



# Prospects and challenges for developing countries in trade and production of organic food and fibers

Prospects and  
challenges

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## The case of Turkey

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**Abstract** Especially after the Second World War, both in developed and to some extent developing countries, agriculture became highly mechanized and specialized as well as heavily dependent on agro-chemicals. Such intensification of farming has produced higher yields and greater wealth but has also created some problems affecting the environment, food and farm-worker safety. Today, different farming systems are subject to discussion and research to discover an alternative to this current agriculture such as organic production, to create conditions for sustainable agriculture and development. Organic farming has been developed in most Western countries such as the USA, Canada, Japan and European Union. In Turkey, organic farming is relatively new, but the number of producers involved in organic production activity has been increasing rapidly since the mid 1980s mainly by the relationships of some multinational companies in order to export organic products to the developed nations especially to the EU. Developing countries like Turkey have some advantages and also challenges for organic food and fiber production. First of all low-input traditional systems are still a major part of those countries' agriculture. Contrary to the developed countries, organic agriculture practices can help the farmers to increase productivity and to protect natural resources through using proper technological systems and also easy access to market and information. As in Turkey, most developing countries have small domestic organic markets and have begun to seize the export opportunities presented by organic farming. The main challenges they face are not having proper production practices, certification organizations and being tied only to foreign markets. It is a fact that development of organic production in these countries requires farmers to act in an organized manner instead of depending on a certification, export or import companies or a governmental body. The role of the government, of course, is also important to establish a legislative base and to support organic farming by convenient policy measures.

### Introduction

It is not necessary to explain the meaning of organic farming in a forum populated by an informed audience. To make clear the forthcoming discussions it might be helpful only to underline that organic agriculture refers to the production system, not a product itself. But when the concern is marketing or markets, the product also must be considered.

Organic farming is becoming of growing importance in the agriculture sectors of many countries, irrespective of their stage of development, although still a fairly small industry. Organic farming has been developed in most



Western countries such as the USA, Canada, Japan and European Union, because of the awareness of the whole society about the hazardous effects of highly industrialized conventional agriculture on the health of human beings and nature. In the 1980s the demand for organic products rose considerably among ordinary consumers. Some governments began to support organic farming. Especially in the EU, between 1980-1990 a breakthrough for organic agriculture was reached in a large part of Europe due to subsidization efforts.

There is a remarkable gap in these countries between supply of and demand for organic food and fibers not only because of the insufficient supply but also dependence on the importation of some agricultural products, which are not produced domestically. The rapidly growing demand in many markets cannot be met by local supply, at least in the short to medium term. Hence the availability of the tap market opportunities in the developed nations has created organic farming movement in the developing countries.

Because of the organic agriculture intention to supply a product which is grown in a production system based on the primary goal to optimize health and productivity of soil, plants, animal, and people, there is a set of strict rules and complicated practices that allow marketing of certified food and fiber products. Marketing of organic products has to be organized in a tight manner through vertical coordination among farmers, processors, specialized retailers and consumers. Organic farming practices are well defined, in fact organic farming practices are unique in that a complete set of certification procedure govern organic farming, from the soil to the consumer table (Rigby and Caceres, 2001).

This holistic and more strictly governed structure of organic farming has created some opportunities for so-called developing and less developed countries, not only giving them expanded export markets, but also providing a sound way to sustainable agriculture and development in their ways of industrialization. Developing and less developed countries have some remarkable advantages and also some challenges to face in being an important part of the worldwide organic agriculture sector.

In this paper, first of all worldwide supply and demand situations of the organic agricultural products are presented focusing on the supply of the developing countries. Secondly, the prospects and challenges for developing countries related to organic production and marketing are reviewed. Finally, the case of Turkey is investigated, and prospects and challenges for Turkey are evaluated by a simplified SWOT analysis.

### **An overview of organic agriculture in the world**

In developed countries, farmers and consumers' demand for environmental and health quality created the organic agriculture movement. Demand for organic foods in the USA, Europe and elsewhere is growing rapidly yet market shares remain quite small (Thompson, 1998). The important factors that affect consumer demand for organic products include awareness and knowledge of organic commodities, motivation, willingness to pay (Zygmunt, 2000). In the USA, private and state schemes for certified organic food reached a point that authorities were

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requested to establish federal rules and control systems to guarantee consumers' confidence in organic products (Klonsky and Tourte, 1998). In the European Union (EU) the demand for sustainable agriculture, and organic agriculture in particular, represented a perfect match to governments' priorities to reduce surplus food. In fact, EU organic agriculture policy reconciles agricultural and environmental policies as it represents a viable option for extensification and an alternative to land set-aside (Sylvander and Wadel, 2000).

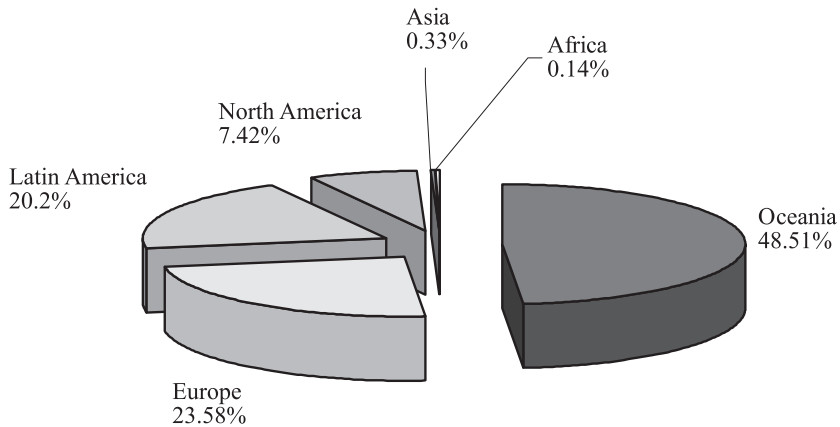
In 1999, international guidelines for production, processing, labeling and marketing of organically produced food were approved by the joint FAO/WHO Codex Alimentarius Commission (Codex), and organic livestock guidelines are being developed. Currently 160 countries hold membership in Codex (Zygmunt, 2000).

In developing countries, policies for organic agriculture seek to earn foreign exchange, through exports for other development needs. In fact, declining government budgets have forced many developing nations to restructure their agriculture sector. Liberalization and privatization policies open the way for a greater role for entrepreneurs and producers' organizations. These trends are an impulse for private initiatives for organic agriculture.

While the environmental and economic benefits are generally perceived in both developed and developing countries, there are reservations as regards the ability of organic agriculture to respond to other social needs, namely to secure food needs. The review of the Commission on Sustainable Development (CSD) of the agricultural sector (March 2000) indicated that there could be limitations and risks in the organic production of food in developing countries, and expressed that organic farming should not be considered as a solution for developing country needs. The main idea behind these views is the availability of a number of organic agricultural techniques that could be applied to enhance traditional and other agricultural practices to promote sustainable agriculture and rural development.

The currently small share of organic products in the food and beverage trade in all these markets indicates a large long-term potential. Expectations of growth are underpinned not only by strong and increasing consumer awareness of health and environmental issues, but also by the more goal-oriented and aggressive marketing and promotion being undertaken by the major retail groups. Product development and innovations in packaging by food processors and manufacturers, as well as supportive government policy in many countries, will also push up world demand.

According to the SÖL survey (February 2001) about 15.8 million hectares are managed organically worldwide. Presently the major part of this area is located in Australia (7.6 million hectares), Argentina (5.5 million hectares), Italy (about 1 million hectares). When we consider the breakdown of the total acreage among the continents, Australia has the highest share with about 50 percent followed by Europe and Latin America with shares of 23.6 percent and 20 percent respectively (Figure 1).



**Figure 1.**  
Percentage share of each  
continent of total area  
under organic  
management

**Source:** Organic Agriculture Worldwide, Statistics and Future Prospects (2001)

In the EU, EFTA countries as well as Bosnia-Herzegovina, Croatia and Yugoslavia have more than 3.7 million hectares under organic farming which corresponds to almost 23.4 percent of the total area (Willer and Yussefi, 2001).

In North America, more than 1 million hectares are managed organically and growth rates are very impressive.

In most Asian countries the area under organic agriculture is still very low. While the total area is assumed to be 50,000 hectares, despite the fact that reliable data are not available, no country has reached 1 percent yet.

In many Latin American countries the organic land area has reached about 0.5 percent of the total agricultural land and growth rates are remarkable. For example in Argentina the organic land has boomed between 1992-2000 from 550 hectares to 5.5 million hectares, i.e. it increased 550 fold in a period of less than ten years.

In Africa, reliable data are not yet available but there is a considerable growth. It is estimated that the total continent has 0.14 percent of the total world organic area.

Detailed figures on the international market for organic products are presented in Table I, which was adopted from one of the ITC studies. According to this study organic food trade has been becoming a major activity on the global food market. Growth rate in the trade of organic foods is also very high which is rarely observed in food markets. The major markets in the world are in the USA, Europe and Japan. In some developing countries local markets for organic products are evolving too, but not so fast. It should be noted that interest in promoting organic agriculture in developing as well as developed countries is rising (Olesen, 1998).

The statistical data show that organic farming is practiced in many countries of the world, and the area under farming is continually growing. Worldwide, at least about 130 countries produce organic food and beverages in

Market	Retail sales (million US\$)	Percentage of total food Sales-ca.	Expected growth – medium term (%)	Forecast for 2000	Forecast %
Germany	1,800	1.2	10-15	2,500	1.75
France	720	0.5	20-25	1,250	1.00
UK	450	0.4	25-35	900	1.00
Switzerland	350	2.0	20-30	700	4.00
The Netherlands	350	1.0	15-20	600	1.75
Denmark	300	2.5	30-40	600	4.50
Sweden	110	0.6	30-40	400	2.00
Subtotal	4,080	–	–	6,950	–
Italy	750	0.6	20	1,100	1.00
Austria	225	2.0	10-15	400	3.50
Other Europe <sup>a</sup>	200	–	–	500	–
USA	4,200	1.25	15-20	8,000	–
Japan	1,000	–	–	2,500	–
Total ca.	10,500	–	–	20,000	–

**Notes:** <sup>a</sup> Belgium, Finland, Greece, Ireland, Portugal, Spain, Norway

**Source:** Compiled by ITC, February 2000

**Table I.**  
Overview world  
markets for organic  
food and beverages  
(1997-2000)

commercial quantities, including 30 developing countries in Africa; 30 countries, including 12 developing countries, in Asia; about 30 developing countries in Latin America and the Caribbean; five countries (including one developing country) in Australia and the Pacific; about 20 countries in Europe and seven transition economies; and finally the USA and Canada. These figures include at least 90 developing countries of which about 15 are less developed countries (Olesen, 2000). The main organically produced product groups which are traded internationally are: fresh fruit and vegetables, dried fruits and nuts, processed fruit and vegetables, coffee, tea and cocoa, spices and herbs, oil crops and derived products, sweeteners, grains, dried leguminous vegetables, meat, dairy products, eggs, alcoholic beverages, processed food/food preparations.

In addition, some non-food products, e.g. feeding stuff, seed grains and cotton, should also be mentioned. Developing countries are very important exporters of many of these product groups, e.g. fresh fruit and vegetables, spices and herbs, coffee, tea and cocoa. On the other hand, they are insignificant suppliers of meat and dairy products, alcoholic beverages and food preparations, though there are some notable exceptions.

The continuous growth in the organic sector is more remarkable since overall food sales are experiencing either slow growth or stagnation. It is a fact that the market for organic food and beverages is growing rapidly in most countries in Western Europe, North America, Japan and Australia, with retail sales of organic food and beverages reaching an estimated \$20 billion in 2000 (Table I). Trade in organic foodstuff has become an important global agribusiness. Preliminary estimates for 1998 indicate retail sales in these

markets about \$13.5 billion. The organic trade is of particular interest in a development context because of the spectacular growth that has taken place in recent years, with growth rates of between 5 percent and 40 percent expected over the medium term, depending on the market in question (ITC, 1999).

If the per capita consumption is considered, Denmark has the largest per capita spending, about US\$113.59. Switzerland follows it with US\$95.32. In the period of 1997-2000, the largest growth rates of the per capita spending are in Sweden and New Zealand with 202 percent and 389 percent respectively.

A 1988 study found that 25 percent of respondents living in Canada's eight main urban centers would be willing to buy primarily organic vegetables if they were no more than 25 percent more expensive than conventional produce. A total of 53 percent of respondents making at least occasional purchases said that they would be willing to pay 25 percent more and 15 percent would be willing to pay 50 percent more. One of the interesting findings of the study was that the most common differentiating sociological characteristic of purchasers was their family status (young families with small children), not their income group (Hill and MacRae, 1992).

According to the ITC study, it is estimated that annual sales growth rate will range between 5 and 50 percent in the medium term. It seems clear that at least in the short and medium term, an insufficient supply of organic products will be the main problem rather than lack of demand. Though domestic production is growing rapidly in many Western markets, demand appears to be expanding even faster. This opens up opportunities for exporters in developing countries, not only for those already in the business but also for others who would like to start production.

In developing countries, policies for organic agriculture seek to earn foreign exchange through export. Under conditions of excess demand for organic products, there should be good market opportunities for production in both developed and developing countries (Scialabba, 2000a). For example the Dominican Republic and Mexico have become the world's leading exporters of fresh organic bananas, accounting for some 75 percent of the world supply. Argentina has become a significant exporter of organic products gaining access to the list of Third Countries that can market their products in the EU without additional inspection (Haen, 1999).

Although the overall picture looks highly positive, a number of potential risk factors should be borne in mind when evaluating future developments in the organic food business. For example, occasional oversupply of a given product may not only have immediate but also more long-term negative effects. Furthermore, other forms of environmentally friendly and sustainable agriculture are likely to result in increased competition in the future. Reduced price premiums for organic produce and insufficient profitability among farmers and other operators are also important factors which must be considered.

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## Prospects and challenges for developing countries

Expansion of organic farming and marketing is also taking place in developing countries though at a slower rate. Developing countries (DCs) have some advantages for developing organic production but also some disadvantages. DCs are actually less homogeneous than most industrialized countries. Therefore it is very difficult to make general statements on what systems of guarantees they will need (Rundgren, 1999). Prospects and challenges for these countries in the development of organic agriculture could be analyzed from different points of view related to production and marketing activities such as production, registration-certification, marketing, and related organizations and policies.

### *Production management*

- Many developing countries have potential comparative advantage in meeting demand for many organic products in major markets. First of all due to the climatic constraints, some products cannot be grown profitably in mostly industrialized countries. Second, in a number of developing countries, to convert a traditional production system, which is using less agro-chemicals and maintains soil fertility in a rather suitable way, to the organic system may be easier than in the countries that have more intensive input and use specialized production systems.
- While the merits of organic agriculture are widely proclaimed, it is always questioned whether such systems practiced by small-holders can yield enough to feed the world's increasing billions. Farmers will probably experience some loss in yields when converting their operations to organic production. There is a period of time between the lowering of synthetic inputs and sufficient biological activity being restored to the land (Reijntjes, 1994). The degree of yield loss varies, however, and depends on factors such as the inherent biological attributes of the farm, farmer expertise, and the extent to which synthetic inputs were used under the previous management system. In most developing countries, organic production practices demonstrate the potential to double or triple average yields because of the very low initial yields on the same lands (Scialabba, 2000b).
- Most studies find that organic agriculture requires significantly greater labor input than conventional farms. This is especially true in areas of low ecological potential, but also several studies have shown that labor requirements vary depending on the type of crop grown. The study by Berardi (1976 in Knoblauch *et al.*, 1990) on organic and conventional wheat production in New York and Pennsylvania found that organic farmers' labor input averaged 21 hours per hectare compared to nine hours per hectare for the conventional farmers. In terms of labor productivity, the average for conventional farmers was significantly greater, 13 bushels per hour of labor, compared to six bushels per hour

of labor for organic farmers (Knoblauch *et al.*, 1990). According to some other studies, in corn and wheat production, organic techniques were found to have 22 to 55 percent lower labor productivity than conventional practices (Knoblauch *et al.*, 1990). According to the study of Pfeffer (1992 cited in Comte, 1994), most of the New Jersey farmers surveyed think that it is difficult to reduce chemical inputs because additional labor is hard to find, and their own labor inputs would have to increase. Labor supply is less elastic for farmers who hire no labor (Comte, 1994). It is a fact that developing countries have some advantages related to higher labor requirements of organic practices because of the availability of unused and unpaid family labor.

- Most developing countries suffer from a number of constraints, such as the lack of technical know-how (e.g. on production methods), lack of storage and processing facilities, poor logistics. Lack of information is an obstacle to organic conversion. For example one of the survey results shows that 63 percent of the sub-Saharan African farmers and 73 percent of the North American (US and Canada) organic farmers cite a lack of knowledge as the greatest barrier to adoption (FAO, 1999). There is a big challenge for the developing world related to adoption and dissemination of the organic practices.
- Required researches related to organic production methods and practices are so scarce and farmers themselves and even extension personnel rarely receive adequate training. Extension staff rarely receive adequate training in organic methods and studies have shown that they sometimes discourage farmers from converting. Furthermore institutional support in developing countries is scarce and not effective (FAO, 1999).

In the Western developed countries, in the last two decades a lot of research projects have been carried out with organic fertilizer, composting, crop rotation design, nitrogen fixation in arable crop rotations and weed regulation (Niggli, 1999). There is more research needed especially including the field of horticulture and animal husbandry and also integrated research projects focused on regional development, landscape and socio-economics aspects of organic farming. There should be an intensive exchange of information between researchers and advisors. In addition, a permanent feedback from the fields through advisers is crucial. As in the other fields of agriculture, research in organic farming must take place at least partly on the farm. Each research group should have a network of reference farms or several on-farm projects for gauging results or insights derived from isolated scientific works (Niggli, 1999). The results and the practical findings of the researches of the Western world must be conveyed to the developing countries.

- Land tenure is also critical to the adoption of organic agriculture. It is highly unlikely that tenant farmers would invest the necessary labor and sustain the difficult conversion period without some guarantee of



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access to the land in later years when the benefits of organic production are attainable (FAO, 1999). The existence of unsolved land tenure problems inhibits investment in soil fertility.

- Other main problems are poverty and very low purchasing power, dominance of smallholders with very low initial and working capital. Therefore, farmers in developing countries need some financial and technical supports to use production techniques to meet required standards and get the desired result from organic farming practices.

### *Marketing*

There is no doubt that the world markets for organic food and beverages will continue to offer developing countries profitable export opportunities. According to the ITC (1999) Organic Food Reports, there are sound market opportunities for developing countries in most major markets especially for the products that are not produced in Europe, North America or Japan. All of the major markets under review offer good prospects for suppliers of organic products that are not produced domestically: examples are coffee, tea, cocoa, spices, tropical fruits and vegetables and citrus fruits. Such opportunities exist not only for off-season produce (such as fruits and vegetables), but also for many other products like in-season fruits (e.g. apple and pears) and vegetables, cane sugar, grains, cereals, pulses and seeds, for the simple reason that the rapidly growing demand in most markets cannot be met by local supplies, at least in the short and medium term. On the other hand some multinational companies such as McDonalds, Danone, Lufthansa, Swiss Air, Nestlé and Novartis have already entered the organic market. This development in the organic market can be seen as an indicator that the organic sector may face even more than a boom (Geier, 2000).

Market demand for organic agriculture products has created incentives to change agricultural production policies towards a market oriented and a more sustainable directions. Organic agriculture offers a specialized market and an opportunity to diversify into new commodities that have a high demand and price premiums. It was argued that profitability of organic methods usually depends on price premiums. An analysis of the Organic Market News and Information Service (OMNIS) shows that between May 1989 and February 1990 the wholesale price for organic lettuce ranged from 28 to 256 percent. The price premium for the red cherry tomatoes ranged from 15 to 281 percent during the same period (Hall *et al.*, 2001).

Because of the export oriented market structure of organic produce, development of market capacity is mainly dependent on foreign import companies and their domestic branches or partners. To improve the access capacity, organic producers have to act together under their own organization such as cooperatives. In the developed countries, organic standards have been developed over a period of 25 years. The main force in this development has been the organic producers themselves. Lately governments also have become engaged in organic standards. Having high standards, on the contrary may create trade barriers for the developing countries to some extent.

Another problem is inadequate market information (for example on which products to grow, which markets and distribution channels to choose, the competition, market access) and insufficient financing. Reliable market information is almost always difficult to obtain. In particular no projections and systematically identified markets for the countries' exports have been available, in the developing world.

We have to mention fair trade practices in relation to organic farming. The fair trade movement started 25 years ago. The terms of trade developed very much in favor of developed countries at that time. The fair trade movement started to counter this development in establishing special criteria for sustainable trade with mainly smallholders, starting with products like coffee, tea and cocoa. The criteria are mainly created to protect small farmers, farmers cooperatives and the farm workers' community, providing a price premium, advance payment and putting trade relationships in long term-perspective (Cierpka, 1999). Among food items currently eligible for Fair Trade Labels are tea, bananas, cocoa, and chocolate. The fair trade certification is different from organic certification, although 65-85 percent of the Fair Trade imports also carry organic certification (Lohr, 2000).

### *Certification*

Organic agriculture has special needs for production, planning and management beyond the traditional farming because of the limitations imposed by the terms of organic registration and certification (Gaskell, 2000). However, farmers and marketing firms seeking to sell their products in developed countries must usually apply to and hire an organic certification agency for annual inspection and confirmation that they adhere to the standards established by various trading partners. The cost for this service can be expensive, especially since few developing countries have their own certification agencies.

As the worldwide import markets expand, some degree of harmonization with international organic principles is expected. A single standard or equivalency of the standards across the nations is difficult because of the diverse characteristics developed by organic farmers (Krissoff, 1998).

International certification organizations from the USA and Europe have been working as the accreditation body in Latin America, Asia and Africa. With some exceptions there are very few local certification bodies established in developing countries. It is a big task to establish local certification bodies as long as they are aiming at export. Furthermore, international nonprofit organizations such as FAO and ITC are devoting resources to assess and announce opportunities for developing countries to supply organic products to the major consumer markets (Zygmunt, 2000).

The inspection itself can be very cumbersome. In most Western countries there is an idea that all fields should be inspected by the external certification bodies. If we consider the availability of a number of the parcels and the fact that they are so scattered, in such cases inspection of all fields increases the

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costs greatly. Therefore internal control by a local organization, evaluation of the internal control system, and random inspection by external certification could be advised (Rundgren, 1999).

Furthermore the standards and certification systems for organic agriculture have been developed without sufficient participation from developing countries, and do not reflect particular needs or circumstances of these countries i.e. their traditions, cultures and existing infrastructure.

Having their own certification and accreditation bodies besides the foreign companies could be advised for developing countries. In some cases, this can be done with the assistance of an existing certification program, and the responsibility might be gradually taken over by local organizations (Rundgren, 2000).

### *Organization and policies*

Availability of related organization and proper supporting policies are very important to develop organic agricultural movement. The growth and spread of organic agriculture throughout developing and in-transition countries is rather new, largely occurring in the last two decades. One of the largest international organic certification programs, the Organic Crop Improvement Association (OCIA), certified only 120 farms in 1986 in the USA. OCIA inspected 35,000 farms in 17 countries with a total acreage of 1 million ha., including growers in Central and South America and Asia (Crucefix, 1998). Many other certification companies and organization have provided international services. When a critical mass of practitioners is formed for organic agriculture, governments formulate policies to support the marketing of certified organic products. The incentive of such policies is therefore economic, either for tapping lucrative markets, securing a place in world trade and/or counterbalancing withdrawal of government support to agricultural inputs and other services.

It can be said that only a few countries have been out of development of organic agriculture. IFOAM has currently more than 700 member organizations in over 100 different countries, 50 percent of which are based in developing and transition countries. Most of the developing countries do not have their own certification organizations, and also professional institutions established to assist farmers throughout production, handling, processing and marketing.

Although organic agriculture policies are generally lacking in developing countries, as organic farming is developing, related policies of organic agriculture within the scope of wider agrarian policies have been considered recently. The main incentives of such policies are economic such as reaching foreign markets and having a considerable share in the world trade and also counterbalancing declining government support to inputs and other policy measures. While organic farming had been promoted and used in a number of countries, some countries are hesitant considering that there could be some risks and limitations. Agricultural policies should revise their food supply

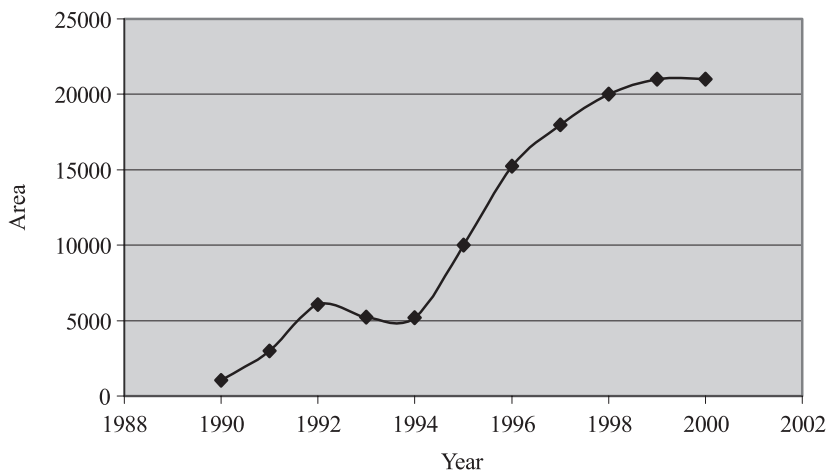
strategies to promote local production. Organic agriculture does not need costly investments in irrigation, energy and external inputs but rather substantial investments in capacity-building through research and training. Emerging organic agricultural policies may have the potential to improve local food security, especially in marginal areas.

### Organic farming in Turkey

Organic farming in Turkey was initiated in 1986, intending to only export through the demand of the import firms. Therefore almost all certified organic production is destined to export markets, about 20 countries. Most of the Turkish organic produce has been exported. The amount of imports limited and oriented products such as organic rice flour and organic vegetable oil, which are used as ingredients in organic processing. EU countries (Germany, The Netherlands, France, Switzerland, and the UK) and the USA are the major export markets. Raisins, dried figs and dried apricots were the first group of organic products grown in Turkey. The detailed data are not available yet, but about 71 items are produced as organic products. For instance Turkey is one of the leading countries in the organic cotton production.

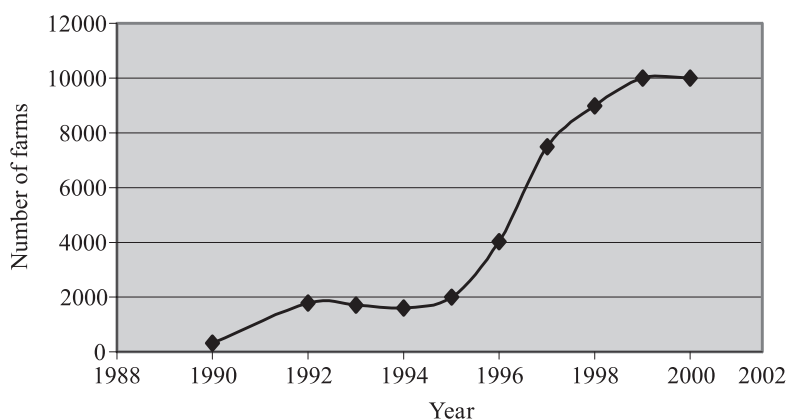
According to a PAN[1] research, leading countries in cotton production include Turkey (41 percent), the USA (34 percent), Africa (13 percent; mostly Uganda, followed by Tanzania, Senegal and Egypt), India (8 percent) and Latin America (4 percent; mostly Peru) (*Organic News*, 2001).

A total of 90 percent of products are dried fruits; the remaining 10 per cent includes nuts, textiles, medicinal plants and herbs. The estimated area under organic agriculture is presented in Figure 2. While about 1,037 hectares was devoted to organic agriculture in 1990, that area reached about 21,000 hectares in 2000 with a steady increase. The number of farms also increased in the period 1990-2000 from 313 to 10,000 (Figure 3).



**Figure 2.**  
Certified organic and  
in-conversion land area  
in Turkey (ha)

Source: <http://www.organic.aber.uk>



Source: <http://www.organic.aber.uk>

**Figure 3.**  
Number of certified and  
policy-supported  
organic and  
in-conversion farms in  
Turkey

The main drive to this development was the Turkish Association of Organic Agriculture Movement (ETO); a NGO that today has an advisory role to the Ministry of Agriculture and Rural Affairs and related state offices. The Turkish Government had to adopt the EU definition of organic agriculture and issued its own legislation as an opportunity to increase agricultural exports. This regulation, named “Regulation concerning the production vegetal and livestock products by organic methods” was prepared in compliance with the EU regulation no: 2092/91. It was amended in 1995 to include some sanction measures. Afterwards an institutional structure was established under the supervision of Ministry of Agriculture and Rural Affairs (MARF) and MARF became the authorized agency for organic farming. After this regulation was put in force “The National Steering Committee of Organic Agriculture” and the Committee for Ecological Agriculture were organized by the MARF. In order to export organic products to the EU, it is necessary to gain a place in the list of firms, which are allowed to export. Therefore a technical report was submitted to the EU through Ministry of Foreign Affairs. An urgent need has been reported by the MARF to have a special law related to organic and ecological agriculture.

#### *Management of organic production and certification*

Export firms make contacts with the farmers who would like to be involved in organic farming, depending on the import firm’s demands. These potential growers have been introduced to the accreditation organizations, which work for the import firms. The candidate farmers are interviewed and their farms and farming conditions are investigated by field survey, and the farmers who meet the requirements of the accreditation company make a contract. The organic farming is carried out under the supervision of the export firm.

The produce grown in the appropriate manner meeting the requirements of the accreditation firm is considered as “transition product” for two years in

succession and as “organic” in the third year. Certification companies both national or foreign have to be registered and get permission from the MARF. Today, there are seven active organizations in Turkey to conduct certifying activities. Six of them are foreign companies which have a Turkish partner. Only one Turkish company has been conducting certifying activities since 1996 (Gündüz, 1999).

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### SWOT analysis

For a company, a country or a sector a good performance is the result of correct interaction of management with its internal and external environment. The recognition of internal strengths and weaknesses, as well as external opportunities and threats can be simply analyzed by a SWOT analysis (Houben *et al.*, 1999; Collett, 1999).

Decision making using SWOT analysis involves building on strengths, minimizing weaknesses, seizing opportunities, counteracting threats (Balamuralikrishna and Dugger, 2001). A simplified SWOT analysis is used here to evaluate the organic farming sector of Turkey:

(1) *Strengths*

- availability of unpaid family labor;
- low level of external-inputs use;
- favorable natural conditions to grow a number of varieties of products;
- low yield levels;
- diversified farming structure.

(2) *Weaknesses*

- lack of education level to capture opportunities of innovations;
- lack of knowledge about organic management systems;
- having small-size farm and scattered plots;
- soil and environment degradation;
- low income level.

(3) *Opportunities*

- opportunity to access new lucrative foreign markets;
- close relationship with the EU;
- development in the demands of the domestic market;
- to have domestic accreditation organizations;
- being organized as farm commodity groups.

(4) *Threats*

- dependence mainly on foreign markets;
- weak government support and policies;

- non-existence of domestic accreditation bodies;
- lack of environment protection awareness;
- insufficient domestic R&D activities.

### *Internal strengths*

*Availability of unpaid family labors.* The population of Turkey was estimated at 64.4 million for the year 2000. About 34 percent of the total population are living in sub-districts and villages (rural areas). The working population was about 22.3 million by 2000, of which around 47.1 percent was estimated to be engaged in agriculture. It can be easily realized from these figures that over and under employment are the main problems of Turkish agriculture. But this structure can be considered as an advantage for organic agriculture, which requires a higher labor force than conventional systems.

*Low level of external-inputs use.* Use of external inputs such as fertilizers, pesticides and growth regulators, genetically modified organisms are rather low when we compare with the developed countries. According to 1995-97 figures, average fertilizer use was 58 kg/ hectares in Turkey while it was 821, 343, 250, and 151kg/hectares in The Netherlands, Germany, the UK, and USA respectively. This consumption of 58kg/hectares is even smaller than the average consumption figure of the developing countries, 96kg/ha. The same tendency can be observed for pesticide use with a 1,145kg/hectares use level which is also lower than the some of the developed countries such as The Netherlands: 11,842kg, USA: 1,599kg, UK: 4,745 and Germany: 1,996kg (www.wri.org (FAO and UN and World Bank)).

*Favorable natural conditions to grow a number of varieties of products.* A survey of Turkey's geographical structure shows that she has varied and great agricultural potential with her climate condition and land and water resources. It can be said that Turkey is one of the most gifted countries favorable for agriculture. It is possible to produce a great variety of field crops, vegetables and fruits in Turkey except some tropical crops such as coffee.

*Low yield levels.* The yield levels both in crop and animal production are rather low when we compare with the countries which have highly industrialized agricultural structure. For example, wheat yield per/hectares was 2,081kg in Turkey, while it was 2,872kg in the USA, 2,591 in Canada and 4,959kg in the EU. In animal production the same picture was seen. For instance, in 1999, milk yield per cow reached 8,043, 6,830 and 4,986kg in the USA, Canada and EU respectively, but it is still very low in Turkey, 1,579kg, as average (FAO, 2001). The main reasons are the low level of production practices, non-optimal farm sizes, and insufficient external-input use compared with the intensified Western agriculture. This structure may be helpful for transition to organic agriculture, which requires non-use of chemicals and genetically modified organisms without any yield lost.

*Diversified farming structure.* Farms in Turkey have still been considered less specialized and industrialized. According to the 1991 Agricultural Census,

86 percent of the existing farms can be characterized as mixed farms which practice both animal and crop production, while only 11.5 percent specialized in crop production and 2.5 percent in animal husbandry (Rehber, 1993). If it is supported with proper measures, this diversified structure will help having more organic farms.

*Internal weaknesses*

*Lack of education level to capture opportunities for innovations.* The literacy level is still very low in rural areas of Turkey. Inefficient extension services provided by the government promulgated this illiteracy problem.

*Lack of knowledge about organic management systems.* Most of the farmers who have opportunity to access organic farming have no idea about organic farming practices. Even farmers who have been involved in organic farming lack information especially about market opportunities.

*Having small-size farm and scattered plots.* The farm size is very small and farms have a fragmented structure. There were about 4 million farms in Turkey in 1991, and 66.9 percent of farm households were cultivating an area smaller than 5 ha. Over 95 percent of all farm households and over 60 percent of total land fell into the 0-20 ha group. In Turkey the average farm size was about 6.24 ha. On the other hand, even small farms do not have unity, but have been divided. The share of the farms which have more than three parcels was about 65 percent, and about 20 percent of total farms has more than ten parcels (Rehber, 1996).

*Soil and environment degradation.* Erosion is one of the most severe rural environmental problems affecting 81 percent of the total land surface in varying levels. About 73 percent of cultivated land and 68 percent of prime agricultural land are prone to erosion. Stream bank erosion affects 57.1 million ha, while wind erosion degrades another 466,000 ha. As a result, about one billion tons of soil are carried away each year (SPO, 1998). Use of fertilizers pollutes the soil (a practice accelerated by fertilizer subsidies accompanied by the use of improper techniques) as industrial emissions have done. Improper pesticides use pollutes the soil and water, and these accumulate in the food chain. Intensified irrigation may lead to salination and also improper irrigation practices and lack of drainage cause salination and lower productivity (Rehber and Vural, 1994) This structure could be evaluated as a handicap for immediate access to organic practices.

*Low level income.* While about 34 percent of the total population live in rural areas in Turkey, the share of agriculture in the total GNP was rather low at 14 percent. According to 1998 data, per capita GNP was about US\$3,387 as an average. The figure for the agricultural sector is lower than half of the national average at US\$1,429 (ICC, 2001). Low income level in this sector, indeed, is hindering people from taking risks, i.e. to access a new farming management system such as organic production.



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*External opportunities and threats*

*Opportunities.* Turkey could not use all its export potential; the more and diversified organic products are grown the larger share could be attained through access to new lucrative foreign markets. As a candidate member of the EU, a close relationship with the EU will create the opportunity to have the same standards and regulations, and make joint venture with European companies.

The domestic markets for organic produce is so limited in Turkey. Increasing consumer awareness about food safety and health issues along with the growth in per capita income will cause a reasonable development in the domestic market demands.

All of the accreditation companies in Turkey are foreign companies. To have domestic accreditation organizations might provide rather easy registration and certification with lower costs. Development of a general awareness, to protect farmers' interest could be provided through being organized under regional and national level organizations owned and controlled by farmers.

*Threats.* Turkish organic production was originally destined for the export market. Dependence mainly on foreign markets makes organic sectors more risky with strict regulations.

Government support is generally lower than in industrialized countries in Turkey. It is a fact that present government support and policies are also rather inefficient. For example, while the total amount of subsidy per farm was US\$7,500 in the USA and US\$5,800 in the EU, it is only US\$725 in Turkey. On the other hand, in the developed countries there is considerable financial support for organic farming, but there is not a special measure directed to organic movement in Turkey. Non-existence of NGOs which aimed to develop the organic movement, or domestic accreditation bodies, are the other important handicaps in Turkey. There is only one organization working at the regional level.

Domestic research and development efforts are so limited in the academic field even in the field of transferring related information from abroad.

Environment protection, awareness and general attitudes toward organic movement have not yet reached a desired level, not only because the low level of education, and lack of dissemination of related information about merits of the organic produce, but also low income level.

## **Conclusion**

Converting a traditional agriculture to organic farming is a complex operation involving high risk and serious problems, both technical and economic. It was discussed that organic farming is more costly than conventional farming, mainly because labor input is higher and yields are lower. Inevitably, organic farming needs more internal inputs, more labor. Developing and less developed countries have some advantages in that they have rather low external input use and often an unused and under-used labor force.

This movement in those countries can make a considerable contribution to developing efforts with high export capacity, if they could be successful in coping with some important obstacles related to production know-how, organization and marketing. A gradualist approach is advised, lowering the amount of off-farms inputs; on the other hand a strict certification procedure is enforced. It reveals a dilemma in promoting organic farming. The only solution for the farmers is being able to receive a premium price for the organic products in a rather stable market structure. At the beginning this could be realized by support policies as in the EU. It is well known that in the Union, there are some national support schemes generally such as conversion grants or aids beside Union-wide structural instruments and regulations. Because of the lack of domestic market, this could be achieved only through vertical coordination between producers and marketing or processing firms through contract farming in Turkey.

In short, development of organic farming both in the less developed, developing countries and Turkey will be dependent on evolution in market structure and performance.

Sound adoption and dissemination efforts are needed to help existing non-organic farmers convert at least some of their production to organic methods, and to assist those who want to begin organic farming as well as the existing organic producers.

#### Note

1. The Pesticide Action Network (PAN) is an international coalition of over 600 organizations in more than 60 countries working to promote culturally sustainable and ecologically sound pest management in place of pesticides.

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