

Lebanon Honey Value Chain Analysis Report

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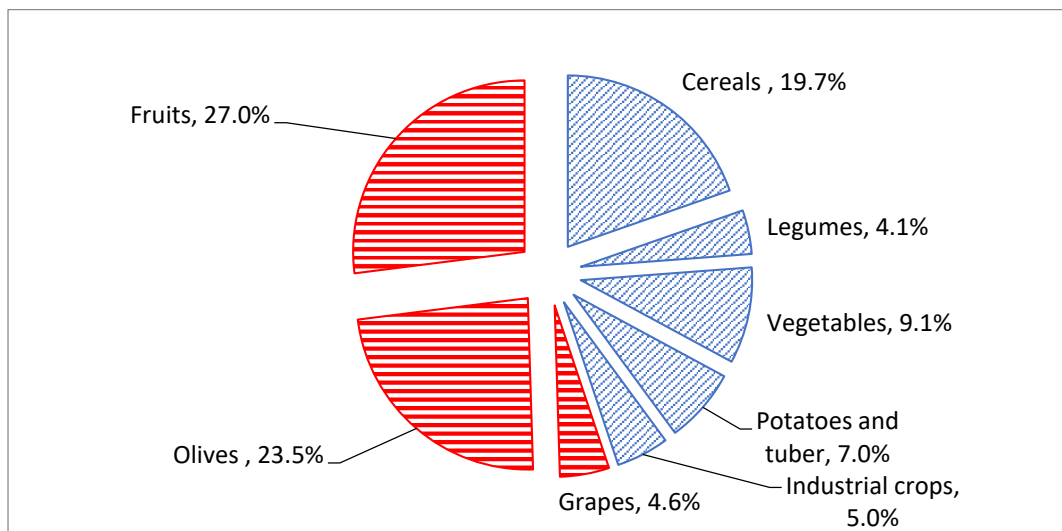
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1. Background and Objectives

Today, agriculture and agroindustry are important and competitive sectors in the Lebanese national economy. Together, they employ 11.5% of the labor force (6.5% and 5.0% for agriculture and agroindustry respectively¹) and represented 11.6% of Lebanese exports (3% and 8.5% for agriculture and agroindustry respectively²) in 2014. Overall, the Lebanese agricultural sector represents around 4.7% of the country's gross domestic product (GDP). This figure increases to 7.0% if agroindustry is added, rendering the Lebanese food production a sector as important as manufacturing in terms of wealth generation.

According to the Ministry of Agricultural (MoA) and the Food and Agriculture Organization of the United Nations (FAO) 2010 census, agricultural land in Lebanon covers approximately 0.24 million hectares (2.4 million dunum), 23.5% of which are covered by olive trees (see Figure 1 below). The number of agricultural holdings is estimated at 170,000, with an average of 1.4ha per holding. More than half of the registered agricultural holdings reported having at least 0.1ha of land planted with olive trees. Further, there are approximately 6,200 registered beekeepers in Lebanon, a number that is subject to high variability due to the low entry and exit cost out of the honey sub-sector. In Lebanon, there are two main types of honey. The first is forest and shrub land based honey including oak honey, cedars honey, and wild flowers honey, while the second is orange blossom honey. Orange blossom honey makes up around 30% of honey production in Lebanon [\[4\]](#).

Figure 1: Lebanon agricultural land use



Source: FAO and MOA agricultural census 2010

In terms of output value, the total production of honey was estimated at 1,620 tons in 2013 with a value estimated at US\$ 32 million³, i.e. approximately 1.5% of total agricultural output. In 2017, the FAO noted that the production of honey has been volatile. However, despite the decrease in production, there has been an increasing pattern in the last five years.

¹Source: MOSA, UNDP and CAS Living households survey 2004. The figure refers to primary employment. It is estimated that agriculture alone offers either a primary or a secondary income for around 17% of Lebanese households (author estimate).

² Source: Office of the president of the council of ministers: Lebanese National Accounts 2013.

³ Hamade, K. (2016). Non-Wood Forest Products Value chains in Lebanon. FAO, Cairo Regional office.

Several field experts and practitioners have identified the honey sub-sector as a sector with high opportunities and potential for value chain upgrade and improvement. However, honey production face challenges common to the whole agricultural sector in Lebanon. As laid out in the MoA's strategy (2015-2019)⁴, these challenges revolve around the need to increase the competitiveness of agricultural production by increasing its productivity while ensuring conformity with international sanitary and phytosanitary requirements, and facilitating access to international markets. Furthermore, agriculture in Lebanon faces significant structural problem, starting from land fragmentation, to high cost of production for small and medium scale farmers, and lack of adequate and accessible post-harvest facilities and services. Moreover, the agricultural cooperative movement remains weak, with its inability to attract farmers⁵, organize, or manage its members. This situation has hampered the ability of the agricultural sector to overcome structural challenges and regional competition.

In recent years, there has been an emphasis on using the value-chain framework in agricultural organization to increase efficiency and expand the sector⁶. The value chain framework is characterized as "a range of activities that are required to bring a product from its conception, through its designing, sourcing of raw materials and intermediate inputs, marketing and distribution, to the final consumer." As such, the value chain creates linkages between the different phases in agriculture, enabling relevant stakeholders understand how best to deliver products efficiently and innovatively, how to reduce costs of production and increase financial gains, and how to ensure successful marketing, food safety, and widespread distribution.

Within that background and within the framework of ACTED's "Support to Olive and Bee Keeping Cooperatives in Lebanon" project (see textbox 1), this report seeks to provide a detailed analysis on the honey value chain in Lebanon, with a specific focus on Akkar, Tyr, Hasbaya and Marjeyoun. The report presents a comprehensive analysis of this sub-sector by identifying the critical gaps, constraints, and potential opportunities in accessing local, national and international markets. In that regard, there will be an emphasis on local agricultural cooperatives and their capacity to integrate into competitive value chains. As such, this study will help with the planning of tailored interventions aimed at ensuring the sustainable development of agricultural cooperatives in rural areas, by improving quality and productivity, improving the ability to access local and international markets, and enhancing their internal governance. The findings ultimately feed into improving beekeeping sector in Lebanon.

⁴ Ministry of Agriculture Strategy 2015-2019. Ministry of Agriculture, Beirut.

⁵ Although there is a high number of agricultural cooperatives in Lebanon, only 4.5% of registered farmers are members of a cooperative. Source: MOA and FAO 2010 agricultural census.

⁶ <http://ageconsearch.umn.edu/bitstream/109516/2/18-Anjani-Kumar.pdf>

Textbox 1: ACTED “Support to Olive and Bee Keeping Cooperatives in Lebanon” project

ACTED started in January 2017 a 30-months project financed 75% by EuropeAid with an amount of 800,000 EUR, targeting 53 olive oil and beekeeping cooperatives in 4 areas of Lebanon: Akkar in the North, and Hasbaya, Tyr and Marjeyoun in South. The overall objective of the project is to empower cooperatives to make effective progress towards development of the agriculture sector in vulnerable regions of Lebanon, by enhancing the capacity of the cooperatives as key stakeholders in promoting inclusive and sustainable growth in the honey and olive production sectors through networking and multi-stakeholder engagement.

More specifically, the project aims at: i) Improving productivity and sustainability of honey and olive production in target districts; ii) Improving capacity of cooperatives to advocate, lobby and engage meaningfully with public and private sector actors through creation of mutually beneficial partnerships; and iii) Improving services available from cooperatives for beneficiaries, to increase their access to markets and create value-added goods (including provision of financial support through grants).

ACTED aimed at reaching these objectives through a three-steps implementation plan:

Inception step: This step consists of a capacity assessment to select target cooperatives. The benefiting cooperatives are pre-selected based on a set of criteria that define their willingness to commit to the overall length of the project (30 months) and their need of support for market access. The inception phase also includes a sectoral value chain and needs analysis in the target area and a review of available services for target sectors from chambers of commerce and Ministry of Agriculture, in order to identify intervention priorities.

Capacity building step: Through this step, cooperatives will be provided legal, managerial and institutional counseling and training, technical assistance for improving quality as well as development and implementation of branding and marketing strategies and action plans.

Networking and advocacy step: At this level, the project aims at creating communities of practice (COPs) through linking target cooperatives to share best practices. This step will also include a participatory identification of services needed by the cooperatives from relevant public-sector stakeholders for the development and implementation of shared advocacy plans. Cooperatives will also be allowed and facilitated their participation in existing fairs and events with regional chambers of commerce for engagement with private sector actors

2. Methodology

This research was implemented by the Consultation and Research Institute (CRI). The study team used a qualitative methodology, beginning with a desk review, following by a data collection composed of field interviews with key informants, heads of cooperatives, and farmers; and concluding with an analysis of the value chain.

2.1. Research design and data collection

Desk review

The research team collected and reviewed the most relevant projects and studies pertaining to cooperatives in Lebanon, and honey production in the country (including studies conducted by Lebanon Industry Value Chain Development Project – LIVCD funded by USAID) (see textbox 2). This has allowed the research team to gain background knowledge to support the topic, and identify the gaps, constraints and strengths in the targeted value chain.

Textbox 2: Important interventions in the honey value chain in Lebanon

Various donor and NGO/IO projects have supported the development of the agricultural sector in Lebanon. Regarding the honey value chain, there is one critical intervention worth noting:

The Lebanon Industry Value Chain Development (LIVCD) project, a five-year, \$41.7 million USAID program aims at improving Lebanon’s economic stability and providing income-generating opportunities for small businesses, while creating jobs for the rural population (in particular for women and youth). LIVCD’s interventions tackle among others honey value chain, with the objective of improving the competitiveness and value of products and services in both local and export markets by increasing the quality, quantity, and consistency of Lebanese products and companies. Targeted improvements and expansion of honey testing are aimed to boost consumer confidence and increase access to powerful international markets. Moreover, strengthening vertical linkages between producers and commercial brands is tackled, in addition to improving technical and managerial practices that channel profits into rural communities and boost incomes of all stakeholders in the honey value chain.

Selection of Stakeholders

Considering that the ACTED project focuses on cooperatives in Akkar, Marjeyoun, Tyre and Hasbaya, the field study targets honey sector in these four regions. The interviewed population were stakeholders from the different stages of the value chain. The following profiles were identified at each stage of the value chain:

Table 1: Key value chain actors by type

Value Chain Segments	Suppliers	Producers	Processors	Wholesalers/ Distributors	Retailers
Key Actors: Honey	- Equipment suppliers - Hive owners	- Farmers - Factory owners	- Farmers - Factory owners	- Traders - National distributors	- Supermarket owners - Store owners

- Owners of protective materials firms	- Cooperatives	- Exporters - Chamber of Commerce	- Importers
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Design of technical tools

After identifying the key stakeholders, the study team has developed two discussion guides, one at the level of the institutions and one at the level of value chain actors (Annex A for tools). Moreover, the tools are designed in a way to collect information on services provided to cooperatives, opportunities and challenges to the development of these value chain, and to generate data that will serve in:

- Constructing a value chain map;
- Analyzing market sub-systems;
- Assessing market access;
- Assessing quality management systems;
- Understanding cooperatives integration (or lack thereof) in agricultural and agro food value chains
- Evaluating external factors and to determine challenges and opportunities for honey sector;
- Concluding on recommendations and action plan.

Data collection

The data collection phase was implemented between March 6, and March 23, 2018 by CRI research team. A total of 26 key informant interviews were collected (see Annex B, for a full list of interviewed stakeholders).

It included a training of researchers on the research tools, as well as an introduction to the general guidelines of conducting a study in terms of partiality, neutrality, and politeness and question formulation. Subsequently, the definition of key concepts used in the questionnaire was explained, followed by a question by question discussion of each of the questionnaires (see Annex B for questionnaires).

2.2. Analysis of findings

After completion of the field work, CRI analyzed the data using developed frameworks to reach the following:

- Value chain map: An analysis of the different stages of the value chain was conducted for the honey sector. This allowed an identification of the challenges and bottleneck processes at each value chain level.
- An in-depth analysis of the value chain market sub-systems: An analysis of 3 types of markets were conducted for each sector including local, low-income markets; local middle/high income markets; and the export market. The first two were studied at both sub-national as well as national levels (where feasible), while the third included the most profitable export markets. The market sub-system analysis included:
 - An analysis of market access: The research team identified local constraints to market access, including technological capabilities of producers, available infrastructures, as well as bargaining power and market knowledge.

- Quality management systems: This included an assessment of supply chain management with a focus on primary processes (transformation and creation of value added products), quality improvement and optimization of distribution processes. CRI benchmarked existing technology in Lebanon and identified critical gaps in technology in the country that currently constrain quality management systems.
- Business enabling environment: This consists of a legal review within the industry analysis for each sector and the impact of existing laws and regulations on the cooperatives/markets and industry attractiveness.
- A “challenges and opportunities analysis” summarizes finding and assesses the competitiveness of each of the stages of the value chain. Further, a political and economic analysis of the business enabling environment was carried out.

Based on the above-mentioned analysis components, the research team developed recommendations to upgrade existing value chain, with a focus on improving the role and capacity of local cooperatives.

3. The Honey Value Chain

3.1. Value chain map

3.1.1. Input and production base

Honey production in Lebanon is predominantly mountain poly-floral honey, and orange blossom honey. Small and large-scale beekeepers produce mountain honey at high altitudes, while orange blossom honey is produced in citrus groves, usually at lower altitudes along the coast in the winter and spring when orange trees blossom. Because of Lebanon's diverse terrain, honey production occurs in every region of the country. The major production constraints to beekeeping include the lack of understanding of modern beekeeping techniques and principals on one hand, and the diseases affecting honey bees the other hand.

Challenges

Beekeeping as a secondary income. Beekeeping provides primary, secondary or in-kind income to approximately 6,200 rural households in Lebanon. Previous reports on the honey value chain tend to divide beekeepers in five different categories according to size and marketing strategies (see textbox 6 for a description of beekeepers' categories based on Hamade (2016b)⁷ and (USAID, 2013). As a matter of fact, there is an increasing interest for farmers as well as non-farmers to adopt beekeeping as both a hobby and/or a secondary income generating activity. As a matter of fact, starting a beekeeping activity requires a limited investment in material and inputs. Correspondingly, return on investment comes within one season and farmers do not need to own or lease grazing land⁸. Till now, beekeeping activities are limited to Lebanese households.

The main input and production related challenges faced by beekeepers are discuss hereunder.

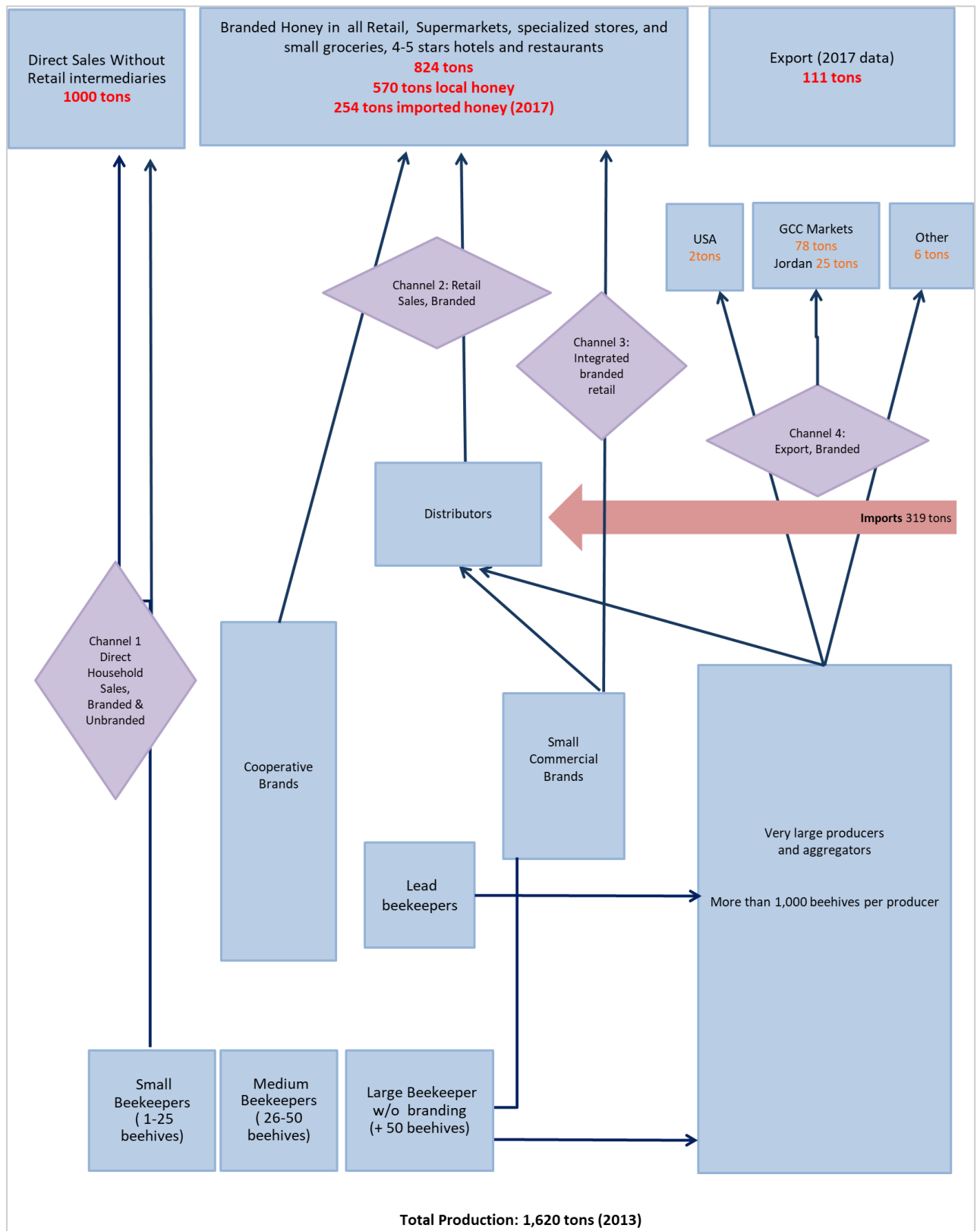
Grazing land. The relatively limited availability of grazing is a major limiting factor for honey production. Lebanon honey production capacity remains underexploited. However, the degradation of grazing is a major threat to both the environment and to planning policies aimed at expanding honey production. For example, interviewed producers complained that areas around Saida and Tyr that used to be bee-friendly 10 years ago are not anymore, and that improper use of herbicides are significant damaging bee pastures.

Quality of imported input. Access to input is not a major issue for most beekeepers. However, key informant interviewees have pointed to the low quality of hives coming from Syria as well as pesticides or antibiotics residues in beeswax foundation imported from China. There are several wax recycling units in Lebanon, and proper methods need to be applied to ensure recycling is done in manner that ensure no residues are left.

⁷ Hamade, K. (2016b). Non-Wood Forest products Value chains in Lebanon. FAO: Cairo

⁸ Beekeepers still need to find agreement on the bee-hives locations. Especially, if beehive location changes according to seasons. This is usually done through gentlemen agreement or in exchange of improve orchards pollination in the case of Citrus blossom honey.

Figure 2: Honey value chain map



Source: adapted and updated from USAID (2013)

Textbox 3: Beekeepers categories (adapted from HAMADE (2016b) and USAID (2013))

Small-scale beekeepers with 25 hives or less – They represent the vast majority of Lebanese beekeepers. These producers are mostly hobby beekeepers, and hive production per hives is usually lower than market-oriented production units. Honey is used for home consumption and sold to friends and networks of acquaintances. These producers may be linked to cooperatives for production aggregation.

Medium-scale beekeepers having between 26 and 49 hives – This category of beekeeper operate as small family businesses. A beekeeper with 40 hives can produce up to 1,200 Kg of honey per year and make a significant profit if honey is sold with at a price premium through a direct sale channel – which is difficult for such volumes. These producers may be linked to cooperatives for production aggregation.

Unbranded large-scale beekeepers with 50 hives or more – These producers exhibit many similarities to medium beekeepers. Virtually all large beekeepers will practice hive migration to yield at least two harvests per year. At this level of production, beekeepers need to develop specific sales strategy to be able to market their volume of production. These strategies are often built on business linkages and long-term cooperation with medium and large-scale companies – either directly or through the intermediary of a local lead beekeepers - whose role is to aggregate local production to reduce transaction and transport costs.

Branded companies (or cooperatives) with more than 200 hives – There a limited number of beekeepers in Lebanon with over 200 hives all of which have their own brands. This category of large beekeepers has invested in maintaining their own specialized retail outlets in Beirut and other urban centers to be able to access consumers in those areas. In addition, they rely on fairs and exhibitions stalls. Competitive and well managed cooperative tends to act as similarly to branded companies.

Large branded companies with more than 1,000 hives – There are two main players in this category. These actors developed brand names and control a significant share of the domestic market and most of the export market. However, they have different supply strategies, the first consists of increasing market share through outsourcing the majority of its production to other small beekeepers (directly or using local lead beekeepers), while the second sources most of its honey internally, making it the largest beekeeping operation in Lebanon.

Bee diseases. As it is the case worldwide, diseases affecting bee colonies is a major production challenge; these diseases are:

- The American foulbrood disease, which affect the bee-Larvae;
- The Varroa mite parasite (a major problem in Lebanon);
- The Colony Collapse Disorder (CCD), an unexplained phenomenon in which bees do not return to the hive, i.e. die outside the hive most probably from increased pesticide residues in both plants and water.

Bee rearing. There is no certified center for rearing of certified queen bees in Lebanon. Depending on the bee variety, queen bees are either imported or reared by local bee-keepers. A certified queen bee rearing center require a significant investment in both equipment and

learning. However, such center could support stakeholder's effort to improve productivity and expand Lebanese honey production.

Beekeepers knowledge and skills. Basic honey production has a relatively flat learning curve. However, if production expands and beekeepers need acquired advance technical and management skills, there should be available full and part-time technical assistance that improve the overall level of skills and knowledge of beekeepers.

Prospects

Political support. There is an increased awareness among policy makers of the importance of honey production as an instrument for rural development. Several interviewed stakeholders have pointed out to the positive externalities of honey production, such as its capacity to contribute to poverty alleviation and to valorize local forest and natural resources, as well as the sector's potential to attract women and youth in rural areas. Unfortunately, the latter potential has not been tackled and encouraged yet.

Honey cooperatives. Over the last several years, the Ministry of Agriculture (MoA) has encouraged the formation of beekeeping cooperatives. Cooperatives have been formed mainly to help organize input supply and provide local level farmer-based extension services. Despite this high number of registered cooperatives, only a limited number is now actively working with beekeepers. Many of the nonfunctional cooperatives were formed by donors as vehicles for distributing aid and technical assistance which stopped functioning once project funds were spent. Other cooperatives were formed by member beekeepers only to receive technical as well as in-kind and in some cases financial aid from the MoA. The active cooperatives have membership numbers that vary between 100 and 300⁹.

Most of these cooperatives offer fee-based honey extraction with centrifuges and a handful of cooperatives offers marketing services for their members. Generally, the services provided by cooperatives include: input ordering, honey extraction, bottling, honey humidity reduction, wax recycling, distributing anti-varroa treatments from the MoA, and extension. Few cooperatives are financially sustainable, and membership fees often do not cover the cost of operations, which include rent, machinery maintenance, and other expenses.

Despite the limited formal impact of beekeeper cooperatives, the training provided by the MOA and various donors to individual cooperative members has in many cases created networks of skilled beekeepers who spontaneously cooperate with neighbors to combat diseases, share queen bees and honey to establish new colonies, share extraction equipment and help each other at harvesting in reciprocal labor sharing agreements. These achievements are considered as important, as they have helped creating a favorable enabling environment for beekeeping in many areas.

Nonetheless, properly managed cooperatives with potential for expansion and economy of scale remain a major element in supporting honey aggregation from small producers. There is scope, to explore on a case to case basis the potential to upgrade these informal networks to functioning and competitive cooperatives that are able to expand and grow.

⁹ Key informant interviews

Bee venom and honey production by-products. Lebanon has recently witnessed significant effort to introduce innovation in the agricultural sector, through initiatives such as the Berytech led Agrytech program¹⁰. Several of these initiatives are directly concerned with the honey sector, some of which have very promising technological breakthroughs regarding the extraction of bee venom. With the expansion of the honey sector, there is scope to ensure the diversification of production in linkages with industrial research and development. Honey cooperatives should be aware and linked to innovation incubators and labs.

3.1.2. Marketing and market sub-systems

The Lebanese honey market sub-system is organized as follows: i) interpersonal direct sales of what is view by consumers has high quality traditional honey, ii) retails market dominated by cheaper and lower quality imports and blended honey, iii) expansion of local high quality honey markets, iv) high opportunities for export.

Home consumption and direct sales

A significant segment of Lebanese consumers prefers to buy honey directly from the beekeepers' house or farm and are willing to pay a significant market premium for unbranded honey purchased from beekeepers. Meanwhile, branded bottled honey from retail markets, which in many countries would be more expensive, is sold at a 25% lower price. This lower price is due to a distrust of brands, and to the general perception of the existence of a high volume of very inexpensive "fake honey"¹¹ in the market. While for many small beekeepers, the existence of such a market has allowed for significant return on products, the reliance on such channel put a significant barrier to the expansion and growth of small businesses. As a matter of fact, there is a limit to the ability to sell larger quantities of honey through this channel, and significant difficulties are found in integrating the retails market.

Hamade (2016b) and USAID (2013), suggest that the direct sale channel conveys more than half of the local produced honey. It provides both a premium price to producers (price range between \$20 and \$30 per Kg) and the opportunity to retain 80% to 100% of the product's price value, thus rendering small production units profitable. It is suggested that an independent beekeeper can market the output of 20 hives per year using personal relationships and direct sale channels (approximately 600 kg of honey). Indeed, there is a series of investments in high quality local honey. These investments are capitalizing on the growing demand for branded local honey in urban and formal local markets.

Lower end local distribution and retail market

While the domestic market is still dominated by direct household sales of unbranded bulk honey, Lebanese brands of bottled honey have made very significant inroads in the past few years. Currently, at least four companies¹² have relationships with large distributors to sell into the expanding supermarket segment.

However, the retail market remains dominated by lower quality imported honey. Lebanese honey is considered as "expensive high-quality honey". In fact, the average price of Lebanese honey in 2011 was US\$16.80/kg. According to the FAO, the per capita consumption in kg of

¹⁰ <http://agrytech.org>

¹¹ Honey to which sugar, rice or other type of syrups have been added.

¹² Jabal El-Cheikh, Kaddoum, Miel du Levant, La Maison du Miel.

honey is about 0.7 kg per year, about average compared to other Middle East countries. Lebanese trade in honey has increased significantly since 2007, and the country is a net importer of honey. Import values for honey increased by around 62.4% from 2007 to 2011, from US\$ 936,000 to US\$ 1,520,000; while the export market increased by 105% from US\$ 163,000 to US\$ 334,000. In 2011, 61% of imports were from Saudi Arabia and are most likely re-exported of rebranded Chinese Honey.¹³

The prospects of honey export

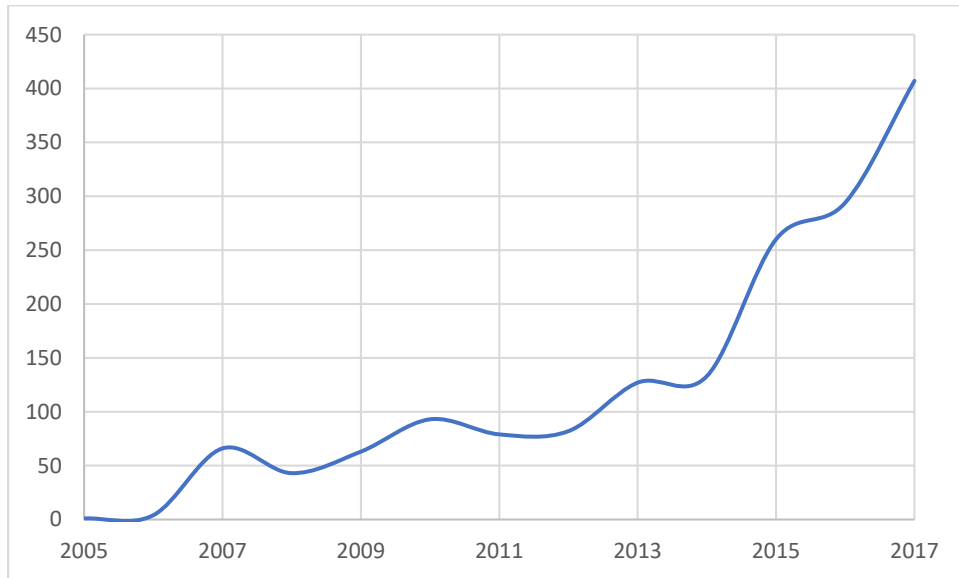
The existence of export market channels is a sine qua none condition for policy makers to engage in expanding local production. There are great export opportunities for Lebanese honey; however, honey exports remain at the stage of market channel identification although they have been growing since 2008 (see figures 6 and 7 below), with a significant change in 2017 with the penetration of Lebanese honey in the Jordanian market.

In 2016, around 85% of Lebanon's honey exports were directed to the GCC. Lebanon was also able to penetrate the Jordanian market after the ban of a Saudi commercial brand. The GCC markets – especially the Saudi market which represents 4% of total world import of honey, are important markets for Lebanon. Efforts should be made to promote Lebanese brands and open new market channels. Honey aggregation strategies, led by a coalition of cooperatives and/or private businesses should allow reaching significant supply volumes needed to penetrate large distribution channels, in both the Saudi mainstream market, and the US niche delicacy and ethnic food markets.

According to Hamade (2016b), Lebanese honey brands have been able to reach the US market since 2005 with sustained yearly shipment. Lebanese honey exports to the United States are sold in ethnic markets that target the Lebanese diaspora community who are willing to support the notably higher prices of Lebanese honey. As of 2012, Lebanese exports to the US are still essentially in the very early stages of market penetration, however, the US honey market that represents around 25% of the world's imports of honey should be seen as a strategic market for Lebanese honey production. Nonetheless, the implementation of proper rules and regulations – e.g. in terms of phytosanitary measures, antibiotic uses and traceability, especially if volumes are to be gathered from small producers – is a sine qua none condition for export expansion in high value markets.

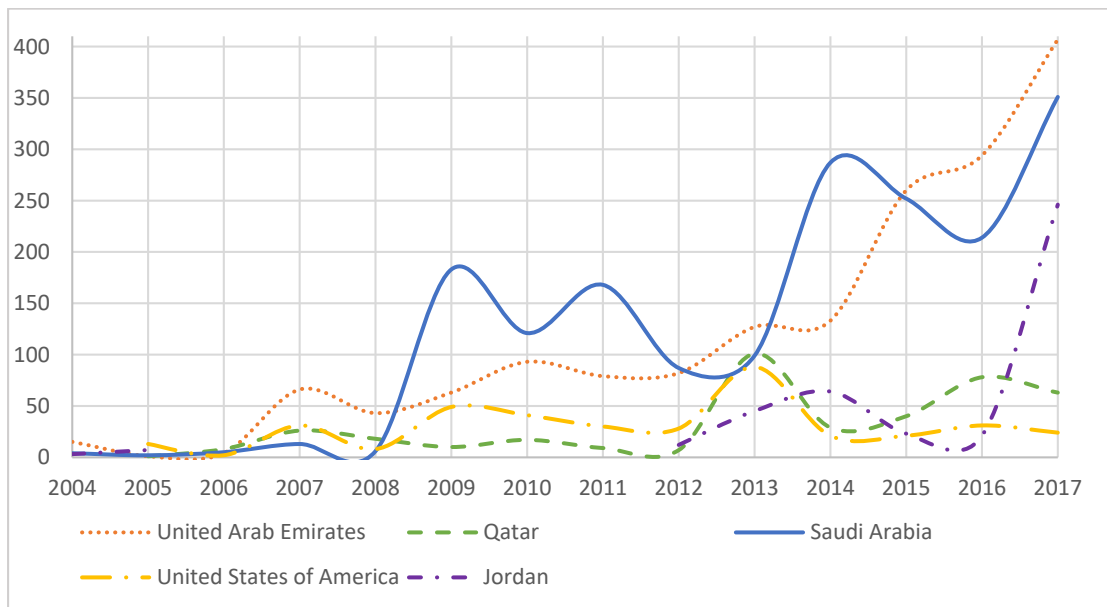
¹³ Source: Key informant interviews

Figure 3: Lebanon export value of honey in thousands of USD, 2005 -2017



Source: Trade map. www.trademap.org

Figure 4: Value of Lebanese export of honey to main export markets in thousands of USD



Source: Trade map. www.trademap.org

3.2. Challenges and opportunities analysis

The following table present a strengths, weaknesses, opportunities and threats SWOT analysis of the honey value chain. Then the main challenges (mainly weaknesses) and the main opportunities are further analysis in Table 3.

Table 2: Honey value chain SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • Profitability of small scale production units, and low initial investment cost • Less than a year return on investment • Lebanese honey has a premium value in local and GCC markets • Potential for the production of different type of honey (seasonal, mountain, forest, citrus orchards). 	<ul style="list-style-type: none"> • low productivity of bee-hives, beekeepers and cooperatives management capacities • Difficulty in Marketing relatively large quantity of honey through direct sales channel, thus rendering expansion above 25 hives difficult. • Limited aggregation capacity of cooperative (geographic constraints) • Lack of consumer awareness of honey quality standards • Conditions and stringent requirements are imposed on the Lebanese honey exports to the EU, due to lack of constant quality and product certification. • Export needed laboratory tests are not readily available in Lebanon.
Opportunities	Threats
<ul style="list-style-type: none"> • Expanding local market and penetration of export though the production of high quality honey • Introduce honey production within Syrian refugee’s informal settlement and gathering • High potential of honey-based products and other bee extractions 	<ul style="list-style-type: none"> • Reduction of bee pastures • Bee diseases: American foulbrood disease, the varroa mite, and colony collapse disorder (CCD) • Honey trade Fraud • Unregulated import (in term of quality specification and honey blend labelling)

Table 3: Challenges and opportunities in the honey value chain

Challenges and opportunities analysis – Honey value chain		
Inputs and production management		
Challenges	Potential solutions	Potential interventions
Improve productivity of bee-hives, beekeepers and cooperatives management capacities	<p>There is a need to improve knowledge and skills of bee-keepers to improve productivities of bee-hives.</p> <p>As mentioned, knowledge of entry barriers in honey production are low, however, additional training on skills are needed to improve hives productivities.</p> <p>Also, there is a need to improve businesses and management skills of bee-keepers, as for them to act as sustainable and economically viable businesses. In parallel, coaching and business support should be provided to cooperatives as for them to become efficient and competitive honey aggregator.</p> <p>In that context, cooperation between cooperatives and regional aggregation is a must.</p>	<p>Programs should intervene at both the level of the cooperative but also at the level of the beekeeper. Business development services packages that includes both technical and managerial skill development programs should be provided to beekeepers.</p> <p>Programs with cooperatives have to reach a certain level of achievement and interventions need to go a step further by working on honey aggregation at the regional level. This in turn would allow cooperatives to access large local retailers as well as export markets (assuming alignment with international regulations).</p>
Fight increasing bee diseases and reduction of bee pastures	<p>Bee diseases and reduction of bee pastures have been a major challenge for the honey sector. However, this is a worldwide phenomenon that is related to the overall degradation of natural resources.</p> <p>Nonetheless, there is a need to work with public institutions and increase their awareness on pesticides use, uncontrolled and unplanned urbanization as well as preservation and management of natural resources.</p>	<p>Work should be done to raise awareness of farmers, cooperatives and municipalities on environmental protection and sustainable use of agricultural inputs.</p>
Marketing		
Challenges	Potential solutions	Potential interventions

Sustain the growth of small scale honey production	There is a significant growth in small-scale home production, this has led to the increase in income of vulnerable and middle-class families. However, for small-scale production unit to sustain growth and income, they must be able to aggregate through informal network and/or cooperatives.	Programs should support the creation of informal beekeeper networks and support cooperatives plans to expand membership through technical assistance and on the job coaching.
Opportunities		Potential interventions
Expanding local market and penetration of export though the production of high quality honey		<p>There are two necessary conditions for cooperatives to be able to reach export market: i) be able to aggregate large supply of high quality honey, ii) be able to obey international regulations and standards.</p> <p>There should be a development of training curriculum programs and on the job coaching and work at three levels: the beekeeper, the cooperative/informal network, and at the regional level by working with formal cooperatives union or informal gathering of cooperatives.</p>
Introduce honey production within Syrian refugee's informal settlement and gathering		<p>With the framework of its LCRP interventions, there is scope for to the development of programs aimed at allowing Syrian refugees to implement small scale honey production. This production would allow for high quality nutritive and calories intake and may generate seasonal disposable cash income.</p> <p>Furthermore, refugees could transport the bee-hives back to Syria when they do return.</p> <p>Implementing such project on a small or medium scale, should not have market distortion impact. Scale of intervention and selection of beneficiaries should be coordinated with stakeholders through existing coordination mechanism such as the food-security and agricultural working groups.</p>

High potential of honey-based products and other bee extractions

Work should be done with cooperatives to find a way to invest in honey based products as well as other bee extractions that are highly demanded in export markets and in the pharma industry.

4. Cooperative Prospects and Challenges

4.1. Sector overview

In 1937, the very first cooperative in Lebanon was established: Abadieh Farmer Cooperative. Today, there are approximately 1,250 registered cooperatives across the country (see textbox 7 on the governance framework of cooperatives), with a high number of them dedicated agriculture (51%).¹⁴ Despite the high number of agricultural cooperatives, there are only 4.5% of Lebanese farmers are members of cooperatives. The Lebanese Federation of Cooperatives, established in 1968, is the main representative body responsible for coordinating with the government, training cooperative members, and overlooking the work of cooperative members. Although the federation is active, it doesn't have the resources needed to expand and meet the growing needs of farmer. Cooperatives in Lebanon are male-dominated (81.5%). However, it is worth noting that of the 18.5% women cooperatives, the majority are members in women led and controlled agrofood cooperatives¹⁵.

Nonetheless, most interviewed stakeholders reported that the vast majority of cooperative are not operational and mostly established to receive governmental subsidies. Furthermore, most cooperatives are centered around one person, who is a well-respected individual in the village with a capacity to mobilize farmers. However, such local leaders may lack the knowledge and experience needed to create democratic structure.

The Ministry of Agriculture 2015-2019 strategy noted that *"The weakness of cooperative work in Lebanon is affecting negatively the agricultural sector as a whole. National and local policies and programmes for the development of cooperative work are absent, leading to a weak public-sector support to cooperatives."* However, interviewed experts considered that cooperatives have a key role in allow farmers to overcome the challenges of high costs of production, land fragmentation, financial insecurity, excessive importations, and difficulty with market entry. Indeed, the NCFC reiterates this notion, pointing out that cooperatives help

Textbox 4: Cooperatives legal framework

The law that governs the cooperative sector was enacted in 1964 (decree law 17199), and further amended in 1972, 1977, and 1983. It defines cooperatives as non-profit organizations whose objective is to improve the socioeconomic conditions of their members through cooperation between them towards a common objective. The first amendments of 1972 and 1977 introduced changes to three articles related to the characteristics of the cooperative and the inspection of the Directorate of Cooperatives for the board of directors. The law was again amended in 1983 with changes in two articles concerning increased monitoring of the activities of cooperatives by the General Directorate for Cooperatives, which is responsible for registering, assisting, and monitoring all cooperatives in Lebanon. By law, cooperatives are exempt from certain taxation the most important being the exemption from profit tax, municipal rent tax and the municipal construction tax, finance fee on contracts, and tax on owned real estate. These exemptions have encouraged traders as well as exporters of fruits and vegetables to establish and register as cooperatives.

¹⁴ Personal communication. General Directorate for Cooperatives to the report authors

¹⁵ ILO (2018). Agricultural and agro-food cooperative in Lebanon. ILO: Geneva

farmers gain access to competitive markets and capitalize their bargaining powers, in addition to attaining products and services needed¹⁶. Ultimately, this empowers them financially and helps improve the overall job opportunities in an area. In addition, they have the capacity to strengthen social networks and alleviate rural emigration to Beirut, Tripoli and other concentrated city centers.

4.2. Cooperatives barriers to growth

In the following the report discuss the main cooperative challenges as identified during field data collection.

Management of cooperatives. Lack of knowledge in cooperative operations and financial management has been reported by interviewed stakeholder as one of the major barriers to cooperatives growth. Management difficulties have forced cooperative to provide minimum services to members, i.e. honey aggregation services. Only a handful number of cooperatives can provide integrated input supply, production, milling/aggregation and marketing support. The lack of management skills of cooperative leadership is also a key factor contributing to the ability of cooperative to grow. A recent study¹⁷ showed that the level of education (and therefore of skills) of the cooperative manager is a key factor in determining the ability of the cooperative to attract additional members. Furthermore, lack of management skills lessens the cooperative's board ability to manage the cooperative in a democratic and participatory way, in which each member take part in the decision-making process and increase sense of belonging and ownership. Thus, in turn reduce farmers' commitment to participate, improve and expand cooperative services and overall business turn-over.

➔ *Support should be provided on technical assistance to cooperative manager and work directly with a group of cooperative members. Technical assistance package should not only focus on management technical skills but should also tackled issue related to cooperation, interpersonal communication, as well as democratic and participatory decision-making processes.*

Legal and regulation barriers. The cooperative law limits the ability of the cooperative to grow beyond a certain geographical location. As any income generating activities, agricultural cooperatives need to be able to expand and reach economy of scale, limiting the cooperative geographical scope to a restrained location (usually at the municipal level) is a significant barrier for its ability to grow. For example, honey cooperatives cannot act as regional or national honey aggregators and this role is taken over by larger private companies.

➔ *Support should be provided to local cooperatives' action to advocate for a reform of the current cooperative regulatory and legal framework.*

Ability to invest. Cooperative structure lacks the ability to invest. This is due to two main interdependent factors:

- There is a dominant perception with the cooperative movement that cooperatives are entitled to public support either from international NGOs and/or from the Ministry of Agriculture. This dominant discourse also tends to describe agricultural cooperative

¹⁶ NCFE 2005, as quoted in "Agricultural Cooperatives I: History, Theory and Problems"

¹⁷ ILO (2018)

as local community-based organization rather than business entities. This misconception of the role of cooperatives, which discourages investment, is also shared by policy makers and public institutions that tend – through financial support - to instrumentalize agricultural cooperatives to gain political backing.

- The disincentives of investment are also directly linked to the informality of the agricultural sector. Farmers have no legal status in Lebanon. This is also the case for the farm as a productive entity, it has no legal business status as would any other private business. Membership of agricultural cooperative is done on individual basis and several interviewed cooperative members have mention the non-ability (and/or the complexity) of inheritance are a major barrier to their willingness to invest in a cooperative, i.e. a commonly owned productive asset that they would not be able to pass on to their daughters and sons. This unwillingness to invest is generally not a problem:
 - *In countries where agriculture cooperatives' membership is made of agricultural businesses (e.g registered private entities).* In that case, when a farmer (business owner) pass away, his business is inherited by his family and at the same time remain part of the cooperative and still have access to the its productive assets.
 - *And/or in countries with high level of cooperative social capital, in which people and community highly value common ownership of productive assets.*
- ➔ *In such context, it might be beyond the scope of any program to advocate a full reform of the agriculture sector legal setting. However, interventions can be directed to raise awareness of the cooperative movement leadership and members on the importance of such reform as well as the importance of investment in commonly owned productive assets.*

Cooperative independence. The cooperatives' inability to undertake investment using their own funds (and/or credit funds) has created a donor and public institutions dependency undermining their independence and autonomy. According to ILO (2018) report, “donor and public aid dependency are a major obstacle to the sector sustainable development. This dependency is further exacerbated by the absence of a unified cooperative movement and the lack of a common discourse and action. Aid dependency has also allowed for the multiplication of inactive and phantom cooperatives which aims only for accessing political based public support. In that regards, the cooperatives movement institutions and governance body – as well as international donors – must gradually engage in a process that encourages self-managed and autonomous cooperatives through refraining from providing non-matched financial grants. The cooperative sector needs to move from being aid dependent to becoming a sustainable private-sector-led economic sector, in-line with the cooperative movement values and principles”

- ➔ *Support should be provided to cooperatives to advocate for the creation of specific financing tools and institutions to support cooperative capacity to undertake investments and improve and grow cooperatives' income generating activities. The reform and re-foundation of the National Union for Cooperative Credit (NUCC) including potentially the dissolution of the current entity constitutes a step toward*

improving cooperative access to funds. Interventions should also focus on raising cooperative members' awareness of the importance of building an independent cooperative movement.

Value chain integration and access to market. The above-mentioned barriers to growth are major factors impeding cooperatives ability to integrate value chains and/or to access and gain market share. In addition, cooperatives (especially in the honey sub-sector) have been encouraged by donor-funded programs to improve production quality and develop marketing strategies that focus on short value chains. Donor projects' market strategy choices have been partly guided by the relatively small supply capacity of cooperatives. Such limited capacity limits cooperatives ability to integrate larger and more complex chains.

- ➔ *Support should be provided to leading cooperatives on a diversified value chain strategy that allow for diversification of market outlet and thus reduction of risks from informal networks to cooperatives. Cooperatives are agents of change in rural area. Being part of an efficient cooperative can minimize the costs of land, labor and pesticides. They also act on farmers' empowerment and induce positive social change.*
- ➔ *Support should be provided to informal farmers' network to gradually enhance cooperation and common action and establish democratic and well manage cooperative and/or union of cooperative structures.*

5. Business Enabling Environment

5.1. Political factors

5.1.1. Political instability and shocks

Political instability in Lebanon is one of the biggest impediments to trade and economic development. The decades of the Lebanese civil war (1975-1990) stalled the state's infrastructure, economic stability, and the general political, economic and social development. The reconstruction years following the war (1990-2005) were largely dedicated to physical infrastructure and foreign investments focused on the services and real estate sectors, with many productive sectors such as agriculture not effectively considered.

After the Syrian army withdrawal in 2005, the country witnessed a period of chronic political instability that is likely to settled down only temporarily after the 2018 elections. This period of instability witnessed several significant shocks such as: The 2006 Israeli war, the domestic imbalances and local security tensions during 2008, and the 29-month presidential vacuum from 2014 to 2016, and, of course, the 2011 on-set of the Syrian crisis.

The gradual influx of more than 1.5 million registered and unregistered Syrian refugees has, in tandem with Lebanon's already fragile economic infrastructure, significantly impacted the Lebanese economy, in addition to the impact of the Syrian war on Lebanon's socioeconomic and political landscape.

Nonetheless, within that context, agriculture seemed to have acted as a resilient sector that supported rural host communities in withstanding the effect of the Syrian crisis shock. The sector has witness significant endogenous growth and new investment (especially in Coastal Akkar and Northern Beqaa) in addition to growth and improvement supported by international donors funded programs^{18,19}. However, dynamisms and self-resilience mechanism are hampered by the lack of public policies.

5.1.2. Agriculture public policies and institutional setting

The Ministry of Agriculture

Agricultural policies in Lebanon were only tackled in the late 1950's during the Chehabist period. Pushed by increasing concern about inequality and poverty in rural area, a series of reform have restructured and significantly changed the agricultural policy landscape. These years witnessed the implementation of a large irrigation infrastructural projects, including the Litani dam, the creation of the Green Plan, the general directorate for cooperatives, the tobacco monopole, the wheat and sugar beet subsidy program, and the Litani River Authority. All these institutions together with the Ministry of agriculture constitute the current institutional setting governing the agricultural sector.

The Ministry of Agriculture is the main institutional actor influencing agriculture and agro-food policies. The ministry's mandate can be summarized as follows:

¹⁸ Hamade, K. (2016a). Agriculture as a key to the resilience of Lebanon rural areas to the effect of the Syrian Crisis. In CIHEAM (eds), Crisis and Resilience in the Mediterranean. CIHEAM watch Letter 36, Paris.

¹⁹ Hamade, K., Blanc, P., Jaubert, R. and Saade-Sbeih, M. (2015). De part et d'autre de la frontière libano-syrienne : les mutations de l'agriculture du Haut Oronte. Confluences méditerranéennes 92:19-32.

- Regulating the agricultural sector in terms of production, processing, marketing, as well as export and import trade (including agro-industrial food products);
- Controlling and monitoring the implementation of laws and regulations;
- Supporting the sector development;
- Providing extension services related to production, harvest, storage, and transformation of agricultural products;
- Planning and coordinating projects related to the sector;
- Documentation, statistics and socio-economic research.

In addition to the General Directorate for Agriculture, three institutions are attached to MOA:

- The Green Plan Authority: An entity that could be considered as a department for rural development. It is an executive body in charge of rural infrastructure, i.e. farm-level irrigation, rural roads, and reclamation of agricultural land.
- The Lebanese Agriculture Research Institute (LARI): LARI is generally considered as a relatively efficient institution, with research programs well directed towards providing answers to farmers' production concerns and needs. LARI laboratory is performing analysis and testing for food quality and safety in support to the ministries of Agriculture and Health, as well as for providing services to farmers testing their products for export. LARI's department of food safety for analytical and micro biological test methods, as well as its department of animal diseases laboratories are seeking ISO 17025 accreditation²⁰. Such an accreditation, would allow LARI's laboratories analysis to be internationally recognized, facilitating export trade of Lebanese products. Unfortunately, no laboratories in Lebanon have such accreditation.
- The General Directorate for Cooperatives: It covers all cooperatives and not just agricultural cooperatives. Its mission includes: (1) legal and financial control over cooperatives, (2) technical formation of cooperatives leadership, (3) economics and statistical follow-up of cooperatives. Its impact and efficiency are usually reported by agricultural stakeholders as very limited.

However, some important issues related to agriculture and rural development do not fall under the direct responsibilities of MOA. Large irrigation programs and water resources management are the responsibility of the Ministry of Energy and Water through the Litani River Authority. Existing subsidy programs are also out of the mandate of MOA – the wheat and sugar beet subsidy program is under the responsibility of the Ministry of Economy; tobacco monopoly is under the tutelage of the Ministry of Finance. Furthermore, issues related to food safety fall under the common jurisdiction of MOA, the Ministry of Health, and the Ministry of Economy. This has taken important policy tools and budgets away from MOA. As a matter of fact, the limited budget of the ministry does not allow it to undertake fully its mandate. Therefore, it has relied on projects funded by international donors.

²⁰ ISO 17025 certification specifies the general requirements for the competence to carry out tests and/or calibrations, including sampling. It covers testing and calibration performed using standard methods, non-standard methods, and laboratory-developed methods. (www.iso.org)

International donors

International donors have also contributed to the enhancement of the Lebanese agricultural sector through the implementation of projects directly with the ministry of Agriculture, local NGOs, and/or the private sector. In these projects, the focus was often directed towards either: (1) rural development and improvement of livelihoods, or (2) increasing quality and compliance with international standards. In addition to irrigation infrastructure projects implemented in cooperation with the Ministry of Energy and the Litani River Authority, and that are expected to have had an impact on rural economies.

The FAO, UNDP as well as the EU and the Italian Cooperation are the main partners of the Ministry of Agriculture. Nonetheless, USAID remains the main international organization – in terms of project dedicated funds to projects in the agricultural sector - however, has very limited interaction with the ministry of agriculture.

Local NGOs

The lack of extension services is one of the most important constraints to agricultural development. Any intervention in the sector should contain a technical support and extension services component. As a matter of fact, public extension services in Lebanon have historically suffered from lack of sufficient human and financial resources. The weakness of the extension services of the Ministry of Agricultural has opened the space for several politically affiliated as well as civil society grass-roots based NGOs to step in the agricultural sectors through the provision of agricultural extension services. The most influential in being: The Safadi Foundation, Rene Mouawad Foundation, and to a lower extend Mada, while Jihad Al-bina is particularly influent in the Marjeyoun-Hasbaya Area.

5.1.3. Policies related to the honey sector

The Lebanese ministry of agriculture has defined the main line of its policies through the 2015-2019 agricultural strategy (2015-2019). The strategy revolves around the need to increase the competitiveness of agricultural production by increasing its productivity while ensuring conformity with international sanitary and phytosanitary requirements, thus facilitating access to international markets.

The Ministerial strategy has proposed eight lines of action:

1. Improve food safety and quality of locally produced and imported products;
2. Increase productivity and competitiveness of the Lebanese agricultural products,
3. Improve the good governance and sustainable use of natural resources;
4. Strengthen agricultural extension and education:
5. Strengthen agricultural research and laboratories,
6. Develop the cooperative sector and mutual funds;
7. Develop the ministry of agriculture's capacities;
8. Respond to climate change impacts.

In terms of policies directly related to the honey sector, the Ministry of Agriculture's efforts have focused on the increase in the value of the local market by increasing demand on the higher quality segment.

The Ministry of Agriculture has implemented measures aimed at ensuring quality and controlling fraud in the honey sector. The Ministry's decisions were incentivized by the mid-

2000's EU three years ban on Lebanese honey exports (after antibiotics residues were found in a Lebanese honey shipment to the EU). The Ministry's measures include:

- **Traceability measures.** Full product traceability to the beekeeper-level has become a requirement for all honey produced in Lebanon since 2011. Complete enforcement of this regulation is yet to be achieved, but significant progress has been made so far, mainly through the registration of bee-keeper at the ministry (a mandatory measure to receive public extension services support). Furthermore, compliance to the regulations is largely voluntary as bee-keeper are increasingly aware of the importance of trust and traceability in the sector.
- **Norms and export test.** Honey sold in Lebanon prior to 2013 was only required to meet LIBNOR norms, which sets a limit for purity and required eight simple chemical tests. However, as of 2013 a decree that set stricter (EU compliant) level of pesticide and chemical residues in honey was issued. Also, as of 2015, a total ban on the use of antibiotic has been imposed. However, till now there is no Lebanese laboratory capable of conducting the full battery of required test under the new regulations. Note that all honey export need to be tested in Lebanon for available test that fall under the regulation.

5.2. Economic factors

5.2.1. Lebanon's economy overview and the impact of the Syrian Crisis

Macro-economic balance. Characterized by a laissez-faire model, Lebanon's economy has minimal government intervention in foreign trade and almost no restrictions on capital, dividends, cash inflow and outflow, and remittances. Some of its main financial challenges are the staggering public debt and the dependence on external finances for domestic management.

Lebanon open economy model has allowed the country to benefit from significant capital influx, allowing it to benefit from a positive balance of payment; although the country historically show chronic trade deficit. However, the Syrian crisis has highly impact macro-economy balances with extensive trade deficits recorded at \$1,187.22 million in February 2018²¹, and a shortfall of \$156 million in the (usually positive) balance of payment²². Nonetheless, the banking sector has till now withstand the effect of the crisis thank to price stability and a noticeable growth in private banks' deposits. The liquidity status of Lebanese banks is also encouraging, ensuring the banks' ongoing ability to continue funding the economy.

Informality. Lebanon's economy is also characterized by extensive informality, with 19% of workers lacking access to social insurance and labor regulations²³. In Lebanon, agriculture is almost a fully informal sector with a significant reliance of the sector on unskilled as well as skilled low-waged Syrian workers.

²¹ <https://tradingeconomics.com/lebanon/balance-of-trade>

²² http://investinlebanon.gov.lb/en/lebanon_at_a_glance/economic_profile/trade_performance

²³ http://www.ilo.org/wcmsp5/groups/public/---arabstates/---ro-beirut/documents/publication/wcms_535107.pdf

Trade policies. An important facilitation was the European Free Trade Agreement, initialed in 2002 and implemented in 2006, which has impacted exports and liberalized trade between the EU and Lebanon. As per the agreement, Lebanon's agricultural products have free access to the EU's market, now accounting for approximately 9% of exports²⁴. There are also ongoing negotiations to join the World Trade Organization, which would push for necessary legislative and institutional changes, and better integration into the global Market. Lebanon is also a signatory to the Greater Arab Free Trade, which promotes free trade among 17 Arab countries and eliminates administrative and monetary barriers between them, as long as GAFTA's standards are being met. Further, as of 2010, it is part of the regional Economic and Trade Association Council, along with Syria, Jordan, and Turkey. Lebanon is also negotiating with MERCOSUR (Argentina, Brazil, Paraguay, and Uruguay) countries regarding free trade agreement, in addition to more than 50 bi-lateral trade agreement that could benefit Lebanon agricultural exports.

These trade agreements have had positive impacts on agricultural production in Lebanon, as there is now smoother access to European and Arab markets.

The Syrian crisis and the influx of Syrian refugees are a huge challenge to Lebanon's business climate, particularly in relation to the two domains that agriculture largely depends on: tourism and trade. Prior to the Syrian war, Lebanon benefited from international highways with sprouting malls and trade centers en route to Syria. Its main export partner was Syria, with 24.9% of its products exported there²⁵. However, highways connecting the two countries have been blocked and rapid deterioration in trade relations with Syria has been experienced since 2011. This has also affected trade relations with other countries, largely because of the closure of land routes from Syria to Gulf countries, such as Saudi Arabia, and, more critically, the closing of the Nasib border point. The Nasib border point is an international border crossing on the Damascus-Amman highway. In 2015, land exports through that channel were stopped entirely, adding extra strain on Lebanese farmers in particular. Indeed, land exports make up around 35% of all Lebanese exports, and GCC's imports of Lebanese products were \$920 million alone in 2014²⁶. The Nasib border was Lebanese truckers' main option after 2011, with many farmers depended solely on it. Moreover, in response to the closing of the land borders, the Lebanese government is subsidizing products exported via sea routes with an allocation of \$20 million²⁷. Although there have been talks signaling reopening the border, there has been no decisive change.

Yet, there are certain points of opportunities instigated by the Syrian crisis, mainly the increase in demand for Lebanese products, to cater to the influx of Syrian refugees and to counterbalance for the decrease of Syrian exports felt in different Arab countries, and the supply of cheaper labor. Indeed, the World Bank reported that exports have increased by 5.1%²⁸. The Investment and Development Authority of Lebanon (IDAL) also noted that "While the Syrian crisis has had its share of negative impact on the Lebanese economy, it has allowed

²⁴ http://investinlebanon.gov.lb/en/lebanon_at_a_glance/economic_profile/trade_performance

²⁵ http://www.economywatch.com/world_economy/lebanon/export-import.html

²⁶ <http://www.jordantimes.com/news/business/last-overland-route-closure-chokes-lebanon-exports>

²⁷ <http://www.executive-magazine.com/industry-agriculture/regional-instability-harms-lebanese-exports>

²⁸ http://www.worldbank.org/content/dam/Worldbank/document/MNA/Mashreq/LEM_Spring_2014.pdf

for increased demand for Lebanese products to compensate for the decrease of Syrian exports.²⁹

5.2.2. Economic investment incentives and access to finance

The nature of agricultural projects that usually requires long-term financing, the general weak organizational and managerial skills of Lebanese farmers and cooperative, and the conditions of bank credit pertaining to the availability of collateral, all hinder access of farmers to credit and thus hamper the establishment and development of agriculture-related businesses. Nonetheless, several formal and informal credit systems exist in Lebanon, some of which have been financing agricultural projects and providing support programs for the establishment of agricultural enterprises.

Kafalat. The Kafalat government-backed program, whose purpose is to support funding of small and medium enterprises in various sectors through commercial banks, is providing credit to agricultural investment, including loans designed for orchards start-up. In fact, in 2017 agriculture's share of Kafalat loans was the highest among all economic sectors reaching 36% of total loan numbers, followed by industry 33%, while tourism representing 24% of loans³⁰. Setting the Kafalat interest subsidy programs aside, banks are more reserved when it comes to funding agricultural businesses, and the credit approval decisions remain largely in the bankers' hands. The challenge remains to make loans accessible to a larger number of farmers, especially the owners of smaller farms.

The marginalization of poor farmers from access to commercial bank loans has led to the expansion of informal credit systems and networks, where the main actors are input suppliers who give credit to farmers often in the form of deferred payment. Despite the fact that such credit is usually accompanied by very high interest rates, it is sometimes the only option for farmers. In addition, loans from relatives or friends form an important source for working capital financing for small farmers. These loans are most often interest-free.

IDAL. The Investment Development Authority of Lebanon (IDAL) is the national investment promotion agency, established in 1994 and working to promote and facilitate investment in Lebanon as well as to market Lebanese exports including agricultural and agro-industrial products. As part of its latter overall objective, IDAL has established the "Agri Plus", with a budget of about \$33.3 million for export subsidies, it aims at opening new markets for Lebanese agricultural produce. IDAL will be in charge to implement the additional \$20 million subsidies voted by the government in order to support sea road export additional cost after the closure of the Syrian-Jordanian border.

5.3. Legal factors

Establishing a business. The agricultural sector remains an informal sector in Lebanon. There are no legal entry barriers for investment in the honey sector. Indeed, apart from mandatory registration for beekeepers, engaging in agricultural activities remains mostly informal. In regard to private agricultural mills, the registration of a company as well as the acquiring a proper industrial license is a must. IDAL is the main body that promotes investment in Lebanon

²⁹ <http://www.executive-magazine.com/industry-agriculture/regional-instability-harms-lebanese-exports>

³⁰ Statistical data base. www.kafalat.com.lb

and has a “One-Stop Shop” that eases the process for investors, making it easier to receive permits and licenses.

Export. Export in Lebanon requires several documents: an original commercial invoice, an export order, a quietus from the social security office, a certificate of origin from the Ministry of Industry that is certified by the Lebanese Customs Authorities, export licenses, agricultural health certificates, quality verification for all food products, and a declaration form based on the single administrative document.

Export Labelling. The labels on exported products should include ingredients, production and expiration date, the product’s net weight, and manufacturer. The Lebanese Standards Institution (LIBNOR) is the main acting body, under the Ministry of Industry, responsible for allotting, issuing, and correcting Lebanese standards. It also grants the Lebanese Conformity Mark. LIBNOR confirms to the WTO’s technical barriers to trade, which is a code of good practice related to ensuring that standards are followed through.

6. Conclusions

Although the production of honey has been volatile, the past five years have witnessed an increasing trend in the production of honey in Lebanon. The Ministry of Agriculture has implemented a series of measures to ensure better honey quality in the sector, in addition to controlling fraud in the market. Yet, there are still major constraints across the honey value chain.

While there are no predominant issues regarding access to input, there remains lack of knowledge on emerging techniques for the production processes. There is also limited grazing available, thereby decreasing the potential of honey production possible. Moreover, there are diseases affecting bees that require more environmental protection and sustainable farming methods to be prevented. Marketing also remains a challenge in the value chain, as a large number of the sales happen through direct channels. As such, small-scale production units have been unable to access informal networks and cooperatives adequately.

There are several opportunities, however, that should be tapped into. Local farmers can access export markets with the production of high quality honey, if the proper techniques are adopted and marketing strategies are strengthened. There is already a visible increase of honey sales to export markets in the GCC, EU, and the U.S. Moreover, given the relatively easy access to input and low investment costs, honey production can be introduced within informal Syrian refugee settlements, as there is also a high potential for honey-based products and bee extractions.

Cooperatives, while generally weak in Lebanon, should be tapped into because they have the potential to tackle several problems in the honey value chain while reducing barriers. This is important, given that many beekeepers have other jobs and not ample time to deal with the challenges that may rise from honey productions.

7. Recommendations

In addition to the punctual recommendations stated throughout the report, CRI can highlight the following general recommendations. These recommendations are based on CRI's analysis but also interviewees' visions on how to improve the value chain and cooperatives' role.

Cooperative Corporate Governance

More effective cooperatives would require strong and capable management. This is only possible through planning and setting objectives and upcoming milestones. One way to do so would be by bringing experts in the field to be advisors for cooperatives, while also involving members more and creating governance boards who have stake in the game. It is important to find a way that can turn cooperative management into a for-profit corporate management, where members would be more incentivized to use revenues and funds efficiently in the right direction and for the right expenses.

Interlinkage and Coordination

One of the most important aspects of cooperatives' success is the coordination between its members, but also the coordination with municipalities, ministries, and funding agencies. Interventions should be aimed at improving the linkages between the cooperatives and surrounding stakeholders, in order to ensure transparency, effectiveness and clarity of visions which helps in better aligning actions undertaken by each entity.

Labelling and Branding

As part of better marketing for unbranded products, simple labeling and/or stamp can improve consumer appreciation for the premium local price (help increase awareness of price to quality ratio), while also facilitating the way for export markets as a first step along the way.

Innovation and Technology

The component of technology of innovation cannot be disregarded from the agriculture sector. Investments should be made in this field as technological advancements can improve the sector on several level: disease detection, crop analysis, increase awareness, marketing, etc.

Youth Incentivizing

The overall agriculture sector does not only involve farmers anymore, it also needs engineers, marketeers, technicians, and so on. Therefore, having initiatives to incentivize youth of different majors and bringing this expertise into the sector is very important. This also allows youth employment and paves the way for innovation and sustainability/improvement of the sector on the long run.

Annex A. Discussion Guides for In-depth Interviews

Interviews with Institutions

Target: *Institutions and stakeholders involved in the honey value chain. Interviewer to introduce the research– highlighting ACTED project objectives.*

The interviewer should mention that information shared will remain confidential and will be solely used for research purposes. Ask for interviewee consent before recording the interview.

Material needed: Block note, recording device, A3 paper, additional pen and colored pencils.

Anchor / timeline change / services provided

1. How long have you been involved in the honey value chain?
 - a. Can you please describe the scope of work of your institution?
 - b. Can you please describe the services your institution provided to farmers and cooperatives? (Elaborate with examples).
 - c. Please describe your relationship with the local authorities such as municipalities, agriculture extension centers, syndicate of food industries, CCIA, other cooperatives, and other relevant stakeholders involved in this value chain.
2. Can you tell us what were the main changes between when you started and today?
 - a. Can you tell us when was the best year? (Why? What was different?)
 - b. The worst year? (Why? What changed? – What did you do to solve the problems faced?)
3. Did the Syrian crisis impact the sector? How? (positively and/or negatively)

Challenges and opportunities and growth expectation

4. How would you describe the current situation of the value chain?
 - a. Where do you see opportunities for farmers/ beekeepers?
 - i. What are the market factors that determine demand? What are in your opinion the main consumption trends?
 - ii. Is there any successful marketing story you are aware of?
 - b. What are their main challenges?
 - c. What are your expectations for the coming years?

Governance framework

5. On what institutional/policy change have your institutions been working on in the past three years?
 - a. What institutional reforms do you think need to be made in the honey value chain?
 - b. What national policies are needed for the improvement of the sector?

Workforce

6. Do you think the lack of qualified labor is a limitation for growth in the value chain?
 - a. Is your institution working on improving skills of farmers/ beekeepers?

Value chain exercise

7. Ask the interviewee to draw the honey value chain and actors relationship as per his understanding. *Make sure to handover a A3 blank paper to the interviewee as well as colored pens.*
8. Ask the interviewee about who is the strongest actor in the value chain, discuss their interaction? Does the strongest actor in the chain play a positive role?
9. What do you think are the comparative advantages of a cooperative?
10. In your opinion, why are cooperatives not integrated into the value chain? What do you think is the best way to integrate them?

Exit

11. Is there anything else you think I should have asked you about?

Interviews with Value Chain Actors

Target: Institutions and stakeholders involved in the honey value chain. Interviewer to introduce the research– highlighting ACTED project objectives.

The interviewer should mention that information shared will remain confidential and will be solely used for research purposes. Ask for interviewee consent before recording the interview.

Material needed: Block note, recording device, A3 paper, additional pen and colored pencils.

Anchor / timeline change

1. How long have you been working in the honey value chain?
 - a. Can you please describe your activities?
2. Can you tell us what were the main changes between when you started and today?
 - a. Can you tell us when was the best year? (Why? What was different?)
 - b. The worst year? (Why? What changed? – What did you do to solve the problems faced?)
3. Did the Syrian crisis impact the sector? How? (positively and/or negatively)

Value chain exercise

4. Ask the interviewee to draw the honey value chain and actors relationship as per his understanding. *Make sure to handover a A3 blank paper to the interviewee as well as colored pens.*
5. Ask the interviewee about who is the strongest actor in the value chain, discuss their interaction.

Input provision

Probe the interviewee on the drawing he did (ask him why he did or did not mentioned input provision as part of the value chain).

6. What are the main challenges faced for input provision? Which of the value chain actors can intervene to solve input provision bottleneck (if any)? What do you think can be done?

Production

7. What are the main challenges faced by farmers and/or beekeepers during production? What do you think can be done? *(Information can be summarized using the table template below in the table below):*

	Potential solution (for each category specify need and value chain actors to be involved)			
Challenges	Skills /training	Equipment/ investment	Technology transfer	Regulations/ policies

Processing / storage and gathering

8. What are the main challenges faced by value chain actors during processing/ storage and gathering of production? What do you think can be done? *(Information can be summarized using the table template below in the table below):*

	Potential solution (for each category specify need and value chain actors to be involved)			
Challenges	Skills /training	Equipment/ investment	Technology transfer	Regulations/ policies

Market

9. Can you please describe the current market trends and opportunities?
- a. What are the profiles of your clients?
 - b. Can you tell us what type of products they are looking for?
 - i. Where do you procure the products? Do you have long term standing relationship with your suppliers/ clients?
 - ii. Do you sell imported products? What types and from where? (distributors)
 - iii. Do you use the services of a middlemen? Can you describe your relationship?
 - iv. Do you export products? Where? If not is there any other successful export you are aware of?
12. Do you think there is unfair competition? From who?
13. Did you plan and implemented a marketing strategy? Can you please give us details on what you considered your competitive edge?
- a. How did you develop it? Did you receive support? From who?

Governance and regulation

Probe the interviewee on the drawing he did (ask him why he did or did not mentioned regulation and governing institution as part of the value chain).

14. What need to be change in term of regulation and policies- what about standards and specification? *(Information can be summarized using the table template below in the table below):*

Regulation and policy change needed	Why is the change needed	Value chain actor that need to be mobilized	Responsible entity

Skills (if not discuss above)

15. Do you think the lack of qualified labor is a limitation for growth in the value chain?

- a. In your opinion what are the needed skills improvement? (*probe for specific need of cooperatives*).

Cooperative union (for cooperatives only)

- 13. Can you please tell us what are the services provided by the cooperative?
 - a. How many members does it has? And how many are active?
 - b. What do you believe are the basis of cooperative work?
- 14. We wish to go with you through the cooperative needs in term of improvement in different areas. We would also like if you justify these needs and tell us who you think could provide them to you.

	Needs	Why	Who
Skills /training			
Equipment / investment			
Technology transfer			
Regulations / policies			

- 15. What do you think is the role of the cooperative union? What action should it take
Are you a member of the Cooperative union?
- 16. How do you describe your relationship with the Ministry of Agriculture? What do you expect from them?
- 17. What do you believe the cooperative can do to improve the agriculture policies and the cooperative sector governance?
- 18. What do you think are the comparative advantages of a cooperative?
- 19. In your opinion, why are cooperatives not integrated into the value chain? What do you think is the best way to integrate them?

Exit

- 20. What are your expectations for the coming years?
- 21. Is there anything else you think I should have asked you about?

Annex B. List of Interviews

	Type	Region	Stakeholder
Ministry of Agriculture (MoA)	Institution	Akkar	Michel Dib
Union of Cooperatives	Institution	Beirut	Ghassan Menhem
AgriTech	Institution	Beirut	Rami Abou Jawdeh
Syndicate of Lebanese Food Industries (SLFI) + Association of Lebanese Industrials (ALI)	Institution	Beirut	Mounir Bsar
Lebanese Standard Institution (LIBNOR)	Institution	Beirut	Cecile Obeid
LIVCD Honey Lead	Honey	Nationwide	Mansour Moudawar
Specialised Organic Shop	Institution	Nationwide	
Transmed	Institution	Beirut	Randa Saleh
MADA NGO	Institution	Nationwide	
Municipality (Union)	Institution	Tyr	Mortada Mohana
Municipality (Union of Hasbani)	Institution	Hasbaya	Sami Safadi
Municipality (Union of Dreib)	Institution	Akkar	Abdo Makhoul
Municipality (Union)	Institution	Marjeyoun	Haj Ali Zein
Expert	Olive + Honey		Elias Wehbe
Cooperative Akkar	Olive + Honey	Kachhlak	Khaled Saker
Cooperative Marjayoun	Olive + Honey	Tebnin	Fouad Wansa
Cooperative Hasbaya	Olive + Honey	Ain Jarfa	Karam Hasanieh
Cooperative Tyre	Olive + Honey	Srifa	Ezzat Zaarour
Expert – Lebanese University	Honey	Beirut	Dani Obeid
Expert – Lebanese University	Honey	Beirut	Shadi Hosri
Syndicate of Beekeepers + Jabal Cheikh Brand	Honey	Beirut	Bahaa Kadamany

Beekeeper + Local Distributor	Honey		Antoine Kaddoum
Cooperative Marjayoun	Olive + Honey	Jabal Amel	Tarek Yasin
J. Grove	Olive + Honey	Jezzine	May Nasreddine
Le Miel du Levant	Honey		
Jasinde Bio	Honey	Beqaa	Charbel Abu Jaoude