

ORGANIC FRUIT PRODUCTION IN TURKEY

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A B S T R A C T

Organic production in agriculture was started in Turkey in the mid 1980's, and since then gained popularity. Over the last decade it has grown dramatically in size and scope due to the progressive interest in Europe. The largest demand is for dried products and nuts followed by field crops, fresh and processed fruit, vegetables, berries, medicinal and aromatic plants, industrial crops, and other row/processed products. The main organic fruits are raisins (sultanas), figs, apricots and hazelnuts, potentially joined by frozen fruit and vegetables, and fruit juice concentrates, which constantly improve their quality. Most Turkish organic products are produced for export, mainly to the European countries. Germany is the major market followed by Switzerland, Netherlands, United Kingdom, USA, France and Italy. The domestic market has just been developed and now some organic products are available in super- and hypermarkets in Turkey. However, their price is still 30-40% higher as compared to conventional products. In total, 98 different organic crops are available for both domestic and foreign market. They can be classified into nine groups: dried fruits, edible nuts, spices and herbs, fresh/processed fruit and vegetables, pulses, cereals, industrial crops, oil seeds and other raw/processed products. Currently, 111 324 ha are organically managed by 15 795 producers, representing only 0.10% of all growers. Inspection and organic certification procedures are carried out by same independent organizations in Turkey registered the Ministry of Agriculture and Rural Affairs (MARA). There are six control and certification companies in Turkey. Although, organic production, product diversity and area of cultivation, are steadily expanding in this country, there are some challenges for organic agriculture. Nevertheless, there is a good prospect for further development of such production, considering its present rising trend, diversity of growing conditions and a close distance to the European countries.

Key words: organic agriculture, organic products, dried fruits, nuts

INTRODUCTION

Organic farming means holistic production systems which refer "earth friendly" methods of cultivation and food processing (De Castro et al., 2004).

It differs from other systems by the specific and precise standards, certification procedures and a specific labelling scheme. Organic farming respects the environment by friendly practices of weed, pest and disease control, which sustain the health of our the environment and our own. Therefore, pesticides, herbicides, chemical fertilizers, growth hormones and antibiotics are not used by organic farmers. They use a range of techniques that are friendly to the earth's natural ecosystems and reduce pollution.

Organic farming has experienced a dramatic expansion in all crops over the last decade. It was possible due to on increased awareness of food safety issues and a growing concern for the environment. In the world, this system is practiced in approx. 100 countries and the area under organic agriculture is continuously growing (Yussefi, 2004). According to the Soel-Survey (February 2004), such areas cover above 24 million hectares across the world, with the leading position of Australia (about 10 million ha), followed by Argentina (almost 3 million ha) and Italy (almost 1.2 million ha) (Yussefi, 2004). Oceania contributes to 42% of the world's organic area, followed by Latin America (24.2%) and Europe (23%). However, the highest representation of organic producers operates in Europe (37.2%) than in Latin America (30.9%) and Africa (15.1%). Turkey is becoming an increasingly important producer and exporter of organic products due to its diverse and favourable climate, natural conditions which allow a higher diversity of production, a relatively moderate use of agro-chemicals in most parts of the country as well as the use of traditional practices in agriculture (Gunduz and Koc, 2004). In this geographic region, Turkey has the largest organically grown area, followed by Tunisia and Morocco (Yussefi, 2004). However, this production represents only a small proportion of the total agricultural areas in Turkey. However, the number of organic growers, volume of production and the variety of products have substantially increased in recent years.

In this study, organic fruit production, product diversity, trade, regulations and constraints in Turkey were evaluated upon the secondary data.

REVIEW AND DISCUSSION

Turkey has a great potential for organic agriculture, because of its geographic and topographic structure, diverse climate and ecological conditions for various crops (except some tropical fruits). Furthermore, its extensive production systems have traditionally used small amounts of agrochemicals as compared to countries more advanced in development. However, the extent of organic production in Turkey is very low. On the other hand, the agricultural sector contributes to over 25% of the national economy, engaging 40% the total working population in this country (De Castro et al., 2004).

Commercial organic production began in Turkey in the mid 1980s with the demand for dried fruit and nuts from European companies. However, it has steadily grown since then, increasing the number of producers and products, and considerably expanding the area under organic crops. Development such production during 1996-2001 is presented in Table 1. The number of organic products increased over that period from 26 to 98, in the respective gain in the number of registered producers from 1,947 to 15,795. However, they still represent only 0.10% of all producers in Turkish agriculture (Fersino, 2003). According to MARA (2004), the total area under organic crops was 111,324 ha in 2001, but it constituted a relatively small proportion of the total agricultural area in Turkey, estimated as 0.14% by the Soel-Survey (Yussefi, 2004). The extent of organic production in Turkey was also progressively increasing and in 2001 it reached 280,328 tons (Tab. 1).

Table 1. Number of products and producers, area and volume of organic production in Turkey, 1996-2001

Year	No. of products	No. of producers	Area [ha]	Production [t]
1996	26	1,947	6,789	10,314
1997	53	7,414	15,906	47,612
1998	67	8,199	21,042	99,300
1999	92	12,275	46,523	168,306
2000	95	18,385	59,985	237,210
2001	98	15,795	111,324	280,328

(MARA, 2004)

At the beginning, the pioneer organic agriculture was mainly located in the Aegean region, but over the past decade it has expanded throughout the country. Organic crops mostly concentrate in the region of Aydin (1,946 producers), followed by Erzurum (1,644) and Izmir (1,432), and other areas such as Kastamonu (1,265), Manisa (986) and Kutahya (770) (Kayalar, 2004). The largest area under organic management is located in Izmir (28,425 ha) then in Kayseri (17,384 ha), and Nevsehir (15,668 ha). On the other hand, the highest volume of organic production comes from Balikesir (26.8%) followed by Sanliurfa (14.5%) and Manisa (7.7%) (Kayalar, 2004).

While in 1985 dried fruit was the leading product in Turkey's organic agriculture, today they belong to nine major groups such as dried fruit, edible nuts, spices and herbs, fresh/processed fruit and vegetables, pulses, cereals, industrial crops, oil seeds and other row/processed products (Gunduz and Koc, 2004; Schayes, 2001). The first were raisins (sultanas), figs, apricots and hazelnuts. At present, there is an evident expansion of other products such as frozen fruit and vegetables and fruit juice-concentrates (Schayes, 2001). As seen in Table 2, major organic crops in Turkey include: tomato, apple, wheat, cotton, apricot, grape, fig, olive, hazelnut, and lentil.

Table 2. Products, number of producers, area and volume of organic production in Turkey (1996-2001)

Products	No. of producers	Area [ha]	Production	
			ton	%
Tomato	182	2,118	90,472	32,3
Apple	5,187	8,629	45,040	16,1
Wheat	366	9,856	31,139	11,1
Cotton	307	5,553	16,512	5,9
Apricot	359	15,009	13,634	4,9
Grape	1,144	2,656	12,894	4,6
Fig	1,259	4,651	8,294	3,0
Olive	299	1,184	7,343	2,6
Nut	1,324	4,129	6,965	2,5
Lentil	92	3,007	5,863	2,1
Others	5,276	54,533	42,162	15,0
Total	15,795	111,325	280,318	100,0

(MARA, 2004)

Organic products in Turkey are mainly destined for export and are well known by foreign importers from more than 20 countries (Schayes, 2001; Aksoy, 2002; Gunduz and Koc, 2004). among them are mainly the European Union countries such as Germany, Switzerland, Netherlands, United Kingdom, USA, France and Italy, along with the USA. Other developing markets for Turkish export are: Denmark, Belgium, Sweden, Norway, Spain, Canada, Japan, Australia, New Zealand and Saudi Arabia (Gunduz and Koc, 2004; Kayalar, 2004). Domestic consumption is very limited and estimated at about \$ 3 million a year (Schayes, 2001). This is mainly due to high price of organic products and the lack of marketing initiatives. However, Turkish consumers are aware of this issue (Sayin et al., 2002). Currently, the local market is just developing and over the past few years organic products have been appearing in major markets and at specialized retailers (Schayes, 2001).

Results of the market study conducted by a national organization (Aegean Exporter's Union, 2004) indicate that in 2003 Turkey's annual export of all organic products was worth almost \$ 37 million, with leading positions of raisins, dried figs and apricots, and hazelnuts (Tab. 3).

Organic product regulations are based on European Union's procedures (Gunduz and Koc, 2004), as this concerning the production, processing and marketing of organic items (EU regulation number 2092/92) (Schayes, 2001). According to these procedures, the supervision of organic cultivation in Turkey was given to the (MARA) Ministry of Agriculture and Rural Affairs (Gunduz and Koc, 2004). MARA is also responsible for the implementation of completed projects and for organizing various educational programmes.

Two committees appointed by this Ministry provide guidance and support to the organic sector. These are the National Steering Committee of Organic Agriculture, which is responsible for formulation policy, and the Committee of Organic Agriculture which has operational responsibilities (Schayes, 2001). An industry advisory body, the Ecological Agricultural Organization (ETO), is involved in the policy determination, along with advancing the technical improvements of the organic industry (Schayes, 2001). Members of this organization consist of producers, exporters, academics and consumers.

Table 3. Export data for major organic products (2003)

Products	Production [t]	Value [\$ 1000]
Raisins	5,677	7.056
Dried figs	2,026	5.166
Dried apricots	1,687	4.734
Frozen fruits	1,211	1.983
Pine nuts	70	1.212
Apple juice	2,527	3.055
Hazelnuts	1,246	4.508
Chick peas	1,667	829
Lentils	1,447	1.024
Cotton	865	1.376
Others	3,157	5.987
Total	21,083	36.930

Aegean Exporters' Union (2004)

Private organizations can certify products as organic, however, they must be registered by MARA, receiving a permit for such activities in Turkey (Schayes, 2001). There are the following 6 agencies approved by the regional authorities of this Ministry to issue official certificates for organic production: IMO, ECOCERT, ETKO, SKAL and BCS (based in Izmir) and EKOTAR (based in Mersin) (Gunduz and Koc, 2004; Kayalar, 2004). A producer must apply for the certification to one of these agencies (Schayes, 2001). Because of high expenses of certificates, some processors and exporters file an application on behalf of a number of individual producers operating within their project. The certifying companies evaluate the producer's compliance with the Turkish organic regulations and product samples are taken at least twice a year, along with random visits during the vegetation cycle (Schayes, 2001).

There are some constraints of organic production in Turkey. The main problem in agronomic aspects is a low soil fertility. There are different sources of organic matter in Turkey. Apart of suitable and practical methods of green manuring and composting which should be introduced to farming, also the mineralization of nitrogen and cycling of organic matter in the soil

are studied to be put into practice (Aksoy, 2002). Control of some pests and diseases is not sufficient because of many authorized products are not fully available, as they are mostly imported and registered by the inspection and certification agencies (Aksoy, 2002). There are only a few local companies producing organic nurseries for some fruit species. Furthermore, small scale farmers, higher prices and lower yields as compared to conventional production, plus no government subsidy, are other problems of organic agriculture in Turkey. In Conclusion, although there are some challenges for organic agriculture, Turkey is well placed to develop this system because of a huge growing diversity, close distance to other European countries and a highly developed transport.

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EKOLOGICZNA PRODUKCJA OWOCÓW W TURCJI

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S T R E S Z C Z E N I E

W Turcji ekologiczną produkcję podjęto w połowie lat 80. dwudziestego wieku i od tego czasu zyskała na popularności. Wyraźny jej wzrost i różnorodność nastąpił w ostatniej dekadzie dzięki coraz większemu zainteresowaniu w krajach europejskich. Największym popytem cieszą się suszone owoce i orzechy, a następnie płody z upraw polowych, świeże i przetworzone owoce, warzywa, owoce jagodowe, rośliny lecznicze i przyprawowe, uprawy przemysłowe oraz inne produkty świeże lub przetworzone. Najważniejszymi produktami ekologicznymi w Turcji są owoce, takie jak rodzynki (sultanki), figi i morele oraz w najbliższym czasie dojdą do nich mrożone owoce i warzywa oraz koncentraty soków owocowych, które stale poprawiają swoją jakość. Większość tureckich produktów ekologicznych przeznaczona jest na eksport, głównie do krajów europejskich. Największym rynkiem dla nich są Niemcy, a następnie Szwajcaria, Holandia, Wielka Brytania, USA, Francja i Włochy. Rynek krajowy obecnie się rozwija i niektóre produkty ekologiczne są już dostępne w tureckich super- i hipermarketach. Jednakże cena ich jest wciąż o 30-40% wyższa od produktów tradycyjnych.

Łącznie w Turcji prowadzi się 98 rodzajów upraw ekologicznych, przeznaczonych zarówno na rynek zagraniczny, jak i krajowy. Produkcję tę można podzielić na 9 następujących grup: suszone owoce, orzechy jadalne, przyprawy i zioła, świeże/przetworzone owoce lub warzywa, rośliny strączkowe, zboża, rośliny przemysłowe, nasiona olejowe oraz inne produkty świeże lub przetworzone. Obecnie w Turcji 111 324 ha przeznaczonych jest pod uprawy ekologiczne, prowadzone przez 15 795 producentów, którzy stanowią zaledwie 0,1% ogólnej ich liczby. Wydawanie certyfikatów dla produkcji ekologicznej oraz jej kontrola prowadzone są przez sześć niezależnych organizacji, zarejestrowanych przez Ministerstwo Rolnictwa. Chociaż następuje stały wzrost produkcji, jak również zwiększanie się asortymentów i powierzchni upraw w rolnictwie ekologicznym, pozostało tu jeszcze wiele zadań do spełnienia. Jednak Turcja posiada korzystne warunki do dalszego rozwoju tego sektora, uwzględniając jego obecny trend wzrostowy, zróżnicowanie warunków uprawy i bliskie położenie innych krajów europejskich.

Słowa kluczowe: ekologiczna produkcja, ekologiczne produkty, suche owoce, orzechy