

## Low Returns on Investment and Productivity of Agricultural Sector in Bahrain Put Off Investors

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Two Bahraini experts have identified a number of challenges that food security in Bahrain faces in the local agriculture sector, namely the desert environment of Bahrain, depletion of groundwater and the encroachment of urbanization on arable land. They consider that food security means the availability of stable food at an affordable price.

They said that Investors are shying away from investing in agriculture for a number of reasons. These include low return on the invested capital, long working capital cycle in some agricultural sectors, and the high risks of investments in agriculture.

Bahrain has been able to maintain food security through imports as Bahrain imports most of its food needs. Food security in Bahrain is, consequently, vulnerable to the risks of fluctuations in world prices of food commodities and disruptions to import supplies as a result of environmental crises such as drought, shipping disruptions or economic and political instability.

The two experts said that Bahrain can both achieve food security and preserve its scarce water resources by importing the food products that consume too much water rather than growing such products locally.

In this article, we will highlight the basic requirements and fundamentals for achieving food security in Bahrain and the main challenges to food security and how to address them.

## **Challenges**

Ghada Abdulla, economic analyst at the Bahrain Center for Strategic, International and Energy Studies, identified several challenges that may hinder the achievement of food security through local agriculture. These include the desert environment of Bahrain, scarcity of groundwater and the use of agricultural land for urban development. However, she explains that the concept of food security is wider than this. Food security is the ability to make food always available to the consumer and at affordable prices.

In this context, Bahrain has been able to provide food security through imports as Bahrain imports most of its food. There are some risks that threaten this type of food security such as fluctuations in world prices of food commodities, shortages in supplies due to environmental conditions such as drought, disruptions to shipping or economic and political instability in the exporting countries.

She added: I do not think that food security means that we should increase agriculture production locally, because it is relatively expensive and may also threaten our water security. Bahrain, on the other hand, can achieve both water and food security by importing food products that consume a lot of water rather than cultivating it locally. In this way, Bahrain also imports the "virtual water" that was used to grow these products. Therefore, one of the options for achieving food security is for Bahrain to enter into partnerships with international food production companies or to have a shareholding in such companies, thereby ensuring that Bahrain would have a more secured source of food.

Ghada pointed out that certain countries may focus on supporting the agricultural sector for a good reason; to protect the farmers, but in Bahrain more than 90% of the people working in the agricultural sector are non-Bahrainis. Furthermore, the productivity of this sector is very low and agricultural productivity in Bahrain has decreased over the years. In this regard, we can notice that the number of workers in the agriculture sector has increased at a higher rate than the rate of the growth in agricultural production between 2008 and 2013. The scarcity of fresh water and dry climate have made agriculture very costly throughout the GCC, and more so in Bahrain as it has the additional challenge of being small in area. Therefore, encouraging local agriculture to achieve food security today will be at the expense of water security tomorrow.

Ghada said that almost all the main agricultural products grown in Bahrain need large quantities of water. For example, dairy products, the main food products exported by Bahrain, consume between 3,000 and 5,000 liters of water per kilogram. Bahrain also produces poultry, meat and eggs, mostly for domestic consumption. Producing one kilogram of beef requires more than 15,000 liters of water, while lamb requires more than 10,000 liters, and the production of one egg requires 196 liters of water.

She added that the main sources of water in Bahrain are groundwater, treated wastewater and desalinated seawater. More specifically, the country depends mainly on desalinated seawater. Bahrain currently produces about 180 million gallons of desalinated water a day, while groundwater accounted for 8.7% of the total supply in 2017. There are not recent official statistics about the quantities of water used in agriculture in Bahrain but the Electricity and Water Authority (EWA) groups water consumption into three categories: domestic, commercial and industrial. The vast majority of 75% of water goes to domestic consumption, whilst 21% goes to commercial consumption and 4% to industrial consumption.

Ghada pointed out that there are many options for Bahrain to achieve food security. It can import food from a number of different countries in order to diversify the sources of its food imports and avoid being overly dependent on a few countries. The second option is that the government of Bahrain can encourage local private companies to buy or rent agricultural land in other countries and use it for producing crops for exporting to Bahrain, or thirdly, the government of Bahrain may invest directly in agricultural lands in countries that have abundant sources of water.

### **The Main Reasons for Refraining from Investing in Agriculture**

For his part, the chairman of Bahrain Agricultural Engineers Society Mr. Mohammed Tawfeeq Al Shaikh said that Bahrain has over the past few decades witnessed rapid economic changes. The rapid demographic growth, in addition to changes in consumption patterns, the rise in per capita income and government subsidies for basic commodities had led to an increased demand for food, despite the lack of domestic production, and hence the growing dependence on food imports from abroad.

He added that the agricultural policy in Bahrain focused on the development of the agriculture sector through direct and indirect support to production. Agricultural development plans have focused on encouraging the private sector to play a greater role in agricultural investment. The economic reforms related to the agricultural sector during this period included the lifting or decreasing of subsidies on many raw materials and production process inputs, liberalizing the prices of agricultural products and their production prerequisites, enhancing the reliance on market mechanisms, reducing the role of the state in production and post-production services and privatization of government agricultural projects. In the late 1990s, the agricultural sector started to decline as a result of the implementation of economic reform policies, in addition to the deterioration of water resources and land, poor agricultural support services, etc. All these factors resulted in the shrinking of planted lands and deterioration in agricultural production and productivity.

Modern agricultural plans in Bahrain emphasize the importance of encouraging vertical agricultural expansion by focusing on crop cultivation, taking into account the limited land and water resources, thus increasing the share of agricultural production in meeting local needs, and maintaining and developing existing agricultural resources. These plans aim to achieve the following: (1) conservation of land resources and rehabilitation of such lands for agricultural purposes, (2) conservation of water resources through the use of modern irrigation and drainage methods, increasing the use of treated wastewater in irrigation and the implementation

of legislation related to the use and management of water, and (3) increasing agricultural production through intensification of crop cultivation to increase the share of certain food commodities in meeting the local needs, and (4) encouraging the private sector to increase its investments in the agricultural sector through creating a conducive environment for agricultural businesses.

## **Strategic Options**

Mr. Al Shaikh mentioned a number of strategic options for achieving agricultural development. These are: first, conservation of natural resources; second, the purchase of agricultural lands by the state in case an owner wished to sell; third, to prioritize agricultural development; and fourth, to promote investment in agriculture and enhance the participation of the private sector.

As for the conservation of natural resources, particularly in view of the limited natural resources of Bahrain, the real challenge for agricultural development is to ensure that these resources are improved and sustained. More effective planning and management of natural resources is needed. In respect of water, the state should continue to provide irrigation water to meet the needs farmers. The water supply may be augmented by (a) increasing the use of treated wastewater and (b) encouraging farmers to use agricultural methods that conserve water resources such as (1) developing and modernizing Irrigation and drainage systems and (2) adopting modern farming methods like green houses and soil-less farming. As for the conservation of land, Bahrain must address the impact of increasing encroachment by real estate developments on agricultural land in the Kingdom since the beginning of this century, which led to an increase in demand for land and a colossal increase in land prices. Agricultural land has greatly been affected by this increase in prices as agricultural land was used for urban expansion. As rent income far exceeds the agricultural yield of the land, land owners were enticed to use them to construct buildings rather than for farming. In order to overcome this problem, Mr. Al Shaikh suggests one or more of the following solutions but further studies should be conducted to determine the pros and cons of each option:

1. The purchase by the state of agricultural land in case an owner desires to sell, or encouraging the owners of agricultural land to use only part of the land area for the purpose of building houses or for tourism-related activities such as restaurants, parks and animal husbandry or other tourist attractions. This can be achieved by putting in place conditions and regulations for ensuring the preservation of the green areas. This option will protect agriculture, promote tourism and preserve the environment.
2. Owners of agricultural land wishing to use it for non-agricultural purposes may be encouraged to exchange it with a piece of non-agricultural land of the same market value. The farming technologies should also be modernized. Despite concerted efforts by the Directorate of Agriculture to develop the agricultural sector, traditional methods and systems are still practiced in this sector as reflected in the ways of using irrigation water, agricultural practices and post-harvest dealings, etc.

He added that continuing with the same old methods and practices in agriculture makes it difficult to make the agricultural sector more efficient and capable of competing with imports.

To overcome this situation, it is necessary to use modern technologies in agriculture in order to help increase productivity, reduce production costs and improve the quality of the produce, and thereby enhance the competitiveness of local agricultural products against the imported products.

Al Shaikh said that increasing agricultural production is necessary but not sufficient in itself. To enable local products to compete with imported goods, it is important not only to increase production but also to do it at low cost, ensuring high quality and be supported by efficient marketing. Improving its competitiveness is a major challenge that the agricultural sector in the Kingdom faces. This requires carrying out a comprehensive assessment of the various agricultural activities and the specific elements of and factors affecting such activities. The purpose is to identify and select production patterns and high-yield crops in terms of yield per unit of water and land unit. Such type of produce will have better economic returns and more enhanced competitiveness.

He called for encouraging investment in agriculture and enhancing the participation of the private sector, stressing that the progress and growth in agriculture largely depends on how much we invest in it. However, the agricultural sector is not attractive for investment because of many inherent reasons such low return on invested capital, long working capital cycle in some agricultural activities and exposure to high risks.

Agriculture in the Kingdom is not only in need of more investment, but it, more than that, needs injection of substantial capital to move it from its present position to a position where it can compete with imported products. Private capital still avoids investing in agriculture. To reverse this situation, we need to improve the investment climate in the different agricultural sectors and make it more attractive for investment. This in turn requires the creation of a conducive investment environment. This is a real challenge for agriculture in the Kingdom. Without creating this conducive agricultural investment environment, developing the agricultural sector in Bahrain will be a daunting task for decision makers and for all those responsible for formulating and implementing agricultural policies.

Al Shaikh said that there are many aspects related to macro-agricultural policies, including sectoral agricultural policies aimed at improving the infrastructure, management of farms, research, guidance and advisory services, capacity building and training of farm workers, in addition to developing legal frameworks for agriculture, as well as providing loans and financing services, putting in place pricing and financial policies aimed at protecting producers and drawing up a marketing plan to help market the product, and other policies.