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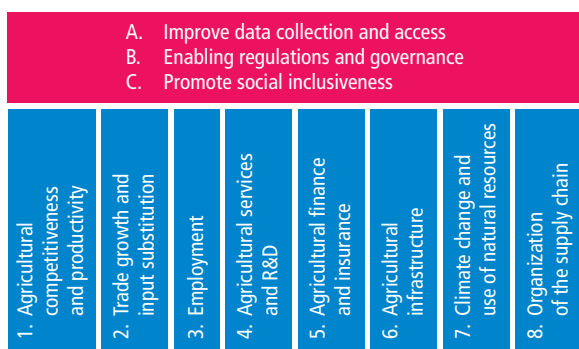
POLICY ANALYSIS

Lebanon's agricultural sector: challenges and opportunities

Agriculture in the Lebanese economy

The agricultural sector in Lebanon has a strong potential that could contribute to the country's recovery from the financial crisis that unfolded in October 2019 and the COVID-19 pandemic. Lebanon has a relatively diversified agricultural land, and a comparative advantage in trading vegetables, fruits, wine, olive oil and tubers. Nevertheless, the development of the sector is constrained by challenges in eight main areas (highlighted in Figure 1). There are three objectives that cut across the eight areas and are critical to addressing all challenges.

FIGURE 1. Eight areas where agricultural development is facing challenges and three cross-cutting objectives



Source: Dal, E., Díaz-González, A.M., Morales-Opazo, C. & Vigani, M. 2021. *Agricultural Sector Review in Lebanon*. FAO Agricultural Development Economics Technical Study No. 12. Rome, FAO.

A dualistic traditional farming system

The current challenge is to transform the small, semi-subsistence farms into more productive and commercially oriented ones. In addition, the Lebanese land market is inefficient, with large registration and transaction costs, short-term rents and exuberant rental values. Unclear roles and responsibilities for managing common lands lead to over-exploitation for grazing, quarrying and agriculture. However, the increase in land prices and land abandonment are mostly due to fragmentation caused

KEY MESSAGES

- ▶ Agricultural production has been increasing for the last three decades in the country. Moreover, Lebanon has a comparative advantage in trading fruits, vegetables and food products.
- ▶ Important and main challenges of the agricultural sector in Lebanon include post-harvest practices, infrastructures and organization, soil degradation and pollution due to overuse of agrochemicals, high costs of production, low plant productivity and unskilled labour.
- ▶ Main opportunities for the development of the sector include adoption of organic agriculture, digital innovation, better traceability of products, integrated pest management, improve transparency along the supply chains and planned irrigation schemes.

by inheritance laws. Land reforms and improvements in farming contracts are essential. Most farmers have inherited the land and the activity from predecessors, but they did not have any agriculture education or training to update their production and managerial skills. The labour force is therefore mainly comprised of low-skilled workers, who are often from abroad, including Syrian refugees. This hinders farmers' capacity to adopt new technologies and good farming practices. In this regard, the existing public and independent agricultural extension services need to be strengthened.

Organization of the supply chain

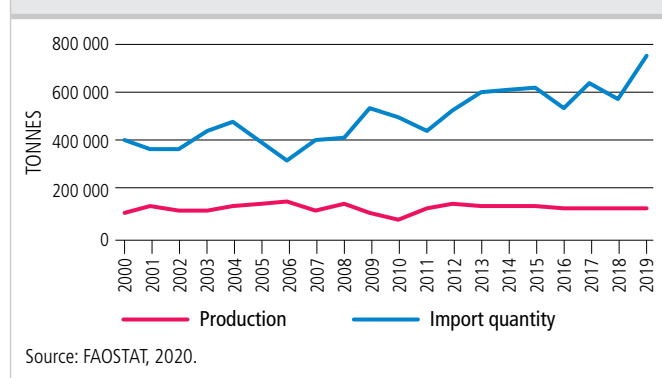
The agricultural supply chain in Lebanon faces major constraints, such as low bargaining power of farmers in market operations and weak cooperatives. It is affected by an imbalanced market power and risks of unfair trade practices. Increasing the transparency of wholesale markets and distributors would be beneficial. In this respect, strengthening the cooperatives system and design digital and regulatory solutions can be helpful. The reform and update of

the regulatory framework, simplifying the registration and monitoring formalities for farms and cooperatives are needed. Potential measures to strengthen the role of cooperatives include facilitating linkages between industrialists and cooperatives, improving the integration in the value chain by opening up new sales channels, and training programmes prior to the launching of new cooperatives.

Over reliance on imports and potential for higher food exports

The country is dependent on imports of the very foods that it consumes the most, such as wheat and other cereals (Figure 2), pulses and, to a lower extent, tree-nuts products. Food imports account for about 50 percent of the calories domestically consumed and the dependence on the global markets is increasing. Nevertheless, Lebanon has the potential to increase the production of both staple foods and high value crops, substituting imports with domestic products for national food security, and increasing exports of high-value and high-quality products. Currently low value crops dominate the agricultural land use. More than 50 percent of cultivated land is dedicated to olives, wheat, potatoes, and barley, which account for less than 25 percent of total produced value. Meanwhile, only 1.7 percent of cultivated land is used to grow tomatoes, which account for 9 percent of total produced value. Lebanon is also dependent on imports of agricultural inputs and technology, limiting self-sufficiency in guaranteeing high yields. Support agricultural research and development is therefore a key element for a competitive and more diversified sector.

FIGURE 2. Wheat production and imports (2000–2020)



Quality of food products and standards

The export potential is constrained by lack of products quality, good agricultural practices, safety standards, traceability and certification systems. The absence of standards and certifications preclude the access to international markets and the integration into global value chains. Optional land registration of agricultural property with cadastre offices makes it more difficult to enforce quality and

safety regulations. The country would benefit from developing quality regulations, products quality testing and certification systems.

For example, the lack of a testing system and facilities is a barrier to the development of high-quality, certified agricultural products for international export. Therefore, it is also recommended that Lebanon develops a strategy, a legislation, and facilities to test residues of pesticides and other substances. The objective is to provide farmers with an easy-to-access testing service that would benefit both domestic and international consumers.

A credit system relying on suppliers and wholesalers

In Lebanon, agricultural inputs (e.g. pesticides and fertilizers) are almost entirely imported and therefore expensive. Because of the lack of agricultural credit institutes and financial products to farmers at affordable prices, importers and suppliers of inputs play also the role of credit lenders. However, the current lack of liquidity due to the financial and economic crisis is reducing the demand for agricultural inputs and the capacity of suppliers to concede credit, with the risk of affecting agricultural production in the medium-term. It is necessary to regulate credit and loans, pushing for formal agreements and prohibiting certain unsustainable practices. The imports of inputs, machineries and technologies at affordable prices could be facilitated. Moreover, developing short term input subsidies or credit vouchers and support to sustainable intensification practices to reduce the costs could also help.

Improvements of water scarcity and quality through infrastructures and management

Lebanese agriculture is highly reliant on water. A relatively high share of agricultural land (about 50 percent) is irrigated. Water scarcity, accelerated by climate change and an increasing demographic pressure, is a significant challenge. Rainfed crops such as cereals are particularly vulnerable given the unpredictability of rain patterns, as well as crops that rely on water for irrigation (summer vegetables, fruit crops). Water pollution, water use inefficiency and inefficient irrigation systems are major bottlenecks for agricultural development. Most distribution channels need maintenance and are not pressurized, leading to large losses through evaporation and leakages. Problematic and obsolete laws constraint efficient water management. Developing new crop varieties adapted to the climatic conditions is necessary, as well as putting in place water management and irrigation plans, schemes and schedules to improve water use efficiency. Water infrastructures like water reservoirs and technical improvements like drip and variable rate irrigation are also necessary. When available, waste waters management should be monitored to ensure water and agricultural products quality.