DEVELOPING ORGANIC FARMING IN PORTUGAL: 
CHALLENGES TO TRAINING AND EXTENSION*

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Abstract

This study provides an overview of the evolution of organic farming in Portugal. It shows 
that this special farming sector is still very small, representing a limited number of operators 
and farmed land. It shows, as well, that major progress has occurred in recent years, 
especially since the mid 90's, and that there are favourable conditions to promote the use of 
organic production methods. However, the involvement and commitment of public 
authorities is still very incipient, far from the desirable. Most public institutions, namely those 
within the Ministry of Agriculture, lack specialised staff, and efforts in such fields as 
research, education, training and extension have been reduced. In the Regional Agricultural 
Services there are no extension agents dealing with organic farming, neither are consistent 
efforts made to implement experimentation or demonstration projects. The growing number 
of vocational schools and higher education institutions involved in organic farming should be 
underlined. There are new courses being created or planned, at undergraduate or graduate 
level. There is a growing number of researchers and projects, in line with a need to increase 
the consistency and quality of the programmes, and to build strong networks of concerned 
people. In the private sector, AGROBIO, has been, since 1985, the key actor. It has 
promoted training, dissemination of information, and stimulated field trials. It has worked 
with farmers, consumers, researchers, technicians and political decision makers. It has 
collaborated intensively with other Associations. Step by step, farmers, consumers, 
development agents and other actors have been building a framework to sustain the 
development of organic farming in Portugal. But the road ahead is still quite long, as many 
initiatives are new and there is a lack of qualified people.
*Paper prepared in the frame of a study financed by the European Centre for the Development of Vocational Training (CEDEFOP).
Background and Purpose of the Paper

The development of sustainable agricultural systems, such as organic farming, environmentally sound and with a strong potential to help strengthen the rural economy, is an important challenge in the European scene. If, 10 or 15 years ago, organic agricultural production was practically ignored by public authorities and policy makers, today it is considered a valuable alternative to conventional farming and an important area of intervention. Some EU countries, such as Denmark, created national measures to support organic farming as early as the late 80’ (Lampkin et al., 1999: i). In the European Union, the so called Agri-Environmental Measures of the Common Agricultural Policy (EC Reg. 2078/92), provided an important framework and specific instruments to promote the adoption of organic production methods, which were used by most member countries.

Support to organic farming has increased continuously in the last five years, and the results have been outstanding. Since 1992 the farming area dedicated to organic production in the EU has more than doubled and it is expected that it will continue to grow. The organic products represent today about 3% of the food products sold in the EU, while in 1992 this figure was only 1% (CE, 2000: 22). Consumer demand has also been growing. However, this form of agriculture still faces many obstacles, namely within the areas of research, education, training and extension. In this regard, it is important to analyse the situation in the different EU countries for such areas.

The paper summarises the results of a study with the following objectives: (1) to characterise the evolution and assess the state of the art of organic farming in Portugal; (2) to identify the existing structures promoting environmental education and agricultural activities friendly to the environment; and (2) to define the new knowledge and skills required to produce alternative agricultural products, free of agri-chemicals, and the best means to be promoted. In more specific terms, the paper proposes to present a critical analysis of the institutional framework supporting organic farming in the fields of extension and training, to identify the farmers’ needs in terms of knowledge development and dissemination, and to discuss possible alternatives to address such needs in the future, as well as implications for EU policies on sustainable agriculture.

Design and Methodology of the Study

The study followed a descriptive approach and was mainly based on questionnaire interviews with a set of agents involved in organic farming. In more concrete terms, the research was developed in four major steps: (1) collection of secondary data from public services, Farmers' and Development Associations and other private institutions; (2) exploratory mail survey to identify initiatives within training, research and extension education. A total of 124 questionnaires were sent in the first week of June and 53 questionnaires returned, corresponding to a response rate of 43%, without any follow-up; (3) selection of a specific study region and two main organically produced products. Trás-os-Montes e Alto Douro, in Northern Portugal, being one of the main areas of organic production in the country, was chosen. The two main products were olives (and olive oil) and grapes (and wine), given their relative importance in the selected region and the possibilities to compare with other countries; (4) and field work, using specific questionnaires designed for each type of actor: organic farmers, certification agents, teachers, trainers, extension agents, wholesalers, consumers. A total of 50 interviews were done, including 15 farmers.

The questionnaires were designed to collect information about: the profile of the respondent; level of environmental consciousness; attitudes and types of behaviour regarding organic production; delivery of environmental education, training and extension; knowledge and information
dissemination; new skills required and training needs; the challenges and conditions to develop organic farming. In this paper a partial review of results is presented.

The Portuguese Organic Farming Sector

Organic farming is not a new practice in Portugal. According to Silva (2000, 22), the first initiatives date from 1976, and in 1985 the Portuguese Association of Organic Farming (AGROBIO) was created. Until very recently, this Association was, indeed, the major institution responsible for disseminating the idea and promoting organic production, especially through experimentation, exchange of experiences, and diffusion of information, among farmers and consumers. The number of organic farmers grew quite slowly since 1985. Since 1990, the growth rate tended to increase. In 1993, organic farming in Portugal represented about 3,000 ha, Trás-os-Montes being the major production region, as measured by the number of farms (23). About 50% of this area was occupied by olive groves, followed by field crops (30%), fruit trees, vineyards and horticultural crops. In general, the types of crops produced in each region or zone reflected the dominant agricultural system. In the case of Trás-os-Montes, olive production was clearly the most important.

Major changes occurred in 1996, and since this time the number of farmers and the area has grown quite considerably. These changes were particularly influenced by the economic incentives related to the application of the CAP Agri-Environmental Measures, which began at the end of 1994. These measures aimed at the maintenance of the traditional extensive agricultural practices, and the conservation of nature and the rural landscape, with a view to preserving the areas most threatened by demographic regression and aging population (Patrício et al., 1999). The Agri-Environmental programme, especially through direct income payments, encouraged the emergence of new organic farming operators, mainly farmers, particularly in Alentejo, Beira Interior and Trás-os-Montes, where extensive forms of production were already dominant. This explains the rapid growth in the area of olive groves, pastures and field crops. The farmed area supported by the programme grew from 901 ha in 1995 to 9938 ha in 1997, and the number of supported holdings from 166 to 226.

At the end of 1999, the situation was the following: organic farming represented 47,974 ha, around 1% of the cultivated area in Portugal; the number of operators (farmers, processors and sellers) reached 750; Alentejo, in Southern Portugal, became the major region of organic farming, both in terms of area (22,917 ha) and number of operators (382), followed by Beira Interior (17,446 ha and 140 operators); Trás-os-Montes became the third region, in importance with 5,840 ha and 144 certified operators; Country wide, olive production was dominant, representing 40% of the area, followed by pasture, representing 24%. Cereals, fruits, aromatic herbs and horticultural products came next in the order of importance.

In spite of the rapid growth in recent years, organic farming still has very little expression in Portugal. Comparisons with conventional agriculture are difficult to make, but, according to the available figures (MADRP, 1998; Guia dos Produtos de Qualidade, 2000), and considering the areas of production, organic farming represented in 1999 only 6% of the olive groves, 1,5% of pasture, 0,7% of fruit orchards and 0,4% of vineyards.
Overview of the Institutional Framework

As we have seen, the expansion of organic farming in Portugal is quite a recent endeavour. As such, the institutional framework is still very incipient. In this section, we will provide a brief outline of the major institutions involved in the sector, mainly in the areas of training and extension.

Associative movement

Until recently, AGROBIO, a non-profit organisation, was the only national association. A second national association was recently created, BIO-ANA, but we have no information about its aims and activities.

AGROBIO was created in 1985 and membership is made up of consumers, producers and technicians, representing in this way a variety of interests (Silva, 2000: 22). Its major activities include: technical support (much more in the past, in the early days, than today); training, mainly through farmers' short courses; promotion of organic farming; and, until 1993, certification and control. In this last regard, AGROBIO defined a set of organic production norms, based upon the work of the French Association "Nature et Progrès", established a control process, and created, in 1988/89, a specific label for certified products (Silva, 2000: 24).

Present membership totals about 1,685 (Firmino, 1999c). This association has published a bulletin since 1985, A Joaninha, and other documents, such as the recently published "Technical Files" on Organic Olive Production. It organises an annual fair of "Organic Farming, Environment and Quality of Life", called "Terra Sã", that is "Healthy Land".

All regional associations were created after 1995, and most of them after 1997. They now total six and work in most agricultural regions of the country, including the Azores and Madeira islands. Their main aims are to provide training and technical support to associated farmers. Some also work intensively with schools, to develop young pupils' consciousness concerning environmental and agriculture issues. Others are active in organising commercialisation.

Public Agricultural Services

The Ministry of Agriculture, thorough the General Directorate of Rural Development, is the State authority that supervises the control and certification institutions. The same Directorate promotes training courses on organic farming. In the Azores and Madeira Regions, these functions are performed by other public Institutes. The Regional Agricultural Directorates have very little or no staff that are technically equipped to provide assistance to organic farmers. In five of the seven Regions in the mainland we could trace some experimentation or training initiatives related to organic production, but all were still in very early stages.

Training and Education

In-service training courses for technicians are promoted by the Public Services and AGROBIO. In Northern Portugal, AGRECO (a training center) and IDARN (a partnership institution involving public and private organisations), have also promoted training for college and university graduates. Training for farmers has been organised by some Local Development Associations, organic farmers' associations or national Farmers' Organisations (CAP and AJAP). A major problem in this area is the limited number of well prepared trainers (only about six). In the area of Vocational Agricultural Education, an intermediate level of training, five Schools have created introductory courses or course modules on organic farming, and others are planning to do so. Complete degrees in this area are not yet offered.
At College level, six institutions offer organic farming or sustainable agriculture as components of their undergraduate courses. At the University level, the University of Trás-os-Montes and Alto Douro offers a graduate course within the framework of the MSc Programme on "Agriculture, Environment, and Markets", the University of Madeira has plans to start a MSc Programme on Organic Farming, and the University of the Azores has created an undergraduate course on Sustainable Agriculture, with a strong emphasis on organic production. However, there are very few experienced professors and researchers in this field. The Department of Geography and Regional Planning at the New University of Lisbon, was probably the first non-agricultural institution to introduce organic farming topics in its curriculum (Firmino, 1998).

**Research, extension and technical consulting**

Very few institutions and researchers are presently involved in the field of organic farming. Only eight major projects were identified, involving ten different entities, six of which are higher educational institutions.

There are no technicians specialised in organic farming in the public agricultural services. In terms of extension and advisory service, only four experts could be identified. Two of them work in associations, and the other two as independent consultants and trainers, each one in a different region of the country (North, South, Azores and Madeira). According to the General Directorate for Rural Development, 16 demonstration plots were approved to be installed jointly by the regional agricultural services and organic farmers' associations, with the support of the EU Agri-environmental Programme.

**Professional Profiles and Training Needs of Farmers and Other Actors**

There are strong variations in the academic and professional profiles of the individuals interviewed. This is quite natural, giving that they are involved in a wide range of activities, from teaching at secondary schools, to organic farming or management of retail shops. A similar variation occurs in relation to training needs. However, it is quite clear that initial and continuing education and training are identified by all categories of people as being important. The following table summarises the information.

<table>
<thead>
<tr>
<th>Category</th>
<th>Profile</th>
<th>Training Needs</th>
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<tbody>
<tr>
<td>Olive producer</td>
<td>• Age between 34 and 47 years</td>
<td>• Quality issues in organic farming</td>
</tr>
<tr>
<td></td>
<td>• Education above average</td>
<td>• Soil nutrition and fertilisation</td>
</tr>
<tr>
<td></td>
<td>• Other professional activities</td>
<td>• Commercialisation</td>
</tr>
<tr>
<td></td>
<td>• Member of Organisations</td>
<td></td>
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<tr>
<td>Grape producer</td>
<td>• Age between 42 and &gt;65 years</td>
<td>• Plant protection</td>
</tr>
<tr>
<td></td>
<td>• Education well above average</td>
<td>• Soil nutrition and fertilisation</td>
</tr>
<tr>
<td></td>
<td>• Other professional activities</td>
<td>• Commercialisation</td>
</tr>
<tr>
<td></td>
<td>• Member of organisations</td>
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<tr>
<td>Certification inspector</td>
<td>• Agronomist with specialised training</td>
<td>• Soil fertility</td>
</tr>
<tr>
<td></td>
<td>• Participates actively in training and other scientific activities</td>
<td>• Plant protection</td>
</tr>
<tr>
<td></td>
<td>• Access to technical and scientific information</td>
<td>• Environmentally-friendly production methods</td>
</tr>
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</table>
Training and extension are critical areas of intervention in order to develop organic farming in Portugal in a consistent and sustainable way. The paper has provided a picture of the situation and evidence about the current situation involving training and extension, as well as about the major needs in these regards. The major conclusions and recommendations are the following:

**Training**

It is recognized by all actors that there should be opportunities for initial and continuing learning on organic farming methods and issues, from production to distribution and consumption, involving theoretical and practical aspects and approaches, including visits or work periods on organic farms. In-service training for those technicians already working is essential, especially in areas like viticulture, horticulture and fruit production. It is also important to train new technical staff, first of all in general aspects related to organic production, and afterwards in specialized topics. Particular care should be given to the professional qualification of animal production technicians and veterinarians motivated to work in organic production. Teachers at all levels, particularly in Vocational Agricultural Schools and higher educational institutions, dealing with organic farming
methods, in areas such as crop sciences, animal production or plant protection, should have the opportunity to enter advanced courses, in Portugal or abroad. The qualification of technicians and trainers should produce concrete results and, as such, be followed by specific actions: farmer training courses, information campaigns, experimentation projects, extension activities (demonstrations, study groups, etc.). Some specific ideas and proposals in this respect are:

- To develop in-service training for secondary school teachers, particularly on environmental education, environment conservation, consumer protection, quality of agricultural products, and environmentally-friendly farming methods. Teacher Training Centers, in partnership with Universities, Colleges of Agriculture and or Schools of Education, could be particularly active in this respect;

- To support and stimulate Vocational Agriculture Schools to develop curricula on organic farming, namely through partnership arrangements with higher education institutions, the Ministry of Agriculture, and organic farmers’ Associations (exchange of information, teacher training, on-farm practice, demonstration plots). Vocational agriculture teachers showed a high need for training on organic farming methods, environmental education, quality and marketing of agricultural products. The higher education institutions have a particular responsibility in fulfilling these needs, along with other institutions already active in the field;

- To establish and implement an advanced University training program to technically and scientifically prepare a core group of technicians and academics. Such a program, given the lack of resources in each individual institution, could be offered by a partnership of Universities already motivated and minimally prepared. The program should also develop close ties with experienced Universities in other countries;

- To support the acquisition of learning resources (on organic farming, environmental education, and consumer protection) by Training Centers, Secondary Schools, Vocational Agricultural Schools, Universities and Colleges (relevant books and journals, videos, CD-ROMs, software);

- To promote initial and continuing education for organic farming operators (farmers, food processors, retail agents), addressing their major needs. These courses could be mainly organized by professional groups and Associations, responding to specific demand, and planned, led and facilitated by qualified trainers. It is important to stress that all interviewed farmers were willing to pay for such training.

**Extension**

Until now, most organic farmers have develop their knowledge and skills using a variety of information sources, sharing experiences with other farmers and, sometimes (in very few cases), contacting one of the few extension agronomists, who work for a cooperative, an association, or as independent consultants. This situation is likely to change in the framework of the new EU programs, and access to permanent technical assistance will become a condition for getting economic support. Some specific ideas and proposals in this respect are:

- Assistance to farmers and other operators should be performed by well trained and motivated agents. The new extension agents should be prepared in technical aspects, social sciences and learning facilitation methods. More than simply providing the dissemination of information and knowledge, they should be able to conduct participatory activities, such as learning in small groups;

- Most of these agents will work in farmers’ or development Associations, but the Ministry of Agriculture must also be equipped with staff trained in organic farming, both at central and
regional levels. All Regional Services should have a team of well trained people, who should maintain permanent field activities, providing direct support to farmers and Associations, disseminating updated information, promoting experimentation, demonstrations and other extension initiatives;

• All this work is likely to fail, as has happened in the past with conventional agriculture, if research and experimentation are not developed and closely tied with extension and training. As such, it is essential, in each region, to find the appropriate forms of determining, as well as planning and implementing, a specific research agenda. Previous experiences have shown the value of research partnerships, involving higher education institutions, research stations, public agriculture services and Farmers’ Associations.

Development of a common policy in the organic farming sector

It is widely recognized at the EU level that there is a growing demand for high quality agricultural products and healthy food in general, including, naturally, the goods produced on organic farms. As also stated in the introduction of this report, sustainable agricultural methods today deserve a special attention on the part of EU policy makers, and several measures, particularly under the auspices of the CAP Agri-environmental Program, have been implemented since 1992. Further development of organic farming, however, requires continuous and consistent action, including the careful design of a major initiative or program linked to education, training, research, extension and information. This initiative should support the implementation of most measures advanced in the previous point, stimulating the exchanges among EU member countries and the development of joint projects.

An important step in this direction could be the promotion, by EU institutions, for a series of policy workshops with the specific aim of defining policy, with a broad range of actors (researchers, experts, farmer representatives and others) in the following activities: the identification of the major objectives and dimensions of the initiative; the establishment of a set of global research priorities; the formulation of a set of priorities and actions in education and training; the creation of a set of priorities and actions on consumer information and promotion of organic products; and the implementation of future policy mechanisms to support the gradual and consistent acceptance of all priority actions.

References