

1. Sector overview

The agricultural sector plays a critical role in the economy of Honduras through job creation, rural income, and export promotion. It accounts for 12.9% of the Gross Domestic Product (GDP), 35.6% of the total value of the country's exports¹. Furthermore, it has significant spillover effects on other sectors of the economy. However, agricultural productivity in Honduras is facing the rising challenge imposed by low use of technologies, climate change, natural resource depletion and environmental degradation.

Agriculture also plays an essential role in reducing food and nutrition insecurity. A total of 1.2 million people, 11% of the total population, are undernourished.

Agricultural land accounts for about 28% of the country's land area, and the agricultural sector employs almost 39% of the population.

Honduras agriculture is characterized by duality, where a modern large-scale agricultural production system coexists with a smallholder, resource-poor, subsistence, and semi-subsistence production system.

Agricultural production can be broken down into small farms with less than 5 hectares (70.6 % of producers) occupying 8.6 % of productive land. Another group (4.6 %) with 50 to 500 hectares, farms 43.3 % of the land, while holdings with more than 500 hectares (0.2 %) farm 18.2 %.²

Most of the agricultural land is used for the production of low-yielding crops such as bananas, plantains, rice, corn and beans. The National Statistics Institute (INE) estimates that approximately 94% of the agricultural production area is concentrated in 10 agricultural crops: coffee (32%), corn (26%), palm (14%), beans (12%), sugarcane (5%), sorghum (2%), oranges (1%), bananas (1%), and melons (1%).

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https://publications.iadb.org/publications/spanish/viewer/An%C3%A1lisis_de_pol%C3%ADticas_agropecuarias_en_Honduras.pdf

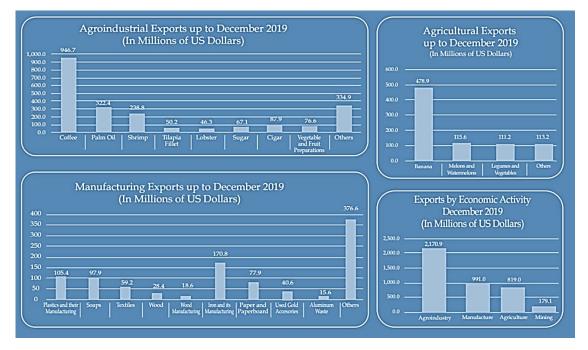
² https://webapps.ifad.org/members/eb/130/docs/EB-2020-130-R-18.pdf

Based on data from the Honduras Central Bank (BCH) agricultural output in Honduras is relatively concentrated, with the coffee and banana subsectors together representing 36% of the value of production and 54% of the value of agricultural exports. In addition to coffee and bananas beef, palm oil, sugar and grains dominate production. Other important export products are shrimp, fruits, and vegetables.

While large and some medium-size producers have developed stable linkages to international markets and have access to state-of-the-art technologies, the majority of producers are small growers and cooperatives with, in general, very low purchasing power.

The large-scale system produces high-value crops for export, providing a large source of export earnings. Historically, Honduras' key export crops have been bananas and coffee. Today, however, African palm oil, produced in the country's northern and central regions, is becoming an important generator of export revenue, followed by sugarcane and, to a lesser extent, pineapple and melon.

Honduras exports ³



The country's agricultural production and productivity is vulnerable to adverse climate events such as droughts and hurricanes. Moreover, Honduras is one of the countries most vulnerable to climate change. According to the Global Climate Risk Index from Bonn-based Germanwatch, it is third on the list of countries most affected by extreme weather events in the decade 1998–2017. A study conducted by UNDP and the International Center for Tropical Agriculture (CIAT) in 2018, projects that by 2100 precipitation during the country's rainy season will decrease by up to 20%. Average monthly minimum and maximum temperatures are expected to increase by 2°C during that period.

It is expected that the two highest-value crops for Honduras—coffee and sugarcane—may also be the hardest hit by climate change.⁴

Vulnerability to climate change is exacerbated by the lack of effective governance structures, high rates of population growth, and urbanization, as well as by poor land-use planning, which results in environmental degradation and habitat destruction.

³ https://cni.hn/wp-content/uploads/2021/04/Honduras-a-World-of-Opportunities-CNI.pdf

⁴ https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/133215/filename/133425.pdf

2. Trends and opportunities

Sustainable agriculture

According to the Ministry of Agriculture and Livestock (MAG), increased development of sustainable agriculture practices could provide Honduras with the key to reducing the dependence of their agriculture sectors on external inputs and curbing poverty in rural areas.

In Honduras, there is a potential for the development of organic agriculture, mainly among small and medium-sized producers. Currently, more than 17 different organic products are grown in Honduras, mainly vegetables and fruits, such as banana, plantain, pineapple, orange, sweet potato, lemon, passion fruit and chili, among others. Most of these products are exported to the international market, where the main partners are the United States, Europe, and Japan.

According to data from the Honduran National Agri-Food Health and Safety Service (SENASA) between 2010-2017, the number of producers of organic fruits, vegetables and grains increased from 1.500 to 6.451, while the planting area expanded from 4.400 to 31.574 hectares. Based on data from the Research Institute of Organic Agriculture (FiBL)⁵, the 2019 organic surface was of 29.274 hectares, representing 0.9% of the total agricultural land of Honduras, and a 64,2% growth in since 2009. However, organic share of land varies largely between crops: at the higher end, cocoa's organic share is 18,7%, and coffee's is 5,4%.

Smart agriculture

Digital agriculture in Honduras is at a relatively nascent stage. While some of the larger, more capitalized stakeholders have invested in customized digital systems, the vast majority of value chain actors are at the beginning of their digital transformation process. International development actors loom large as sources of both supply and demand for digital agriculture solutions.⁶

Honduras has begun to test precision agriculture through different arrays of applications, which include automated drip irrigation, drones in the field, computerized greenhouses, vertical farms, livestock tracking, mobile price monitoring apps, and some Fintech apps with new digital payment methods, among others.

Most of the technology companies building digital agriculture solutions are building customized solutions for either larger agribusinesses or development programming. While the digital agriculture ecosystem in Honduras is in its early stages, there are several building blocks in place: good network coverage, strong smartphone penetration and a group of stakeholders well positioned to help the digital agriculture ecosystem accelerate.

The National Investment Council (Consejo Nacional de Inversiones, CNI) of Honduras promotes the transformation of traditional processes to digital platforms that add value and generate positive change in the economy and investment in Honduras. The CNI considers that digital technologies can be a part of the solution to certain obstacles that agribusinesses face since it allows a more efficient, productive and sustainable agriculture through the optimization of its processes. The use of information technology, sensors, and digital processes to the unit of small producers, associations,

⁵ https://www.fibl.org/fileadmin/documents/shop/1150-organic-world-2021.pdf

https://files.digitalfrontiersdai.com/media/documents/Public_Final_Honduras_Digital_Agriculture_Assessment_w.log os.pdf

and cooperatives, among others, could represent a new route in the medium and long term to stabilize supply, combining traditional means and new formats to make business.

Recently the AgritecGEO⁷ technology platform was introduced, which integrates data so that farmers can optimize their resources and improve their productivity. AgritecGEO includes agronomic advice, high-tech agriculture services and inputs tailored to each crop, through software installed on the user's phone via free app, which will help farmers better manage their crop and make it more sustainable.

As part of its Digital Strategy, the General Secretariat of Central American Integration System (SICA) strengthened its web portal, gathering real-time satellite information tools, thanks to the SICA-NASA agreement, and granted access to digital applications titled Climate Fishing, Coffee Cloud, HydroClima and Climate Center.⁸

There are also initiatives aimed at small producers by the Inter-American Institute for Cooperation on Agriculture (IICA) that announced an alliance with Microsoft and Global Hitss, a subsidiary of América Móvil, to promote the digital transformation of the sector in the Central American region. The project uses Microsoft Azure platform both for data storage and analysis and for the creation of chatbots and technical videos that seek to answer online inquiries, from producers, about crops and diseases.

The International Fund for Agricultural Development (IFAD) in coordination with the government of Honduras has developed a Roadmap for the Transformation of the Food System in Honduras^{9,10}. The roadmap identifies key activities that will help achieve a vision for 2030 that strives for Honduras to have a "comprehensive and strengthened food system that takes advantage of existing potential and minimizes inequity gaps in the population". The roadmap focuses on two primary courses of action to achieve this vision, 1) Promoting equitable livelihoods and reducing inequalities ands 2) Build resilience to vulnerabilities, shocks, and stresses. Digital channels are called out in several ways to help achieve these courses of action, including 1) continuing to strengthen the digital infrastructure in Honduras, 2) building capacity of food system stakeholders to utilize digital channels effectively, 3) promoting access to digital trading platforms to improve market access, and 4) leveraging digital channels to improve market information systems. By 2025, the roadmap hopes to energize digital transformation in the food system.

⁷ https://www.disagro.com.hn/agritecgeo-storytelling/

⁸ https://www.sica.int/nasa-sica/inicio

⁹ https://webapps.ifad.org/members/eb/130/docs/EB-2020-130-R-18.pdf

¹⁰ https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/133215/filename/133425.pdf



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