



CBI  
Ministry of Foreign Affairs

# *Export Value Chain Analysis*

## *Fresh Fruit and Vegetables Lebanon*



# Export Value Chain Analysis Fresh Fruit and Vegetables Lebanon

December 2016

Authorised by:  
Centre for the Promotion of Imports from Developing Countries | CBI.eu



CBI  
*Ministry of Foreign Affairs*

Prepared by:



Jos Leeters  
[www.bureauleeters.nl](http://www.bureauleeters.nl)

In collaboration with:



Piet Schotel  
[www.fruitconsultancyeurope.nl](http://www.fruitconsultancyeurope.nl)



Milco Rikken  
[www.proverde.nl](http://www.proverde.nl)

## Table of contents

<b>1 Introduction</b>	<b>4</b>
1.1 Background	4
1.2 Objectives	5
1.3 Project team	5
1.4 Methodology	6
1.5 About CBI	6
1.6 Guide for the reader	6
1.7 List of abbreviations and acronyms	7
<b>2 Management summary</b>	<b>9</b>
<b>3 The fresh fruit and vegetables sector in Lebanon</b>	<b>11</b>
3.1 General features and trends of the Lebanese fresh fruit and vegetables sector	11
3.2 Lebanon exports	12
3.3 Lebanon imports	16
3.4 Structure and governance in Lebanese fresh fruit and vegetables value chains	16
3.4.1 Chain actors	17
3.4.2 Chain supporters	18
3.4.3 Chain influencers	21
<b>4 The European fruit and vegetables market</b>	<b>23</b>
4.1 Segmentation of EU/EFTA markets and product groups	23
4.2 Market trends	25
4.3 Trends in trade structure and logistics	26
4.4 EU imports from Lebanon	28
4.5 Lebanon's main competitors on the EU market	29
<b>5 The value chain from Lebanon to Europe in a nutshell</b>	<b>32</b>
<b>6 Bottlenecks in the Lebanese fruit and vegetables sector</b>	<b>33</b>
6.1 Market & market access	33
6.2 Pre- and postharvest practices	33
6.3 Business culture and human resources	34
6.4 Private public environment	34
6.5 Immigrants / refugees	34
<b>7 Risks in the Lebanese fruit and vegetables sector</b>	<b>36</b>
7.1 CSR risks	36
7.2 Market-related risks	37
7.3 Analysis of risks and impact of risks on export potential	37
<b>8 Table grapes</b>	<b>38</b>
8.1 End market(s) and competitiveness	38
8.2 Structure and governance of the value chain	40
8.2.1 Chain actors	40
8.2.2 Chain supporters	41
8.3 Specific bottlenecks, risks and opportunities in the table grapes value chain	42
8.3.1 Bottlenecks	42
8.3.2 Risks	42
8.3.3 Opportunities	42
<b>9 Avocados</b>	<b>43</b>
9.1 End market(s) and competitiveness	43



9.2	Structure and governance of the value chain .....	45
9.2.1	Chain actors .....	46
9.2.2	Chain supporters .....	47
9.3	Specific bottlenecks, risks and opportunities in the avocado value chain .....	47
9.3.1	Bottlenecks .....	47
9.3.2	Risks .....	47
9.3.3	Opportunities .....	47
<b>10</b>	<b>Citrus .....</b>	<b>49</b>
10.1	End market(s) and competitiveness .....	49
10.2	Structure and governance of the value chain .....	51
10.2.1	Chain actors .....	52
10.2.2	Chain supporters .....	53
10.3	Specific bottlenecks, risks and opportunities in the citrus value chain .....	53
10.3.1	Bottlenecks .....	53
10.3.2	Risks .....	54
10.3.3	Opportunities .....	54
<b>11</b>	<b>Potatoes.....</b>	<b>55</b>
11.1	End market(s) and competitiveness .....	55
11.2	Structure and governance of the value chain .....	57
11.2.1	Chain actors.....	57
11.2.2	Chain supporters .....	58
11.3	Specific bottlenecks, risks and opportunities in the potato value chain .....	58
11.3.1	Bottlenecks .....	58
11.3.2	Risks .....	59
11.3.3	Opportunities .....	59
<b>12</b>	<b>Smaller products with export potential to high-end markets.....</b>	<b>61</b>
12.1	Products with potential.....	62
12.2	End market(s) and competitiveness .....	62
12.3	Structure and governance of the value chain .....	63
12.4	Specific bottlenecks, risks and opportunities in the value chains .....	63
<b>13</b>	<b>Other donor programs .....</b>	<b>64</b>
<b>14</b>	<b>Conclusions, possible solutions and recommendations .....</b>	<b>67</b>
14.1	Conclusions .....	67
14.2	Solutions and recommendations .....	69
<b>Annex 1</b>	<b>References .....</b>	<b>71</b>
A1.1	Reports .....	71
A1.2	Interviews in the Netherlands and Lebanon.....	72
<b>Annex 2</b>	<b>Field trip programs in Lebanon.....</b>	<b>73</b>
<b>Annex 3</b>	<b>Statistics.....</b>	<b>74</b>
A3.1	Lebanon exports of fresh fruit per destination.....	74
A3.2	Lebanon exports of fresh vegetables per destination .....	75
<b>Annex 4</b>	<b>EKN's program 2016-2018 .....</b>	<b>77</b>

# 1 Introduction

## 1.1 Background

Lebanon is located on a strategic location between Europe and the Middle East. There is a good climate for agriculture and Lebanon is a net exporter of fruit and vegetables. The value of yearly imports of fresh fruit and vegetables is around € 185 million, while the yearly export is worth around € 225 million, equal to around 500,000 tonnes. The majority of Lebanese exports of fresh fruit and vegetables is consumed by countries in the Middle East. Syria has always been a major market.

Export to the Gulf states is still substantial, but Lebanon faces serious challenges since the Gulf Cooperation Council (GCC<sup>1</sup>) market gradually opened for global suppliers. Other suppliers appear to be very competitive, which diminished the competitiveness of Lebanon. So exporters have strong arguments to diversify their markets and Europe could be an interesting export destination. In the European market, food safety continues to be a very important topic and a challenge for many Lebanese exporters. Strict compliance are a precondition when entering the EU market.

The Syrian crisis puts a burden on the Lebanese society and its economy. The number of Syrians in Lebanon (registered and unregistered) constitutes to as much as 20 to 25% of the total population. Since the crisis, traditional export routes within the region (especially Syria and the Gulf States) are poorly available or more expensive. Therefore, the Embassy of the Kingdom of the Netherlands (EKN) in Beirut has initiated a CBI intervention to research the opportunities to increase exports of Lebanese agricultural products to the EU market. This is based on the idea that export promotion, especially in the agricultural sector, will boost the local economy and thereby create more chances for locals and refugees.

The CBI intervention has a timeframe until the end of 2016. It is aimed at strengthening the export enabling environment in Lebanon by a balanced support on both the institutional level and the private sector level. The intervention includes:

- assisting the Investment Development Authority of Lebanon (IDAL) and the Federation of Chambers of Commerce, Industry and Agriculture of Lebanon (FCCIAL) in their mission and service delivery in export promotion;
- identifying agricultural subsectors with export potential and conducting an in depth Value Chain Analysis (VCA) for these sub sectors;
- offering a training course on Market Access Requirements (MAR) in the targeted sectors, aimed at entrepreneurs in this sector with export ambitions and potential to the EU.

A preliminary study in July 2016 showed that, although the sector is being faced with several obstacles and threats, there is potential to increase exports and there is a group of exporters with the eagerness and capacity to invest in it. Lebanon can build competitive advantages with certain niche products and/or specific market windows. Based on this preliminary study, CBI has decided to further research the value chain for Fresh Fruit and Vegetables, and in particular for table grapes, avocado, citrus and potatoes which showed to be most promising for exports to the European market:

- Table grapes are produced in the whole country, with a yearly production of 120,000 tonnes, of which 20,000 tonnes are meant for export. Most grapes are exported to other Middle-Eastern countries, 3.5% is exported to the EU.
- Avocado is mainly produced in coastal areas. The production capacity will substantially grow in the next years. There are potential export opportunities for Lebanese avocados on the EU, Russian and Middle-Eastern market.
- Production of citrus fruits total up to 200,000 tonnes per year, mainly produced in the coastal regions. However, the production has declined with 45% since 2007, because of replacement

---

<sup>1</sup> GCC is a regional intergovernmental political and economic union consisting of all Arab states of the Persian Gulf, except for Iraq. Its member states are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

of citrus fruit by banana and avocado. Currently, Lebanese citrus fruit is only exported to the Middle Eastern market, but there are export opportunities for the sector on the US, EU and Russian market.

- There is about 11,000 ha of potato plantation in Lebanon. Lebanese potatoes are mainly exported to the Arab world and Russia. There is an available quota for the European market of 50,000 tonnes.

### Product definition

This study covers fresh fruit and vegetables, which are subdivided into product groups and products. The product group "Fruit" (HS08) includes nuts.

Table 1: HS Classification		
Product (group)	Code	Full description
<u>Fruit</u> <i>amongst which:</i>	08	Edible fruit and nuts; peel of citrus fruit or melons
Grapes	080610	Fresh grapes
Avocados	080440	Fresh or dried avocados
Citrus fruit	0805	Citrus fruit, fresh or dried
<u>Vegetables</u> <i>amongst which:</i>	07	Edible vegetables and certain roots and tubers
Potatoes	0701	Potatoes, fresh or chilled

## 1.2 Objectives

This VCA is in the first place performed for the EKN in Beirut as well as the involved Business Support Organisations IDAL and FCCIAL. The principal aim of this VCA is to map the opportunities and challenges for the Fresh Fruit and Vegetables sector in Lebanon regarding export to the European market, resulting in insight for sector stakeholders on how to tap into the European market, as well as possible steps to tackle identified bottlenecks.

The VCA will be used to:

1. Provide stakeholders insight in the opportunities and challenges regarding export to Europe;
2. Help stakeholders to develop interventions to tackle identified bottlenecks;
3. Make Lebanese exporters in the Fresh Fruit and Vegetables sector aware of the export opportunities to the European market and how to prepare for this market.

The specific objectives of the VCA are to:

1. Investigate and map the value chain in terms of structure and governance, actors and their position in the value chain; more specifically, the position of SMEs in the value chain and the constraints that withhold their access to the EU/EFTA (European Free Trade Association) market;
2. Make an in-depth analysis of constraints, opportunities, and potential Social Responsibility risks or adverse impacts in the value chain that hamper sustainable exports;
3. Make an in-depth analysis of solutions that may remove constraints, mitigate risks and spur opportunities for sustainable exports.

## 1.3 Project team

The VCA was carried out by a core team of 3 Dutch experts:

- Jos Leeters (Bureau Leeters) - lead consultant, field research Lebanon and reporting
- Milco Rikken (ProVerde) - desk research, backstopping and reporting
- Piet Schotel (Fruit Consultancy Europe) - field research EU traders

Throughout the survey, the contact persons at CBI were Mr. Dirk-Jan Zegelaar and Mrs. Sanne Boogers; valuable additional support was received by Mr. Marc Zeenny of the EKN in Beirut.

## 1.4 Methodology

The study was conducted through a combination of desk research and field research in the Netherlands and Lebanon. A field trip in Lebanon was conducted from 14 till 17 November 2016 and a validation workshop on 16 December 2016, both by Jos Leeters in close cooperation with CBI and the EKN in Beirut.

In preparation of the field trips, a series of interviews was conducted in the EU market:

- Importers: assessing their supply chains and sales channels (key trade partners and their relations with them), (perceived) risks and challenges in their supply chain, constraints that hinder their import activities;
- Other key actors in the value chain, either in the Netherlands or other end market(s) (e.g. agents, wholesalers, etc.).

During the field trip itself, information was gathered from and interviews were held with, amongst others:

- The target companies (SME exporters): assessing their supply chains, sales channels and business environment and other key stakeholders in the private sector, such as packers and exporters;
- Key stakeholders from the institutional environment: key local and international influencers (e.g. local government agencies and ministries, standard bodies, etc.) and supporters (e.g. IDAL, national and regional Chambers of Commerce and any other relevant organisations, including donors;
- Technical input suppliers (such as seed companies) and commercial service providers.

Please refer to Annex 1.2, for a full list of interviewed people in Lebanon and in the Netherlands.

USAID and the International Labour Organisation (ILO) have conducted several relevant value chain assessments in recent years (see reference in Annex 1.1). These studies can be viewed as an integral part of this underlying CBI analysis, which aimed to build upon their work. Where applicable, results are included or reference is made.

## 1.5 About CBI

The Centre for the Promotion of Imports from Developing Countries (CBI) contributes to sustainable and inclusive economic development in developing countries through the expansion of exports from these countries. It does so by offering an integrated approach which entails involving many different stakeholders in its work, from Small and Medium-sized Enterprises (SMEs) to Business Support Organisations, governments and international organisations. In this way CBI can tackle many different issues that impede exports.

① <http://cbi.eu>

CBI is part of The Netherlands Enterprise Agency (RVO). RVO enhances private sector development by offering different instruments and intervention types, targeting SME's from developing countries and emerging markets.

① <http://english.rvo.nl/>

## 1.6 Guide for the reader

The main report starts with Chapter 3, providing an overview of general features and trends of the fresh fruit and vegetables sector in Lebanon, including the main actors, supporters and influencers in the local value chain. Chapter 4, subsequently highlights the most significant characteristics and developments in the European market with special attention to the position of Lebanon and its main competitors in the market. Chapter 5 summarizes the preceding two chapters by means of a visual picture of the whole value chain, with all parties involved from the production on the fields in Lebanon to the consumer in the European market.

In Chapter 6 and 7, the bottlenecks and risks for the Lebanese fruit and vegetables sector as a whole are described.

The following five chapters (Chapters 8 to 12), focus in on the initially identified products with export potential. Per product, market conditions and the structure and governance of each value chain are described in detail, followed by an overview of the specific bottlenecks, risks and opportunities for that product.

The report concludes with an overview of donor programs that have been and still are active in the Lebanese fruit and vegetable sector (Chapter 13). Finally, our conclusions are formulated and a way forward is mapped through possible solutions and recommendations for support actions in Chapter 14.

## 1.7 List of abbreviations and acronyms

ARDP	Agriculture and Rural Development Programme
BRC	British Retail Consortium
BSCI	Business Social Compliance Initiative
BSO	Business Support Organisation
CBI	Centre for the Promotion of Imports from Developing Countries
CSR	Corporate Social Responsibility
dunam	1.0 dunam = 0.1 hectare = 1,000 m <sup>2</sup>
EFTA	European Free Trade Association
EKN	Embassy of the Kingdom of the Netherlands
EU	European Union
EC	European Commission
ECR	Efficient Consumer Response
ETI	Ethical Trade Initiative
FAO	Food and Agriculture Organisation
FCCIAL	Federation of Chambers of Commerce, Industry and Agriculture of Lebanon
FFV	Fresh Fruit and Vegetables
GAFTA	Greater Arab Free Trade Area
GAP	Good Agricultural Practices
GCC	Gulf Cooperation Council
GoL	Government of Lebanon
GMP	Good Manufacturing Practices
GSCP	Global Social Compliance Programme
ha	1.0 hectare = 10,000 m <sup>2</sup>
HACCP	Hazard Analysis and Critical Control Points
IDAL	Investment Development Authority of Lebanon
IFS	International Featured Standard
ILO	International Labour Organisation
IPM	Integrated Pest Management
LARI	Lebanese Agricultural Research Institute
LBP	Lebanese Pounds
LIVCD	Lebanon Industry Value Chain development project (by USAID)
MAR	Market Access Requirements
MoA	Ministry of Agriculture
MoET	Ministry of Economy and Trade



Mol	Ministry of Industry
MRL	Maximum Residue Level
PUM	Netherlands senior experts
RMF	René Moawad Foundation
RVO	Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland)
SMEs	Small and Medium-sized Enterprises
SPS	Sanitary and Phytosanitary
UAE	United Arab Emirates
UNHCR	United Nations High Commissioner for Refugees
USAID	United States Agency for International Development
VCA	Value Chain Analysis

## 2 Management summary

Lebanon has a good climate and long traditions in agriculture and food. It is a net exporter of fresh fruit and vegetables. The value of yearly imports is around € 185 million, while the yearly export is worth around € 225 million, equal to around 500,000 tonnes. The majority of Lebanese exports of fresh fruit and vegetables is consumed by countries in the Middle East, in particular the Gulf states. Exports to this region faces challenges since the Gulf markets gradually opened for global suppliers in recent years and Lebanon lost competitive advantages. Lebanese exporters have strong arguments to diversify their markets and Europe could be an interesting export destination. However, it faces difficulties to meet the strict requirements on the European market.

The Syrian crisis, resulting in a high influx of Syrians in Lebanon, puts a burden on the Lebanese society and its economy. Since the crisis, traditional export routes within the region are poorly available or more expensive. Therefore, the Embassy of the Kingdom of the Netherlands has initiated this Value Chain Analysis to research the opportunities to increase exports of Lebanese agricultural products to the EU market. Export promotion, especially in the agricultural sector, is expected to boost the local economy and thereby create more chances for locals and refugees.

### **The European fresh fruit and vegetables market**

The main characteristics and trends in the European markets for fruit and vegetables are:

- In terms of volumes the market is big and still shows growth, but at the same time the market is highly competitive and tough to enter;
- Large supermarkets dominate sales and distribution and require high food safety and quality levels and strict logistical procedures. Three supermarket segments can be distinguished: premium, mid-range and low price. All of them work with high standards;
- Smaller retail formulas and street markets are facing difficulties due to long lasting price competition and less favourable advantages of scale;
- Relevant consumer trends are 'health', 'pure and natural', 'convenience' and at the same time 'low price'. Influx of immigrants results in a growing demand for ethnic niche assortments.
- Furthermore European consumers value social and environmental issues; therefore buyers prefer to work with certifications with Corporate Social Responsibility (CSR) impact.
- In trade and logistics there is an ongoing tendency of retail concentration and at the same time importers consolidate and specialize to become preferred suppliers for these retail chains. It means that supply lines are becoming shorter and more efficient and contact between producers, traders and retailers is becoming closer.

Lebanon's main competitors on the European market are the Mediterranean countries Spain, Italy, Israel, Turkey, Morocco and Egypt, mainly because of rather similar climatic conditions and seasonality. Furthermore South Africa and Latin American countries (southern hemisphere) supply the European market.

### **The Lebanese value chain of fresh fruit and vegetables**

Generally speaking the production and postharvest practices in the Lebanese agriculture have a small scale and lack the capacity to produce volumes and qualities for high-end markets. Quality is not consistent, hardly any production is under Global GAP certification and the cold chain is broken, resulting in high postharvest losses. Market intelligence with respect to trends and buyer requirements in the European market is weak, all over the sector. Furthermore the domestic market structures are immature / not transparent and the private public environment is not supportive.

All these factors do not leave much space for sustainable exports of large volumes to Europe. However, European buyers have an open mind for new suppliers with something special. Lebanon has intrinsic opportunities for certain (small) windows in the fruit and vegetables market. And there is a group of larger producers / exporters with the motivation and capacity to realise these exports.

## Opportunities

Lebanon has the best opportunities in specialty (niche) markets, under the precondition that strong and smart marketing communication (story-telling) with attention for the added value of Lebanese produce can be provided. Specific opportunities for the value chains in this study are:

- **Table grapes:** a potential window is late in the European season: after October and before the peak of South African supply in December. Europe prefers seedless grapes.
- **Avocados:** European demand is expected to show continuous growth in the coming years. There is a preference for Hass. Competitiveness is the highest in the first months of the year.
- **Citrus:** there is an interesting window for (Valencia) oranges in the summer (June – September), after Spain leaves the market and in the start of the South Africa supply season.
- **Potatoes:** the European potato market is too competitive and too difficult for big expectations; only specialties, with high quality and marketed under premium branding, have a chance.
- **Other (smaller) products:** Lebanese traders who export table grapes, avocados, citrus fruit and/or potatoes, usually also export other products. Cherries, stone fruit, nuts as well as some other small vegetables and fruits may find (narrow) windows in the European market channels.

## Needs for improvements in the value chain

There is a strong need to improve the organisation and quality of the supply chains from farmer (cultivation, certification), to handling (postharvest practices, certification), to exporter. Reaching larger scale and better professionalism is crucial, which can be achieved among others through the establishment of more and better cooperatives or alternative models to join forces and consolidate product volumes. Another approach is stimulating and supporting large enterprises who can guide the sector towards high-end markets in the role of service companies that provide technical services, Integrated Pest Management (IPM), certification, knowledge, training etc. to affiliated (small) farmers. Furthermore it is necessary to improve the cold chain infrastructure by initiating investments in packing houses and cold storage facilities.

There is also a strong need to develop a national (export) marketing strategy for fruit and vegetables and a roadmap for the public and private sector with attention for the national product calendar, for determination of the priority crops and unique selling points as well as a branding strategy and a branding plan. Recommended elements of such a national strategy are:

- identify specialty segments in high end markets and focus less on delivering ethnic markets, which usually have a low-quality and low-price character;
- choose table grapes and avocado as the leading crops and the foundation for the export strategy; let other crops follow in their slip-stream;
- use the outstanding taste of Lebanese agricultural produce as an added-value factor;
- stimulate organic production and aim to adding organic as the other added-value factor;
- invest in Europe but at the same time work hard to improve the channels towards GCC markets;
- include the Lebanese diaspora all over the world in marketing and distribution operations.

As a crosscutting approach, knowledge dissemination is indispensable and requires efforts from the public and private sector. Capacity building and training should focus on technical assistance and training all over the supply chain in order to introduce and support modern technologies and methods and should also focus on knowledge on market trends and buyer requirements in Europe.

## Private public environment and donor coordination

It is recommended to enhance more and better linkages between the private and public sector and make use of private public partnerships that contribute to both improved infrastructure (investments in production technology and cold chain) and an improved knowledge infrastructure. It is important that the quality and effectiveness of agricultural research, agricultural extension and agricultural (practical) education) will be strengthened.

A structural donor coordination with the actors that have an agenda in the fruit and vegetables sector (in particular EKN, EU Delegation and Expertise France, Food and Agriculture Organisation (FAO), Italian Cooperation and USAID) is highly recommended.

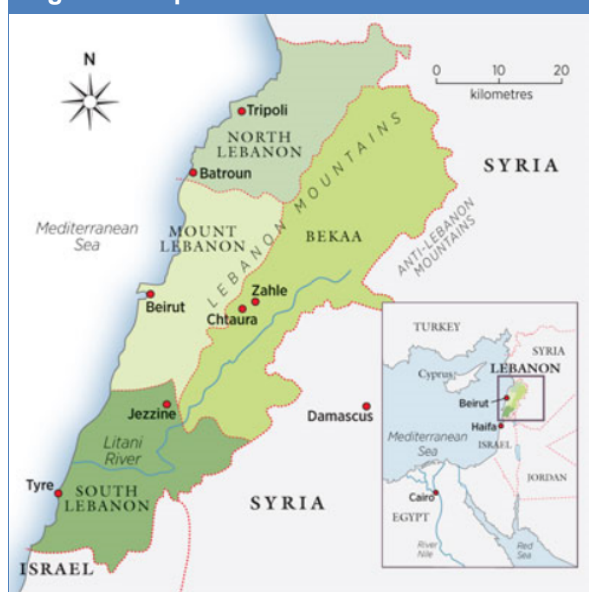
### 3 The fresh fruit and vegetables sector in Lebanon

#### 3.1 General features and trends of the Lebanese fresh fruit and vegetables sector

The Mediterranean climate in Lebanon along with fertile soils and relatively good availability and quality of water are favourable for fruit and vegetables production. Lebanon has 6 main crop production regions :

1. Coastal strip: citrus, banana, vegetables, grapes
2. North / Akkar plain / upper Mount Lebanon: cereals, potatoes, grapes and vegetables
3. Bekaa valley: potatoes, grains, fruits and vegetables
4. Mountainous regions: orchards and vegetables
5. Western slope of Anti Lebanon range: grapes, olives and cherries
6. Southern hills: olives, tobacco, almonds and grains

Fig 1: Map of Lebanon <sup>2</sup>



Fruit and vegetables constitute the widest agribusiness sub-sector of Lebanon, in terms of production area and volume, socio-economic inclusiveness, rural development and livelihood enhancement (European Commission 2016).

Benefiting from a Mediterranean climate, a wide assortment of fruit and vegetables are produced in the country. With a total production of 405 thousand tonnes, potato ranked first in the top ten commodities produced in Lebanon in 2013. Tomato production ranked second with a volume of 320 thousand tonnes in 2013 followed by cucumbers, apples, wheat, bananas, oranges, olives, onions, and grapes.

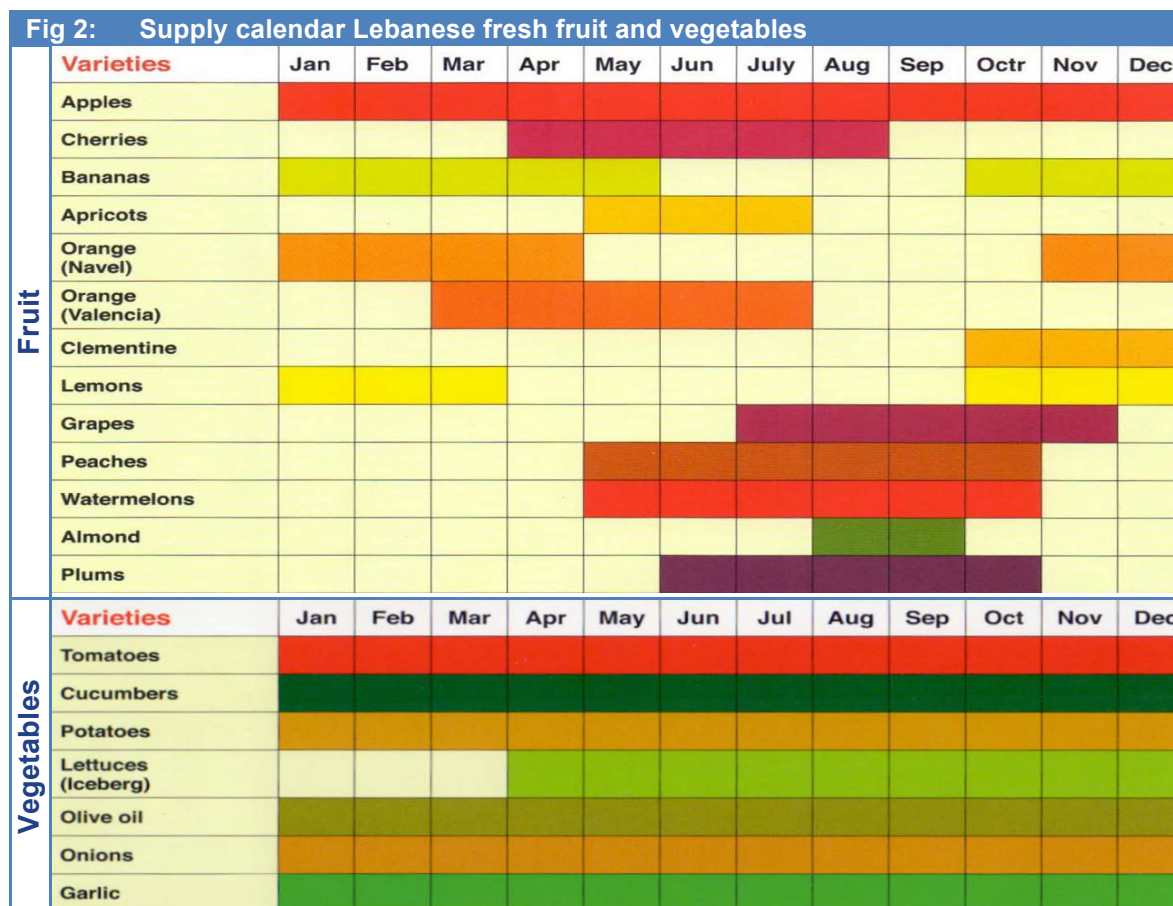
The Bekaa is the most productive agricultural area but many of the other regions of the country contribute to the agricultural economy in a significant way. The multitude of micro climatic zones and the widespread use of greenhouses allows for great diversity in the production of fruits and vegetables. However due to low productivity and inefficiencies in the value chain, Lebanon is not meeting its potential for both responding to domestic demand and supplying the entire Middle East with fruit and vegetables (FAO 2011).

Generally speaking the production and harvest cycles of fruit and vegetables in Lebanon are similar to (Southern) Europe. Various micro climates from north to south and from sea level to the mountain slopes, allow vegetable harvests over a long season, though not year round. In the winter season production only can be done in greenhouses. Storage (especially for potatoes, cabbages and onions) makes it possible to offer year round supply. Fruits are harvested in smaller windows; only apples are stored for longer periods, allowing year round supply.

Reliable up-to-date statistics of production areas of agricultural crops are not available. The total agriculture land area is estimated at 332,000 hectares, of which 231,000 hectares are cultivated and almost half are irrigated (census 2010), with an average land holding size of 1.36 ha (Ministry of Agriculture, 2014).

<sup>2</sup> The map of Lebanon shows the administrative division of Lebanon in its Governorates, which doesn't follow the division in production regions, based on factors as altitude and microclimate.

The supply calendar of Lebanese key fruit and vegetables is shown in a brochure of the Ministry of Agriculture:



Source: Ministry of Agriculture – Brochure Lebanese Fresh Fruit & Vegetables

Some figures of production volumes from various sources up to 2013 are shown in Table 2.

Table 2: Production volumes for main fruit and vegetables crops in 1,000 tonnes in 2013			
Fruit		Vegetables	
Apple	155	Potato	405
Banana	125	Tomato	320
Orange	115	Cucumber and gherkin	175
Peach, apricot, plum, cherry	109	Onion, garlic and leek	100
Grape	92	Lettuce and chicory	58
Lemon and lime	82	Eggplant	44

Source: European Commission (2016)

### 3.2 Lebanon exports

According to Trademap figures, total Lebanese exports of fruit and vegetables (HS07+HS08) reached € 107 million in 2014<sup>3 4</sup>. Since 2011 (€ 84 million), exports have increased about 9% on average per year. Fruit exports account for about 58%, while vegetables represent the remaining 42%. The share of fruit has been increasing gradually.

<sup>3</sup> Trademap statistics indicate that total fruit and vegetable exports reached € 225 million in 2015. However, these data are based on the partner reported data (Mirror data) and seems not accurate.

<sup>4</sup> Various sources in Lebanon expect that real trade figures are at least 2 times higher than official statistics because it is common that only 1/3 to 1/2 of real values are being registered at customs.



Lebanon has signed bilateral and multiple trade agreements with many Arab and European countries as part of its trade liberalisation agenda. It is a signatory to 54 bilateral agreements for the promotion and protection of investments. Adoption of trade liberalisation policies is part of the Lebanese comprehensive economic strategy to integrate further into global economy:

- Euro-Mediterranean Partnership Initiative, 2002; involved (other) countries are: Algeria, Egypt, Israel, Jordan, Libya, Morocco, Palestine, Syria, Tunisia, Turkey. See also <http://ec.europa.eu/trade/policy/countries-and-regions/regions/euro-mediterranean-partnership/>;
- Lebanon signed its Association Agreement with the EU in 2002, entering into force in 2006;
- Free Trade Agreement with the European Free Trade Association (EFTA), 2004;
- Member of the Greater Arab Free Trade Area (GAFTA), 2005: As a GAFTA member Lebanon receives full exemption of tariffs on all agricultural and industrial goods traded between the 17 Arab member countries, since January 2005;
- Lebanon is in the process of negotiations to join the WTO.

Though it is hard to quantify, trade agreements are considered to have a positive impact on export market access and actual trade (ILO 2015, IDAL 2016b). Lebanese industrial as well as most agricultural products benefit from free access to the EU market. However, there is not a positive sentiment with respect to this agreement. It is a common thought that the EU agreement benefits the EU more than Lebanon as the enormous gap between imports from the EU and exports to the EU has not been closed yet.

In general, GCC markets have significant demand for Lebanese fresh produce because of relative ease of access (over land), lower quality requirements, historical presence of a large Lebanese community living and working in the GCC, greater name recognition, lack of domestic substitutes and lower cost of shipping (USAID 2014b).

The logistic infrastructure in Lebanon for exports over land, sea or by air is adequate:

- roads are reasonable and do not hinder basic transportation of agricultural goods to the market;
- normally the land borders with Syria give access not only to Syria itself but also to all countries in the Middle East; Because of the border closures since 2013, alternative transportation routes have been found, mainly by ship;
- sea shipments for exports of agricultural goods leave the country through the ports of Tripoli or Beirut. Facilities are reasonable to good, especially in Beirut. Through Chinese support and involvement the port of Beirut became a professional operation; reefer containers are shipped through the port of Beirut (in 2017 also from Tripoli) and reach the Gulf region in about 20 days (a similar timeframe as shipments to Europe);
- trucks can use roll on - roll off boats in Tripoli; the shipping time to Aqaba (Jordan) is three days;
- air shipments leave the country through the international airport in Beirut.

## Fruit

- The leading fruit export product is apples, which showed stable exports until 2014. The main destination market for Lebanese apples is Egypt with about 70% of all Lebanese apple exports in the past couple of years. The rest is mainly exported to the Gulf states.
- Oranges are the second largest export fruit and are exported primarily to the Gulf region. This and other citrus fruit are discussed in more detail in Chapter 10.
- Exports of fresh grapes have been growing steadily and reached exports of more than € 10 million last year. Fresh grapes are exported to a diverse portfolio of markets, with leading buyers in Saudi Arabia, Germany, Iraq and the UK. More about fresh grapes in Chapter 8.
- Other export fruits that have been growing strongly are apricots, plums, cherries, bananas and avocados (especially since 2015). Avocados are described in Chapter 9.

### Colour coding in all below tables:

- Green** = substantially increasing (at least +10% on average per year)
- Black** = relatively stable
- Red** = substantially decreasing (at least -10% on average per year)

**Table 3: Lebanon fresh fruit (and nuts) exports (HS08): main products**  
In 1,000 euros

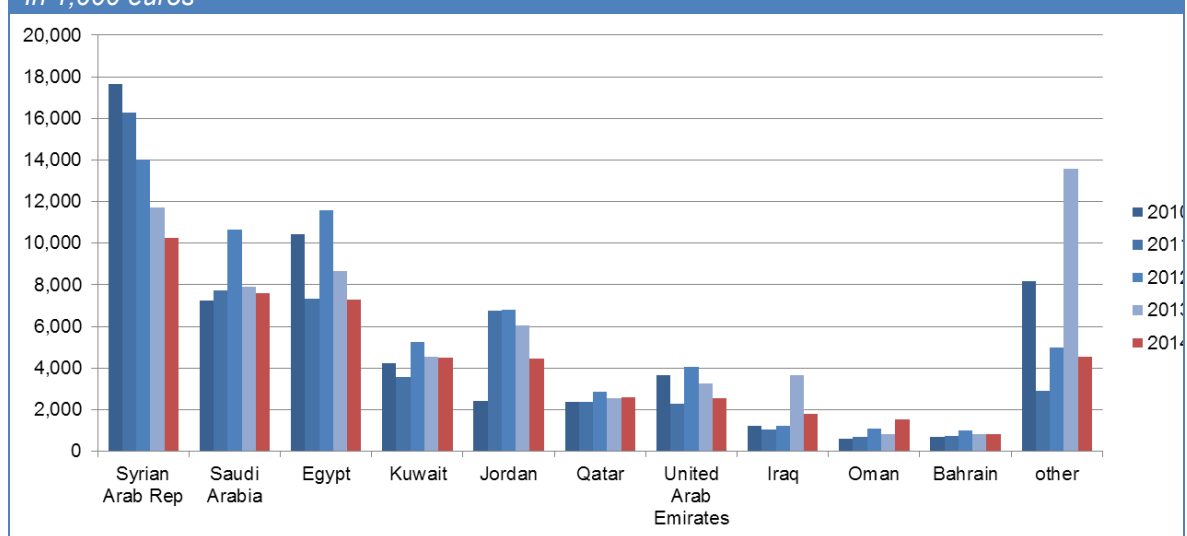
Code	Product label	2011	2012	2013	2014	2015*
	Total fresh fruit exports	51,711	63,469	63,640	47,873	129,158
'080810	Fresh apples	9,708	14,926	11,182	9,336	44,495
'080510	Fresh or dried oranges	9,328	9,607	5,474	6,211	13,447
'080610	Fresh grapes	3,248	5,219	5,381	5,508	10,133
'081090	Fresh tamarinds, cashew apples, jackfruit, lychees, sapodillo plums, passion fruit,...	2,008	2,008	1,544	1,618	8,823
'080930	Fresh peaches, incl. nectarines	2,603	2,420	2,754	1,381	8,571
'080910	Fresh apricots	452	800	718	284	7,632
'080940	Fresh plums and sloes	845	1,331	1,250	859	6,772
'080921	Fresh sour cherries "Prunus cerasus"	-	1,222	451	1,199	4,559
'080929	Fresh cherries (excluding sour cherries)	-	920	1,027	817	4,489
'080520	Fresh or dried mandarins (incl. tangerines and satsumas, clementines, and similar)	1,865	2,125	1,644	2,047	4,364
'080390	Fresh or dried bananas (excl. plantains)	-	8,769	11,058	6,846	4,081
'080830	Fresh pears	-	1,763	1,389	735	2,186
'080440	Fresh or dried avocados	251	414	443	339	1,505
'080310	Fresh or dried plantains	-	4,500	1,866	2,507	1,496
'080211	Fresh or dried almonds in shell	140	167	291	207	1,299
'080550	Fresh or dried lemons and limes	7,693	2,351	3,619	2,915	981
'080410	Fresh or dried dates	847	548	605	762	854
'081350	Mixtures of nuts or dried fruits	78	42	109	367	664
'080290	Nuts, fresh or dried (excl. coconuts, Brazil nuts, cashew, ...)	429	1,010	9,474	809	659
'080540	Fresh or dried grapefruit	388	425	365	323	623

\* 2015 data based on the partner reported data (Mirror data).

Note: see Annexes A3 for full list of export products.

Source: Trademap (2016)

**Fig 3: Lebanese fruit exports (HS08): main markets**  
In 1,000 euros



Source: Trademap (2016)

## Vegetables

- The leading export vegetable is potatoes, reaching € 56 million exports in 2015, grown threefold since the € 15 million in 2011. More details about potatoes can be found in Chapter 11.

- Exports of cabbage lettuce has also increased threefold in the past 5 years, reaching € 12 million last year. Lettuce is almost exclusively exported to the Gulf region.
- Note that the sudden booms in exports of “Leeks and other alliaceous vegetables”, seed potatoes and sweet potatoes seem a statistical error (not replicable by other sources).
- Other vegetable export products showing strong increases are beans and cabbages, with strongest growth in exports to the Gulf region.

**Table 4: Lebanon fresh vegetable exports (HS07): main products**  
In 1,000 euros

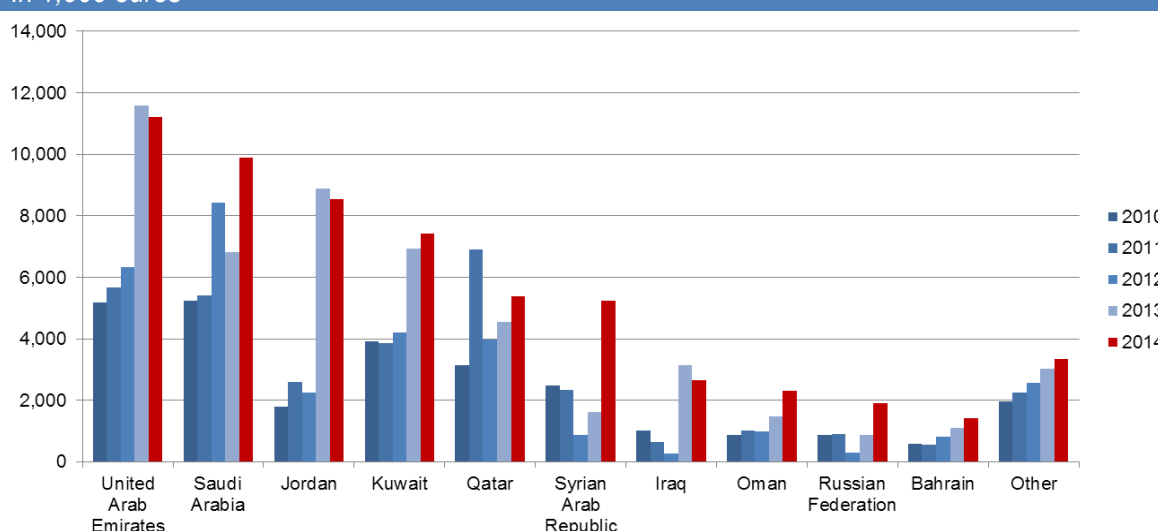
Code	Product label	2011	2012	2013	2014	2015*
	<b>Total fresh vegetable exports</b>	<b>32,144</b>	<b>31,008</b>	<b>49,989</b>	<b>59,344</b>	<b>95,398</b>
'070190	Fresh or chilled potatoes (excluding seed)	14,837	12,118	27,629	36,694	56,278
'070511	Fresh or chilled cabbage lettuce	4,887	6,402	8,857	2,538	12,396
'070390	Leeks and other alliaceous vegetables	3	2	-	1	6,908
'071350	Dried, shelled broad beans and horse beans	683	252	381	586	2,941
'070999	Fresh or chilled vegetables n.e.s.	-	1,858	1,497	1,515	2,784
'070110	Seed potatoes	157	-	-	1	2,776
'070310	Onions and shallots	2,113	1,355	2,782	3,048	1,792
'070820	Beans	230	307	349	349	1,587
'070200	Tomatoes	546	811	1,126	1,085	1,504
'070490	Cabbages, kohlrabi, kale and similar edible brassicas (excl. cauliflowers)	113	103	249	128	1,240
'070700	Cucumbers and gherkins	337	532	550	647	680
'070930	Aubergines "eggplants"	322	430	385	391	538
'071320	Chickpeas	571	352	297	287	524
'071420	Sweet potatoes	-	1	11	2	505
'071340	Dried, shelled lentils	429	414	337	418	490
'071290	Dried vegetables and mixtures of vegetables	95	142	288	342	310
'070810	Peas	57	98	111	286	300
'070890	Leguminous vegetables	108	264	193	331	265
'070960	Capsicum or Pimenta	296	282	301	310	258
'070993	Pumpkins, squash and gourds	-	289	286	302	135

\* 2015 data based on the partner reported data (Mirror data).

Note: see Annexes A3 for full list of export products.

Source: Trademap (2016)

**Fig 4: Lebanese vegetable exports (HS08): main markets**  
In 1,000 euros



Source: Trademap (2016)

### 3.3 Lebanon imports

Imports of fruit and vegetables amounted to € 185 million euro in 2015. Fruit imports have been increasing over the past years, while Lebanese vegetable imports decreased slightly.

**Table 5: Lebanon fruit and vegetable imports (HS07 and HS08)**  
In 1,000 euros

Code	Product	2011	2013	2015*	Average annual growth
HS08	Total fruit and nuts imports	82,820	112,788	96,080	4.0%
HS07	Total vegetable imports	100,373	102,972	89,341	-2.7%
	Total FV	183,193	215,760	185,421	0.3%

\* 2015 data based on the partner reported data (Mirror data).

Source: Trademap (2016)

The bulk of Lebanese imports consist of nuts such as almonds, walnuts, chestnuts and cashew nuts. Important suppliers of nuts are Iran and the USA. Saudi Arabia is an important supplier of dates. Vietnam is the leading supplier of cashew nuts to Lebanon. Nut imports are growing steadily, except for cashew nuts.

Fresh fruit imports are actually quite small with only mango/guavas, kiwifruit and apples reaching the top-10 imported products.

Potatoes, chickpeas, garlic and lentils are the main vegetable items imported into Lebanon. In the past, Saudi Arabia was the leading potato supplier, but lately this position has been taken over by Egypt. Potato imports are typically highest during low local production season. Mexico and the USA are the leading suppliers of chickpeas. Garlic is imported primarily from China.

**Table 6: Lebanon fresh fruit (&nuts) imports** In thousand euros

Code	Product label	2011	2013	2015
'080212	Almonds	16,675	18,911	35,396
'080232	Walnuts	4,212	7,401	9,267
'080410	Dates	6,513	9,140	6,791
'080241	Chestnuts	-	3,551	6,316
'080132	Cashew nuts	16,161	18,253	6,072
'080450	Guavas, mangoes	2,043	3,469	5,305
'080222	Hazelnuts	2,571	3,651	4,910
'081050	Kiwifruit	454	1,318	2,888
'080810	Apples	673	634	1,807
'080231	Walnuts	795	547	1,502
	other	32,723	45,913	15,826
	Total	82,820	112,788	96,080

Leading supplying countries:

Iran, USA, Vietnam, Turkey, Saudi Arabia, Ukraine.

**Table 7: Lebanon fresh vegetables imports** In thousand euros

Code	Product label	2011	2013	2015
'070190	Potatoes	18,999	19,110	14,223
'070110	Seed potatoes	17,754	13,501	14,007
'071320	Chickpeas	9,588	10,515	10,196
'070320	Garlic	3,446	2,895	8,737
'071340	Lentils	8,586	7,384	7,429
'071080	Frozen vegetables	1,592	1,832	4,843
'071350	Broad beans	2,717	4,972	4,525
'071333	Kidney beans	3,012	3,791	4,131
'070310	Onions	4,639	5,049	3,320
'071290	Dried & mixtures of vegetables	1,597	2,264	2,481
	other	32,723	45,913	15,826
	Total	100,373	102,972	89,341

Leading supplying countries:

Egypt, Syria, Netherlands, China, Canada, Australia.

Note: 2015 data based on the partner reported data (Mirror data).

Source: Trademap (2016)

### 3.4 Structure and governance in Lebanese fresh fruit and vegetables value chains

This paragraph gives overall insights in the way how the Lebanese value chains of fresh products function and which parties are involved. Sub-paragraphs deal with an overview of:

- the actors in the chain in Lebanon: those private parties that have a subsequent position in the value adding process from seed to domestic shelf or to export destinations;
- the supporters in the chain: those parties that support the value chain in a commercial way (technical suppliers and service providers) or institutional way (business support organisations, trade associations, education, etc.) as well as (international) donors;
- the influencers in the chain: parties from the institutional environment such as local and national governments and the international politics.

Specific elements regarding the value chains for table grapes, avocado, citrus and potato, are described in the chapters 8, 9, 10 resp. 11.

### 3.4.1 Chain actors

#### Producers

- Farm types range from hobby, small, medium to large. According to the 2010 agriculture census the number of farmers (holders) was about 170,000 (8.6% females) with an average age of 52 years (55 for females). The average size of a farm is 1.36 ha (Ministry of Agriculture, 2014).
- Depending on the scale of farming, location, and farmers' preferences, production from small and medium sized farms will often be aggregated by a "daman", a typically large or medium scale farmer who purchases from other farmers in his or her area, though some work strictly as traders. Damans aggregate products and sell at wholesale markets, to exporters, or they can act as a distributor or exporter themselves. The daman-system is common in fruit production; they buy the crop 'on the wood', usually at 15-25 percent less than the farm gate price, and they cover the actual harvesting and packaging which is usually done in the field (USAID 2014b).
- The Lebanese fruit and vegetables production sector is in a process to become market oriented. On a seasonal basis fruit and vegetables are self-sufficient. Producers work on expansion of the supply season through new varieties and better cultivation and postharvest practices. Only in the off-season demand is larger than supply. Exported products are generally grown specifically for exports and concern mostly specific (often short) seasons (windows) in export markets.

#### Wholesale markets

- There are seven main wholesale markets in Lebanon and two smaller ones, covering all production regions from south to north. Their role and function is rather similar, although they show differences over the regions and even over the seasons. Wholesale markets in the production regions (such as in Akkar and the Bekaa) are typically consignment markets that connect local supply with domestic outlets and export markets. Outside the production season, these markets change into trade markets, supplying the regional markets with mainly imported produce. That also counts for the Beirut market.
- All wholesale markets are run and managed as a private business. Generally speaking the facilities are poor to moderate and the price-setting mechanism is far from professional and transparent. Most of the trade is done on consignment. The official commission fee for merchants is 7 to 10% on the sales value. There is no system of quality regulations at national level, nor at wholesale market level..

#### Domestic distributors

- In fresh produce value chains, distributors buy from wholesale markets and from importers and then distribute to the local retail market and restaurants and catering operations. Usually on a regular schedule. Those who sell to fresh F&V stores and small groceries, usually cover 5 to 6 of these stores. The distribution mark-up is 10%-15% (USAID 2014b).

#### Packers / exporters

- About 40 to 50 exporters are active in the Lebanese fruit and vegetables sector. They mostly source their products from wholesale markets and/or direct from farmers (possibly damans). Only a few (larger) producers in the country have an export position by themselves.
- The majority of packers / exporters also supplies the domestic market. There is only weak awareness and readiness to supply high-end markets such as in Europe. Less than a handful has organised a proper supply chain and is able to meet export market requirements, such as operating according to Global GAP and GMP (HACCP, Hazard Analysis and Critical Control Points) practices.
- Exporters are not used to cooperate in export marketing. They may come together in meetings with IDAL, their Chamber of Commerce or in their Syndicate, however there is hardly any cooperation in the business as such.
- Syria always has been a big export market for Lebanon. Formal trade is blocked now because of the war, but informal trade continues. Figures are not available.



- Export to the Gulf states (GCC) is substantial and is mainly based on family dynasties with solid connections in the Gulf. However they face serious problems since the GCC market is faced with substantial supply from other countries, especially since the Russian ban on imports of fresh produce, European suppliers, but also produce from the Far East, India, Pakistan and North Africa appear to be very competitive, which diminished the competitiveness of Lebanon. So exporters have strong arguments to diversify their markets and develop channels in Europe.

### Processors

- Processors play an important role in fresh value chains, as they purchase products that are not suitable for sale in the export and retail markets and process them and/or they add value.

### Domestic retailers

- The domestic market showed a fast development during the last two decades with an increasing number of retail outlets, particularly super- and hypermarkets. It is expected that the growth will continue. Nowadays 10 supermarket chains have a position in the market, a mixture of domestic and international enterprises: Admic, Bou Khalil, Carrefour, Fahed Supermarket, Goodies, Le Charcutier, Monoprix, O&C, Spinneys and, The Sultan Center – TSC. Because of the fact that around 50% of the Lebanese population lives in Beirut and Mt. Lebanon, the density of supermarket outlets is relatively high in this part of the country.

## 3.4.2 Chain supporters

### Farmers cooperatives

- Cooperatives are established as tools to assist in production at the farm and supply chain levels, to reduce costs and improve conditions for market access. According to the Ministry of Agriculture (MoA), there are currently around 1,350 registered cooperatives in the country including farmers cooperatives. They all have a legal status monitored by the MoA and receive some tax exemptions and/or subsidies. During the last two decades there was intensive financial and technical support for such cooperatives from both national and international organizations. Still they face many problems (lack of know-how, technology and finance) (European Commission, 2016). It seems only few of them benefit from the fact that farmers join forces in a cooperative.
- Almost every village has a local agricultural cooperative, nevertheless functional cooperatives are rare. Most of the cooperatives are created to get better access to support from different organizations and institutes, rather than to have a development objective for a certain value chain or market. Many of the cooperatives are active in ensuring training for farmers in specific fields (pruning, pest control, etc.), but rarely tend to develop marketing activities or empower farmers to be competitive on the market or to get inputs at lower prices (economy of scale) (ILO 2015).

### Input suppliers

- Seeds, rootstock and other planting materials: these inputs are well available in the Lebanese market. Suppliers often have business connections with international breeders. In general, getting seeds and plant materials is not a problem for farmers.
- Chemicals and fertilizers: agricultural chemical providers deal in fertilizers and pesticides and sell to farmers. These firms serve a variety of crops. In the Bekaa alone, over 75 suppliers are registered (USAID 2014b).
- More than 90% of input sales are made on credit, as farmers need supplies at the beginning of the season, but are unable to pay until harvest time. Thus, input suppliers provide farmers with loan facilities to cover the costs at the start of the season. Pesticides and liquid fertilizers amount to approximately 15 to 20 percent of the cost of production (USAID 2014b)
- Cold storage providers: there are 45 commercially available cold storage facilities in Lebanon, Despite the availability of cold storage, the facilities are inadequate in terms of capacity and quality of refrigeration (USAID 2014b).

## Certification bodies

High-end markets require evidence of proper production and processing. Especially food safety but also social and environmental factors are relevant. For advice, auditing and issuing of certification schemes such as Global GAP and GMP (BRC, IFS, HACCP) certification bodies offer their services. Normally these certifiers are being hired by the enterprises that require a certain certification (i.e. producer, packer, exporter). However, in immature sectors, which is the case in Lebanon and many other developing countries, it is common that donors or governments give support to chain actors and pay certifications by directly hiring certifiers. Usually That is for the start-up phase, which means only for the initial certification. Renewal of the certificate from the second year onwards, then comes to the account of the company itself.

In Lebanon the following certifiers that work on international levels, are active:

- Bureau Veritas (Global GAP);
- TUV (Global GAP);
- IMC (organic production; it also promotes Integrated Pest Management (IPM) methods).

## Banks / financing / insurance

- Although the commercial banking sector in Lebanon is one of the most advanced in the region, with 54 commercial banks, 10 specialised banks, 23 Multiple Finance Companies and leasing offered through retailers and manufacturers, lending to agriculture is limited. Common problems are the mismatch between terms and conditions of available loan products and the needs and capacities of farmers and exporters, including high interest rates, high collateral requirements, and a lack of seasonal loans structured for agriculture (USAID 2014b).
- There is however a good alternative. According to several persons in the sector, financing is not even a problem in Lebanon. With a good business plan and access to the right people, loans are easy to arrange, especially through Kafalat ([www.kafalat.com.lb](http://www.kafalat.com.lb)). The Central Bank's Kafalat loan guarantee program, which is the chief program for promoting SME lending with a particular focus on agriculture, has been operating since 2007 (USAID 2014b).
- Wholesalers may act as lenders to small and medium farmers with the loans covering up to 70% of the value of the crop. Farmers use the money to cover the costs of production and harvesting. In most cases the loan includes a mutual agreement for the farmer to sell product to the wholesaler at market price (USAID 2014b).
- The research team of an ILO survey in the potato value chain noticed that farmers still prefer to borrow money from traders and not from "Kafalat", mainly for two reasons:
  - traders do not have a formal system of applying for a loan and do not require any legal documents from farmers; the relationship is based mainly on trust;
  - in case of a farmer's inability to repay his debts due to a bad crop season, the trader postpones all unpaid debts to the next crop season and still provides the farmer with all his needs from input supplies (ILO 2015).

## Business Support Organisations (BSO's)

Federation of Chambers of Commerce, Industry and Agriculture in Lebanon (FCCIAL)

FCCIAL <http://www.cci-fed.org.lb/> was established in 1997 as the national umbrella of the four regional Chambers in Lebanon:

1. Beirut and Mount Lebanon (CCIABML) – more than 15,000 members, most of which SMEs;
2. Saida and the South (CCIAS); 7,000 active members;
3. Tripoli and the North (CCIAT); 6,000 members
4. Zahle and the Bekaa (CCIAZ); 15,000 members

The regional Chambers, including the Federation are active organisations with useful services for their members. Agriculture and agro-processing are priority sectors, which results in various services, such as:

- Support members in export development and export promotion (trade fairs);
- Training and workshops on themes such as management skills, food safety, business English and financial management;

- Providing (generic) information on market access requirements and consumer needs as well as specific market information on request;
- Laboratory services (in the north, in the Bekaa and in the south);
- Technical assistance and extension;
- Matchmaking.

#### Investment Development Authority of Lebanon (IDAL)

IDAL <http://investinlebanon.gov.lb/> was established in 1994 as the national investment and export promotion agency that promotes Lebanon as a key investment destination and strengthens export competitiveness of local companies. IDAL reports to the Presidency of the Council of Ministers and has financial and administrative autonomy. It has the mandate to offer a range of incentives and business support services for investors, based on priority sectors that show the most promising opportunities in terms of their investment potential and impact on socio-economic growth. The identified sectors include agriculture and agro-industry (ILO 2015).

Export promotion services of IDAL include:

- Providing data on export markets and potential export opportunities;
- Supporting companies in accessing external markets;
- Providing technical assistance to exporters in selected fields;
- Subsidizing participation in foreign fairs.

IDAL offers the AGRI PLUS program (since 2011) for exporters and cooperatives, working with fresh produce. It consists of four key components:

- Production streamlining, to provide exporters with adequate training to improve quality of production and foster the growth of new products that meet regional and international demand;
- Packaging improvement, to support exporters in improving packaging and cooling centres to meet international norms of quality;
- Marketing and promotion, to promote the sector regionally and internationally; a visit to the Berlin Fruit Logistica is on the agenda most of the years;
- Financial support, to provide a portion of the packaging costs of exporters.

A similar program (AGRO MAP) is provided for exporters in the food industry with the opportunity to market their products in international fairs and introduce local producers to latest technology in the sector (IDAL 2016b).

Two specific financial services of IDAL are:

- 20% additional subsidy to encourage exporters to improve the quality of their products in terms of produce and packaging; any exporter who obtains an internationally recognised certificate of quality for his product along with a certificate for the packinghouse where the product is being packed, get this subsidy;
- Compensation of part of the higher costs for exporters to reach export destinations, following on the border closure with Syria: (\$40 per tonne for truck transport to the Lebanese port and little more for the sea transport).

#### Syndicates

Most fresh fruit and vegetable exporters belong to the Fresh Fruit and Vegetable Export Syndicate and most potato exporters belong to the Potato Exporters Syndicate. The mandate of these syndicates is in the field of lobby and advocacy towards the government and thereby support the whole sector. They do not offer services towards individual companies and do not show leadership in the sector.

#### **Agricultural research, extension and education**

- Extension, research and education are integrated in the agricultural development triangle of the MoA and its affiliated institutions.
- The Lebanese Agricultural Research Institute (LARI) is the organization under the supervision of the MoA that conducts applied and basic scientific research for the development and

advancement of the agricultural sector in Lebanon. LARI has at its disposal experimental stations where research projects are conducted to solve the problems facing the agricultural sector in the area. In addition to LARI's key role in testing water, soil and potatoes for export, it conducts some development activities such as the production of quality seeds. LARI also sends free SMS messages containing weather and technical information to farmers (ILO 2015).

- Agricultural extension is considered to be one of the main functions of the MoA, especially for small farmers. The service possesses an important infrastructure and good geographical coverage all over the Lebanese agricultural areas. It relies on 28 agricultural centres, 7 agricultural technical schools, and 3 agricultural service centres covering all districts. However, in practice it is a weak service. The majority of the farmers does not receive advice and most of the support in cultivation and postharvest practices is being delivered by input suppliers, who are thus in a position to control the farmers and the whole value chain. Some larger farmers hire commercial (Lebanese or international) specialists for advice. Moreover, several (international) donors include extension services in their programs.
- The weakness of the public extension system and thereby its limited effectiveness is considered as the key issue impeding the development of the different sectors and has many reasons. Among them are lack of human and financial resources and needed equipment at the agricultural centres, staff multiplicity of tasks, lack of specialisation and limited staff incentives (Ministry of Agriculture, 2014).
- Lebanon has a developed public and private university level education and a public agricultural technical education system. Moreover, Lebanon receives donor support (for instance from the EU). At the same time it is a fact that the agricultural technical education suffers from several weaknesses including the lack of interest in this field of education, insufficient budgets of the MoA, underdeveloped capacities of teaching staff, inadequate facilities and poor curricula, that do not comply with the sector requirements and market demands in terms of new specialisations. (Ministry of Agriculture, 2014).

### International donors

Various donors are active in Lebanon, both in the humanitarian field (related to the Syrian crisis) and in the private sector development, including the fruit and vegetables sector. More details about relevant actors for this sector and about their programs are shown in chapter 12.

### 3.4.3 Chain influencers

#### Government

For the last three years Lebanon was lacking a president, which created a rather instable political situation. Consequently there was no approval of budgets in the previous years for various public services. For instance IDAL was confronted with lack of staff and lack of budget approval, which had serious impact on the performance of IDAL. There is no lack of plans and ideas, but no means to realise them. In November 2016 a new president was appointed.

#### Ministry of Agriculture (MoA)

- The MoA is responsible for developing a suitable legal and regulatory framework and enhancing infrastructure development to promote investment and improve agricultural production and marketing. The MoA also plays an important role in the management of natural resources of the country (agricultural land, irrigation water, forests, fisheries, pasturelands) and contributes to rural development programmes (ILO 2015).
- The agricultural sector in Lebanon still suffers from structural weaknesses. In this context, the MoA Strategic Framework for the period 2010–2014 was formulated in December 2009, built around eight pillars setting forth interventions at central and local levels, aiming at decreasing cost of production and improving quality of agricultural products (ILO 2015).
- In 2014/2015 an update of the MoA Strategy for the years 2015-2019 was formulated under the framework of the EU funded Agriculture and Rural Development Programme (ARDP).
- The main pillars of the MoA Strategic Framework are:
  - updating and issuance of appropriate regulations;

- improving the organizational structure and role of the MoA and enhancing coordination among the public, private and civil society sectors;
- modernizing the agricultural infrastructure and increasing the efficiency of using natural resources;
- improving agricultural extension;
- enforcing control on agricultural products, inputs, forests, fisheries and hunting;
- developing value chains, and improving the quality, processing, marketing and exports of agricultural products;
- establishing a credit scheme for small and medium-sized projects;
- conserving natural resources (soil, forests, biodiversity, use of marginal lands and pasturelands, and fisheries).
- Beginning in 2012, the MoA started to encourage farmers to form cooperatives to access public subsidies for production and processing equipment. The cooperatives are also supposed to receive technical support from MoA agronomists (USAID 2014b).
- In recent years, the MoA has passed laws to improve product traceability and control pesticides residue levels in agriculture. However, implementation of these regulations is difficult, particularly because many small farmers' lots are mixed by damans. The regulations should improve the ability to hold farmers accountable for pesticide residues, increase compliance with export Maximum Residue Levels (MRLs) and improve domestic consumer confidence (USAID 2014b).

Apart from MoA, also the Ministry of Industry (MoI) and the Ministry of Economy and Trade (MoET) have mandates and responsibilities in the performance of the agricultural sector, especially to promote the interest of SMEs.

Trade policy is in the hands of the MoET, which is supported by a Trade Agreement Committee at the Federation of the Lebanese Chambers. However, there is no national or sector export strategy. The Ministry has a Trade Information Centre that provides trade statistics, import and export regulations, tariffs, trade partner search and outsourcing opportunities. A recent SME strategy refers to the establishment of a Lebanese Export Promotion Agency 'LEBEX'. The MoET confirmed this. The governance model would be a public private partnership in which the government facilitates and the private sector executes export programs (Rob van Eijbergen, 2016).

### International politics

The political situation in the region, more in particular the war in Syria, has a huge impact on the agricultural sector in Lebanon. Border limitations with Syria hinder normal trade relations with Syria and moreover hinder smooth connections with all other export destinations in the Middle East that normally can be reached by land. The other factor is the influx of refugees in Lebanon. Apart from the high number of Palestinians that have lived in Lebanon for years, now many Syrians live (and work) in Lebanon.

Lebanon, despite being the smallest of the countries neighbouring Syria, hosts the largest population of displaced Syrians. According to the data published by the Office of the United Nations High Commissioner for Refugees (UNHCR) 1,017,433 (as of 30 September 2016) displaced Syrians have registered in Lebanon since the crisis. This significant population of displaced Syrians amounts to approximately one quarter of the Lebanese population. Latest data suggests that many localities have more displaced Syrians than Lebanese host community members.

Although labour market conditions were already unfavourable prior to the Syria crisis, due to high unemployment rates, mismatches between supply and demand, and a prevalence of low quality and low-productivity jobs, the problems have been exacerbated by the Syria crisis (FAO, 2015)

While food security is not an immediate problem for Lebanese host communities at the country level, several operational areas already have a portion of their population affected by food insecurity. If the situation is not addressed and its evolution not monitored, this may lead poor households to becoming increasingly vulnerable to future shocks (FAO, 2015).



## 4 The European fruit and vegetables market

The European Fresh Fruit and Vegetables sector offers opportunities for Lebanese exporters. In this section you find information on key end market and value chain trends. Is there evidence of strong effective demand for the products? Is there unmet demand for these products? Who are the most important rivals?

The European Union (EU) is a politico-economic union of 28 member states (EU28). The European Free Trade Association (EFTA) is a regional trade organisation and free trade area consisting of four European states: Iceland, Liechtenstein, Norway, and Switzerland. The organisation operates in parallel with the EU, and all four member states participate in the EU's single market.

The information contained in this section is primarily based on CBI market reports and summarises the information most relevant for the Lebanese fruit and vegetables sector. CBI is the expert on European markets. More detailed, up-to-date and background information can be found on [www.cbi.eu](http://www.cbi.eu).

### 4.1 Segmentation of EU/EFTA markets and product groups

#### **Supermarkets dominate sales of fruit and vegetables in Europe**

- About 60-90% of produce is sold through supermarkets, depending on the product and country. The market share of supermarkets tends to be higher in North-West Europe than in Southern Europe. The largest European food retailers are the Schwarz Group (including Lidl), Tesco, Carrefour, Metro Group, Auchan, REWE Group, Edeka, Leclerc, ITM (Intermarché) and Sainsbury's. These concerns usually manage several different supermarket brands.
- Supermarkets are demanding customers, generally with more than minimal requirements on quality. Importer-wholesalers are the key to supplying them. Most of the large supermarkets have special service providers who – together with importers and local producers – attend to the smooth delivery and sourcing of good quality products.
- Most fresh produce from developing countries is traded via importers. Importers supplying large retail formulas are changing towards a lean and mean organisation. Without their own facilities (which are rented only when necessary), importers are developing towards an intermediary role between producers and retailers. Europe counts with many importers, but the market is consolidating. Supermarkets are increasingly organising integrated supply chains with a limited number of preferred suppliers or service providers. This enhances responsiveness and safeguards product quality and promotional planning. Larger importing wholesalers will also often act as service providers to the supermarkets, investing in added value services such as ripening, packaging and mixing.

#### **Difficulties for traditional stores and food services**

- Smaller retail formulas are facing difficulties due to long lasting price competition and less favourable advantages of scale.
- Street markets generally have a larger market share in Southern and Eastern Europe, but traditional ambulant sales experience the same pressure from large retailers as smaller stores.
- The out-of-home market has experienced difficulties in the years of the economic crisis (since 2008), especially restaurants. Now this segment is recovering. The market share of out-of-home varies from about 10 to 30% in the different European countries.

#### **Segment quality and quantity requirements**

All EU imports of fresh fruit and vegetables have to adhere to minimum requirements on product quality and food safety. Additionally, the supermarkets – specifically in North-West and Southern Europe – demand almost exclusively class I produce. The quality requirements for Eastern Europe, some discount supermarkets and street markets may be lower. Most supermarkets demand consumer packaging for imported produce, including the retailer label. It is common that product is

prepared and packed for the supermarket shelf in the countries of origin before shipping. A country of origin labelling is required according to EU legislation.

Supermarkets demand much larger quantities (of uniform quality) than specialised stores and street vendors. The latter are however generally supplied by domestic wholesale. To become a regular supplier to the large retail chains, timely delivery and cooperation with special promotions, as well as flexibility with regard to seasonal or growing demand are vital. Supplying through an importing wholesaler is generally the only way to achieve this status.

**Fig 5: Retail segmentation of the fresh fruit and vegetable sector**

Segment	Description	Examples
<b>1. Premium / convenience</b>	Class I and additional quality standards, minimally processed for convenience, sustainability, fair-trade, organic. These products are generally more expensive, considered more luxurious, but also have higher marketing and distribution costs. Full service supermarkets and specialist stores.	e.g. ready to eat, mixed salads, sliced fruits, organic and fair trade, green baby asparagus, off-season, exotic (on top of the complete assortment)
<b>2. Mid-range</b>	Class I and standard retail requirements. Consumers pay for good quality, although competition (especially in-season) is increasing. Supermarkets and specialist stores.	e.g. berries, in-season, sugar snaps, avocado (on top of the complete assortment)
<b>3. Low price</b>	Class I and II, low price. Main bulk products are sold in large quantities; prices and margins are generally quite low. Discount supermarkets, street markets.	e.g. common citrus, banana, green beans, in-season

*Source: CBI Market Channels and Segments (2015)*

### Major regional differences in the European market

The European market can roughly be segmented into three geographical areas with different patterns of consumption and buying behaviour:

1. Consumers in North-West Europe have the highest average purchasing power. The market has the highest demand for tropical and exotic fruit and off-season vegetables. Northwest European consumers buy most of their shopping in supermarkets. Fruit and vegetables stores are slightly more expensive than supermarkets, but carry a more diverse range of products. The role of supermarkets is set to further expand. In this segment, almost all of the produce sold is class I.
2. In Southern Europe, fruit and vegetables make up a higher share of the diet. Product quality requirements are mostly class I. Consumers have a higher preference for local traditional produce, although local supply is not sufficient to meet demand. The supermarket channel is gaining importance in these regions as well.
3. In Eastern Europe, product quality requirements are also somewhat lower (class I and class II); supermarket market share is also lower but expanding. In the long run, market growth in Eastern Europe, including higher quality and sustainable produce, is expected to be substantial. With the increase in customer quality demands comes also the increase in the importance of a quality supply chain.

### Ethnic markets

All over Europe the share of ethnic consumers (related to immigrants / refugees) is increasing. As the world is increasingly turning into a global village, culinary traditions from other continents tend to be more widely accepted by European consumers, increasing the demand for ethnic and exotic fruit and vegetables. This development is also stimulated by the steady population growth of ethnic minority groups, which have significantly increased their purchasing power over recent years. Dates, for example, can nowadays be found in almost every European supermarkets. More exotic products such as okra are particularly found in specialist grocery shops, but sometimes also in high-end supermarkets, especially in the bigger cities.

## 4.2 Market trends

Over the last five years, European consumption of fresh fruit and vegetables has been fairly stable. Major future changes in total market volumes are not anticipated. There are however a number of key trends that make this otherwise stable market very dynamic from the viewpoint of a supplier.

### Healthy living

- Health has always been a selling point for fresh fruit and vegetables. Importance of communication on health benefits will further increase, as will organic products and the further introduction of 'super fruit and vegetables'.
- Products with specific healthful characteristics (superfoods) have become more popular. Leading retailers have started to embrace these products.
- Demand for pure organic products is increasing, especially in North-Western Europe. Organic and special products are usually traded by specialized import companies.

### Niches and consumer experience

- The market for niche products is growing. Niche products are products with extra value compared to standard products. Examples are fruits from certain microclimates with more taste or vegetable varieties with specific colours, shapes, taste or nutritional value. To a certain extent Hass avocado from the highlands can be considered as niche because of their better taste and structure (more creamy).
- Niche products will continue to emerge and be provided to consumers as unique products, particularly within the high-end market. Certain target groups (such as elderly people or young children) can be specific target groups for niche products.
- In addition to new exotics, taste and experience are playing an increasingly important role.
- Consumers are willing to pay premium prices for products that have consistently good taste.
- Because product taste is an invisible quality element, story-telling and branding are needed.

### Convenience

- Convenience, smaller portion-packs and e-commerce are becoming more popular. Forerunners in North-West Europe are the UK and the Netherlands.
- Convenience food includes seedless fruit, easy peelers, products with a longer shelf life, individually sized products and pre-cut mixes. Specific trends with growth potential include ready-to-eat and ripened fruit.

### Food safety

- Food safety continues to be a key issue. Within the North-West European market, product requirements are already higher than the official EU requirements.
- Strict compliance with MRLs (maximum residue levels) and microbial contamination are a precondition for entering the EU market.
- Tracking and tracing is becoming more and more essential.
- Certification such as Global GAP (and BRC) has become a minimum standard for most European supermarkets, especially in the North-West European market.

### CSR is becoming mainstream

- Corporate Social Responsibility (CSR) and sustainability continue to gain importance. Consumers are more concerned about where products come from and how they are produced.
- Proof of social conduct includes Business Social Compliance Initiative (BSCI), Ethical Trade Initiative (ETI), Fair for Life, Global Social Compliance Programme (GSCP), Fair Trade and other similar ethical certifications. Northern (Dutch) importers and supermarkets signed an agreement which says that in 2020 only product will be sourced from suppliers with at least one social / sustainability certificate.
- Organic is difficult for retailers, but remains a good niche market. EU demand for organics is still considerable and almost all supermarket chains have a respectable organic aisle. Although still considered a niche, the organic market is expected to grow over the next years. Research

company Technavio predicts organic food and drinks will grow by a combined yearly average of approximately 7% in Europe until the year 2020. For 2015 they have identified the following top vendors in Europe: Tesco, Metro, Carrefour, AHOLD and the REWE group (CBI 2016d).

### **Regional developments in the EU and EFTA market**

- The Eastern European market is expanding. The market for more exotic fruit and vegetables in the Eastern EU is still relatively small, but emerging fast. Consumers in Eastern Europe are very price-conscious and exotic fruit and vegetables are relatively new for most consumers.
- Russian ban on EU fruit and vegetables: in August 2014, Russia announced an import ban on fruit and vegetables from the EU. This import embargo has had consequences for both the internal EU market and European exports.

### **Other trends**

- According to interviewed importers, the influx of Muslims into the EU stimulates demand for dates. Not only directly, but also the rest of the European population becomes increasingly aware of dates and the various types.

## **4.3 Trends in trade structure and logistics**

### **Importers/wholesalers**

The importing wholesale companies buy produce from abroad and resell to domestic retailers, or re-export to other countries. They take care of the necessary administrative formalities and often provide services such as (re-)packaging, ripening, transportation and logistics. These importing wholesalers provide your best access to the European markets, as they have an extended network of customers, varying from retail buying centres, domestic wholesalers to food service companies. Importers usually have longstanding relationships with customers and excellent knowledge of quality requirements, logistics and the formal administrative processes. Some wholesalers use agents to facilitate transactions.

Post-harvest treatments include sorting, grading, cleaning or washing, cutting or slicing, ripening, and packaging and labelling. The treatments depend heavily on the type of produce and the supply chain requirements. Sorting and cleaning of fruit and vegetables is always done in the country of origin, as well as packing in wholesale containers (boxes or crates). For some produce, such as banana, avocado and mango, ripening is done in the destination country.

After importing into the EU or EFTA market, some produce needs to be repacked in retail size packaging. Wholesalers and specialised companies perform this task if required by wholesalers.

### **Retailers**

#### **Hyper- / supermarkets**

European supermarkets are divided into the large supermarket chains such as Carrefour, REWE and AHOLD, and smaller independent stores. The larger supermarkets have by far the largest market shares and operate their own (sometimes combined) buying centres and distribution centres. Although supermarkets may be involved in sourcing their fresh produce, they usually rely on the services of importing wholesalers and service providers. Supermarket service providers are wholesalers and logistics service providers who take care of much of the sourcing and distribution process on behalf of the supermarket. They cooperate with importers and are responsible for importing, contracting and combining products from different countries. Directly dealing with supermarkets requires a high degree of business professionalism as well as access to logistics service providers and your own importing experience and facilities. Usually exporters from developing markets access the supermarket channels through European importers.

#### **Specialised shops**

Specialised fruit and vegetable shops exist throughout the European market, although their market share has decreased to about 10%. Most of them are family-owned, small independent shops that

sell fresh fruit and vegetables as well as some related food items. They buy primarily from local wholesalers.

### **Street markets**

Most European cities have regular (sometimes daily) fruit and vegetable markets. Traders rent stalls and sell fresh produce that they usually source from local wholesalers or producers. The street markets have a decreasing market share of only a few per cent in most countries.

### **Food service**

The food service channel includes restaurant, hotels, business catering and hospitals. These organizations usually procure fresh fruit and vegetables from local wholesalers. The food service channel has an estimated market share of about 10-15% for fruit and about 20% for vegetables.

### **Trends and developments**

#### **Strong buyer's position for supermarkets**

- The European supermarket purchasing power is increasing and is expected to increase even more in the future. This is evident in the requirements and conditions supermarkets set. If one does not adhere to these demands, supermarkets shift readily to other suppliers. At the moment the European market for fresh fruit and vegetables is mainly a buyers' market characterised by oversupply. Competition is based mainly on price, which makes price sensitivity high for EU buyers. This then translates into greater pressure on other players closer to producer level, such as EU-import agents and exporters.
- Large retail organisations are increasing their requirements concerning food safety and sustainability. EU buyers put more pressure on suppliers in the entire chain to adhere to these requirements.
- Retail concentration will continue, further increasing the size of supermarket purchase centres.

#### **Specialising importers**

- Importers and wholesalers are becoming more specialised and are looking to establish a unique market position. Wholesalers that supply large retail formulas change to a lean and mean middle man. They prefer to work with large producers and quantities. Smaller importers more and more search for niche channels, e.g. by specialising only in exotics or a specific product type.

#### **Vertical integration and Efficient Consumer Response (ECR)**

- Supply lines are becoming shorter and more efficient. Contact between farmers, traders and retailers is becoming closer. Control throughout the entire value chain is essential in order to build expertise in specific products and to comply with the strict delivery terms of large retailers.
- Most retailers and their suppliers operate Efficient Consumer Response (ECR) systems to adjust flexibly and rapidly to changing demand. Timely delivery, flexibility of supply and adherence to all logistical requirements to guarantee product quality is crucial. Exporters and growers must be able to meet the logistical requirements of the supply chain. To ensure product quality and ECR, most supply chains are strictly organized under the direction of the importer/wholesaler or service provider in relation to adherence to the retailer's demands. It reflects the important trend towards vertical integration.

#### **Buyers are keen on new cooling and packaging technologies**

- New post-harvest, cooling and packaging techniques are opening up new opportunities for getting fresh products from farm to end market and EU retailers want to be at the forefront of these developments. A range of new films and plastics are having a huge impact on the preservability of fresh fruit. Also, constant progress is being made in the field of controlled atmosphere containers.
- Post-harvest treatment techniques are also shifting the boundaries for transport and logistics. EU buyers are interested in suppliers who keep in step with these developments and are able to implement them.



### E-commerce and online concepts

- E-commerce is growing in Europe, especially in Northern European markets, where online shopping has become an integral part of society. Supermarkets are experimenting with home delivery of fresh products, and new independent concepts are emerging (for example food boxes with recipes). Examples include Hello Fresh and Gousto.

## 4.4 EU imports from Lebanon

EU imports of Lebanese fruit and vegetables are fairly modest amounting to € 3.2 million in 2014 (€ 1.9 million fruit and € 1.3 million vegetables), representing merely 3% of total Lebanese exports that year (€ 107 million in 2014). In 2013, Lebanese exports to the EU peaked at € 10 million euro mainly thanks to a one-year export boom of nuts to Italy (unknown reason, possibly a one-time trade deal). For the rest, exports have been showing steady but mostly moderate increases.

It must be noted that on more detailed product level, trade data from Eurostat (Table 8) **Fout!** **Verwijzingsbron niet gevonden.** and Trademap tend to conflict. From comparing both source, however, we can deduct that products that have shown strong increases in exports to the EU were beans, oranges, chickpeas, aubergines and dried apricots.

**Table 8: Leading Lebanese products imported into the EU (HS07+HS08)**  
In 1,000 euros

Product	2011	2012	2013	2014	2015
Fresh grapes	794	1,026	1,243	2,219*	863
Broad beans and horse beans	146	167	239	264	697
Oranges	8	2	3	3	470
Dates	192	200	146	268	299
Chickpeas	102	162	92	200	272
Dried vegetables and mixtures of vegetables	46	33	83	160	257
Tamarinds, cashew apples, jackfruit, lychees, sapodillo plums, passion fruit, carambola, pitahaya and other edible fruit	19	44	62	70	255
Nuts (excl. Coconuts, brazil nuts, cashew nuts, almonds,...)	441	736	7,004	954	236
Dried, shelled lentils	118	139	123	206	234
Aubergines 'eggplants'	2	11	1	25	153
Dried apricots	42	55	55	78	139
Beans 'vigna spp., phaseolus spp.'	3	58	8	5	115
Kidney beans	18	42	29	81	82
Beans 'vigna and phaseolus'	72	19	49	103	82
Fresh or chilled vegetables n.e.s.		113	132	106	35
Cucumbers and gherkins	30	15	28	15	32
Dried, shelled leguminous vegetables	31	9	43	25	29
Cabbage lettuce	1				26
Mixtures of nuts or dried fruits	28	83	88	31	25
Pistachios		13	2	6	17
Pumpkins, squash and gourds		16	16	8	15
Vegetables, frozen (excl. Potatoes, leguminous veg...)	11		5	6	15
Dried peaches, pears, papaws "papayas", tamarinds and other edible fruits (excl. Nuts, bananas, dates, figs, pineapples,...)	3	37	15	62	14
Figs	10	5	0	1	13
Almonds in shell	4	9	2	7	13
Plums and sloes	1	0	6	2	12
Cashew nuts, shelled	1	17	10	6	10

\* According to Trademap, this figure is 1,135 (i.e. € 1.1 mln).  
Source: Eurostat (2016)

#### 4.5 Lebanon's main competitors on the EU market

Because of similar climatic conditions, for most in-season fruit from Lebanon, Southern Europe is a strong competitor, particularly Spain and Italy. European competitors are well organised, and they have optimised their marketing tools, including social media and online presentation. Supply from Eastern Europe is also increasing, with the exception of exotic/tropical fruits.

At the moment, competition still takes place at the price level but this will change in the future, especially for niche markets. It is expected that quality and sustainability will become more prominent values in the EU market.

Note that Lebanon's competitive position for individual products is described in Chapters 8 to 11.

##### Spain

- Spain is one of the European fruit and vegetable powerhouses. Its exports to the rest of the EU is still increasing by more than 10% annually and reached an impressive € 7.1 billion of fruit and € 5.4 billion of vegetable exports to the rest of the EU28 in 2015.

**Table 9: Spain's leading products on the EU market**

*EU import from Spain in million euros*

EU Import from Spain in million euros											
Fruit					Vegetables						
		2013	2014	2015			2013	2014	2015		
1	'080520	Mandarins	1,153	1,134	1,195	1	'070200	Tomatoes	1,007	950	1,018
2	'080510	Oranges	968	776	940	2	'070960	Peppers	776	801	888
3	'080930	Peaches	716	651	765	3	'070700	Cucumbers	475	469	492
4	'080550	Lemons	445	494	593	4	'070993	Pumpkins, squash and gourds	267	214	326
5	'081010	Strawberries	524	446	493	5	'070519	Lettuce	273	262	305
6	'080719	Melons	306	269	286	6	'070410	Cauliflowers and broccoli	224	229	262
7	'080711	Watermelons	233	228	274	7	'070511	Cabbage lettuce	225	204	240
8	'080610	Grapes, fresh	214	237	269	8	'071080	Vegetables, frozen nes	179	199	218
9	'081020	Raspberries, blackberries, etc	151	177	228	9	'070999	Fresh or chilled vegetables n.e.s.	158	163	189
10	'080440	Avocados	115	137	185	10	'070320	Garlic, fresh or chilled	141	139	172

Source: Trademap (2016)

##### Italy

- Being one of the leading EU fresh suppliers, Italian exports of fruit reached € 2.6 billion in 2015, while vegetable exports stabilised at € 1.2 billion that same year. About 80% of Italian exports of fresh fruit and vegetables is exported to the EU.
- Italy is the leading supplier of fresh grapes to the EU market. It is also Italy's number one fruit export product. In 2015, Italy exported almost € 600 million worth of fresh grapes to other EU countries. Italian grape exports have shown continued moderate growth in the past couple of years.

**Table 10: Italy's leading products on the EU market**

*EU import from Italy in million euros*

Fruit					Vegetables						
		2013	2014	2015			2013	2014	2015		
1	'080610	Grapes	570	532	589	1	'080610	Fresh or chilled vegetables n.e.s.	183	187	216
2	'080810	Apples	483	437	493	2	'080810	Tomatoes	173	172	180
3	'081050	Kiwifruit	239	259	257	3	'081050	Lettuce	126	124	140
4	'080930	Peaches, incl. nectarines	243	161	200	4	'080930	Cabbages	61	52	60
5	'080222	Hazelnuts	75	128	183	5	'080222	Salad beetroot, salsify, celeriac, etc.	56	50	55
6	'080830	Pears	118	129	135	6	'080830	Carrots	54	41	54
7	'080510	Oranges	70	60	68	7	'080510	Cabbage lettuce	46	41	50
8	'080212	Almonds	44	56	68	8	'080212	Pumpkins	36	36	42
9	'080711	Watermelons	62	58	64	9	'080711	Cauliflower	37	32	41
10	'080520	Mandarins	41	47	50	10	'080520	Vegetables, frozen	38	40	40

Source: Trademap (2016)

##### Israel

- Israeli exports to the EU have shown steady growth, with fresh fruit exports moderately growing to € 313 million in 2015.

- After a few years of decrease, fresh vegetable exports seem to have stabilised at € 176 million in 2015.
- Israel is the second largest supplier of dates (after Tunisia) to the EU with a market share of about 21%.

**Table 11: Israel's leading products on the EU market**  
EU import from Israel in million euros

Fruit					Vegetables						
		2013	2014	2015			2013	2014	2015		
1	'080440	Avocados	66	74	77	1	'070960	Sweet peppers	111	63	64
2	'080520	Mandarins, clementines	52	53	69	2	'070190	Potatoes	95	62	59
3	'080410	Dates	38	49	47	3	'070610	Carrots	39	18	26
4	'080540	Grapefruit	39	43	36	4	'071420	Sweet potatoes	4	7	9
5	'081090	Fruits, fresh nes	23	23	28	5	'070999	Fresh or chilled vegetables nes	14	12	6
6	'080450	Guavas, mangoes, mangosteens	21	28	25	6	'070200	Tomatoes	10	5	4
7	'081190	Fruits & nuts frozen, nes	8	9	11	7	'071290	Vegetables and mixtures dried	2	2	3
8	'080420	Figs	2	4	3	8	'070390	Leeks	4	3	2
9	'080510	Oranges	5	5	3	9	'070690	Salad beetroot, celeriac, radish	1.6	2.0	0.9
10	'080590	Citrus fruits, nes	3	2	3	10	'070993	Pumpkins	1.1	1.0	0.9

Source: Trademap (2016)

### Turkey

- Turkish fruit exports to the EU are considerable and have been growing strongly. Fruit exports reached € 2.1 billion in 2015 (30% up from 2013). Note that this figure (HS08 classification group) includes nuts that represents more than half of the exports. Still, export growth is broadly based. Table 12 gives an overview of the leading fresh fruit export products, excluding nut. It shows that the main export product grapes has actually remained fairly stable recently.
- EU vegetable imports from Turkey are more modest, amounting to € 268 million in 2015. Still, vegetable exports have also shown steady growth figures.

**Table 12: Turkey's leading products on the EU market**  
EU import from Turkey in million euros

Fruit					Vegetables				
		2013	2014	2015			2013	2014	2015
1	'080620 Grapes, dried	353	328	351	1	'070960 Sweet peppers	44	44	60
2	'080420 Figs	115	135	141	2	'070200 Tomatoes	28	48	39
3	'081310 Apricots, dried	110	135	133	3	'071080 Vegetables, frozen nes	27	33	35
4	'080550 Lemons	70	69	95	4	'071340 Lentils dried, shelled	23	22	32
5	'080929 Cherries	90	82	83	5	'071290 Vegetables and mixtures, dried	26	29	30
6	'080540 Grapefruit	30	51	43	6	'070993 Pumpkins, squash and gourds	7	7	11
7	'081090 Fruits, fresh nes	22	30	34	7	'070700 Cucumbers and gherkins	8	9	10
8	'080520 Mandarins, clementines, etc.	25	35	27	8	'071190 Vegetables nes & mixtures	9	10	9
9	'080610 Grapes, fresh	22	29	24	9	'071320 Chickpeas	8	8	7
10	'081110 Strawberries	12	12	11	10	'070959 Mushrooms	3	2	5

Source: Trademap (2016)

### Morocco

- Morocco is strengthening its position as an important upcoming fruit and vegetables supplier to the European market. Moroccan vegetable exports to the EU reached almost one billion euro last year, showing strong growth figures of 13% per year for 2014 and 2015. Fruit exports are a bit smaller, but still considerable at € 541 million in 2015, with similar growth figures as vegetables.

**Table 13: Morocco's leading products on the EU market**  
EU import from Morocco in million euros

Fruit				Vegetables							
		2013	2014	2015		2013	2014	2015			
1	'080520	Mandarins & clementines	71	90	116	1	'070200	Tomatoes	367	425	472
2	'081110	Strawberries, frozen	67	70	68	2	'070820	Beans	190	233	245
3	'080510	Oranges	31	39	53	3	'070960	Peppers	80	100	125
4	'081020	Raspberries, blackberries, etc	16	31	51	4	'070993	Pumpkins, squash	46	30	49
5	'081040	Cranberries, bilberries, etc	21	31	49	5	'071190	Vegetables, not for immediate cons	20	24	22
6	'080719	Melons	51	59	48	6	'070999	Fresh or chilled vegetables n.e.s.	12	12	18
7	'081010	Strawberries, fresh	37	41	42	7	'070700	Cucumbers and gherkins	5	9	9
8	'080711	Watermelons	5	15	38	8	'070390	Leeks and other alliaceous vegetables	4	5	6
9	'080610	Grapes	15	15	22	9	'070310	Onions	4	4	6
10	'080440	Avocados	2	11	15	10	'070890	Leguminous vegetables, nes	1	0	4

Source: Trademap (2016)

## Egypt

- Egypt is still a relatively small supplier to the European market. Egyptian fruit and vegetable exports to the EU28 are rather stagnant, with fruit exports still slightly growing to € 304 million in 2015 (€ 257 million in 2013). Vegetables show a stagnant development at € 309 million in 2015 (€ 323 million in 2013).

**Table 14: Egypt's leading products on the EU market**  
EU import from Egypt in million euros

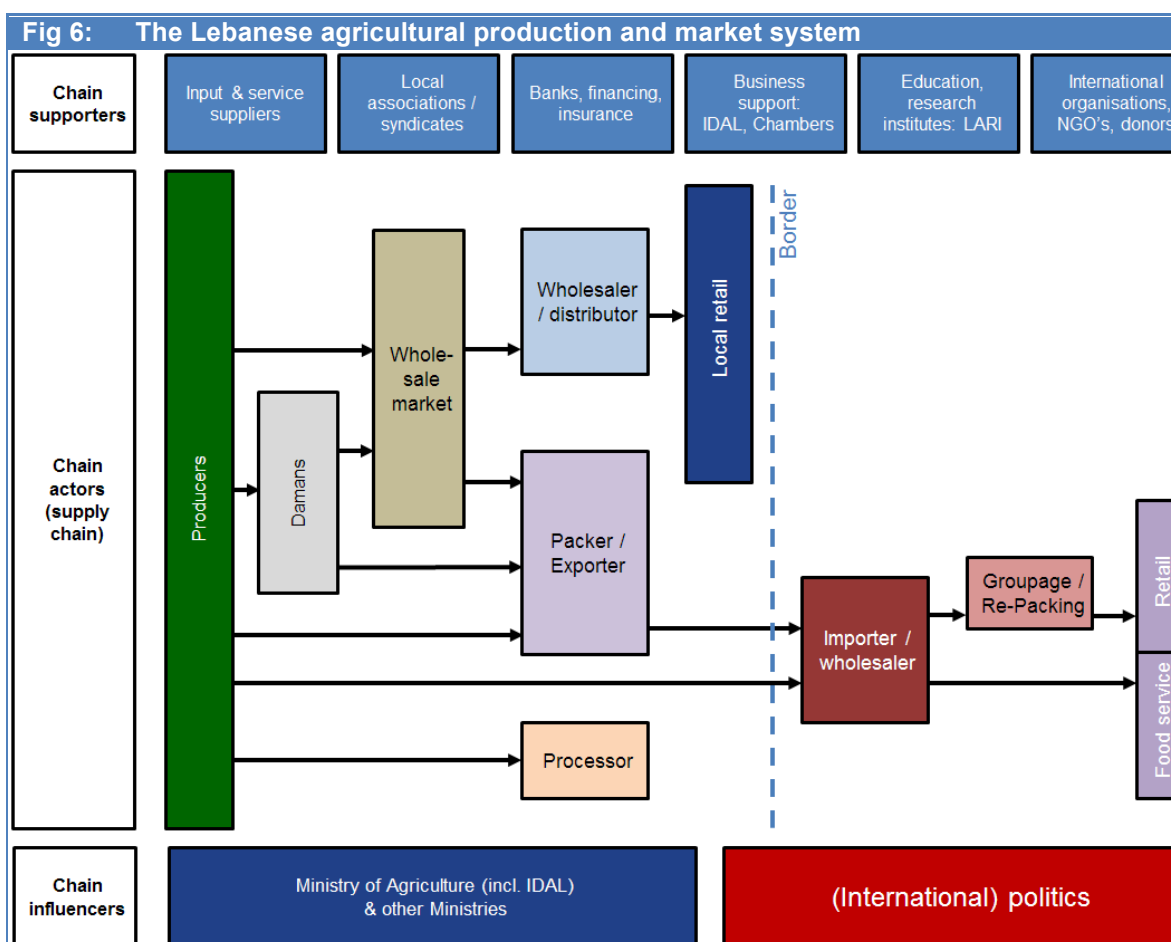
Fruit				Vegetables			
	2013	2014	2015		2013	2014	2015
1 '080610 Grapes	99	106	137	1 '070190 Potatoes	98	61	63
2 '080510 Oranges	98	89	99	2 '070310 Onions	56	55	55
3 '081010 Strawberries	26	39	31	3 '070820 Beans	50	46	46
4 '081110 Strawberries, frozen	19	19	17	4 '071080 Vegetables, frozen nes	17	21	29
5 '081090 Fruits, fresh nes	5	6	6	5 '071220 Onions, dried	15	21	29
6 '080719 Melons	3	3	4	6 '071190 Vegetables presvd, not for immediate cons	13	13	20
7 '081340 Fruits, dried nes	1	0	3	7 '071333 Kidney beans & white pea beans	28	31	14
8 '080930 Peaches	2	2	2	8 '071290 Vegetables and mixtures dried	9	12	12
9 '080450 Guavas, mangoes	1	1	2	9 '071420 Sweet potatoes	3	7	8
10 '080520 Mandarins & clementines	0	1	2	10 '070810 Peas	4	5	6

Source: Trademap (2016)

## 5 The value chain from Lebanon to Europe in a nutshell

In this chapter a summarising, visual picture of the whole value chain is shown, with all parties involved from the production on the fields in Lebanon to the consumer in the European market.

More elaboration with specific information for the grapes, avocado, citrus and potato value chains can be found in chapters 8, 9, 10 resp. 11.



Source: Bureau Leeters & ProVerde (2016)

There are not a lot of concrete figures about the importance of the various sales channels available. The importance of the channels also strongly differ per product (as we will see in Chapters 8 to 11):

- In case of grapes, over 80% of all grapes for the domestic market pass through the Ferzol market, and go either to other urban wholesale markets, or directly to exporters and retail outlets. Production from small- and medium-sized farms are often aggregated by a daman who sends the grapes to the wholesale market or directly to exporters.
- The Saida and Tyr wholesale markets are the main trading hubs for Lebanese avocado farmers and 'wood' daman. Few amounts are sold directly to other wholesale markets or exporters.
- In case of citrus fruit, the vast majority is sold through wholesale markets in Saudi, Beirut, and Tripoli as well as other smaller wholesale markets.
- Potato farmers sell their products in wholesale 'spot' markets where farmers and traders converge to buy and sell products at a given period. Farmers do sell directly to buyers at their homes and/or farms. Farmers also sell through contracts to traders, exporters or processors.



## 6 Bottlenecks in the Lebanese fruit and vegetables sector

Various bottlenecks prevent sustainable Lebanese exports of fruit and vegetables in general and exports to high end markets in particular. These bottlenecks are shown in this chapter, clustered in 4 main themes:

1. **Market & market access:** related to available market windows in the international and domestic markets as well as the capacity to access these markets;
2. **Pre- and postharvest practices:** related to the conditions for the private sector to operate in the fruit and vegetables sector, such as availability and use of technology and inputs and the infrastructure therefore;
3. **Business culture and human resources:** related to business behaviour and the presence of sufficient entrepreneurial capacity and human capital in the sector;
4. **Private-public environment:** related to the business environment in general and the relationship between the private and public sector in particular.

The current influx of immigrants in the country, mainly caused by the Syria crisis, has a big impact on the society as a whole and also on the performance of the agricultural sector. An extra paragraph is therefore added in this chapter.

### 6.1 Market & market access

- Limited physical access to the main markets in the Gulf due to the Syria crisis; alternatives have a higher cost price and take more time; some market windows in the Gulf have been taken over by competing countries
- Pressure on the purchasing power in the Gulf markets (due to the 'oil crisis') in combination with upcoming competitive power of other suppliers, especially since the 'Russia ban'
- Long shipping times to the EU (for instance no direct flights to the Netherlands)
- There are no central (national or regional) crop and/or area planning mechanisms which hinders demand oriented production schemes
- Weak domestic market structure
- Same seasonality / production calendar as in the southern European countries for crops such as grapes, stone fruit, citrus and potatoes, in combination with fierce competition (especially from Turkey, Syria, Egypt, Morocco and southern Europe) in Europe

### 6.2 Pre- and postharvest practices

- Production and postharvest practice are small scale
- In farming practices:
  - varieties have a weak fit with high end markets
  - inputs have high prices
  - the technology level is low
  - the sustainability level (for instance. water efficiency) is low
  - the overall productivity is low
  - the end-quality is not consistent
  - the cost price is high
- Hardly any Global GAP certified produce
- Inefficient and non-transparent collection and price-setting mechanisms because of the roles of damans and other distributors, creating challenges in the traceability (food safety control) in the supply chain
- Poor practices of harvesting (correct timing and handling) and poor sorting, grading, packing and labelling; poor traceability
- Weak cold chain infrastructure; lack of technology and management; many postharvest losses

### 6.3 Business culture and human resources

- Weak market intelligence all over the country; exporters lack understanding of market needs, trends, requirements ('old-school')
- The mentality too often is 'we keep the best and export the rest'
- No culture to cooperate; cooperatives are not effective in collective sales and marketing
- Hardly any exporter has the capacity and means to manage the production chain according to high end market standards

### 6.4 Private public environment

The public sector in Lebanon does not have the capacity, the budgets and the priorities to strongly support the sector in building and expanding its export performances in fruit and vegetables. There is no clear national vision on agriculture, no national marketing (export) strategy and as a consequence, there is no (Lebanon) branding in international markets. Moreover, the regulatory frameworks to ensure compatibility with European market requirements, are limited:

- weak national legislation on product quality (classification, quality standards, minimum quality, packaging, labelling);
- weak framework for Sanitary and Phytosanitary (SPS) monitoring and control;
- no accredited, recognized lab for MRL's.

Many actors in Lebanon report that there are limited connections between the public sector and the private sector, also resulting in a lack of structural firm-to-firm linkages between the private sector and research & education. The quality and performance of practical research and extension are below the level to support companies that have the willingness and drive to develop positions in high-end markets. And adequate practical education is missing, which results in lack of graduates with practical skills and the right attitude

IDAL and FCCIAL are BSO's with the mandate to support the private sector towards more professionalism and international competitiveness. Both organisations have a strong dedication and willingness but they lack sufficient staffing and budgets to offer all required services towards the private sector. Based on assessments by CBI (Rob van Eijbergen, 2016), the priority themes that should be taken into account are (valid for both organisations):

- performing a needs assessment to identify the needs for assistance of the target companies within their selected priority sectors;
- the development of an integrated service portfolio;
- capacity building at staff level;
- professionalisation of the market information system (especially related to trends and developments in the EU market);
- enhancing the cooperation with each other and other BSO's, including a division of tasks and responsibilities between the BSO's, in combination with developing a Lebanese knowledge platform on export development and export promotion.

Various other sector organisations (syndicates, associations, cooperatives) play a role in fruit and vegetables value chains. Most exporters belong to the Fresh Fruit and Vegetable Export Syndicate or the Potato Exporters Syndicate. The mandate of these syndicates is in the field of lobby and advocacy towards the government. They do not offer services towards individual companies and do not show leadership in the sector. The same counts for associations and cooperatives: the majority lacks good governance and adequate service delivery and they do not contribute to integration of the public and private sector.

### 6.5 Immigrants / refugees

Another factor that should be taken into account because it affects activities in the fresh fruit and vegetable sector, is the huge number of immigrants in the country. Lebanon currently hosts one

million (mainly Syrian but also Palestinian) refugees on a population of five million. This puts a burden on the Lebanese society and economy.

FAO (2015) reports that one of the main consequences of the Syria crisis on the labour market is the increase in labour supply which is leading to more competition for jobs and a rise in unemployment among Lebanese. As a result, according to qualitative data, many are choosing to relocate to urban areas or in some cases foreign countries in search of job opportunities

FAO (2015) also reports cases that Lebanese employers hire Syrians over other groups, as they are willing to accept lower standards of working conditions and benefits. "Syrian labour costs less than Lebanese or Palestinian labour. Lebanese and Palestinians demand 30,000 LBP per day; while Syrians ask for 25,000 LBP per day for any agriculture activity." Actually the cheap Syrian labour helps farmers and traders who wish to expand their cultivation and sales practices in fruit and vegetables. From a rational viewpoint this situation creates opportunities for the agricultural export sector. In other words: export promotion and growth of export volumes will create employment for both Lebanese labour as well as Syrians. However, there seems to be an overall negative sentiment in Lebanon with respect to the immigrants; the majority of the population hardly has trust and patience and is looking forward to the return of all to their home country and more time, energy and support from the government for the Lebanese economy.

## 7 Risks in the Lebanese fruit and vegetables sector

While developing and supporting the Lebanese export position of fruit and vegetables, several risks have to be considered. In this chapter Corporate Social Responsibility (CSR) risks -including environmental risks- and market-related risks are listed.

### 7.1 CSR risks

CSR, also known as Social Responsibility (SR), refers to the responsibility of a community or organisation for the impacts of its decisions and activities on society and the environment, through transparent and ethical behaviour that:

- contributes to sustainable development, including (human and plant) health, environment and the welfare of society
  - takes into account the expectations of stakeholders
  - is in compliance with applicable law and consistent with international norms of behaviour
  - is integrated throughout the organisation and practised in its relationships
- (Source: ISO 26000, 2010)

MVO Nederland is the Dutch national knowledge centre and network organisation for CSR. Its tool -the CSR Risk Check- ([www.mvorisicochecker.nl/en](http://www.mvorisicochecker.nl/en)) gives an actual overview what CSR opportunities and risks exist in all countries of the world, based on public information. For Lebanon, the Risk Check shows a total number of 22 risks, divided into 4 themes: 1<sup>st</sup> labour rights; 2<sup>nd</sup> human rights and ethics; 3<sup>rd</sup> environment and 4<sup>th</sup> fair business practices. The list below contains 15 out of these 22 risks that relate to the fruit and vegetables sector.

#### Labour rights (10 out of 12 risks in total for Lebanon)

1. Child labour in vegetables cultivation and warehouses: refugee families often make use of their children's capacities to earn an income for the family; as a matter of fact it often happens that Syrian children work in production and postharvest.
2. Child labour in potato cultivation: 'Sorting and packing facilities employ both Lebanese and migrant workers, males and females, generally at equal levels in terms of working conditions. During visits by the research team, some teenagers were spotted working in these facilities' (ILO 2015).
3. Child labour: poor state regulations that prohibit hazardous working conditions, eliminate the worst forms of child labour and improve access to quality education.
4. Gender: less economic participation and opportunities for women.
5. Gender discrimination (both in law and in practice).
6. Freedom of association: systematic violations of labour rights (score 4 on a scale of 1 to 5, which means a high risk): small farmers have a weak position; not being united, they have a hard time competing with bigger companies, they often have no direct contact with exporters and are dependent of middlemen, who often do not work with transparent methods and exploit them.
7. Freedom of association: government interference in trade union affairs; extra restrictions for Palestinian refugees: discrimination against women and (Palestine) refugees in the agricultural sector is mentioned often, though in this study no detailed information has been heard or found.
8. Labour conditions (contracts, working hours, payments for overtime): poor state regulation in the field of providing decent work for young workers, parents and caregivers and protecting the rights of children in relation to business activities.
9. Labour exploitation and human trafficking: migrant workers face exploitation and abuse.
10. Wage and remuneration: discriminatory laws and regulations for (long-term) refugees, in particular Palestinians.

#### Human rights and ethics (2 out of 7 risks in total for Lebanon)

11. Conflicts and security: security in general and threat for terrorism in particular.

12. Government influence: this risk refers to political rights and civil liberties, more in particular to the fact that the security situation in Lebanon deteriorated in 2014 and violence spilled over from the conflict in Syria.

#### **Environment (in total 1 risk for Lebanon)**

13. Water scarcity: in this study no detailed information was heard or found with respect to environmental damages through the use of chemical fertilizers, chemical crop protection or spoilage/pollution of water in areas with water scarcity.

#### **Fair business practices (in total 2 risks for Lebanon)**

14. Corruption: score 28 on a scale of 1 to 100: high risk of corruption.
15. Taxation: according to OECD (2015) Lebanon is a 'tax haven'.

## **7.2 Market-related risks**

- Lebanon is a net importer of (fresh) agricultural products, in particular dairy and meat. However, for fresh fruit and vegetables, Lebanon is already a net exporter. There is a theoretical risk that increase in exports of fresh fruit and vegetables might put pressure on the domestic market and food security in the country, in particular in the current situation with many immigrants.
- Opportunism is one of the main characteristics of trade in fresh fruit and vegetables in mature markets (such as Europe). Although CSR is on the agenda, many traders have a short-term scope and do not mind so much where the product comes from. It just has to be good and as cheap as possible. Competition (especially from the south of Europe) will remain strong and there is little intrinsic ambition to invest in Lebanese products. European traders are open for anything special but they are not waiting for it. Therefore Lebanese exporters cannot expect a great deal of long-term loyalty towards Lebanese produce.

## **7.3 Analysis of risks and impact of risks on export potential**

- Regarding CSR risks: those risks have been reported and are actually present, although we do not have quantitative figures and analyses for all of them. For imports in Europe, traders and retailers use common certification schemes, in particular Global GAP, to ensure compliance with CSR requirements. Therefore farmers and exporters with a structural presence in the European market need to show evidence that worker safety and health in crop production is ensured by means of proper use of chemicals and spraying techniques. And that child labour is not being practiced. In other words, for those farms with a Global GAP certification, CSR risks are excluded. At the same time this implies a huge challenge, because in Lebanon most of the farms do not follow yet these good agricultural practices (GAP).
- Any negative influence of exports on food security in Lebanon, is not considered to be a real risk. Facts and opinions show that there is sufficient supply to meet the demand in the local market for those products with export potential (such as grapes, avocados). Moreover there is a mentality in Lebanon to serve the local market in the first place: 'keep the best and export the rest'. In other words: investments in better quality and more volumes for exports of fresh products to high-end markets in Europe, will not have negative influence on food security in Lebanon.



## 8 Table grapes

Lebanese table grapes are already available on the European market and are among the products with the highest potential to reach a name and a sustainable position. This chapter elaborates on the characteristics of the table grapes market in EU & EFTA and the opportunities for Lebanon to develop sustainable trade towards Europe. This chapter builds further on paragraph 3.4 (Lebanese fruit and vegetables value chains), 6 (bottlenecks in the sector) resp. 7 (risks in the sector).

### 8.1 End market(s) and competitiveness

First of all: according to USAID (2014), grape exporters and importers frequently under-report quantity and value of grapes moving between countries. The Comtrade and Trademap data show unreasonably low volumes, values and average sales prices. Still, the figures can be used to obtain a good idea of trends and relative importance.

Lebanese exports of fresh grapes have been growing steadily, amounting to more than € 5 million euro per year. Saudi Arabia is traditionally the leading destination of exported table grapes, taking up about one fifth of Lebanese exports. Exports to Germany and the UK have been increasing steadily in recent years and have reached about € 500 thousand annually per destination country.

Lebanese table grapes: the main species are Baytamuni, Tfeifihi, Maghdushi, Jbaai, Globe seedless, Early Superior Seedless, Black Pearl, Red Globe.

Lebanon is in the centre of the area of origin of grapes. Table grape is planted nationwide between the coastal area and 1,600m altitude. However, the most important areas of production are the Bekaa valley and Akkar. The importance of its cultivation is due to the climatic conditions including a long period of sunny days over the year, fertile soil and adequate averages of rainfall which ensure the appropriate Brix degree.

Seasonal availability: from June till February.

Source: Ministry of Agriculture – Brochure 'Lebanese Fresh Fruit and Vegetables' (2016).

The main varieties of Lebanese grapes in the GCC are traditional Arab ones, including: Vitamouni and Halawani (also known as Baytamouni and Tfeifihi) in addition to a growing volume of the relatively new variety Red Globe. High quality exporters also sell new varieties such as Black Pearl and Thompson Seedless. Commercial farmers have begun to diversify into other popular varieties such as Crimson, Diamante, Early, Flame and Big Muscat seedless. In GCC markets, these grapes are sold at a price premium compared to grapes from Italy, Brazil and other countries (USAID 2014b). Lebanese grape exports to the GCC are not typically branded, except for the highest quality grape exports from the (few) most advanced integrated exporters (USAID 2014b).

**Table 15: Lebanese exports of fresh grapes: top-10 export destinations**

*In 1,000 euros*

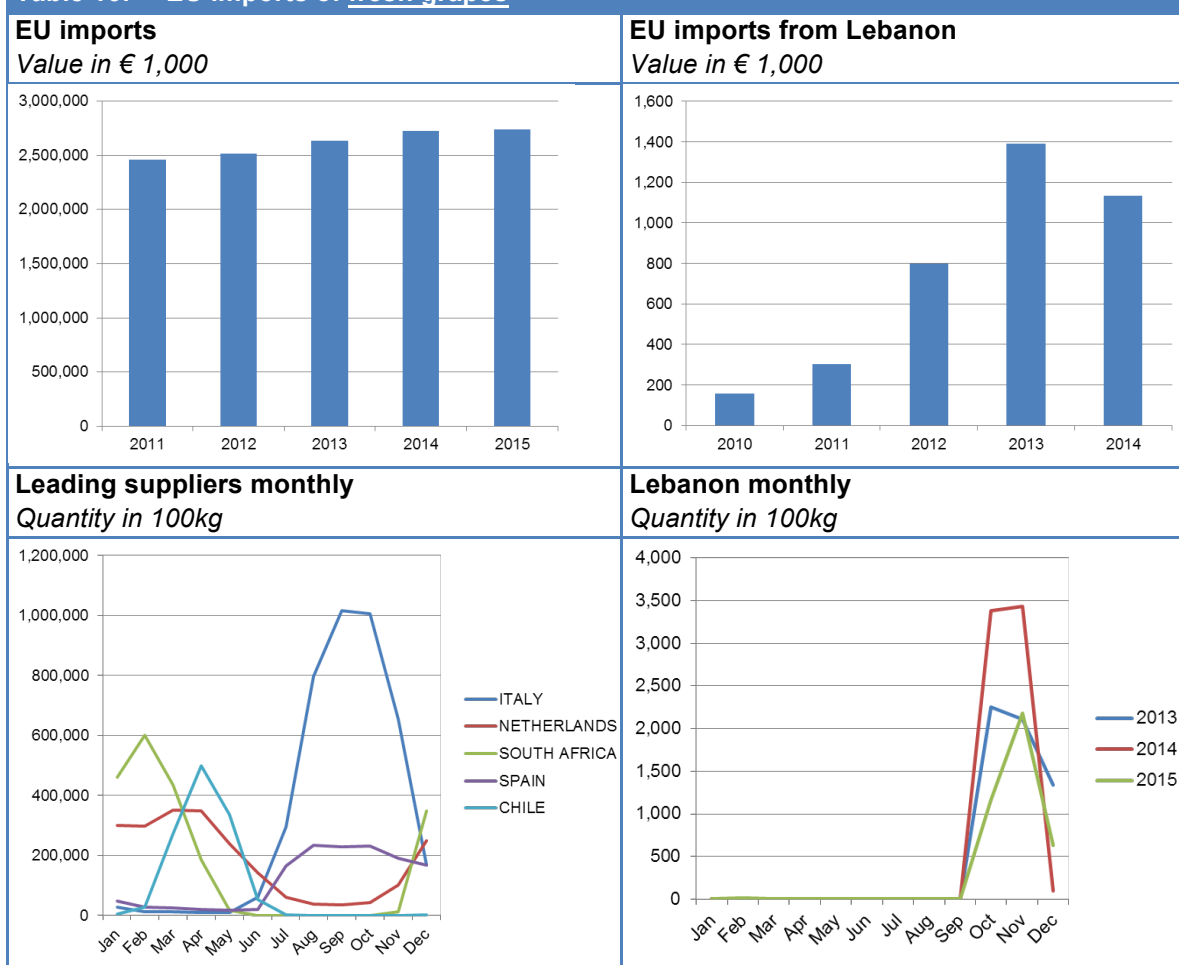
	2010	2011	2012	2013	2014
<b>World</b>	<b>3,465</b>	<b>3,248</b>	<b>5,219</b>	<b>5,381</b>	<b>5,508</b>
1. Saudi Arabia	1,005	864	1,481	1,465	1,331
2. Germany	-	-	592	1,166	591
3. Iraq	13	25	19	289	543
4. United Kingdom	93	185	164	226	509
5. Sudan (North + South)	675	452	484	418	460
6. Oman	135	170	292	261	396
7. Kuwait	183	209	294	250	334
8. United Arab Emirates	169	212	605	387	268
9. Egypt	295	108	305	200	257
10. Qatar	201	284	315	245	206

Source: Trademap (2016)

### The EU grapes market

- In 2015, the EU imported 1.6 million tonnes of fresh grapes for a value of almost € 3 billion, of which € 863 thousand from Lebanon.
- The leading suppliers of fresh grapes to the EU markets are Italy, South Africa, Spain and Chile.
- Fresh grapes are available all year round with imports fluctuating between € 150 and € 300 million per month throughout the year. The year typically starts with South African grapes in the winter, followed by Chilean in spring and Italian and Spanish at the end of European summer.
- The Netherlands is an important importer and re-exporter of fresh grapes.
- The Lebanese export season to the EU (Germany and UK markets mainly) coincides with Italian and Spanish supply season. The grapes varieties planted in Lebanon ripen between July and November, and the peak harvest period in September and October. The ripening schedule varies by region in which it is grown and by variety.

**Table 16: EU imports of fresh grapes**



Source: Eurostat, Trademap (2016)

### Lebanese grapes in the EU

Seedless grapes by far have the highest preference in the European market. A number of interviewed EU importers mentioned that Crimson Seedless grapes from Lebanon are currently available in the market (October / November 2016), imported by Dole Europe GMBH in Germany and by others. The main reason as being mentioned for having grapes from Lebanon this year is due to the early ending of the European season, this as result of the heavy rains in October in as well Greece as Italy in the production areas.

It was the importers opinion that the import of Lebanese Crimson Seedless in October is too early due to the still abundantly available European produce. Crimson Seedless is one of the later varieties in the production regions. The general opinion about the quality seen so far was not too

positive. Quality, packaging in the way needed for the supermarkets (punnets) and full set of all required certificates would give them a chance but then still competition from the European suppliers remains fierce.

Only one Lebanese exporter currently has the capacity to send grapes to Europe that meet all access requirements by full control of production and postharvest practices and thereby guaranteeing quality. Two other promising, market-oriented initiatives are known that will come on the market with suitable volumes and the right varieties in the coming years:

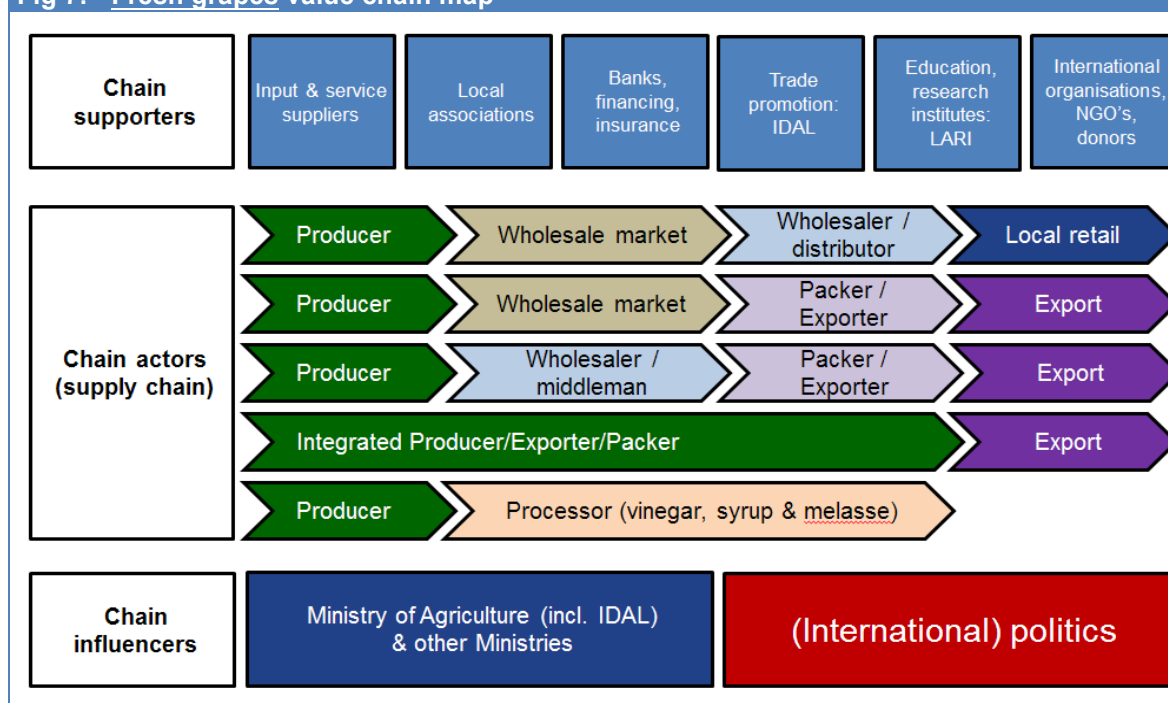
- One of them invested in 45 ha Crimson Seedless. The plantation will come in full production in 2017. It is based on modern agricultural practices (irrigation, integrated pest management) and it already has completed all procedures for Global GAP certification. Foreseen production will be much higher than average yields in Lebanon: 30 to 35 tonnes per ha, of which 25 tonnes export quality, which adds up to about 1,100 tonnes in 2017.
- The other project consists of 10 ha initial production (seedless) with expansion to 100 ha and making use of different micro-climate zones in the Bekaa in order to realise long supplying seasons.

## 8.2 Structure and governance of the value chain

### General characteristics:

- Grapes are one of Lebanon's most important agricultural products. They are a high value product that claims premium prices in both domestic, Gulf, and other Arab markets. In recent years, there has been a growing trend to plant varieties that are in high demand in local and export markets (USAID 2014b).
- Grape production is expanding into new non-traditional areas such as the extreme north of the Bekaa valley and deep in the South. The expansion into the South is important in lengthening the export window of Lebanese grapes (USAID 2014b).

**Fig 7: Fresh grapes value chain map**



Source: Bureau Leeters & ProVerde (2016)

### 8.2.1 Chain actors

#### Producers

- Grape production in Lebanon has averaged around 120,000 tonnes since 1997. Grapes are grown in all regions, with larger grape farms concentrated in the Bekaa. The main areas of

commercial grape production in the Bekaa are Qaa, Zahle, Ferzol, Baalbek, Niha, and Kfarmishki. Average commercial yields are 16 tonnes per ha for table grapes and 6.8 tonnes per ha for processing grapes (USAID 2014b). Modern practices, recently introduced by few producers in the Bekaa, reach to higher yields, up to 35 tonnes per ha.

- USAID classifies commercial farmers based on size of farm into three classes. Small-scale farmers cultivate between 3 and 15 dunams, medium-scale farmers farm between 16 and 70 dunams and large-scale farmers farm over 70 dunams. Just over 80 percent of farmers are small-scale, 17.3 percent of farmers are medium-scale, and 2.3 percent are large scale farms or mega-farms of over 250 dunams. Although there are only 11 mega farms, these farms claim over 50 percent of all land planted to grapes. Small and medium scale farmers each claim just over 19 percent of total land planted with grapes, while large scale farms claim the remaining 11.6 percent. Large scale commercial operations serve export markets, whereas the domestic market is served predominantly by small and medium scale grape farmers (USAID 2014b).

#### Wholesale markets

- The most important market for grapes is the Ferzol market, which is located in the Bekaa, and specializes in grapes and cherries. Over 80 percent of all grapes for the domestic market pass through the Ferzol market, and go either to other Lebanese wholesale markets, or directly to exporters and domestic retail outlets (USAID 2014b).

#### Wholesaler/distributors

- Wholesaler/distributor buy from wholesale markets and from importers and then distribute to the retail market, restaurants and catering operations on a regular schedule. Those who sell to fresh F&V stores and small groceries, usually cover 5 to 6 of these stores. The distribution mark-up is 10%-15% (USAID 2014b).

#### Packers/exporters

- There are 12 major table grapes packer/exporters in Lebanon. These actors are divided into two categories: those that have their own in-house production of grapes and those who only pack and export others' production (USAID 2014b).
- Sales to the GCC market and other Arab countries are for the most part made through wholesale markets where the Lebanese exporter deals with particular importers in the GCC. These importers typically work for major supermarket chains and purchase with firm fixed price orders. They have a strong preference for exporters who have an established quality track record and with whom they have built a relationship of trust (USAID 2014b).
- In terms of overall volumes, the overwhelming majority of grape exports flow to GCC countries. Only one company has gained consistent access to European markets through a contract with an international produce brand (USAID 2014b). Most other connections with EU importers have merely resulted in ad hoc trade.

#### Processors

- Processors play an important role in the grapes value chain, as they purchase table grapes that are not suitable for sale in the export and retail markets and process them into vinegar and grape molasses. Grape vinegar is a low value product, whereas grape molasses, which was traditionally used as a natural sweetener, can claim relatively high prices. It is estimated that 1,200 tonnes of grapes are used to produce grape molasses, producing 200 tonnes of molasses annually (USAID 2014b).

### **8.2.2 Chain supporters**

#### Input and service suppliers

- Rootstock and planting material: nurseries provide grape rootstock and planting material. The genetic material for grapes is usually imported by large grape farmers and specialized fruit tree nurseries from the EU and USA. These service providers multiply and sell planting material to farmers and provide varying levels of technical assistance. In general, getting plant materials is not a problem for farmers (USAID 2014b).
- Chemicals and fertilizers: there are many suppliers of fertilizers and pesticides for grape production in Lebanon, with over 75 registered in the Bekaa alone (USAID 2014b).

- Cold storage providers: there are 13 major cold storage facilities located in the Bekaa that cater to the grape industry. The majority of the facilities is inadequate in terms of capacity and quality of refrigeration (USAID 2014b).

#### IDAL's AGRI PLUS program

In contrast to grape farmers, grape packers/exporters are eligible for export subsidies under IDAL's AGRI PLUS program. AGRI PLUS subsidizes packaging and transportation to help exporters to be more competitive with other grape exporting countries in the region that enjoy considerably lower transportation costs due to subsidized fuel. The program also encourages farmers to upgrade agricultural practices and improve packaging. AGRI PLUS gives packaging and transportation subsidies that are conditional on quality of the product and the type of packaging. The program provides an additional 30% over base level subsidies to products that are organic, have international certification such as Global GAP, ISO22000 or HACCP. To encourage introduction of new products AGRI PLUS adds an additional 10% for exports of products not previously exported (USAID 2014b).

### **8.3 Specific bottlenecks, risks and opportunities in the table grapes value chain**

#### **8.3.1 Bottlenecks**

- In general, most grapes grown in Lebanon, whether for local consumption or for export are not produced or packed according to the standards required either by European buyers or high quality produce buyers in the region (USAID 2014b).
- The technical capacity of farmers tends to decline in relation to farm size. Small farmers do not follow proper production, harvest and postharvest practices. A common problem is that farmers have no access to pre-cooling and modern cold storage. During the peak season grapes sit out under the hot sun where they rapidly lose quality and storage potential (USAID 2014b).
- Inadequate cold storage negatively impacts shelf life which is critical due to the relatively long transport time to Europe. Almost all storage facilities do not have humidity control and they use old cooling technologies that use Freon, a banned refrigerant (USAID 2014b).

#### **8.3.2 Risks**

- Local market saturation: the domestic market is already saturated and any measurable increase in volumes sold causes prices to fall to a level under the costs of production. During the peak production period of August and September, prices are often below production costs (USAID 2014b). This has been the case in the last few years as well. The saturation of the Lebanese table grapes market poses a special challenge to the smaller, less efficient farmers who are now exclusively dependent on the local wholesale markets (USAID 2014b).

#### **8.3.3 Opportunities**

- Given the available suppliers on the European markets, Lebanese table grapes will not be able to compete with the bulk suppliers. First of all Lebanese producers and exporters need to select seedless varieties, for instance Crimson Seedless (red) and Thompson Seedless (white), with a production calendar that coincides with a period of low supply in Europe. The best possible window to enter the market is late in the European (Italian, Spanish and Greek) season: after October and before the peak of South-African supply in December. In the late part of the European season, Italy and Spain are not considered to have the best quality. If a good quality can be guaranteed and if packaging and other requirements are fulfilled, buyers will have a good argument to wait longer for stepping over to grapes from the southern hemisphere.
- A way to strengthen competitiveness in the European market is strong marketing communication (story-telling) with attention for the added value of Lebanese produce, such as its taste. Organic certification would have added value as well.
- Vertical integration in the domestic value chain under guidance of a large farmer or exporter and with use of modern pre- and postharvest methods, may increase the participation of small and medium scale farmers in export market channels.



## 9 Avocados

Area and production volumes of avocado have been small and Lebanese export figures of avocados were negligible in the last decade. However, in the past few years many trees have been planted and substantial volumes will be available for export in the coming years. Avocados are among the products in Lebanon with a high potential to reach a name and a sustainable position in Europe. This chapter elaborates on the characteristics of the avocado market in EU & EFTA as well as the opportunities for Lebanon to develop sustainable trade towards Europe. This chapter builds further on paragraph 3.4 (Lebanese fruit and vegetables value chains), 6 (bottlenecks in the sector) resp. 7 (risks in the sector).

### 9.1 End market(s) and competitiveness

Global avocado trade is growing steadily; two high-income, high consumption markets that are both strong exporters and importers drive the world avocado trade: Europe and the United States. Large, well-established producers, aggregators and exporters including Mexico, Chile, Peru, Israel, Netherlands and Kenya supply these markets (USAID 2014a).

By far, the largest producer and exporter of avocado globally is Mexico, with triple the production and exports of its closest rival, Chile. The top six producers (Mexico, Chile, Dominican Republic, Indonesia, Colombia and Peru) account for 50% of global production volumes (USAID 2014a).

Avocados are classified into four main types: Guatemalan, Mexican, West Indian and hybrids. Commercial varieties include Hass (Guatemalan), Fuerte (hybrid), Ettinger (hybrid), Pinkerton (hybrid), and Reed (Guatemalan). Hass (a race with pebbled black skin) is the main planted variety today. There are new Hass varieties available, such as Lavi Hass, Lamb Hass and Gem Hass. These Hass sub-varieties help extend the supply season.

The three largest avocado producers in the Middle East region are Israel (approximately 75,000 tonnes), Morocco (approximately 20,000 tonnes) and Lebanon (approximately 8,000 tonnes<sup>5</sup>). Turkey (approximately 1,000 tonnes), the top regional producer for most fruit crops, has limited avocado production due to its climate conditions (USAID 2014a).

**Table 17: Lebanese exports of avocados: top-10 export destinations**  
In 1,000 euros

	2010	2011	2012	2013	2014
<b>World</b>	<b>223</b>	<b>251</b>	<b>414</b>	<b>443</b>	<b>339</b>
1. Qatar	63	56	128	142	105
2. Jordan	66	65	46	87	71
3. Saudi Arabia	26	56	110	99	70
4. Kuwait	47	49	62	62	43
5. United Arab Emirates	13	18	44	32	26
6. Bahrain	4	6	12	17	14
7. Iraq	0	0	1	0	4
8. Oman	4	1	2	2	4
9. Egypt	2	0	10	3	2
10. Côte d'Ivoire	0	0	0	1	0

Source: Trademap (2016)

Lebanese exports of avocados are modest but have been increasing since 2010 (reaching € 339 thousand euros in 2015). Almost all avocados are exported to the Middle East countries, ranging

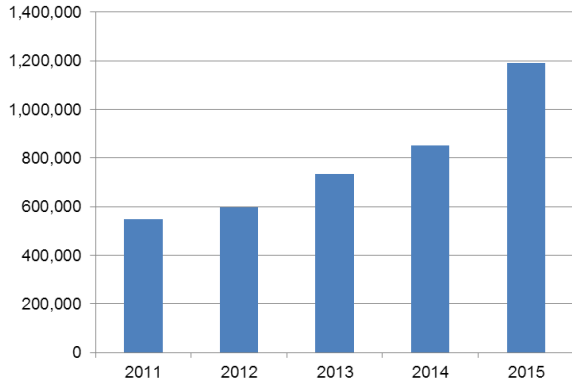
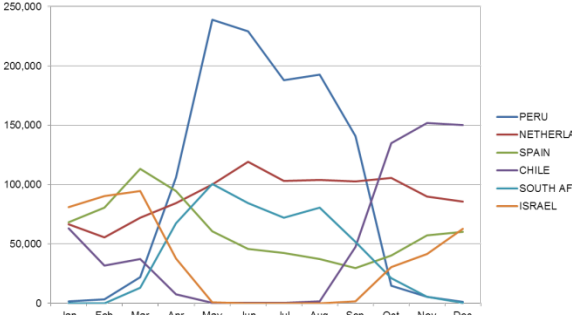
<sup>5</sup> In 2015 yields increased to 11,000 tonnes; foreseen growth in the coming years will exceed 15,000 tonnes / year.

from neighbouring countries to Gulf states. Lebanon holds considerable market share in low consumption countries like Qatar and Kuwait. Market shares in Saudi Arabia and United Arab Emirates (UAE) are smaller. Note that the GCC region is currently a low price importer, taking avocado from Kenya, which holds over 90% market share in the UAE and 80% market share in Saudi Arabia (USAID 2014a).

### Avocados in the EU market

- Europe is a fast growing market. Avocado consumption in Europe has increased significantly in the last ten years. The increase is most remarkable in the Nordic countries.
- The EU imported 600,000 tonnes of avocados in 2015, representing almost € 1.2 billion.
- Consumer demand is particularly strong in Western and Nordic countries. The best opportunities are in large consumer markets such as France, Germany, Spain and the UK, which are often supplied through the Netherlands. The Netherlands and France are the main entry ports for avocados. Dutch wholesale exporters deliver avocados to many buyers throughout Europe.
- Spain is the only significant producer of avocados in Europe, but also an important processor and importer.
- The European market is expected to grow further in the coming years. Nevertheless, the market will remain competitive and importers favour larger producers because of supply certainty.
- The green varieties are losing market share to Hass quickly. Green varieties are still sold because they have a different harvest period, but Western European countries mainly favour the taste and ease of the ready to eat Hass variety.
- Avocado has been a growing market for several years. Changes in production planning and climate result in variation of supply and therefore also prices. In 2014 prices dropped due to an oversupply, while in 2015 and 2016 they started at a higher level because of poor or postponed harvests in Peru and Chile.

**Table 18: EU imports of avocados**

<b>EU imports</b> <i>Value in € 1,000</i>	<b>EU imports from Lebanon</b> <i>Value in € 1,000</i>
	<p>Lebanon has no significant exports of avocados to the EU in the reviewed period.</p>
<b>Leading suppliers monthly</b> <i>Quantity in 100kg</i>	<b>Lebanon monthly</b> <i>Quantity in 100kg</i>
	<p>Lebanon has no significant exports of avocados to the EU in the reviewed period.</p>

Source: Eurostat, Trademap (2016)

### The avocado calendar

- EU imports are all-year round with different countries filling in different seasonal periods. Peru is the leading supplier between May and September, while Chile, Spain and Israel fill in the remainder of the year.
- There are no Lebanese avocados on the EU market, but November through March are the peak production times and the largest in terms of volume traded.

**Fig 8: EU supply calendar for avocados**

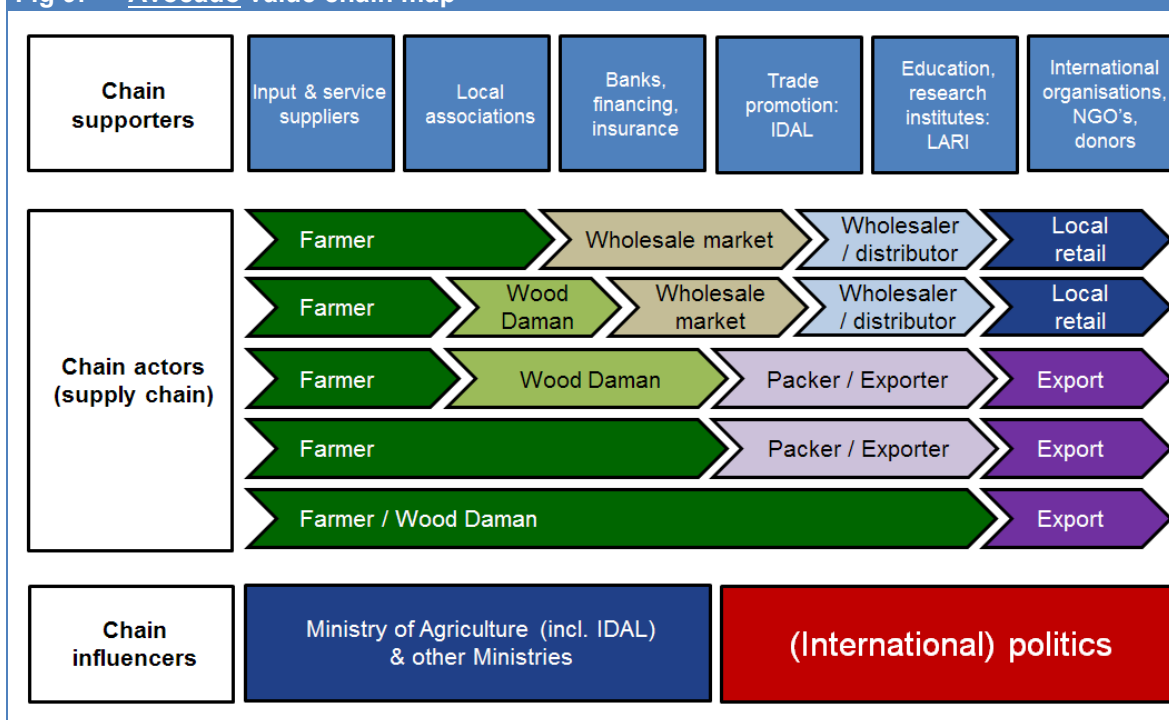
	J	F	M	A	M	J	J	A	S	O	N	D
Peru												
Chile												
S. Africa												
Israel												
Mexico												
Kenya												
Colombia												
Morocco												
Spain												

Source: CBI (2016)

## 9.2 Structure and governance of the value chain

Most avocados in Lebanon are sold by small and large farmers through a network of traders, wholesalers and wholesale markets. Export is a relatively small but growing sales channel. Traders set the price, but producers have relatively more control of supply (therefore price) due to avocado's ability to store on the tree and rather long shelf life once harvested (USAID 2014a).

**Fig 9: Avocado value chain map**



Source: Bureau Leeters & ProVerde (2016)

### 9.2.1 Chain actors

#### Producers

- Avocado is not a traditional crop, but one adopted by producers in the last few decades. Most avocado orchards also include a variety of citrus, custard apple and loquat trees. According to the MoA Agriculture Census of 2010, there are 3,700 avocado farmers in Lebanon (USAID 2014a). The planted area in 2016 is about 750 ha (Hussein Abou Yehia, 2016).
- Farm types range from hobby, small, medium to large and/or 'wood' daman. Many of the large orchards are owned by landowners who derive income from non-agricultural sources. They tend to be environmentally conscious and/or interested in agriculture and take pride in having trees, as opposed to buildings. The farms are managed by professional orchardists who serve as 'wood' daman, providing the orchard owner with a fixed annual rental price, in exchange for complete control over production and sales.
- The market potential and the low maintenance cost of avocados has encouraged farmers to shift towards this crop and away from citrus and banana. Avocado orchard expansion continues today. Nurseries report a farmers demand for more than 100,000 seedlings (50% of these are imported from Spain), which will cover more than 150 ha new area in the coming few years.
- Avocado production in Lebanon enjoys a wide geographic distribution along the coastal strip, especially in the south. Avocados also have been planted with success in Lebanon's interior and recently, growers have started to plant avocados in the Akkar plain (USAID 2014a).
- Production yields in Lebanon are about 12.6 tonnes / ha, being among the highest in the region. Modern varieties and farming practices can bring higher yields, up to 20 tonnes / ha. Total yields in 2015 were about 11,000 tonnes and will increase to 15,000 tonnes in the coming years. Harvest takes place between September and early June, depending on variety (USAID 2014a; Hussein Abu Yehia, 2016).
- Pinkerton, Fuerte, Reed, and Hass varieties account for the majority of all production. Hass is the most popular due to its high value and popularity among consumers. Ettinger, referred to as 'atunga' by growers and traders, is gaining popularity due to its large fruit size, up to 0.5 kg per fruit, and high oil content (USAID 2014a).
- Growers rely on trial and error and advice from a more experienced grower or nursery owner to determine best practices to maintain their avocado orchards. There is little consistency between production practices in different orchards, with growers using different spacing, fertilization, irrigation and pest control practices (USAID 2014a).

#### Wholesale markets

- The Saida and Tyr wholesale markets are the main avocado delivery points for farmers and/or damans. Beirut serves as the main conduit to domestic consumers as the majority of avocados delivered to Saida and Tyr are resold through the Beirut wholesale market (USAID 2014a).
- The wholesale market does not perform any type of added value. No pre-packing happens at the wholesale market as the farmers typically perform sorting product in the field (USAID 2014a).

#### Specialised traders / exporters

- Exporters buy product either directly from the grower or the wholesale market. It is then sorted and packed in single layer boxes and exported (USAID 2014a).
- The number of packers has increased enormously over the past 10 years, as even small-scale traders have entered the export market and set up packing operations. The full-time traders have established links with buyers in high-end retail markets and pursue opportunistic deals as well as longer-term purchase agreements. These diversified exporters typically send mixed loads to their destinations (USAID 2014a).
- The quality of the majority of packing facilities is below standard. Most of the packing (either at the farm or at the premises of traders / exporters) is done by hand. One full automatic packing house for fruit has been reported in the south (HACCP-certified, with modern sorting machines, wax equipment and cold storage), owned by ADR, but it is not being used currently Hussein Abu Yehia, 2016).

## 9.2.2 Chain supporters

### Seeds and young plants suppliers

- Avocado seedlings are available in abundance in the nurseries in the south region of Lebanon. Imported rootstocks from Europe (especially Spain) and US are grafted with local scions, both certified virus-free and uncertified are available, and primarily purchased by landowners and/or wealthier farmers (USAID 2014a).

### Banks / financing / insurance

- Most avocado producers are self-financed or work on credit obtained from input suppliers and/or wholesale traders. In some cases, landowners who rent to wood daman are financing the establishment of orchards on their properties (USAID 2014a).

### Agricultural research and extension

- Avocado farmers receive little to no extension support. Some larger farmers may hire specialists for advice. Others self-finance study tours to Europe or North America. Smaller farmers have virtually no source of advice on improved techniques and will often rely on neighbours or the local nursery for advice, or in some cases input suppliers (USAID 2014a).
- The Hariri Foundation provides extension training to avocado farmers in and around Saida (USAID 2014a).

## 9.3 Specific bottlenecks, risks and opportunities in the avocado value chain

### 9.3.1 Bottlenecks

- Though the quality of seedlings has been improved and modern farming practices have been introduced in recent years (for instance with support of the USAID funded LIVCD project), still today some orchards are suffering from poor tree growth and inconsistent production.
- The major constraint facing orchard expansion or orchard conversion is the high cost of land and competition from real estate developers as well as high investment costs because of the high price levels for imported seedlings (USAID 2014a).
- Newly planted seedlings require five to seven years to reach commercial scale production levels. A commonly used option is to graft known varieties onto available trees that have been grown from seed. Growers then can attain commercial production levels within two years (USAID 2014a).
- In sorting, grading and packing, facilities are below standard and international grading classifications (Extra, Class I and Class II) are not being used by the majority of the growers and/or exporters

### 9.3.2 Risks

- The avocado subsector is developing fast; it can be said that there is optimism, based on demand in high-end markets. It is crucial and it is a challenge to develop and build this subsector in a proper and professional way. It starts with high quality genetic material and ends with adequate systems and facilities for postharvest and exporting. A theoretical risk is that not enough attention goes to a solid and professional organisation of this promising value chain.
- There are no other specific risks in the avocado value chain in addition to the general risks which have been mentioned in chapter 7.

### 9.3.3 Opportunities

- Lebanon has a great opportunity to increase its market share in Europe. Europe is a large and growing market for avocados, which is expected to show further growth in the coming years, particularly Nordic countries, France, Germany, Spain and the UK, which are often supplied through the Netherlands. Finding importers in the Netherlands for re-export all over Europe, is a recommended distribution strategy.
- In terms of varieties, there is clear trend towards Hass varieties.
- Whereas Lebanese avocados can be on the market from September to May, the indication is that competitiveness in terms of quality and prices compared to other suppliers, is the best in



the first months of the year. Normally the demand is high in those months and the supply (from Israel, Spain, Chili and Colombia) is limited.

- A way to strengthen competitiveness in the European market is strong marketing communication (story-telling) with attention for the added value of Lebanese produce, such as its taste. Organic certification would have added value as well.
- Apart from European markets, Lebanon has potential to enlarge its market shares in the Middle-East. Excluding the major production countries Israel and Lebanon, the Middle-East region significantly underperforms the European market in consumption. But the GCC is a growing market. In the GCC, the UAE and Saudi Arabia are relatively large importers where Lebanon has limited market share. Low-priced, non-commercial “green” Kenyan avocados dominate these markets. For Lebanon to capture market share from Kenya, it would have to take advantage of Kenyan supply shortfalls between October and February, or increase demand for the higher quality avocados from Lebanon (USAID 2014a).
- Avocado consumption in Lebanon it is higher than in Europe. Considering that most of this consumption is through the juice stands, the potential to increase household consumption exists for low, medium and high-income consumers (USAID 2014a).
- Currently, there is no industrial processing of avocados in Lebanon. However, great potential exists, as avocado oil is very good for cosmetics and cooking. Lebanon’s existing olive oil pressing infrastructure can support the establishment of an avocado oil industry, which will open new markets internationally as well as in Lebanon’s vibrant health food and cosmetics sectors (USAID 2014a). In addition to oil, there is also a good international market for frozen pulp and chunks.

## 10 Citrus

The citrus subsector traditionally is an important factor in the Lebanese fruit and vegetables sector, producing for the domestic market and GCC channels. Within the citrus assortment, oranges, lemons and clementines & mandarins take the major part. Lebanese citrus is not yet any factor in the European market. This chapter elaborates on the characteristics of the citrus market in EU & EFTA and the opportunities for Lebanon to develop sustainable trade towards Europe. This chapter builds further on paragraph 3.4 (Lebanese fruit and vegetables value chains), 6 (bottlenecks in the sector) resp. 7 (risks in the sector).

### 10.1 End market(s) and competitiveness

Citrus fruits are grown all over the world. Brazil, China and USA are the leading global producers, but Spain is the largest exporter with a market share of 24% of total exported value, followed by Turkey and South Africa, each with a 10% share, and USA (8%) (Blominvest Bank 2016).

Lebanese production of citrus varied significantly throughout the years, triggered by political upheavals on the local and the regional level. Citrus production started increasing in 2001, mainly after the withdrawal of Israeli troops from the South, and peaked in 2004, reaching almost 400,000 tonnes. This number decreased to 374,000 tonnes due to the July War of 2006, recuperated in the couple of years to follow, then plunged significantly in 2008, as a result of the replacement of citrus in the South with avocado and banana. Banana and avocado cultivation is not an option for farmers in the North because it is too cold (Blominvest Bank 2016). According to estimations of Hussein Abou Yehia (2016) yields in 2011 were 200,000 tonnes, decreased to less than 100,000 tonnes in 2014 and recovered to around 120,000 tonnes in 2015.

Still, Lebanon exported a considerable € 11.5 million of citrus fruit in 2014, mainly to the Gulf region. Lebanon's citrus exports have been following a declining trend since 2007, except for a one-time spike in price, in 2010 and 2011. This substantial hike was triggered by the period of instability in Egypt, normally one of the largest citrus exporters in the Middle East, weighing heavily on the country's citrus exports (Blominvest Bank 2016).

Fresh oranges are the leading product (about 50% of citrus exports), followed at a distance by mandarins, lemons and limes. All products show more or less the same stagnating export development. Exports of grapefruit, pomelos and other citrus are small, but have drawn attention in the sector because of international demand.

#### Oranges

Main species: Navels, Shamouti, Blood oranges and Valencia.

Oranges are produced on the coastal plains of the south and north, as well as on the slopes and valleys of Mount Lebanon up to 600m altitude.

Seasonal availability: from October until July.

#### Lemon

Main species: Eureka, Lisbon, Fiminello

Lemon is the most popular citrus in Lebanon since its juice is appreciated and used in most famous Lebanese dishes. Lemon is cultivated along with other citrus crops on the coastal plains up to 600m altitude.

Seasonal availability: almost all year round.

#### Mandarin and Clementine

From the old Yusuf effendi Mandarin, originally cultivated in Tripoli and its surrounding, to the most known Clementine varieties, these fruits are popular and produced all over the coastal plains from the south to the north.

Seasonal availability: from September till February.

*Source: Ministry of Agriculture – Brochure 'Lebanese Fresh Fruit and Vegetables'*

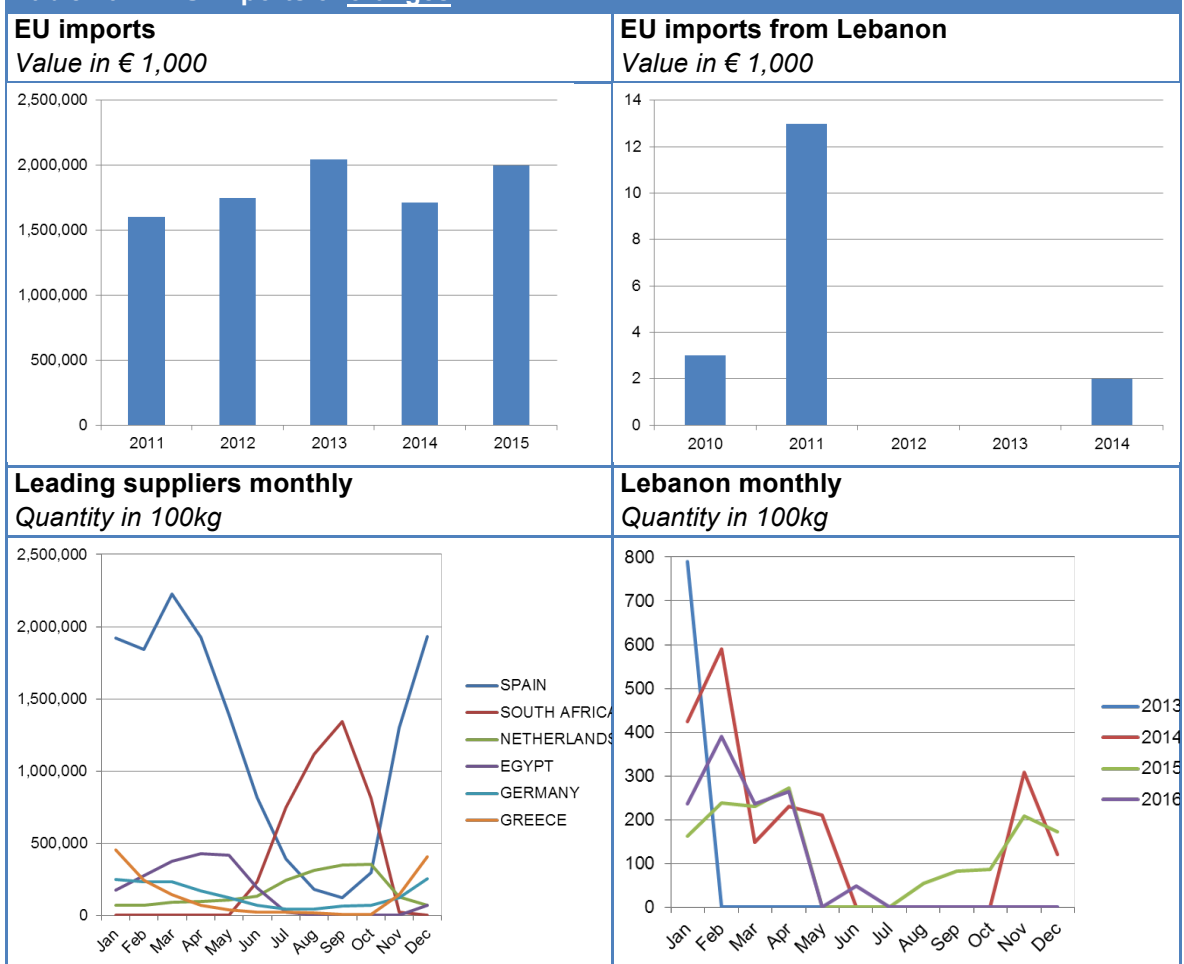
The Arab and GCC markets are highly suited to the current state of the Lebanese citrus sector, for various reasons, among others the cost competitiveness, (still) lower quality requirements, relative ease of market access and existing market linkages with these countries.

**Table 19: Lebanese exports of citrus: top-10 export destinations**  
In 1,000 euros

	2010	2011	2012	2013	2014
<b>World</b>	<b>12,754</b>	<b>19,341</b>	<b>14,583</b>	<b>11,496</b>	<b>11,555</b>
1. Saudi Arabia	3,419	4,220	5,059	3,160	3,635
2. Kuwait	2,474	2,104	3,190	2,462	2,233
3. Syrian Arab Republic	2,382	5,556	2,681	2,035	1,977
4. Qatar	765	788	911	702	948
5. United Arab Emirates	2,429	1,038	1,393	797	825
6. Oman	252	279	348	136	503
7. Bahrain	353	386	539	366	481
8. Jordan	221	4,521	183	398	460
9. Iraq	376	401	205	1,354	451
10. Côte d'Ivoire	19	15	25	17	15

Source: Trademap (2016)

**Table 20: EU imports of oranges**



Source: Trademap, Eurostat (2016)

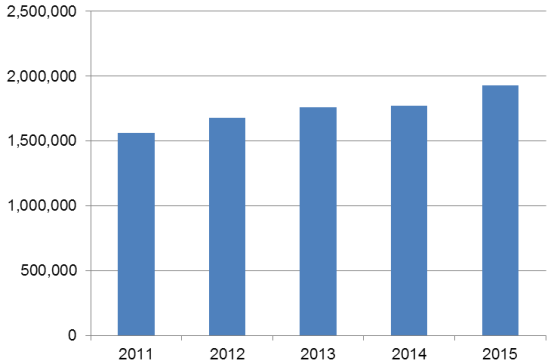
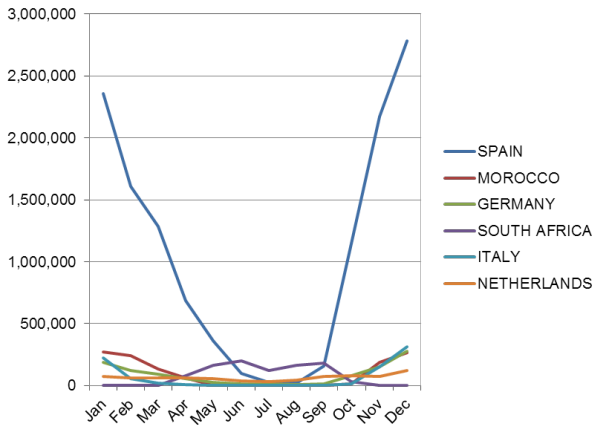
### Oranges in the EU market

- The EU imports (intra- and extra-imports) more than 300 million tonnes of oranges annually (about € 2 billion).
- Spain is the leading supplier between October and June. During the European summer South Africa takes over this role. Egypt supplies mainly in the European late winter and spring time.
- According to USDA (USDA 2016), orange production in the European Union in 2016 is forecasted up 2% to 6.1 million tonnes on favourable weather. Imports are down but consumption is up with the availability of additional domestic oranges. Fruit for processing is slightly lower.

### Mandarins in the EU market

- The EU countries imported a total of 206 million tonnes of mandarins in 2015, representing almost € 2 billion. The lion's share of the mandarins is European produce.
- Spain dominates supply of mandarins to the EU market. Spanish supply starts in October and continues until April/May. Other minor supplying countries are Morocco, South Africa and Italy. South Africa fills in the summer season when Spanish supply is low. Furthermore there is supply from Peru, Argentina and Uruguay in the May/September period.

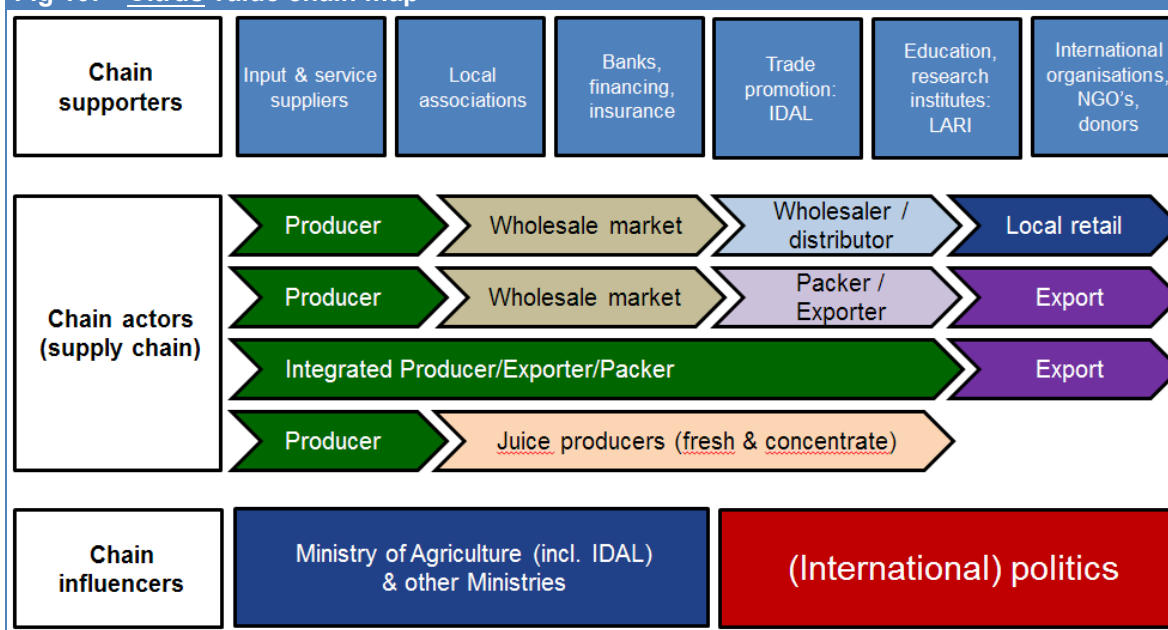
**Table 21: EU imports of mandarins**

<b>EU imports</b> <i>Value in € 1,000</i>	<b>EU imports from Lebanon</b> <i>Value in € 1,000</i>
	<p>Lebanon has no significant exports of mandarins to the EU in the reviewed period.</p>
<b>Leading suppliers monthly</b> <i>Quantity in 100kg</i>	<b>Lebanon monthly</b> <i>Quantity in 100kg</i>
	<p>Lebanon has no significant exports of mandarins to the EU in the reviewed period.</p>

Source: Trademap, Eurostat (2016)

## 10.2 Structure and governance of the value chain

The majority of the Lebanese citrus is produced at small scale farms and finds its way to the domestic market, processing industry and export destinations through various (not always transparent) channels.

**Fig 10: Citrus value chain map**

Source: Bureau Leeters & ProVerde (2016)

### 10.2.1 Chain actors

#### Producers

- Small scale farmers, in addition to cultivating citrus, typically engage in other forms of agriculture, or have part time jobs in other sectors. Lebanese citrus producers grow popular varieties of citrus such as Shamouti and Navel oranges, but often traditional production practices reduce the quality of these fruits and overall yields.
- Most citrus varieties in Lebanon were introduced in the 1960's and have been cultivated in Lebanon for such a long time that they are now considered local varieties. Shamouti (branded as Jaffa), is the most commonly cultivated orange variety, and accounts for at least 65 percent of citrus production in Lebanon. Lebanese farmers produce three main lemon varieties: Interdonato, Monachello and Meyer. Other important citrus in Lebanon are mandarins & clementine and tangerine. Production of grapefruit and pomelo are low, as there is limited (domestic) demand for these fruits. A few Lebanese producers have started producing kumquats, which are considered "fancy". (USAID 2013a).
- The cropping system for citrus production in Lebanon reflects mostly older, traditional practices that are no longer considered best practice by international standards. All citrus plantations in Lebanon are irrigated; the majority using traditional furrow or flood systems, and a smaller portion using drip irrigation systems. Typical citrus farming practices support average annual yields of 3 tonnes per dunam, compared to annual yields using best practices which can be as high as 5 tonnes per dunam (USAID 2013a). According to Hussein Abou Yehia (2016) the lack of Integrated Pest Management practices (IPM) and certifications (in particular Global GAP) are the main bottlenecks that hinder the citrus subsector.
- Harvesting practices utilized by Lebanese producers are adequate, although there is room for improvement in harvesting infrastructure including using ladders. Currently, harvesting is done by hand picking only. There is no machinery used, except transportation from the field to the collection point and then to the packing house (USAID 2013a).
- In recent years farmers face far too low prices in their domestic market during the peak season: \$3 to \$7 for 25 kg boxes.

#### Wholesale markets

- The vast majority of citrus production is sold through wholesale markets in Saida, Beirut, and Tripoli as well as other smaller wholesale markets. As there is only one wholesale market in each major city, farmers do not have many sales options and negotiation power is skewed to the side of the wholesale traders (USAID 2013a).

**Table 22: Most important citrus species and varieties in Lebanon**

Type/Species	Specific varieties
<u>Oranges:</u>	
Navel	Washington Navel, Navel Late, Navalina, Thompson Navel, Lane Late, New Hall
Common	Jaffa Shamounti, Hamlin, Valencia Late, Valencia Late Olindia
Blood	Cara, Washington Sanguine, Rub, Tarocco, Double Fine, Sanguinelle
Succari	Succari Maghrabi, Tangelo Minneola, Fortune
<u>Other citrus:</u>	
Mandarin	Satsuma Owari, Satsuma mandarin, Temple, Avana
Clementine	Nour, Fina, Fedele, Common, Hernandina
Tangerine	Mediterranean Mandarin, Ortanique Tangor, Commune
Grapefruit	March Seedless, Thompson Pink Marsh, Star Ruby, Red Blush, Ruby Red
Pomelo	Shaddock

Source: LARI, Lebanon (2010)

#### Specialised traders / exporters

- Exporters buy product either directly from the grower or the wholesale market. Most of the exporters include citrus in their assortment.
- Wholesale traders, who routinely pressure farmers to accept low prices and slim margins, charge on average a 12 percent margin on sales (USAID 2013a).
- The average quality of packing facilities is below standard. Most of the packing (at the farm or at the premises of traders / exporters) is done by hand. One full automatic packing house for fruit has been reported in the south (HACCP-certified, with modern sorting machines, wax equipment and cold storage), owned by ADR, but it is not being used currently (Hussein Abu Yehia, 2016).

#### Juice producers

- Juice production in Lebanon can be divided to two main types (Blominvest Bank 2016):
  - fresh juice: this market is dominated by Balkis. Balkis produces bottled fresh juice that is pasteurized to preserve the flavour and vitamins. Other fresh juice producers include Juice-up, Antabli and Tam tam, which have small shops and produce on demand.
  - juice made from concentrate, which can be further divided into two sub categories: natural concentrate juice, with only water added to the concentrate, and concentrate juice with additives. The former is dominated by Maccaw, Libby's and Tropicana Premium, while X-tra, Tropicana Slice, and Pampa are the main players in the latter.
- Only fresh juice producers utilize fruits produced in Lebanon. Meanwhile producers of juice made from concentrate import the concentrate from abroad, and reconstitute it in Lebanon. No concentrate is made in Lebanon, since there are many fruits like mangoes and pineapple that are not grown in the country (Blominvest Bank 2016).

### **10.2.2 Chain supporters**

#### Seeds and young plants suppliers

- Citrus nurseries are unregulated and there are limited standards regarding the quality and growing standards of tree seedlings and grafting materials. Many nurseries are not specialized in citrus seedling production, and produce multiple plant species without specialized treatments to improve the quality of seedlings, without certificate of variety, and without quality control, leading to low quality seedlings (USAID 2013a).

## **10.3 Specific bottlenecks, risks and opportunities in the citrus value chain**

### **10.3.1 Bottlenecks**

- The citrus subsector has a low profitability, being caused in part due to relatively high costs of production. The small plot size of many farmers, especially those in the south, limits the potential for economies of scale. Farmers are not organized in any kind of cooperative that could enable bulk purchasing and result in cost savings on key agricultural inputs such as fertilizers and pesticides. Low profitability is also caused by low yields, which have been



declining for multiple reasons: traditional production practices, low plant density, widespread disease and pests without using IPM practices and poor postharvest practices. Farmers have very limited access to technical extension services that could increase knowledge (USAID 2013a).

- After harvest produce is faced with high losses because of poor storage. Only about half of Lebanese citrus production, the portion that is destined for international markets, passes through cold storage. The lack of access to cold storage is the main driver of post-harvest loss rates of as high as 15 % for a product that has the potential to have relatively long shelf life (USAID 2013a).
- The legal and institutional environment for citrus in Lebanon is largely under-developed. For example, Lebanon currently does not have citrus pest and disease quarantine to control imported fruits and plants coming in to Lebanon to ensure that they are not contaminated and threatening to domestic crops. The citrus industry does not have any regulation related to pesticide use or pest management beyond a list of banned pesticides that was established by the Ministry of Agriculture in 2010 (USAID 2013a).
- The exporting actors in the Lebanese citrus chain lost their marketing intelligence in the European channels and never developed warm linkages with European importers.

### 10.3.2 Risks

- There are no specific risks in the citrus value chain (apart from the general risks which have been mentioned in chapter 7).

### 10.3.3 Opportunities

- Opportunities for Lebanese citrus on the European market are limited. It is not only because of the various weaknesses in the chain and the overall sentiment in Lebanon, causing replacements of citrus into other crops, such as avocado. The main reason has to do with the fact that Lebanon's export season fully overlaps with Spain, which is the leading supplier between October and June. During the European summer season South Africa takes over this role.
- Having said this, there seems to be a small but interesting window for Valencia oranges in the summer (June – September), after Spain leaves the market and in the start of the South Africa supply season. Lebanese Valencia's then may be able to compete in terms of quality and price, both for fresh use as for processing.
- Due to the new rules on quarantine measures on South African oranges (which have been issued late 2016) there is a big interest for orange suppliers in the period June – October; this may create extra opportunities
- A way to strengthen competitiveness in the European market and support market exposure for specialty products, is strong marketing communication (story-telling) with attention for the added value of Lebanese produce, such as its taste. Against that background other citrus products may have opportunities in the European market, for instance lemon, pomelo and even mandarins and clementines.

## 11 Potatoes

Since the 1960's Lebanon has been an important regional producer of potatoes with imports of quality seeds from western countries (such as the Netherlands) and exports to markets mainly in Arab countries. Since the civil war in the 1970s the sector faced a drop in yields and exports. Lebanese potatoes have not been on the European market since the 70s. This chapter elaborates on the characteristics of the potato market in EU & EFTA and the opportunities for Lebanon to develop sustainable trade towards Europe. This chapter builds further on paragraph 3.4 (Lebanese fruit and vegetables value chains), 6 (bottlenecks in the sector) resp. 7 (risks in the sector).

### 11.1 End market(s) and competitiveness

By the early 1970s, Lebanon produced an annual volume of about 100,000 tonnes, of which about 60% was exported. Production was severely disrupted by the civil war in Lebanon in the mid-70s, dropping to 30,000 tonnes in 1976. The Bekaa Valley is traditionally the major producing area of potatoes in Lebanon, accounting for about 80% of the country's potato production. Potatoes from the Akkar region are favoured by Lebanese consumers for their taste. Around 111,311 dunams (11,131 ha) are used to grow potatoes in Lebanon (ILO 2015).

Lebanese potatoes: the main species are Spunta and Agria.

Potato is one of the major exportable products of the country. The different climatic zones ensure diversity in harvesting periods. Akkar and Bekaa constitute the major areas of production. Nowadays, efforts are made to improve the cultivation and many improved varieties are introduced.

Seasonal availability: all year round.

*Source: Ministry of Agriculture – Brochure 'Lebanese Fresh Fruit and Vegetables'*

Lebanon is well supplied with seed potatoes: 23 European exporters (among others the Dutch suppliers Agrico, Stet and HZPC), deliver their seeds to 37 importers in Lebanon. Spunta (which is a variety free of breeders rights) is dominant, but there seems to be more and more demand for specialties, such as HZPC's varieties Innovator, Annabelle and Colomba (Jan Prins, 2016).

Potatoes in the north of Lebanon (Akkar) give the earliest harvest season: planting from early December to the end of January results in harvest from early April to the middle of June. Then, after a one month gap, harvest starts in the Bekaa valley.

In the past couple of years, Lebanese exports of potatoes have been increasing, reaching a value of € 37 million in 2014. These are mostly fresh potatoes. Exports of seed potatoes is negligible.

**Table 23: Lebanese exports of potatoes: top-10 export destinations**  
In 1,000 euros

	2010	2011	2012	2013	2014
World	10,407	14,994	12,118	27,629	36,695
1. United Arab Emirates	1,880	3,062	3,391	7,154	8,435
2. Jordan	702	1,014	1,306	6,776	5,763
3. Kuwait	1,978	1,953	2,293	4,844	5,445
4. Syrian Arab Republic	1,522	1,644	162	992	4,363
5. Saudi Arabia	2,213	1,944	3,109	1,022	3,363
6. Qatar	409	3,324	647	1,487	2,275
7. Oman	566	700	592	1,235	2,109
8. Iraq	46	211	7	2,647	2,093
9. Russian Federation	885	913	313	870	1,900
10. Bahrain	180	169	249	586	895

*Source: Trademap (2016)*

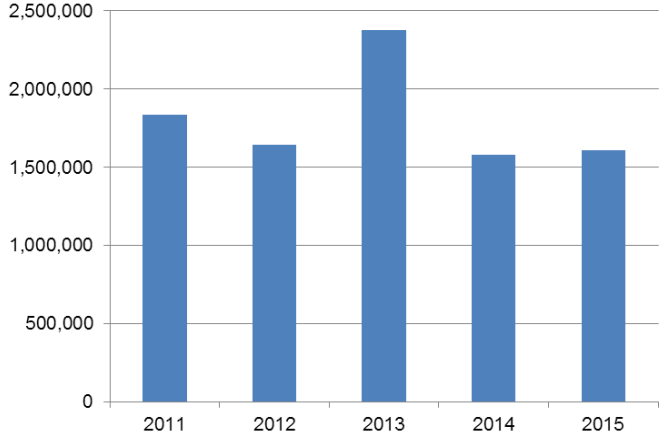
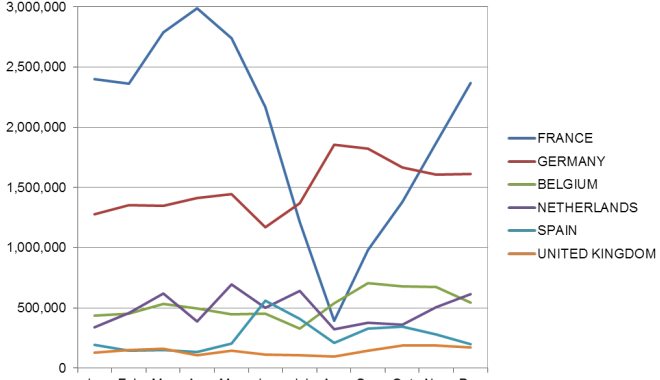
Potatoes are being exported to Middle-East countries and to Russia. Most export markets show growing imports of Lebanese potatoes, but strongest growth in value could be registered in exports to the United Arab Emirates.

Despite the growth figures in exports, potatoes are not yet important for the government budget in the same way that citrus or some other cash crops are. Potatoes are not anymore a strategic product for exports, mainly because of the high need for water and because of stronger competition in GCC markets from Turkey, Pakistan and even France. At the farm level, government policies are not visible and potato farmers do not experience the effects of the policies in their everyday life (ILO, 2015 and various persons during the field trip in Bekaa).

### EU quota

- In 1998 Lebanon agreed with the EU on a yearly free quota of 50,000 tonnes. It took until 2013 to overcome obstacles with residues and phytosanitary problems (Phytophthora).
- On 1 August 2013, the EC published decision (2013/413/EU) and paved the way for the export of Lebanese potatoes to the EU. The decision allows EU imports of 50,000 tonnes of potatoes not intended for planting. The possibility to export into the EU was expected to provide substantial economic opportunities. However, the prices of potatoes in the local market rose almost to the same level of export prices, which led to a huge decrease of potatoes available for export to the EU (ILO 2015). Until now, not any kg has been shipped to the EU.

**Table 24: EU imports of potatoes**

<b>EU imports</b> <i>Value in € 1,000</i>	<b>EU imports from Lebanon</b> <i>Value in € 1,000</i>
	<p>Lebanon has no significant exports of potatoes to the EU in the reviewed period.</p>
<b>Leading suppliers monthly</b> <i>Quantity in 100kg</i>	<b>Lebanon monthly</b> <i>Quantity in 100kg</i>
	<p>Lebanon has no significant exports of potatoes to the EU in the reviewed period.</p>

Source: Trademap, Eurostat (2016)

## Potatoes in the EU market

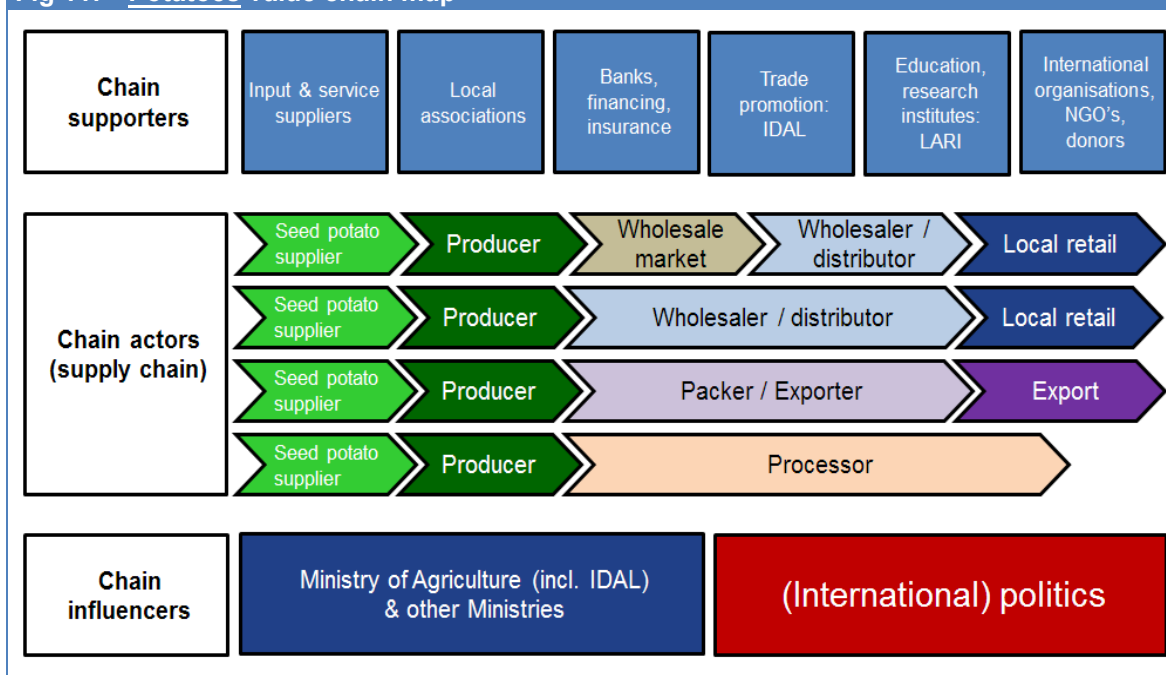
- European countries imported about 6.6 million tonnes of potatoes in 2015 (€ 1.6 billion).
- Leading supplying countries are France (2.4 million tonnes) and Germany (1.8 million tonnes). Potatoes are traded all year round. There is a dip in the French supply in July-September, which is filled in partly by German supply.
- The markets in Europe show a wide diversity. The UK, Scandinavia and France can be considered as high-end, offering good prices. The German market is a bulk and discount market (Jan Prins, 2016).

## 11.2 Structure and governance of the value chain

Lebanon's potato value chain is rather complex. It is common to find many actors playing more than one role. For instance, one person can be a farmer, trader, owner of a shop at the wholesale market, exporter, chairman of a cooperative and vice chairman of a syndicate. Some traders, exporters and processors reach back to the beginning of the chain and play the role of input supplier by providing farmers with seeds, fertilizers and pesticides (ILO 2015).

Farmers sell their products at wholesale markets, which actually are spot markets. Farmers do also sell directly to buyers at their homes and/or farms. They get less income but do not need to pay for transport. Farmers also sell through contracts to traders, exporters or factory owners (ILO 2015).

**Fig 11: Potatoes value chain map**



Source: Bureau Leeters & ProVerde (2016)

### 11.2.1 Chain actors

#### Producers

- Only 2% of farmers grow potatoes in areas larger than 20 ha, but these farms account for 32% of the total potato production. These are the producers interested in exporting to the EU market and they are mainly organised as family companies. Having strong cooperatives helps gather small farmers and empower them to buy their input supplies, and produce and sell their crops collectively and efficiently (ILO 2015). However, in practice not many cooperatives have this strong organisation and governance.

#### Wholesaler / distributors and packers / exporters

- Traders control the market by fixing the purchase price and buying from farmers in different ways and delivering domestic and/or export channels. They may hire daily workers for harvesting, sorting and packing labour work, pay for transporting the packed produce to the export market and arrange trade deals in the export market (ILO 2015).

#### Processors

- All over Lebanon various processing options for potatoes are available.
- In the north of Lebanon, there are two French fry factories (Famous Frites and Super Frites). Famous Frites buys “Agria” potatoes from the field. Previously, they used to buy from 50 farmers using the contract system, but this system did not work out due to lack of commitment from farmers. Currently, Famous Frites buys potatoes from ten big farmers who accept their terms and conditions and do not get involved in the production phase. They import also from Egypt, due to cheaper prices compared with Lebanese potatoes, and use four cold storage rooms (capacity of each storage room is between 1,000 and 1,500 tonnes) (ILO 2015).

### **11.2.2 Chain supporters**

#### Cooperatives and farmers’ groups

- Cooperatives play an important role in the potato subsector, mainly because of the small scale of the majority of the producers. Almost every village has an agricultural cooperative. However, functional cooperatives hardly exist. They rarely develop marketing activities or empower farmers to be competitive on the market or to get inputs at lower prices (ILO 2015).

#### Seed potato suppliers

- Lebanon does not produce certified seed. There are no gene banks or potato breeders in Lebanon either. The total amount of certified seed potato imported is mainly from EU member states. Lebanon imports around 70% of its potato seed needs from the Netherlands. Other source countries are Belgium, France, Germany and Denmark (ILO 2015).
- Generally speaking, farmers are hesitant to buy high quality seeds because they are not familiar with the relatively high costs of these (imported) seeds.
- Importers of seed potatoes are registered with the MoA and must submit details regarding the exporting company, quantity, variety, and the registration number of the producer (ILO 2015).

#### Input and service suppliers

- The cost of some agricultural inputs, such as chemicals and fertilizers, has increased since the Syrian crisis began, particularly in border areas where these inputs were imported from Syria. This has compounded the already rising input costs due to government restrictions on some pesticides (ILO 2015).

#### International donors

- Various international donors include the potato sector in their programs, especially in the north of Lebanon because of the impact of the Syria crisis. More details can be found in chapter 13.
- One specific project is funded by the Dutch government, RVO being the initiator. The project is being implemented in cooperation with the Dutch seed supplier HZPC and aims to develop an export flow to the European market and thereby using the available 50,000 tonnes EU quota.
  - The project is based on controlled production and marketing of a specialty variety (HZPC’s variety Annabelle); for the season 2015/2016 agreements were made with the Dutch packer Joh. van Kampen (Lisse), whereas the actual import was HZPC’s task. The market entry and distribution to retail outlets was well prepared with dedicated packaging and a special label. However, the Lebanese cluster (importer plus farmer cooperative) did not manage to ship the potatoes after harvest. Apparently the whole process was too risky and/or complicated which did them decide to supply the local market.

## **11.3 Specific bottlenecks, risks and opportunities in the potato value chain**

### **11.3.1 Bottlenecks**

- The potato subsector is characterized by small scale operations, thereby high costs of production and low profitability. Farming practices are primitive; despite the existence of many

cooperatives, the use of machinery for soil preparation and crop maintenance (ploughs, hilling machines and spraying equipment) is not common practice.

- Most of the potato varieties are not suitable for high-end markets and none of the potato fields are under Global GAP certification.
- Lebanon is faced with strong competition in the supply of both its traditional export markets (neighbouring countries and GCC states) as well as the European market. Moreover, networks in the EU market are not there.
- ILO conducted a deep Value Chain Analysis (VCA) of potatoes in Akkar in 2015 and came up with a long list of weaknesses. In January 2015, ILO held a stakeholder meeting to validate the findings. Most of the identified constraints met a high level of agreement from all attendees. Other weaknesses were not agreed upon by all attendees. Below is the full list (the underlined ones were not agreed upon) (ILO 2015):
  - Oligopoly of seeds and fertilizer prices by input suppliers
  - Improper use by farmers of pesticides and fertilizers within the proposed standards and guidelines
  - Excessive consumption of agricultural land and not adopting crop rotation
  - The difficulty of introducing new varieties of potato seeds
  - Lack of appropriate machines to clean potato tubers from soil residue
  - The large number of small-scale cultivated lands
  - Inaccuracy of agricultural information provided via text messages to the farmer and not offered on a regular basis
  - Lack of follow-up on the correct application of agricultural information provided during training sessions
  - Lack of adequate information and statistical data for the sector (import, export, prices in the domestic and overseas market)
  - Lack of coordination among stakeholders
  - Lack of coordination between projects funded by foreign and Arab countries
  - Control of the final product prices in the markets
  - Weaknesses in the role of cooperatives
  - Lack of experience in export and shipping procedures to Europe
  - Low wages for agricultural workers and unequal pay and working conditions between women and men
  - Unfamiliarity with the minimum standards for the quality of the product for export to Europe.
- Other relevant constraints identified by the aforementioned ILO VCA (ILO 2015):
  - The farm gate price of potatoes is often based on limited negotiation; smallholders do not have the market savvy or access to necessary market information.
  - Public and private support is lagging behind. Agriculture policies and resources have traditionally focused on cash crops for export, leaving potatoes at the periphery.
  - Farmers are using surface water for irrigation that is contaminated with sewage.
  - Food traceability is not ensured.
  - Imports of potatoes, notably from Egypt, which some traders buy in great quantities before the deadline in the agricultural calendar year set by the MoA (typically around the end of March / early April). This means that cheap potatoes are imported from Egypt very shortly before the potatoes from Akkar come to the market. This makes it more difficult for Akkar farmers to sell their potatoes at a fair price.

### 11.3.2 Risks

- There are no specific risks in the potato value chain (apart from the general risks which have been mentioned in chapter 7).

### 11.3.3 Opportunities

- Opportunities for Lebanese potatoes in the European bulk segment are limited, unless the potatoes come on the market as early as March (which is not feasible with the current varieties and practices) and Southern European produce comes late.



- Given the preferences and the demand in the European markets, only specialties, with high quality and marketed under premium branding, have a chance. Partnerships between Lebanese growers and packers on one side and a Dutch seed supplier and a Dutch packer on the other side have the potential to develop effective value chains and develop a market in Europe.
- The majority of actors in the Lebanese potato value chain is far away from delivering the required quality and service, but few exporters / packers in Lebanon already do have that capacity.
- A way to strengthen competitiveness in the European market and support market exposure for specialty products, is strong marketing communication (story-telling) with attention for the added value of Lebanese produce, such as its taste. That is a feasible option for potatoes and asks for a close cooperation between the seed supplier, producers, exporters and European packers.

## 12 Smaller products with export potential to high-end markets

Apart from the four crops that have been analysed in chapters 8, 9, 10 and 11, Lebanon has a wide assortment of other fruits, nuts and vegetables with potential for high end markets, either in the region or in Europe. Lebanese traders who export table grapes, avocados, citrus fruit and/or potatoes, usually also export (a combination of) these other products. Taking into consideration the bottlenecks and risks in the value chains that have to be solved (see chapters 6 and 7) the following products have opportunities and are described in this chapter:

- Cherries
- Stone fruit (peaches, nectarines, plums, apricots)
- Apples
- Nuts
- Vegetables
- Other fruits

Some statistics of exports in the previous years of these and other products, are shown in the table below.

Table 25: Other Lebanese fruit export products (excluding grapes, avocado, citrus, potatoes) In 1,000 euros						
Fruit (and nuts)						
Code	Product label	2011	2012	2013	2014	2015*
'080810	Apples	9,708	14,926	11,182	9,336	44,495
'081090	Tamarinds, cashew apples, jackfruit, lychees, sapodillo plums, passion fruit,...	2,008	2,008	1,544	1,618	8,823
'080930	Peaches, incl. nectarines	2,603	2,420	2,754	1,381	8,571
'080910	Apricots	452	800	718	284	7,632
'080940	Plums and sloes	845	1,331	1,250	859	6,772
'080921	Sour cherries "Prunus cerasus"	-	1,222	451	1,199	4,559
'080929	Cherries (excluding sour cherries)	-	920	1,027	817	4,489
'080390	Fresh or dried bananas (excl. plantains)	-	8,769	11,058	6,846	4,081
'080830	Pears	-	1,763	1,389	735	2,186
'080251	Fresh or dried pistachios, in shell	-	301	231	39	153
'081340	Dried peaches, pears, papaws "papayas", tamarinds and other edible fruits (excl. nuts)	129	200	217	139	147
'081070	Persimmons	-	465	379	311	93
'081030	Fresh black-, white- or redcurrants and gooseberries	-	2	-	-	74
'081010	Strawberries	102	58	48	23	52
'080450	Fresh or dried guavas, mangoes and mangosteens	94	128	75	86	41
Fresh vegetables						
Code	Product label	2011	2012	2013	2014	2015*
'070390	Leeks and other alliaceous vegetables (excl. onions, shallots and garlic)	3	2	-	1	6,908
'070310	Onions and shallots	2,113	1,355	2,782	3,048	1,792
'070490	Cabbages, kohlrabi, kale and similar edible brassicas (excluding cauliflowers, ...)	113	103	249	128	1,240
'070890	Fresh or chilled leguminous vegetables, (excl. peas ...)	108	264	193	331	265
'070519	Lettuce (excluding cabbage lettuce)	2,363	2,251	1,255	6,773	112

\* 2015 data based on the partner reported data (Mirror data).

Source: Trademap (2016)

## 12.1 Products with potential

### Cherries

- On a global scale the US, Chili, Turkey and Spain are large producers and exporters of cherries. Spain and Turkey dominate the European market, which shows a growing demand for high value cherries in recent years.
- In Europe the season starts early May (with premium prices) and has its peak in June and July (with 25% to 35% lower prices). Volumes go down and prices go up in August.
- In the last few years there are indications that supply from Greece and Turkey fall back, whereas Spain and Italy become stronger suppliers.
- Generally speaking the consumer in Europe prefers dark and big cherries. There is room for loose cherries in cartons, although retail packing in punnets is favourable.
- Lebanon has a good name and reputation in the region as a producer of sweet cherries, mainly cultivated between 900m and 2,000m altitude, resulting in good flavour, colour, texture and taste. The supply season is between April and August.
- Lebanese cherries face a strong domestic demand and have been exported to regional markets since years. These markets have growth potential. In addition, there is an opportunity for high quality cherries in Europe, especially in the early season (May).

### Stone fruit

- Peaches and nectarines (white and yellow pulp) are available in the period May till October. Apricots (produced in the northern Bekaa and on the slopes of Mount Lebanon) are on the market from May till early July. Plums have the same production regions as apricots and are on the market from June till October.
- In the last few years much attention has been paid to increase of the production area and the quality of farming and postharvest practices. Export figures in 2015 for stone fruit show a strong growth.
- Because of a parallel seasonality as in the European countries, little opportunities are there for exports to Europe.

### Apples (pome fruit)

- The biggest Lebanese fruit product in terms of export value, is apple. Export destinations are all countries in the region, with Egypt as the main market (70% of all exports in the past couple of years).
- Regional demand for high quality apples (and pears) is increasing.
- Although Europe is a huge consumer market for apples, regional supply (all year round) and some additional off-season imports from the southern hemisphere, have created a full market saturation. Opportunities for Lebanese imports are not there.

### Nuts, vegetables, other fruits

- Lebanon is a serious player as a producer, importer and exporter of a wide nuts assortment, for instance pine nuts, wall nuts, chest nuts and almonds. Even though the EU market consumption for edible nuts is a mature market, it still may have windows for imports from Lebanon. More European consumers also recognise the health value of luxury nuts. Their high nutritious and protein level is a factor, which is expected to increase the demand for luxury nuts. Also, production of organic nuts is still not enough to fulfil the needs of the increasing EU market.
- The same counts for some vegetables crops, such as fresh herbs, spring onion, shallot and fruit, such as mangosteen, kiwi, pomegranate, cherimoya, kaki.

## 12.2 End market(s) and competitiveness

- Lebanese produce faces a reality that importers / traders all over the world, also in Europe, mostly have a short-term scope and do not mind that much where the product comes from. It just has to be good and as cheap as possible. There is little intrinsic ambition to invest in Lebanese products. European traders are open for anything special but they are not waiting for

it. Competition from regional produce (especially the south of Europe) will remain strong anyway.

### **12.3 Structure and governance of the value chain**

- Similar to the value chains of the bigger crops, the structure and governance of other chains is rather weak: production and postharvest practices have a small scale and the channels towards the domestic market, processing industry and export destinations are not efficient and transparent. Consolidation through vertical integration in the domestic value chain under guidance of a large farmer or exporter and with use of modern pre- and postharvest methods, may strengthen the competitiveness in export markets and at the same time increase participation of small and medium scale farmers in export market channels.

### **12.4 Specific bottlenecks, risks and opportunities in the value chains**

- There are no specific bottlenecks and risks in the value chains for smaller products, apart from the general bottlenecks and risks which have been mentioned in chapters 6 and 7.
- For none of the aforementioned smaller products there is a strong uniqueness in the European (bulk) market. On the other side specialty segments have opportunities, especially if exporters are able to organise the production and postharvest activities in a proper way, reach a certain economy of scale, ensure quality and continuity (even in smaller volumes) and come up with added value. Then, in the marketing approach, the challenge is to allocate niche market segments in partnership with a European importer.
- A way to strengthen competitiveness in the European market, being an opportunity, is strong marketing communication (story-telling) with attention for the added value of Lebanese produce, such as its taste. Organic certification would have added value as well.

## 13 Other donor programs

Several donor organisations offer or schedule programs in agricultural value chains in Lebanon and in the fruit and vegetables sector in particular. Those running or foreseen initiatives with the potential for cooperation and synergy with a possible Dutch intervention, are listed in this chapter. Starting point for all possible linkages is the fact that all value chains of fresh products have crucial constraints in the pre-harvest, harvest and postharvest stage. Without addressing and diminishing these constraints, export promotion efforts will not be effective anyway.

### EKN (Embassy of the Kingdom of the Netherlands in Lebanon)

- The Dutch embassy has a long tradition in humanitarian projects and education in Lebanon, but is moving towards economic development.
- Due to the great amount of refugees in Lebanon, the Dutch Ministry of Foreign Affairs has decided to expand its development cooperation with Lebanon in 2016.
- The interesting fields worth mentioning here are:
  - the start of PUM (Netherlands senior experts) in Lebanon since July 2016;
  - a private sector development package for 2016/2018 for education (all levels), agriculture, water, employment and infrastructure with a total value of € 86 million: details can be found in Annex 4.

### EU delegation

- The EU runs the Agriculture and Rural Development Programme 2011-2017 (ARDP), which has the MoA and related institutions (LARI), farmers, municipalities, NGO's and universities as beneficiaries. The overall objective of the ARDP is improving the economic performance of the agricultural sector and improving livelihoods of rural and farming communities to achieve sustainable agricultural and rural development. Specific objectives are to strengthen the capacity of national institutions to develop a coherent agricultural /rural development vision and to support and empower local rural actors (farmers, cooperatives, municipalities) by increasing access to credit and by supporting rural development initiatives. ARDP has three components:
  - capacity development of the MoA
  - support of rural development activities through increased access to credit and improved extension services
  - support of agriculture infrastructure to improve sustainable water and land management.
- The EU runs the Rural Development / Agriculture project (IRDP) since 2010, which consists of three pillars:
  - capacity building (with FAO), for instance SPS infrastructure
  - access to finance (with Kafelat; € 35 million loan capacity)
  - infrastructure (forestry, irrigation)
- The EU started a market oriented private sector development project in 2016, with an available budget for the period 2016-2018 of € 15 million. Expertise France has been appointed as the implementer. The project will focus on socio-economic impact through value chain development in fruit and vegetables in Akkar & Bekaa, using among others the instruments 'capacity building' and provision of equipment.

### Expertise France

- Expertise France is a technical cooperation agency, part of the French Ministry of Foreign Affairs. It has been entrusted by the EU delegation in Lebanon with the aforementioned three years private sector development programme, covering 2 sectors (agribusiness and wood processing).
- Ultimo 2016 the team has identified two regions and three value chains to support:
  - Bekaa: table grapes and cherries
  - Akkar: citrus

## FAO

- The FAO is not a donor as such but plays a crucial role in the agricultural sector development in Lebanon by means of involvement in various projects, being expert and/or implementer.
  - 2009–2015: capacity building MoA, a.o. strategy development with a focus on regulatory aspects
  - because of the Syria crisis: re-focus of strategy towards host-communities for refugees and small farm level development (direct and indirect support for refugees)
  - a land reclamation project with Dutch funds (mainly fruit trees)
  - SPS (among others projects on fruit trees, diseases in olives, diseases in pines)
  - introduction of quinoa (in scaling up phase in 2016): focus on farming and postharvest practices

## ILO

- In response to the Syrian crisis, the ILO initiated a project in Akkar (North of Lebanon) in June 2014 with a focus on employment and livelihood issues. The aim of the project is to enhance the resilience of entrepreneurs, including farmers and workers in rural areas, affected by the Syrian refugee crisis. The North Lebanon Local Economic Development Agency (LEDA) was contracted as the implementer. Based on 'Making markets work for the poor' (M4P) criteria, as well as ILO criteria (labour intensive, large-scale impact, potential for systematic change in the short to medium term and for improving growth and access), LEDA choose two value chains: potatoes and leafy green vegetables (ILO 2015).
- Once the two value chains were selected, a research team was formed to conduct primary and secondary market research and a complete value chain analysis in order to identify the constraints and strengths in each value chain (ILO 2015). The initiative was taken over by other donors, for instance through the Dutch follow-up with a project in export-oriented potato cultivation in cooperation with seed supplier HZPC.

## Italian Cooperation

- Since 2010 Italy spent € 20 million in agricultural projects, including infrastructure; most efforts went into the potato and olive oil subsectors.
- The potato project (2011-2013) was successfully implemented in cooperation with the MoA, LARI and the private sector, resulting in improved phytosanitary procedures and a voluntary traceability system in the potato value chain. The achievements of this project, especially harmonization of national regulations to EU quality standards, allow Lebanon to export to the EU and make use of the 50,000 tonnes quota.
- Current focus projects with relevance for fruit and vegetables are:
  - boutique / creative industry (with UNIDO), including crossovers with agriculture
  - education: remodelling school curricula € 1.6 million
  - olive oil € 1.0 million and some other value chains (honey) € 0.5 million
- At the same time Italy prepares a program with soft loan systems (based on a grace period of six to seven years and a payback period of more than 10 years).

## PUM (Netherlands senior experts)

- PUM offers volunteer expertise to SMEs in various countries, using a network of 3,000 senior experts who share their knowledge on a one-on-one basis, either through short-term and repetitive advisory missions at the work floor, or through online coaching activities.
- Per 1 July 2016, PUM started activities in Lebanon (<https://www.pum.nl/pum-start-work-lebanon>.) and already conducted several missions in various sectors. PUM's local representative Mr. Marwan Nasr is eager to include the agricultural sector in the scope of activities.



### René Moawad Foundation (RMF)

- The RMF is a non-profit, non-political, non-sectarian organization, promoting sustainable human development in Lebanon. It was established in the US in 1993, with headquarters in Washington DC, to advance the mission and goals of its counterpart in Lebanon and to diversify its sources of funding and support. This is achieved through numerous fundraising events that support projects in the fields of agricultural and social development, education and health care. The Foundation's ultimate objective is promoting peace and stability in Lebanon through development (ILO 2015).
- Rural and agricultural development has been a cornerstone of RMF's activities from the very start and in 1996 the Agricultural Center of the North (CAN) was created. This centre offers services to farmers (ILO 2015). RMF is involved in several ongoing projects and it is a natural partner for the Dutch Embassy in working with the agricultural sector in the north of Lebanon.

### Safadi Foundation

- The Safadi Foundation provides a number of public services in Tripoli. The Foundation has four sectors of intervention through which it implements projects funded by donors and grass roots activities funded by the Foundation itself:
  - Rural Development and sustainable Agriculture
  - Social Development
  - Education
  - Culture
- One of their recent projects is Developing Horticulture to Access International Markets (DHAIM); the implementing partner is ACDI-VOCA, funded by USAID (2011-2015), in partnership with the Hariri Foundation and the René Moawad Foundation, Arc En Ciel and the Chambers of Commerce in Tripoli, Zahle and Saida (CCAIT and CCIAZ and CCIAS) (ILO 2015).

### USAID

- Pillars of the interventions of USAID Lebanon are education and economic growth. Since 2012 USAID runs the Lebanon Industry Value Chain Development Project (LIVCD), which is being implemented by DAI. <https://www.dai.com/our-work/projects/lebanon-industry-value-chain-development-livcd>. The project will end in 2017 and had available a total budget of US\$ 41.7 million.
- The project deals with seven main value chains: grapes, cherries, avocado, apple, honey, olive oil and a so-called 'rural basket' (=herbs, pine nuts, honey). During the implementation phase the project has been heavily influenced by the Syria crisis. According to the project team, the most positive results have been achieved in four value chains:
  - grapes (strong competitive advantage)
  - honey (based on branding)
  - olive oil (improved sector organization / cooperation)
  - avocado
- Part of the project deliverables is a set of value chain analysis studies, which have been used as a useful source for this report.

### World Bank

- The World Bank has offered various programs in the field of education, health care, water supply and poverty alleviation. In June 2016 the 'Emergency National Poverty Targeting Program (NPTP) Project' was started, a social assistance package for Lebanese affected by the Syrian crisis and for all Lebanese households under the extreme poverty line.
- A program related to climate change is being prepared with 5 components, among others pest control and new technologies in crops/plants (hydroponics). Furthermore there is an eye on the potato and apple value chains.

## 14 Conclusions, possible solutions and recommendations

This chapter starts with a concluding overview of the bottlenecks, risks and opportunities for exports to EU/EFTA markets for the four value chains. These conclusions are the starting point for the final paragraph 'solutions and recommendations', providing pathways to come to sustainable exports, preferably with improved CSR performance and specific options for recommended interventions.

### 14.1 Conclusions

#### General conclusions

Notwithstanding the fierce competition, European buyers have an open mind for new suppliers with something special. Lebanon has some intrinsic opportunities for certain (small) windows in the European fruit and vegetables market. And there is in fact a group of larger producers / exporters with the motivation and capacity to realise these exports. In some subsectors, in particular table grapes, entrepreneurs already developed the capacity and methods to prepare produce that meets all European market requirements. Not only in table grapes, also in avocado, citrus and some other (small) product groups, larger scale production (on 25 ha or more) are seen.

In the EU market, Lebanon has the best opportunities in specialty (niche) markets, because the regular bulk markets in Europe are too competitive and massive for the volumes that Lebanon can deliver.

Production and postharvest practices in Lebanon in average have a small scale and lack the capacity and quality to produce volumes and qualities for high-end markets. Quality is not consistent, hardly any production is under Global GAP certification and the cold chain is broken, resulting in high postharvest losses. Furthermore the domestic market structures are immature / not transparent and the private public environment is not supportive. From a market point of view, the Lebanese production calendar is more or less similar as in the southern European countries.

Market intelligence with respect to trends and buyer requirements in the European market is weak, all over the sector. Lebanese traders have experience and networks in the GCC markets but Europe requires different approaches because of

- the dominance of large buyer clusters (supermarket chains) and their strict requirements;
- the importance of seasonality (rather narrow market windows);
- the fierce competition from suppliers all over the world, especially Mediterranean countries.

All these factors do not leave much space for sustainable exports of large volumes to Europe. Strong and smart marketing communication (story-telling) with attention for the added value of Lebanese produce, such as its taste, is the way to strengthen competitiveness in Europe.

Lebanon barely produces fresh fruit and vegetables under organic production methods. Implementing organic production is not feasible for all crops (especially because farmers are not that familiar yet with IPM and Global GAP) but especially for avocado it is a realistic short-term option. Limited attention for organic produce is mainly caused by unawareness of the market potential. The organic market is an ongoing growth market, especially in the north-western part of Europe, therefore more organic production can more easily open doors for Lebanese exporters on the European organic market.

Vertical integration in the domestic value chain, under guidance of a large farmer or exporter and with use of modern pre- and postharvest methods, may increase the participation of small and medium scale farmers in export market channels.

Whereas investing in the European market is a feasible strategic option for Lebanon, it should never forget to continue investing and improving in exports to regional markets. There is an

obvious tendency that market requirements in the region also become stricter and consumer preferences in the national market and in nearby, regional markets follow the same trends as in European high-end markets. In fact this can be said for all global markets. Therefore it is recommended anyway to improve working methods all over the value chain and get ready for this new reality.

Another factor is the huge number of immigrants in the country, which puts a burden on the Lebanese society and economy and takes much time, energy and budgets that cannot flow to the agricultural sector. Export promotion and growth of export volumes will create employment for both Lebanese labour as well as Syrians in the pre-harvest and post-harvest stages of agricultural value chains. In other words, enhancing high-value agricultural production and actual exports will boost the local economy and thereby create chances for locals and immigrants / refugees.

### Table grapes

- Lebanon produces around 120,000 tonnes of table grapes every year. In 2015 the export value was about € 10 million, of which the overwhelming majority flows to GCC countries. Only one company has gained a position in the EU market. Few other large producers are preparing European market entry.
- Lebanese table grapes will not be able to compete with the bulk suppliers in Europe. The best possible window to enter the market is late in the European season: after October and before the peak of South-African supply in December.
- Europe prefers seedless grapes.
- During the supply season of European suppliers the competition will remain fierce, although Italy and Spain are not considered to have the best quality in the late part of their season.
- Generally speaking, importers have an open mind for grapes from Lebanon, if the suppliers at least come with the right varieties, at the right moment and with competitive price levels; quality and packaging need to fulfil all requirements.

### Avocados

- Avocado production in Lebanon shows a strong growth in terms of planted area and farming practices. Total yields in 2015 were about 11,000 tonnes and will increase to over 15,000 tonnes in the coming years. Harvest takes place between September and early June. Also the number of packers has increased enormously over the past 10 years.
- The avocado sector has a good potential for exports to Europe, where the demand is expected to show continuous growth in the coming years, particularly in the Nordic countries, France, Germany, Spain and the UK, which are often supplied through the Netherlands.
- In terms of varieties, there is a clear trend towards Hass.
- Competitiveness is the highest in the first months of the year. Although produce from Israel, Spain, Chili and Colombia is on the market in that period, the market can take more volumes and especially in these months Lebanese avocados have the highest competitive advantage in terms of quality and price.

### Citrus

- The citrus subsector has a low profitability, being caused by the small scale, low yields, poor postharvest performance and lack of suitable market linkages in export markets.
- Opportunities for Lebanese citrus on the European market are limited, mainly because of the dominant position of Spain in the period between October and June and South Africa during the European summer season. However, there is an interesting window for (Valencia) oranges in the summer (June – September), after Spain leaves the market and in the start of the South Africa supply season. Lebanese Valencia's then may be able to compete in terms of quality and price, both for fresh use as for processing. Due to the new rules on quarantine measures on South African oranges (which have been issued late 2016) the opportunity for Lebanon even has been strengthened. It is difficult to foresee how this will affect the long-term opportunities for Lebanese citrus in Europe, because importers still orientate themselves on the consequences.

## Potatoes

- The potato sector is characterized by small scale operations, high costs of production and low profitability. Most of the potato varieties are not suitable for high-end markets and none of the potato fields are under Global GAP certification. Nevertheless Lebanon exports substantial volumes to GCC countries. Since 2013 Lebanon has a free quota of 50,000 tonnes of potatoes on the EU market. Until now not any kg has been shipped to the EU.
- Exploring and developing the European market can be an option, but the market is too competitive and too difficult for big expectations. Exports to Eastern European countries (such as Poland, Hungary, Romania, Bulgaria) are not easier, even more difficult because of unpredictable and less reliable behaviour and sometimes changing import requirements. It is better to focus on alternative high-end markets in the region.
- Opportunities for Lebanese potatoes in the European bulk segment are limited; only specialties, with high quality and marketed under premium branding, have a chance.

## Other (smaller) products

Lebanon has a wide assortment of other fruits, nuts and vegetables with potential for high end markets, either in the region or in Europe. Lebanese traders who export table grapes, avocados, citrus fruit and/or potatoes, usually also export (a combination of) these other products. Cherries, stone fruit, nuts as well as some other small vegetables and fruits may find (narrow) windows in the European market channels.

## 14.2 Solutions and recommendations

This paragraph shows possible solution pathways to face the value chain challenges and develop sustainable exports to Europe. These solutions can be considered as recommendations for specific interventions, preferably with improved CSR performance.

The solutions and recommendations are clustered according to three categories:

- Structure and governance of the value chain in the pre- and postharvest phase
- Market & market access
- Private public environment

### Structure and governance of the value chain in the pre- and postharvest phase

- There is a strong need to improve the organisation and quality of the supply chains from farmer (cultivation, certification), to handling (postharvest practices, certification), to exporter. In value chain interventions by donor organisations balanced attention has to be given to
  - (access to) technology
  - (access to) knowledge & skills
  - (access to) finance
- Reaching larger scale and better professionalism is crucial. Several solution paths can be followed:
  - encourage and stimulate the establishment of more and better cooperatives or alternative models to join forces and consolidate product volumes
  - large enterprises with entrepreneurial management and investment (or loan) capacity can guide the sector towards high-end markets; they have the capacity to organise the value chain and stimulate (small) farmers to participate in high quality channels in the role of a service company that provides technical services, IPM, certification, knowledge, training etc. to affiliated (small) farmers
  - strong cooperatives and/or large enterprises with direct export channels, will finally break the primitive and uncontrollable market structure (currently too many middlemen).
- It is necessary to improve the cold chain infrastructure, to initiate more investments in packing houses and cold storage facilities and to develop and provide modern packing materials.

- As a crosscutting approach, knowledge dissemination is indispensable and requires efforts from both the public sector and the private sector (among others input suppliers): provide technical assistance and capacity training all over the supply chain and create an open mind for new technologies and working methods: from variety choice, land preparation, crop maintenance and IPM to postharvest handling and linking with the market.

### Market & market access

- There is a need to develop a national export marketing strategy for fruit and vegetables, with involvement and leadership from both the private and the public sector.
- Based on such a national strategy, all stakeholders, using their mandate, need to take their assigned task and allocate budgets; some key elements of the national strategy may include:
  - determination of the national product calendar with a clear choice for priority crops for export marketing in certain (specialty) markets
  - focus on the unique selling points (added value) of Lebanon, such as taste
  - a branding strategy and a branding plan (which may include campaigns, exposure on trade fairs such as Fruit Logistica, Fruit Attraction, trade missions etc.).
- Based on this value chain study, the following cornerstones of a national strategy are recommended:
  - specialty segments in high end markets are the starting point, which also includes that Lebanon should give less strategic priority in supplying low quality ethnic markets in European countries
  - choose the table grapes and avocado subsectors as the leading crops and the foundation for the export strategy; let other crops follow in their slip-stream
  - use the outstanding taste of Lebanese agricultural produce as an added-value factor
  - stimulate organic production and add organic as the other added-value factor
  - invest in the European market but at the same time work hard to improve the channels towards GCC markets
  - include the large Lebanese diaspora all over the world in the marketing and distribution operations.
- With respect to knowledge dissemination and training: strong attention should be given to knowledge on market trends and buyer requirements in Europe as well as implementing mechanisms in the sector to keep up to date with respect to trends in trade (market intelligence).

### Private public environment

- Enhance more and better linkages between the public and private sector and thereby create a better foundation for strategic decision making with respect to all stages in the supply chain: from choosing and planting the right varieties till postharvest handling and export marketing.
- Enhance private public partnerships that contribute to both improved infrastructure (investments in production technology and cold chain) and an improved knowledge infrastructure.
- Support the strengthening and the effectiveness of agricultural research, agricultural extension and agricultural (practical) education).
- Create show cases, demonstration plots for best practices in cooperation with the supply industry.
- Organize a structural donor coordination with the actors that have an agenda in the fruit and vegetables sector (in particular EKN, EU Delegation and Expertise France, FAO, Italian Cooperation and USAID).
- FCCIAL, including the regional chambers, and to a lesser extent IDAL, already play an active role in the facilitation of the private sector towards higher international competitiveness and linking the public and private sector. Based on their mandate and solid network in the agricultural sector, FCCIAL could take the lead in developing a roadmap and actions to improve value chain performance (pre-harvest and post-harvest) and enhance private public cooperation. The latter actions should be related to the aforementioned -to be developed- national export marketing strategy for fruit and vegetables.

## Annex 1 References

### A1.1 Reports

- ARDP (2015a). Donors Interventions in the Agricultural Sector.
- ARDP (2015b). Agriculture and Rural Development Programme (ARDP) achievements.
- Bankmed (2016). Analysis of Lebanon's Food Market.
- Blominvest Bank (2016). Citrus Cultivation - Lebanon's Sour Sector.
- CBI (2016a). Exporting fresh fruit and vegetables to Europe.
- CBI (2016b). Exporting fresh avocados to Europe. [www.cbi.eu/market-information/fresh-fruit-vegetables/avocado/](http://www.cbi.eu/market-information/fresh-fruit-vegetables/avocado/)
- CBI (2016c). CBI Market Channels and Segments: Fresh Fruit and Vegetables in Europe.
- CBI (2016d). CBI Trends: Fresh Fruit and Vegetables in Europe.
- CBI (2014). Product factsheet avocado Germany.
- Chlouk, Dr. Ghinwa (2016a). Economic Opportunities and Job Creation Agro-food Sector.
- Chlouk, Dr. Ghinwa (2016b). Economic Opportunities and Job Creation Agriculture Sector.
- CIHEAM - Mediterranean Agronomic Institute of Bari (2013). Technical and financial reports of the EuLebPot project: Achieving European standards for quality conformity of Potato production in Lebanon.
- Eijbergen, Prof. Rob van (2016): Organizational assessment report IDAL.
- European Commission (2016). Agribusiness Value Chains Sector Fiche (Fruit post-harvesting, fishery and Lebanese specialties). Identification and Formulation of a Private Sector Development Programme in Lebanon.
- FAO (2015). Food security and livelihoods assessment of Lebanese host communities.
- FAO (2011). Agricultural Export Promotion (AEP) Strategy for Lebanon.
- IDAL (2016a). Investment opportunities in Lebanon.
- IDAL (2016b). Investment opportunities in the agro food sector 2016.
- IDAL (2016c). Agro-Food Fact Book 2016.
- IDAL (2016d). Agriculture Fact Book 2016.
- IDAL (2016e). Directory of Agricultural Exporters in Lebanon 2016.
- ILO (2015). Potatoes and Leafy Green Vegetables: Value Chain Analysis.
- ITC (2015). Fresh Fruit and Vegetables Middle East.
- Ministry of Agriculture (2014). Ministry of Agriculture Strategy 2015-2019.
- USAID (2013a). Citrus production and market assessment report.
- USAID (2014b). Honey Value Chain Assessment Report
- USAID (2014a). Avocado Value Chain Assessment.
- USAID (2014b). Table Grape Value Chain Assessment Report.
- USAID (2014a). Avocado Value Chain Assessment.
- USAID (2014c). Small Scale Agriculture Set Market Assessment.
- USAID (2014d). Floriculture Value Chain Assessment Report.
- USAID (2014e). Cherry Value Chain Assessment Report.
- USAID (2014f). Olive Oil Value Chain Assessment Report.
- USAID (2014g). Pome Fruit Value Chain Assessment Report.
- USAID (2014h). Processed Foods Value Chain Assessment Report.
- USDA (2016). Citrus: World Markets and Trade.



USAID & Feed the Future (2016). Lebanon Industry Value Chain Development Project Round table discussion - Working paper.

### A1.2 Interviews in the Netherlands and Lebanon

Organisation (the Netherlands)	Person	Web	Type
Hillfresh	Mr. Paul Postema	www.hillfresh.eu	importer/wholesaler
Direct Source International (DSI)	Mr. Marnix van Fraassen	www.direct-source.nl	importer/wholesaler
Schrijvershof BV	Mr. Willem Schrijvershof	www.schrijvershof.nl	importer/wholesaler
HZPC	Mr. Jan Prins	www.hzpc.nl	seed potato supplier
Roveg BV	Mr. Martin Oudenes	www.roveg.nl	Importer/wholesaler
Organisation (Lebanon)	Person	E-mail	Type
DAI	Mr. Hussein Abou Yehia	husseinabouyehia@gmail.com	avocado/citrus expert
Federation of Chambers of Commerce Industry and Agriculture (FCCIAL)	Mr. Elie Massoud	maselie@hotmail.com	business support organisation

## Annex 2 Field trip programs in Lebanon

**Field trip Lebanon July 11<sup>th</sup> - 14<sup>th</sup> 2016 Jos Leeters**  
**Prepared by and supported by IDAL, FCCIA and the EKN in Beirut**

Monday July 11 <sup>th</sup>	Stakeholders meeting at the Chamber of Commerce of Industry and Agriculture Beirut & Mt. Lebanon with a.o. IDAL and active exporters of fruit and vegetables
Tuesday July 12 <sup>th</sup>	Field day to the Bekaa valley, prepared and supported by the head of the agricultural department of the Chamber of Commerce Zahle and Bekaa (CCIAZ)
Wednesday July 13 <sup>th</sup>	Field day to the south, prepared and supported by the Chamber of Commerce of Industry and Agriculture Sidon and South Lebanon
Thursday July 14 <sup>th</sup>	Donor coordination meeting, headed by Ambassador Mrs. Hester Somson, with participation of the World Bank, EU delegation, FAO, USAID and the Italian Development Cooperation

**Field trip Lebanon November 15<sup>th</sup> - 17<sup>th</sup> 2016 Jos Leeters**  
**Prepared by and fully attended by Marc Zeenny - the EKN in Beirut**

### Tuesday November 15<sup>th</sup>

Whole day Beirut	
09:00	Visit Comptoir Agricole – Mr. Riad Saadé (president), input supplier, researcher, expert
10:30	Visit Beirut wholesale market: Libanfruits - Mr. Elie Maalouf
02:30	Meeting with Georges Frenn, USAID (including Rob van Eijbergen)
18:30	Dinner with Hussein Abou Yehia – agriculture engineer and expert on avocado and citrus

### Wednesday November 16<sup>th</sup>

Whole day Akkar, hosted by Mr. Nabil Mouwad, general manager of the René Mouwad Foundation RMF), an ngo that supports the agricultural sector in the north (including Rob van Eijbergen)	
09:30	Halba: meeting with Mr. Omar El Hayek, one of the biggest potato farmers in Akkar and chairman of a cooperative, together with 7 other potato farmers, representing 3 more farmer groups
11:00	Talmeayane: meeting with a group (syndicate) of (8) citrus farmers and one of the biggest citrus exporters in Akkar, Mr. Mohammed Mobied
12:30	Mennieh: meeting two avocado farmers
13:30	Mejdlaya: lunch at the RMF campus with 2 regional exporters
14:15	Visit the facilities of the trade company of Abed El Aziz & Saoud El Samad
15:00	Visit the facilities of Shaker Ali El Samad Trading Co. and meeting Mr. Shaker El Samad

### Thursday November 17<sup>th</sup>

Whole day Bekaa Valley, hosted by Mr. Fadi Sarkis, expert and entrepreneur; CEO of Natagri	
09:00	Meeting with Fadi Sarkis and 3 of his staff; introduction Natagri
10:30	Meeting with a potato farmer, grape farmer and exporter (Mr. Moussa Zgheib) in the Natagri office
11:30	Visit of the Kab Elias wholesale market and meeting with one of the traders
12:30	Visit of the facilities and handling facilities of JABER for Trading Co.; meeting Ali Youssef Jaber
14:00	Visiting Natagri's grape plantation (45 ha Crimpson under Global GAP)
15:00	Lunch with Fadi Sarkis
18:00	Visiting the food fair in Beirut with Hussain Abou Yehia

**Visit Beirut - Lebanon for MAR training and validation workshop December 15<sup>th</sup> - 16<sup>th</sup> 2016**  
**Jos Leeters, together with Dirk-Jan Zegelaar (CBI program manager) and Eric Bentil Quayé (Global GAP trainer)**

Thursday December 15 <sup>th</sup> whole day and Friday December 16 <sup>th</sup> morning	1.5 day workshop 'Market Access Requirements for exporting agricultural products to the EU' with participation of Lebanese exporters and representatives of BSO's and donors
Friday December 16 <sup>th</sup> afternoon	Validation workshop with presentation of the preliminary findings of the VCA in order to get feedback and additional information. Same audience as in the Thursday and Friday morning training

## Annex 3 Statistics

### A3.1 Lebanon exports of fresh fruit per destination

Table 26: Lebanon fresh fruit exports (HS08): main products  
In 1,000 euros

Code	Product label	2011	2012	2013	2014	2015*
	Total fresh fruit exports	51,711	63,469	63,640	47,873	129,158
'080810	Fresh apples	9,708	14,926	11,182	9,336	44,495
'080510	Fresh or dried oranges	9,328	9,607	5,474	6,211	13,447
'080610	Fresh grapes	3,248	5,219	5,381	5,508	10,133
'081090	Fresh tamarinds, cashew apples, jackfruit, lychees, sapodillo plums, passion fruit,...	2,008	2,008	1,544	1,618	8,823
'080930	Fresh peaches, incl. nectarines	2,603	2,420	2,754	1,381	8,571
'080910	Fresh apricots	452	800	718	284	7,632
'080940	Fresh plums and sloes	845	1,331	1,250	859	6,772
'080921	Fresh sour cherries "Prunus cerasus"	-	1,222	451	1,199	4,559
'080929	Fresh cherries (excluding sour cherries)	-	920	1,027	817	4,489
'080520	Fresh or dried mandarins incl. tangerines and satsumas, clementines, and similar)	1,865	2,125	1,644	2,047	4,364
'080390	Fresh or dried bananas (excl. plantains)	-	8,769	11,058	6,846	4,081
'080830	Fresh pears	-	1,763	1,389	735	2,186
'080440	Fresh or dried avocados	251	414	443	339	1,505
'080310	Fresh or dried plantains	-	4,500	1,866	2,507	1,496
'080211	Fresh or dried almonds in shell	140	167	291	207	1,299
'080550	Fresh or dried lemons "Citrus limon, Citrus limonum" and limes "Citrus aurantifolia,...)	7,693	2,351	3,619	2,915	981
'080410	Fresh or dried dates	847	548	605	762	854
'081350	Mixtures of nuts or dried fruits	78	42	109	367	664
'080290	Nuts, fresh or dried (excl. coconuts, Brazil nuts, cashew ...	429	1,010	9,474	809	659
'080540	Fresh or dried grapefruit	388	425	365	323	623
'080711	Fresh watermelons	161	307	582	371	209
'081310	Dried apricots	47	30	22	80	190
'080590	Fresh or dried citrus fruit (excl. oranges, lemons "Citrus limon, Citrus limonum", ...	67	77	393	59	156
'080251	Fresh or dried pistachios, in shell	-	301	231	39	153
'081340	Dried peaches, pears, papaws "papayas", tamarinds and other edible fruits (excl. nuts)	129	200	217	139	147
'081070	Fresh persimmons	-	465	379	311	93
'080420	Fresh or dried figs	55	68	93	74	75
'081030	Fresh black-, white- or redcurrants and gooseberries	-	2	-	-	74
'080212	Fresh or dried almonds, shelled	45	161	41	322	63
'081010	Fresh strawberries	102	58	48	23	52
'080450	Fresh or dried guavas, mangoes and mangosteens	94	128	75	86	41
'081040	Fresh cranberries, bilberries and other fruits of the genus Vaccinium	-	-	-	1	39
'080252	Fresh or dried pistachios, shelled	-	23	37	71	22
'080131	Fresh or dried cashew nuts, in shell	-	-	6	9	19

'080132	Fresh or dried cashew nuts, shelled	78	93	114	465	19
'080112	Fresh coconuts in the inner shell "endocarp"	-	-	-	-	19
'081320	Dried prunes	6	9	11	11	18
'080620	Dried grapes	25	26	30	28	18
'080719	Fresh melons (excluding watermelons)	80	123	84	110	14
'080280	Fresh or dried areca nuts	-	-	-	-	12
'080222	Fresh or dried hazelnuts or filberts "Corylus spp.", shelled	200	7	45	145	11
'080111	Desiccated coconuts	6	5	6	11	10
'081190	Frozen fruit and nuts, uncooked or cooked by steaming or boiling in water, whether or not sweetened ...	2	-	24	38	10

\* 2015 data based on the partner reported data (Mirror data).

Source: Trademap (2016)

### A3.2 Lebanon exports of fresh vegetables per destination

Table 27: Lebanon fresh vegetable exports (HS08): main products  
In 1,000 euros

Code	Product label	2011	2012	2013	2014	2015*
	Total fresh vegetable exports	32,144	31,008	49,989	59,344	95,398
'070190	Fresh or chilled potatoes (excluding seed)	14,837	12,118	27,629	36,694	56,278
'070511	Fresh or chilled cabbage lettuce	4,887	6,402	8,857	2,538	12,396
'070390	Leeks and other alliaceous vegetables, fresh or chilled (excluding onions, shallots and garlic)	3	2	-	1	6,908
'071350	Dried, shelled broad beans "Vicia faba var. major" and horse beans "Vicia faba var. equina ...	683	252	381	586	2,941
'070999	Fresh or chilled vegetables n.e.s.	-	1,858	1,497	1,515	2,784
'070110	Seed potatoes	157	-	-	1	2,776
'070310	Fresh or chilled onions and shallots	2,113	1,355	2,782	3,048	1,792
'070820	Fresh or chilled beans "Vigna spp., Phaseolus spp.", shelled or unshelled	230	307	349	349	1,587
'070200	Tomatoes, fresh or chilled	546	811	1,126	1,085	1,504
'070490	Fresh or chilled cabbages, kohlrabi, kale and similar edible brassicas (excluding cauliflowers, ...	113	103	249	128	1,240
'070700	Cucumbers and gherkins, fresh or chilled	337	532	550	647	680
'070930	Fresh or chilled aubergines "eggplants"	322	430	385	391	538
'071320	Dried, shelled chickpeas "garbanzos", whether or not skinned or split	571	352	297	287	524
'071420	Sweet potatoes, fresh, chilled, frozen or dried, whether or not sliced or in the form of pellets	-	1	11	2	505
'071340	Dried, shelled lentils, whether or not skinned or split	429	414	337	418	490
'071290	Dried vegetables and mixtures of vegetables, whole, cut, sliced, broken or in powder, but not ...	95	142	288	342	310
'070810	Fresh or chilled peas "Pisum sativum", shelled or unshelled	57	98	111	286	300
'070890	Fresh or chilled leguminous vegetables, shelled or unshelled (excluding peas	108	264	193	331	265

	"Pisum sativum" ...					
'070960	Fresh or chilled fruits of the genus Capsicum or Pimenta	296	282	301	310	258
'070993	Fresh or chilled pumpkins, squash and gourds "Cucurbita spp."	-	289	286	302	135
'071339	Dried, shelled beans "Vigna and Phaseolus", whether or not skinned or split (excluding beans ...	276	520	506	807	132
'070519	Fresh or chilled lettuce (excluding cabbage lettuce)	2,363	2,251	1,255	6,773	112
'071010	Potatoes, uncooked or cooked by steaming or by boiling in water, frozen	217	219	253	137	100
'070690	Fresh or chilled salad beetroot, salsify, celeriac, radishes and similar edible roots (excluding ...	67	74	86	159	99
'071120	Olives, provisionally preserved, e.g. by sulphur dioxide gas, in brine, in sulphur water or ...	57	55	48	33	96
'070951	Fresh or chilled mushrooms of the genus "Agaricus"	1	4	2	11	91
'071333	Dried, shelled kidney beans "Phaseolus vulgaris", whether or not skinned or split	73	79	136	123	90
'071490	Arrowroot, salep, Jerusalem artichokes and similar roots and tubers with high starch or inulin ...	1	2	-	-	77
'070992	Fresh or chilled olives	-	49	84	7	58
'071390	Dried, shelled leguminous vegetables, whether or not skinned or split (excluding peas, chickpeas, ...	337	679	967	915	35
'071029	Leguminous vegetables, shelled or unshelled, uncooked or cooked by steaming or by boiling in ...	230	215	127	167	35
'070410	Fresh or chilled cauliflowers and headed broccoli	279	291	306	369	31
'071140	Cucumbers and gherkins provisionally preserved, e.g. by sulphur dioxide gas, in brine, in sulphur ...	52	5	31	14	29
'071310	Dried, shelled peas "Pisum sativum", whether or not skinned or split	11	4	-	38	25
'070610	Fresh or chilled carrots and turnips	55	48	53	116	25
'071080	Vegetables, uncooked or cooked by steaming or by boiling in water, frozen (excluding potatoes, ...	6	42	25	23	24
'070991	Fresh or chilled globe artichokes	-	23	26	21	15
'070420	Brussels sprouts, fresh or chilled	-	1	36	12	14
'070959	Fresh or chilled edible mushrooms and truffles (excluding mushrooms of the genus "Agaricus")	9	15	7	11	14
'071159	Mushrooms and truffles, provisionally preserved, e.g., by sulphur dioxide gas, in brine, in ...	3	5	2	2	12
'071190	Vegetables and mixtures of vegetables provisionally preserved, e.g. by sulphur dioxide gas, ...	27	89	55	24	12

\* 2015 data based on the partner reported data (Mirror data).  
Source: Trademap (2016)

## Annex 4 EKN's program 2016-2018

Titel / description	Partners	Beneficiaries	Implementer	Budget
<b>Vocational and agricultural education</b>  Revision of curricula for Agricultural Technical Vocational Education and Training (A-TVET) and rehabilitation of 7 A-TVET schools.	MEHE Ministry of Agriculture UNICEF FAO ILO AERES group	Every year 315 students aged (14-18) benefit from 3 year program 2500 students in short courses 100 teachers trained	FAO	EUR 5 mln
<b>Promotion of livelihood and Employment through Investing in Land Reclamation &amp; Water reservoirs</b>	MOA Farmers private sector FAO	3,150 Lebanese farm household individuals 1,500 beneficiaries of temporary jobs created	FAO	USD 8.25 mln
<b>Water Hub</b> Support to Bekaa Water Establishment in their capacity to manage resources, donate water sensors to measure water quality and underground levels both with the Litani River Authority and the Bekaa Water Establishment. The hub will also implement a Agriculture Demoplot at the LARI or Arc en Ciel in the Bekaa to showcase best water practices in Agriculture and finally will do a complete mapping of the water situation in Lebanon	Dutch Water Consortium ESFD		Dutch Water Consortium	EUR 5 mln
<b>Improved access to market opportunities for livelihoods in rural areas</b> Supporting cooperatives of farmers in the Akkar and the North to produce potato crops that are up to the EU standards and varieties that can be exported to the EU.	Rene Mouawad & Safadi Foundations	60 farmers through cooperatives and 100 individual farmers 3 Syrian families per farmer	Rene Moawad Foundation	EUR 1 mln
<b>Dutch Lebanese Agro food tech hub</b> This program will support young fresh graduates and engineers who seek to find solutions to problems in agriculture than can be solved through technologies. 30 Entrepreneurs will be selected and then shortlisted to 5. The 5 champions will benefit from seed funding to validate their products and benefit from Dutch expertise by connecting them to StartLife and Food Valley in Wageningen	Berytech Speed Techhub	1,500 youth	Berytech	EUR 2.89 mln

Source: EKN (December 2016)





This is a publication of:  
Netherlands Enterprise Agency  
Prinses Beatrixlaan 2  
PO Box 93144 | 2509 AC The Hague  
T +31 (0) 88 042 42 42  
E klantcontact@rvo.nl  
www.rvo.nl

This publication was commissioned by the ministry of Foreign Affairs.

© Netherlands Enterprise Agency | January 2017

Publication number: RVO-008-1701/RP-CBI

NL Enterprise Agency is a department of the Dutch ministry of Economic Affairs that implements government policy for agricultural, sustainability, innovation, and international business and cooperation. NL Enterprise Agency is the contact point for businesses, educational institutions and government bodies for information and advice, financing, networking and regulatory matters.

Netherlands Enterprise Agency is part of the ministry of Economic Affairs.