Organic agriculture in Syria: policy options

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Jel classification: Q180, Q380

1. Introduction

Over the last few years, in Syria some scientists, policy makers and producers have started being interested in organic agriculture (OA). Seminars were held at the University of Aleppo and at the Ministry of Agriculture in Damascus in 2002-2003. An FAO project started in 2006, titled "Institutional Development of Organic Agriculture in Syria", but it might still be perceived by most decision makers as a small exploratory move into a niche export market, whereas an increasing number of Syrians and expatriates working in Syria believe that OA could represent a really alternative approach to sustainable production. The purpose of this paper is consequently to remind some basic concepts related to OA and to indicate the guidelines for an integrated policy that the Government could elaborate and then implement for a country-wide adoption.

As a matter of fact, the Ministers of Agriculture of all Mediterranean Countries, at the end of their Venice Meeting in 2003, declared that OA is a priority and that all efforts should be spent for its development. In 2004, the European Action Plan was released, after a long process of consulta-

Abstract

The paper deals with the need for an integrated approach for organic agriculture in Syria, where the ecological and socio-economic conditions require a profound change of both present agricultural policies and technological approach. The history and evolution of organic agriculture, as well as the world consumer market are briefly illustrated in order to show the potential of organic food systems in Syria.

The motivations and goals of the governments to act for the strengthening of organic agri-food chains are explained, while the last paragraph lists the possible intervention areas and some of the actions to be taken, in the short and medium term, for a sustainable organic reform of agriculture and animal production, for both domestic food security and foreign markets.

The paper also underlines the need for a participatory approach and for the involvement of the private sector and of the Civil Society Organizations in the organic policy elaboration and implementation.

Keywords: Organic farming, policy options, Syria

Résumé

L'article concerne la nécessité d'une approche intégrée pour développer l'agriculture biologique en Syrie, où les conditions écologiques et socio-économiques imposent un changement profond des politiques agricoles actuelles et de l'approche technologique aussi. L'histoire, l'évolution de l'agriculture bio et le marché mondial de consommation sont brièvement illustrés afin d'indiquer le potentiel des filières bio en Syrie.

Les motivations et les buts des gouvernements pour l'expansion des filières bio sont expliqués, avec le dernier paragraphe dédié à la liste des possibles interventions et de certaines actions, à court et moyen terme, pour une réforme biologique durable de l'agriculture, y compris les productions animales, pour la sécurité alimentaire nationale et pour les marchés étrangers.

L'article souligne aussi le besoin d'une approche participative et de l'engagement du secteur privé et des Organisations de la Société Civile dans l'élaboration et mise en œuvre d'une politique bio.

Mots clés: Agriculture biologique, options politiques, Syrie

2. Origins and present situation of organic agriculture

Lampkin & Padel (1994) defined OA as "approaches to farming, aiming at establishing sustainable production sys-
tems, mainly based on renewable resources, on the management of the biological processes, in order to achieve acceptable animal and vegetal production levels, human nutrition, protection against diseases and pests, and a proper return to labour and other resources”. More complete definitions have been recently issued by the International Federation of Organic Agriculture Movements (IFOAM) and by Codex Alimentarius (El Hage Scalababa & Hattam, 2002).

OA has been existing since 1924 (Kristiansen, Taji & Reganold, 2006) when some German producers began to follow the ideas of Steiner, founder of the Anthroposophy. Simultaneously in Japan, Okada (Hamilton, 2007) and Fukuoka elaborated their visions for a more natural way to farming. In the UK, in the early 1940s, Howard developed his guidelines to enhance soil fertility, while Rodale in the USA was proposing OA and healthy lifestyle. During the 1950s, Rusch & Mueller in Switzerland and Lemeire & Boucher in France proposed their approaches for OA and a healthier nutrition. In Australia, in the 1970s, Mollison & Holmegren elaborated Permaculture, based on the continuous coverage of the soil, no external inputs and minimal mechanization. These examples mean that conventional agriculture, based on a massive use of external inputs, energy, water, chemical products, “improved” varieties and animal lines, was perceived to be negative quite many years ago. Unfortunately, for more than 150 years, conventional agriculture has been supported by Governments, with research and extension, training and modernization plans, credits and grants, subsidies and incentives, whereas OA has very slowly expanded, over the years and across the continents, without any public support: no legislation, no subsidies, no grants or credit schemes, no public research or extension. In many cases, organic farmers, medical doctors and the few agronomists and veterinarians who supported them, were object of derision. Only in the very recent past, since the mid-1980s, due to the growing environmental concerns, health awareness and the energy costs of conventional farming, some local authorities and national governments have supported OA.

Nowadays, in several countries, such as in the EU, the USA, Japan, Argentina, Costa Rica, Tunisia, Turkey etc., a legislative framework exists, projects support producers and processors, grants and subsidies are available for the different stakeholders in the agri-food chain, public research and extension have been activated. The aggregated amount of resources available for OA is still a minimal fraction of the total public support to agriculture, but it is better than nothing and it is growing. Also the consumers’ demand is growing very fast, with the conventional retail and the supermarkets chains aggressively entering this market.

To conclude this first paragraph, the past eighty years of history of the different forms of OA demonstrate that a) very slow progress can happen even without a policy, but also that b) positive and coherent political actions can enormously speed up the diffusion of OA.

3. Worldwide organic farming and markets

OA extends nowadays over almost 30.4 million ha, in 138 countries (Willer, Yussefi-Menzler & Sorensen, 2008) with the highest growth in the USA, Argentina and Canada, where such expansion has been market-led and there are no subsidies. 39% of the global organic surface is in Australia (Table 1) followed by Europe (23%) and Latin America (19%). The worldwide market was quantified in 2006 at about 38.6 billion USD, +21% if compared to the previous year, continuously growing since 2001. The biggest market is Europe (52%), followed by North America (45%). The balance (3%) is diluted in all other countries.

<table>
<thead>
<tr>
<th>Continent</th>
<th>Area 2006</th>
<th>Farms 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>000 ha</td>
<td>% 000n</td>
</tr>
<tr>
<td>Africa</td>
<td>22</td>
<td>417</td>
</tr>
<tr>
<td>Asia</td>
<td>44</td>
<td>3,091</td>
</tr>
<tr>
<td>Europe</td>
<td>3,503</td>
<td>7,389</td>
</tr>
<tr>
<td>Latin America</td>
<td>546</td>
<td>4,916</td>
</tr>
<tr>
<td>North America</td>
<td>118</td>
<td>2,225</td>
</tr>
<tr>
<td>Oceania</td>
<td>5,309</td>
<td>12,381</td>
</tr>
<tr>
<td>Total</td>
<td>9,542</td>
<td>30,418</td>
</tr>
</tbody>
</table>

Note: Mexico in 1999 was considered in North America and in 2006 in Latin America

In Canada and the USA, about 12,000 farmers organically manage about 2,200,000 ha. There are very small alternative producers, selling their output at local “farmers’ markets”, directly to consumers, as well as large corporations supplying raw materials to processors and supermarket chains. The US and Canadian consumers demand all sorts of products (even frozen ready-to-eat pizza or pet foods) and this stimulates the expansion of both imported and domestic products.

In Africa, about 176,000 producers organically manage about 400,000 ha. Furthermore, there are millions of hectares of certified collection of wild fruits, spices, herbs. Tunisia and Egypt have leading institutions, important processors and traders. In the sub-Saharan countries, OA is less developed, but it is growing, for both food security and export. The resilience of OA in most climatic zones has been proven and it allows a more stable production, even without external inputs and under rainfed conditions. OA improves several dimensions of sustainability (Hine, Pretty & Tvarog, 2008) since it improves the natural environment, the communities, the education and skills of producers, leads to better market organizations and increases the households’ incomes, with positive impact also on health.

In most countries, proper policies are still missing and the public support is small or non-existent, but several national
and international NGOs help OA and support fair trade agreements. In South Africa, there is a growing local market for certified organic products. Since 2007, the East African countries have a regional organic regulation and this has allowed a quite good expansion (Uganda: 122,000 ha, Kenya: 90,000 ha, Tanzania: 56,000 ha, South Africa: 45,000 ha).

In Asia, about 130,000 farmers organically manage 3,100,000 ha and the most important countries are China (2.3 million ha) and India (528,000 ha). Most products are export-oriented (wild rice, tomatoes, teas, etc.), because the only large market in Asia has been Japan, but a growing demand is now recorded elsewhere. In several countries there are research projects, education opportunities, and governments positively act to promote further growth. 11 Countries have organic regulations and eight more are working on them. India is in the EU “Third country list” because its certification system is considered trustworthy and there is no need for another EU control.

In Oceania, 8,000 farmers declare over 12.4 million ha, 99% being in Australia. Most area is used for extensive grazing, but there are also large farms, with cereals and fruits for export, as well as small farms solely producing for the domestic market. In Australia and New Zealand there are consolidated organic standards and certification bodies. Both countries are in the EU “Third country list”.

In Latin America, where OA was introduced by some German settlers during the 1930s, about 223,000 producers manage 4.9 million ha. Most products are exported towards the USA and Europe, with a small flow towards Japan. Like in Africa, many projects as well as national and international NGOs support the expansion of OA and of wild collection, supplying fair trade products (coffee, cotton, spices, cocoa beans, medicinal herbs). Other important commodities are soy beans, bananas and sugar cane. Some governments (Brazil, Bolivia, Costa Rica, Argentina, Chile) have been very positive about OA and include its growth among the targets of their agricultural policies. Research activities as well as educational opportunities are very frequent. 15 Countries already have an organic legislation, but only Argentina and Costa Rica are in the EU “Third country list”.

In Europe, about 7.4 million ha were organically managed in 2006 by about 200,000 farmers. 6.8 million ha and 180,000 farmers can be found in the EU, where OA is regulated since 1991 and is supported with area subsidies since 1992. Organic production, processing and trade are also supported through a variety of channels, including rural development projects, by national and local Authorities. The largest areas are in Italy (>1.1 million ha), Spain (almost one million ha) and Germany (over 825,000 ha), but very fast growth is recorded also in the new eastern member states. In Europe, including Switzerland and Norway, organic goods can be found in almost all grocery stores (Table 2) and several retailers have their own organic private label. To satisfy such increasing demand, the European firms are importing organic raw and processed commodities from all over the world.

Focusing on the Mediterranean Basin (Giardina, 2008), the countries with the largest organic areas belong to the EU, but Tunisia and Turkey are coming close (Table 3). In these countries, legislation has been issued and updated, supporting schemes exist, research, education and extension activities have been initiated. Monotti (2007) indicates that the

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (million)</th>
<th>PPP pro cap (USD) *</th>
<th>Food Share (%) of total family expenditure*</th>
<th>Total market (million $)</th>
<th>Organic Food pro cap (€)</th>
<th>Organic Food Share (%) of food expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>82.5</td>
<td>26,980</td>
<td>11</td>
<td>4,600</td>
<td>56</td>
<td>2.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>60.0</td>
<td>26,580</td>
<td>9</td>
<td>2,831</td>
<td>47</td>
<td>2.5</td>
</tr>
<tr>
<td>Italy</td>
<td>58.5</td>
<td>26,170</td>
<td>14</td>
<td>1,900</td>
<td>32</td>
<td>1.6</td>
</tr>
<tr>
<td>France</td>
<td>60.6</td>
<td>26,160</td>
<td>13</td>
<td>1,700</td>
<td>27</td>
<td>na</td>
</tr>
<tr>
<td>Switzerland</td>
<td>7.4</td>
<td>31,840</td>
<td>10</td>
<td>764</td>
<td>102</td>
<td>4.5</td>
</tr>
<tr>
<td>Austria</td>
<td>8.2</td>
<td>28,910</td>
<td>10</td>
<td>730</td>
<td>64</td>
<td>5.4</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>16.3</td>
<td>28,350</td>
<td>10</td>
<td>446</td>
<td>28</td>
<td>1.9</td>
</tr>
<tr>
<td>Denmark</td>
<td>5.4</td>
<td>30,600</td>
<td>11</td>
<td>434</td>
<td>80</td>
<td>4.5</td>
</tr>
<tr>
<td>Sweden</td>
<td>9.0</td>
<td>25,820</td>
<td>12</td>
<td>379</td>
<td>42</td>
<td>2.3</td>
</tr>
<tr>
<td>Spain</td>
<td>38.2</td>
<td>21,210</td>
<td>14</td>
<td>270</td>
<td>2</td>
<td>na</td>
</tr>
<tr>
<td>Total</td>
<td>346.1</td>
<td>na</td>
<td>na</td>
<td>13,688</td>
<td>na</td>
<td>na</td>
</tr>
</tbody>
</table>

Source: FAO 2007a

<table>
<thead>
<tr>
<th>Country</th>
<th>Area (ha) in 2005</th>
<th>Area (ha) in 2006</th>
<th>Farms (no.) in 2006</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3,184</td>
<td>6,204</td>
<td>368</td>
</tr>
<tr>
<td>Slovenia</td>
<td>23,499</td>
<td>26,831</td>
<td>1,953</td>
</tr>
<tr>
<td>Albania</td>
<td>1,170</td>
<td>1,000</td>
<td>100</td>
</tr>
<tr>
<td>Greece</td>
<td>288,255</td>
<td>302,256</td>
<td>23,900</td>
</tr>
<tr>
<td>Malta</td>
<td>14</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Cyprus</td>
<td>1,698</td>
<td>1,979</td>
<td>305</td>
</tr>
<tr>
<td>Turkey</td>
<td>93,133</td>
<td>100,275</td>
<td>14,256</td>
</tr>
<tr>
<td>Syria</td>
<td>20,500</td>
<td>30,493</td>
<td>3,256</td>
</tr>
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<td>3,470</td>
<td>213</td>
</tr>
<tr>
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<td>6,685</td>
<td>4,058</td>
<td>216</td>
</tr>
<tr>
<td>Palestine</td>
<td>1,000</td>
<td>641</td>
<td>303</td>
</tr>
<tr>
<td>Jordan</td>
<td>10</td>
<td>1,024</td>
<td>25</td>
</tr>
<tr>
<td>Egypt</td>
<td>24,548</td>
<td>14,165</td>
<td>460</td>
</tr>
<tr>
<td>Lybia</td>
<td>nd</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Tunisia</td>
<td>143,099</td>
<td>154,793</td>
<td>862</td>
</tr>
<tr>
<td>Algeria</td>
<td>887</td>
<td>1,550</td>
<td>39</td>
</tr>
<tr>
<td>Morocco</td>
<td>20,040</td>
<td>4,216</td>
<td>na</td>
</tr>
<tr>
<td>Portugal</td>
<td>233,458</td>
<td>269,374</td>
<td>1,696</td>
</tr>
<tr>
<td>Spain</td>
<td>807,569</td>
<td>926,390</td>
<td>17,214</td>
</tr>
<tr>
<td>France</td>
<td>560,838</td>
<td>552,824</td>
<td>11,640</td>
</tr>
<tr>
<td>Italy</td>
<td>1,067,102</td>
<td>1,148,162</td>
<td>45,115</td>
</tr>
<tr>
<td>Total</td>
<td>3,299,154</td>
<td>3,549,725</td>
<td>121,931</td>
</tr>
</tbody>
</table>

Source: Willer, Yusufi-Menzer & Sorensen 2008

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na: not available
factors hampering the further development of OA in the non EU countries are the high costs of production and certification, the low educational level of farmers and the lack of advisory services, the lack of appropriate structures for production, processing and trading, and poor marketing activities (Table 4). Al Bitar and Pugliese (2008) provide useful case studies from Turkey and Tunisia and they underline the need for a holistic and integrated policy approach.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Total</th>
<th>Strongly agree (+4)</th>
<th>Agree (+2)</th>
<th>Not relevant (0)</th>
<th>Disagree (-2)</th>
<th>Strongly disagree (-4)</th>
<th>No answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>High costs of production/certification</td>
<td>2.2</td>
<td>38.2</td>
<td>41.2</td>
<td>7.4</td>
<td>8.8</td>
<td>1.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Low education of farmers/lack of advisory services</td>
<td>2.2</td>
<td>42.6</td>
<td>36.3</td>
<td>5.9</td>
<td>11.8</td>
<td>1.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Lack of structures (production, processing, distribution)</td>
<td>2.0</td>
<td>35.3</td>
<td>41.2</td>
<td>7.4</td>
<td>8.8</td>
<td>2.9</td>
<td>4.4</td>
</tr>
<tr>
<td>Poor marketing activities</td>
<td>1.9</td>
<td>33.8</td>
<td>45.6</td>
<td>4.4</td>
<td>4.4</td>
<td>8.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Lack of subsidies and financial supports</td>
<td>1.8</td>
<td>35.3</td>
<td>35.3</td>
<td>8.8</td>
<td>10.3</td>
<td>5.9</td>
<td>4.4</td>
</tr>
<tr>
<td>Lack of consumer awareness</td>
<td>1.5</td>
<td>26.5</td>
<td>36.8</td>
<td>19.1</td>
<td>5.9</td>
<td>5.9</td>
<td>5.9</td>
</tr>
<tr>
<td>Low or variable yields</td>
<td>1.4</td>
<td>27.9</td>
<td>36.8</td>
<td>14.7</td>
<td>7.4</td>
<td>8.8</td>
<td>4.4</td>
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<tr>
<td>Small farm size</td>
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<td>33.8</td>
<td>35.3</td>
<td>5.9</td>
<td>8.8</td>
<td>13.2</td>
<td>2.9</td>
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<tr>
<td>Lack of appropriate inputs</td>
<td>1.3</td>
<td>27.9</td>
<td>30.9</td>
<td>17.6</td>
<td>7.4</td>
<td>10.3</td>
<td>5.9</td>
</tr>
<tr>
<td>Competition with organic products from other countries</td>
<td>0.5</td>
<td>14.7</td>
<td>35.3</td>
<td>13.2</td>
<td>22.1</td>
<td>8.8</td>
<td>5.9</td>
</tr>
<tr>
<td>Lack of traceability</td>
<td>0.3</td>
<td>14.7</td>
<td>30.9</td>
<td>14.7</td>
<td>19.1</td>
<td>14.7</td>
<td>5.9</td>
</tr>
<tr>
<td>Lack of harmonization with foreign legislation</td>
<td>0.1</td>
<td>17.6</td>
<td>23.5</td>
<td>17.6</td>
<td>17.6</td>
<td>17.6</td>
<td>5.9</td>
</tr>
<tr>
<td>Distance from foreign markets</td>
<td>0.1</td>
<td>13.2</td>
<td>33.8</td>
<td>14.7</td>
<td>16.2</td>
<td>19.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Lack of national legislation/legislations</td>
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<td>23.5</td>
<td>13.2</td>
<td>26.5</td>
<td>7.4</td>
<td>25.0</td>
<td>4.4</td>
</tr>
<tr>
<td>Lack of Certification Bodies</td>
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<td>16.2</td>
<td>19.1</td>
<td>20.6</td>
<td>10.3</td>
<td>29.4</td>
<td>4.4</td>
</tr>
</tbody>
</table>

4. Motivations for public intervention

The public involvement for the introduction and/or further expansion of OA has many reasons, motivations and purposes.

The Governments of developed countries (OECD, 2001) desire to reduce the pollution due to excessive use/misuse of chemicals, or because lower surpluses were expected thanks to an extended adoption of OA. Since subsidies cannot be coupled any longer with production, supporting OA with area subsidies has been a way to bypass the WTO opposition to price support. Animalist associations, environmentalist parties and NGOs represent strong lobbies. Last but not least, consumers wish to purchase more locally grown organic produce and governments like to satisfy such demand.

In many developing countries, although in most cases organic products are still considered a specialty for foreign markets or for small domestic niche markets, there is also a growing awareness that OA could be a better approach than conventional systems for food security, because bio diverse organic systems are more resilient and require less cash investments (El Hage Scialabba and Hattam, 2002; Rundgren, 2008). Also in developing countries, the failures of conventional agriculture (see next paragraph) are becoming more evident and this leads to rely on knowledge intensive systems, based on local resources, especially for cash poor small producers. Also the pressure from NGOs and some foreign donors should not be underestimated, because endogenous development still needs the support, in many cases, of some external help. In developing countries there are not resources for area subsidies, and the political support is only normative (legislation) and indirect (some research activities, some advisory projects, etc.).

5. Side-effects of conventional farming

The expansion of OA is due to the raising awareness that the conventional agri-food system is becoming less sustainable from an ecological, economic and sociopolitical point of view. The present global food crisis and the recent FAO world conference (FAO, 2008) have confirmed the contradictions of the conventional agri-food systems, based on monoculture, intensive use of external inputs and scarcity of natural resources.

With oil prices priced over 130 US$ per barrel, the energy balance of conventional agriculture is more and more negative and the recent decline of its price should not stop the search for energy-saving methods of production. In a few decades, conventional farming systems have consumed the non renewable natural resources accumulated in millions of years.

Conventional agriculture requires water, because High Yield Varieties cannot express their potential without fertilizers, which then impose regular supply of this increasingly scarce resource. Competition for the use of water is growing everywhere in Syria.

The environment degradation is another problem. To facilitate the mechanization, even in fragile areas such as in Syria, "useless" trees and shrubs have been cut away, but this increases wind and rain erosion, causing the loss of millions of tons of fertile topsoil every year. Biological competitors of harmful insects do not have a shelter any longer and pests freely multiply. Rotations and mixed farming have been abandoned, while overgrazing is menacing the pastures in the Al – Badia area. Nitrates and fine chemicals, as well as heavy metals, antibiotics and animal wastes are flowing into the aquifers, whose waters are now dangerous for all forms of life.

The genetic pressure on plants and animals has made conventional systems more susceptible to diseases. This makes necessary the continuous import of more powerful fine chemicals, patented by a small number of giant cross-national companies, because animals and plants are weaker, whereas diseases (for both plants and animals) and weeds are increasingly resistant.
Productive animals have been confined into artificial systems and subject to all kind of unnatural treatments for increasing their productivity. Artificial illumination 24 h/d, growth hormones, antibiotics, synthetic vitamins have led to think that animals can be treated as machines. But viruses and bacteria are becoming stronger and resistant to all sorts of chemical treatments and all these hormones accumulate into the body of consumers. Even in Syria, consumers search now for “baladi”, i.e. rustic, home produced eggs.

New social problems have recently appeared, linked with the excessive consumption of relatively cheap food: aggressive advertising is pushing adults, children and teenagers to consume over their needs. Obesity and related diseases have been also found in Developing Countries and they can be observed also in Syria. Several people suffer from new allergies to additives, artificial colours, artificial flavours used in food and textile production.

Beyond all the above mentioned problems, most conventional systems are not economically competitive. They need huge financial State support, either openly declared or hidden, as unpaid natural resources (water, grazing land, for example), low taxation or free services (from extension to social care). The Syrian government has been supporting some unsustainable conventional systems with subsidized seeds, fertilizers, pesticides, irrigation plants, fuel. The prices of raw commodities have been kept artificially high, and the prices at consumption are kept artificially low, but all these subsidies cannot last forever, because their financial weight is becoming unbearable.

And what about the farmers and their families? Are they happy and rich? The contrary is true: agricultural labour has surely become less demanding in terms of physical fatigue, but in many sectors and many areas of Syria it is very unhealthy. Pesticides were carelessly used and many people were victims of chemicals – nowadays the situation has improved, but still there is a long way to go. The average agricultural incomes remain low and the rural exodus is strong. Like in many other countries, in some areas only the elderly, some women and the children still inhabit the villages.

6. Agricultural policy for organic agriculture

To elaborate and implement a comprehensive set of interventions for the development of OA, a logical path should be followed (Dabbert, Haering and Zanolli, 2004) because any public plan wishing to move from the support for conventional agriculture to the development of organic agriculture chain should cover the following points:

a) Present situation: definition of the areas and products where OA could be more easily developed, barriers and potentials, human resources requirements, research needs, market perspectives (domestic and abroad), certification bodies and accredited laboratories, legislation, etc.;

b) Objectives and strategies: where to be in 5 – 10 year time, and how to get there. This means to agree on some meaningful indicators such as number of farms, area, output volume, export volume, extension agents trained, research projects initiated, labs established, etc.;

c) Instruments and addresses: regulations and resources (grants, loans, subsidies) for the various category stakeholders;

d) Priorities: where and what should be done first, to have a logic progression and not a chaotic waste of public resources;

e) Follow-up, monitoring and evaluation: the above mentioned indicators should allow to check the implementation and achievements, for eventual modification of the previous plan;

f) Role of public institutions, of Civil Society Organizations and of private profit oriented firms.

Such comprehensive analysis and plan should be elaborated in a participatory way, trough the involvement, via consultations, workshops, debates, etc., of all likely possible stakeholders, which will be then also responsible for action (Santucci & Antonelli, 2004). This procedure requires commitment, dedication and time.

A comprehensive policy should include several areas of intervention (Rundgren, 2008), each one articulated in several actions to be implemented over time and in the different parts of the country. The most important areas and actions can be briefly resumed as follows:

**National legislation:** Such legislation, which is now under elaboration in Syria, must consider what is happening worldwide and should be respectful of the international standards, to facilitate the export of domestic products. The legislation should also guarantee a fair level ground to Civil Society Organizations and private operators, in the fields of production, processing, trade, and even in the certification and service provision;

**Certification and accreditation** represent a major challenge not only for organic food systems, but also in conventional ones. In Syria, local producers still rely on foreign inspectors, who come to control the respect of the organic guidelines. This “organic colonialism” must finish, with locally based Certification Bodies (CBs). Another problem is represented by the need for properly equipped labs, where samples of products, plants, soils, etc. could be analysed. Add to this that both the CBs and labs need to be accredited by a superior agency, also internationally recognized. To overcome such challenges, a specific set of actions should consequently be planned, if needed, in order to support the establishment of domestic CBs. While waiting for national CBs to begin their operations, foreign CBs could be authorized, with locally employed experts, for the time being. The Government could also promote, through credit and grants, the establishment of private or public accredited labs, and the same could be done for the establishment of private or public accreditation bodies. Taking into account that the certification costs could be too heavy, especially for
the small farmers, the certification costs could be paid by
the Government, at least for the conversion period.

**Research and training:** OA is the fusion of the most ad-
vanced knowledge with whatsoever can be used of the tra-
ditional knowledge, which was too fast put aside to pursue
the simple reductionism approach proposed during the last
century. In Syria, almost all scientists belong to the “con-
ventional school” and for them it is difficult to conduct re-
search with a new approach. The same happens with the
farm advisors, who lack the knowledge about OA and the
attitudes for knowledge sharing with farmers. Consequent-
ly, within this area of intervention, several actions should be
activated. Such as: a) scientists and technicians should be
updated and trained, through courses at home and abroad;
b) applied research programs should be started as soon as
possible; designed with a holistic and participatory ap-
proach, involving the producers in the research design, im-
plementation and result evaluation, to merge traditional
know-how with modern knowledge; c) in the medium term,
OA should become part of the curriculum offered by agri-
cultural schools and universities; d) extension programs
should favour the exchange of knowledge between farmers
and advisors; e) farmer to farmer knowledge sharing should
be favoured, promoting farmers’ groups, rings and interest
groups; f) also the advisory programs should be designed
with a holistic approach, covering the various aspects of
the same farming system including the technical and economic
aspects, as well as valorisation and marketing.

**To increase the production,** several measures are pos-
sible: a) through modernization schemes, credit lines and/or
grants should be established, for producers, processors and
traders wishing to introduce OA and modernize their oper-
ations; b) a different option is to recognize to organic pro-
ducers, processors and traders priority access to all forms of
support; c) another option is to consider organic production
as an extra score for the access to any form of grant and
credit, as it is usually done for special categories, like
women or smallholders operating in less favoured areas; d)
area subsidies to producers, in some cases for the conver-
sion period only, or for a longer period.

**To expand the domestic demand,** there is a long list of
feasible actions, which could be implemented in coopera-
tion with several public institutions and the CSOs: a) a na-
tional logo could be established to make Syrian organic
products easily recognizable; b) awareness raising pro-
grams for medical doctors, nutritionists and the general
public, to inform about the links between health, nutrition,
environment and agriculture; c) training for some cate-
gories could be organized, to provide more information and
skills (food shop owners and/or employees, nutritionists at
canteens, etc.) because these categories have daily contacts
with consumers; d) public procurement could be favoured,
introducing locally produced organic ingredients into the
meals served by public institutions (kindergartens, schools,
hospitals, etc.); e) another action could favour direct mar-
teting, linking groups of producers with groups of interest-
ed consumers, through local markets and national fairs; f)
market transparency should be favoured: data about farms,
areas, productions, trade (import and export), prices should
be made available as soon as possible, setting up a market
information system accessible to all concerned parties; g) in
the medium term, a very important strategy could be to link
organic products with Geographical Indication (GI), still
missing in Syria, to have organic GI products. This double
certification gives the consumers a double guarantee: that
the product is organically grown and it comes from a very
specific area of the country, i.e. “The organic lambs from
the Al Badia desert”.

**To penetrate foreign markets,** at least a) promotion ac-
tivities could be supported and organized in selected for-
eign markets, also through the participation in international
fairs; b) in the medium term, the linkages between Fair
Trade and OA should be supported, as it already happens
in Palestine, for the organic olive oil.

7. Conclusions

Since several years ago Syria has started a process of e-
conomic reforms that is progressively changing its eco-
nomic landscape. Furthermore, the deteriorating ecological
conditions and the growing population pressure impose a
more sustainable approach to agriculture. Within this evo-
lution, OA could be a key factor for improving both do-
meric food security and the food trade balance.

The direct presence of Governmental institutions and S-
tate companies is decreasing and a more liberalized market
is developing. Thanks to its own forces and to international
cooperation, more ecologically friendly forms of agricul-
ture are taking place (integrated pest management, water
saving technologies, organic agriculture). On the macro-e-
conomic side, the conditions of the public budget impose a
better use of public resources and this will lead to a more
careful spending for subsidizing inputs such as fuel and fer-
tilizers.

The FAO project “Institutional Development of Organic
Agriculture in Syria” has allowed moving the first steps in
the right direction, but more public involvement is needed.
Domestic and external markets already demand more or-
ganic products. Consequently, the engagement of Public In-
stitutions should be strengthened, while Civil Society Or-
ganizations and private firms should be further encouraged,
in the framework of an integrated holistic plan, as the one
previously described.

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