



AGRICULTURE'S FUTURE IN BELIZE

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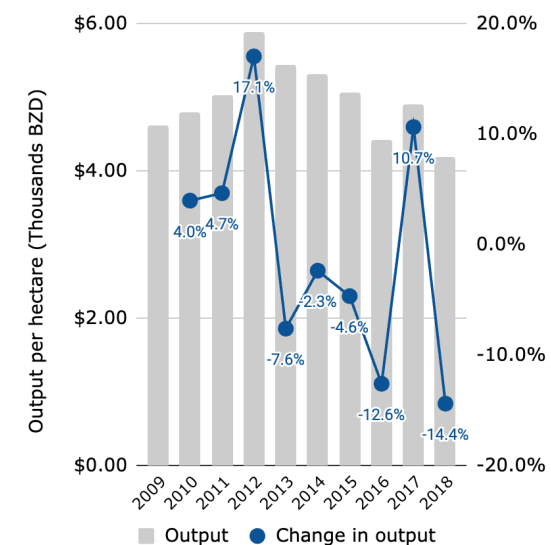
AGRICULTURE'S FUTURE IN BELIZE

Agriculture and agribusiness are integral parts of Belize's economy. The sector contributes to national food security, employment and export revenue. However, changing trade regimes, shifts in consumer priorities, and sustainability concerns means that local producers must catch up - and fast. Belizean agricultural export competitiveness will depend on how well local producers and the Government address cross-cutting issues and disruptive forces in the years to come.

Context

By 2030, Belize's population could surpass 540 thousand people.¹ At current import per capita levels, population growth alone will add more than BZ\$68 million to the country's agricultural import bill.² But while the growth in imports has been constant, agricultural exports have grown by only 2% since 2010 and Belizean producers continue to struggle to tap into global value chains. National agricultural output has been falling since 2011 with an average year-over-year growth of just 0.1% (see figure below).

Gross and Relative Agricultural Output



Globally, the world's population is on track to reach 9.7 billion by 2050,³ requiring a corresponding 70% increase in calories available for consumption - demand that will most likely be met by countries with more advanced and technologically capable agricultural sectors, leaving countries like Belize behind.⁴ To make matters worse, global water supply is projected to fall 40% short of meeting water needs by 2030.⁵ Locally, producers are already grappling with the effects of climate change such as volatile rainfall patterns and longer dry spells.

Belize has an opportunity to capitalize on growing global demand while also ensuring sustainability by focusing on modernizing its agricultural sector, forging synergies between the private and public sectors, and facilitating greater investment in infrastructure.



Recent Developments

- There has been a consolidated push for the expansion of the cattle industry - particularly for exports. New trade facilities between Belize and Mexico are expected to benefit cattle farmers and support export-led growth. However, all indications are that exports will be low in terms of value-add, limiting the development of economies of scale.
- Expansion into non-traditional crops, including coconut and dragon fruit, has been listed as a priority for some time now but a lack of coordination between the private and public sectors, inadequate investment framework and a generally unfriendly business environment make it difficult for producers and entrepreneurs to transition to these crops. Transitioning to new crops requires extensive investment and, in the absence of secured markets, it's difficult to see much private-sector led expansion in this area without significant improvements in access to finance and capacity building.

¹ Note: Author's calculation based on 2.6% annual average growth rate.

² Source: Author's calculations based on the Ministry of Agriculture's Agricultural Import Data. Retrieved from: <https://www.agriculture.gov.bz>

³ Source: The World Population Prospects: 2015 Revision, UNDESA, Population Division, 2015.

⁴ Source: World Resources Report: Creating a Sustainable Food Future, UN, WRI, and the World Bank, 2013.

⁵ Source: World Could Face Water Availability Shortfall by 2030 if Current Trends Continue, Secretary-General Warns at Meeting of High-Level Panel, United Nations, 2016.

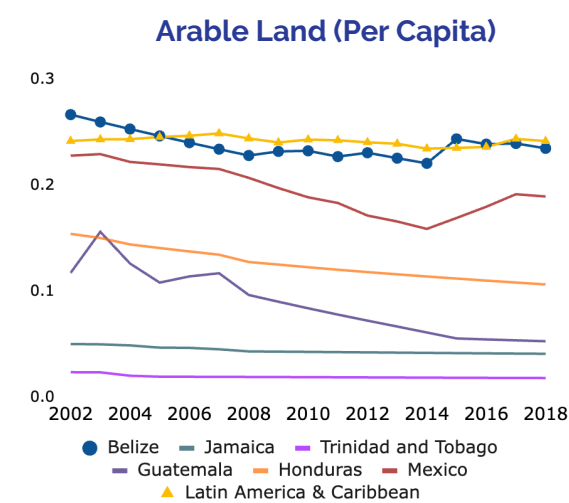
FACTORS



The traditional factors of production in agriculture (and most industries) are land, labor, and capital. The availability of these factors determines the productivity of the sector and its contribution to national economic development.

Land

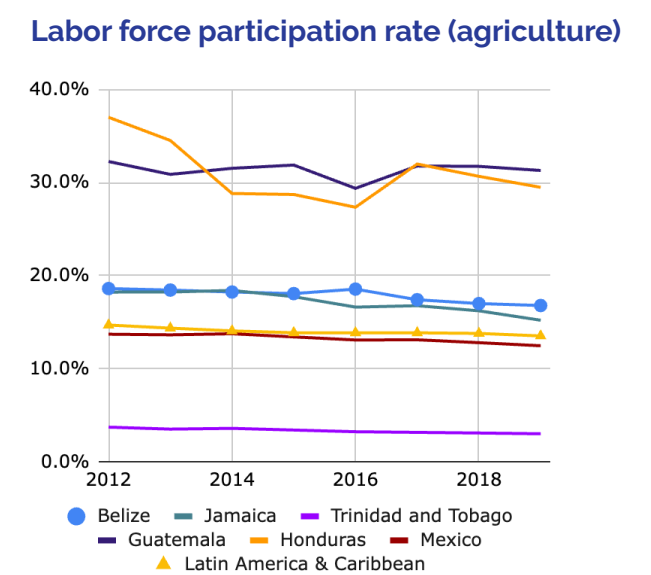
Belize is relatively well endowed with arable land - arable land per capita (hectares per person) is greater than much larger countries such as Mexico and roughly in par with the LAC average (see figure below). However, the private sector continues to deal with slow and inefficient government services when registering property.



Belize ranks as the second worst country in terms of ease of registering property in Latin America and the Caribbean, according to the World Bank 2020 Doing Business Report.⁶ Land administration in the country continues to suffer from a lack of transparency and inadequate infrastructure. In addition, the lack of up-to-date Land Use and Land Change data makes it difficult for producers to make informed, strategic decisions for diversification and expansion.

Labor

Labor is one of the most important inputs in agricultural production. How it is measured and valued is critical for establishing production costs. Roughly 16% of employed persons work in the agriculture industry, slightly above the LAC average and countries such as Jamaica, Trinidad and Tobago, and Mexico (see figure below).⁷



Most workers in the agricultural sector are unskilled or semi-skilled with a large share being seasonal migrant workers from Central America. As of April 2021, workers in agriculture earned about BZ\$725 monthly - BZ\$341 less than the national average across all occupations.⁸ This translates to roughly BZ\$4.5/hr, greater than the national minimum wage of BZ\$3.30, but labor force survey results do not differentiate between supervisory and non-supervisory positions in the agricultural sector - a major statistical drawback.

6 Source: Belize Doing Business 2020. World Bank. Accessed at: <https://archive.doingbusiness.org>

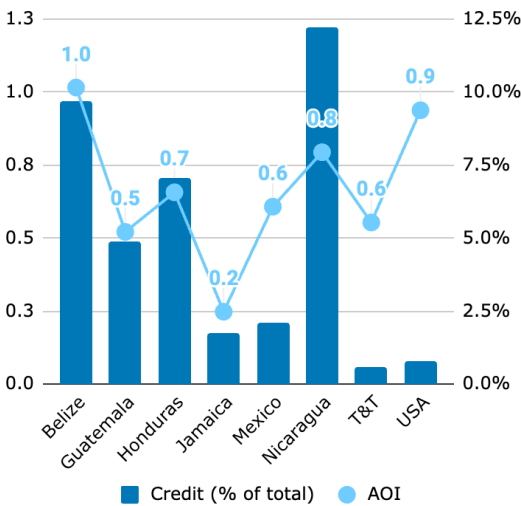
7 Source: Employment in agriculture (% of total employment, modeled ILO estimate). Retrieved from World Bank World Development Indicators.

8 Source: Belize Labor Force Survey - April 2021. Statistical Institute of Belize.

Capital

Belize’s financial system is bank dominated with collateral-backed bank loans being the primary form of financing. Despite adequate liquidity in the banking sector and roughly 10% of all domestic credit, the agricultural sector underperforms relative to other portfolios and regional neighbors. The FAO’s Agriculture Orientation Index (AOI) assesses the relative importance that commercial banks place on financing the sector. An AOI lower than 1 indicates that the agriculture sector receives a credit share lower than its contribution to the economy, while an AOI greater than 1 indicates a credit share to the agriculture sector greater than its economic contribution. Belize’s AOI is 1.02, which is the highest in the region, indicating that in general the sector does not justify the credit it receives. Producers will point to structural constraints limiting their productivity; and banks will point to the lack of fundable projects - outside of tourism and construction, investment opportunities are slim.

Credit to Agriculture and AOI (2019)



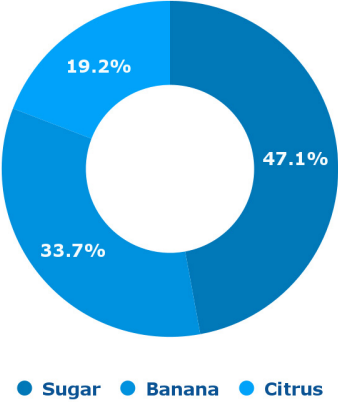
AOI measured on the left axis; share of total credit to the agricultural sector measured on the right axis.

In the absence of alternative financing and facilities such as crop insurance, the agricultural sector will likely continue to underwhelm.

Major Crops

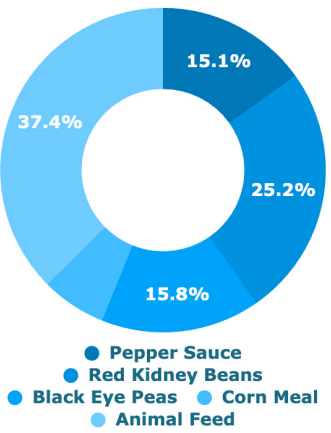
Output continues to center on three major crops: Sugar (and molasses), Bananas, and Citrus. Exports of these three crops totaled roughly US\$129 million in 2020. Diversification has remained limited even though the major crops continue to battle with disease. Production of oranges and grapefruits has declined by 66% since 2010 despite a 22% increase in the amount of acres harvested.⁹ This downward trend is likely to continue as the industry battles citrus greening (Huanglongbing) disease.

Major Crops (% of Exports, 2020)



The total export value of non-traditional crops in 2020 was estimated at only US\$0.02 million.¹⁰ Production is limited to beans (41%), pepper sauce (15%), corn meal (6.5%) and animal feed (37%). With the exception of pepper sauce, all exports are low in value-add.

Non-traditional crops (% of exports, 2020)



ADDITIONAL FACTORS



Access to external markets

Though not considered a traditional factor of production, market access is crucial for the sustainability of the sector and national development priorities. Unfortunately, access has generally been a challenge for Belizean agro-processors because of the technical barriers faced when seeking to enter some overseas markets. Barriers include phytosanitary

standards, certification and accreditation requirements, rules of origin, customs procedures and labeling and packaging rules - with many processors lacking the capacity to identify and meet the standards and other requirements of export markets. National metrology, conformity assessment, and standardization infrastructure in Belize is inadequate.

Trade Regime

Business expansion continues to be out of reach of many producers, especially smallholder farmers, partly due to a complex import tariff and trade tax regime. Taxes on the transfer of property and export and import tariffs alone account for almost 15% of total government tax-based revenue¹¹ - both key areas of concern for producers. Given Belize's fragile fiscal situation, there may be little appetite to forego short-term tax revenue; however these costs should be weighed against the potential benefits that could accrue from long-term structural reforms.

Data

Data collection and accessibility continues to be a major problem in Belize across sectors. Industry-specific data is rarely available in consolidated databases and statistical publications often lack the depth of analysis required to support data-driven decision making. Some key features of the Belizean socio-economic context lack detailed study such as the rate of informality, total factor productivity, and real wages.

Research and Development

Agricultural R&D is a crucial determinant of agricultural productivity and therefore food security. Unfortunately, Belize lacks a national, coordinated innovation policy framework to support R&D in the agricultural sector. Deficiencies exist at all levels, from the lack of a national STEM school education strategy aimed at building the capacities needed to compete in an increasingly digital global marketplace to a limited financial sector with no equity and venture capital financing opportunities.

Infrastructure

Belize continues to suffer from limited and inadequate infrastructure. Signage, drainage, and lighting continue to be major deficiencies across most of the Country's main roads. There are more accidents in Belize on average than other Central American countries.¹² Road maintenance is often inadequate and there is no control of vehicle weights and overloads. Low road coverage often leads to a high vulnerability of the road network to natural disasters and increased transportation costs for producers and consumers.

Cold Storage

Another major deficiency is the lack of cold storage facilities available for agricultural producers. Cold storage involves the use of electric powered facilities to store fresh and/or frozen perishable fruits or vegetables, meat, seafood, or dairy products, at a desired temperature to maintain the quality of products for sale. It can have a positive impact on food security by extending the shelf-life, reducing losses, and retaining nutrients in food. Cold storage facilities are also crucial for export growth by allowing producers to meet external demand as needed.

Connectivity

Less than half of the Belizean population has access to the internet and it is unclear what share of internet users are rural versus urban. In addition, though the price of mobile data in Belize is comparably low - an entry level data plan is roughly 17% of the median income for skilled agricultural, forestry and fisheries workers.¹³

¹¹ Source: GOB Budget

¹² Source: Mortality caused by road traffic injury (per 100,000 population). WHO, Global Health Observatory Data Repository. Accessed at <https://data.worldbank.org>

¹³ Source: Median income by occupation from Statistical Institute of Belize - Labor Force Survey Tables. Data costs from Belize Telemedia Limited (Digi) are the average of entry-level prepaid and postpaid plans.

A close-up photograph of a person's hand holding a small green seedling. The seedling has several bright green leaves and a network of roots visible in the dark, rich soil. The background is a blurred outdoor setting with green foliage.

OPPORTUNITIES

Support for the agricultural sector begins with the reform of the Belizean business climate. Streamlining transactions, embracing digital tools for public service provision, and removing structural barriers to investment and growth will all go a long way in supporting economic growth in general. However, discrete interventions are also necessary for the agricultural sector to ensure sustainable development:

Cold Storage Network

If Belizean agricultural producers are expected to compete on the global marketplace, they must do so on a level playing field. The lack of cold-storage is a significant handicap for producers when accessing external markets. The government should prioritize a feasibility study on a decentralized network of accessible cold-storage facilities that can allow farmers to better regulate supply to match demand and capitalize on market opportunities.

Improvements in Road Infrastructure

Increased road coverage and greater redundancies would go a long way in supporting shipping and logistics within the country - particularly for small-scale farmers that contribute to national food security.

Increased Investments in R&D

A national R&D and innovation policy would go a long way in supporting diversification of the economy and economies of scale. R&D should also encompass the critical area of climate resilient crops and methods that can allow Belizean farmers to cope with the rapidly changing climate. The Government should prioritize the mobilization of resources for greater investments in R&D and the development of an incentive-based framework to drive innovation within the private and public sectors.

Enhanced ICT Access

The GOB is well poised, as majority owner of the national telecom, to push for greater connectivity across the country. Access to new technologies such as fiber and 5G are crucial for competitiveness. The extent to which producers can adopt and implement technology - including drone farming, autonomous machinery, and sensor-based farm management - depends on their access to the internet.

Financial Sector Development

Diversification of the Country's financial system

will help connect producers with funders - especially in the area of Climate Smart Agriculture where the supply of financing often falls short of demand. FDI inflows in 2021 were estimated at US\$152.3 million and outflows at US \$24.4 million but primarily concentrated in real estate, construction, financial intermediation, and the hotel and restaurant industries.¹⁴ Additional facilities such as climate insurance would also be helpful in attracting the investment needed to sustain production in a rapidly changing climate. In addition, cross-border trade with neighboring countries like Guatemala and Mexico is made difficult due to limited local access to and convertibility between Belize dollars and their respective currencies. Development of a formalized and efficient clearing and settlement mechanism for regional payments could serve as a catalyst for trade.

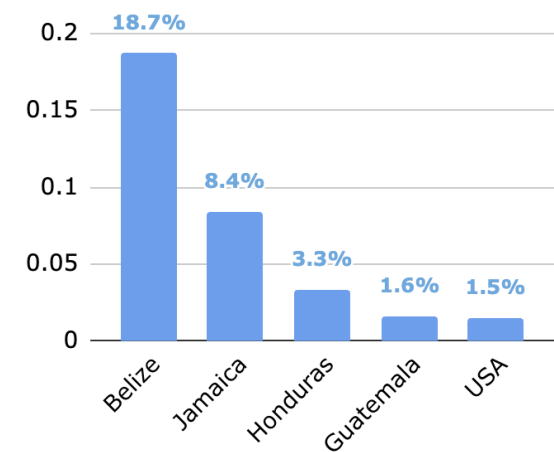
Payments for Ecosystem Services

Belize prides itself on its strong track record of environmental conservation and protection. Recently, the country was able to leverage this record to secure the payment of 12% of its bondholder debt through a Debt-for-Nature Swap arranged by The Nature Conservancy. In the context of conservation, the agricultural sector has often been maligned as a threat but it does not have to be this way. Balancing between conservation and production is possible through the establishment of a Payment for Ecosystem Services (PES) framework where incentives are offered to farmers in exchange for managing their land to provide various sorts of ecological services. For example, limiting the clearing of riparian areas to conserve surface water quality and ensure biodiversity connectivity. Adopting an approach where producers are partners in conservation rather than adversaries is likely to generate long-term positive impacts in sustainable development. A critical first step would be the publication of an updated Land Use Map that indicates development areas and soil types.

Revised Trade Tax Regime

A renewed focus on streamlining Belize’s trade tax regime is critical for export competitiveness. In the absence of the capital markets, innovation networks, and industrial capacities that support organic growth in other countries, Belizean producers rely almost exclusively on imported equipment and supplies to drive production. Unfortunately for producers, Belize has one of the highest mean tariff rates in the region at 18.7% (see below).

Tariffs (Weighted Mean, All Products, 2020)¹⁵



There must be consolidated action to revise

15 Source: World Bank World Development Indicators

the country’s trade tax regime to reduce costs for businesses while also preserving fiscal sustainability. This would require a greater shift and focus on supply-side economic policies rather than demand-side and interventionist policies. A review of existing trade policies should also take into account existing processes to acquire genetic resources from abroad which are often costly and time consuming for producers.

Strengthened Standardization

Strengthening domestic standards to meet global market requirements is a critical step to ensure competitiveness. Aligning local standards with existing frameworks, such as the UNECE Minimum Quality Specifications for Fresh Fruit and Vegetables (UNECE-MQS), protects local consumers and also increases access to external markets. However, implementation success would largely depend on the technical assistance and financing provided to help producers meet minimum standards.

CONCLUDING THOUGHTS



Regardless of the intervention, Climate Smart Agriculture must be integrated as a cross-cutting theme. Small countries are disproportionately affected by climate change impacts including drought, extreme weather, rising sea levels, and rising temperatures. A coordinated focus on sustainability can help create synergies between the public sector, civil society and the private sector. The context requires that development does not come at the expense of the country’s adaptation and mitigation capacities but instead enhances them.

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