



Organic Ecosystem in Lebanon Survey results National Report

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Abstract

Organic agriculture is an effective production method aimed at achieving food safety and food security, as well as environmental sustainability. In the Mediterranean context, numerous challenges limiting this sector must be tackled with evidence-based innovative research. Therefore, it is imperative to document major challenges facing stakeholders and identify ad hoc solutions across the value chain.

The Organic Ecosystem project (OE) aims at improving the organic sector competitiveness through the creation of a cross-border Organic Ecosystem supporting the development of business and SMEs in cooperation with public institutions.

This report focuses on the results deriving from the questionnaire submitted to relevant stakeholders following the Kickoff Meeting held on the 3rd of June 2020.



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LIST OF ACRONYMS

AP: Associated partner CCIAZ: Chamber of Commerce, Industry and Agriculture of Zahle & Bekaa CIHEAM: International Center for Advanced Mediterranean Agronomic Studies EU: European Union KoM: Kick off meeting MoA: Ministry of Agriculture PP: Project partner

WP: Work Package

 P_{age}



Part A: Quantitative analysis

1 Introduction of the study - Problem Statement

1.a Significance of the study

The significance of the study stems from the need to identify stakeholders' challenges in the Mediterranean organic value chain in order to support Policy Makers and Competent Authorities to address specific needs and develop a common strategy for the development of the sector, through an ad hoc analysis of the issues at stake.

1.b Scope of the study

The mentioned analysis is conducted in the framework of the OE project and aims, through the use of the survey at its basis, at reaching a wide audience of stakeholders. The identification of their needs is fundamental to conduct a SWOT analysis and to understand how it is possible to build an effective common strategy both at local and regional levels to foster the development of the organic sector.

2 Methodology and Source of data

In accordance with the principles of personal data protection established by each Project Partner (PP), personal data and data acquired through the questionnaire have been processed through computerized and electronic tools, as well as in paper form. No fullyautomated decision-making process has been used, all in the perspective of performing activities aimed at statistical survey purposes, necessary for the realization of the project activities. All data collected will be stored for as long as is necessary to achieve the purpose in question and even after, to fulfill legal requirements and for administrative purposes.

As mentioned above, after the KoM the questionnaire has been sent to relevant stakeholders in each country. All PPs engaged to collect answers in their country, to process data, to analyse them and to compile a National Report. The questionnaire has *"This publication has been produced with the financial assistance of the European Union under the ENI CBC Mediterranean Sea Basin Programme. The contents of this document are the sole responsibility of The Chamber of Commerce, Industry and Agriculture of Zahle and Bekaa and can under no circumstances be regarded as reflecting the position of the European Union or the Programme management structures"*



been submitted through an ad hoc tool created by CIHEAM Bari, i.e. Lime Survey. The official language is English, but each PP had the opportunity to translate the questionnaire in local language and submit it. Nevertheless, each PP has compiled the present report in English.

The structure of the questionnaire is as follows: a first general part with questions related to personal identifying data, opinions regarding the most important obstacles to the development of the organic sector in the Mediterranean, solutions proposed, priority challenges in the sector at stake and improvements suggested to enhance the sustainability of the organic value chain.

A second part includes specific sections, depending on the category of each respondent, and namely: A for Farmers/Producers, B for Governmental, C for Certification bodies/Advisors, D for Consumers and E for Logistics.

In each Section specific questions were submitted, and details about topics and answers will be given in the following parts of this report.

3. Quantitative Analysis of results

3.A Introduction to the general part of the survey

CIHEAM Bari issued a dedicated link for Lebanese respondants in order to collect their feedback concerning the Organic Agriculture in Lebanon. The CCIAZ (project partner) in coordination with the Ministry of Agriculture and Biomass (associated partners) have spread the survey to different stakeholders of the Organic value chain, from different ages, regions, profiles,... in order to ensure the diversity of answers and get an overall frame of the needs, on which the WP4 trainings will be organized.

3.A.1 Number of answers received - significance of the sample chosen

75 respondents coveing farmers, producers, processors, researchers, academy and education persons, government and policy makers, marketers, input suppliers, development partners, farm advisors and extension agents, certification body, civil society organizations, consumers and finally transport and logistics agents have participated and

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filled actively the survey. This reflects the diversity of the sample and accordingly the fact that the Value Chain coverage was representative of the sector in general.

The Figure 1 shows the number of respondents per category of Organic value chain actors.

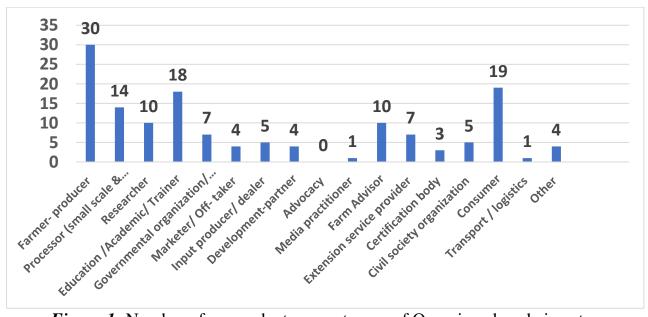


Figure 1: Number of respondents per category of Organic value chain actors

It is clear that some of them are engaged in different activities along the value chain. Farmers, consumers and Academic agents have been among the most responsive in filling the survey.

On the other hand, the 75 repondents were affiliated to different organizations or sectors (Figure 2). They were mainly from the private sector (49%), while others were governmental, intergovernmental, NGOs and other actors.





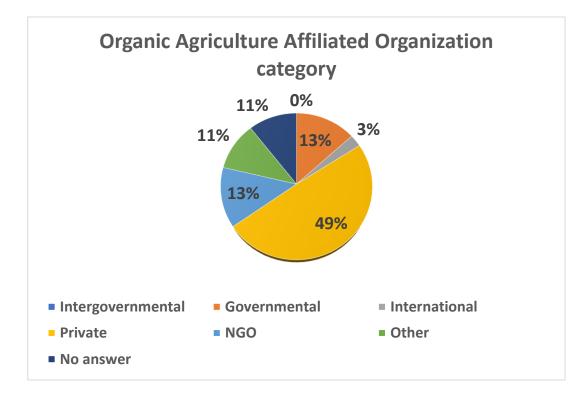


Figure 2: Distribution of respondents according to their affiliated organization

3.A.2 General data (average age, average years in organic agriculture, etc.)

The average age of responents was 38 years old. The eldest interviewee has 70 years and the youngest 20 years. This shows that the young generation is actively involved in the organic sector.

62 respondents has been in the organic agriculture sector with an average of 11 years of experience. Some of them are newly integrated while others have 27 years of experience in this field.

<u>3.A.3 Obstacles and challenges preventing the development of the Organic Value</u> <u>Chain in Lebanon</u>

In this part, the chosen answers were rated according to a scale of 1 to 5 where 1 is less important and 5 is most important.



I- Obstacles

1- High Prices

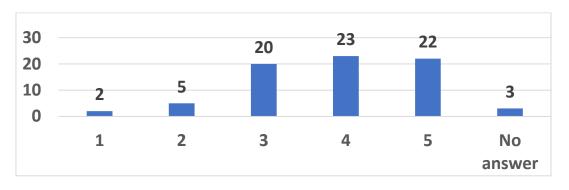


Figure 3: Level of Impact of the High price

72 out ot 75 persons raised the importance of the high prices as an obstacle to the development of the organic value chain. 62% expressed that high prices have a high level of importance and 28% as medium level. Only few (10%) considered this factor as not important.

2- Reduced availability of organic products

86% of participants found that the reduced availability of organic products on the shelves and all year long has an intermediate to high impact.

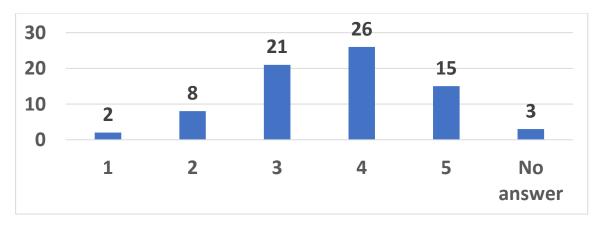


Figure 4: Level of Impact of Organic products availability



3- Certification cost

The impact of the certification cost was raised as important by 88% of the repondents, especially that part of it is paid in foreign currency which is becoming rare with the devaluation of the Lebanese pound which lost five (5) times its value within one (1) year only.

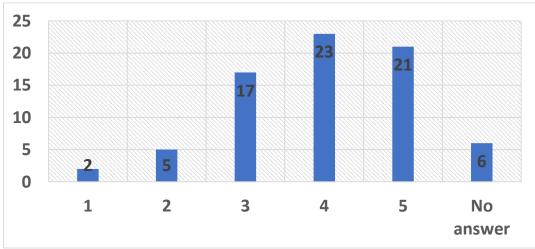


Figure 5: Impact of the certification cost

4- Poor Consumers trust in Organic products

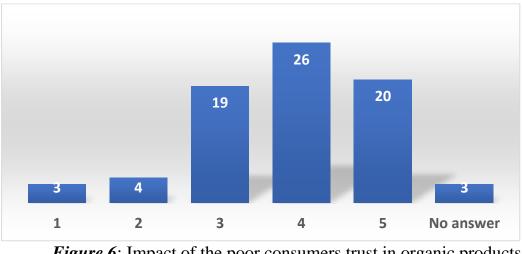


Figure 6: Impact of the poor consumers trust in organic products



The Figure 6 shows that 90% of consumers have moderate to low trust in the organic products sold in the local market due to the weaknesses at the level of of control systems (Ministries, laboratories, ...), and fraudulent practices.

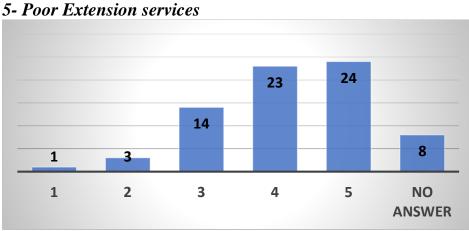
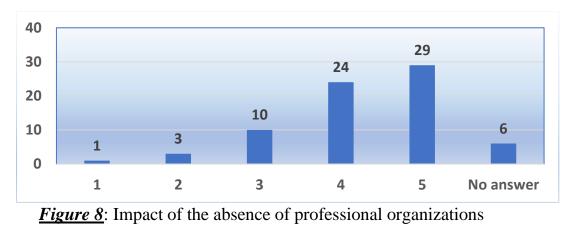


Figure 7: Impact of the poor extension services

The extension services can play an important role in strengthening the Organic value chain. This has been raised by 91 % of the participants.

6- Lack of cooperatives and professional associations

Professional organisations like cooperatives, NGOs are considered as important players in the development of the sector. The absence of such institutions can harmly affect the producers and traders, especially when the size of enterprises is small.





7- Climate change impact

The repondents didn't consider firmly that climate change has a big role to play in the development of the organic sector only. Its impact will affect the agricultural sector in general.

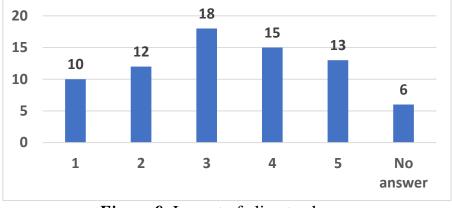
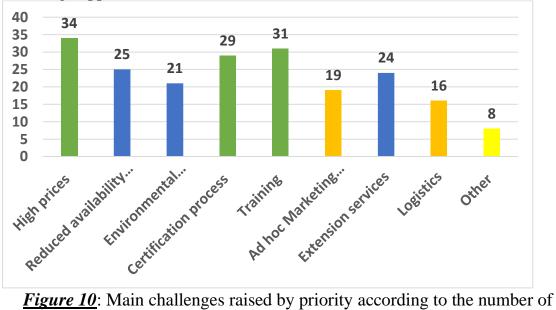


Figure 9: Impact of climate change

II- <u>Challenges</u>

Respondents were asked to prioritize the challenges faced in the Organic Value Chain. The top priority was given to the reduction of high prices, the certification cost and the training support.



responses



Some challenges such as the reduced availability of products, extension services and climate change were listed as moderate priority. In addition, respondents raised other challenges such as low availability of organic inputs and seeds due to legislative restrictions and bureaucracy, lack of confidence in organic products, fair pricing and finally the ecosystem degradation due to extensive/unregulated use of pesticides.

3.B Specific Survey Sections

3.B.1 Section A - Farmers/Producers

I- Analysis of production data

1- Size of Enterprises:

The figure below shows that respondents who replied to this section (25 answers) are mainly Micro (14 out of 25) to small enterprises (7 out of 25). There was only one (1) medium size and three (3) big enterprises. This reflects the distribution at the national level also where most of the enterprises are individual or family businesses. Concerning the Medium and big enterprises, they rely mainly on seasonal workers during the production period.

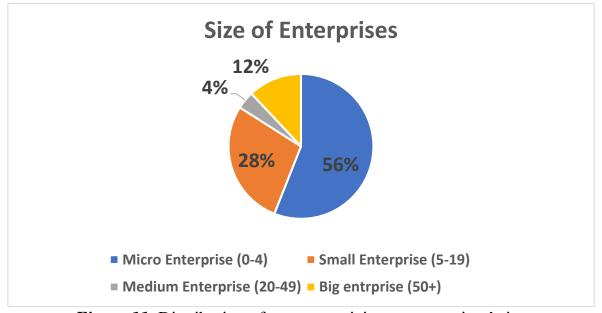


Figure 11: Distribution of survey participants enterprises' size

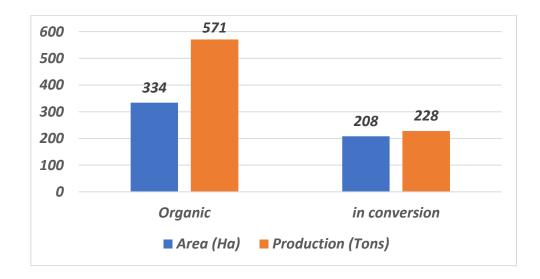


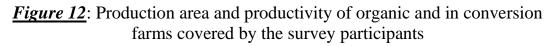
Their production is mainly concentrated on fresh fruits (cherry, apple, pear, almonds, olives, apricot, grapevineswalnuts,...) and vegetables (tomato, cucumber, zucchini, eggplant, lettuce, pepper, beans, leafy greens, cereals) in addition to seeds. Animal production such as chicken and laying hens, goat and sheep for milk production and warm silk.

Food processing has also its place such as olive oil, dairy products, wine, jams, pickles and others.

2- Production Area

The Figure 12 shows the organic farms surveyed has an overall area of 334 Ha and an approximate production of 571 Tons. The numbers show also that there are important plots in conversion period which will increase the area by 62% and the production by 40%.



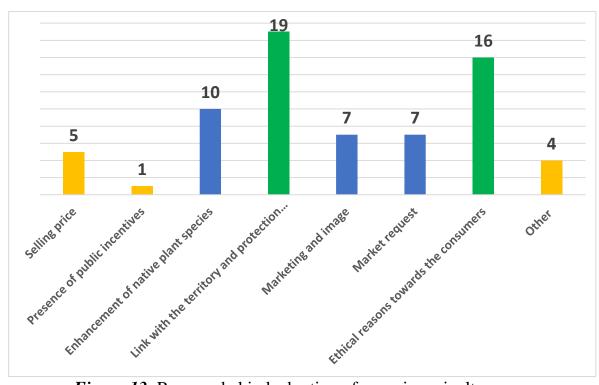


The survey repondents for this category were asked about the reasons for which they adopted organic production methods. The most repeated answers were the link with the territory and protection of nature/biodiversity mentionned by 19 out of 25 persons, followed by ethical reasons toward customers (16 out of 25). This shows the commitment

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of Organic agriculture actors which reflects their Corporate Social responsibility (CSR) toward their communities (Figure 13).



3- Social aspects and collaboration among value chain actors

Figure 13: Reasons behind adoption of organic agriculture

They have listed some actions taken to reinforce linkage with other stakeholders, mainly social agriculture, educational farms, and networking. Few have mentioned clustering, contract farming and consortium organization.

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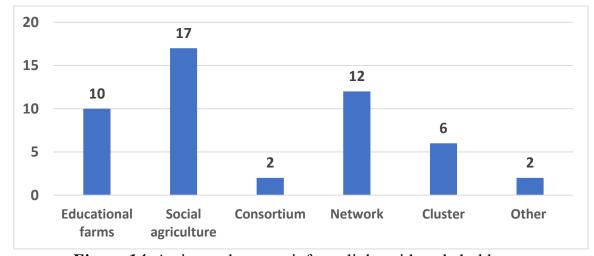


Figure 14: Actions taken to reinforce links with stakeholders 77% of respondents value the presence of producers association or collaborative value chain to strengthen the image and the promotion of the brand on the market.

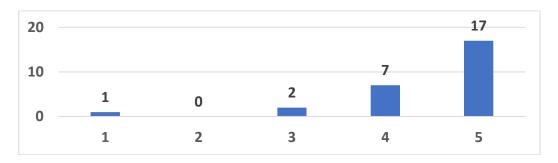


Figure 15: Importance of collaborative actions to strengthen the brand image.

Concerning the introduction of innovation or added value to their enterprises, 22 out of 25 respondents have confirmed such initiatives and listed the following actions:

- ✓ Experimental organic hydroponics and fogponics.
- ✓ Increasing consumption of organic products through advertising and Marketing.
- ✓ Eco agro-tourism.
- ✓ Use of ecofriendly packaging.
- \checkmark Supporting shepherds in mountains to stay in their lands and sell their products.

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- \checkmark Weather station to anticipate diseases and frost.
- \checkmark Use of renewable Energy for Irrigation and Electricity.
- \checkmark Thermal heat generation using compost to heat the earth in the greenhouse.
- ✓ Organic agro food processing.
- \checkmark Automation.
- \checkmark Initiation of the first laboratory for the mass rearing of natural enemies.
- \checkmark Use of air pruning method to enhance production.
- ✓ Organic farming academy for youth.
- ✓ Introduction of new products/varieties/packaging and traceability.
- ✓ Seeds production farm (growing demand for organic heirloom seeds).

II- Marketing and market data

The survey participants have considered some strategies useful to increase the knowledge of consumers and traders about organic products: 90% use tasting in points of sale, 88% give importance to ad hoc training for traders and marketing campaigns and 85% for common packaging.



Figure 16: Importance given for tasting (left) and ad hoc training (right).



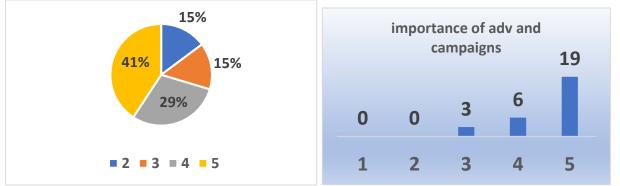


Figure 17: Importance given for common packaging (left) and adv. campaigns (right).

As for the channels used to commercialize their products, the analysis shows that most of respondents rely mainly on direct sales (24%), followed by specialized shops (13%), online trading (13%), supermarkets (11%) and farmers' markets (11%).

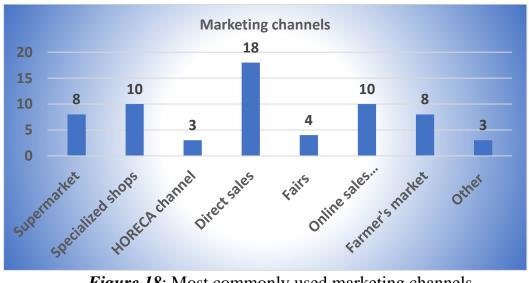


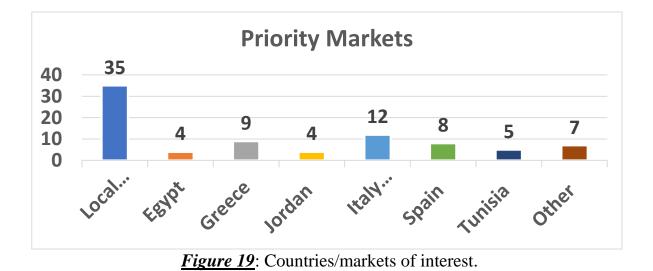
Figure 18: Most commonly used marketing channels.

As for priority markets or countries for which the surveyed persons showed interest, the following ones were listed (Figure 19).

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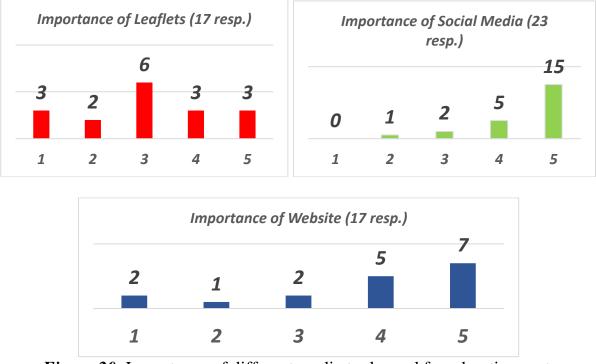
The local market is set as priority for most respondents. It is followed by EU countries (Italy, Greece, Spain, Germany), besides other options such as Arab countries (Jordan, Egypt, Tunis, GCC), Russia, Japan, Australia, UK, USA and South Africa.

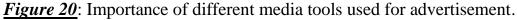
Concerning the communication tools, participants give nowadays an importance for Social Media and websites. Other traditional tools such as Radio, leaflets and TVs are of less importance





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3.B.2 Section B - Governmentals and Policy Makers

The survey participants who answered this section were asked about their main mission in the organic sector. The following facts were listed:

- Competent authority, coordination of the organic agriculture technical committee at the Ministry of Agriculture, market control and labelling control.
- Raising awareness about organic system for food processors and food handlers over the whole chain.
- Development of Lebanese standards related to food and agriculture sectors.
- Research and development through characterization of germplasm and the quality and composition of olive oil.
- Provision of extension services to farmers and farmer's associations.

The different incentives provided to the organic sector are shown in the Figure 21 below:



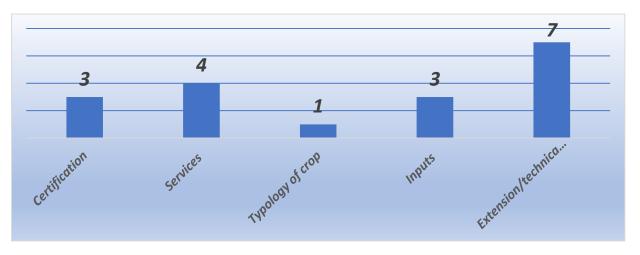


Figure 21: Availabe incentives for the organic sector.

3.B.3 Section C - Certification bodies/ Advisory services

It clearly stated by the service providers such as certification bodies, extension agents and farm advisors that most of clients/partners mainly need advices on agricultural practices and technical assistance.

	No. of	Gross
	answers	percentage
Training on obligations at farm level ("cross-compliance")	7	9.46%
Advice on agricultural practices beneficial for the climate and the environment ("greening")	9	12.16%
Training on measures at farm level provided for in rural development programs	5	6.76%
Promotion of entrepreneurship	2	2.70%
Requirements for water protection, efficient, sustainable water use, use of plant protection products	1	1.35%
Minimum requirements for agri-environment-climate payments beyond mandatory standards	3	4.05%
Information related to climate change mitigation and adaptation, biodiversity and protection of water	2	2.70%
Total	29	100.00%



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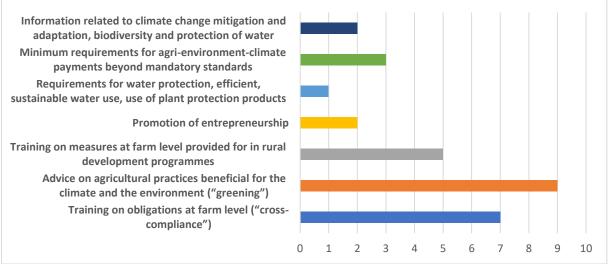


Figure 22: the main needs expressed by partners or clients in the organic sector.

3.B.4 Section D - Consumers

The consumers participating in this survey were requested to answer on the importance of some factors affecting their purchasing habits, mainly the price, health claims, designation of origin, products availability. The following answers were collected (Figure 23)







Figure 23: Importance of some factors affecting the purchasing operation.

The product price and health claims were considered very important by 80% of respondents, while the product availability was so for 62% and last, the designation of origin was shown important for only 40% of them.

On another hand, the most purchased products were fruits and vegetables (42%) followed by honey, wine, cereals and dairy products. Cosmetics and other products were not interesting for respondents.

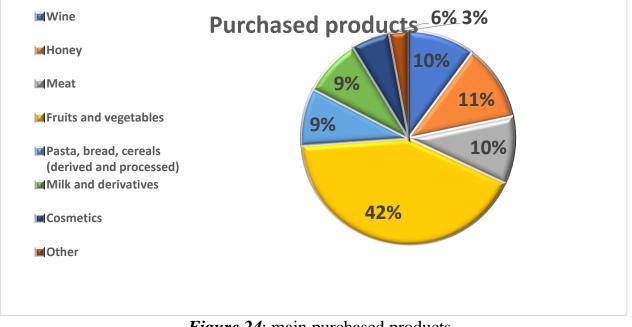


Figure 24: main purchased products.



Most of consumers are buying mainly from supermarkets (49%), or directly from the producer (29%). Others buy from specialized shops and other sources (fFig. 26). On another hand, the study showed that 96% of repondents belonging to this category don't adhere to a purchasing group.

Concerning the quality/price ratio, some respondents were in favor of the higher price considering higher production cost (43%), others were indifferent as it's an ethical choice (34%). The remaining ones (23%) finds the price inadequate if compared with conventional products (Fig.25).

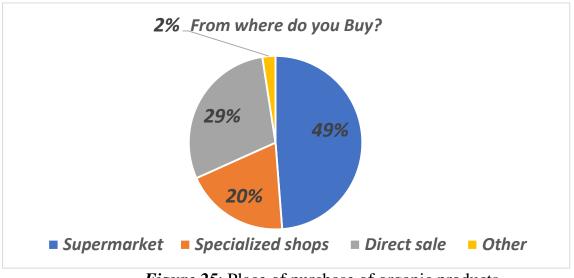


Figure 25: Place of purchase of organic products.

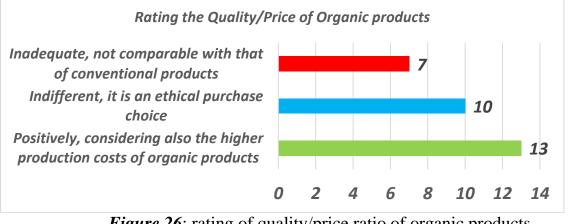


Figure 26: rating of quality/price ratio of organic products.

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3.B.5 Section E - Logistics and distribution

Supply chain management and warehousing were considered as the most important needs in term of logistics and distribution (Fig. 27).

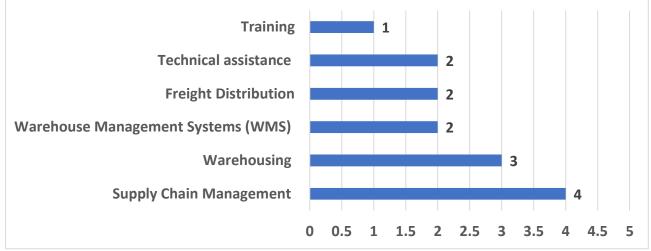


Figure 27: Main needs in logistics and distribution expressed by clients.

On another hand, logistics companies work on their staff integration and training, logistic processes design, management and planning, involvement in social projects and fleet renewal. Few respondents are giving attention to IOT improvement and efficiency (Fig. 28).

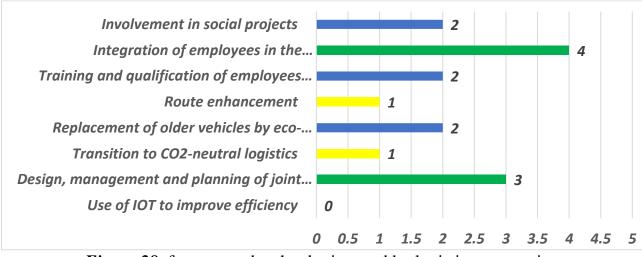


Figure 28: features and technologies used by logistics companies.



Part B: Qualitative analysis

1 SWOT analysis

Strengths

- ✓ Relying less on entrants (mostly imported) and promoting diverse farming techniques especially that organic agriculture is a resilient and sustainable farming system that preserves resources, improves soil fertility and promotes food security.
- ✓ Availability of certified organic processing units which give an added value to organic products and facilitate their export.
- ✓ Development of local production of needed inputs, composting units, natural enemies' production, and organic pesticides.
- ✓ Lebanon is blessed with microclimates, soil and a terrain (geography) that favour biodiversity and polyculture farming methods. Diversity of crops and of farming activities that are specific to organic farming, increases commercial opportunities and economic growth (inclusive sector).

Weaknesses

- ✓ The size of Lebanese farms are relatively small to medium in terms of arable land area.
- ✓ High cost of production (inputs, certification, ...)
- ✓ Lack of collaboration/clustering between value chain actors via associations and groups. Recently a new association has been created but needs some time to be operational.
- ✓ Lack of support from the public sector in terms of subsidies, taxation, etc. In addition to the urgency of issuance of appropriate decrees and strict control mechanisms for the new organic farming law.
- \checkmark Existence of one certification body only, which reduces the competition.
- ✓ Lack of financing and funding opportunities to certified operators.
- ✓ Weak technical assistance/ advisory services for producers.
- ✓ Weak post-harvest infrastructure and organization. Post-harvest practices in Lebanon are below international standards.
- ✓ Cumbersome business procedures. Lebanon ranks 143rd out of 190 countries in the Ease of Doing Business. On average, it takes 96 hours to comply with border





procedures only, twice as much as the MENA regional average, which hurts exports of perishable products.

✓ Rising water stress and increasing water use competition. Water resources are under increasing pressure because of climate change and population growth.

Opportunities

- ✓ Organic farming represents a strategic opportunity, when compared to regional countries with large scale farms.
- ✓ High innovation potential. Work on renewable energy and packaging reuse to lower production costs.
- ✓ Niche products demand growth, with health, food safety and environmental concerns, organic farming is the fastest growing food segment, in the world. It is driven by an exponentially growing consumer demand.
- ✓ Organic farming is internationally regulated and controlled, providing certified operators with high export potential to international markets (EU, USA, Russia, GCC & Levant countries, East-Asia, Africa)
- ✓ Promoting organic production for producers and consumers using social media and low cost marketing campaigns, in addition to the creation of a platform for sharing organic news and information.
- ✓ Domestic market expansion potential and high export potential.
- ✓ High cooperatives potential.

Threats

- Economic, political and social crisis in Lebanon resulting in reducing the importing capacity of local producers in terms of inputs, in addition to the devaluation of the purchasing capacity of Lebanese consumers.
- Problems in accessing the international markets due to borders closing (to GCC specifically) and Beirut port blast.
- Climate change challenges which may result in decreasing the production at farms level.

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2 National recommendations

I- <u>Proposed solutions and Improvements</u>

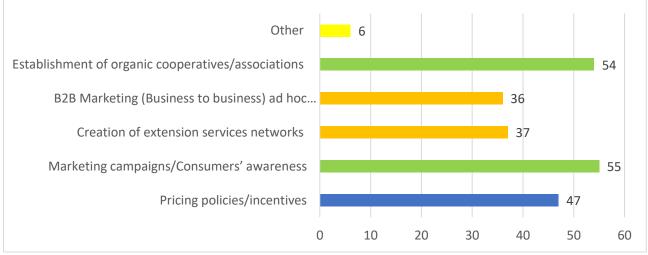


Figure 29: Solutions proposed by survey participants

The survey respondents were given the option to select and propose solutions to challenges faced. Most of them were convinced that the establishement of professional organizations and consumers' awareness and princing policies are important keys to foster the sector development. In addition, B2B approach and creation of extension services networks were commonly listed as supportive actions for the value chain actors to overcome the obstacles.

Other solutions, such as reinforcing the quality control systems, availability of more than one certification body, government support and setting up appropriate legislations on inputs import and taxation were also identified.



ORGANIC ECOSYSTEM

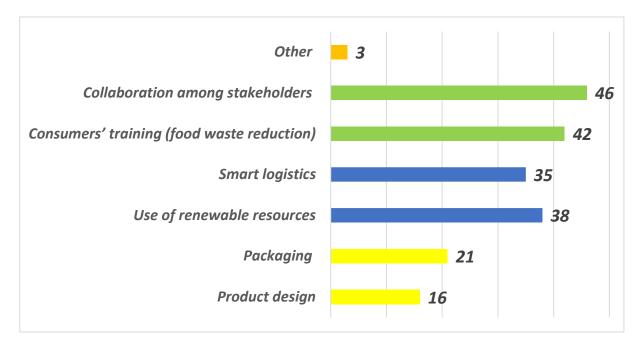


Figure 30: Improvements suggested by survey participants

As for major improvements suggested to enhance the sustainability of the value chain in the organic sector, respondents focused on the importance of collaboration among stakeholders (61%), food waste reduction and consumers' training (56%), followed by the necessity of using renewable energy and smart logistics (51% and 47% of responses), Packaging (28%) and product design (21%). Finally, improving the regulatory framework, lowering the products' prices and the creation of an interactive platform for stakeholders may play a role in this regard.