



# Brazil's Agricultural Competitiveness: Recent Growth and Future Impacts Under Currency Depreciation and Changing Macroeconomic Conditions

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## What Is the Issue?

Brazil's macroeconomic policies have played an important role in its emergence as one of the top exporters of agricultural products, including soybeans, corn, cotton, sugar, coffee, orange juice, and meat. However, extended periods of currency depreciation, low energy costs and interest rates, rising demand for biofuel feedstocks, and macroeconomic fluctuations have contributed to Brazil's emergence as a competitor for the United States in global agricultural markets. This study explores the role of macroeconomic variables by simulating the impact of Brazilian policy-driven currency depreciation and sustained macroeconomic growth on Brazilian agricultural output and trade. The potential impact of macroeconomic events on Brazil's agricultural exports remains important, especially as the country's economy and agricultural commodity markets are vulnerable to the effects of the COVID-19 pandemic.

## What Did the Study Find?

A weaker value of Brazil's currency, the *real* (denoted as BRL), during its deep 2014-16 recession contributed to the record growth in Brazil's agricultural exports. During 2014-16, devaluation of the Brazilian currency encouraged Brazil's farmers to bring more new land into production and increase double-cropping. Consequently, local currency-denominated prices yielded increased net returns for Brazilian farmers despite weak dollar-denominated prices in global markets. The expansion of Brazil's land use was led by a 20-percent growth in the soybean area. USDA has projected additional growth in production and exports to 2028, and simulations show that this growth could accelerate if Brazil's currency weakens more than previously expected. Alternatively, stronger economic growth in Brazil could stimulate more domestic meat consumption with more domestic use of corn and soybean meal.

Key findings from two simulated macroeconomic scenarios (accelerated depreciation and sustained growth) show:

- Faster depreciation of the *real* could lead to even faster growth in Brazilian exports than projected in USDA's 10-year projections. Simulations show that Brazil's exports of each major commodity could be an aggregate 5.6 percent greater and international prices 2.7 percent lower by 2028, compared with the USDA projections released in February 2020.

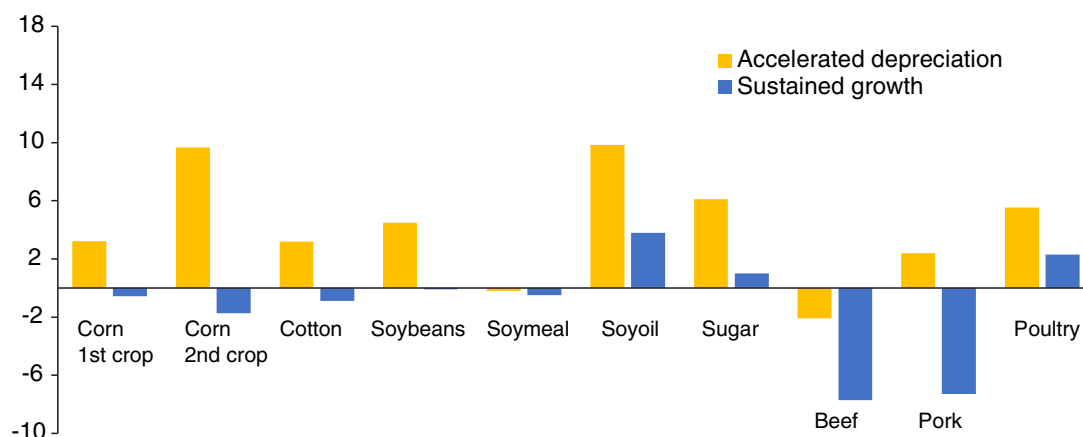
ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

- Changes in net returns would divert cropland from sugarcane to soybeans and corn, yet a reduction in fuel imports would induce greater use of sugarcane to produce ethanol.
- Faster economic growth in Brazil would reduce its exports of beef and pork as more meat is consumed domestically, narrowing the gap between red meats and chicken prices. Increased poultry exports, driven by the price competitiveness of the Brazilian product, reflect Brazil's status as the world's largest exporter of chicken meat. More Brazilian corn would be used as animal feed and more soybeans would be processed to feed livestock. Corn exports would fall marginally, but soybean exports would not change substantially.
- During the 2020 COVID-19 pandemic, Brazil's currency depreciated further, and its economy slowed. Experience and simulation results suggest that these developments could spur Brazil's agricultural export growth. However, Brazil's export performance also depends on the pandemic's impact on demand in importing countries.

These changes are summarized in the following chart:

### Change in Brazil's average exports in 2019-2028 under alternate scenarios

Percent differences from reference (recession) scenario



Source: USDA, Economic Research Service research results.

### How Was the Study Conducted?

The study simulated impacts of macroeconomic scenarios with a partial equilibrium model of Brazilian agriculture that is used to generate USDA's long-term baseline projections for production and trade over 10 years. The model includes assumptions for key macroeconomic variables (e.g., income growth, interest rates, and exchange rates), petroleum and fertilizer nutrient prices, producer and trade policies, and production technology. The first scenario assumes the BRL depreciates against the U.S. dollar at a faster rate than is assumed in the USDA reference baseline during the 2019-28 projection period (accelerated depreciation scenario). A second scenario assumes that Brazil was able to sustain economic growth on the trend established before 2014 and retained that growth through its recession years (2014-16) and in future years (2019-28) (sustained growth scenario). The results of these simulated projections are compared with the baseline projections to 2028 to assess the impact of each scenario on Brazil's supply and demand for grains, oilseeds and products, cotton, livestock products, sugarcane, sugar, and ethanol. Effects on global markets were measured by combining the model with 41 other country/regional models in the Country-Commodity Linked System to generate global commodity supply, demand, trade, and equilibrium prices for 2014-28.