



# The ERS Country-Commodity Linked System: Documenting Its International Country and Regional Agricultural Baseline Models

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## What Is the Issue?

In agriculture, many policy and business decisions require consideration of long timeframes. Public and private projections of market indicators help decision makers evaluate the potential costs and benefits of alternative courses of action. With quantitative and qualitative input from many of its agencies, the U.S. Department of Agriculture publishes annual, 10-year agricultural projections that are instrumental in policy and budgetary matters. Quantitative input includes data from country and regional partial equilibrium agricultural sector models maintained by USDA's Economic Research Service (ERS). To expand understanding of these analytical tools, which constitute the Country-Commodity Linked System (CCLS), this report describes the models' underlying economic structure and presents an overview of the CCLS.

## What Did the Study Find?

ERS uses a system of 44 country- and region-specific recursive partial equilibrium models to generate projections for 5 to 20 years into the future, with 10 years used for the official USDA baseline. Each model contains up to 32 commodities or commodity aggregates, with an average of 12 commodities per model. The standard commodity set includes livestock products, grains, oilseeds and oilseed products, cotton, and sugar. The models use economic behavioral relationships to project production, use, and trade quantities based on world and domestic commodity market prices and assumed macroeconomic conditions. Domestic market prices are usually linked to world prices, but the models filter the world prices through import and export taxes and domestic agricultural policy variables such as support prices and producer and consumer subsidies.

## How Was the Study Conducted?

The ERS analytical agricultural sector models are used as inputs to the annual USDA agricultural baseline projections and, subsequently, to answer questions posed by U.S. Government agencies related to agricultural trade and other policies. The models also are tools for conducting country- or region-specific research on export competitiveness, the impact of macroeconomic factors on commodity trade, yield and area shocks, the effects of potential agricultural or trade policy changes, and other contemporary issues. The standard determinants of area, yield, demand variables (e.g., food, feed, other demand, and stocks), and imports and exports, are identified by examining the content of numerous country models. Alternative specifications for supply and demand variables are also identified and reported.

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.