Vegetable oils | 3.883 | 3.925 | 5.545 | 6.0 | 6.0 | 5.9 |
| Horticulture products | 50.967 | 50.981 | 66.145 | 64.4 | 65.9 | 69.8 |
| Fruits, fresh | 11.187 | 11.306 | 13.958 | 14.8 | 14.3 | 14.8 |
| Fruits, processed | 4.369 | 4.174 | 5.748 | 5.9 | 5.4 | 5.9 |
| Fruit juices | 1.729 | 1.421 | 2.193 | 1.9 | 1.7 | 1.9 |
| Nuts, whole and processed | 2.382 | 2.158 | 3.140 | 3.3 | 3.0 | 3.1 |
| Vegetables, fresh | 7.127 | 7.777 | 8.897 | 8.3 | 9.0 | 9.8 |
| Vegetables, processed | 4.096 | 4.320 | 5.427 | 5.5 | 5.7 | 6.0 |
| Wine | 4.907 | 4.641 | 6.582 | 6.1 | 6.1 | 6.1 |
| Malt beer | 4.051 | 3.794 | 5.507 | 5.1 | 5.1 | 5.7 |
| Essential oils | 3.163 | 2.957 | 4.198 | 4.1 | 4.1 | 4.1 |
| Cut flowers and nursery stock | 1.754 | 1.656 | 2.173 | 2.1 | 2.1 | 2.1 |
| Sugar and tropical products | 17.230 | 17.375 | 23.068 | 23.5 | 23.1 | 23.1 |
| Sweeteners and products | 3.374 | 3.809 | 4.514 | 4.9 | 4.9 | 4.7 |
| Confections | 1.414 | 1.414 | 1.924 | 1.9 | 1.9 | 1.9 |
| Cocoa and products | 3.615 | 3.773 | 4.809 | 4.9 | 4.7 | 4.7 |
| Coffee and products | 4.580 | 4.583 | 6.163 | 6.1 | 6.1 | 6.1 |
| Rubber, natural | 1.128 | 1.056 | 1.513 | 1.5 | 1.5 | 1.6 |
| Other imports 1/ | 1.313 | 1.144 | 1.676 | 1.7 | 1.7 | 1.7 |
| Total agricultural imports | 99.433 | 100.491 | 130.845 | 130.2 | 131.7 | 136.0 |
| VOLUME | | | | | | |
| ---Million metric tons--- | | | | | | |
| Wine 2/ | 0.998 | 1.082 | 1.324 | 1.3 | 1.3 | 1.3 |
| Malt beer 2/ | 3.118 | 2.843 | 4.215 | 3.8 | 3.8 | 4.2 |
| Fruit juices 2/ | 3.906 | 3.360 | 4.832 | 4.6 | 4.2 | 4.7 |
| Cattle and calves 3/ | 1.701 | 1.698 | 2.031 | 2.0 | 2.0 | 2.0 |
| Swine 3/ | 3.877 | 3.838 | 5.077 | 4.8 | 5.0 | 4.8 |
| Beef and veal | 0.760 | 0.792 | 1.020 | 1.0 | 1.1 | 1.0 |
| Pork | 0.321 | 0.280 | 0.421 | 0.4 | 0.4 | 0.4 |
| Fruits, fresh | 9.196 | 9.150 | 12.519 | 12.6 | 12.4 | 12.9 |
| Fruits, processed | 4.285 | 3.766 | 1.896 | 2.0 | 1.9 | 2.0 |
| Vegetables, fresh | 2.329 | 2.503 | 7.984 | 7.9 | 8.1 | 8.5 |
| Vegetables, processed | 7.491 | 7.512 | 4.123 | 4.2 | 4.3 | 4.5 |
| Vegetable oils | 3.319 | 3.534 | 4.896 | 5.0 | 5.0 | 4.8 |
| Cocoa and products | 1.067 | 1.056 | 1.381 | 1.4 | 1.4 | 1.4 |
| Coffee and products | 1.334 | 1.236 | 1.788 | 1.7 | 1.7 | 1.7 |

Totals may not add due to rounding.

1/ Largely tobacco and planting seeds. 2/ Billion liters. 3/ Million head.

Sources: USDA, Economic Research Service and USDA, Foreign Agricultural Service analysis and forecasts using data from U.S. Department of Commerce, Bureau of the Census.

Regional Imports

Outlook for FY 2021

U.S. agricultural imports in FY 2021 are forecast at \$136.0 billion, \$4.3 billion more than the forecast for FY 2020. Imports from Canada, Mexico, and South America are the main drivers of the forecasted increase for FY 2021. Imports from every trading region are forecast to increase or remain steady from FY 2020 to FY 2021.

Western Hemisphere

Imports from the Western Hemisphere are forecast at \$74.7 billion for FY 2021, \$2.5 billion higher than the forecast level for FY 2020 as imports of fresh produce and beer rebound from the downturn in the importation of those commodities seen early in the pandemic. Imports from Canada and Mexico are forecast up \$900 million and \$700 million, respectively, from the adjusted 2020 FY forecast to \$24.2 billion and \$29.2 billion for FY 2021.

Imports from Central and South America are forecast up \$400 million and \$500 million, respectively, from the revised FY 2020 forecasts of \$6.0 billion and \$14.6 billion. Imports from Guatemala, Chile, and Peru are expected to increase by \$400 million, \$300 million, and \$200 million, respectively, as supply chains for fresh fruits and other horticultural products adapt to the issues faced early in the pandemic.

Asia

U.S. agricultural imports from Asia are projected to increase \$1.6 billion from the adjusted FY 2020 forecast to \$24.1 billion. Imports from Southeast Asia—projected to increase by \$1.2 billion above FY 2020's levels to \$15.0 billion in FY 2021—are a significant factor in the growth of imports from Asia as a whole. The growth is due in large part to increases in the FY 2021 forecast of \$700 million and \$400 million for imports from Vietnam and other Southeast Asia, respectively, as the region continues to grow as a major trading partner of the United States.

Imports from China are forecast at \$4.1 billion for FY 2021—\$200 million higher than the forecast for FY 2020. Imports from other East Asian countries are also forecast to be \$200 million higher in FY 2021 than in FY 2020. For both China and the rest of East Asia, rising imports occur primarily in the product categories of fruit juices and other horticultural imports.

Europe

Imports from the EU for FY 2021 are forecast to be \$24.6 billion, a \$200 million increase from the FY 2020 forecast. The increase is due to rising beer imports from the Netherlands and Belgium.

Africa, Middle East, and Oceania

In FY 2021, the United States is forecast to have the same dollar value of agricultural imports from Africa, the Middle East, and Oceania as in FY 2020.

Table 6—U.S. agricultural imports: Value by region, fiscal years 2019–21

| Region and country | October–June | | Fiscal year 2019 | Forecast | | Forecast |
|------------------------------|--------------|---------|---------------------|------------------|--------|------------------|
| | FY2019 | FY2020 | | Fiscal year 2020 | | Fiscal year 2021 |
| | | | May | August | August | |
| VALUE | | | | | | |
| <i>---Billion dollars---</i> | | | | | | |
| Western Hemisphere | 55.127 | 56.846 | 71.736 | 70.4 | 72.2 | 74.7 |
| Canada | 17.333 | 17.788 | 23.390 | 22.9 | 23.3 | 24.2 |
| Mexico | 22.241 | 23.082 | 27.870 | 27.0 | 28.5 | 29.2 |
| Central America | 4.116 | 4.416 | 5.430 | 5.4 | 5.6 | 6.0 |
| Costa Rica | 1.147 | 1.189 | 1.516 | 1.5 | 1.5 | 1.5 |
| Guatemala | 1.600 | 1.695 | 2.129 | 2.1 | 2.3 | 2.7 |
| Other Central America | 1.369 | 1.532 | 1.785 | 1.8 | 1.8 | 1.8 |
| Caribbean | 0.525 | 0.519 | 0.662 | 0.7 | 0.7 | 0.7 |
| South America | 10.912 | 11.041 | 14.384 | 14.4 | 14.1 | 14.6 |
| Argentina | 1.020 | 1.058 | 1.356 | 1.4 | 1.4 | 1.4 |
| Brazil | 2.481 | 2.459 | 3.325 | 3.3 | 3.3 | 3.3 |
| Chile | 2.274 | 2.142 | 2.874 | 2.9 | 2.6 | 2.9 |
| Colombia | 2.075 | 2.022 | 2.700 | 2.7 | 2.6 | 2.6 |
| Peru | 1.767 | 1.995 | 2.439 | 2.4 | 2.5 | 2.7 |
| Other South America | 1.295 | 1.365 | 1.690 | 1.7 | 1.7 | 1.7 |
| Europe and Eurasia | 19.351 | 18.757 | 26.255 | 26.2 | 26.2 | 26.4 |
| European Union-27+UK 1/ | 18.163 | 17.541 | 24.679 | 24.4 | 24.4 | 24.6 |
| Other Europe | 1.188 | 1.216 | 1.576 | 1.8 | 1.8 | 1.8 |
| Asia | 16.618 | 16.616 | 22.065 | 22.7 | 22.5 | 24.1 |
| East Asia | 4.585 | 4.316 | 6.034 | 6.2 | 5.7 | 6.1 |
| China | 3.104 | 2.715 | 4.054 | 4.4 | 3.9 | 4.1 |
| Other East Asia | 1.481 | 1.601 | 1.980 | 1.8 | 1.8 | 2.0 |
| Southeast Asia | 9.739 | 10.234 | 12.992 | 13.5 | 13.8 | 15.0 |
| Indonesia | 2.238 | 2.388 | 2.984 | 3.3 | 3.3 | 3.3 |
| Malaysia | 0.742 | 0.769 | 1.026 | 1.0 | 1.0 | 1.0 |
| Thailand | 2.100 | 2.298 | 2.827 | 2.8 | 3.1 | 3.2 |
| Vietnam | 1.485 | 1.569 | 2.031 | 2.4 | 2.4 | 3.1 |
| Other Southeast Asia | 3.174 | 3.210 | 4.124 | 4.0 | 4.0 | 4.4 |
| South Asia | 2.294 | 2.066 | 3.039 | 3.0 | 3.0 | 3.0 |
| India | 2.021 | 1.805 | 2.681 | 2.7 | 2.7 | 2.7 |
| Oceania | 4.443 | 4.470 | 5.897 | 6.3 | 6.3 | 6.3 |
| Australia | 2.536 | 2.525 | 3.420 | 3.7 | 3.7 | 3.7 |
| New Zealand | 1.823 | 1.871 | 2.368 | 2.6 | 2.6 | 2.6 |
| Africa | 2.490 | 2.444 | 3.128 | 3.0 | 2.9 | 2.9 |
| Sub-Saharan | 2.097 | 1.986 | 2.642 | 2.7 | 2.6 | 2.6 |
| Côte d'Ivoire | 0.619 | 0.732 | 0.752 | 0.9 | 0.8 | 0.8 |
| Middle East | 1.190 | 1.124 | 1.482 | 1.6 | 1.6 | 1.6 |
| Turkey | 0.798 | 0.730 | 0.975 | 1.0 | 1.0 | 1.0 |
| World total | 99.433 | 100.491 | 130.845 | 130.2 | 131.7 | 136.0 |

Totals may not add due to rounding.

1/ 28 member nations of the European Union (EU) including the United Kingdom (UK), which will remain in the EU Customs Union during the transition period that is scheduled to end December 31, 2020, but may be extended.

Sources: USDA, Economic Research Service and USDA, Foreign Agricultural Service analysis and forecasts using data from U.S. Department of Commerce, Bureau of the Census.

Reliability Tables

Table 7—Reliability of quarterly U.S. export projections, by commodity and quarter

| Commodity | Root mean squared error (RSME) 1/ Fiscal 2015–2019 | | | | | Forecast errors Fiscal 2019 | | | | |
|-------------------------------|---|------|------|-----|------|--------------------------------|------|------|-----|------|
| | Aug. | Nov. | Feb. | May | Aug. | Aug. | Nov. | Feb. | May | Aug. |
| Export value | <i>RMSE</i> | | | | | <i>Percent</i> | | | | |
| Grains and feeds | 2.5 | 2.3 | 2.6 | 1.4 | 0.4 | 13 | 15 | 15 | 5 | 2 |
| Wheat | 1.2 | 0.9 | 0.7 | 0.4 | 0.3 | 14 | 20 | 20 | 1 | -1 |
| Rice | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | -3 | -8 | -8 | -7 | -3 |
| Coarse grains | 4.6 | 4.6 | 4.6 | 4.4 | 4.1 | 27 | 31 | 30 | 14 | 2 |
| Corn | 1.8 | 1.8 | 1.8 | 1.0 | 0.2 | 25 | 31 | 31 | 16 | 2 |
| Feeds and fodders | 0.5 | 0.5 | 0.8 | 0.6 | 0.2 | -1 | -1 | -1 | -1 | 1 |
| Oilseeds and products | 2.7 | 2.2 | 2.2 | 1.7 | 0.7 | 17 | 8 | 8 | 2 | -2 |
| Soybeans | 2.7 | 2.3 | 1.8 | 1.4 | 0.7 | 24 | 10 | 9 | 0 | -4 |
| Soybean meal | 0.6 | 0.6 | 0.6 | 0.3 | 0.2 | -1 | 1 | 3 | 2 | 0 |
| Soybean oil | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 18 | 18 | 18 | 8 | 7 |
| Livestock, poultry, and dairy | 3.1 | 2.6 | 1.2 | 0.9 | 0.4 | 0 | 0 | 1 | -1 | -1 |
| Livestock products | 1.8 | 1.5 | 0.6 | 0.5 | 0.2 | 0 | 1 | 1 | -2 | -1 |
| Beef and veal | 0.8 | 0.7 | 0.5 | 0.4 | 0.2 | -3 | 4 | 6 | 2 | 3 |
| Pork | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 | -8 | -6 | -2 | -4 | -1 |
| Beef and pork variety meats | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | -4 | -4 | -4 | -6 | -1 |
| Hides, skins, and furs | 0.6 | 0.5 | 0.2 | 0.1 | 0.1 | 44 | 35 | 8 | -12 | -15 |
| Poultry and products | 0.5 | 0.5 | 0.3 | 0.3 | 0.1 | 3 | -1 | 3 | 4 | -2 |
| Broiler meat | 0.3 | 0.4 | 0.3 | 0.2 | 0.1 | 4 | 1 | 4 | 2 | -2 |
| Dairy products | 0.9 | 0.7 | 0.5 | 0.3 | 0.1 | -1 | -7 | -5 | -1 | -1 |
| Tobacco, unmanufactured | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 33 | 33 | 33 | 33 | 6 |
| Cotton | 1.3 | 1.1 | 0.7 | 0.4 | 0.2 | 14 | -3 | -3 | -6 | -6 |
| Planting seeds | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | -5 | -5 | -5 | -5 | 5 |
| Horticultural products | 2.1 | 2.1 | 1.2 | 0.5 | 0.3 | 1 | 1 | 1 | 1 | 0 |
| Fruits and vegetables, fresh | 0.5 | 0.5 | 0.3 | 0.3 | 0.2 | 5 | 5 | 5 | 5 | 0 |
| Fruits and veget., processed | 0.5 | 0.5 | 0.4 | 0.3 | 0.1 | 5 | 5 | 5 | 5 | 1 |
| Tree nuts | 1.1 | 1.1 | 0.7 | 0.3 | 0.1 | 1 | 1 | 1 | 1 | 1 |
| Sugar and tropical products | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 | 1 | 1 | 1 | 1 | 1 |
| Major bulk products | 7.0 | 6.1 | 6.0 | 4.0 | 2.5 | 41 | 33 | 32 | 20 | 14 |
| Total agricultural exports | 7.1 | 4.6 | 4.4 | 2.9 | 1.4 | 7 | 4 | 4 | 1 | -1 |
| Export volume | | | | | | | | | | |
| Wheat | 3.8 | 3.8 | 2.7 | 1.4 | 1.3 | 5 | 15 | 12 | -2 | -1 |
| Rice | 0.4 | 0.4 | 0.4 | 0.3 | 0.2 | -1 | -6 | -6 | -6 | -3 |
| Coarse grains | 9.7 | 9.7 | 8.9 | 5.9 | 1.3 | 23 | 26 | 26 | 17 | 3 |
| Corn | 8.9 | 9.2 | 9.0 | 6.0 | 1.4 | 20 | 26 | 26 | 18 | 4 |
| Feeds and fodders | 0.6 | 1.7 | 2.2 | 2.1 | 0.7 | 2 | 2 | 2 | 2 | 2 |
| Soybeans | 6.5 | 4.9 | 4.4 | 3.6 | 1.6 | 17 | 7 | 6 | 0 | -3 |
| Soybean meal | 1.2 | 1.1 | 1.1 | 0.9 | 0.4 | -2 | 2 | 2 | 2 | 0 |
| Soybean oil | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 14 | 14 | 14 | 14 | 2 |
| Beef and veal | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 9 | 9 | 9 | 4 | 2 |
| Pork | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 2 | 2 | 2 | -2 | 0 |
| Beef and pork variety meats | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | -4 | -4 | -4 | -9 | -3 |
| Broiler meat | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | -1 | -1 | 2 | 1 | 1 |
| Tobacco, unmanufactured | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 91 | 91 | 91 | 91 | -4 |
| Cotton | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 | 2 | -4 | -4 | -7 | -7 |
| Major bulk products | 12.1 | 11.7 | 12.6 | 8.2 | 2.3 | 16 | 15 | 14 | 6 | 0 |

1/ Root mean squared error (RMSE) is the squared root of the average squared difference between the forecast and actual values.

Sources: USDA, Economic Research Service and USDA, Foreign Agricultural Service.

Table 8—Reliability of quarterly U.S. export projections, by country and quarter

| Country/region | Root mean squared error (RSME) 1/ Fiscal 2015–2019 | | | | | Forecast errors Fiscal 2019 | | | | |
|-------------------------|---|------|------|-----|------|--------------------------------|------|------|-----|------|
| | Aug. | Nov. | Feb. | May | Aug. | Aug. | Nov. | Feb. | May | Aug. |
| Export value | <i>RSME</i> | | | | | <i>Percent</i> | | | | |
| Asia | 4.3 | 3.0 | 3.0 | 2.5 | 1.8 | 10 | 6 | 6 | -2 | -4 |
| East Asia | 3.3 | 2.0 | 1.9 | 2.1 | 1.4 | 9 | 3 | 3 | -6 | -4 |
| Japan | 1.1 | 1.0 | 0.7 | 0.5 | 0.4 | 2 | 4 | 4 | 4 | 4 |
| China | 3.2 | 3.0 | 2.6 | 3.0 | 1.8 | 19 | -11 | -11 | -36 | -28 |
| Hong Kong | 0.6 | 0.6 | 0.5 | 0.3 | 0.2 | 31 | 31 | 31 | 8 | 2 |
| Taiwan | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 3 | 5 | 5 | 5 | 5 |
| South Korea | 0.8 | 0.7 | 0.7 | 0.6 | 0.4 | 1 | 5 | 8 | 8 | 5 |
| Southeast Asia | 1.7 | 1.6 | 1.5 | 1.2 | 0.6 | 12 | 12 | 11 | 7 | -1 |
| Indonesia | 0.4 | 0.4 | 0.4 | 0.3 | 0.1 | 21 | 21 | 21 | 14 | 0 |
| Philippines | 0.2 | 0.3 | 0.3 | 0.2 | 0.1 | 4 | 4 | 4 | 4 | 4 |
| Malaysia | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 13 | 13 | 13 | 13 | 13 |
| Thailand | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 | 38 | 38 | 27 | 11 | 1 |
| Vietnam | 0.8 | 0.6 | 0.6 | 0.5 | 0.2 | 17 | 17 | 17 | 17 | 3 |
| South Asia | 0.7 | 0.7 | 0.7 | 0.5 | 0.1 | 10 | 10 | 10 | 5 | -3 |
| India | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | -5 | -5 | -5 | -16 | -16 |
| Western Hemisphere | 1.4 | 0.6 | 0.3 | 0.4 | 0.3 | 1 | 1 | 1 | 1 | 0 |
| North America | 1.3 | 1.1 | 0.9 | 1.0 | 0.7 | 3 | 3 | 3 | 3 | 1 |
| Canada | 0.9 | 0.7 | 0.6 | 0.6 | 0.5 | 3 | 3 | 3 | 3 | 1 |
| Mexico | 0.6 | 0.5 | 0.5 | 0.5 | 0.3 | 4 | 4 | 4 | 4 | 2 |
| Caribbean | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | -5 | -5 | -2 | -2 | -2 |
| Dominican Republic | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | -7 | -7 | 0 | 0 | 0 |
| Central America | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | -9 | -9 | -9 | -9 | -9 |
| South America | 0.5 | 0.5 | 0.7 | 0.6 | 0.3 | -4 | -4 | -4 | -5 | -1 |
| Brazil | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 3 | 3 | 3 | 3 | 3 |
| Colombia | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 | 12 | 12 | 12 | 12 | 5 |
| Peru | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 26 | 26 | 26 | 26 | 7 |
| Venezuela | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 73 | 73 | 73 | 15 | 15 |
| Europe and Eurasia | 0.6 | 0.6 | 0.6 | 0.5 | 0.4 | 6 | 6 | 6 | 7 | 6 |
| European Union-27+UK 2/ | 0.6 | 0.6 | 0.6 | 0.5 | 0.4 | 6 | 6 | 6 | 6 | 6 |
| Other Europe | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 22 | 22 | 22 | 22 | 5 |
| FSU-12 3/ | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | -18 | -18 | -18 | -2 | -2 |
| Russia | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | -8 | -8 | -8 | 37 | 37 |
| Middle East | 0.4 | 0.4 | 0.4 | 0.2 | 0.1 | 4 | 4 | 4 | 4 | 2 |
| Turkey | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 27 | 27 | 27 | 27 | 18 |
| Saudi Arabia | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 6 | 6 | 6 | 6 | 6 |
| Africa | 0.9 | 0.9 | 0.8 | 0.6 | 0.2 | 32 | 32 | 32 | 23 | 10 |
| North Africa | 0.9 | 0.8 | 0.8 | 0.6 | 0.2 | 69 | 69 | 69 | 51 | 22 |
| Egypt | 0.6 | 0.6 | 0.6 | 0.5 | 0.1 | 56 | 56 | 56 | 56 | 15 |
| Sub-Saharan Africa | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 | -8 | -8 | -8 | -8 | -3 |
| Nigeria | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | -9 | -9 | -9 | -9 | 9 |
| Oceania | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | -2 | -2 | -2 | -2 | -2 |

1/ Root mean squared error (RMSE) is the squared root of the average squared difference between the forecast and actual values. 2/ 28 member nations of the European Union (EU) including the United Kingdom (UK), which will remain in the E Customs Union during the transition period that is scheduled to end December 31, 2020, but may be extended.

3/ The 15 Republics of the Former Soviet Union (FSU) minus the 3 Baltic Republics.

Sources: USDA, Economic Research Service and USDA, Foreign Agricultural Service.

Table 9—Reliability of quarterly U.S. import projections, by commodity and quarter

| Commodity | Root mean squared error (RSME) 1/ Fiscal 2015–2019 | | | | | Forecast errors Fiscal 2019 | | | | |
|-------------------------------|---|------|------|-----|------|--------------------------------|------|------|-----|------|
| | Aug. | Nov. | Feb. | May | Aug. | Aug. | Nov. | Feb. | May | Aug. |
| Import value | <i>RSME</i> | | | | | <i>Percent</i> | | | | |
| Livestock, poultry, and dairy | 2.0 | 1.5 | 1.0 | 0.7 | 0.1 | -3 | -4 | -4 | -3 | 0 |
| Livestock and meats | 1.9 | 1.3 | 0.9 | 0.7 | 0.2 | -1 | -4 | -3 | -2 | 0 |
| Cattle and calves | 0.5 | 0.3 | 0.0 | 0.0 | 0.1 | -9 | -9 | -3 | -3 | 3 |
| Swine | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -4 | -4 | -4 | -4 | -4 |
| Beef and veal | 1.3 | 1.0 | 0.6 | 0.4 | 0.1 | -2 | -7 | -7 | -3 | -2 |
| Pork | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 9 | 3 | 9 | 3 | 3 |
| Dairy products | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | -11 | -8 | -8 | -8 | -3 |
| Cheese | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | -4 | -4 | -4 | 11 | -4 |
| Grains and feed | 0.9 | 0.8 | 0.6 | 0.5 | 0.3 | -7 | -7 | -4 | -4 | -1 |
| Grain products | 0.6 | 0.6 | 0.5 | 0.4 | 0.2 | -9 | -9 | -6 | -6 | -4 |
| Oilseeds and products | 1.0 | 0.9 | 0.8 | 0.6 | 0.2 | 11 | 10 | 9 | 7 | 2 |
| Vegetable oils | 0.8 | 0.6 | 0.5 | 0.4 | 0.2 | 21 | 19 | 15 | 14 | 6 |
| Horticulture products | 4.3 | 4.1 | 3.6 | 2.7 | 1.7 | -7 | -6 | -5 | -3 | -2 |
| Fruits, fresh | 0.8 | 0.8 | 0.6 | 0.6 | 0.3 | -5 | -6 | -2 | -1 | -1 |
| Fruits, preserved | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 | -4 | -3 | -1 | 1 | 1 |
| Fruit juices | 0.3 | 0.3 | 0.2 | 0.1 | 0.1 | -4 | 0 | 0 | 0 | 0 |
| Nuts and preparations | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 | 8 | 8 | 11 | 11 | 11 |
| Vegetables, fresh | 0.6 | 0.6 | 0.6 | 0.4 | 0.2 | -7 | -7 | -6 | -5 | -5 |
| Vegetables, processed | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | -1 | -1 | 1 | 1 | 1 |
| Wine | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 | 0 | 0 | -1 | -1 | -1 |
| Malt beer | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0 | 2 | 2 | 2 | -2 |
| Essential oils | 0.4 | 0.3 | 0.3 | 0.2 | 0.1 | -2 | 0 | 0 | 0 | 0 |
| Cut flowers and nursery stock | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | -8 | -8 | -8 | -8 | -8 |
| Sugar and tropical products | 2.5 | 2.4 | 2.6 | 0.9 | 0.3 | 2 | 3 | 2 | 1 | 0 |
| Sweeteners and products | 0.2 | 0.3 | 0.3 | 0.2 | 0.1 | 6 | 8 | 8 | 6 | 1 |
| Confections | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | -6 | -1 | -1 | -1 | -1 |
| Cocoa and products | 0.4 | 0.4 | 0.4 | 0.2 | 0.1 | 0 | 0 | -2 | -2 | 0 |
| Coffee beans and products | 0.7 | 0.7 | 0.8 | 0.5 | 0.3 | 7 | 7 | 5 | 5 | -1 |
| Natural rubber | 0.7 | 0.6 | 0.4 | 0.2 | 0.1 | 12 | 12 | 12 | 6 | 6 |
| Other imports | 0.4 | 0.3 | 0.3 | 0.1 | 0.1 | 3 | 3 | 3 | 3 | -3 |
| Total agricultural imports | 7.7 | 7.1 | 5.8 | 3.8 | 2.1 | -3 | -3 | -2 | -2 | -1 |
| Import volume | | | | | | | | | | |
| Wine | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 6 | 6 | 6 | 6 | -2 |
| Malt beer | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | -3 | 0 | 0 | 0 | 0 |
| Fruit juices | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 | 6 | 8 | 8 | 8 | 6 |
| Cattle and calves | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | -2 | -2 | -2 | -2 | 3 |
| Swine | 0.5 | 0.5 | 0.3 | 0.3 | 0.1 | 6 | 4 | 2 | 4 | 0 |
| Beef and veal | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | -2 | -2 | -2 | -2 | -2 |
| Pork | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 19 | 19 | 19 | -5 | -5 |
| Fruits--fresh | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 | 1 | 1 | 1 | 1 | 0 |
| Fruits--processed | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 5 | 0 | 0 | 0 | 0 |
| Vegetables--fresh | 0.4 | 0.4 | 0.4 | 0.2 | 0.2 | -2 | -2 | -2 | 0 | 0 |
| Vegetables--processed | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | -1 | -1 | -1 | 2 | 2 |
| Vegetable oils | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 16 | 12 | 12 | 10 | 2 |
| Cocoa and products | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | -6 | -6 | -6 | -6 | -6 |
| Coffee beans and products | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | -16 | -16 | -16 | -16 | -10 |

1/ Root mean squared error (RMSE) is the squared root of the average squared difference between the forecast and actual value.

Sources: USDA, Economic Research Service and USDA, Foreign Agricultural Service.

Table 10—Reliability of quarterly U.S. import projections, by country and quarter

| Country/region | Root mean squared error (RSME) 1/ Fiscal 2015–2019 | | | | | Forecast errors Fiscal 2019 | | | | |
|-------------------------|---|------|------|-----|------|--------------------------------|------|------|-----|------|
| | Aug. | Nov. | Feb. | May | Aug. | Aug. | Nov. | Feb. | May | Aug. |
| Import value | <i>RSME</i> | | | | | <i>Percent</i> | | | | |
| Western Hemisphere | 3.3 | 2.8 | 2.4 | 1.6 | 0.8 | -3 | -2 | -1 | -1 | -1 |
| Canada | 1.6 | 1.3 | 1.0 | 0.5 | 0.3 | 0 | 1 | 1 | 1 | -1 |
| Mexico | 1.8 | 1.8 | 1.4 | 1.1 | 0.7 | -9 | -8 | -7 | -6 | -3 |
| Central America | 0.3 | 0.3 | 0.4 | 0.2 | 0.1 | 1 | 1 | 3 | 3 | 1 |
| Costa Rica | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 12 | 12 | 12 | 12 | 6 |
| Guatemala | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | -1 | -1 | 3 | 3 | 3 |
| Other Central America | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | -5 | -5 | -5 | -5 | 1 |
| Caribbean | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | -9 | 6 | 6 | 21 | 21 |
| South America | 0.7 | 0.8 | 0.9 | 0.6 | 0.2 | -1 | -1 | -1 | 0 | 0 |
| Argentina | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 3 | 3 | 3 | 4 | 4 |
| Brazil | 0.3 | 0.3 | 0.4 | 0.3 | 0.1 | 5 | 5 | 5 | 5 | 2 |
| Chile | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 4 | 4 | 8 | 8 | 4 |
| Colombia | 0.2 | 0.3 | 0.2 | 0.2 | 0.1 | -4 | -4 | -4 | -5 | -5 |
| Peru 2/ | NA | NA | NA | NA | NA | -10 | -14 | -14 | -11 | -6 |
| Other South America | 0.7 | 0.7 | 0.1 | 0.1 | 0.1 | -5 | -5 | -5 | 1 | 1 |
| Europe and Eurasia | 1.3 | 1.3 | 1.0 | 0.8 | 0.5 | -5 | -5 | -4 | -4 | -4 |
| European Union-27+UK 3/ | 1.3 | 1.3 | 1.0 | 0.7 | 0.4 | -4 | -4 | -3 | -3 | -2 |
| Other Europe | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | -19 | -19 | -19 | -17 | -17 |
| Asia | 2.5 | 2.5 | 2.1 | 1.4 | 0.7 | -3 | -4 | -4 | 1 | 1 |
| East Asia | 0.4 | 0.5 | 0.4 | 0.3 | 0.2 | 6 | 6 | 7 | 7 | 2 |
| China | 0.4 | 0.4 | 0.4 | 0.3 | 0.2 | 13 | 15 | 15 | 13 | 6 |
| Other East Asia | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | -9 | -9 | -9 | -4 | -4 |
| Southeast Asia | 1.6 | 1.6 | 1.4 | 1.0 | 0.5 | -7 | -8 | -8 | -1 | 0 |
| Indonesia | 0.6 | 0.6 | 0.5 | 0.4 | 0.1 | 21 | 21 | 21 | 17 | 4 |
| Malaysia | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | -3 | -3 | -3 | -3 | -3 |
| Thailand | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | -12 | -12 | -12 | -7 | -5 |
| Vietnam 2/ | NA | NA | NA | NA | NA | 23 | 23 | 23 | 17 | 8 |
| Other Southeast Asia | 1.5 | 1.5 | 1.4 | 0.9 | 0.4 | -44 | -49 | -49 | -20 | -3 |
| South Asia | 0.8 | 0.8 | 1.1 | 0.3 | 0.2 | -5 | -5 | -5 | -1 | -1 |
| India | 0.7 | 0.7 | 0.8 | 0.3 | 0.2 | -3 | -3 | -3 | -1 | -1 |
| Oceania | 1.7 | 1.5 | 2.0 | 0.7 | 0.5 | 3 | 3 | 3 | 1 | 1 |
| Australia | 1.2 | 1.1 | 1.5 | 0.5 | 0.4 | -1 | -1 | -1 | -1 | 2 |
| New Zealand | 0.5 | 0.5 | 0.7 | 0.3 | 0.2 | 14 | 14 | 14 | 6 | 6 |
| Africa | 0.3 | 0.3 | 0.4 | 0.4 | 0.2 | -4 | -7 | -7 | -7 | -4 |
| Sub-Saharan Africa | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | -1 | -5 | -5 | -5 | -5 |
| Côte d'Ivoire | 0.3 | 0.3 | 0.6 | 0.1 | 0.1 | 46 | 33 | 33 | 13 | 6 |
| Middle East | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | 1 | 1 | 1 | 0 | 0 |
| Turkey | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 3 | 3 | 3 | 1 | 1 |

1/ Root mean squared error (RMSE) is the squared root of the average squared difference between the forecast and actual value. 2/ Import values from Peru and Vietnam were not forecast in FY 2015, resulting in insufficient data to calculate the 5-year RSME for those forecasts. 3/ 28 member nations of the European Union (EU) including the United Kingdom (UK), which will remain in the EU Customs Union during the transition period that is scheduled to end December 31, 2020, but may be extended.

Sources: USDA, Economic Research Service and USDA, Foreign Agricultural Service.

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