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Toward an Organic Lebanon

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Abstract: While organic agriculture has reached its peak level in terms of development around the world, it is still in its embryonic stage in Lebanon. *De facto* organic farming used to occur by default before the 60's. However, throughout the last four decades the intensive use of agro-chemicals became a must to increase yields. This double-edged sword led to deterioration in the quality of produce as well as a break in the ecological balance. The last decade witnessed a lot of awareness to health and environmental issues and imported organic products found their place on the Lebanese supermarket shelves and in specialty shops. An increasing number of farmers started to adopt organic farming despite the fact that there is still no established certifying body since there are no national standards. Universities, NGOs and other institutions are making efforts to promote organic agriculture through research and implementation of pilot projects. They are further trying to develop the national standards. There are good prospects for promoting organic agriculture in Lebanon. The demand for healthy food in the local market is increasing and there is a great potential for export in view of the favorable climatic conditions and ecological diversity that Lebanon enjoys. However, there is a need for a comprehensive scheme to be initiated by researchers and NGOs with the indispensable facilitation by the Ministry of Agriculture and the adoption by the private sector.

Introduction

While the world is converting to organic agriculture at a rapid pace, Lebanon is still launching this concept due to the efforts of NGOs and Universities while the government does not consider this issue as one of its priorities. In view of the absence of data on the production size, practices and market potentials, this paper focuses on the current situation of organic production and marketing in Lebanon with an emphasis on the ongoing projects in this field.

Geographical location of Lebanon

Lebanon is situated in southwestern Asia, on the eastern coast of the Mediterranean Sea. Its area is 10,452 km² stretching 225 km along the coast with a width varying between 48 km and 80 km inland. A very narrow coastal plain extends along the Mediterranean Sea. Inland, two mountain ranges dominate the land, Mount Lebanon and Anti Lebanon. The two mountain ranges run parallel to each other over the length of the country. Between the two ranges lies the Bekaa Valley, the most fertile plains of the country (Appendix 1). Despite this small size, Lebanon enjoys a geographical and climatic diversity manifested in its rich biodiversity and the wide variety of agricultural products that can be grown. Lebanon used to be a major producer and exporter of a variety of agricultural products and there is hardly an agricultural product that is not produced there (ESCWA, 1999).

General outlook on Agriculture in Lebanon

It is estimated that 35% of the total land of Lebanon is cultivable, but only 60% of this potential is used. Agriculture in Lebanon never reached its full potential due to insufficient attention

from the government who preferred promoting services and trade even before the initiation of the civil war when the Lebanese economy was growing rapidly (ESCWA, 1999).

During the war, the agricultural sector suffered a lot of losses including those brought about by the loss of the traditional export market and the dumping of cheaper agricultural goods from neighboring countries. Moreover, the deterioration of research, extension and government services left Lebanon lagging behind all its neighboring countries. This has led a lot of Lebanese farmers to grow illegal crops to survive. After the recovery from the war, the government has banned such crops and subsidized others such as wheat, sugar beet, and tobacco. These have reduced the burden faced by farmers, but the problem was not completely solved. Alternative approaches in agriculture, such as the adoption of sustainable agriculture, were not identified until recently.

A major importer of Lebanese agricultural products in 1998 was Saudi Arabia clearing 41.56 % of the total agricultural products in addition to exports Kuwait, Syria, Jordan, UAE, Egypt, Bahrain, and Qatar (ESCWA, 1999). The main products that Lebanon exports include: apples, potatoes, tomatoes, onions, garlic, banana, grapes, apricots, cherries and citrus fruits (Baalbaki and Mahfouz, 1985).

Organic Agriculture in Lebanon

After decades of intensive use of agro-chemicals as a means to increase yields and improve their living, an increasing number of farmers have become concerned about issues of health and environment. In fact, a lot of farmers used to practice organic agriculture by default. Poor farmers couldn't afford the high cost of agricultural inputs and they relied on the available resources such as manure and organic residues. Yet, those farmers were driven by economic necessity to shift to what is now called conventional agriculture leaving behind the traditional practices.

The heavy use of chemicals and the conventional cultural practices contributed to the disruption of the ecological balance in addition to the deterioration in the quality of the produce. In the last decade, awareness to such issues of health and environment has increased world wide. In Lebanon, a lot of NGOs focused their efforts on launching environmental public awareness campaigns and promoting environmentally sound practices in different sectors. At the level of universities, more research is carried out on topics related to the environment, and a lot of universities integrated environmental programmes in their curricula.

One of the focal areas in the environmental awareness issue is organic agriculture the promotion of which started in the region in the mid 1980s. Some promoting bodies were:

a) MECTAT

The Middle East Center for the Transfer of Appropriate Technology, an environmental resource center, established in 1982 in Beirut, is one of the first NGOs that began promoting the concept of organic agriculture through publications, lectures and practical demonstrations. Recently, MECTAT has translated IFOAM standards into the Arabic language.

b) GreenLine

In 1998, GreenLine, a Lebanese scientific NGO for the protection of the environment intensified its work on promoting organic farming. In 1999, the organic farming committee was formed and since then it has been working on promoting organic agriculture through workshops, seminars, and training of agricultural engineers in coordination with IFOAM (AgriBioMediterranean).

raeano). One of its latest achievements is the establishment of “Biocoop Lubnan” in 2002, the first coop for organic farmers in Lebanon. This cooperative aims at improving the economic and social status of organic farmers by helping them in the production, packaging, and marketing of fresh and processed organic material in the domestic as well as external markets. Currently, there are eight farmers registered in this coop and more will be joining in the near future. At the level of projects, GreenLine was granted a financial contribution from GTZ (the German Technical Cooperation), a federally owned organization for development. This specific project aims at promoting organic farming in Lebanon with special emphasis on the preparation of the necessary legal framework and the establishment of a certification system. It will be implemented in the following year and half in three pilot locations in Lebanon.

c) World Vision

World Vision is a Christian humanitarian organization, serving the world's poorest children and families in nearly 100 countries. World Vision is currently implementing a project, funded by MCI-USDA, to promote organic agriculture and develop the appropriate marketing strategy for the organic products in the liberated south part of Lebanon through the implementation of eight pilot projects in four villages.

d) The American University of Beirut (AUB)

For the past four years, the Faculty of Agricultural and Food Sciences (FAFS) at AUB, has been implementing developmental projects in rural areas of Lebanon. Organic Agriculture has been promoted as a means to improve the economic situation of the farmers who will get higher returns while protecting the environment and producing healthy food. In Yamouneh (Appendix 2), a technology transfer project to improve sustainable agriculture was successfully executed and organic agriculture was one of its components. The project area is located in central-north Bekaa. It covers 175 km² and is divided into three different eco-geographical areas: the highlands (32 km²), the lowlands or plains (54 km²), and the hills (91 km²). This project was funded by the World Bank, International Fund for Agricultural Development (IFAD), the Lebanese Council of Development and Reconstruction (CDR), and the Lebanese Ministry of Agriculture. Upon its completion in 2001, two farmers who offered their farms as demonstration plots, are now producing organic fruits and vegetables and they have established their direct marketing outlet to customers. Another phase of this project started this year with a plan to enlarge the scale of organic farming in the area.

In December 2001, Mercy Corps / Lebanon program granted AUB a financial contribution to undertake a project called “Growing Sustainability An Integrated Village Development Project, El Qaraaoun pilot village” project, under the USDA supported Rural Community Development Cluster project. One specific objective of this project is to promote organic agriculture to improve farmers’ livelihoods. This is being attained by establishing pilot organic farms in each village to serve as a demonstration station where farmers can learn and observe the results of organic practices. In addition, technical guidance and marketing facilities are offered to farmers who are willing to shift to organic agriculture. A participatory rural appraisal was conducted in the villages prior to the implementation of the projects, and it showed that farmers are willing to shift into organic agriculture as long as the market of such products is secured.

Specific cultural practices adopted in these projects are:

- In pest management: use of insect pheromones, sticky traps, and oils.
- In soil fertility: planting legumes in rotation with vegetables, use of composted manures, green manure and other organic additives.

- In weed control: soil solarization was proven to be an effective practice to control weeds and soil borne diseases.

On the other hand, research in the field of organic agriculture is in its early stages. An economic feasibility study is being carried out to investigate the potential of organic agriculture as an alternative to replace the illicit crops in the Bekaa Valley of Lebanon.

e) Lebanese University

The Lebanese University, is conducting research to study the performance of improved varieties of chickpeas grown organically as compared to conventional methods in the mountainous region of Hrajel 38 Km from Beirut. Such programs may encourage the Lebanese farmers to adopt the biological techniques in growing native varieties of chickpeas. (Risk.H, personal communication)

According to a report by Willer and Yussefi (2002), in 1999 Lebanon had an estimated area of 100 ha under “organic management”, which constitutes 0.03% of its agricultural land. However, in Lebanon there is no data depicting the size of organic agricultural production, nor the market of organic products. This is due mainly to the inconsistency in defining organic agriculture. The term “Organic Agriculture” used in Lebanon does not always refer to the holistic approach of organic agriculture as defined by IFOAM or FAO or USDA. For some farmers, “organic” means no pesticides used, for others it means incorporating manure instead of chemical fertilizers, etc.... In fact, the figures mentioned underestimate actual figures if “organic” refers to practices defined by local farmers. This leads to the need to develop national regulations and standardization of organic definition and practices in the entire country. When this is developed, it is recommended that data about the size of organic production be collected in addition to a survey about the potential domestic and external market, and this is crucial for the development of a comprehensive scheme.

Market opportunities in Lebanon

The demand for organic products is increasing in Lebanon, as more awareness is drawn toward health issues as well as environmental issues. This could be perceived from the boosting up of health shops and specialty stores. However, the market of such products still constitutes a niche market and products are sold in some supermarkets as well as in specialty shops. These products include vegetables, fruits, bread, baby food, cereals, jams, herbs, and a wide variety of food and beverages in addition to cosmetic products. Some Lebanese producers of organic products depend on direct marketing of their products to consumers without resorting to middlemen. However, while all imported products are certified organic, the locally produced ones are labeled “organic” or “healthy” without any certification and this acts as an obstruction in situations where one aims to gain credibility in the domestic market and as a barrier blocking the exporting channel.

A new strategy to market organic products in Lebanon was introduced this year by AUB through the implementation of the first Community Supported Agriculture (CSA) project.

CSA is a cooperative link between the city and the country, providing support for local organic agriculture and an affordable way to eat organic produce throughout the season. Citizens become shareholders in a CSA project by purchasing a “share” in a farm’s harvest at the beginning of the season and then receiving a basket of fresh produce each week. The baskets are usually delivered to drop-off points or to the sharer’s house (Hunter, 2000). The idea of Community

Supported Agriculture took shape in Europe in the mid 1980s and spread quickly to North America, where over 1000 CSA projects now exist.

The direct objective behind such a project is to help Lebanese farmers develop sustainable incomes while protecting the environment. A Canadian expert in this field is collaborating with the FAFS at AUB to launch CSA in Lebanon. In its first year the project is aiming at 40 sharers and according to a survey conducted by AUB, a larger number of people showed their interest in taking part in this project. The project started in July 2002 with 35 sharers and the aim is to expand it to include more sharers and farmers.

According to a Lebanese importer of organic products (Rania Kazan), there are different types of consumers who seek to purchase healthy organic food:

- Educated people who are aware of health and environmental issues.
- Lebanese people who have lived abroad and are acquainted with such products.
- Foreigners who live in Lebanon and are used to consuming organic products in their countries.
- Sick people who have health problems or are on special diets and prefer to eat healthy food as recommended sometimes by their physicians.
- Affluent people who can afford to buy organic food, which is more expensive than the conventional one. A general look at the prices in supermarkets illustrates that organic product prices range between 30% and 70% more than conventional product prices.
- Occasional consumers who try the products due to curiosity and then maintain this eating habit because they enjoyed their first experience.
- An important chunk of organic product consumers, especially for fresh products, consists of people who are nostalgic to the taste and smell of the fruits and vegetables they used to eat in their villages.
- Consumers who mainly seek healthy food and don't pay much attention to environmental issues.

At the domestic level, a market study is needed to assess the potentials and possibilities of marketing organic products and accordingly develop a marketing strategy that best suits the situation. According to a survey conducted with 800 individuals in Beirut (Slaibi, 2001 unpublished data), Lebanese people are willing to pay between 45-55% more than what they pay for their conventional commodities. The same survey depicted that the most highly demanded types of commodities are: tomato, cucumber, carrot, apple, watermelon, meat, and almond.

As for the international market, Lebanon has a comparative advantage compared to its neighboring countries. The climatic and the geographic diversity of Lebanon have granted the nation different agro-ecological zones which make agricultural production possible in different seasons. In view of this, Lebanon has a potential international market where exports are made to Europe and the Middle East providing these nations with "out of season" fresh products.

Certification in Lebanon

Consumers all over the world tend to be demanding in terms of quality assurance for the products they buy, especially when products are declared "organic". To avoid consumer confusion, organic certification by an accredited body is imperative. Organic certification is indispensable

to generate great premia for producers especially when the international market is targeted (Parrott and Marsden, 2002). Moreover, certification is crucial to maintain the credibility of organic produce in the domestic market.

For budgetary reasons, the Lebanese Ministry of Agriculture does not regard organic agriculture as a priority. In view of this, the aspect of certification has been an issue. Efforts to promote organic agriculture are driven almost exclusively by NGOs. The response to such efforts is positive since more and more farmers are adapting the organic practices in agriculture. The major constraint for organic producers at present is the lack of certification. The establishment of a local certification body is not possible currently since the Lebanese national standards are not developed yet. Meanwhile, and for the benefit of the farmers, GreenLine has resorted to direct certification where producers of organic products are inspected by a supervisor from an inspection body accredited in the EU. Biocoop Lubnan is creating private regulations adapted from the EU regulations, meanwhile GreenLine is working on establishing the Lebanese national standards in cooperation with Libnor. They will be adapted from IFOAM standards, EU standards and the Codex Alimentarius Commission guidelines. However, they are not expected to be established before the middle of 2003. Libnor is a public institution attached to the Ministry of Industry and it is the sole authority which is given permission to prepare national standards and to give the right to use the Lebanese Conformity Mark.

A comprehensive scheme

NGOs in Lebanon have taken a giant step in initiating the promotion of organic agriculture in Lebanon and they went further in their efforts trying to gain certification and developing the national standards which are in process of being set. In addition to that, they are continuously putting efforts in launching public awareness campaigns to widen the horizons of this concept in Lebanon. However, the comprehensive scheme of organic agriculture from production to marketing requires the facilitating role of the government. In most developing countries, governments are hostile to the development of organic agriculture and instead tend to support conventional agriculture which is a faster way to generate high returns (Parrott & Marsden, 2002). As a result, most initiatives to promote the organic agriculture concept are taken by NGOs and researchers. However, facilitation by the government is crucial in some areas, especially when logistics and legal support such as the following is needed:

- Conducting a survey to identify areas where organic approaches including *de facto* organic farming are already practiced, their sizes, the types of existing practices and their effectiveness, the depth of the knowledge and the problems experienced.
- Redefining the priorities of funded projects and research in educational institutes so as to include topics relevant to the promotion of organic agriculture.
- Setting the necessary logistics to open external market channels for organic products in addition to controlling the import of such products as a means to protect the local producers.
- Providing legal and logistic support to enable the development of national standards and regulations for organic production in Lebanon in order to domestically perform inspection and certification.
- Establishing a nation-wide cooperative to help organic farmers in the production, processing, packaging and labeling, and most importantly, marketing of their organic products.

An essential phase in the comprehensive scheme is research in the field of organic agriculture. Studies should be carried out both on production and marketing. The unique climatic, geographic, and edaphic conditions of Lebanon necessitate that multidisciplinary research be done. Different aspects of the production system should be integrated in research in order to identify the most suitable practices and strategies to be adopted.

Conclusion

Organic products have found their way to the Lebanese society while more farmers are adopting the concept of organic farming. The lack of a certification and support from the government are keeping Lebanon lagging behind other countries over which he has a comparative advantage. Organic agriculture has prospects in Lebanon at the domestic level in view of the increasing demand for healthy food, as well as at the international level since Lebanese agricultural products have always been demanded by Arab and European countries. However, support from the government and research are highly recommended to foster this concept in Lebanon.

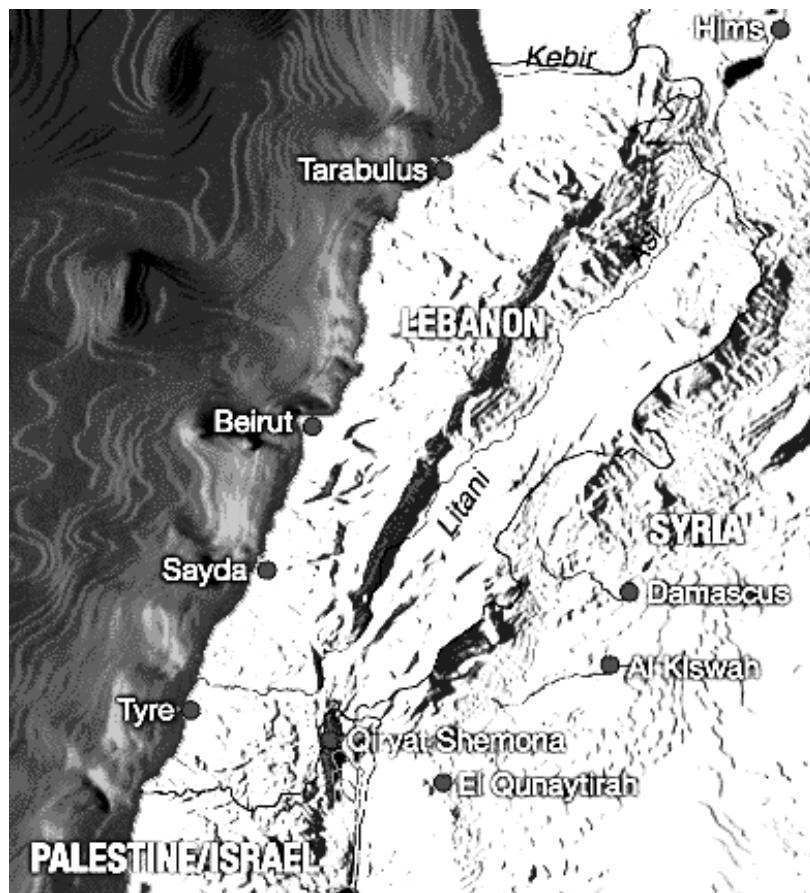
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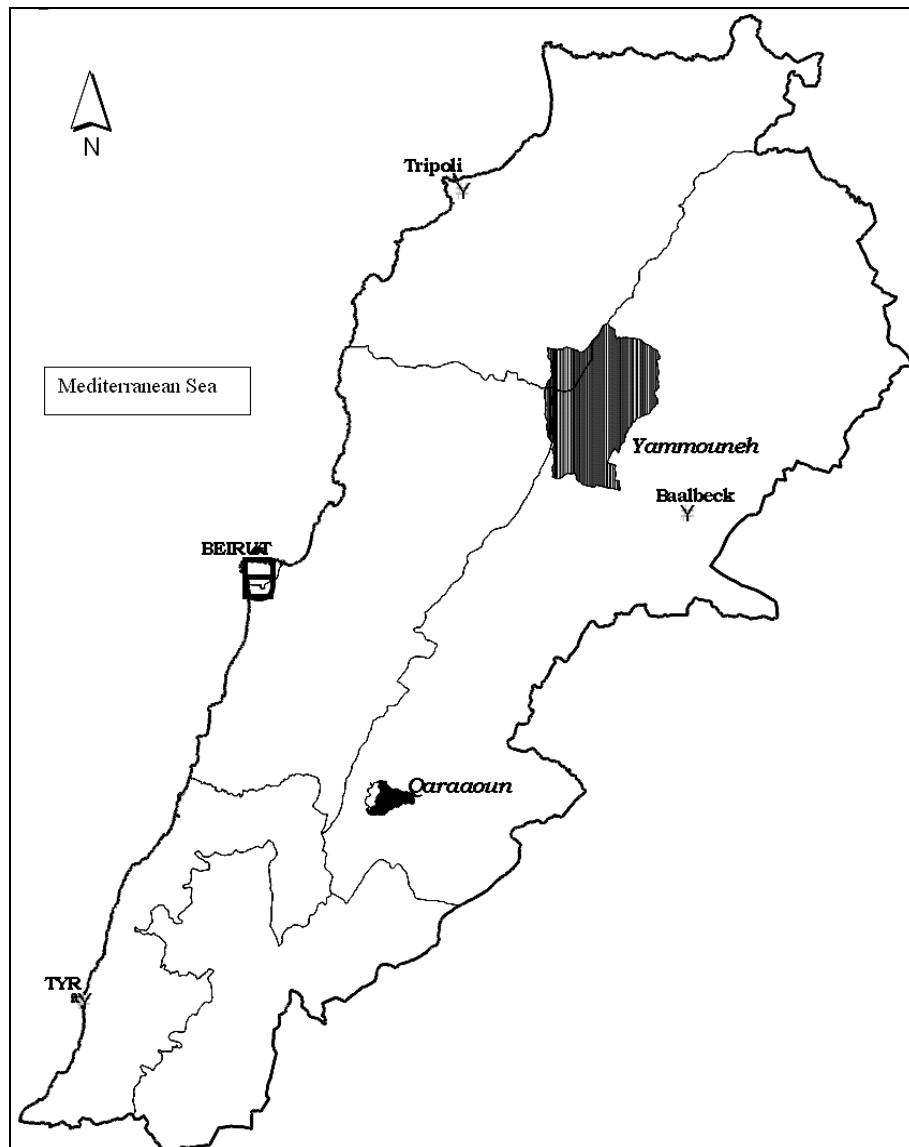
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Appendix



Topographic Map- Lebanon



Project Locations