

Colombia's Agricultural Land Conversion, Expansion, and Policies

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Abstract

Colombia currently imports roughly \$5.6 billion worth of agricultural and food products each year. Colombia is the third largest of the South American markets in terms of population and the largest market for U.S. agricultural exports to South America at \$2.4 billion. Colombian agriculture is at a historical turning point because of a convergence of several positive factors, including the United States-Colombia Trade Promotion Agreement (TPA), ongoing efforts to increase agricultural production and improve efficiency, and the prospects for fuller involvement of the Colombian population in their country's food system, both as consumers and as producers. In Colombia, conversion of range, pasture, and forest land into cropland is an important factor in the growth of agriculture. This study seeks to examine how rapidly and to what extent might crop and livestock output in Colombia expand into traditional and agricultural frontier regions and the implications of such an expansion for agricultural trade. This assessment will be done using a partial equilibrium model of the Colombian agricultural and food economy. The model takes market-clearing world prices as given, both in the historical and projected years. The world prices feed into determination of Colombia's commodity prices, which in turn generate, for ten or more years into the future, supply and demand balances for modeled commodities.

In spite of the downturn in commodity prices and the depreciation of the Colombian peso, this convergence of factors is seen as having the potential to positively affect Colombian agricultural trade, featuring larger trade flows with a broader composition of products in both exports and imports.

The agricultural sector remains one of the cornerstones of the Colombian economy, with most of its products being competitive by international standards.

Agriculture constitutes a crucial platform for the success of the peace agreement, as primary agriculture generates more employment than any other sector of the Colombian economy. Agriculture is also crucial in sustaining the industrial and services sectors, which have benefitted from more stable macroeconomic policies, higher levels of foreign direct investment, and greater participation of multinational corporations. Factors contributing to the positive outlook for agriculture include 1) the prospect for fuller involvement of the Colombian population in their country's food system, both as consumers and as producers; 2) the Peace dividend, in terms of lower security-related expenses for commercial agriculture; and 3) the expansion of plantings of agricultural products in new lands, coming mostly from idle land in former conflict areas. To evaluate the impact of these new developments on Colombia's land conversion and expansion we develop a partial equilibrium model of Colombian agriculture in order to assess the potential competition between food production and livestock expansion and deforestation.

Statement of the Issue

Colombia has made significant strides over the past two decades in realizing agriculture's potential in crops and livestock products that have a comparative advantage, in expanding acreage, and in increasing the use of technology. As a result, the country has become one of the world's largest exporters of coffee, bananas, sugar, cocoa, and cut flowers and has seen significant expansion of production of rice, corn, tropical fruits, and livestock products. However, Colombia still faces challenges, including a precarious fiscal situation, the reincorporation of thousands of former FARC members into civil society, and persistent structural problems in agriculture, including poor infrastructure and high import costs. In Colombia, conversion of range, pasture, and forest land into cropland is an important factor in the growth of agriculture. Concerns have been raised by many about the extent to which increased agricultural production will lead to changes in crop composition on existing cropland, as well as pasture and forest conversion in the savannahs and Amazon regions of Colombia.

To gain a clearer idea of what the next 15-20 years holds for Colombia and for world agricultural exports to Colombia given the new economic and policy environment, the project seeks to carry out forward-looking market analysis on Colombia's agricultural and food economy, encompassing productive expansion and capacity, infrastructure developments, trade policy, and potential markets for imported agricultural products. The Colombia project has the potential to help decision makers in the public and private sectors have a better understanding of the country's future and the prospects for larger and more diverse market opportunities for

agricultural, food, and input exporters. Colombia currently imports roughly \$5.6 billion worth of agricultural and food products each year. Colombia is the third largest of the South American markets in terms of population and the largest market for U.S. agricultural exports to South America at \$2.4 billion.

Expansion of domestic crop, meats, and biofuel production has had and will continue to have a major effect on Colombian agriculture, on the amount of additional land needed for production, and on domestic and international biofuels, other energy, and commodity markets. The additional area used to produce food displaces other crops and livestock production, forcing them to compete for the remaining land. Alternatively, to maintain area available for other agricultural production activities, the stock of land must be increased. The degree to which additional land can be brought into production varies within the two major and distinct production regions in Colombia—the traditional and the frontier agricultural regions. In the traditional agricultural production region, land for new food production must come from acreage not currently in production (idled cropland) and from acreage shifted from other crops and pasture. As land in the traditional region is taken from competing agricultural activities, incentives to regain the lost crop and livestock production may lead to conversion of pasture to cropland and of forest to new pastures for cattle ranching in the western frontier.

Objectives and Approach

This assessment of Colombia's agricultural and food economy will be done using a partial equilibrium model of Colombian agriculture developed under this project. Topics to be examined include:

- Expansion in agricultural area: *How rapidly and to what extent might crop and livestock area in Colombia expand?* Influencing factors will include international commodity prices, use of technology, financing, local regulations, domestic support, environmental issues, and opportunities for Colombian producers to use bulk commodities and agricultural inputs from the United States to expand their businesses.
- Food distribution and marketing infrastructure: *How rapidly could Colombia improve its food distribution and marketing infrastructure, from farm to domestic consumer markets and to international ports?* Influencing factors will include public and private financing and institutional involvement, including the potential involvement of U.S. investors and U.S. suppliers of food products
- Potential market for food imports. *As a country in close proximity to the United States, Colombia represents the third most populous country in Latin America, after Brazil and Mexico. With a population of nearly 49 million, a growing middle class, and the impending incorporation of additional former 10,000 guerrillas into civil society, what is the size and composition of a potential market for food imports?* Influencing factors include changing socioeconomic status, changing consumer demands, and potential expansion of the domestic food processing sector.

This project has four main objectives:

1. Evaluate the productive capacity of Colombian agriculture, including recent trends and future growth for crop and livestock production area and the potential for increases in yields and animal productivity.
2. Identify current and future infrastructure needs to 2028.
3. Examine the direction of Colombia's agricultural trade policy and how those policies may affect exporters to Colombia.
4. Analyze the current market for agricultural exports to Colombia and how that market can expand over time as Colombian needs are better evaluated, infrastructure needs are met, and policy allows for expanded access.

Data Sources

The primary data source for land use and agricultural production and prices in Colombia is the newly released agricultural census data from Ministerio de Agricultura. Colombian agricultural supply and demand data are from USDA's Production, Supply, and Distribution (PS&D) database. Macroeconomic variables and reference (international) prices are from the USDA 2016 agricultural baseline assumptions set. Regional production and agricultural prices are from Colombia's agricultural marketing agency. Interest rates and other relevant macroeconomic data not included in the international baseline assumptions are from Colombia's Central Bank.

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