# Organic farming in Greece trends and perspectives

**Bitsaki A., Vassiliou A., Kabourakis E.**

*in*

**Nikolaidis A. (ed.), Baourakis G. (ed.), Isikli E. (ed.), Yercan M. (ed.).**
**The market for organic products in the Mediterranean region**

**Chania : CIHEAM**
**Cahiers Options Méditerranéennes; n. 61**

**2003**
pages 53-65

# Organic farming in Greece
# Trends and Perspectives

**Argyro Bitsaki[1], Agapi Vassiliou[2] and Emmanuil Kabourakis[3]**

[1] Department of Horticultural Genetics and Biotechnology,
Mediterranean Agronomic Institute of Chania (MAICh), Chania, Greece
[2] Cretan Agri-environmental Group, Research and Development Unit, Moires, Greece
[3] Ecological Production Systems & Sustainable Rural Development Unit, Institute of Viticulture and Horticulture, National Agricultural Research Foundation, Heraklion, Greece

**Abstract:** This paper constitutes a critical evaluation of the current status of organic agriculture in Greece, and aims to identify key factors influencing the development of organic farming in the country. Organic agricultural production and the national market for organic produce are constantly increasing. In this dynamic situation, data concerning the organic agriculture five years ago have little predictive value, in the same way that a description of the current situation will be of limited value in the future.

Among the parameters examined were the following: National legislation, the Inspection and Certification Bodies operating in the country, those authorities competent for their accreditation, the number, area and regional distribution of organic farms, the main organic products, the number, type and location of processing units, the development of the national market for organic produce focusing on supply and demand, distribution channels and marketing strategies, common agronomic problems, research and training activities, and national policies governing organic agriculture.

## History

Two decades have passed since the first attempt was made to introduce organic agriculture in Greece in the early eighties. During this period the first organic growers appeared at scattered locations throughout Greece. The situation was very vague, and little real progress was made until the first commercial projects appeared in the late 1980s and EU regulations 2092/91 and 2078/92 were implemented at the beginning of the 1990s. These so-called "organic projects" constituted contract farming involving a company, (representing the market) and the contracted farmers (representing the production side). These contracts required the growers to comply with specified standards (certification body standards or EU Reg. 2092/91). The farmers delivered their produce to the company and received a premium price. To cover the needs of the market, initially the *Soil Association*, *Skal* and *Bioland* facilitated the inspection and certification of these projects, in the absence of national policies, regulations, and an approved national inspection body. The first organic farming project was initiated in response to a demand for organic currants by a Dutch firm (*Fertilia*) in 1982, while the second, a few years later, was for the production of organic olive oil for the German market (by *Blauel*).

In 1991 the implementation of EU Reg. 2092/91 provided the framework for Greek organic agriculture. It ended the chaotic situation in which different inspection and certification organisations applied different definitions and rules for the certification of organic products, at great expense to producers. The subsequent EU Regulation 2078/92, stimulated development through the payment of subsidies to establish and maintain organic farming systems. In spite of the fact that subsidy payments typically constitute only a very small part of the financial returns of an organic farm, they are a key contributory factor in the decision-making process of the producers, since they provide insurance against the risks of conversion (Vassiliou *et al*, 1999).

## Philosophy

Motivations for organic production include economic, food safety and environmental concerns. All organic farmers exclude, in accordance with the regulations, the use of synthetic chemicals, but philosophies regarding methods to achieve the ideal farming system, differ among organic farmers. There are different tendencies and practices in organic production systems that could be described as “extensive” and “intensive” organic systems. Organic farmers span the spectrum from those who completely avoid external inputs, create on-farm sources of compost for fertilization and encourage the activity of beneficial insects through conservation of food and nesting sites, to those farmers who import their fertility and pest management inputs. Although there are no official data, it seems that the latter type of farmers comprises the large majority of farmers. In addition, these same farmers are often linked with contracted farming projects. The philosophy of "input substitution" is discredited by many long-time advocates of organic agriculture. A truly sustainable method of organic farming would seek to eliminate as much as possible reliance on external inputs. Thus, the sustainability of organic farming in many cases may be questioned because of all the above, not to mention the lack in many cases of sustainable technologies and know how.

Together with the introduction of subsides for organic farming the subsidy-hunters appeared. They do not manage their farms at all since their only aim is to obtain the aid. Therefore they do not promise any continuation.

### Inspection and certification - Legalities

The Inspection and Certification system in Greece conforms with the EU legislation (EU-Regulation 2092/91 with all its amendments, EU-Regulation 2078/92 for the introduction of hectare subsidies, EU-Regulation 1804/99 for biological animal husbandry) as well as with International standards (Codex Alimentarious and IFOAM). The competent authority for the accreditation and control of all inspection and certification bodies is the Ministry of Agriculture (Office of Organic Products). This year, a new organisation, named AGROCERT, has been founded by the Ministry of Agriculture. Although it has a private entity status, it is supervised by the Ministry of Agriculture and is responsible for revising and improving the accreditation and control of the inspection and certification system in the country.

In Greece, during the first year of conversion, the farms are inspected (the operation pays the cost of inspection) but production is not certified as organic and cannot sell as such. During the second and third year of inspection, the products from perennial crops start to be certified as “product of farming in conversion to organic” while from the fourth year and onwards the produce is certified as “product of organic farming”. In a similar manner for annual crops the second year of inspection, the products start to be certified as “product of farming in conversion to organic” while from the third year and onwards the produce is certified as “product of organic farming”. Because of this extended conversion period, the supply of the organic market cannot react quickly in response to changes in demand so conversion period functions as a buffer system to the temporary preferences and tendencies of the market.

In Greece, there are three registered inspection and certification bodies, which operate in accordance with European Union regulations, namely DIO (the largest in terms of operations and area (2677 operations in 1999), operating all over the country), SOGE (operating all over the country) and Physiologiki (operating in Central and Northern Greece). The percentage of the organic land certified by each certification body is presented in Figure 1. The management of the inspection and certification is performed in Greece (the personnel is Greek) and is harmo-

nised with the European Union and International legislation and standards. Some of the organizations have already gained long experience and they are recognised abroad.

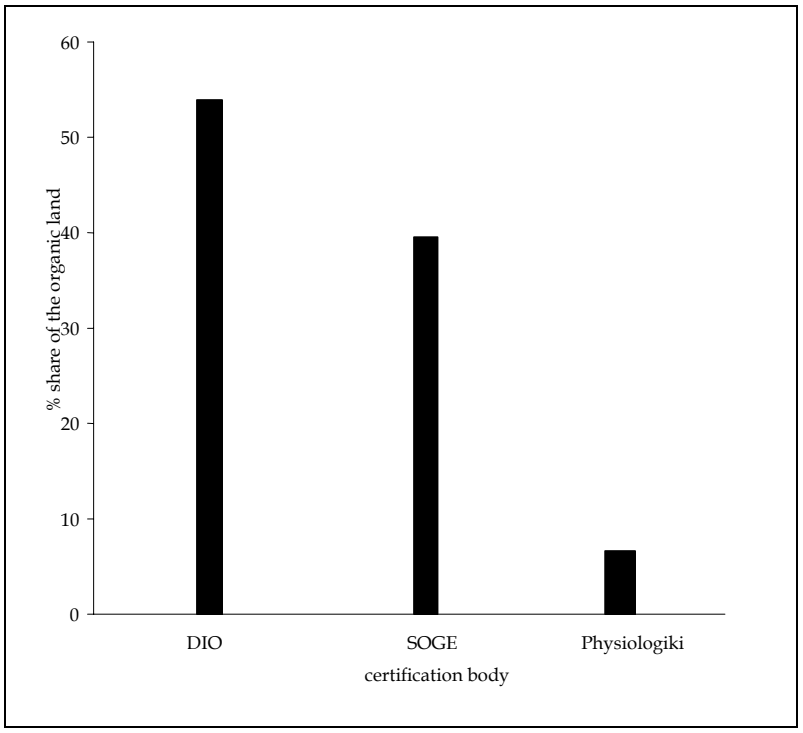


**Figure 1.** Distribution of organic farm land by certification body, in 1999

## Organic farming and its distribution

### Organic farming in the Mediterranean Region and Greece

In many non-EU Mediterranean countries, a lack of national regulation makes it difficult to distinguish organic farming projects from traditional, extensive and low-chemical input agriculture. In addition, there are often no official statistics concerning the development and current status of organic agriculture in these countries (number of farmers, area cultivated, etc). This is the case for Turkey, Tunisia, Morocco, Egypt, Lebanon, Cyprus, Malta, Albania and Algeria.

According to data we have obtained from NGOs and certification bodies through our participation in scientific networks for organic farming, and statistics collated by the German organisation SOL (Willer, 2001), we have drawn up figures (Figure 2 and 3) indicating the current situation of organic farming in the Mediterranean region (data were collected in 1999 or 2000). In terms of organically cultivated areas, Greece (21280 ha) was ranked 6th after Italy (959000 ha), Spain (352164 ha), France (316000 ha), Portugal (48000 ha) and Turkey (44500 ha). Other Mediterranean countries such as Tunisia (18000 ha), Morocco (12000 ha) and Egypt (5000 ha) are ranked lower, but it should be noted that in Morocco a large percentage of land described as being organically cultivated is actually natural Argan tree forests. Finally, in some countries such as the Lebanon (300 ha), Cyprus (52 ha) and Albania (50 ha) organic farming is in its infancy, while in Malta where there are only a few experimental trials in progress and in Algeria there are at present no organic farms.

In terms of percentage of total agricultural land that is organically cultivated, Greece (0.6%) ranks 4th after Italy (6.46%), Spain (1.37%), Portugal (1.26%) and France (1.12%). Tunisia (0.2%),

Morocco (0.17%), Egypt (0.15%), Turkey (0.12%), Lebanon (0.09%) and Cyprus (0.04%) all have lower percentage organic cultivation.

Besides, in the ex Yugoslavia countries, organic farming is at the beginning after the stabilization of the situation and the end of conflicts. Operations and national laws are underway (e.g. in Croatia where a national law for organic farming was voted in January).

The situation of organic farming in most Mediterranean countries is very dynamic. At present, most are in the process of drawing up national standards and regulations and besides conversion to organic farming by growers proceeds at a high rate.

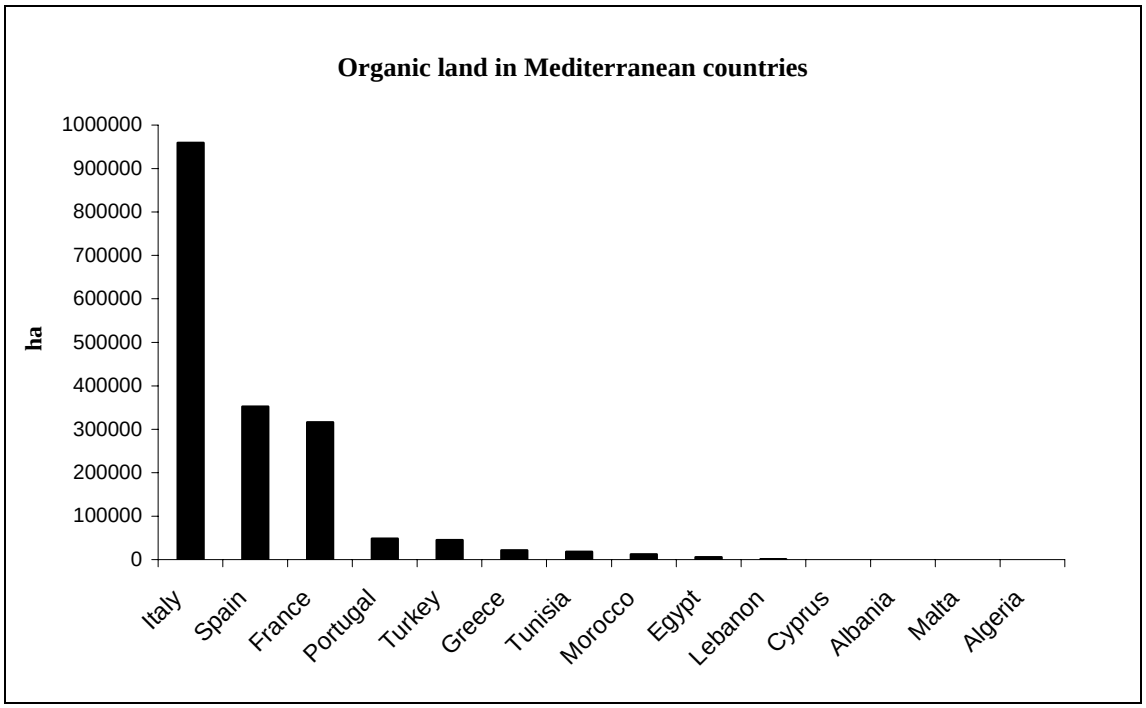


**Figure 2.** Hectares of organic land in the Mediterranean countries

### Development of organic farming in Greece

Since the implementation of EU Reg. 2092/91 and 2078/92 in Greece, the cultivated land under organic agriculture has an annual rate of growth ranging between 40% and 120%, reaching 21,453 ha in 1999 (Figure 4; Figure 5). This included 5042 certified operators, of whom approximately 4500 are producers, 300 are producers, processors and distributors and 200 are processors and distributors. But still, it accounts only for 0.6% of the total cultivated land in Greece. Besides, 100 organic animal husbandry operators were registered by the end of 2000 (the EU Reg. 1804/99 for organic animal husbandry began being implemented in Greece at the autumn of 2000).

Out of the registered production in 1999, around 30% is organic farming, 50% organic farming in conversion and 20% registered operations in the first year of control. In 1998, the number of farms amounted to 4.231 accounting for 0.48% of the total number of farms in the country (Hellenic Ministry of Agriculture, 1999). In the same year the total organic and in conversion area amounted to 15,402 ha accounting for 0.47% of the total cultivated land out of which 18% (2,771 ha) was organic farming and 82% (12,628 ha) was in the various conversion stages (Hellenic Ministry of Agriculture, 1999).

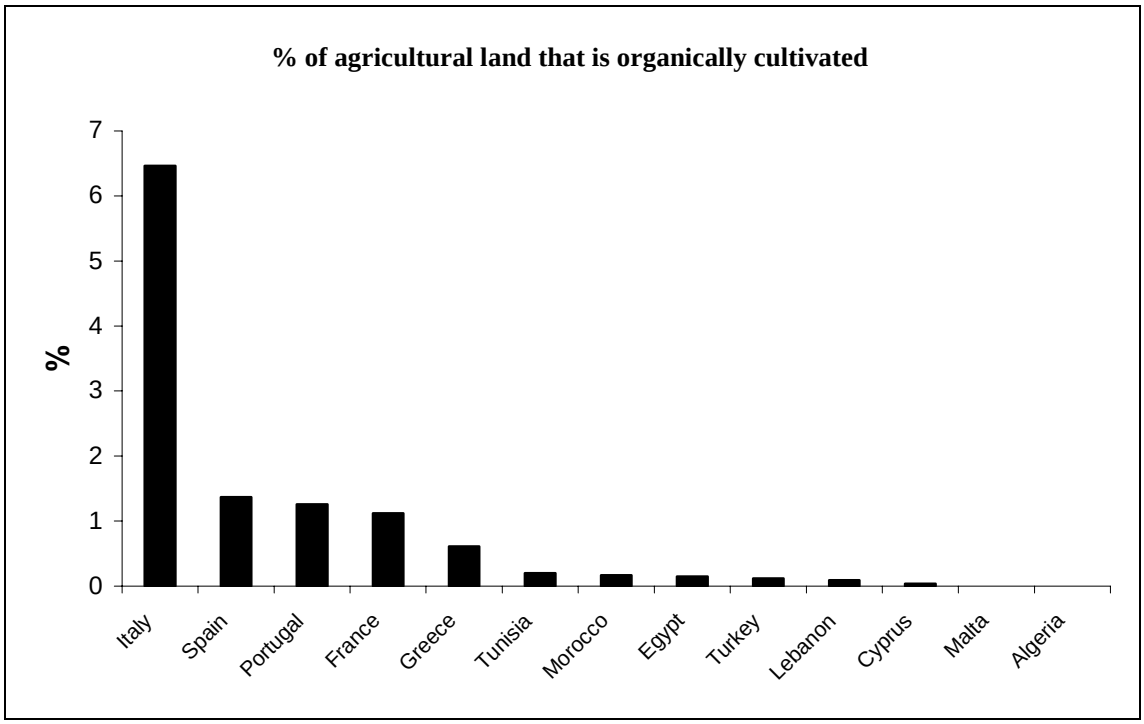


**Figure 3.** % total agricultural land organically cultivated in specific Mediterranean countries.

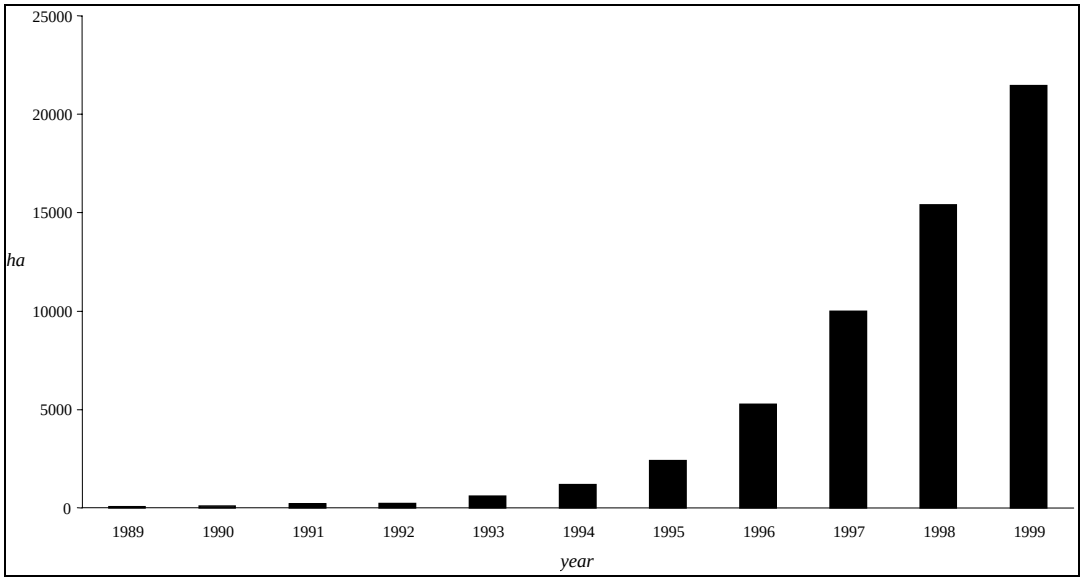


**Figure 4.** Development of certified organic farming UAA land area in Greece, 1989-1999
(source of data: from 1985 to 1993: DIO, from 1994 to 1996: Ministry of Agriculture)

### Distribution of organic farming

Within the organic sector in Greece, the unequal geographical distribution of land and farms is the main characteristic. More than 50% of organic farms are located in only 5 of the 52 provinces of Greece, mainly in the following order of importance: Messinia, Achaia, Biotia, Corfu and Heraklion. In addition, more than 55% of organic farms are located in three (Peloponnese, Western Greece and Crete) of the 14 regions of Greece. In contrast, in the regions of Thessaly, Western Macedonia, East Macedonia and Thrace, Epirus and the south Aegean islands the rate of growth of organic farming is lower compared to the rest of Greece and the numbers of converted farms are low. Table 1 presents the regional distribution of organic cultivated land in

1998 but with data only from two (DIO, Physiologiki) of the three inspection and certification organisations.

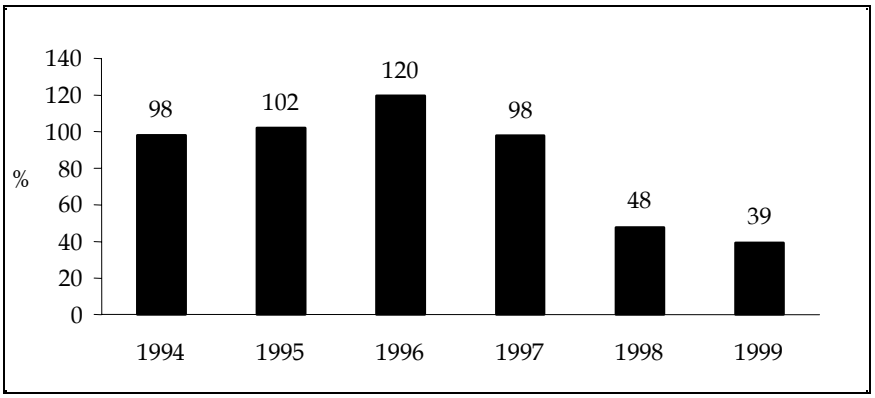


**Figure 5.** Annual growth rate of organic farming in Greece, 1994-1999
(source of data: 1994: DIO, from 1995 to 1999: Ministry of Agriculture)

**Table 1.** Regional distribution of organic land in Greece, 1998

| Region | Hectares | % of entire organic area |
|---|---|---|
| Peloponnese | 2,842 | 29.2 |
| Western Greece | 1,623 | 16.7 |
| Crete | 922 | 9.5 |
| Central Greece | 813 | 8.4 |
| North Aegean Islands | 713 | 7.3 |
| Attica | 676 | 6.9 |
| Central Macedonia | 614 | 6.3 |
| Ionian Islands | 459 | 4.7 |
| Western Macedonia | 427 | 4.4 |
| Thessaly | 242 | 2.5 |
| East Macedonia and Thrace | 175 | 1.8 |
| Epirus | 133 | 1.4 |
| South Aegean Islands | 90 | 0.9 |
| Total | 9,730 | 100 |

Source of data: DIO; Physiologiki; van der Smissen, 1999

It seems that for the introduction of organic agriculture in a region, the level of marginality in this region is the most important factor (the more marginal it is, the easier the introduction), while for its further development, the existent infrastructure plays the most important role. After the introduction of organic farming in an area, subvention prices are important for the expansion of organic farming in that area. The national policy of subsidies to organic farmers is orientated to the creation of "nuclei" of organic farms, hence making it easier for neighbouring farmers to convert.

Organic agriculture is seen by producers as a means to sustain agriculture with low or no-use of external inputs and to maintain or improve farm income. It is remarkable that organic production was first introduced in one of the most marginal areas of Greece (Mani) and was developed under contract farming. Initially, small size farms adopted organic practices, while medium and

bigger size farms followed. Still, the average size of organic farms in Greece is 4 ha which is equal to the national average.

### Crops under organic management

Regarding production, the variety of the organic produce appears rather poor. Among perennial crops, which are dominant, olive trees cover 56% of the total cultivated land under organic farming, vineyards 10% and citrus 7% while all the remaining stone fruits represent only 4% of organic farmland. Cereals and vegetable crops account for 8% and 1.2%, respectively, in spite of their importance in the Greek market and exports (Figure 6).

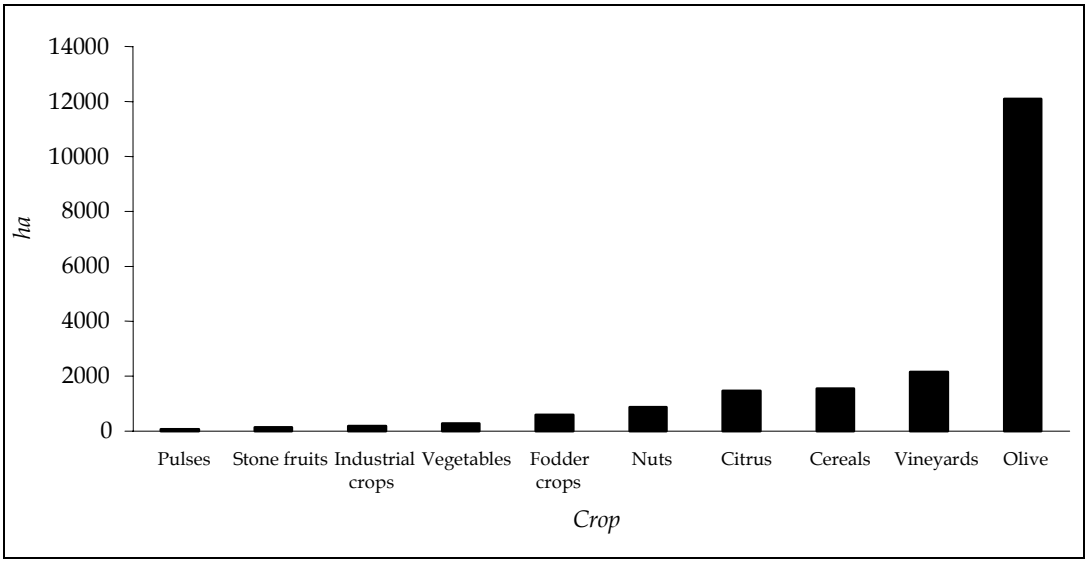


**Figure 6.** Organic farming land area per crop in Hellas, 1999 (source of data: Ministry of Agriculture)

**Table 2.** Organic area per crop in 1998 and 1999, in Greece

| Type of product | Surface (ha) 1998 | Surface (ha) 1999 |
|---|---|---|
| Olive tree | 9475 | 12085 |
| Vine | 1566 | 2147 |
| Citrus | 1299 | 1469 |
| Cereals | 1000 | 1548 |
| Nuts | 624 | 870 |
| Fodder | 437 | 580 |
| Vegetables | 240 | 267 |
| Industrial crops | 197 | 172 |
| Pulses | 57 | 67 |
| Fallow | 60 | 199 |

Source of data: Hellenic Ministry of Agriculture

Organic farming land area corresponding to some important crops in 1998 and 1999 in Greece are shown in Table 2 (Hellenic Ministry of Agriculture, 1998 and 1999). The highest increases in land area for the period 1998 to 1999 were observed for the following crops: cereals 58%, nuts 40%, vineyards 37%, fodder crops 33%, olive tree 28% and pulses 17%. Regarding fodder crops,

this high increase could be partly attributed to the expected implementation of the recent EU Regulation 1804/99 concerning animal husbandry (in the autumn of year 2000).

The rate of development of certain products mainly depends on:

a. the level of extensification or intensification before the adoption of organic practices

b. existing research and/or know-how for its production

c. market channels developed for the specific product.

Indeed, oliviculture was the first cultivation to be converted to organic because it developed under contract farming which guaranteed sales of the produce (olive oil). In Greece traditional methods are applied to olive production as there is a long tradition in oliviculture. It is rather extensive, compared with other crops or oliviculture in other countries, and there are satisfactory research results and know how for the control of the main pests of the olive tree.

## Processing of organic products

The processing of organic products is highly advanced compared with that of conventional products because they contain far less preservatives. In addition processed farm products are more adventurous, compared to the non-processed, for the farmer if he or she has the possibilities of processing them because it gives higher value-added to the product and therefore higher price able to pay the extra labor involved. Although there are no national standards for processing, individual operations have their own standards. The only difference with the conventional processed products is the use of a limited number of preservatives. In the organic food processing industry there are operators who work at different scale and type of processing. In many cases, process takes place on/in farm, in others in conventional processing plants while in some new high technology and novel processing methods are used only for organic produce.

**Table 3.** Number of processing units per type of product certified by DIO, in 2000

| Processed Product | Number of units | Processed Product | Number of units |
|---|---|---|---|
| Cotton | 3 | Marmelades & jams | 1 |
| Olive oil | 59 | Pulses | 3 |
| Olives & olive pate | 16 | Cereals, powder, pasta | 6 |
| Currants | 6 | Bread | 4 |
| Wine | 10 | Rusk | 3 |
| Vinegar | 1 | Sesame products | 2 |
| Fruits & Vegetables | 5 | Aromatic plants | 1 |
| Orange juice | 1 | | |
| Tomato products | 1 | | |

In 1998 there were 71 processors all over the country (Hellenic Ministry of Agriculture, 2000). 35 of which were both processing and packaging units and were certified by DIO (Anastasiadis *et al.* 2000; Kyriazopoulou personal communication, 2001). In 1999 the number increased to 119 (Hellenic Ministry of Agriculture, 2000). 66 of them were certified by DIO, of which 27 units dealt only with packaging, 2 only with processing and 37 with processing and packaging (Anastasiadis et al. 2000; Kyriazopoulou personal communication, 2001). In order to have a general picture of their activities 60% of these 66 processing units dealt with olive oil and olives, 14%

with wine, vinegar and currants, 11% with cereals (powder, pasta, bread, rusks) and 6% with fruit (juices, jams) and vegetables (Table 3) (Anastasiadis *et al.* 2000; Kyriazopoulou personal communication, 2001).

## Market and market channels

Although the organic industry began in a niche market, steady growth has led to its place in a "segment" market till nowadays. From 1999 and onwards the domestic market especially has been expanding rapidly, mainly due to the continuous food crises during the past two years, resulting in:

- an increase in the volume and variety of organic products
- the establishment of many specialised shops
- the marketing of organic food by the largest supermarket chains

Today, specialised shops selling organic food can be found in all big and average size cities. In addition, the largest supermarkets (with a number of branches in each city) that control the main volume of distributed food in Greece are interested in or have already introduced organic food in their outlets. Furthermore, chains of specialised shops selling exclusively organic food have recently appeared in the largest cities.

It cannot be clearly stated whether Greece is a net importer or exporter of organic products (in value of organic products) since there are no official data (Ministry of Trade or other authorities) for the volume, value and type of products that are imported and exported. Making a rough assessment in relative terms, the most exportable products are the olive oil and table olives (80-90% of the produce is exported), while currants and raisins have the same percentage. It should be noted at this point that the export-orientated character of the first organic projects in Greece regarding citrus and table grapes, is around 70%, while this figure is very small for vegetables in spite of the great potential of Greece to produce organic vegetables. In contrast, there are imports of low and high processed and packed products (such as lentils, sugar, cereals, flour, breakfast products, jams and chocolates) as well as of vegetables (especially potatoes) due to their low volume and seasonal nature.

There is a great variation of distribution channels of organic products in the domestic market. Many farmers, especially those producing vegetables and fruits, sell directly either at the farm gate or in local markets. The share of direct sales is estimated around 30% of the total domestic sales for vegetables, lower for fruits, while for the remaining products (mainly preserved products) it can be considered eligible.

Regarding all the other products, it is estimated that 60% of the quantity consumed domestically is delivered through specialised shops (passing the market chain: producer-wholesaler-retailer or producer-retailer) and the remaining 40% is sold in the big supermarkets which have shown an increasing interest for organic products during the last two years (through the market chain: producer - wholesaler and packer – SM).

## Premium Prices

In spite of the rapid increase of the market of organic products, this remains not well structured (in many cases with no structure at all), it is monopolistic, not transparent and export orientated. This results in an irregular supply of organic produce, price fluctuation in time and space, and substantial differences between producer and consumer price (Vassiliou and Kabourakis,

1999). It is very likely that certified organic products are traded as conventional in some cases either because there is no market for them or because producers cannot reach such markets (Vassiliou and Kabourakis, 1999). In many cases, organic products have premium prices, which may vary from 10% to 100%, while the difference between the producer's price and the final consumer's price can be quite high, 3 to 4 times the producer price (Vassiliou and Kabourakis, 1999; Michelsen *et al*, 1999). The reasons for such phenomena are: the limited size of the organic market, and the production by contract farming (Vassiliou and Kabourakis, 1999).

But the market conditions change continuously. Organic market may enlarge as more products are produced in terms of variety and volume, resulting to economies of scale and more efficient transactions, which will lower processing, trade and transaction costs for organic products. As more enterprise will be involved in the organic market the competition will be increased causing an even more price reduction (it is estimated that the retail outlets dealing with organic products increase by 20-30% the last few years). Thus, consumer prices may be lower causing a demand increase. This will cause demand for more products from the primary sector by trade enterprises leading to higher premium prices for the producer than today, and gaps between producer and consumer price might be reduced. Therefore, major changes are expected in the interim period (Vassiliou, 2000).

## Economics of organic farms

There is limited research in the economics of organic farms. This is due to the absence of interest from academia and the limited number of farms operating and products produced. The research contucted so far accessing farm economic is limited due to the small number of farms considered in the research and the one-year research (Dessyllas, 1992 Fotopoulos, 1999). Only in one research project throughout a four-year period was access to the economic of organic olive oil production in Crete considered and compared to the average of the region. Nevertheless, all the research that has taken place in Greece as well as the bibliographical evidence suggests that economic performance of the farm changes together with the agronomic and ecological performance as the farm is converted from conventional to organic (Dabbert, 1994). Productivity, and therefore production is reduced during the conversion and converted period. Oliviculture can be an exception as no significant reduction is reported. This depends highly on the level of intensification/or extensification during the conventional period as well the managerial capacity of the grower. Labour and labour cost is higher in organic farms as many farms applications are done manually. Variable cost is reduced – this depends mainly on the dependence or not of the farm from off-farm inputs. When a farm is converted to organic some investments are needed which increase the fixed cost of the farm enterprise. Finally, income is expected to be higher but of course this depends on market prices (which in its turn depends on the abilities of the farmer to penetrate into the markets) and farmers' capability to operate at a low cost.

## Farmers organisation

Although organic agriculture developed during its early stage as a contract-farming, later on growers started being organised in producers' groups and/or co-operatives as a mean to approach markets and increase their income, having a part of the market margin. However, until now there is not any regional or national association of farmers, processors, retailers, etc. mainly due to the fact that organic farming industry is still in its infancy.

## Agronomic aspects

In addition to the unequal geographical distribution of organic farms and processing units in the country as well as the small average size of organic farms, many other unfavourable conditions must be overcome. Many technical problems remain to be solved and many production systems lack the appropriate technology. Finally, most of the authorized agents for fertilization and plant protection are imported thus not the most suitable for Greek conditions.

### Soil and soil fertility management

Management of soil fertility using organic fertilizers remains one of the weakest points. Growers have not been well informed of the proper timing and amounts of organic fertilizers to apply, and these fertilisers have quite different attributes to the conventional chemical and mineral agents. There are many differences in the amounts of fertilizers used by organic farmers, which depend on the crop and whether the model of cultivation followed is extensive or intensive. For example, greenhouse cultivators usually apply much larger quantities of fertilizers than is required while olive growers usually apply lower or normal amounts. A combination of fertilization methods and soil tillage techniques, especially the minimum tillage or no tillage recommended in organic agriculture, have not yet been effectively adopted by organic growers. Besides, farmers often do not use cover crops as recommended by organic farming and codes of sustainable practices. Furthermore, farmers often lack appropriate machinery for soil management. The problems of soil erosion and soil salinity are significant in some regions of Greece, where improving the properties and fertility of soil is more difficult.

In many mountainous or semi-mountainous areas, the use of mechanization (for soil cultivation, weed control, green manure application, harvesting etc) is difficult or not feasible. In addition, as crop and animal production are traditionally separated in Greece, growers cannot be easily supplied with adequate quantities of manure produced on-farm and thus it has often been suggested that cooperation schemes between growers and animal breeders should be promoted at a regional (local) level to their mutual benefit.

### Pest management

Some insect pests of common crops cause serious problems, as for example the olive fly in olive orchards. Frequently the population numbers of this insect are very high resulting in severe damage, and the plant protection agents that are compatible with organic agriculture regulations cannot effectively control this pest.

### Plant material

There is little experience in developing plant varieties appropriate for organic farming. Most organic growers use the commercial hybrids that have been developed for conventional cultivation.

## Research and Training

As yet, there is no University Department or Research Institute devoted exclusively to organic agriculture. However, the Agricultural Universities have included modules concerning various aspects of organic agriculture, especially related to plant protection methods and techniques, in their courses. Researchers deal with the specific problems of organic agriculture and often contribute in solving problems of organic farmers. Socio-economic research is also carried out but of limited scope.

The Agricultural University of Athens has announced a lecturer's post in organic farming of arable land crops. Recently, the Aristotle University of Thessaloniki, Faculty of Agriculture has initiated a Postgraduate Programme at MSc level, in Sustainable Rural Development. The Technological Educational Institute of Epirus has initiated a new Department on the island of Kefallonia on "Biological Agriculture" and the Technological Educational Institute of Crete offers undergraduate courses in organic farming. The National Agricultural Research Foundation appointed three research positions for organic farming at the end of 2000. The Mediterranean Agronomic Institute at Chania (MAICh) performs research and training activities in the field of organic farming, including scientific networks, research projects, market surveys, short courses and seminars. The Department of Horticultural Quality Management at MAICh has initiated a new Postgraduate Programme in Sustainable Horticulture starting in the academic year 2001-2002.

The Inspection and Certification bodies of the country also perform training activities such as courses, seminars and the publication of reference books, booklets and magazines. Local Authorities, as well as associations of growers very often contribute to these efforts. There are introductory training courses for organic farming at vocational schools, agricultural schools, etc. but often the quality is low.

### Subsidies and Policy

Organic farming is supported by the organic farming scheme of Regulation (EC) 2078/93. Although there is a minimum support compared with other European Union countries (Vassiliou et al, 1999, Anastasiadis et al, 2000). In spite of the fact that subsidy payments is only a very small part of the financial returns in the organic farm, they are a factor that contributes to the producers' decision-making, since it provides insurance against the risk of conversion (Vassiliou et al, 1999). As demand of the market is related to supply and supply is related to subsidies, these interactions influence market development in Greece.

The general guidelines given by the Ministry of Agriculture to the local authorities for the regional implementation of 2078/93 take into consideration the following parameters:

- The location of the field: if it near the seacoast or a lake or a river or if there are neighboring organic farms
- The type of the crop: traditional crops of the region, products of protected designation of origin (PDO), products of protected geographical indication (PGI).

As yet, no concrete policy regarding organic farming has been adopted by the Greek state. Organic farming was considered important for less favoured and environmentally sensitive areas. Many officials at the Ministry of Agriculture are in favour of organic farming. The political support of local authorities regarding organic farming is increasing due to the demands of society.

## Conclusions

Although the size of the organic farming industry in Greece is small, considerable progress has been made during the last decade. The industry is beginning to develop mainly due to the activities of the private sector in the economy, which mostly pays the costs (inspection, processing, marketing, etc) and the investments, at the time when state support is minimal.

We foresee further progress in the coming years due to the increasing public demand for quality food, its growing environmental awareness and the expansion of the local and international

markets for organic farming. The extent of this progress will depend on the professionalism of the industry and on the development of the required infrastructures.


### Acknowledgements

We are grateful to Mrs A. Kiriazopoulou, DIO, and Mrs A. Balbouzi, Ministry of Agriculture, for the provision of data on organic farming.


## References


[1] Anastasiadis, M., Kiriazopoulou, A., Laskari, F., Sgouros, S. (2000) Organic Farming. *DIO 13: 21-27* (in Greek)

[2] Dabbert, S. (1994) Economics of conversion to organic farming: cross-sectional analysis of survey data in Germany. In: Lampkin, N. H. and S. Padel (eds) *The economics of organic farming. An international perspective*. CAB International, Wallingford, UK.

[3] Dessyllas, M. (1992) *Introducing environmentally friendly farming practices to rural areas: The project of organic olive production in Mani.* MSc Thesis, Agricultural University of Athens, Athens,Greece (in Greek)

[4] Hellenic Ministry of Agriculture. Organic Farming at http://www.minagric.gr/

[5] Kabourakis, E.and Vassiliou, A. (2001) *Organic farming in Greece.* Proceedings of the conference: "EU Harmonisation of Organic Agriculture" Rijka, Croatia, 24-29 January 2001 (In Publication)

[6] Van der Smissen, N. (1999) Organic Farming in Greece. In: Willer, H. *Organic Europe.* SOL, Germany

[7] Vassiliou, A. (2000). *Farm structure optimization and the impact of widespread transition to ecological olive production systems*. Phd Thesis. Institute of Rural Studies, University of Wales, Aberystwyth.

[8] Vassiliou, A., Lampkin, N., Foster, C., Padel, S. (1999). Greece. In: Lampkin, N., Foster, C., Padel, S. *The Policy and Regulatory Environment for Organic Farming in Europe: Country Reports.* Universitat Hohenheim, Hohenheim, Germany.

[9] Vassiliou, A and E. Kabourakis, (1999) *Development of national market for organic farming products. Possibilities, problems and perspectives.* Proceedings of the 2nd National Organic Farming Congress, 17-19 May 1996, Tripoli, Greece. DIO, Athens (in Greek)

[10] Fotopoulos, C. (1999) *The productive system of organic agriculture as an alternative solution for the development of rural Greece.* National Agricultural Research Foundation, Athens, Greece (in Greek)