

Agriculture Sector Profile

Natural access to fresh water has historically made agriculture a very important sector in Bahrain. Along with fishing, it was the primary source of livelihood for many communities. Historically, date cultivation was the pre-eminent activity. As food consumption habits changed and the salinity of the aquifers that served as irrigation sources increased, there was a gradual decline in date cultivation and many palm groves were replaced by new kinds of agricultural activities, such as vegetable gardens, nurseries for trees and flowers, poultry production and dairy farms. The main sectors of food production in the Kingdom are crop and animal production, forestry, fishing and aquaculture.

The agriculture sector contributed 0.3% to Bahrain's real GDP in 2021. It witnessed a 1.4% YoY growth in GVA in 2021 with a total GVA value of BHD 38.2 million. The sector represents 2.6% of the active CRs in Bahrain (a total of 1,596 CRs) and employs 1% of the private sector workforce (4,581 employees). The sector has the second lowest Bahrainization rate at 7%.

Despite the Kingdom's scarce water resources and shortage of land, the implementation of alternative crop production methods has presented an increasingly more sustainable future for the Kingdom. In 2021, a new blueprint to address Bahrain's food security challenges was approved. The government earmarked 20 locations for food security projects that focus on hydroponics and aquaculture as achieving food self-sufficiency remains high on the agenda.

As an island, Bahrain is home to varied marine life. With the aim to boost the Kingdom's aquaculture, Aluminum Bahrain (Alba) has developed a fish farm at its Calciner and Marine Plant. The success of the farm demonstrated that its Calciner and Marine operations are safe and favorable for aquaculture.

In 2022, the National Initiative for Agricultural Development (NIAD) launched the Solar Energy Trees project for the construction of structures resembling trees that generate solar energy using photovoltaic (PV) panels. The energy is also used for the irrigation network, and electricity consumption is reduced by around 20% and is creating a clean, sustainable environment in line with the Kingdom's Vision 2030. Also, in cooperation with Amazon Web Services (AWS) Bahrain, NIAD launched a new project to plant trees as part of the Forever Green campaign that aims to expand green areas in Bahraini cities, preserving the environment and supporting local and international efforts to reach zero-carbon neutrality by 2060.

NIAD's initiatives also facilitate partnerships between the public and private sectors in Bahrain towards the implementation of afforestation projects and encourage individuals, institutions and society to play their role in supporting national efforts to expand the green areas in the Kingdom.

Agriculture Sector Activities

MOIC - ISIC4

- Crop and animal production, hunting and related service activities
- Forestry and logging
- Fishing and aquaculture



Key Market Trends

- The government of Bahrain and NIAD are working on several projects to increase local production and to support of agricultural workers, increase green spaces, stimulate and support agricultural manufacturing industries, and increase expertise in agriculture through education and training. One of the projects includes the establishment of a plant specialized in the production and packing of Bahraini dates.
- The scarcity of water supplies and land salinity adversely affect the existing agricultural output; and the demand for fish products has continued to increase over the last two decades. Hence, alternative agricultural practices such as hydroponic farming and aquaculture have become increasingly popular in the Kingdom. Hydroponic farming is implemented in Bahrain as a viable way to increase food security and to increase profit from home-grown crops.
- Seafood has been traditionally a large part of the Bahraini diet . With the growing population, seafood consumption has increased, further stressing the importance of the aquaculture market. To meet local demand and decrease its dependency on imports, the GCC has witnessed an increase in government initiatives for sustainable fish farming. KSA, UAE and Oman have been making large-scale investments for the development of aquaculture to increase the quantity and types of fish production.

Sector Opportunities

- **Organic and specialized farming:** Changing demographic trends and technological advancements are delivering new innovations in the field of agriculture. Changes in lifestyles, dietary habits and food preferences increased the local demand for organic and specialized produce (i.e., dairy free, gluten free).
- **Alternative foods:** The growing demand of plant-based foods and alternative meat substitutes presents opportunities for research on lab grown foods and foods alternatives in Bahrain. Quinoa farmers are increasing in the UAE as more resilient strands of the crop are developed. Similarly Saudi Arabia sees lab grown meat as playing an increasing role in providing food security to the region.
- **Climate resilient crops:** Ensuring global food security requires intensive research efforts. Much uncertainty remains concerning the resilience of plants, soils, and associated microbes to climate change. Research is needed for the adoption and promotion of resilient crops for climate risk mitigation and import substitution.
- **AgriTech:** Bahrain is heavily investing in aquaculture and increasing collaborative efforts with private fish farmers to regulate, regularize and boost domestic production. Many types of aquaculture activities are feasible, and a wide range of aquatic species could be cultured. This presents investment opportunities for AgriTech internationals, along with home-grown ventures.
- **Food processing and packaging:** Connecting farmers with businesses to provide packaging and branding solutions specific to their needs. There are also lucrative opportunities in byproducts and waste from food production that can be turned into export ready products, especially agro-based processing that provide valuable compounds such as proteins, lipids, starch and dietary fibers. Food byproducts such as bran, seeds, shells and fruit peels can also be turned into marketable products. Food processing also includes locally grown produce such as tomatoes that can be turned into pickles or paste.
- **Aquaculture:** Bahrain has potential for fish farming considering the advantages offered by its climate, location, and market. Many types of aquaculture activities are feasible, and a wide range of aquatic species could be cultured. Currently in the GCC, Saudi Arabia is the only country that produces fish feeds.
- **Digitization and advanced analytics:** The sector must embrace a digital, connectivity-fueled transformation to overcome increasing demand and several disruptive forces. AI, analytics and connected sensors will increase yields, improve the efficiency of water and other inputs, and build sustainability and resilience across crop cultivation and animal husbandry.

Agriculture Sector Economic Indicators

iGA-National Accounts, Q4-2021



BHD
38.2 M
GVA, 2021

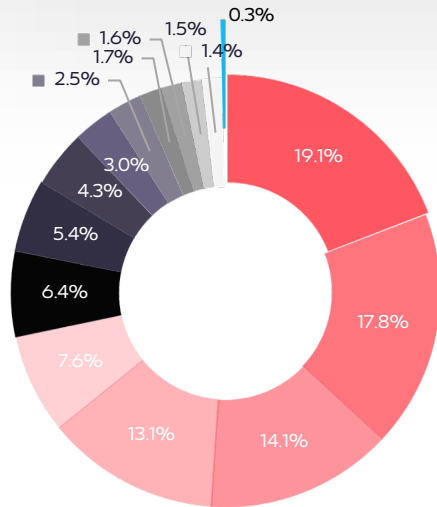


1.4%
YoY Growth
in GVA, 2021

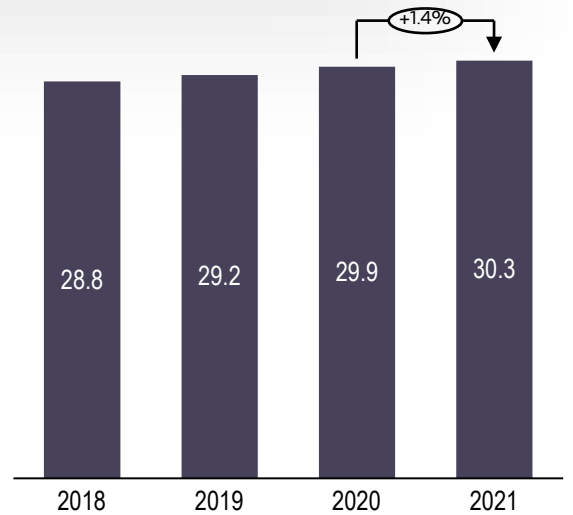


0.3%
Contribution to
Real GDP, 2021

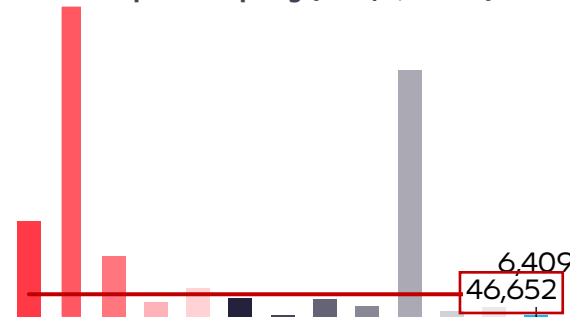
Sectors' Contribution to Real GDP (% , 2021)



Agriculture Sector
GVA* (BHD, M)



GVA per Company (BHD, Q1 2021)



- Mining & Quarrying
- Manufacturing
- Construction
- Real Estate
- Tax / Import Duties
- Other Social & Personal Services
- Accommodation and food services
- Others**
- Financial Services
- Government Services
- Transportation & Communication
- Sale/Trading
- Private Education
- Electricity & Water
- Private Healthcare
- Agriculture

*Gross Value added (GVA) is the measure of the value of goods and services produced in an area, industry or sector of an economy

**Other includes Government Services, Private Non-Profit Institutions, Households with Employed Persons

Agriculture Sector Enterprises

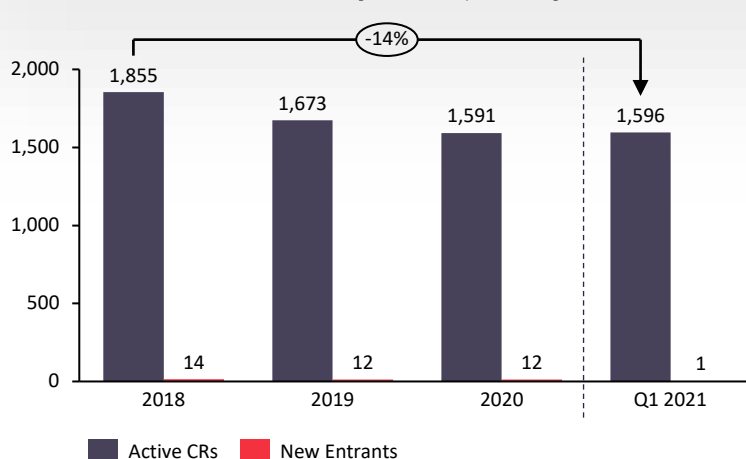
LMRA, Q1 2021 - BLMI



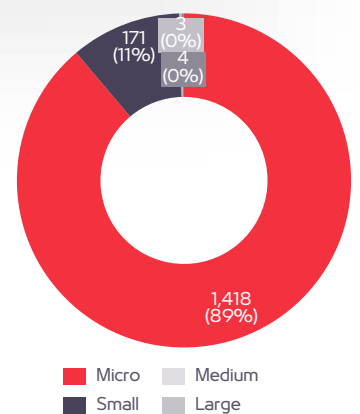
1,596
Active CRs

2.6%
of total Active
CRs in Bahrain

Agriculture Sector
Active CRs (2018 - Q1 2021)



Agriculture Sector
by Enterprise Size (% , Q1 2021)



Agriculture Private Sector Employment

LMRA, Q1 2021 - BLMI / iGA-National Accounts



4,581
Total Employees
1%
(% of Labor Market)

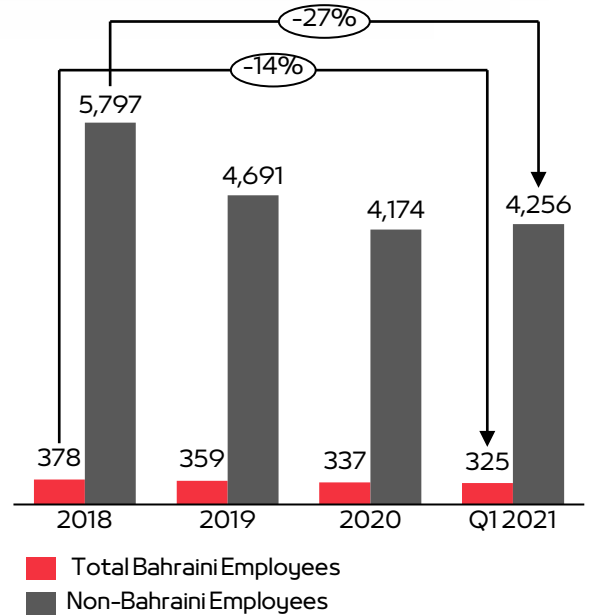


118
Total Female Employees
0.2%
(% Female in Labor Market)



4,463
Total Male Employees
1%
(% Male in Labor Market)

Agriculture Growth In Employees by Citizenship (2018 - Q1 2021)



7%
Bahrainization
Ranked 17/18 Sectors



325
Bahraini Employees
0.3%
(% of Total Bahraini Employees)



4,256
Non-Bahraini Employees
1%
(% of Total Non Bahraini Employees)



BHD 451
Average Wage of Bahrainis



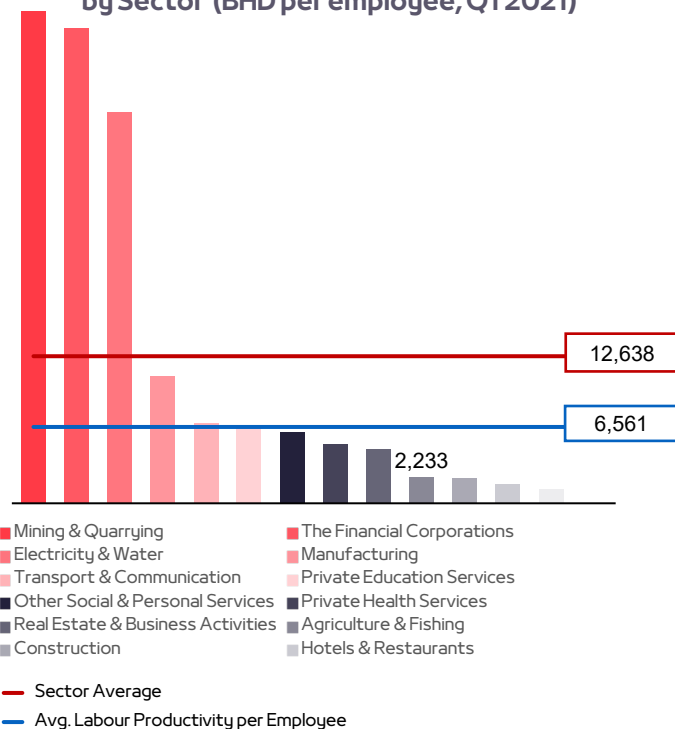
BHD 118
Average Wage of Non-Bahrainis



BHD 2,233
Labor Productivity
Ranked 10/13 sectors*

*13 sectors as per ISIC 3 / National Accounts, iGA

Agriculture Labor Productivity, by Sector (BHD per employee, Q1 2021)



2%
Bahraini Female Participation
(% of Labor Market)
Ranked 18/18 sectors



5%
Bahraini Male Participation
(% of Labor Market)
Ranked 17/18 sectors