The World of Organic Agriculture

Statistics and Emerging Trends 2007

Edited by Helga Willer & Minou Yussefi

Willer, Helga and Minou Yussefi (Eds.) (2007)
The World of Organic Agriculture. Statistics and Emerging Trends 2007. 9th edition, totally revised and updated.
International Federation of Organic Agriculture Movements IFOAM, Bonn, Germany & Research Institute of Organic Agriculture FiBL, Frick, Switzerland
ISBN IFOAM: 3-934055-82-6
ISBN FiBL 978-03736-001-9

International Federation of Organic Agriculture Movements (IFOAM), Charles-de-Gaulle-Str. 5, 53113 Bonn, Germany, Tel. +49 228 926 50-10, Fax +49 228 926 50-99, E-mail headoffice@ifoam.org, Internet www.ifoam.org
Research Institute of Organic Agriculture FiBL, Ackerstrasse, 5070 Frick, Switzerland, Tel. +41 62 865 72 72; Fax +41 62 865 72 73, E-Mail info.suisse@fibl.org, Internet www.fibl.org

Language Editing: Neil Sorensen, IFOAM, Bonn Germany
Layout: Helga Willer, FiBL, Frick, Switzerland
Printed on recycled paper by Medienhaus Plump, Rolandsecker Weg 33, 53619 Rheinbreitbach, Germany
Printed copies of this volume may be ordered directly from IFOAM or FiBL or via the IFOAM website at www.ifoam.org or via the FiBL shop at www.fibl.org/shop/, FiBL order number 1449.
Price: 20 Euros + postage for the printed copy, Download 15 Euros.
Download of the main chapters via www.organic-world.net is free of charge.

Table of Contents

Tables

Figures

Maps

1 Foreword Edition 2007

We herewith present the ninth edition of the study 'The World of Organic Agriculture' documenting current statistics, recent developments and trends in global organic farming. The Foundation Ecology & Agriculture (SOEL), the International Federation of Organic Agriculture Movements (IFOAM) and the Research Institute of Organic Agriculture (FiBL) have been collaborating on this project for several years now, with the support of NürnbergMesse. Since 2000 the latest global organic figures have been presented annually at the BioFach Fair in Nuremburg, of which IFOAM is the patron.

For this edition, the statistical information and all chapters were updated. A new addition is a chapter on organic wild collection which presents the results of a recent survey.

We are very thankful to the authors for contributing in depth information on their continent, their country or their field of expertise.

We are also very grateful to numerous individuals from all over the world, who helped us to compile the global statistical data by providing valuable information.

Particular thanks are due to Dirk Sthamer, who carried out the statistical survey organic agriculture worldwide 2007.

We are also very grateful to Neil Sorensen for the technical editing, for proofreading and for coordinating the production of this book and to the editors Helga Willer and Minou Yussefi for compiling the information.

Many thanks are due to Udo Funke from NürnbergMesse, the organizer of BioFach, who financially supported this as well as earlier editions of this study.

Bonn, Frick, Bad Duerkheim, February 2007

Angela B. Caudle
IFOAM Executive Director
Bonn, Germany

Urs Niggli
Director FiBL
Frick, Switzerland

Uli Zerger
Director SOEL
Bad Duerkheim, Germany

2 Editors' Note

We would like to express our gratitude to all authors and information providers who have made the publication of this yearbook possible. We think that this product improves with each edition, and this is due to the huge commitment of numerous experts from all over the world.

The next global organic survey will start by mid 2007. We would be very grateful if data - country and crop statistics – could be sent to us, but we will of course also contact all experts.

Should you notice any errors regarding the statistical data in this volume, please let us know; we will then correct the information in our database and use the corrected data for the 2008 edition. Please send any relevant information to helga.willer @ fibl.org.

Corrections will be posted at www.organic-world.net. The previous editions of 'The World of Organic Agriculture' can be downloaded here.

Helga Willer, FiBL, Frick, Switzerland

Minou Yussefi, SOEL, Bad Duerkheim, Germany

3 Organic Farming Worldwide 2007: Overview & Main Statistics

Minou Yussefi[1] and Helga Willer[2]

The Foundation Ecology & Agriculture SOEL and the Research Institute of Organic Agriculture FiBL have collected data about organic farming worldwide every year since 1999. Since the publication of the 2003 results, IFOAM has collaborated in the project. In an annual yearbook, the data are published together with articles from experts on the development of organic farming in the continents and on other issues related to the global development of organic farming.

This chapter summarizes the most important facts of the 2007 edition.

Recent Statistics

Organic agriculture is developing rapidly and is now practiced in more than 120 countries of the world. Its share of agricultural land and farms continues to grow in many countries. Furthermore, it can reasonably be assumed that uncertified organic farming is practiced in even more countries.

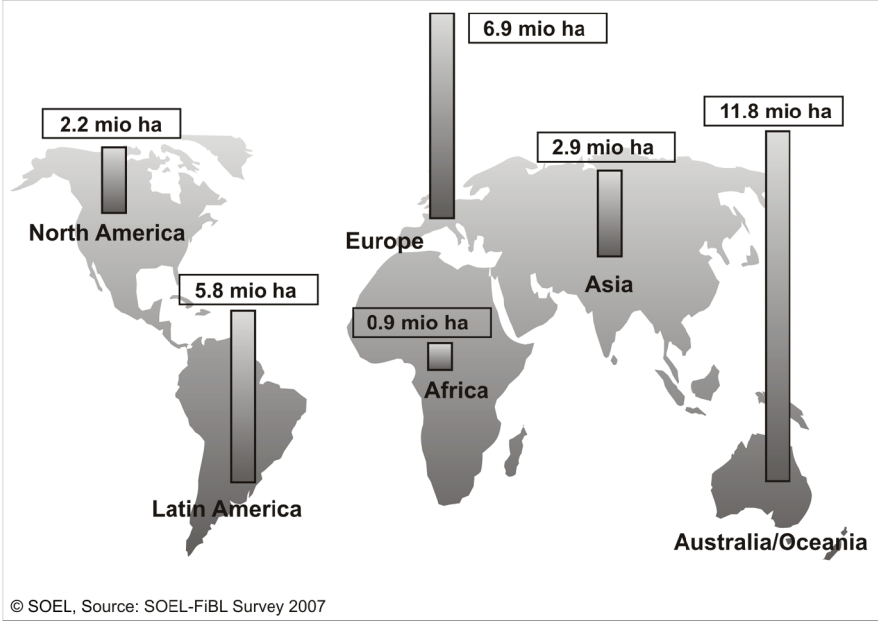
According to the latest survey on organic farming worldwide, almost 31 million hectares are currently managed organically by at least 633'891 farms. This constitutes 0.7 percent of the agricultural land of the countries covered by the survey (see chapter on the main results of the global organic survey 2007 and corresponding tables in the annex).

In total, Oceania holds 39 percent of the world's organic land, followed by Europe (23 percent) and Latin America (19 percent).

Currently, the countries with the greatest organic areas are Australia (11.8 million hectares), Argentina (3.1 million hectares), China (2.3 million hectares) and the US (1.6 million hectares). The number of farms and the proportion of organically compared to conventionally managed land, however, is highest in Europe.

There has been major growth of organic land in North America and in Europe; both continents have, compared to the end 2004, half a million hectares more each. In North America, this constitutes an increase of almost 30 percent, representing an exceptional growth. In most countries organic farming is on the rise; there have, however also been decreases of organic land (extensive pastoral land) in China, Chile and Australia.

[1] Minou Yussefi, Foundation Ecology & Agriculture SOEL, Weinstrasse Sued 51, 67098 Bad Duerkheim, Germany, www.soel.de
[2] Dr. Helga Willer, Communication, Research Institute of Organic Agriculture FiBL, Ackerstrasse, 5070 Frick, Internet www.fibl.org



Map 1: Organic agriculture worldwide

Source: SOEL-FiBL Survey 2007, Graph: Minou Yussefi, SOEL

The global survey on organic agriculture also contains information on the main land uses and the importance of some crops in a global context. For 90 percent of the organic land, at least some information on its uses was available. Data, though still quite incomplete, show, for instance, that the number one country for organic citrus fruit production is Italy; that Mexico is the biggest organic coffee producer or that the Dominican Republic is a major producer of organic cocoa. The leaders in organic grape production are Italy, Spain and France. Italy, Spain and Tunisia have the largest areas of organic olives.

Wild collection

In 2005, the International Trade Centre ITC and Organic Services carried out the study 'Overview of production and marketing of organic wild products'. This study shows registered areas of about 62 million hectares of organic wild collection, and a total number of 979 organic wild collection projects. The largest collection areas are in Europe and Africa (almost 27 million hectares each). In terms of quantities, the following products are the most important: bamboo shoots amount to 36 percent of the quantities collected, followed by fruits and berries (21 percent) and by nuts (19 percent) (see chapter on wild collection by Udo Censkowsky and Uli Helberg).

For the global statistics, this adds another 62 million hectares to the 30.6 million hectares of organic agricultural land.

Market

Global sales of organic food and drink have increased by 43 percent from 23 billion US-Dollars (17.8 billion Euros[1]) in 2002 with sales reaching 33 billion US-Dollars (25.5 billion Euros) in 2005. Organic Monitor expects sales to have approached 40 billion US-Dollars (30.9 billion Euros) in 2006. Although organic agriculture is now present in most parts of the globe, demand remains concentrated in Europe and North America. The two regions are experiencing undersupply because production is not meeting demand. Thus, large volumes of imports are coming in from other regions (see chapter on the global market by Amarjit Sahota).

Standards & Regulations

2006 was a very dynamic year concerning the development of a legal framework for organic production in the world: for example, Canada and Paraguay passed legislation, and others elaborated drafts or revised existing legislation. The revision process of EU regulation 2092/91 on organic agriculture, however, received the most international attention in 2006. The process began at the end of 2005, and was almost finalized in December 2006 when the European Agriculture and Fisheries Council agreed on the outline of the new organic regulation. The final decision is expected in the spring of 2007. Currently more than 60 countries have a regulation (see chapter on standards and regulations by Beate Huber, Lukas Kilcher and Otto Schmid).

Certification & Accreditation

Today, 395 organizations worldwide offer organic certification services. Most certification bodies are in Europe (160), followed by Asia (93) and North America (80). The countries with the most certification bodies are the US, Japan, China and Germany. Many of the certification organizations also operate outside of their home country. 40 percent of the certification bodies are approved by the European Union, 32 percent have ISO 65 accreditation, and 28 percent are accredited under the US National Organic Program.

Lacking acceptance and recognition between the different certification and accreditation systems can contradict the objective of enhancing trade, market development and fostering confidence. An important initiative for international harmonization is the IFOAM Accreditation Program, which assesses certification bodies against the IFOAM norms. Currently 32 certification bodies operating in over 70 countries around the world have voluntarily submitted themselves to the IFOAM accreditation process. A recent development is the International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF) aiming at a general consensus on harmonizing private with government and government with government standards/regulations (see chapter on certification and accreditation by Gerald Herrmann and Gunnar Rundgren).

[1] Exchange rate as of January 2007

Organic Agriculture by Continent

Africa

In Africa, organic production is rarely certified, and for many countries new figures were not available. Nevertheless, organic farming is increasing in Africa, especially in southern countries. An important growth factor in Africa is the demand for organic products in industrialized countries. Another motivation is the maintenance and building of soil fertility on land threatened by degradation and erosion.

Especially in poorer countries, organic agriculture can contribute to meaningful socio-economic and ecologically sustainable development. This is in part due to the application of organic principles, which translates into efficient management of local resources and therefore cost-effectiveness. Additionally, the market for organic products – at both the local and international level – has good prospects for growth and offers creative producers and exporters in the South excellent opportunities to improve their income and living conditions. Especially in the tropics, organic production reduces the risk of yield failure and stabilizes returns, thereby enhancing food security for small farmers' families. In the arid tropics, organically managed dry land soils have a greater potential for countering soil degradation and desertification, resilience to both water stress and nutrient loss are built into the system. (see chapter on sustainable development of Lukas Kilcher).

In Africa, almost 900'000 hectares are now managed and certified organic. With a few exceptions (notably Egypt and South Africa), the African market for organic produce is very small. This is due both to low-income levels and to an undeveloped infrastructure for inspection and certification. Most certified organic production in Africa is geared towards export markets, with the large majority being exported to the EU, Africa's largest market for agricultural produce.

There is a strong NGO interest in organic farming, because it is about making farming more sustainable and improving food security. There is also commercial interest in organics as it represents an interesting niche market, with a significant earning potential. The interest from governments, however, lags behind. At present Tunisia is the only African country with its own organic (EU compatible) standards, certification and inspection system. Egypt and South Africa have both made significant progress in this direction, and Kenya, Uganda and Tanzania are soon to follow. Those countries are well on the way to developing standards, and private certification organizations have been established there. Morocco, Ghana and Zambia have made some progress in developing their own standards (see chapter on Africa by Bo van Elzakker, Nicolas Parrott, Marjorie Chola Chonya, and Sam Adimado).

Asia

The total organic area in Asia is almost 2.9 million hectares, managed by almost 130'000 farms. For many countries there are still no precise figures available, but some countries, in which data were not previously recorded, now have statistical information available.

The majority of activities and development in the region is occurring without market regulation and certification. Organic rules have already been established in a number of Asian countries, including India, Japan, Korea, Philippines, Taiwan and Thailand. Organic rules tend to be mandatory in importing countries and voluntary in exporting countries. Only Israel and now India have attained equivalency status with the EU regulation (see chapter on Asia by Ong Kung Wai).

Australia/Oceania

This area includes Australia and New Zealand as well as smaller countries like Fiji, Papua New Guinea, Tonga and Vanuatu. Altogether, more than 11.8 million hectares and 2'689 farms are under organic management here. Most of this area is pastoral land for low intensity grazing in Australia. Important products in Australia include grains, fruit and vegetables, which are produced all year around, wine, dairy products, beef and sheep (both meat and wool) and herbs. In New Zealand, the main types of organic primary production are kiwifruit, apples, blueberries, fresh and processed vegetables, dairy, meat, viticulture, and aquaculture.

Growth in the organic industry in Australia has been strongly influenced by rapidly growing overseas demand. The key market for export of Australian organic products has changed over the years. In the early 2000s, it was Europe accounting for over 70 percent of Australian organic exports. Other countries such as Japan, USA, Singapore and Hong Kong were emerging as promising future export markets for Australian produce. For beef in particular, the USA is becoming an important export destination.

There is some government support to encourage organic agriculture per se. However, there are no subsidies for organic agriculture, neither in Australia nor in New Zealand. Australia has had national standards for organic and biodynamic products in place since 1992, and it is one of the countries on the third country list of the European Union - as is New Zealand. While these standards are only enforced for export products, they have acted as an informal standard domestically, though the term 'organic' was not legally protected in the domestic market place. However, in 2006 Standards Australia agreed to adopt organic standards which, once in place, can then be used by authorities to enforce on the domestic market. In New Zealand a National Organic Standard was launched in 2003, underpinning the various certification schemes that already exist. Through the launch of the New Zealand Organic Sector Strategy, there is Government acknowledgement of the importance of organics, but still only limited Government support.

While trends of rising consumer demand for organics are becoming discernible, the organic food market in Australia is still considered a niche market. On the domestic market, organic produce receives a substantial price premium over that of conventionally grown produce. Imported products are not only food and drinks, of which more than half is processed, primarily from New Zealand, the USA and the UK. Increasingly non-edible items such as cotton and personal care products are imported (see chapter on Australia/Oceania by Els Wynen and Seager Mason).

Europe

Since the beginning of the 1990s, organic farming has rapidly developed in almost all European countries. As of the end of 2005, 6.9 million hectares in Europe were managed organically by almost 190'000 farms. In the European Union, almost 6.3 million hectares are under organic management, and there are almost 160'000 organic farms. This constitutes 3.9 percent of the agricultural area. The country with the highest number of farms and the largest organic area is Italy.

Compared to the previous survey (as of December 2004), organic land increased by almost 510'000 hectares (+8 percent) in Europe as a whole and by 490'000 hectares (+ 8.5 percent) in the European Union. The increase in the EU is due to high growth rates in the new member states (for instance Lithuania and Poland) as well as substantial increases in Italy and Spain. Support for organic farming in the European Union includes grants under the European Union's rural development programs, legal protection under the recently revised EU regulation on organic faming (since 1992) and the launch of the European Action Plan on Organic Food and Farming in June 2004. Countries that are not EU members have similar support.

The European market is estimated to be between 13 and 14 billion Euros (2005). The biggest market for organic products is Germany with an annual turnover of 3.9 billion Euros, followed by Italy (2.4 billion Euros) and by France (2.2 billion Euros). The highest market share of organic products of the total market is in Switzerland with 4.5 percent, and the highest per capita consumption is also in that country with more than 100 Euros spent on organic food per year and citizen. Growth of the European market compared to the previous year is around ten percent. Some countries are currently experiencing a shortage of supply (see chapter on organic farming in Europe by Helga Willer, Toralf Richter and Susanne Padel).

Latin America

In Latin America many countries have more than 100'000 hectares of organic land, and having started from a comparatively low level, there have been extraordinary growth rates in the previous years. The total organically managed and certified area is now 5.8 million hectares. Almost all Latin American countries have an organic sector, though the level of development varies widely. The countries with the highest proportion of organic land are Uruguay, Mexico and Argentina. A major part of the 3.1 million organic hectares in Argentina are extensive grassland.

In general, the organic movement in Latin America has grown through its own efforts. No government provides direct subsidies or economic aid for organic production. There are, however, exceptions:

In Brazil, the government issued an inter-ministerial Pro Organic Plan, officially stimulating organic production, research, association building, marketing and trade. In Bolivia an action plan for the 'Promotion of the development of ecological production and establishment for a national control system' was recently launched. Costa Rica and some others have official funding for research and teaching, Argentina and Chile have had official export agencies helping producers attend international fairs and print product catalogues, and in Mexico there is a growing interest from national and state agencies. In places there has been seed funding for extension and association building from international aid agencies, especially from Germany, the Netherlands and Switzerland.

Export is still the main organic activity in Latin America. From the coffee grains and bananas of Central America, to the sugar in Paraguay and the cereals and meat in Argentina, the trade of organic produce has been mostly oriented towards foreign markets (see chapter on Latin America by Pipo Lernoud).

North America

In North America almost 2.2 million hectares are managed organically, representing approximately a 0.6 percent share of the total agricultural area. Currently, the number of farms is about 12'000. Compared to the other continents North America had the highest growth of organic land: The organic land area increased by almost thirty percent.

With the US national rule in place, the organic sector has been able to provide a guarantee to consumers that those organic products using the new labeling mean that specific practices were followed. The US market has seen more and more organic products being introduced, the number of certification agencies accredited by USDA has grown, and talks are progressing to expedite international trade of organic products.

Since 1999, the Canadian industry has had a voluntary Canada Organic Standard that is not supported by regulation. The organic industry continues to devote its energies toward implementation of a mandatory national organic regulation to help expedite trade relations with such major trading partners as the United States, European Union, and Japan.

Valued at about 14.9 billion US-Dollars (11.5 billion Euros) in 2005, the North American market accounted for 45 percent of global revenues. A large increase in organic farmland and organic food production in the US could make it the largest exporter of organic products. Growing consumer demand for healthy & nutritious foods and increasing distribution in conventional grocery channels are the major drivers of market growth (see chapter on organic farming in North America by Barbara Haumann).

Developments within IFOAM

For IFOAM, which unites the organic movement worldwide, 2006 proved to be another outstanding year.

Several important milestone were achieved, including: the establishment of the Organic Certification Body Forum that aims to increase cooperation and communication between certification bodies worldwide; the launch of a joint project to facilitate the development of East Africa Standards with the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Environment Program (UNEP); and a joint project with the International Fund of Development IFAD called 'Building Capacities on Certification of Organic Agriculture in the Pacific'.

IFOAM also organized three major international conferences in 2006 to offer a platform for interested and engaged people in the organic movement: the IFOAM International Conference on Organic Wild Production, the IFOAM International Conference on Animals in Organic Production and the IFOAM Conference on Organic Certification. Various other positive developments and events in 2006 have provided IFOAM with the confidence and energy to continue leading the organic movement.

A highlight in 2007 will be the international conference on organic agriculture and food security, to be held at the headquarters of the Food and Agriculture Organization of the United Nations (FAO) in Rome, Italy. The FAO invited IFOAM to organize this conference in collaboration with the World Wildlife Fund (WWF), the Third World Network (TWN) and the Rural Advancement Foundation International (RAFI).

IFOAM is confident that the current challenges will turn out to be opportunities for new developments, from which the whole organic industry, in all its different settings and diverse localities, can profit (see chapter 18 by Angela B. Caudle and Gabriele Holtmann).

4 The Global Survey on Organic Farming 2007: Contacts, Data Sources, Data Processing

Contacts and data sources

Dirk Sthamer[1]

The SOEL-FiBL survey on global organic farming was undertaken between September 2006 and January 2007. For the second time the survey includes information on land use patterns.

Contacts and information resources

Various information sources were used. Most of the data were supplied through national contact persons. We aimed to use the same contacts as for the 2006 survey. A detailed description of how these contacts were found is available in the 2006 edition of 'The World of Organic Agriculture' (Baraibar 2006). However, not all contacts responded, and as a result new contacts had to be found for some countries. For a complete list of who provided data, see the tables in the continent chapters. See also the chapter on information resources for details on the resources listed below.

The contacts and information sources can be classified as follows:

- Members of the International Federation of Organic Agriculture Movements (IFOAM), Bonn, Germany, www.ifoam.org
- National and international certification bodies
- Eurostat, the Statistical Office of the European Union, Luxembourg, Data sets organic farming
- Data from agricultural ministries
- Contacts and data provided by the Research Institute of Organic Agriculture FiBL, Frick, Switzerland, EkoConnect, Dresden, Germany, the Mediterranean Agricultural Institute IAMB, Bari, Italy and other institutions with good networks.
- Organic Agriculture Information Management System (Organic-AIMS) of the Food and Agriculture Organization FAO, Rome, Italy, www.fao.org/organicag/frame6-e.htm

[1] Dirk Sthamer carried out the SOEL-FiBL survey 2007 at Foundation Ecology & Agriculture SOEL. Contact is via SOEL, Weinstrasse Sued 51, D-67098 Bad Dürkheim, www.soel.de

Scope of the survey: countries and land use information covered

192 countries are part of the United Nations[1]. If Vatican City, Hong Kong, Palestine, Taiwan and Western Sahara are included, the total is 197 countries[2]. Of these, 133 could be contacted, and 106 provided new data (from December 31, 2005). For countries that could not be contacted (17), older data was used. For 74 countries, no data at all were available. As a result, the survey covered 63 percent of all countries (see table below).

Table 1: Percentage of countries by continent that answered the survey

	Number of countries that provided new data (31.12.2005)	Number of countries for which older data are available	Number of countries with data on organic agriculture	Number of countries with no information	Total countries	Percent of countries that provided data
Africa	21	3	24	32	56	43%
Asia	25	6	31	18	49	63%
Australia/Oceania	3	-	3	9	12	25%
Europe	39	1	40	5	45	89%
Latin America	16	7	23	10	33	70%
North America	2	-	2	0	02	100%
Total	106	17	123	74	197	63%

- Australia/Oceania: Three of the twelve countries were covered. The nine countries that did not provide data are small islands.
- In Africa, data collection remains difficult. The availability and quality of information is improving in many countries, but this cannot be said for all countries, as many suffer from unstable political situations.
- Asia: More than 60 percent of the Asian countries answered the survey, and new countries like Cambodia and East Timor were included for the first time.
- Europe: Almost 90 percent of the European countries are covered by the survey. In Europe, most agricultural ministries collect and provide data on organic farming. Furthermore, the Eurostat database is a helpful tool in terms of data collection on organic farming. Countries that did not answer were Belarus, San Marino, Andorra, Monaco and Vatican City. Apart from Belarus, agriculture is of only little importance in these countries.
- Latin America: 70 percent of the countries in Latin America were covered by the survey, with Argentina and Brazil being the largest.
- North America: the United States and Canada supplied very good data, including breakdowns of land use patterns.

1 United Nations, List of Member States, The UN Homepage, www.un.org/Overview/unmember.html

[2] Vatican City is observer country of the UN; Palestine and Western Sahara are recognized by many countries as sovereign but not de facto as independent; Hong Kong is special administrative region of the People's Republic of China (listed as we received separate data), Taiwan is not recognized by the UN.

Classification of land use data

Bàrbara Baraibar[1] and Helga Willer[2]

Classification of data

For the data collected under the 2007 global survey, the classification system developed for the 2006 survey was used, but slightly modified. When the 2006 survey began, FiBL did not yet have a classification system, as it was not known what kind of data would be available, if any (Baraibar 2006). As the data were collected, a classification system was developed according to the kind of data received. FiBL and SOEL are planning to improve the classification system and to ultimately bring it in line with classification systems that are currently being developed for organic farming.

As with the 2006 survey (Baraibar 2006), the following problems were found[3]:

- Standardization on a world level is lacking, and data is seldom comparable between countries, even though availability and quality of the statistics have improved in many countries.
- The perception of agriculture in different countries generated a huge variety of ways to provide the information, and aggregation levels vary significantly.
- Other ranking problems occurred when trying to classify a crop used in differing ways around the world (e.g. flax can be an industrial crop used for fiber or an oilseed).

The FAO statistical system

For this survey, the general FAO classification system for main land uses[4] was utilized with slight modifications. Five main levels were used to classify the land use and crop data: arable land, permanent crops, permanent pastures/grassland, other crops and other. Wild collection was not included into the general survey, even though the data were stored when available.

---

[1] Bàrbara Baraibar. Higher School of Agronomy (ETSEA). University of Lleida, Av. Rovira Roure, 191. 25198 Lleida, Spain
[2] Dirk Sthamer carried out the SOEL-FiBL survey 2007 at, Foundation Ecology & Agriculture SOEL. Contact via SOEL, Weinstrasse Sued 51, D-67098 Bad Dürkheim, www.soel.de
[3] As described by Baraibar (2006) organic data collection, processing and classification on a global level are not yet as developed as for agriculture in general. In spite of the dynamic growth of organic farming in many countries, most existing systems for agricultural statistics do not include organic agriculture figures. Many efforts, however, are currently being made – for instance by the FAO (Mayo 2004) or by Eurostat – to build a standardized system that will finally make it possible to have high quality, easily accessible and comparable statistical information. Another current activity is the European funded project European Information System for Organic Markets (EISfOM), aiming to develop a framework for the collection and processing of reliable and comprehensive data on organic production and markets (Rippin et al. 2006).
[4] This system is used for instance by Faostat to classify land use data and can be found at FAOSTAT (http://faostat.fao.org/) > Archives > Land use and irrigation http://faostat.fao.org/site/418/default.aspx, download of January 7, 2007

The main land use categories from the FAO were modified for the global organic survey as follows[1]:

- Arable Land

Land under temporary crops, temporary meadows for mowing or pasture, land under market and kitchen gardens and temporarily fallow land (less than five years). Abandoned land resulting from shifting cultivation is not included in this category. Data for 'Arable land' are not meant to indicate the amount of land that is potentially cultivable.

- Permanent Crops

Land cultivated with crops that occupy the land for long periods and need not to be replanted after each harvest, such as cocoa, coffee and rubber. This category includes land under flowering shrubs, fruit trees, nut trees and vines, but excludes land with trees grown for wood or timber.

- Permanent Pasture

Land used permanently (five years or more) for herbaceous forage crops, either cultivated or growing wild (wild prairie or grazing land).

- Other crops (FAO: Non-arable and permanent crops')

This category was used for crops that did not fit into the other categories or for which details were not known. For this survey, the category was also used when crops of the arable and the permanent crop category had been put into one group by the data suppliers (e.g. olives and annual oil crops).

- Other

The FAO has a category 'Forest and Woodland'. In this survey, forest, aquaculture and the unutilized land categories were all grouped under 'Other'.

- No information

This category covers land for which no details were available.

Data Storage and classification

The huge amount of information gathered was entered into a database created for this purpose. The data was entered into this database at three levels:

1. Main category (arable land, permanent crops, permanent pastures/grassland, other crops, other). The main categories have already been explained (see above).

2. Crop category (main crop groups like cereals)

This second category was used to classify the main groups of crops within each main category. Because the information provided was very different from one country to another, this classification level aims to include the most important crop groups all over the world.

3. Crop (individual crops)

This last category includes specific crops grown organically around the world. They can be as specific as 'maize for silage' and general as 'greenhouse cultivated vegetables'.

[1] See FAOSTAT homepage at http://faostat.fao.org/ > Metadata > Concepts and definitions > Methodology (search) > 'Land use' at http://faostat.fao.org/site/362/default.aspx, download of January 7, 2007

The classification used for the data gathered in the survey is below. The fact that a crop is not included in this table does not mean that it is not grown organically, but that mo specific data it was received.

Arable land

- Cereals

Ajonjoli, amaranth, barley, buckwheat, emmer wheat, grain maize, oats, rice, rye, quinoa, sorghum, spelt wheat, triticale, wheat, other cereals

- Field fodder growing

Feed legumes, Lucerne (Medicago), maize for silage, maslin (mixed cultivation of either different cereals or mixed cultivation of cereals and pulses), temporary grassland, other field fodder growing

- Flowers and ornamental plants

Roses, tagetes, other flowers and ornamental plants

- Medicinal and aromatic plants and spices,

Aloe Vera (Sabila), black pepper, caraway, citronella, chamomile, geranium, ginger, herbs for essential oil, lavender, leaf herbs, lemongrass, patchouli, sienna pods, ververt

- Industrial crops

Cotton, flax, hemp, jojoba, other industrial crops

- Oilseeds

Mani (***Arachis hypogaea***), pumpkin seeds, rape and turnip rape, safflower seeds, sesame seeds, sunflower seeds

- Vegetables

Brussel sprouts, cabbage, carrot, garlic, greenhouse cultivation, onion, parsley, pepper, Savoy cabbage, other vegetables, tomatoes

- Root crops

Fodder roots and brassicas, potatoes, sugar beets, other root crops

- Protein crops

Beans, legumes, peas, pulses, soy, other protein crops

- Other arable crops

Chile, 'esponja' (***Luffa acutangula***), jamaica, tobacco, panela, other arable crops

- Seed production

Seeds and seedlings

- Set-a-side/ green manuring

Permanent crops

- Fruits and nuts

Almonds, apples, apricots, blackberry, blueberry, carob trees, cherries, chestnut, citrus, lemon, fig, hazelnut, nuts, peach, pear, peanuts, pecano (***Carya illinoensis***), pimberrien, plum, pomegranate, raspberry, sour cherry, strawberries, walnut kernel, other fruits and nuts

- Grapes

Grapes, sultanas, currants

- Olives

- Coffee

Coffee and coffee associated with other crops

- Cocoa

- Sugarcane
- Tropical fruits

Araza or Amazon peach (Eugenia stipitata), avocado, banana, cactus, coconut, dates, guava, guineo, jocote (Spondia Purpurea L), litchi, mamey (Mammea americana L), mango, 'marañon' (Anacardium occidentale L), 'nanche' (Byrsonima crassifolia), orito (Musa acuminata), papaya, passion fruit, pineapple, pitaya (Hilocereus undatus).

- Permanent crops

Various Hops, guar gum, gum Arabic, hibiscus, kiwi, kaki, macadamia, neem (Azadirachta indica), palm oil, palmito (Bactris gasipaes Kunth), vanilla, yucca, Other permanent crops

- Tea

Other crops

- Unknown/mixed, e.g. permanent crops and arable crops together.

Permanent pastures

- Permanent pastures, permanent meadows

Other

- Unutilized land, forest, aquaculture

Further Reading

Baraibar, Bàrbara (2006): Contacts and Data Sources. In: Willer/Yussefi (Eds.) The World of Organic Agriculture 2006, International Federation of Organic Agriculture Movements, Bonn, Germany and Research Institute of Organic Agriculture FiBL, Frick, Switzerland

Baraibar, Bàrbara (2006): Data Collection and Processing. In: Willer/Yussefi (Eds.) The World of Organic Agriculture 2006, International Federation of Organic Agriculture Movements, Bonn, Germany and Research Institute of Organic Agriculture FiBL, Frick, Switzerland

Mayo, Robert (2004): Organic agricultural statistics and information at the United Nations Food and Agriculture Organization: initiatives, opportunities and challenges. In: Recke, Guido; Willer, Helga; Lampkin, Nic and Vaughan, Alison, Eds. (2004) Development of a European Information System for Organic Markets - Improving the Scope and Quality of Statistical Data. Proceedings of the 1st EISfOM European Seminar, held in Berlin, Germany, 26-27 April 2004. FiBL-Report. Research Institute of Organic Agriculture (FiBL), CH-Frick. http://orgprints.org/2935/

Rippin, Markus; Vitulano, Susanna; Zanoli, Raffaele and Lampkin, Nicolas (2006) Synthesis and final recommendations on the development of a European Information System for Organic Markets. = Deliverable D6 of the European Project EISfOM QLK5-2002-02400. Report, Institute of Rural Sciences, University of Wales. http://orgprints.org/8961/

Rippin, Markus (2006) Classification List for Land Use and Livestock Data. Zentrale Markt- und Preisberichtstelle für Erzeugnisse der Land-, Forst- und Ernährungswirtschaft GmbH, DE-Bonn. http://orgprints.org/9109/

Rippin, Markus; Willer, Helga; Lampkin, Nicolas and Vaughan, Alison, Eds. (2006) Towards a European Framework for Organic Market Information. Proceedings of the Second EISfOM European Seminar, Brussels, November 10 & 11, 2005. Research Institute of Organic Agriculture FiBL, Frick, Switzerland. http://orgprints.org/6054/

5 The Global Survey on Organic Farming 2007: Main Results

Helga Willer[1], Minou Yussefi[2], Dirk Sthamer[3]

In this chapter, we present the main results of the 2007 global survey on organic land area, land use and organic farms carried out by SOEL and FiBL

Presentation of the statistics in this book

The statistics compiled under the 2007 survey can be found at various places in this book.

The general global statistics, including information on land area and farms and an overview of the general land use and some crop details, are available in *this chapter:*

- Organic land area and organic farms by continent.
- Share of organic land of the continents' agricultural area.
- Statistical information on main land uses (arable crops, permanent crops, permanent pastures, other) globally.
- Global statistics on the main arable and permanent crop categories.
- Statistical information on main land uses in the continents.
- Some crop statistics: Graphs showing the main countries for the production of cereals, citrus fruits, coffee, cocoa, cotton, grapes, rice, olives, wheat. Detailed information on some crops is available in the 2006 edition of 'The World of Organic Agriculture' (Willer/Yussefi 2006): Cocoa (Garibay 2006), coffee and cotton (Baraibar 2006) as well as grapes (Geier 2006).

In the *continent chapters* of this book, the following results of the global organic survey are available:

- Land area, share of total agricultural area and farms by country.
- Information and data sources for the country data. These sources refer to all country related data including land use and crop data.

In the *annex,* the results of the global survey on organic farming are presented in full detail:

[1] Dr. Helga Willer, Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH-5070 Frick, www.fibl.org
[2] Minou Yussefi, Foundation Ecology & Agriculture SOEL, Weinstrasse Sued 51, D-67098 Bad Duerkheim, www.soel.de
[3] Dirk Sthamer carried out the SOEL-FiBL survey 2007 at, Foundation Ecology & Agriculture SOEL. Contact is via SOEL, Weinstrasse Sued 51, D-67098 Bad Dürkheim, www.soel.de

- Country list with information on land under organic management, share of organic of agricultural land and numbers of farms.
- Country list with land under organic management, sorted by global importance.
- Country list with information on share of organic of agricultural land, sorted by global importance.
- Country list with information on numbers of farms, sorted by global importance.
- Country list with land use and crop details. Global organic land use by main crop categories.

Developments at a global level

According to the 2007 survey[1], almost 31 million hectares are currently managed organically by more than 600'000 farms worldwide. This constitutes 0.7 percent of the agricultural land of the countries covered by the survey.

The continent with most organic land is Australia/Oceania with almost 11.9 million hectares, followed by Europe with almost 7 million hectares, Latin America (5.8 million hectares), Asia (almost 2.9 million hectares), North America (2.2 million hectares) and Africa (almost 0.9 million hectares).

On a continent level, the share or organic land in proportion to all agricultural land is highest in Australia/Oceania (2.6 percent), followed by Europe. It should be noted, though, that some countries in Europe exhibit a much higher percentage; some countries have reached shares of more than ten percent of agricultural land (Austria, Switzerland). In the European Union, the share of organic land is almost four percent.

Table 2: Organic land and farms by continent

Continent	Organic land area (hectares)	Share of total agricultural area	Organic farms
Africa	890'504	0.11%	124'805
Asia	2'893'572	0.21%	129'927
Europe	6'920'462	1.38%	187'697
Latin America	5'809'320	0.93%	176'710
North America	2'199'225	0.56%	12'063
Oceania	11'845'100	2.59%	2'689
Total	30'558'183	0.74%	633'891

Source: SOEL-FiBL Survey 2007

[1] For reasons of statistical consistency we aimed to obtain the data as of December 31, 2005, for the 2007 survey, whereas in previous years we had tried to get the latest data available. Fo some countries the data as of mid 2006 would have already been available. On the other hand, for many countries the 2005 data were not yet available. In those cases we used the data of the previous surveys.

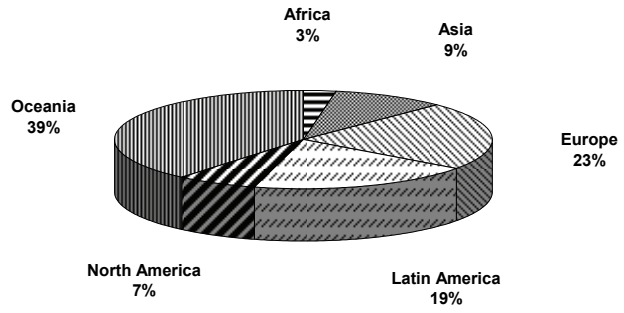


Figure 1: Distribution of global organic land by continent

Source: SOEL-FiBL Survey 2007

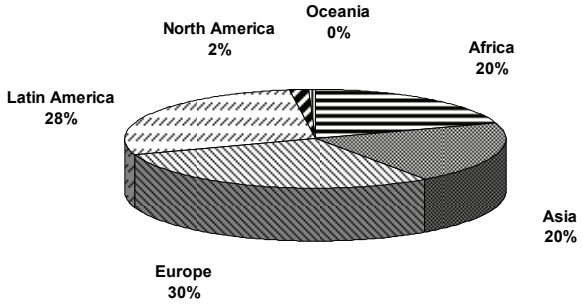


Figure 2: Distribution of organic farms by continent

Source: SOEL-FiBL Survey 2007

In most of the countries that provided new data, there has been an increase of organic land. The two continents of Europe and North America gained approximately half a million hectares each. This corresponds to an increase of 8 percent in Europe and of 29 percent in North America, representing exceptional growth.

Developments at a country level

Like in previous years, Australia is the country with most organic land. Number two is currently Argentina, which had an increase of 300'000 hectares, followed China. Major increases of organic land in the United States have made this country the new number four, followed by Italy. The top 10 countries have 23.7 million hectares together, thus constituting more than three quarters of the world's organic land. In the annex a table with all countries and their organic land, sorted by organic land area is available.

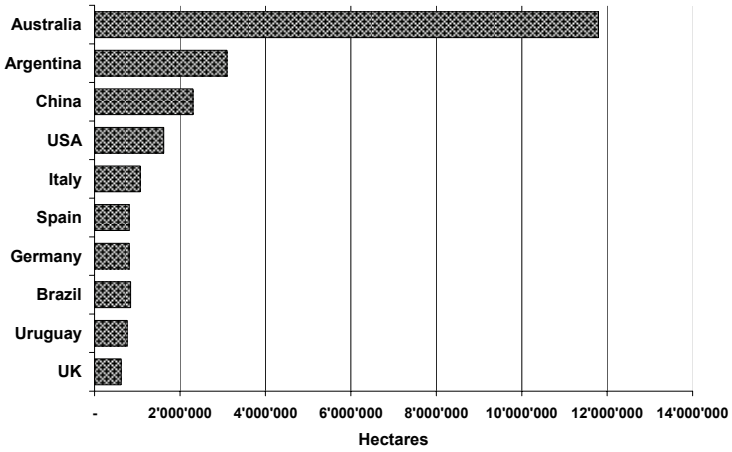


Figure 3: The ten countries with most organic land

Source: SOEL-FiBL-Survey 2007

In more than 60 countries covered by the survey, organic land has increased since the previous survey. Prominent examples are the United States (+400'000 hectares), Argentina (+300'000 hectares), Italy (+110'000 hectares) and Canada (+90'000 hectares). The top ten countries regarding increase of organic land in hectares had a growth of 1.2 million hectares. The highest relative increases were in several countries of Central and Eastern Europe (Latvia, Poland and Lithuania), but also in other countries (Italy, United States).

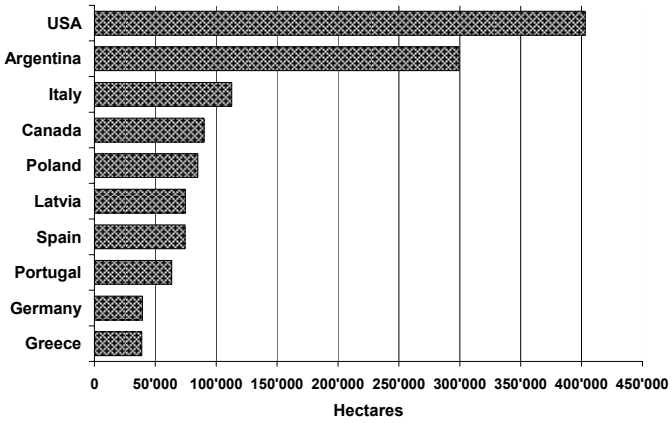


Figure 4: The ten countries with the highest increase of organic land area (hectares) according to SOEL–FiBL surveys 2006 and 2007

Sources: SOEL-FiBL surveys 2006 and 2007

It is also important to look at the share of organic land. The graph of the ten countries with the highest share of organic land shows that, with the exception of East Timor, the shares of organic land of the total agricultural area are highest in Europe.

The total agricultural land (as of 2003) for most countries was taken from the FAO Statistical database FAOSTAT[1]. For the European Union, most data (as of 2005) were taken from Eurostat[2]. Where available, we used the data for total agricultural land from ministries (US, Switzerland, and Austria). Please note that in some cases the calculation of the shares of organic land and farms based on the Eurostat and FAOSTAT data might differ from the organic shares communicated by the Ministries or experts.

In the annex, a table with all countries sorted by share of organic land is available.

[1] FAOSTAT, Data Archives, the FAO Homepage, FAO, Rome at faostat.fao.org > Data Archives > Land > Land Use; http://faostat.fao.org/site/418/DesktopDefault.aspx?PageID=418

[2] Eurostat, Agriculture & Fisheries Data, The Eurostat Homepage, Eurostat, Luxembourg, at ec.europa.eu/eurostat/ > Themes: Agriculture and Fisheries > Data > Agriculture, forestry and fisheries > Agriculture > Structure of agricultural holdings > Results of the farm structure surveys from 1990 onwards > General overview by area status > Key variables by region, agricultural area size classes and legal status; http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0,1136206,0_45570467&_dad=portal&_schema=PORTAL

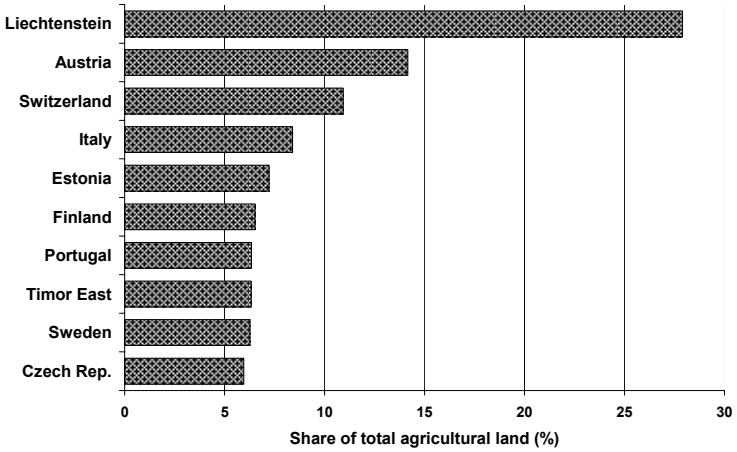


Figure 5: The ten countries with the highest share of organic land

Source: SOEL-FiBL survey 2007

As to the number of farms, the figures presented here have to be treated with caution, because in some countries only the number of enterprises, not the total number of farms, was included; some enterprises consist of many smallholder farms. Within the scope of this survey, it was not possible to discern the details.

According to the data obtained, the greatest number of farms is in Mexico, followed by Uganda, Italy and Sri Lanka. The small number of farms compared to the organic area in Australia is due to the fact that many farms are extensive sheep grazing farms. The figure for China – again small compared to the organic land - shows the number of enterprises but not the households involved in organic farming.

A table in the annex shows the countries of the world sorted by number of organic farms.

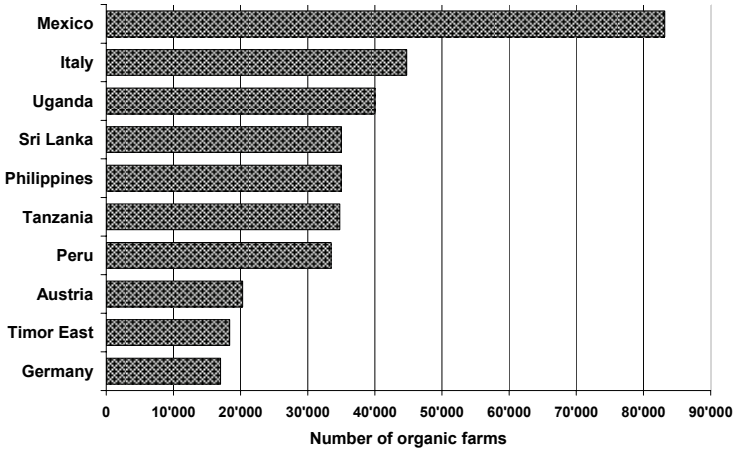


Figure 6: The ten countries with the highest number of organic farms

Source: SOEL-FiBL survey 2007

Results of the land use survey 2007

Data depth

When interpreting the following data, it should always be kept in mind that detailed information on land use was not available for all countries. This means that the information presented below is far from being complete, and with the available data, the following has to be considered:

- The depth of information may differ: For some countries, only information on the main uses (arable crops, permanent crops, and permanent grassland) was available. For Australia, for instance, only permanent grassland data were available. For other countries, very detailed statistical land use information can be found; the Danish statistics list each vegetable type.
- Aggregation: In order to make data accessible the data are aggregated in many statistics. This means various crops have been put together into one group. For instance, Spain combines cereals and leguminous crops, and it is thus impossible to have a figure solely for cereals. In such cases the data available have to be classified as 'other arable crops'. In cases where arable and permanent crops were mixed, the category 'other crops' was used. As a result, a lot of information was lost due to the inability to obtain a precise breakdown of the data.
- For some countries, no land use information was available at all.

Global land use

Compared to the previous survey, more land use information was available. In the 2006 survey, land use details were available for more than 16 million hectares; for the 2007 survey, land use information was available for 27 million hectares, 90 percent of organic land. It should be noted, however, that this does not mean that detailed crop information is available for every country (see table in the annex).

The table on the main land use categories and crop categories shows that more than half of the organic agricultural land for which land use information was available is used for permanent pastures/grassland. About one quarter is used for arable cropping, almost ten percent for permanent crops, followed by other crops and other land.

Table 3: Global organic land by main land use categories

Main category	Hectares
Arable land	4'156'754
Other	289'379
Other crops	1'550'272
Permanent crops	1'393'595
Permanent pastures/grassland	19'939'796
No information	3'228'387
Total	30'558'183

Source: SOEL-FiBL survey 2007

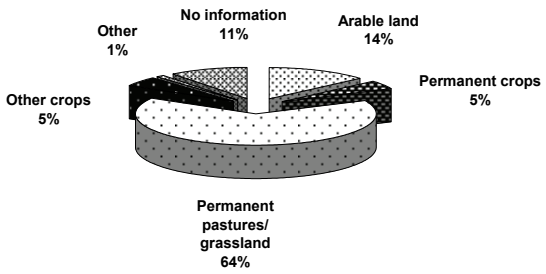


Figure 7: Global organic land use: Global organic land use, including share of land for which no information was available

Source: SOEL-FiBL survey 2007

Arable land

On a global level, arable land accounts for more than one quarter of the organic agricultural land for which information was available – a total of 4.1 million hectares of organic arable land was covered by this survey. Most of the world's organic arable land is in Europe, followed by North America and Asia. Most of the arable land is used for cereals, including rice, followed by field fodder crops (see graphs).

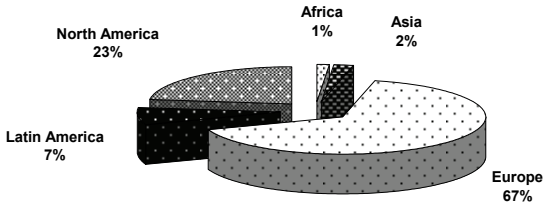


Figure 8: Arable land by continent: The continents' share of arable land

Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

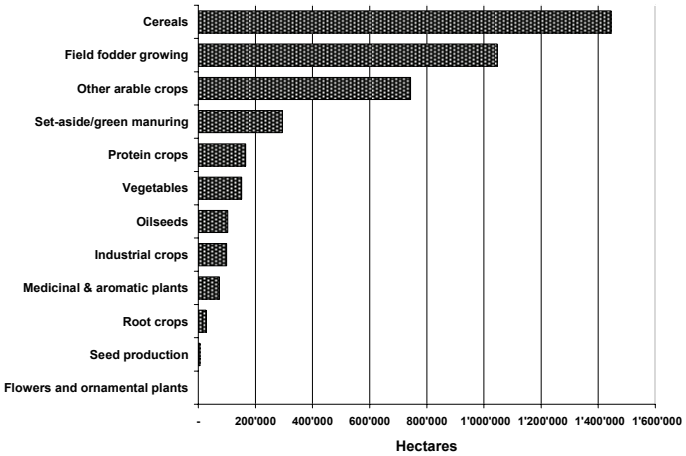


Figure 9: Use of organic arable land (hectares)

Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

Permanent crops

On a global level, permanent crops account for nine percent of the organic agricultural land for which information was available (1.4 million hectares). Most of this land is in Europe, followed by Latin America and Africa. The most important crops are olives (almost a quarter of the permanent cropland) followed by coffee, fruits and nuts.

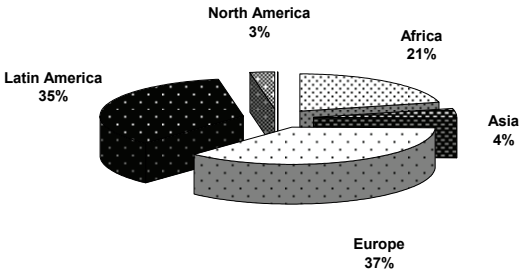


Figure 10: Permanent crops by continent (hectares)

Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

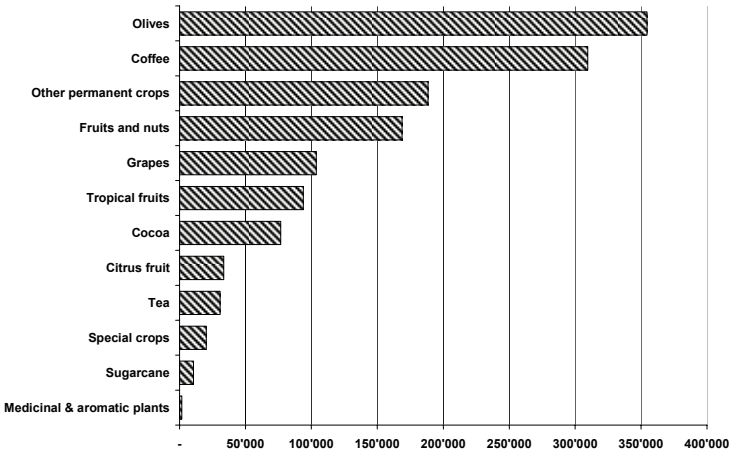


Figure 11: Use of organic permanent cropland (hectares)

Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

Permanent pastures/grassland

On a global level, permanent pastures/grassland (19.8 million hectares) account for almost two third of the world's organic land. More than half of this grassland is in Australia. Furthermore, large areas of permanent pastures are in Latin America and Europe.

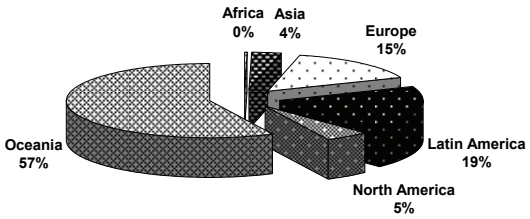


Figure 12: Permanent grassland by continent (hectares)

Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

Land use by continent

Looking at the land use at a continent level for each continent a different pattern emerges.

Table 4: Organic land by main category

Main category	Africa	Asia	Europe	Latin America	North America	Oceania	Total
Arable land	60'999	84'404	2'746'185	306'840	958'325		4'156'754
Other	37'396	990	240'462	10'531			289'379
Other crops	7'796	998'446	130'184	38'890	4'956	370'000	1'550'272
Permanent crops	292'522	59'123	512'538	488'934	40'378	100	1'393'595
Permanent pastures	35'716	710'900	2'995'695	3'776'461	991'024	11'430'000	19'939'796
No information	456'076	1'039'709	295'396	1'187'664	204'541	45'000	3'228'387
Total	890'540	2'893'572	6'920'462	5'809'320	2'199'225	11'845'100	30'558'183

Source: SOEL-FiBL survey 2007

Africa

For Africa (almost 900'000 hectares), information covering about half of the organic agricultural land was available. Most of this land is used for permanent crops. The main permanent crops are cash crops like olives (North Africa), followed by (tropical) fruits, nuts and coffee.

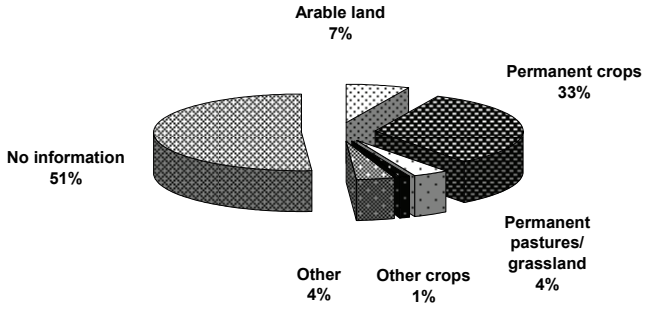


Figure 13: Land use in organic farming in Africa

Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

Asia

Some details are known for two thirds of the organic land in Asia (almost 2.9 million hectares). Arable land is mainly used for cereals, including rice. The most important permanent crops are coffee, fruits and nuts as well as grapes (see table in the annex). Large areas of extensive grazing land are in China.

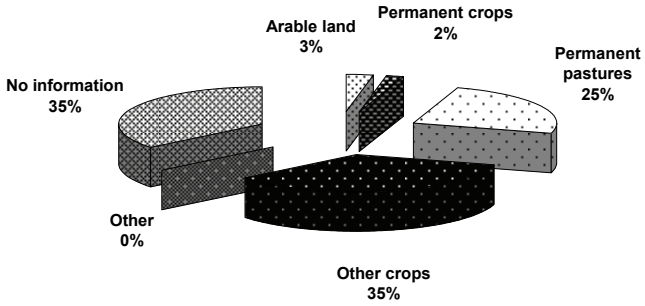


Figure 14: Land use in organic farming in Asia

Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

Australia/Oceania

Most of the land in Australia is used for extensive grassland. On the remaining land no or little information is available. 100 hectares of coconuts were reported from the Fiji Islands.

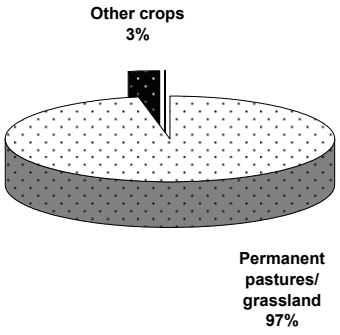


Figure 15: Land use in organic farming in Australia/Oceania

Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

Europe

In Europe (6.9 million hectares), the organic land uses are known to a good degree, and the main crop categories are well documented. Permanent pastures and arable land have approximately equal shares of the organic agricultural area. The main uses of the arable area include cereals, followed by the cultivation of field fodder. Permanent crops account for seven percent of organic agricultural land. More than half of this land is used for olives, followed by fruits, nuts, and by grapes.

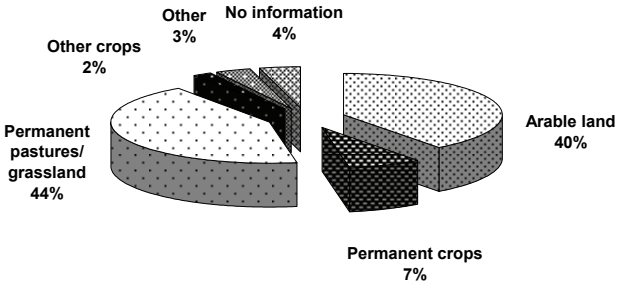


Figure 16: Land use in organic farming in Europe

Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

Latin America

For Latin America, (5.8 million hectares) most of the organic land, for which information was available, is permanent pasture. Permanent crops account for about eight percent of the agricultural area. The main crops are coffee, fruits, nuts and cocoa.

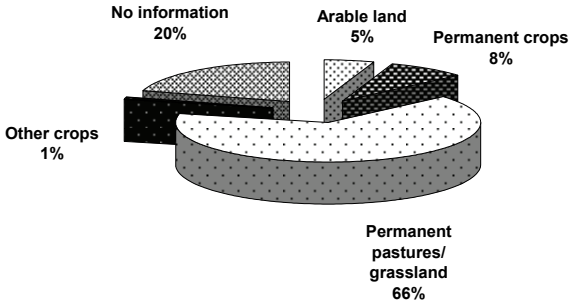


Figure 17: Land use in organic farming in Latin America

Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

North America

In North America, crop information was available for most of the the land. Like in Europe, arable land and permanent grassland have almost equal shares. Most of the arable land is used for cereal production.

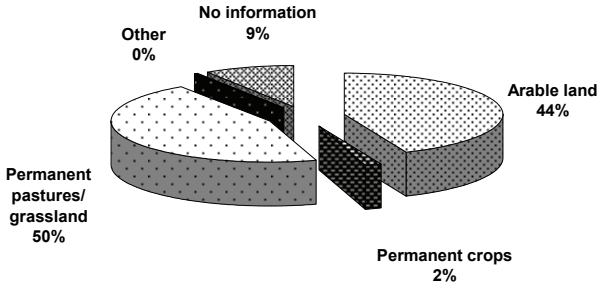


Figure 18: Land use in organic farming in North America

Source: SOEL-FiBL survey 2007

Statistics on important crops (graphs)

In this chapter, graphs showing the importance of major crops by country are presented: Banana, cereals, citrus fruit, cocoa, coffee, cotton, grapes, permanent pastures/grassland, olives, rice, tropical fruit, and wheat.

Please note that in the 2006 edition of 'The World of Organic Agriculture' detailed information is available on the following crops: Cocoa, coffee, cotton and grapes.

It should be noted that for many countries crop data are not available.

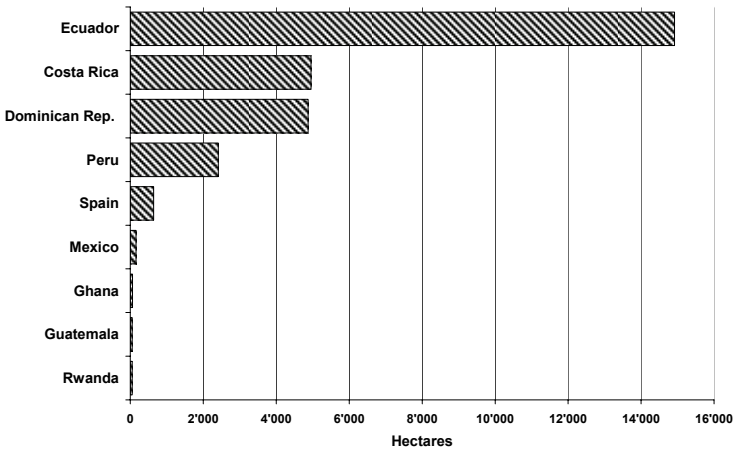


Figure 19: Organic banana production (hectares)

The most important countries according to the global organic survey 2007 (only countries with more than 50 hectares of bananas).
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

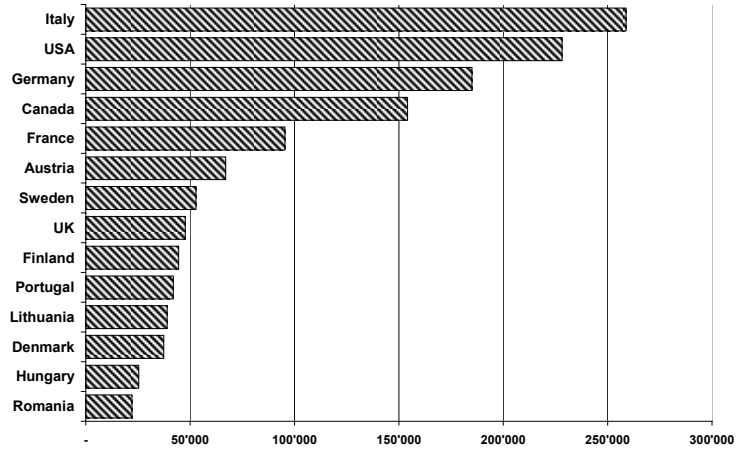


Figure 20: Organic cereal production (hectares)

The most important countries according to the global organic survey 2007 (only countries with more than 20'000 hectares of cereals).
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

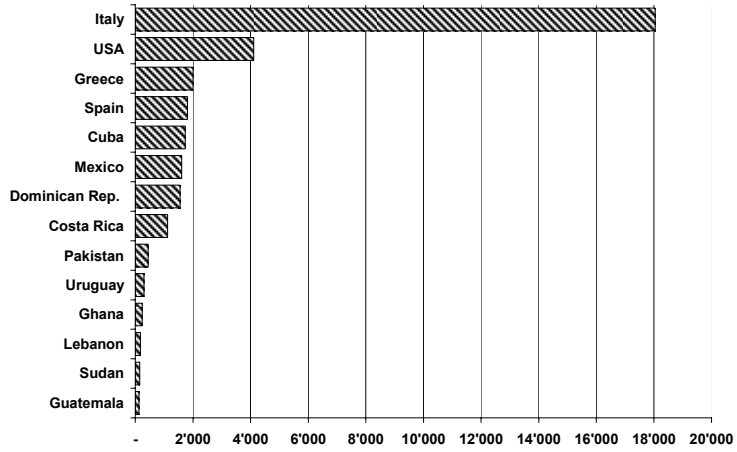


Figure 21: Organic citrus fruit production (hectares)

The most important countries according to the global organic survey 2007 (only countries with more than 100 hectares of citrus fruit).
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

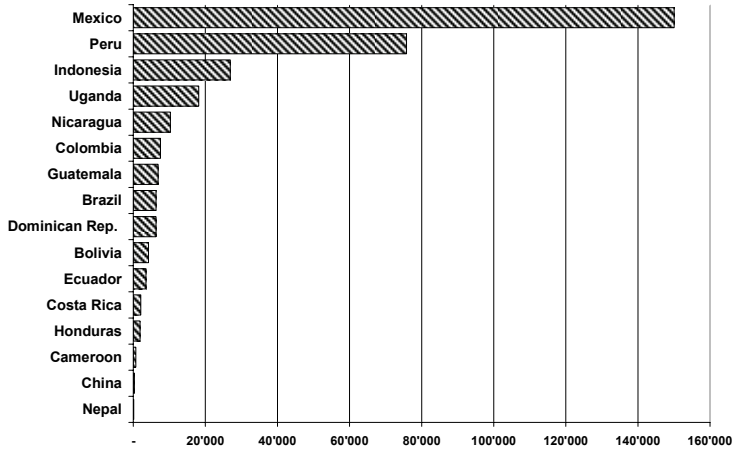


Figure 22: Organic coffee production (hectares)

The most important countries according to the global organic survey 2007 (only countries with more than 100 hectares of coffee)
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

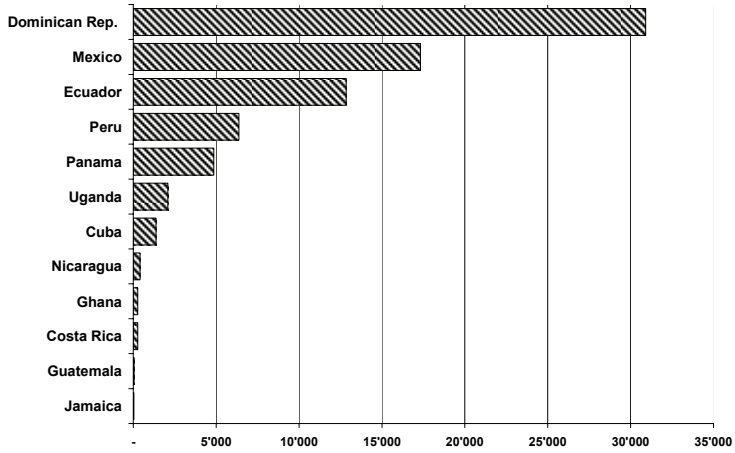


Figure 23: Organic cocoa production (hectares)

The most important countries according to the global organic survey 2007
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

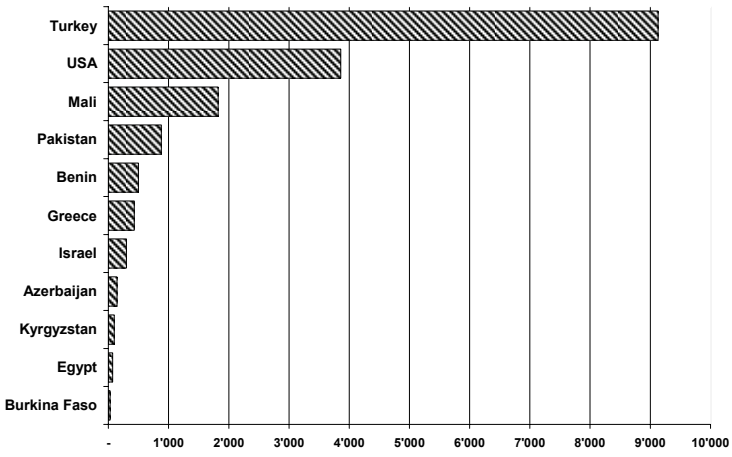


Figure 24: Organic cotton production (hectares)

The most important countries according to the global organic survey 2007
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

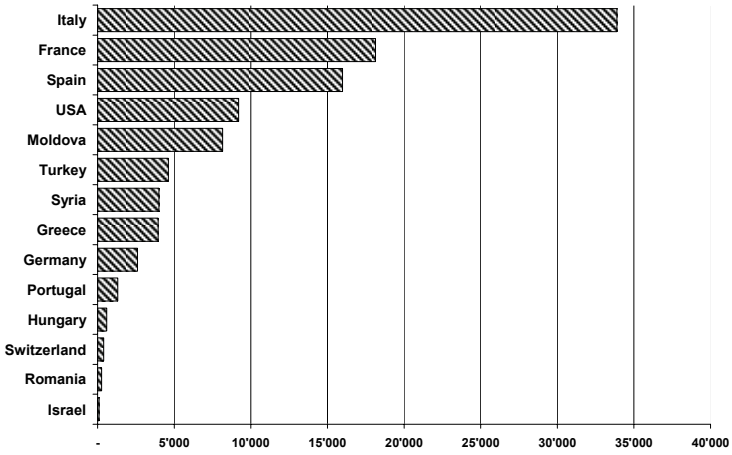


Figure 25: Organic grape production (hectares)

The most important countries according to the global organic survey 2007 (only countries with more than 100 hectares of grapes).
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

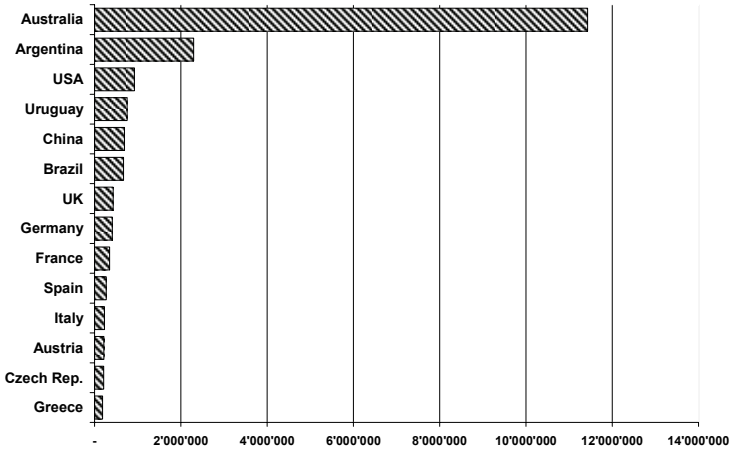


Figure 26: Organic permanent grassland (hectares)

Countries with major areas of organic permanent pastures/grassland according to the global organic survey 2007 (only countries with more than 100'000 hectares of grassland)
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

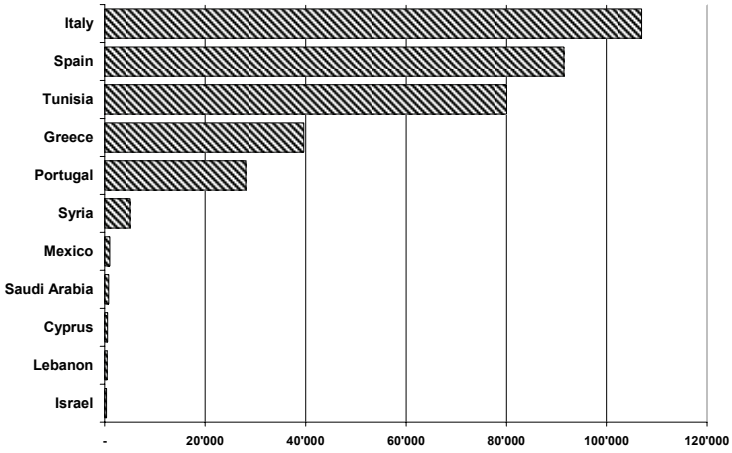


Figure 27: Organic olive production (hectares)

The most important countries according to the global organic survey 2007 (only countries with more than 100 hectares of olives)
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

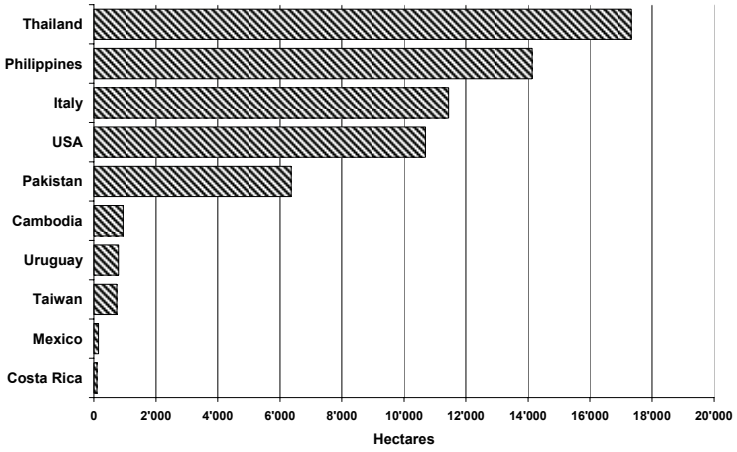


Figure 28: Organic rice production (hectares)

The most important countries according to the global organic survey 2007 (only countries with more than 100 hectares of rice)
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

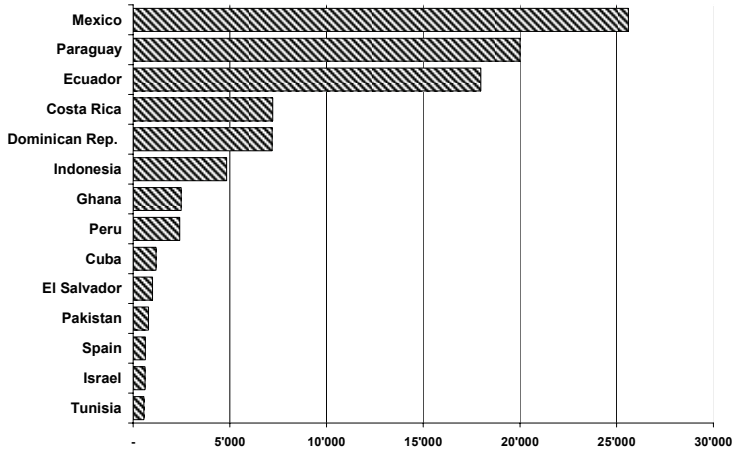


Figure 29: Organic tropical fruit production (hectares)

The most important countries according to the global organic survey 2007 (only countries with more than 100 hectares of tropical fruits)
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

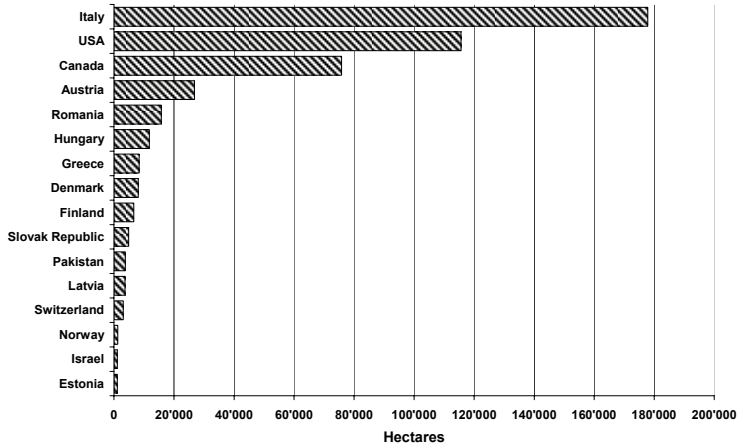


Figure 30: Organic wheat and spelt production (hectares)

The most important countries according to the global organic survey 2007 (only countries with more than 1'000 hectares of wheat and spelt)
Source: SOEL-FiBL survey 2007
Please note: information on land use, crop categories and crops was not available for all countries.

Further reading

Baraibar, Bàrbara (2006) Organic Coffee. In Willer/Yussefi 2006, Statistics and Emerging Trends. IFOAM, Bonn, Germany. pp 52-54, http://orgprints.org/5161/

Baraibar, Bàrbara (2006) Organic Cotton. In Willer/Yussefi 2006, Statistics and Emerging Trends. IFOAM, Bonn, Germany. pp 55-57, http://orgprints.org/5161/

Garibay, Salvador (2006) Organic Cocoa Production. In Willer/Yussefi 2006, Statistics and Emerging Trends. IFOAM, Bonn, Germany. pp 58-61, http://orgprints.org/5161/

Geier, Bernward (2006) Organic grapes – More Than Wine and Statistics. In Willer/Yussefi 2006, Statistics and Emerging Trends. IFOAM, Bonn, Germany. pp 62-65, http://orgprints.org/4858/

6 Data and Market Access Information

In this chapter, some of the major information sources for information related to organic farming are presented. The International Trade Centre (ITC) has recently considerably expanded its information and market access services. These are presented in detail.

Information sources: Overview

HELGA WILLER[1]

BioFach: Catalogue and BioFach Newsletter

NürnbergMesse, which runs the BioFach fair, the largest organic fair worldwide, publishes the BioFach Newsletter, which is a good source of information on developments in organic farming worldwide. Furthermore, it annually publishes a catalogue of all exhibitors; it is a useful tool for market actors. The addresses are also available in a database, which can be accessed via the BioFach homepage.

- BioFach - World Organic Trade Fair, Nürnberg Messe, Messezentrum Nürnberg, 90471 Nürnberg, Germany, Internet: www.biofach.de
- BioFach-Newsletter, Internet: www.biofach.de/main/d6vwip4x/d6szfm8q/page.html

Central Market and Price Reporting Bureau in Germany ZMP

The monthly information Bulletin of the German ZMP 'Oekomarkt Forum' has a news service that provides information about international developments in organic agriculture. Much of the statistical information was taken from this newsletter, especially for developing countries. ZMP has also developed a database with data on European organic farming, funded by the European Commission (EISfOM project) and the German Federal Organic Farming Scheme.

- General information is available at the ZMP homepage at www.zmp.de
- The ZMP organic market database is available at www.zmp.de/oekomarkt/Marktdaten-bank/en/index.asp.

[1] Dr. Helga Willer, Communication, Research Institute of Organic Agriculture FiBL, Ackerstrasse, 5070 Frick, Internet www.fibl.org

EkoConnect - International Center for Organic Agriculture of Central and Eastern Europe

EkoConnect is the International Center for Organic Agriculture of Central and Eastern Europe, and it is a member of the IFOAM. EkoConnect supports the exchange of information, knowledge and experiences in the field of organic agriculture. The organization also offers its network to people and their organizations engaged in the organic sector from Western and Eastern Europe.

Since March 2005, EkoConnect has published a bi-monthly newsletter about organic agriculture in Central and Eastern Europe.

- Homepage of the International Centre for Organic Agriculture of Central and Eastern Europe EkoConnect: www.ekoconnect.org/en_index.html

Eurostat Statistics on Organic Farming

Eurostat, the statistical office of the European Union, provides several data sets on organic agriculture for most EU countries. Eurostat also provides in depth reports about the statistical development of organic farming in Europe.

- A link to the various Eurostat databases and documents related to organic farming is available via the Organic Europe homepage: www.organic-europe.net/europe_eu/statistics-eurostat.asp.

Food and Agriculture Organization of the United Nations (FAO)

The FAO offers a wide range of information on organic agriculture on its organic farming internet site. In 2005, the FAO set up the Organic Agriculture Information Management System (Organic-AIMS), with country information on organic agriculture. The following aspects are covered: legal and institutional framework, institutions and experts. Selected documents are made available.

The FAO statistical database FAOSTAT, which can be found at the FAO internet page, provides useful statistical information on agriculture worldwide.

- Food and Agriculture Organization of the United Nations (FAO), Organic Agriculture, Viale delle Terme di Caracalla, 00100 Roma, Italy. Internet: www.fao.org/organicag.
- The general statistics are available at http://faostat.fao.org/default.aspx

Foreign Agricultural Service (FAS) of the United States Department of Agriculture (USDA): Reports & database

The attaché reports of the staff of the Foreign Agricultural Service (FAS) of the United States Department of Agriculture (USDA) provide in-depth information about organic farming in many countries of the world. The reports are available at the FAS Homepage.

- The attaché reports are available at www.fas.usda.gov/agx/organics/ attache.htm and www.fas.usda.gov/agx/organics/international.htm.

- The attaché reports database offers search options by products, countries and by date at www.fas.usda.gov/scriptsw/attacherep/default.asp.

International Federation of Organic Agriculture Movements (IFOAM)

The International Federation of Organic Agriculture Movements (IFOAM), the international umbrella organization of organic farming organizations worldwide. It has about 700 members in 108 countries, which are listed in its membership directory (IFOAM 2007). The IFOAM homepage www.ifoam.org provides useful information about organic farming worldwide. IFOAM also has also relevant publications.

- International Federation of Organic Agriculture Movements (IFOAM), Charles-de-Gaulle-Str. 5, 53113 Bonn, Germany, Internet: www.ifoam.org

International Fund for Agricultural Development (IFAD)

The International Fund for Agricultural Development (IFAD) is a specialized agency of the United Nations, dedicated to eradicating rural poverty in developing countries. Its homepage is a useful tool to learn more about the agricultural situation in many developing countries. IFAD conducted two thematic evaluations of organic agriculture and poverty reduction: one covering Latin America and the Caribbean (IFAD 2002), and one covering Asia, primarily China and India (IFAD 2005). The evaluations looked at the practice of organic methods and their relation to poverty reduction, food security and trade. They also analyzed small-farmer groups that have been successful in adopting organic technologies and in marketing their organic products.

- For more information about IFAD's work related to organic farming see www.ifad.org/evaluation/public_html/eksyst/doc/thematic/organic/organic.htm

International Trade Centre (ITC)

In 1999, the International Trade Centre (ITC) published its study 'Organic Food and Beverages: World supply and major European Markets'. The aim of this study is to inform developing countries about the market potential of organic products from their countries for the organic markets worldwide. Until today, this book is one of the key information resources on organic farming worldwide.

On the organic farming homepage of the International Trade Centre, individual aspects covered in the studies are continually expanded and updated. Detailed information on the ITC activities is available in the following chapter by Alexander Kasterine.

- www.intracen.org/organics

Organic Market Info

This website offers a wide range of information on organic farming in Europe and worldwide with a special focus on market news.

- www.organic-market.info/

Organic Monitor

Organic Monitor is a business research & consulting company that specializes on the global organic and related product industries. It provides a range of business services to organizations that are active in these industries. Services include business research publications, customized research and business consulting. The Organic Monitor homepage provides summaries of the research reports as well as market news.

- www.organicmonitor.com

The Organic Standard (TOS)

In 2000, 'The Organic Standard', a magazine concerned with international certification was launched. 'The Organic Standard', published by Grolink, provides regular and up-to date information on issues regarding organic farming worldwide, and a trial issue can be ordered via the internet site of the magazine.

- The Organic Standard www.organicstandard.com/
- Grolink www.grolink.se

Research Institute of Organic Agriculture FiBL

The FiBL Homepage www.fibl.org provides a wide range of information on the international work of the institution. Furthermore, FiBL maintains a few homepages of relevance to international organic farming like the Organic Europe homepage with country reports and addresses and the Organic World Homepage (links, currently being set up). FiBL also provides market studies (e.g. Kilcher et al. 2004).

- www.fibl.org, www.organic-europe.net and www.organic-world.net

References and further reading

Censkowsky, Udo, Ulrich Helberg, Anja Nowack, Mildred Steidle (2006) Overview of production and marketing of organic wild products. International Trade Centre (ITC), Geneva

El-Hage Scialabba, Nadia and Caroline, Hattam (Eds) (2002): Organic agriculture, environment and food security. Environment and Natural Resources Series 4. Food and Agriculture Organization of the United Nations FAO, Rome, Italy. Available at: www.fao.org/DOCREP/005/Y4137E/Y4137E00.htm

International Federation of Organic Agriculture Movements (IFOAM) (2006): Organic Agriculture Worldwide. IFOAM Directory of Member Organizations and Associates 2007. IFOAM, Bonn, Germany. Info available at http://shop.ifoam.org/bookstore/product_info.php?cPath=27&products_id=84

International Fund for Agricultural Development (IFAD) Evaluation Committee (2002): Thematic Evaluation of Organic Agriculture in Latin America and in the Caribbean. International Fund for Agricultural Development (IFAD) Evaluation Committee - Thirty-Second Session, Rome, 9 December 2002. Document available at www.ifad.org/gbdocs/eb/ec/e/32/EC-2002-32-W-P-3.pdf

International Fund for Agricultural Development (IFAD) / Fondo Internacional de Desarrollo Agrícola (FIDA), Unidad Regional de Asistencia Técnica (RUTA). Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), Organización de las Naciones Unidas para la Agricultura y la Alimentación (FAO) (2003): Memoria del Taller: Agricultura Orgánica: Una herramienta para el desarrollo rural sostenible y la reducción de la pobreza (Organic Agriculture, a tool to sustainable development and poverty reduction). Del 19 al 21 de mayo de 2003, Turrialba,Costa Rica 2003. Available at www.fao.org/es/esc/common/ecg/30476_es_RUTAtaller.pdf

International Fund for Agricultural Development (IFAD) (2005) Organic Agriculture and Poverty Reduction in Asia: China and India Focus. Thematic Evaluation = Document of the International Fund for Agricultural Development. Rome. Report No. 1664. Info available at www.ifad.org/evaluation/public_html/eksyst/doc/thematic/organic/index.htm. Full document available at www.ifad.org/evaluation/public_html/eksyst/doc/thematic/organic/asia.pdf

International Trade Centre (ITC) (1999): Organic food and beverages: world supply and major European markets. ITC, CH-Geneva, info at www.intracen.org/mds/sectors/organic/welcome.htm

International Trade Centre, Technical Centre for Agricultural and Rural Cooperation and Food and Agriculture Organization of the United Nations (Eds.) (2001): World Markets for Organic Fruit and Vegetables - Opportunities for Developing Countries in the Production and Export of Organic Horticultural Products. Food and Agriculture Organization FAO, Rome. Available at www.fao.org/docrep/004/y1669e/y1669e00.htm

Kilcher, Lukas; Khanna, Ranjana; Huber, Beate; Richter, Toralf; Schmid, Otto und Staubli, Franziska (2004): The Organic Market in Switzerland and the EU - Overview and market access information for producers and international trading companies. FiBL Forschungsinstitut für biologischen Landbau, SIPPO Swiss Import Promotion Program. Available at www.sippo.ch/files/publications/organic04.pdf

Parrot Nicolas and Terry Marsden (2002) The Real Green Revolution. Organic and agroecological farming in the South. Greenpeace, London, United Kingdom. Download at www. greenpeace.org/multimedia/download/1/36088/0/realgreenrev.pdf

Parrot, N. and Bo van Elzakker (2003): Organic and like minded movements in Africa. International Federation of Organic Agriculture Movements (IFOAM), Bonn. Information available at http://shop.ifoam.org/bookstore/product_info.php?products_id=43

United Nations Conference on Trade and Development (2004): Trading Opportunities for Organic Food Products from Developing Countries. Strengthening Research and Policy Making Capacity on Trade and Environment in Developing Countries. United Nations, New York and Geneva. Available at http://r0.unctad.org/trade_env/test1/publications/organic.pdf
The report offers a general overview on trading opportunities for organic products from developing countries.

Willer, H. and Minou Yussefi (2006). The World of Organic Agriculture 2006. Statistics and EmergingTrends. International Federation of Organic Agriculture Movements, Bonn, Germany. http://orgprints.org/5161/

The Organics Trade Development Programme (OTDP) of the International Trade Centre (ITC)

Alexander Kasterine[1]

The International Trade Centre (ITC) is the joint technical cooperation agency of the United Nations Conference on Trade and Development (UNCTAD) and the World Trade Organization (WTO). It works with the organic sector in developing countries through its Organics Trade Development Programmme (OTDP).

Developing countries face serious obstacles to the export of organic products, including meeting the quality demands of buyers, a lack of information about standards, dealing with the complexities and costs of certification, responding to market trends and establishing partnerships with potential importers. ITC works with small companies and trade support institutions in overcoming these obstacles and to increase access international markets. Through its Organics Trade Development Programme, ITC supports the development of the organic sector in developing countries through a number of channels, including the provision of market information, facilitating business-to-business contact, use of the internet, and developing trade through training in standards and certification and through policy support. The program is currently working in Ethiopia, Kenya, and Uganda. All UN Member States are eligible to join the program subject to availability of funding.

Developing trade through market information

The Organic Market News Service is a bimonthly publication for small and medium enterprises (SMEs) and trade support institutions in sub Saharan Africa. It carries information on prices, market trends, in depth features on selected organic products and geographical focus areas. There is no other reliable and regular free market information source that is currently available to developing country exporters on the market. This is a new initiative from ITC, to be launched in 2007.

Where there is demand for more in-depth information on products and their markets, the program carries out research on demand, quality requirements and trends. The OTDP published in 2006 a 2nd edition reissue of its successful 'Marketing Manuel for Organic Herbs, Spices and Essential Oils'. At the 2007 BioFach, it launched a new publication 'World Overview of Markets for Organic Wild Collected Products'.

[1] Dr. Alexander Kasterine, International Trade Centre (ITC), UNCTAD/WTO, Division of Product and Market Development, Market Development Section, Rue de Montbrillant, 54-56, 1202 Geneva 10, Switzerland , Internet: www.intracen.org/organics

Developing trade through the internet

Lack of contacts and reliable market information is one of the main problems facing exporters of organic products from developing countries. In response, the International Trade Centre has developed a new web portal called Organic Link. Organic Link (www.intracen.org/organics) is designed to facilitate contact between importers and exporters of organic products globally.

A freely available database of importers and exporters of organic products, NGOs and research centers is also available on the portal. This will enable buyers to find suppliers according to product and country of origin, and similarly, enable exporters to find new buyers. Companies and other interested organizations can register and be listed in the organic market place for free. The database also provides links to certification bodies, NGOs and training and research institutes involved in the organic sector worldwide.

Furthermore, the website serves as valuable source of freely available sector information with links to several hundred market studies, business news and directories. A FAQ section gives users answer to frequently asked questions on organic and natural products.

Web-based Marketing and Information Systems: an ITC project in Africa

ITC research carried out in May 2006 shows that buyers are increasingly sourcing organic and natural products through the Internet. However, suppliers in developing countries often lack the expertise to use the Internet to reach these potential overseas buyers. This issue is of critical importance to developing countries looking to maximize export earning from the agricultural sector.

The project addresses the following problems:

- Lack of understanding amongst agricultural exporters of the use of the Internet for market information: Developing country exporters are often unaware of the wealth of business-critical information available to them via the net. By learning simple techniques, there is the potential to unlock the Internet's research potential. Through the Internet, this knowledge is now obtainable at a low cost.
- Lack of ability of companies to develop and maintain websites: The promotional use of websites is now considered to be essential in carrying out business. However, many agricultural product exporters do not have websites. Companies and their sector associations need to be sensitized to the importance of the web as a shop window for their companies and equipped with the technical skills to develop this aspect of their marketing.

Over a series of workshops, SMEs and trade support institutions receive training in how to use the Internet for finding and interpreting market information and coaching on building and maintaining websites. Through a local partner, the projects advise SMEs on web design, Internet service providers, site maintenance and branding.

7 Overview of the Global Market for Organic Food and Drink[1]

AMARJIT SAHOTA[2]

Introduction

Consumer demand for organic products is increasing across the globe, with retail sales estimated at 33 billion US-Dollars (25.5 billion Euros[3]) in 2005. Global organic food & drink revenues have increased by 43 percent from 23 billion US-Dollars in 2002. Although all regions reported healthy increases, the two major engines driving growth were the European and North American markets. These two regions generate most global revenues.

Global production of organic crops has not kept pace with demand, with many sectors reporting undersupply. The North American market has been experiencing supply shortages for a number of years; however, Europe and Asia are now also affected. Undersupply in the organic dairy sector is causing a leading British supermarket to market transitional organic milk, and an American organic yoghurt producer to import from New Zealand. Other sectors experiencing supply shortages include organic fruit & vegetables, meat products, beverage and ingredients.

Europe

The European market for organic food & drink is the largest in the world, comprising over a half of total revenues. The revenue share has overtaken that of North America in recent years partly because of the appreciation of the Euro against the US dollar in the foreign exchange.

Most of the 17 billion US-Dollar (13.1 billion Euros) revenues are concentrated in Western Europe. Indeed, four countries comprise over 75 percent of regional revenues. Most organic food sales are from Germany, the UK, France and Italy. Other countries like Denmark, Sweden and the Netherlands show high demand. However, they have much smaller markets due to their small populations.

---

[1] This chapter has been prepared from the report on The Global Market for Organic Food & Drink: Business Opportunities & Future Outlook (Organic Monitor, 2006). No part of this chapter maybe reproduced or used in other commercial publications without written consent from Organic Monitor. To request permission, please write to Organic Monitor.

[2] Director of Organic Monitor, 79 Western Road, London W5 5DT, Great Britain, www.organicmonitor.com

[3] Editors' note: Exchange rate as of January 2007

The German and the British markets are the fastest growing in Europe. Exceptionally high market growth rates have been observed since 2004. The entry of the discounters has had a major impact on the German market. Supply for all types of organic products has tightened, whilst retail competition has stepped up. Organic foods are also making inroads in drugstores and supermarkets. In the UK, production of organic foods is not keeping pace with demand, causing an influx of imports once again. The organic dairy sector, which has experienced oversupply since 2001, is now once again relying on imports. Organic meat products are coming into the UK from Australasia, Latin America and Europe.

In terms of consumption per capita, Scandinavian and Alpine countries lead Europe. Swiss consumers spend the most on organic foods, around 140 US-Dollars (108 Euros) per capita in 2005. The Danes, Swedes and Austrians are the next largest spenders. In contrast, Southern, Central & Eastern European consumers are the lowest spenders on organic foods.

There is a small market for organic foods in new EU accession countries. Central & Eastern Europe (CEE) comprise about two percent of European revenues. Although organic food production is increasing in these countries, mostly organic primary crops are grown, with most exported to Western Europe. The lack of organic food processing in CEE countries causes most finished goods to come into the region from the West.

North America

Consumer demand for organic foods continues to soar in the US and Canada. Valued at about 14.9 billion US-Dollars (11.5 billion Euros) in 2005, the region accounted for 45 percent of global revenues. The high revenue share is because of the domination of the US. The country not only has the largest market for organic products in the world, it is also a leading producer and exporter. A large increase in organic farmland and organic food production could make it the largest exporter of organic products; the US is already the largest agricultural exporter in the world.

The North American market has been showing high growth since the US government implemented the National Organic Program (NOP) in 2002. Revenues have been increasing by about 16 percent per annum since. Growing consumer demand for healthy & nutritious foods and increasing distribution in conventional grocery channels are the major drivers of market growth.

High market growth rates have attracted investment from large food companies. Some, like Dean Foods and General Mills, have acquired dedicated organic food companies, whilst others, like Unilever and Heinz, have added organic products to their portfolios. Private equity firms and organic food conglomerates like Hain Celestial and SunOpta are also acquiring specialist organic food companies.

Large food retailers are also stepping up marketing activities, with many launching private labels for organic foods. Most leading food retailers, including Wal-Mart, are marketing organic products under their private labels. The success of natural food supermarkets like Whole Foods Market is leading some mainstream retailers to develop dedicated retailers for organic foods. For instance, SuperValu and Publix Super Markets are planning new store openings.

Asia

Asia is becoming an important region for organic foods. Countries like China and India are becoming global sources of organic ingredients, whilst countries like Taiwan and Singapore are becoming large consumers.

The Japanese market comprises most of the 750 million US-Dollars (580 million Euros) of revenues (a revision of previous years estimate as data that are more accurate became available). Demand for organic products is concentrated in industrialized countries like Japan, South Korea, Singapore, Taiwan and Hong Kong. In contrast, production is mainly in agricultural countries like China, India, Thailand and Indonesia. Mostly, primary crops are grown in these countries, mainly for export to North America and Europe.

The Asian market is reporting healthy growth because of increasing retail distribution and rising consumer awareness. Leading food retailers in the major cities are introducing organic products. Investment is also coming in from large food companies that are setting up organic food production and distribution businesses. For instance, the Singaporean company Yeo Hiap Seng has launched organic foods since it entered a strategic tie-up with Hain Celestial in summer 2005.

Consumer awareness of organic foods is rising partly because of the high incidence of health scares in recent years. The scares, some involving foods, are raising consumer awareness of health issues and stimulating consumer demand for organic products. Important health scares were Avian flu and Severe Acute Respiratory Syndrome (SARS) and those involving foods included cola drinks (India, August 2006) and tofu (Indonesia, January 2006).

Although organic food sales are rising, consumer demand remains subdued partly because of the low spending power of most Asian consumers. Organic food prices are exceptionally high in some Asian countries. In Japan, Taiwan and Singapore, some organic foods are priced 4-5 times as much as non-organic foods. Since most finished organic products come in from countries like Australia and the US, distribution costs and import tariffs inflate product prices.

Oceania

Australasia is an important producer of organic foods, though it is not yet a large consumer. The Australasian continent has over 40 percent of global organic farmland, however it comprises less than one percent of organic food & drink sales. The Australasian market was estimated at about 300 million US-Dollars in 2005.

Australia and New Zealand are important exporters of organic products. The two countries have become global sources of organic beef, lamb, wool, kiwi fruit, apples and pears. Although exports continue to increase, the portion of exports to total production is in decline as internal markets for organic food & drink develop.

The Australasian market for organic products is growing at a steady rate. Most sales are of organic fresh products like fruit, vegetables, milk and beef. However, there is an increase in organic food processing activity. The number of mainstream food retailers selling organic products is increasing, whilst new organic food shops continue to open.

Other Regions

Production and demand for organic products is also increasing in other regions. An important producer region is Latin America. Over 90 percent of organic food produced in countries like Argentina, Brazil and Mexico is exported. However, internal markets are slowly growing in these countries, especially in cities like Buenos Aires, Mexico City, and São Paulo. Major cities in the Middle-East like Dubai, Riyadh and Kuwait City are also reporting high market growth rates.

Conclusions

Global sales of organic food & drink are increasing at a rapid rate, with sales reaching 33 billion US-Dollars in 2005. Organic Monitor expects sales to approach 40 billion US-Dollars in 2006. Although production is now occurring across the globe, demand remains concentrated in Europe and North America. The two regions are experiencing undersupply because production within these trading blocks is not meeting demand. Thus, large volumes of imports are coming in from other regions. Production in the developing world is rising at a much faster rate than that in the industrial countries. For instance, the amount of organic farmland has increased in triple digits in Africa, Asia and Latin America since 2000, whereas double-digit growth has been observed in other regions.

Demand for organic products mainly comes from affluent countries. Consumers with some of the highest disposable incomes are the largest spenders on organic foods. Indeed, six of the G7 countries comprise 84 percent of global revenues. This disparity between production and consumption of organic foods puts the industry in a potentially fragile condition. A dip in demand from Europe and / or North America would have a major impact on global production of organic food. The industry could lose confidence as export markets close, causing oversupply and organic food prices to drop.

Organic food producers in regions like Asia, Africa and Latin America are advised to become less reliant on exports and develop internal markets for their products. By developing local markets, producers can spread the business risk of organic food production. Consumers can also benefit by having access to regionally produced organic foods. Such initiatives would ensure the global organic food industry continues to go from strength to strength.

8 Standards and Regulations

Beate Huber[1], Lukas Kilcher[2], Otto Schmid[3]

Introduction

Farmer associations developed the first standards for organic production in the middle of the last century. The first international standards were published by IFOAM in 1980. The first legislative initiatives were developed by some European countries (e.g. Austria, France) in the 1980s. In 1991, the EU passed the organic regulation 2092/91 and set standards with major implications for international trade, and included not only production standards, but also standards for labeling and inspection. Various countries in Europe, Latin America and Asia introduced legislation in the 1990s. In 1999, Codex Alimentarius approved the first guidelines for organic plant production. Livestock production was included in 2001. In the new millennium, most major economies have implemented legislation on organic production; in 2002, the US National Organic Program came into force in 2002, and the Chinese legal framework was finalized in 2005.

2006 was again a dynamic year in the development of a legal framework for organic production; both Canada and Paraguay passed legislation, and others refined drafts or revised existing legislation. A complete list of countries with regulations on organic agriculture and those in the process of drafting regulations is included below.

The revision process for EU regulation 2092/91 on organic agriculture, however, has been a focus of international attention. A process that began at the end of 2005, the European Agriculture and Fisheries Council agreed on the outline of the new organic regulation in December 2006. The final decision is expected in the spring of 2007. As part of this process, the European Council revised the import regulations, introducing an approval system not only for Third Countries, but also for inspection bodies operating in Third Countries. Details about the revision of the EU regulation are described in the following subchapters.

Table 6: Countries with regulations on organic agriculture

Region	Country	Remark	Website (where available)
European Union (27)	Austria	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Belgium	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Bulgaria	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Cyprus	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Czech Republic	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Denmark	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Estonia	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/

[1] Beate, Huber, Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH-5070 Frick, Internet www.fibl.org
[2] Lukas Kilcher, Research Institute of Organic Agriculture FiBL Ackerstrasse, CH-5070 Frick, Internet www.fibl.org
[3] Otto Schmid, Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH-5070 Frick, Internet www.fibl.org

Region	Country	Remark	Website (where available)
			en/consleg/1991/R/01991R2092-20060506-en.pdf
	Finland	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	France	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Germany	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Greece	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Hungary	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Ireland	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Italy	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Latvia	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Lithuania	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Luxembourg	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Malta	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Poland	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Portugal	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Romania	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Slovak Republic	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Slovenia	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Spain	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	Sweden	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	The Netherlands	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
	United Kingdom	Fully implemented	http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
Others Europe (10)	Albania	Not fully implemented	
	Croatia	Fully implemented	
	Iceland	Fully implemented	http://www.landbunadarraduneyti.is/log-og-reglugerdir/Reglugerdir/Allar_reglugerdir/nr/79
	Macedonia	Fully implemented	
	Moldova	Fully implemented	
	Montenegro	Fully implemented	http://www.skupstina.cg.yu/skupstinaweb/tekstovi_list.php?s_id_zakoda=110
	Norway	Fully implemented	
	Serbia	Not fully implemented	
	Switzerland	Fully implemented	http://www.admin.ch/ch/d/sr/c910_18.html
	Turkey	Fully implemented	
Asia and Pacific Region (11)	Australia	Only export regulations	http://www.affa.gov.au/corporate_docs/publications/word/quarantine/approg/nationalstandard2.doc
	Bhutan	Not fully implemented	
	China	Fully implemented	
	India	Only export	http://www.apeda.com/organic/index.html

Region	Country	Remark	Website (where available)
		regulations	
	Israel	Only export regulations	
	Japan	Fully implemented	http://www.maff.go.jp/soshiki/syokuhin/hinshitu/e_label/index.htm
	New Zealand	Only export regulations	
	Philippines	Not fully implemented	
	Korea South	Fully implemented	
	Taiwan	Fully implemented	
	Thailand	Fully implemented	http://www.acfs.go.th/
The Americas & Caribbean (14)	Argentina	Fully implemented	
	Bolivia	Not fully implemented	http://www.aopeb.org/
	Brazil	Fully implemented	www.planetaorganico.com.br
	Canada	Not fully implemented	
	Chile	Fully implemented	
	Costa Rica	National regulations not fully implemented	http://www.mag.go.cr/doc_d/reg_ley_mag.html
	Dominican Republic	Not fully implemented	
	Ecuador	Fully implemented	http://www.sica.gov.ec/agronegocios/productos%20para%20invertir/organicos/principal.htm
	El Salvador	Not fully implemented	http://www.elsalvadororganico.com.sv/
	Honduras	Fully implemented	www.senasa.gob.hn
	Mexico	Not fully implemented	
	Paraguay	Not fully implemented	
	Peru	Not fully implemented	
	US	Fully implemented	http://www.ams.usda.gov/nop/indexIE.htm
Africa (2)	Ghana	Not fully implemented	
	Tunisia	Fully implemented	

Source: Huber, Silva, Gelman, FiBL Switzerland, survey 2006

Table 7: Countries in the process of drafting regulations

Region	Country	
Europe (3)	Bosnia & Herzegovina	
	Russia	
	Ukraine	
Asia and Pacific Region (8)	Armenia	
	Azerbaijan	
	Georgia	http://www.elkana.org.ge
	Hong Kong	
	Indonesia	
	Lebanon	
	Saudi Arabia	
	Vietnam	

Region	Country	
The Americas & Caribbean (3)	Cuba	
	Nicaragua	
	St. Lucia	
Africa (4)	Cameroon	
	Egypt	
	Madagascar	
	South Africa	http://www.afrisco.net/Html/Product_Stardards.htm

Source: Huber, Silva, Gelman, FiBL Switzerland, survey 2006

Remark: The data on legislation in the world was collected among authorities and experts. The classification whether the legislation is 'not yet fully' or 'fully implemented' is based on the feedback of the persons interviewed, and was not subject to verification. Responses from experts and authorities from 60 percent of the countries were received. It may be assumed that a majority of the 40 percent non-responding countries did not pass legislation on organic production, although the share of countries that are in the process of developing legislation is probably higher than reflected. Please send comments or information on countries not listed to Beate Huber (e-mail beate.huber@fibl.org).

International standards

IFOAM Standards

The IFOAM Basic Standards (IBS)[1] define how organic products are grown, produced, processed and handled. They reflect the current state of organic production and processing methods. The IFOAM Basic Standards provide a framework for certification bodies and standard-setting organizations worldwide to develop their own certification standards, and thus cannot be used for certification on their own. In close co-operation and consultation with IFOAM member organizations and other interested parties, The IFOAM Standards Committee develops the IBS. The IFOAM Basic Standards are presented as general principles, recommendations, basic standards and derogations. IFOAM is currently working on a revision of the IFOAM Organic Guarantee System; one of the activities being a complete revision of the IFOAM Basic Standards.

The Codex Alimentarius

The need for clear and harmonized rules has not only been taken up by private bodies, IFOAM and state authorities, but also by the Food and Agriculture Organization (FAO) and World Health Organization (WHO), as well as the United Nations Conference on Trade and Development (UNCTAD). The FAO and WHO consider international guidelines on organically produced food products to be important for consumer protection and information to facilitate trade. They are also useful to governments wishing to develop regulations in this area, in particular in developing countries and countries in transition.

[1] At the homepage of IFOAM http://www.ifoam.org under 'Organic Guarantee System" the IFOAM Norms, consisting of the IFOAM Basic Standards for Organic Production and Processing and the IFOAM Accreditation Criteria for Bodies certifying Organic Production and Processing can be ordered. The homepage also provides information on the IFOAM Accreditation Program (see next chapter).

The Codex Alimentarius Commission, a joint FAO/WHO Food Standards Program, began in 1991 (with participation of observer organizations such as IFOAM) with the development of Guidelines for the production, processing, labelling and marketing of organically produced food. The Codex Commission approved plant production guidelines in June 1999 and animal production guidelines in July 2001[1].The requirements in these Codex Guidelines are in line with the IFOAM Basic Standards and the EU regulation 2092/91. There are, however, differences with regard to the details and the areas covered by the standards.

The trade guidelines on organic food take into account the current regulations in several countries, in particular EU regulation 2092/91, as well as the private standards applied by producer organizations, especially those based on the IFOAM Basic Standards. These guidelines define the nature of organic food production and prevent claims that could mislead consumers about the quality of the product or the way it was produced.

In the view of IFOAM, which was actively involved in the development of these Guidelines, this Codex Document is an important step in the harmonization of international rules and the effort to build consumer trust. They will be important in determining equivalence judgments under the rules of the World Trade Organization (WTO). In terms of market development, the completion of the Codex Guidelines are important in giving guidance to governments in developing national regulations for organic food.

Since 2005 a revision process of the annex lists of substances has begun, and in particular focusing on food processing, based on amended criteria for the use of new substances. A working group within the Codex Committee for Food Labelling is responsible for this work. It meets regularly each year in May; the government of Canada organizes the meetings.

Revision of the EU regulation

In December 2005, the European Union published the first revised draft of the EU regulation 2092/91 on organic agriculture. The decision to revise the regulation was announced in the Organic Action Plan, published by the European Commission in 2004. The draft was a surprise for most of the stakeholders, since it foresaw a complete revision of the structure and text of the regulation. The proposal included changes that would have had major implications on the regulation of organic production in Europe, and would also have affected all export-oriented countries outside of Europe. When the European Commission published the first draft, it explained that the new regulation was meant to improve clarity for both consumers and farmers: "The new rules should be simpler, and should allow a certain flexibility to take account of regional differences in climate and conditions."

[1] Information about Codex Alimentarius is available via the homepage www. codexalimentarius.net. The Codex-Alimentarius-Guidelines on organic agriculture can be downloaded from http://www.codexalimentarius.net/download/standards/360/CXG_032e.pdf

Although the aim to simplify the regulation was appreciated, the opposition by the organic sector and the majority of the Member States was strong. In the subsequent months, many meetings were held and compromise papers published in an effort to improve the proposal. Finally, on December 19, 2006, the EU Agricultural Council reached agreement on the outlines, or 'general approach' of the new organic regulation; only slight technical changes will be possible in 2007. The proposed regulation shall come into force on January 1, 2009. As of the publication of this study, only the working papers and reports of the Agricultural Council's meeting are publicly available. The final text and minutes have not been published, and therefore, it is not possible to provide precise information on the planned changes. What is known is that the new regulation will contain the following changes:

- New chapters on the objectives and principles of organic production have been established.
- Segments of production-related technical annexes will be included in the main regulation.
- The regulation will also cover production rules for animal aquaculture, seaweed and yeast.
- Detailed criteria for the approval of farm inputs, additives and processing aids will be included.
- Regional flexibility will be introduced through 'exceptional production rules'.
- The European organic logo will become mandatory.
- The EU's official food and feed control system (regulation 882/2004) now applies as well to organic inspection.
- The existing (temporary) rules for imports will be replaced by permanent and more consistent procedures.

The generally agreed compromise text for the Council regulation from December 2006 has taken up several major concerns of the private sector and member states, such as the protection of the word 'organic', a stronger system approach, the deletion of the labelling rules for mixed products with 70 percent ingredients and proposed restrictions for the private sector, etc. Other private sector concerns remain, such as the lack of formal stakeholder involvement in the procedures, the provisions on GMOs, the mandatory use of the European logo, the missing clarification regarding the food and feed control regulation (882/2004), the exclusion of non-food products from the scope of the regulation and the missing details regarding the implementenation of the flexibility rules (IFOAM EU Regional Group, press release of December 12, 2006). How the details can be altered under the German Presidency is still open, and. also depends on the content of the report from the European Parliament. A final decision by the EU Agricultural Council is expected in spring 2007.

The published draft only considers the legislative basics of organic production. It does not cover most of aspects currently regulated in annexes I to VIII, such as production rules, minimum inspection rules, lists of approved farm inputs, ingredients, aids and additives. The European Commission will have the task of developing the detailed implementation rules once agreement is finally reached on the Council regulation. The detailed implementation rules will include the revision of the current technical annexes, which will need to be harmonized with the new regulation.

Information on the revision of the EU regulation is available at the IFOAM EU Group revision info page[1]. The EUR-Lex website leads to an updated consolidated version of the EU regulation 2092/91. It is available in the languages of the European Union[2].

US and EU import procedures

Since the US NOP came into effect in October 2002, it has joined the EU regulation in having a great deal of influence upon organic production standards worldwide. From the perspective of the consumer, one might say that production and inspection standards of US organic products, EU organic products and organic products from many other parts of the world are equivalent with each other. However, there are many differences in details. Even when considering application for certification, farmers or traders who want to export organic products should know the potential final destination(s) of their products in order to assure that both production standards and procedures for imported products in the target market(s) are met.

Importing goods into the EU

At the end of December 2006, the EU published new regulations on imports of organic products[3]. The new procedures came into force in January 2007, and they will be also adopted in the new general EU regulation, which is expected to come into force in 2009. The revised import procedures replace the current (temporary) system of import authorizations by an approval system for inspection bodies operating in countries outside of the EU. The existing system for approval of countries in the so-called 'Third Country List' will be maintained, although amended. The rules and procedures for implementing the revised import provisions have not yet been developed. Therefore, the principles of the new procedures can be described, but the technical details and practical implementation still need to be developed.

For importing products in the EU, products must have been certified by an inspection body or authority recognized by the European Commission. The EU will publish lists of approved inspection bodies and authorities as well as approved third countries. There will be three different lists:

1) List of inspection bodies which have been accredited according to EN 45011/ISO 65 and which apply an inspection system and production rules **compliant** with the EU regulation.

[1] www.ifoam.org/about_ifoam/around_world/eu_group/web_Revision/Revision_info_page.html
[2] Council Regulation (EEC) No 2092/91 of 24 June 1991 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs and amendments: http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20060506-en.pdf
[3] Council Regulation (EC) No 1991/2006 of 21 December 2006 amending Regulation (EEC) No 2092/91 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs (OJ L 411, 30.12.2006); http://eur-lex.europa.eu/LexUriServ/site/en/oj/2007/l_027/l_02720070202en00110014.pdf

The provision on compliance with the EU regulation is new. So far, the EU only requested equivalency with the EU requirements. It will have to be determined what compliance means in other circumstances, such as with tropical climates or Internal Control Systems (smallholder group certification) in developing countries, which are currently accepted by the EU.

2) List of inspection bodies which apply an inspection system and production standards **equivalent** to the EU regulation.

The previous EU legislation requested 'equivalency' with the production and inspection provisions of the EU regulation for imported products. It does not require accreditation of the certification bodies, and allows certification bodies to apply their own standards as long as they are 'equivalent' with EU provisions. However, the EU did not yet define 'equivalency,' and it is difficult to predict how the authorities will 'determine' equivalency in contrast to 'compliance'.

3) List of countries whose system of production complies with rules **equivalent** to the EU production and inspection provisions.

This list corresponds to the existing Third Country List, and procedures for getting listed will presumably remain the same.

Under option 1) and 2), the inspection bodies can either be located within or outside the EU. Inspection bodies or authorities shall provide to the EU the assessment reports issued by the accreditation body or, as appropriate, the competent authority on the regular on-the-spot evaluation, monitoring and multi-annual reassessment of their activities. The EU provides the option of assigning experts to conduct 'on-the-spot' examinations, and shall ensure appropriate supervision of the recognized inspection bodies by regularly reviewing their recognition. It can be assumed that the EU will supervise inspection bodies itself, but will rely on the reports provided by competent bodies such as the national accreditation bodies or the International Organic Accreditation Service (IOAS), a wholly owned but independent subsidiary of IFOAM.

Under option 2) and 3), (the equivalency-option) imported products have to be covered by a certificate of inspection, a provision that is not described under option 1). For option 2) and 3), Codex Alimentarius shall be taken into account for assessing equivalency.

The new import regulation allows a more consistent and effective control system for imported products, and improves the possibilities for supervision of inspection bodies operating in Third Countries. It further increases transparency by publishing lists of recognized inspection bodies. In the current system, it was difficult for inspection bodies outside the EU to prove the acceptance of their certification in the EU. They depended on European importers willing to take the hurdle to apply for an import authorization with a new or unknown inspection body. The new system allows inspection bodies from non-EU-countries to apply for recognition based upon their own initiative, and can prove their recognition prior to engaging in trade relationships. This reduces the risk of importers when importing products certified by non-European and/or less known inspection bodies.

The EU has not yet developed implementation rules for the new import procedures. Therefore, it is not yet defined how and when inspection bodies can apply for recognition, and it is not clear when the first lists of approved inspection bodies will be published. The Member States can continue to issue import authorities for a period that begins on January 1, 2007 and ends twelve months after the publication of the first list of recognized inspection bodies and authorities. Any import authorizations issued before December 31, 2006 shall expire on December 31, 2007 at the latest.

Importing goods into the US

The US NOP requires all produce labeled as organic in the US to meet the US standards, including imported products. The US system approves certification bodies as agents to operate the US certification program that is published as a component of the rule. Retroactive certification is not possible. Inspections have to be conducted by inspectors trained on the NOP and use NOP questionnaires, and only certificates issued by certification bodies accredited by the US Department of Agriculture (USDA) are accepted. It is not relevant whether the certification body is based in or out of the US. So far, almost 100 certification bodies have been accredited according to NOP by the USDA, and only produce certified by these certification bodies may be exported to the US.

Recognition procedures in the US and EU

Both the US and EU have provisions to accept other governmental systems on a bilateral agreement. The procedures on how to meet such agreements are described quite poorly in the respective regulations and leave the impression that such agreements are based on political negotiations rather than technical assessments.

According to the EU regulation 2092/91, export countries have to submit a request to be listed on the third country list. They have to supply the necessary information, which might be examined on the spot by an expert group authorized by the European Commission. Based upon this assessment, the European Commission decides on the listing (see above). These provisions also remain under the new import regulation, which came into force in January 2007.

The US so far has accepted a few foreign governments' accreditation procedures. Certification bodies accredited according to the US requirements by Denmark, Great Britain, India, Israel, New Zealand and Quebec are accepted by the USDA for certifying according to the US NOP without being directly accredited by USDA. This is just recognition of the accreditation procedures; the respective certification bodies still have to meet the requirements of NOP to issue certificates accepted by the US.

In addition, the US is negotiating equivalency agreements with Australia, the European Union, India and Japan. This means that USDA would determine that their technical requirements and conformity assessment system adequately fulfil the objectives of the NOP, and double certification would not be necessary for imports. The US announced that equivalency determinations are very complex and time-consuming, and that negotiations with the EU have been suspended, at least in regard to animal production issues.

Private Standards

In some countries in Europe, farmers' associations had already formulated their private standards and labeling schemes long before national regulations came into force. The promotion of these quality marks or logos, such as in the UK, in Denmark, Austria, Sweden and Switzerland, are trusted by consumers and are one of the reasons for the current boom in the market for organic products in these countries. These quality marks are listed in the IFOAM Membership directory, which is also available on the IFOAM homepage[1].

Compared to national regulations, private standards are developed from the bottom up rather than imposed from above. However, since the implementation of national regulations, private standards have been forced to comply, and state authorities are increasingly making decisions on standards decisions as opposed to farmers' associations.

In 2002, UNCTAD, the FAO and IFOAM initiated the International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF)[2]. This partnership between the private organic community and the United Nations offers a forum for public and private discussions, and aims to initiate the development of a constructive and effective partnership between the private and the public sector.

Relationship to Fair Trade

Many producer associations in the emerging markets and markets in transition conform to the requirements of fair trade organizations such as the Fair Trade Labeling Organization International (FLO), Transfair, Max Havelaar and World Shops (Weltlaeden). Having a fair - trade label does not necessarily mean, however, that the products can also be sold as 'organic'. In order to use and communicate the term 'organic,' the project must be subject to accredited organic inspection procedures.

IFOAM maintains close contacts with FLO and its members, due to the fact that a large number of projects conform to the standards of both organizations. The combination of 'organic' and 'fair trade' labeling can enhance a product's market prospects. Additional information and regulations can be downloaded at www.flo-international.org.

Literature

Commins, Ken (2003): Overview of current status of standards and conformity assessment systems, Discussion Paper on the International Task Force on Harmonization, October 2003

Kilcher Lukas et al (2004): The Market for Organic Food and Beverages in Switzerland and the European Union. Overview and market access information, pp 156, Forschungsinstitut fuer biologischen Landbau (FiBL) und Swiss Import Promotion Program (SIPPO), Second Edition Frick/Zuerich January 2004, ISBN 3-906081-03-06

Kilcher, Lukas; Huber, Beate and Schmid, Otto (2006) Standards and Regulations. In: Willer, Helga and Yussefi, Minou, Eds. The World of Organic Agriculture. Statistics and Emerging Trends 2006, pp. 74-83. International Federation of Organic Agriculture Movements IFOAM, Bonn, Germany and Research Institute of Organic Agriculture FiBL, Frick, Switzerland. http://orgprints.org/10375/

1 Organic Directory Online: http://www.ifoam.org/organic_world/directory/index.html

[2] International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF): http://www.unctad.org/trade_env/itf-organic/welcome1.asp

Websites

- www.fao.org/organicag/ Information on organic agriculture published by FAO with detailed country reports on the structure and legal situation
- http://www.organic-europe.net/
Extensive country reports and address database
- http://www.ams.usda.gov/nop/indexIE.htm
Information about the US National Organic Program (NOP)
- http://organicrules.org/
Database which compares national and private standards with the EU Regulation
- http://www.unctad.org/trade_env/itf-organic/ welcome1.asp
International Task Force on Harmonization and Equivalency in Organic Agriculture (ITF)
- ftp://ftp.fao.org/codex/standard/en/CXG_032e.pdf. or http://www.codexalimentarius.net/download/standards/360/CXG_032e.pdf
Codex-Alimentarius standards

9 Certification and Accreditation

Accreditation

GERALD A. HERRMANN[1]

Organic agriculture is based on the commitment of farmers and processors to work according to set standards and regulations, which define the organic production system. Further, organic agriculture is based on transparency to make the production system comprehensive and reliable. Finally, organic agriculture needs the consumer confidence for market development.

Seen in this context, certification and accreditation systems primarily serve as tools to enhance trade, market development and foster confidence.

Accreditation and certification mechanisms are developing rapidly. There are almost no areas of human life or technology where regulations or norms have not yet been developed and introduced. With regard to food, organic food production and processing set the precedents for the conventional industry.

Whereas private (farmer) organizations developed the standards for production, inspection and certification in the 1980s, the first governments took over this task at the beginning of the 1990s. Although they took on the task of defining the rules as a sovereign right, they did not necessarily become involved in the implementation of these rules at all levels.

Codex Alimentarius, with its organic chapter, defines the common international framework for governments (see chapter on standards and regulations). Regulations like those in the EU or US l were passed and implemented at governmental or supra-governmental level. State governments added specific requirements.

The private sector standards are based on the IFOAM Basic Standards, which were and still are reference for governmental regulations as well as Codex Alimentarius.

Today, about 80 countries are already regulating or are working towards regulating organic agriculture with national standards and developing further requirements regulating the recognition of inspection bodies; some are defining inspection procedures as well.

The major consuming and importing markets, like Europe, the US and Japan are leading, but countries like India, China and Brazil are following this path. Inspection and certification is accredited or at least supervised by government authorities as defined in the regulations, even though the systems being implemented might be quite different. Control and supervision at all levels should guarantee that all inspectors and certifiers are evaluated and accredited (accreditation means 'the evaluation of certifiers').

[1]Organic Services GmbH, Landsberger Str. 527, D - 81241 Muenchen. Gerald A. Herrmann is the President of IFOAM.

Europe is currently facing a decision on its newly revised organic regulation after its general outline has practically found consensus among member states. Technical requirements are still pending discussion and decision. The final definition, especially in regard to international trade and imports, is not finalized as well.

In addition, several private standards and labeling schemes exist, mainly in areas of the world where the organic market is well developed. Registers count about 395 certification bodies certifying according to private standards and/or set regulations around the world. However, private standards are also being initiated in less developed regions as well, with the support of different organizations, including IFOAM and UNCTAD.

However, it is not enough to define the rules. It is still necessary to achieve a minimum (worldwide) equivalency guaranteed throughout the system in order to let products flow. Lacking acceptance and recognition between the different certification and accreditation systems contradicts the objective of enhancing trade, market development and fostering confidence. It is the opposite. The existing and different systems today create a technical barrier to trade that forces producers to seek multiple certifications for their operation if their products are to access different markets with different regulations.

Nobody can seriously state that this situation makes the organic system more safe and reliable. It is usually added bureaucracy without additional value, for neither the producer nor the consumer.

However, it is undisputed that the development of standards, certification and accreditation systems during the last decade has improved reliability and transparency of the organic system, but from an overall perspective it is now high time to consider how systems can be reviewed in order to make them more inclusive and to reduce market barriers. The differences in the organic systems more or less result from minor details and different (cultural) approaches, although all systems serve the common idea of improving credibility of the organic system.

In order to strengthen 'organic,' all involved parties, like governments, private standard setting and certification bodies as well as other stakeholders, should concentrate their focus on the essential difference between organic and conventional rather to struggle within the movement about differences, even details. It is high time to reconsider that accreditation and certification is basically a tool to strengthen the organic development.

Because of the above-mentioned factors, certification (including inspection and accreditation) should be reasonably designed to support the credibility of the organic system rather than to endanger it by overburdening it with more and more details.

This is what the organic movement is still trying to achieve with harmonized international basic standards and with designing a private system, yet acknowledging the reality of its practical restrictions.

It still is to be seen whether the joint initiative of IFOAM, FAO and UNCTAD of an International Task Force on Harmonization and Equivalence in Organic Agriculture (ITF) will achieve consensus on harmonizing private with government and government with government standards/regulations. Both the private sector and representatives of governments are participating in this initiative.

For harmonizing requirements for the accreditation of certifiers, the ITF recently mandated a project for the development of 'International requirements for Organic Certification Bodies,' taking ISO 65 as well as IFOAM Criteria into account.

Certification bodies: Almost 400 organic certifiers in more than 70 countries

GUNNAR RUNDGREN[1]

In the 2003 issue of The 'Organic Certification Directory,' published by the Organic Standard[2], 364 organizations were listed as offering organic certification services. In 2004, we listed 385. The number reached 419 organizations in 2005. The directory now contains 395 entries. The decline in the number is due to changes in the Japanese organic regulation and a requirement for re-registration of certification organizations. This led to a decline from 69 to 35 organizations.

The majority of the certification bodies are located in the EU, US, Japan, China, Canada and Brazil. Many of the listed certification organizations are also operating outside their home country. Most of them are based in a developed country and also offer their certification services in developing countries. Very few are operating in several developed countries, for example, there is not one single EU based certification body offering its services in the US, even when they have the required NOP accreditation. A handful of certifiers operate on several or all the continents. 71 countries have a home-based certification organization. Most of Africa and big parts of Asia still lack local service providers. There are only eight certification bodies in Africa: in South Africa, Kenya, Uganda, Tanzania and Egypt. Asia has 93 certification bodies, most of them based in China, India or Japan.

Table 5: Number of Certification Bodies

	2006	2005	2004	2003
Africa	8	7	9	7
Asia	93	117	91	83
Europe	160	157	142	130
Latin America & Caribbean	43	43	33	33
North America	80	84	97	101
Oceania	11	11	11	10

[1] Grolink AB, Torfolk, 684 95 Höje, Sweden, www.grolink.se

[2] The Organic Standard is an international monthly journal that enables individuals and organizations to be kept up-to-date with developments concerning worldwide standards and certification issues in the organic sector. www.organicstandard.com/

The number of organizations in China has continued to grow, albeit at a lower pace than previous year. There are now 32 organic certification organizations in China, up from 26 in 2005 and just six in 2004. The highest number is reported from the US, even though there is one less this year than previous year.

Number of organic certification bodies

Country	Number of certification bodies
US	59
Japan	35
China P.R.	32
Germany	31
Spain	26
Canada	21
Brazil	18
Italy	16
India	11
United Kingdom	10

Certification bodies were asked for information about the number of operators they certify. 200 responded, giving a total of 152'000 operators. When it comes to the number of farmers, 149 gave an answer. They certified in total 377'000 farms, with IMO's head office alone reporting more than 65'000 and their office in Latin America 30'000. BioLatina certified 20'000 farms, up from 14'000 in 2005. Naturland reports 40'000 farms and Certimex 30'000 farms. Ceres, a recently established certification organization based in Germany already certifies 15'000 farmers. It should be noted that the same farm can be certified twice, e.g. many Naturland certified farmers are also IMO certified as the two organizations cooperate closely. Nevertheless, the total number of certified farms is likely to be more than of half a million.

Most organizations still decline to be transparent regarding their turnover. Only 66 organizations responded. Many report figures in the range of 100'000 to 500'000 Euros. Bio Suisse and Soil Association are heavyweights when it comes to turnover, with more than five million Euros. The total turnover of the three Swiss-based organizations Bio Suisse, IMO and bio.inspecta reached eleven million Euros. Similarly, ICEA, CCPB, Suolo and Salute from Italy report more than ten million Euros together. Other organizations reporting turnover between two and five million include Qualité France, DIO (Greece), Skal (Netherlands) and Debio (Norway).

Of those 273 that responded to the question concerning the starting date of their operation, only six started before 1985, while 62 percent started after 1997.

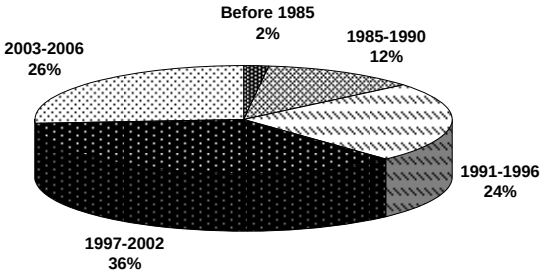


Figure 31: Development of organic certification bodies

The graph shows how many of the 273 organic certification bodies who responded to the TOS survey were founded in which time period.
Source: The Organic Standard (TOS)

Table 6: Certification bodies and accreditation status

	Total	Approval IFOAM	Japan	ISO 65	EU	US
Africa	8			3		
Asia	93	4	35	11	12	2
Europe	160	13	13	73	135	32
Latin America & Caribbean	43	5	1	15	6	11
North America	80	6	9	24	0	62
Oceania	11	4	6	3	7	5
Sum 2006	395	32	64	129	160	112
Sum 2005	419	31	100	113	143	115
Sum 2004	385	30	95	96	132	112
Sum 2003	364	26	81	74	112	106

Source: The Organic Standard (TOS)

The number of organizations that have ISO 65 accreditation shows an increase and is now close to one third of all organizations. 14 of the organizations have ISO 65 accreditation from the DAP German Accreditation System[1] and seven from the International Organic Accreditation Service (IOAS)[2]. TOS does not verify the claims of ISO 65 accreditation, and the real number is probably lower. The number of organizations approved in Japan has dropped as a result of a changed system. The EU has 160 approved bodies, with 24 non-EU based bodies recognized within its system. This is a big increase from 2005, mainly a result of the fact that India has been put on the list of approved third countries, adding eleven organizations. The majority of imports into the EU come through certification granted under article 11.6 (*i.e.* the importer's derogation). Under that system, import authorizations were granted from 108 countries in 2005.

Only five organizations have all five approvals, the same as in 2005.

The IFOAM Accreditation Program

The International Organic Accreditation Service (IOAS) is a non-profit independent organization registered in Delaware, USA that offers international oversight of organic certification, through a voluntary accreditation process for certification bodies active in the field of organic agriculture.

The IOAS implements the IFOAM Accreditation Program. Under this program, applicant certification bodies are assessed against the IFOAM Norms – the Criteria for Certification Bodies and the IFOAM Basic Standards. The assessment includes both a review of the certification body's documentation and an on-site visit to evaluate the quality of the certification body's performance. Once a certification body is compliant with these requirements, it is awarded IFOAM accreditation by the IOAS. Continued compliance is assured through an annual surveillance system that includes yearly visits to the office of the certification body and, where appropriate, visits to foreign offices and operators.

Further information about the IFOAM Accreditation Program and IOAS can be found on the IOAS website[3]. A list of the IFOAM accredited certification bodies is below.

IFOAM accredited certification bodies

- Agrior, 121 Hachashmona'im St., Tel Aviv 67011, Israel, +97 23 561 4898, +97 23 6241897, agrior@netvision.net.il, Israel
- AgriQuality Ltd, Private Bag 14946, Panmure, Auckland, New Zealand, +64 7 572 081, +64 7 572 0839, vandeldent@agriquality.com; New Zealand, Vanuatu, Cook Islands, Malaysia

[1] Deutsches Akkreditierungssystem Prüfwesen GmbH, www.dap.de/
[2] International Organic Accreditation Service (IOAS), www.ioas.org. The IOAS implements the IFOAM Accreditation Program.
[3] International Organic Accreditation Service (IOAS), Delaware, US, www.ioas.org

- Aranea Certifiering AB, Box 1940, SE-751 49 Uppsala, Sweden, +46 1810 0290, +46 1810 0366, kare.wahlberg@araneacert.se; Sweden, Bosnia & Herzogovina, Finland, Poland, Serbia, Tanzania, Thailand and Uganda
- Argencert S.R.L., Bernardo de Irigoyen 972, 4§ "B", 1072 Buenos Aires, Argentina, +54-11 4363 0033, +54-11 4363 0202, argencert@argencert.com.ar; Argentina, Chile, Paraguay
- Australian Certified Organic, PO Box 530, Level 1, 766 Gympie Rd (Brisbane), Chermside, Queensland, 4032 Australia, +61 7 3350 5706, +61 7 3350 5996, certification@aco.net.au; Australia, Cook Islands, Fiji, Indonesia, Japan, Madagascar, Malaysia, Papua New Guinea, Thailand.
- Bioagricert srl, Via del Macabraccia 8, 40033 Casalecchio di Reno (BO), Italy, +39 051 562 158, +39 051 562 294, amalia.rueda@bioagricert.org; Italy, Mexico, Thailand
- Bio-Gro New Zealand Ltd, PO Box 9693, Marion Square, Wellington 6031, New Zealand, + 64 4 801 9741, +64 4 801 9742, smason@bio-gro.co.nz; New Zealand, Cook Islands, Niue.
- Biokontroll Hungaria Kht, H 1535 Budapest PF 800 Postal, H 1027 Budapest, Margit KRT 1, Hungary, +36 1 336 1122, +36 1 315 1123, info@biokontroll.hu, Hungary
- Bioland e.V., Kaiserstrasse 18, D-55116 Mainz, Germany, +49 613 123 9790, +49 613 123 979-27, landbau@bioland.de; Germany, Belgium, Italy, Netherlands, France, Austria, Switzerland.
- BIOPARKe.V., Rövertannen 13, 18273 Güstrow, Germany, +49 384 324 5030, +49 384 324 5032, info@biopark.de; Germany
- BIOS S.r.l., Via M. Grappa, 37/C, Marostica, VI, 36063, Italy, +39 0424 471 125, +39 0424 476 947, info@certbios.it; Italy
- Bolicert, Casilla 13030, General Gonzales 1314, La Paz, Bolivia, +59 12 249 0747, +59 12 249 0747, bolicert@mail.megalink.com; Bolivia and Paraguay
- CCOF Certification Services LLC, 1115 Mission Street, Santa Cruz, CA, 95060, USA, +1 831 423 2263, +1 831 423 4528, ccof@ccof.org, USA, Canada, Mexico
- Consorzio per il Controllo dei Prodotti Biologici, Via Jacopo Barozzi N.8, 40126 Bologna, Italy, +39 0 51 6089811, +39 0 51 254842, ccpb@ccpb.it, Italy
- Debio, Bjorkelangen, N - 1940, Norway, + 47 638 62 650, + 47 638 56 985, morten@debio.no, Norway
- Doalnara Certified Organic Korea, LLC, 729-2 Suam Ri, Socho-myeon, Wonju-si, 220833, S. Korea, +82 33 732 4234, +82 33 732 4239, doalnara@doalnara.or.kr, South Korea
- Gäa e.V. Vereinigung okologischer Landbau
Bundesverband, Gäa e.v Bundesverband, Arndtstrasse 11, 01099 Dresden, Germany, +49 351 401 2389, +49 351 401 5519, Christian.Pein@gaea.de, Germany, Italy
- Global Organic Agriculturist Association, #492-4, Dongho-dong, Bukku, Taegu City, South Korea, + 82-53-326-9895, +82-53-326-9896, kkdeca@naver.com, South Korea
- Instituto Biodinamico, Rua Prudente de Moraes, 530, 18.620-060, Botucatu SP, Brazil, +55 14 3882 5066, +55 14 3815 9909, ibd@ibd.com.br, Argentina, Bolivia, Brazil, Mexico, Paraguay and Uruguay
- International Certification Services Inc., 301 5th Ave. SE, Medina, ND, USA, +1 701 486 3578, +1 701 486 3580, Info@ics-intl.com, USA, Brazil, Canada, China, Guatemala, Mexico, Paraguay, Tahiti
- Istituto Mediterraneo Di Certificazione s.r.l., Via Carlo Pisacane, 32, 60019 Senigallia, Ancona, Italy, +39 071 792 8725, +39 071 791 0043, imcert@imcert.it, Italy
- Istituto per la Certificazione Etica e Ambientale, Strada Maggiore 29, 40125, Bologna, Italy, +39 051 272 986, +39 051 232 011, icea@icea.info, Italy, Lebanon, Turkey

- Japan Organic & Natural Foods Association, Takegashi Bldg. 3F, 3-5-3, Kyobashi, Chuo-Ku, Tokyo, 104-0031, Japan, +81 33 538 1851, +81 33 538 1852, toshi@jona-japan.org, Japan, China and Jordan
- LETIS S.A., Urquiza 1564 (S2000 ANR), Rosario
Santa Fe, Argentina, +54 341 426 4244, +54 341 426 4244, letis@letis.com.ar, Argentina, Canada, Chile and Paraguay
- National Association Sustainable Agriculture Australia, PO Box 768, Stirling, S. Australia, 5152 Australia, +61 8 8370 8455, +61 8 8370 8381, admin.manager@nasaa.com.au, Australia, East Timor, Indonesia, Malaysia, Nepal, New Zealand, Papua New Guinea, Samoa, Sri Lanka and the Solomon Islands
- Naturland - Verband für Ökologischen Landbau e.V., Kleinhaderner Weg 1, 82166 Gräfelfing, Germany, +49 89 898 082-0, +49 89 898 08290, naturland@naturland.de, Germany, Austria, Bolivia, Brazil, China, Ecuador, Egypt, Greece, Guatemala, Hungary, India, Indonesia, Ireland, Israel, Italy, Mexico, Nicaragua, Paraguay, Peru, Philippines, Poland, Sri Lanka, Taiwan, Tanzania, Uganda, United Kingdom, Vietnam
- Organic Agriculture Certification Thailand, 619/43 Kiatngamwong buildings,
Tambon Bangke, Muang District, Nonthaburi, 11000, Thailand, +66 2 952 6677, +66 2 580 0934, info@actorganic-cert.or.th, Thailand
- Organic Certifiers, 6500 Casitas Pass Road, Ventura, CA, 93001, USA, +1 805 684 6494, +1 805 684 2767, organic@west.net, USA, Philippines.
- Organic Crop Improvement Association International, 6400 Cornhusker, Suite 125, Lincoln, NE, 68507, USA, +1 402 477 2323, +1 402 477 4325, info@ocia.org, USA, Brazil, Canada, China, Columbia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Germany, Guatemala, Honduras, Japan, Mexico, Paraguay, Peru, Philippines, Timor Lorosa'e, Uganda
- Organic Food Development & Certification Center of China, 8 Jiangwangmiao Street, P.O. Box 4202, Nanjing, 210042, P.R.China, +86 25 8542 5370, +86 25 8542 0606, lidebo@ofdc.org.cn, P.R.China
- Organizacion Internacional Agropecuaria S.A., Av. Santa Fe 830, B1641ABN Acassuso, Buenos Aires, Argentina, +54 11 4793 4340, +54 11 4793 4340, oia@oia.com.ar, Argentina and Uruguay
- Quality Assurance International, 9191 Towne Centre Drive, Suite 510, San Diego, California, 92122, USA, +1 858 792 3531, +1 858 792 8665, Jake@qai-inc.com, USA, Paraguay, Canada, Mexico
- Soil Association Certification Ltd., South Plaza, Marlborough Street, Bristol, BS1 3NX, United Kingdom, +44 117 314 5000, +44 117 314 5001, BBrown@soilassociation.org, Australia,Belgium, Belize, Bosnia-Herzegovina, Bulgaria, Channel Islands, Costa Rica, Denmark, Dominica, Egypt, Finland, France, Germany, Ghana, Grenada, India, Iran, Ireland, Israel, Italy, Kenya, Namibia,Nigeria, Pakistan, Portugal, Slovenia, South Africa
- Washington State Dept. of Agriculture Organic Food Program, PO Box 42560, 1111 Washington Street, Olympia, Washington, 98504-2560, USA, +1 360 902 1805, +1 360 902 2087, organic@agr.wa.govUSA

Applicant Certification Bodies:

- Ecoland e.V.
- Organska Kontrola Sarajevo
- Tanzania Organic Certification Association

10 Organic Wild Collection

UDO CENSKOWSKY AND ULI HELBERG[1]

In order to support the First IFOAM International Conference on Organic Wild Production, the International Trade Centre (ITC)[2] commissioned and financed a survey on global organic wild collection. The aims of this study are to clarify the terminology used in wild collection, to give an overview of organic and other standards that deal with wild collection and to supply, for the first time, data and background information about collection and marketing of organically certified wild products worldwide.

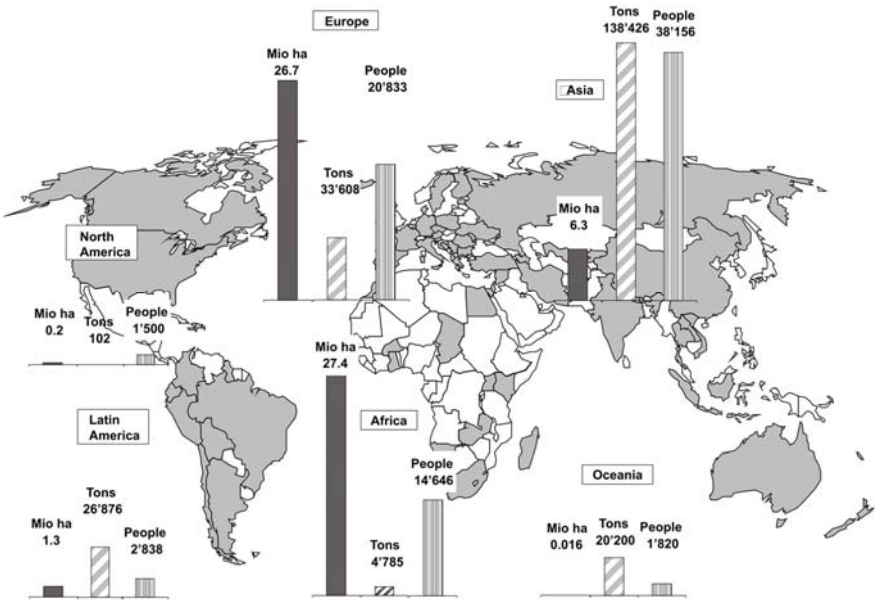


Figure 32: Overview on certified organic wild collection areas, harvested quantities and number of reported collectors per continent in 2005.

Source: ITC Global Survey Organic Wild Collection (2006)

[1] Organic Services GmbH, Landsbergerstr. 527, 81241 Muenchen, Germany, www.organic-services.com
[2] International Trade Centre ITC, Geneva, Rue de Montbrillant, 54-56, Switzerland, www.intracen.org/organics

This study used certification bodies as a basic source of information in order to get a global overview on organic wild collection. The interviews were based on a questionnaire referring to collection facts (country, area, products, quantity, processing steps), social issues (number of involved collectors, collecting family members) and sustainability. All product data referred to the year 2005. Secondary data sources were online databases of certification bodies, company information and personal communication. In total, certification bodies and secondary reports show registered areas of about 62 million hectares for organic wild collection and a total number of 979 organic wild collection projects.

About 440 different organic products have been reported. Almost all of them are from plants. Data from a total of 71 countries have been collected and used for the study. Thereof, the majority of countries (80 percent) are less developed or emerging countries which shows the socio-economic importance of organic wild collection for countries with little income alternatives. An extrapolation on how many people are involved in certified organic wild collection project came up to 150'000 to 200'000 people (including collectors, local agents, employees in processing plants etc.)[1].

As already mentioned, a collection area of nearly 62 million hectares and a total quantity of 223'754 tons of organic wild products have been indicated. However, the total collection area is estimated to be much larger -between 78 million hectares and 104 million hectares - because not all existing organic wild projects could be identified. The largest identified collection areas are in Europe (26.7 million hectares) and Africa (26.8 million hectares), while Asia shows the highest quantity (138'426 tons) collected from a relatively small area (6.2 million hectares).

Table 7: Identified quantities, registered areas and number of wild collection projects worldwide in 2005

Continent	Number of certified wild collection projects	Registered area (ha)	Total harvest quantity (t)
Europe	127	26'715'956	33'365
Africa	25	27'439'963	4'785
Asia[2]	145	6'261'176	138'426
Latin America	25	1'346'420	26'876
North America[3]	648	180'000	102
Australia and Oceania	9	16'090	20'200
Total	979	61'959'605	223'754

ITC Global Survey Organic Wild Collection (2006)

[1] 80'000 collectors have been reported to the study.
[2] The Asia statistics comprise a large collection area of 3.2 million hectares in Azerbaijan where certification status could not be clarified.
[3] The high number of North-American organic wild collection projects comprises above all Canadian wild rice and wild maple projects.

The top ten countries in terms of registered area are Romania, Kenya, Zambia, Finland, Azerbaijan, China, South Africa, Uganda, Namibia and Bolivia (see country list at the end of this chapter). These countries cover nearly 92 percent of the total registered wild collection area reported to the study. However, significant commercial activities are not taking place in all of the mentioned countries. Kenya is an example of a country with a large registered wild collection area, but without relevant collection activities. On the contrary, Bolivia, Romania or China are countries showing significant commercial activities. China's certified organic wild product quantity reaches a share of 67 percent of the total organic wild production quantity in 2005, with bamboo shoots as the leading species.

The top ten products in terms of harvest quantity are bamboo shoots, Brazil nut, lingonberry, rosehip, tea seed for oil, blueberry, iron walnut, green laver, coconut and white mushroom. These top ten make up 136'411 tons of 223'754 tons.

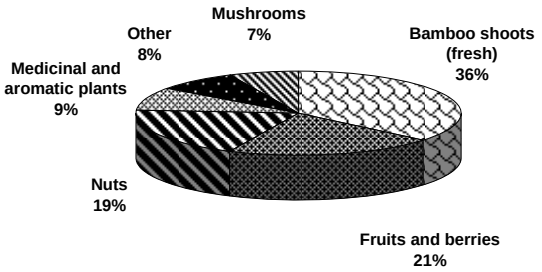


Figure 33: Organic wild product categories: Share of total quantities

Source: ITC Global Survey Organic Wild Collection (2006)

In 65 percent of the reported project cases, the export company is the holder of the certificate, followed by manufacturing company (24 percent), importing company (18 percent), collector group (17 percent) and wholesaler (8 percent)[1].

In Europe, Finland and Romania have the largest collection areas, followed by Bulgaria, Iceland and Albania. Regarding the quantity, wild berries and mushrooms are the dominant wild products. The highest amounts were collected in Romania, Russia, and Bulgaria, as well as Serbia and Montenegro, Bosnia and Herzegovina and Albania. In Europe, a wide variety of products is collected (about 198 different products).

[1] Multiple answers possible.

In Africa, only a small range of products is collected. The most important products in terms of quantity are sheabutter, rosehip, gum arabic, argan oil and honeybush. The two countries with the largest collection areas (Kenya and Zambia) have only few collection activities.

The most important wild products in North America are wild rice, maple syrup, wild blueberries and blue green algae. Unlike Canada, organic wild collection in the United States is of less significance.

Brazil nuts are the most important wild collected product in Latin America. The biggest portion is collected in Bolivia. Other important products are coconut, heart of palm and rosehip. In terms of collection area, Bolivia is the leading country, followed by Brazil, Peru and Guatemala.

China is the leading country in Asia in terms of collection areas and in harvested quantities. Asia shows the widest variety of collected products (241). Products such as bamboo shoots, walnuts, tea seeds, seaweed, berries and mushrooms are collected in large quantities. The top ten products make up more than 80 percent of the total collected harvest.

In Australia and Oceania organic wild collection has no big commercial importance. Indicated products are game, noni, sandalwood, seaweed, kangaroo grass and honey. There was almost no data provided on registered areas, quantities or harvest areas.

Asked for the efficiency of their monitoring tools for sustainability of wild collection, 60 percent of the certification bodies answered that it would be 'sufficient' and 40 percent that it would be 'good'.

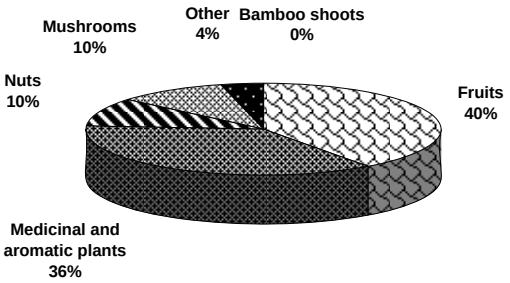


Figure 34: Organic wild product categories: Share of total harvested area

Source: ITC Global Survey Organic Wild Collection (2006)

The global value of organic wild products has been estimated based on indicative F.O.B. prices[1], and was between 630 to 830 million Euros in 2005.

Europe is by far the leading market region, as most of the identified organic wild products are certified according to EU regulation for organic agriculture. However, as US certification bodies are not sufficiently represented in the survey, it is estimated that the real difference between the US and the EU market is less than indicated.

43 percent of the trade company respondents indicated Europe (or European countries) to be the target market. North America accounted for 31 percent and Asia for 26 percent. Single countries as a target market were mentioned in 212 cases. Of these, the United States (57), Japan (29) and Germany (27) were mentioned most frequently. However, all also mentioned European countries, accounting for 76 cases, which further supports the overall result that Europe is the market region with the strongest demand for organic wild products.

Discussions with companies have shown that organic wild products are preferred compared to the same products from cultivation because of the lower price. In order to ensure long-term supply, some companies switch from buying wild collection products to those with farmed origins when demand outstrips the quantities available. In organic food retail markets, 'wild' products can hardly be found. The only exceptions are some single-ingredient products, such as Brazil nuts, wild rice, wild fish or edible mushrooms. In other market segments such as remedies and food supplements the term 'wild' is used more frequently as the term 'wild' is connected to positive natural attributes.

Table 8: List with reported organic wild collection projects (2005)[2] ordered by harvested quantities

	No. Projects	Registered area (ha)	Harvested quantity (t)
Country		2005	2005
Romania	17	15'927'862	10'320
Kenya	2	15'080'028	0
Zambia	2	9'067'500	322
Finland	1	7'507'614	312
Azerbaijan	1	3'200'000	0
China	103	2'252'900	135'885
South Africa	3	1'904'600	316
Russia	5	859'070	9'530
Namibia	1	728'493	2
Bolivia	4	722'387	12'572
Uganda	2	635'000	30
Macedonia	3	559'200	234

[1] FOB origin (Free on Board origin) - The shipping cost from the factory or warehouse is paid by the purchaser. Ownership of the goods is transferred to the buyer as soon as it leaves the point of origin. It can be either the buyer or seller that arranges for the transportation.

[2] In cases of unavailability of data about area and/or harvested quantities the table show '0". In some countries the existence of certified organic wild projects has been indicated without providing any further information (Norway, Sri Lanka, UK, Ireland and Madagascar).

	No. Projects	Registered area (ha)	Harvested quantity (t)
Serbia and Monte-negro	10	520'200	1'773
Uzbekistan	1	500'000	76
Bulgaria	17	447'775	5'282
Brazil	6	367'851	2'798
Ukraine	3	207'000	640
Iceland	2	200'305	0
Turkey	20	191'131	941
Spain	2	184'972	101
Peru	3	156'335	1'404
Canada	620	150'000	0
Albania	7	140'551	1'183
Poland	5	113'201	519
Guatemala	1	83'500	0
Nepal	3	48'006	100
Bosnia and Herzego-vina	8	45'967	1'564
Kyrgysztan	1	40'000	0
US	28	30'000	102
Fiji	2	16'040	20'200
Burkina Faso	3	15'800	2'415
Thailand	2	11'784	13
India	6	10'000	523
Chile	5	8'728	3'806
Morocco	8	7'000	25
Lebanon	2	6'800	0
Ecuador	1	5'300	60
Dominican Republic	3	2'199	5'386
Ghana	1	1'000	115
Hungary	1	600	396
Czech Republic	2	500	30
Egypt	1	442	160
Syria	1	400	361
Denmark	1	375	0
Austria	2	250	0
Greece	9	136	16
Colombia	1	120	0
Estonia	1	119	0
Armenia	1	111	2
Lesotho	1	100	1'000
France	4	100	28
Portugal	7	80	0
Germany	12	75	78
Niue Island/ New Zealand	1	50	0
Vietnam	1	44	0

	No. Projects	Registered area (ha)	Harvested quantity (t)
Belgium	1	4	0
Guayana	1	0	850
Sweden	2	0	749
Indonesia	1	0	500
Chad	1	0	400
Croatia	3	0	210
Moldavia	2	0	400
Laos	1	0	25
Iran	1	0	0
Australia	4	0	0
Tasmania	1	0	0
New Caledonia	1	0	0
Sri Lanka	0	0	0
Madagascar	0	0	0
Ireland	0	0	0
UK	0	0	0
Norway	0	0	0
Total	979	61'959'605	223'754

Source: ITC Global Survey Organic Wild Collection (2006)

Reference

Censkowsky, Udo, Ulrich Helberg, Anja Nowack, Mildred Steidle (2006) Overview of production and marketing of organic wild products. International Trade Centre (ITC), Geneva

11 How Organic Agriculture Contributes to Sustainable Development

Lukas Kilcher[1]

Organic agriculture can contribute to meaningful socio-economic and ecologically sustainable development, especially in poorer countries. On one hand, this is due to the application of organic principles, which means efficient management of local resources (e.g. local seed varieties, manure, etc.) and therefore cost-effectiveness. On the other hand, the market for organic products – at local and international level – has tremendous growth prospects and offers creative producers and exporters in the South excellent opportunities to improve their income and living conditions. Establishing whether organic agriculture is a viable alternative for a particular holding needs to be carried out on a case-by-case basis.

What potential does organic agriculture have for solving the problems of hunger and poverty? What can organic agriculture contribute to achieving socially and ecologically sustainable development in poor countries? To date, no systematic attempt has been made to evaluate the benefits and effects of each system. The article presents results from current projects conducted by the Swiss Research Institute of Organic Agriculture FiBL, which demonstrate these benefits, based on experiences gained in practice. It should be noted that there are numerous organic development projects carried out by further institutions showing similar results. Most of the organizations carrying out such projects are members of the International Federation of Organic Agriculture Movements (IFOAM), and a list is available at the IFOAM homepage[2].

To assess the contribution of organic agriculture to food security, poverty alleviation and environmental conservation, a network of long-term farming systems comparison trials was launched in 2006 by FiBL. Much of the work will be based on the experience gained in the DOK long-term trial in Switzerland (Mäder et al. 2002). The local partners of the network are:

- In Kenya: Institute of Insect Physiology and Ecology (ICIPE), Tropical Soil Biology and Fertility Institute (TSBF-CIAT), Kenyan Agricultural Research Institute (KARI), and School of Environmental Studies and Human Sciences of Kenyatta University (KU)
- In India: bioRe India; local University and/or international agricultural research center to be identified
- In Bolivia: Partner selection presently on-going

[1] Lukas Kilcher, Research Institute of Organic Agriculture FiBL, Head of the International Cooperation Department, Ackerstrasse, 5070 Frick, Switzerland, Internet www.fibl.org/english/cooperation/index.php
[2] International Federation of Organic Agriculture Movements (IFOAM): Organic Directory Online. The IFOAM Homepage, available at www.ifoam.org/organic_world/directory/index.html

Picture 1: Organic farmers from Karatinga (Kenya) discussing their experiences with organic farming in a pepper nursery. These pioneers in organic farming in Africa are important partners of the network of long-term farming systems comparisons in the tropics. Participatory on-station and on-farm research generates new knowledge that is shared with other farmers. Such learning processes lead to sustainable innovation.

Photograph: Christine Zundel, FiBL, Frick, Switzerland

Organic agriculture is sustainable and diverse

Diversity of the production system is of special importance in the tropics: simplified systems and monocropping harm soil fertility and the ecological balance to a much greater extent than in temperate climates because soil oxidation and pest population dynamics run permanently and more rapidly in the tropics. Heavy rainfall and high temperatures accelerate mineralization of the nutrients and retard accumulation of soil organic matter. Tropical farming can only be sustainable if the primary rules of this natural system are respected. Organic production reduces the risk of yield failure, stabilizes returns and therefore enhances food security for small farmers' families. Organic farmers do not fight against the natural dynamics; on the contrary, they use them to their advantage. The perennial vegetation in the tropics offers excellent alternatives to simplified production systems:

1) Agroforestry: agricultural production in forestry systems and under shade trees.
2) Intercropping: a combination of two or more crops on the same plot and at the same time.
3) Rotation: one crop is followed by another crop, preferably from a different botanical family.

Organic farmers in the tropics combine the systems referred to above to achieve an optimal mixture of diversity in space and diversity in time. The Cuban example shows how the diversity and sustainability of the system can be increased systematically in the conversion process of citrus plantations (see chart).

1) Increase the distance between the rows of citrus trees from six to nine meters, cutting down several rows of citrus trees. Lower-density plantings are better adapted to the organic production system; they increase ventilation and light interception and thus decrease disease pressure. Lower tree density gives space for crops in the alleyway between rows.
2) Plant young trees between the rows. At the same time, intercrop beans for self-sufficiency and leguminous crops for fodder, or just cover crops, such as *Neonotonia wightii*.
3) Create a diverse mosaic of citrus units and other crops from an existing plantation: divide large plots (more than 100 hectares) into smaller plots of about one to two hectares and plant hedges or other fruit trees along the plot borders.
4) Between the rows (in the alleyway), it may be possible to intercrop permanently with pasture (sheep), beans or other crops. However, this may be difficult in the case of older plantations where the trees are adapted to a certain type of management; in such cases, a step-by-step procedure is recommended (introduction of new crops and elements at yearly intervals), to allow the root systems of the citrus trees to adapt to new competition in the soil. For larger, mechanized organic farms, it may be difficult to continue intercropping as soon as the newly planted citrus trees are in production. In such cases, cover crops may be more appropriate in order to avoid disturbances in citrus management.

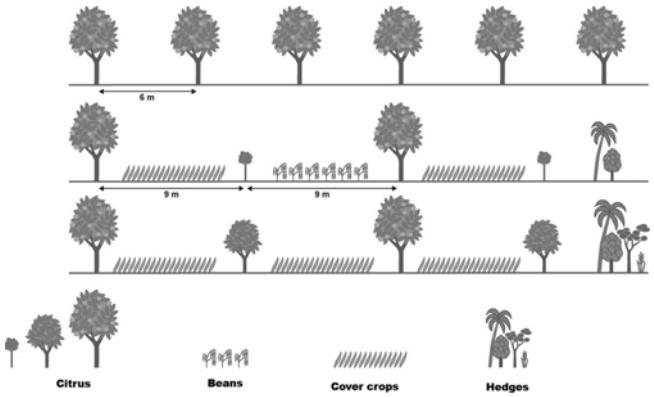


Chart: Conversion of an existing citrus orchard into an intercropping system

Chart: Lukas Kilcher, FiBL, Frick, Switzerland

Organic farmers conserve resources

Organic farmers protect their soil from erosion by soil bunds and terraces, minimum tillage and contour cultivation. Planting cover crops, mulching, intercropping and agroforestry play an important role in protection against erosion and landslides, because their rooting system stabilizes the soil. Further, these technologies increase the organic matter content of the soil, which also has positive effects on water-holding capacity. Additionally, the vegetation cover conserves humidity by protecting the soil from direct solar radiation.

Fortunately, in the humid tropics, it is not only decomposition processes that are rapid, but also composition processes. Animal manure, green manure and compost favor the composition processes and can replenish nutrients required by crops and supply the soil with essential organic matter. Additionally, legume plants are a highly valuable source of nitrogen. Closed nutrient cycles and efficient use of local resources – for example compost, dung or seeds – are especially important for subsistence farmers depending on few and limited assets. For this reason, organic agriculture means adapted technologies.

Picture 2: Organic farmers in the tropics promote the balance between growth, decomposition and mineralization. Organically managed soils have a high potential to counteract soil degradation, as they are more resilient both to water stress and to nutrient loss. In the picture: Organic farmers from Hazoua (Tunisia) discussing strategies to reduce water evaporation of the soil.

Photograph Lukas Kilcher, FiBL, Frick, Switzerland

Organic farming helps to conserve resources not only in the humid tropics, but also in the arid tropics; organically managed dryland soils have a high potential to counter soil degradation and desertification, as they are more resilient both to water stress and to nutrient loss. Water and nutrient retention capacity is increased due to a higher level of organic matter and permanent soil cover. Microorganisms have a good feeding base and create a stable soil structure. Due to the resulting higher moisture retention capacity, the amount of water needed for irrigation can be reduced substantially. Several practical examples of organic agricultural systems in arid areas show how organic agriculture can help restore degraded lands to fertility.

Organic farmers produce more, better-quality products and achieve higher incomes

Organic farmers do not only produce more crops, but also achieve more sustainable yields, better quality, and in many cases even higher yields and incomes, mainly due to the following reasons:

- In developing countries where organic agriculture is not subsidized, synthetic inputs are expensive and labor is relatively cheap, market-oriented organic farmers can achieve higher returns thanks to reduced production costs and diversified production. In many cases, price premiums are not a sufficient incentive to certify and market organic products. Farmers have adopted organic practices nevertheless because the avoidance of external inputs saves on production costs while yields are more stable.
- The risk of crop failure due to drought or pest damage is lower in organic production, mainly due to higher diversity and improved overall soil fertility (soil structure, biological activity etc.).
- Efficient use of locally available resources such as manure, seeds and irrigation water contribute significantly to more stable and even higher yields, especially if highly valuable local resources (e.g. animal manure) had been lost before conversion.
- Cultivation is more intensive (e.g. irrigation, crop care) due to improved financial situation.
- Pesticide residues are lower than in conventionally grown foods (El-Hage and Hattam 2002). However, organic foods are not pesticide free, due to many factors beyond the control of the organic farmer, for example, pesticide spray drift from adjacent fields or soil or irrigation water contamination.
- Organic farming can contribute significantly to improving the livelihood of smallholders, as it generates higher incomes and involves less risk. Organic farming therefore motivates farmers to invest in their future: in capacity building, in production, processing and marketing, in work force and in their family.

Most comparisons of the efficiency of alternative production systems focus merely on the gross yield of marketable commodities. However, yield and productivity comparisons offer a limited, narrow, and often misleading picture of the different production systems. Profitability and long-term economic viability would be a better indicator for evaluating the benefits and limitations of a production system. Moreover, the multiple environmental benefits of organic farming, difficult to quantify in monetary terms, are essential ingredients in any comparison. The FiBL long-term farming system comparisons in the tropics take this issue into consideration.

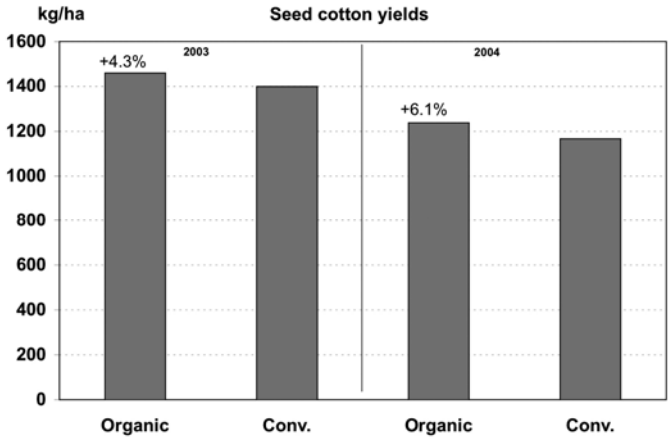


Chart 2: To investigate the economic viability of organic cotton farming and its impact on the livelihood of the involved farmers a detailed study on organic cotton farming was conducted in the bioRe India project in central India (Eyhorn et al. 2005)[1].

Over a period of two years, an Indo-Swiss research team collected and compared agronomic data from 60 organic and 60 conventional farms. One striking (though statistically not significant) result was that average cotton yields in organic fields were 4 to 6 percent higher in the two years of observation. The research results show that organic cotton farming has the potential to be an economically sound business proposition even for marginal farmers.

Chart taken from Eyhorn et al. 2005

[1] This study was mandated to FiBL by the Swiss Agency for Development and Cooperation (SDC) and WWF Switzerland.

Organic products provide market access and create added value

Certified organic products provide access to attractive local and international markets for developing countries, while the producers generate higher incomes. In addition, due to long-term contracts, income is generated more continuously than in conventional trade: To guarantee a fair share of the international organic trade benefit to those contributing most to the production of food, trade must include social regulations. For this reason, numerous organic products in developing countries also embrace social standards in accordance with fair trade labels such as 'Max Havelaar' or 'Transfair'.

Picture 3: Lebanese consumers are quality-conscious and sensitive to regional provenance. The organic market initiative 'Wadi El Tayim' is a women's cooperative that produces Lebanese specialties using artisan processing techniques. Their main markets are Arab communities abroad, familiar with the much-valued Lebanese cuisine.

Photograph: Paul van den Berge, FiBL, Frick, Switzerland

A project for the development of organic agriculture in Lebanon[1] pursues two main strategies: founding a Lebanese-owned certification body, Libancert, and developing the market for organic produce. For the latter strategy, a multiple-target approach was chosen. As a first step, the stakeholders in organic agriculture were brought together under the umbrella of the newly founded Association for Lebanese Organic Agriculture (ALOA).

[1] This projected is funded by the Swiss State Secretariat for Economic Affairs (seco) and has been carried out by FiBL since 2005.

The tasks of the association are to provide market intelligence to the operators in the organic market and to foster demand for organic produce. The second step is to support several organic market initiatives that are expected to have a significant impact on the development of the market for organic produce. Despite all the setbacks of the war, the organic movement in Lebanon will fight to continue its development.

Organic agriculture raises self-confidence and mobilizes new partnerships

Very often, conventional agriculture puts farmers in a situation of high dependency on agro-industry and its high-tech solutions, which are difficult to understand. Organic agriculture profoundly respects indigenous knowledge, womens' knowledge and local solutions. Producers thus gain control over the production cycle and increase their self-confidence. Local and international organic producers play an active role in advancing their production methods and in developing standards.

Picture 4: India is already exporting a range of organic products such as tea, spices, cotton, rice, etc. The Indian domestic market is promising, although still small.

To gain consumers' confidence, valid certification is an essential prerequisite for marketing. In 2001, a group of organizations and corporate bodies took the initiative to set up the Indian Organic Certification Agency INDOCERT[1]. It has become an important element of the organic movement in India and mobilizes new forces and partnerships. In 2003, together with other partners, INDOCERT created the International Competence Center for Organic Agriculture (ICCOA)2, a service provider for networking, capacity building and market development in the organic sector in India[3]. Among other activities, ICCOA implements the Indian Organic Market Development Project (2005-2007), which focuses on the following main areas: awareness raising, market intelligence, developing organic market initiatives, and the India Organic Trade Fair[4] .

Photograph: Samuel Moser, FiBL, Frick, Switzerland

[1] Indian Organic Certification Agency INDOCERT , www.indocert.org, Kerala-India
[2] International Competence Centre for Organic Agriculture, Bangalore, India, www.iccoa.org
[3] Both projects are funded by the Swiss State Secretariat for Economic Affairs (seco) with technical support from FiBL.
[4] India Organic Trade Fair, c/o ICCOA, Bangalore, India, www.indiaorganic2006.com

Developing organic farmers' organizations, standards, certification systems, extension services, education, research and markets brings producers together in a new manner. Stronger partnerships within the organic community enable better connections with external institutions. Such communities are in a stronger position to demand and assert their rights and to maintain or improve their economic position.

Investments to overcome constraints on the road to organic farming

The above discussion provides evidence that organic agriculture is a great opportunity for poor countries and can contribute substantially to sustainable development. The target-oriented implementation of organic farming enables efficient use of locally available resources, which is a central element of adapted technologies. Organic agriculture also presents an opportunity to achieve socio-economic sustainability, because it is committed to:

1) Participatory technology development
2) Fair trade
3) Autonomy and self-determination.

Nevertheless, there are some critical questions towards organic farming from the point of view of development policies:

1) 'Brussels, Tokyo and Washington' are defining organic agriculture worldwide. Such 'desk-created' standards may create trade barriers for some developing countries (Vogl et al. 2005). How can producers from poor countries increase their participation in global standards development and how can they define their own locally adapted standards in order to increase sovereignty and identification?
2) Inspection, certification and accreditation are becoming increasingly complex and thus a greater hurdle for small farmers in developing countries. The creation of local, indigenous certification programs and smallholder group certification, which build on the presence of an internal control system, are important solutions. How can the standard-setters in government authorities, IFOAM, UNCTAD, FAO and private labeling programs consider this issue in their discussions on harmonization? How can they include 'accreditation' in current discussions on harmonization?
3) Many small farmers in poor countries do not have access to the organic market. How can authorities and market partners from richer countries make the organic market more transparent and improve market access for small farmers from poor countries? How can they reduce especially non-tariff trade barriers such as organic certification?
4) Income and benefits for organic trade are not always equally distributed. How can organic trade guarantee a fair share of consumers' expenditure to all participants in the value chain, especially to producers? Is certified fair trade the right and only answer to this question?
5) Organic agriculture is a know-how-intensive farming method. To be competitive, organic farmers need to experiment with new techniques, and must manage land, labor, capital and innovations quite differently from conventional farmers. How can research and development improve access for small farmers to this know-how and to specific inputs, such as seeds and biological methods of pest control?

6) Does organic agriculture reach the poorest of the poor? Are other models such as 'low external input systems' more appropriate for this target-group?

The greatest constraints faced by poor farmers on the road to organic agriculture are lack of knowledge, access to markets, certification, agricultural inputs, and lack of organization. Greater investment in practice-oriented research, capacity building and extension, accessible local certification schemes and harmonized standards, organic market initiatives, fair trade relationships and inspiring partnerships within the movement can help to overcome these constraints. Developing these tools and services in such a way as to enable participatory learning processes will lead to sustainable innovation within the rural communities and thereby contribute to sustainable development.

References

El-Hage Scialabba N. and Hattam C (Eds.). 2002. Organic agriculture, environment and food security. FAO, Rome. www.fao.org/DOCREP/005/Y4137E/Y4137E00.htm

Eyhorn, F., P. Mäder and M. Ramakrishnan (2005): The impact of organic cotton farming on the livelihoods of smallholders. Evidence from the Maikaal bioRe project in central India. Research Institute of Organic Agriculture FiBL, Frick, Switzerland. www.fibl.org/english/cooperation/projects/documents/maikaal-research-report.pdf

Kilcher L., Khanna R., Richter T., Huber B. and Schmid O. 2004: The Market for Organic Food and Beverages in Switzerland and the European Union. Overview and market access information for producers and international trading companies. Forschungsinstitut für biologischen Landbau (FiBL) und Swiss Import Promotion Program (SIPPO), Frick/Zürich, ISBN 3-906081-03-06.

Mäder P. 2002: Organic farming and its future. World Summit on Sustainable Development, Science Forum, Johannesburg, 26.8.-4.9.2002.

Mäder P., Fließbach A., Dubois D., Gunst L., Fried, P. and Niggli U. 2002. Soil fertility and biodiversity in organic farming. Science 296: 1694-1697.

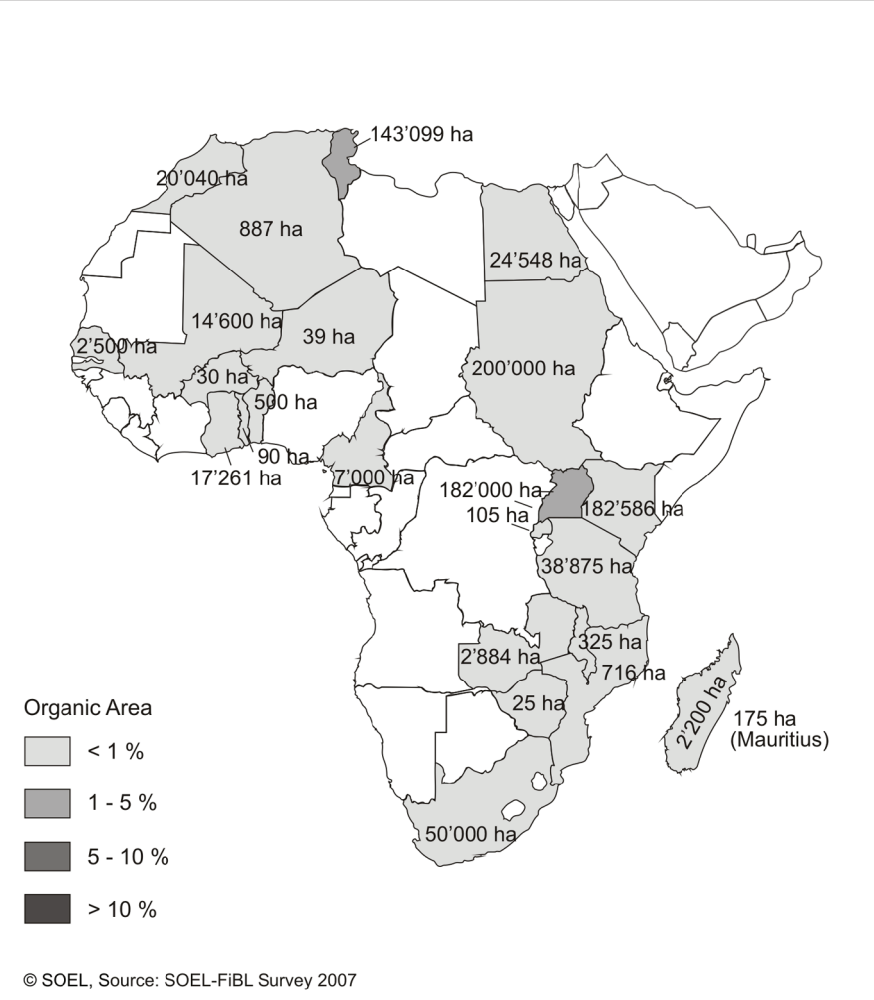
Parrott N. and Marsden T. 2002. The real green revolution. Organic and agroecolocical farming in the South. Department of City, and Regional Planning, Cardiff University. ISBN 1 903907 02 0. www.greenpeace.de/GP_DOK_3P/BRENNPUN/F0107N11.PDF

Pimentel D., Hepperly P., Hanson J., Douds D. and Seidel R. 2005. Environmental, energetic, and economic comparisons of organic and conventional farming systems. BioScience 55 (7): 573-582.

Vogl C., Kilcher L., Schmidt H, (2005): Are Standards and Regulations of Organic Farming Moving Away from Small Farmers' Knowledge? In: Journal of Sustainable Agriculture, Vol. 26(1) 2005, page 5-26. http://orgprints.org/5920/

Willer H. and Yussefi M. (Eds.). 2006. The World of Organic Agriculture. Statistics and Emerging Trends 2006. International Federation of Organic Agriculture Movements (IFOAM), Bonn, Germany. http://orgprints.org/5161/

12 Africa



Map 2: Organic farming in Africa.

Source: SOEL-FiBL Survey 2007, Graph: Minou Yussefi, SOEL

Organic Farming in Africa

BO VAN ELZAKKER[1], NICOLAS PARROTT[2], MARJORIE CHOLA CHONYA[3], SAM ADIMADO[4]

This chapter is an adaptation of the similarly titled chapter in this publication in 2006, written by Nicholas Parrott, Charles Ssekyewa, Chido Makunike and Samuel Muwanga Ntambi[5].

Introduction

In Africa, certified organic production is mostly geared to products destined for export beyond Africa's shores. However, local markets for certified organic products are growing, especially in Egypt, South Africa, Uganda and Kenya. Statistics for certified production are provided in the table at the end of this chapter. Although these are probably incomplete, (most countries do not have data collection systems for organic farming) they indicate that, with a few exceptions (notably Uganda), certified organic farming is relatively underdeveloped, even in comparison to other low-income continents. Organic certification is mainly organized under group certification systems, using an Internal Control (management) System that is operated by the exporter, who holds the organic certificate. This reflects the strong tendency for organic agriculture to involve smallholder farmers, which mirrors the situation of smallholders being responsible for 90 percent of African agricultural production (Ife 2006).

Pinstrup-Anderson (1982) and Lipton (1988) argue that there has been a tremendous effort by the donor community in investing in agricultural productivity and agricultural research in Africa, but that the results have been less than remarkable compared with similar levels of investment in Asia. There have been various attempts to modernize the smallholder farmer through providing government extension, seed, fertilizers and pesticides. However, the reality is that government extension services are largely ineffective, improved varieties and right fertilizers rarely available at the right time, pesticides improperly handled; and farmers do not like to be trapped into purchasing inputs on credit when they regularly face crop failures. Access to these inputs is hampered by poor infrastructures, like roads, and poor management. The situation is always highly unreliable. As a result most smallholder farmers reject external inputs and grow their food crops and some cash crops in an organic by default situation. For certified organic production, a more active organic farm management should be adapted to increase production and quality but, also to maintain production in the longer term. As many soils are poor, soil fertility management requires much attention, more than just a bag of urea.

[1] Bo van Elzakker, Agro Eco, Bennekom, the Netherlands
[2] Nicholas Parrott, TextualHealing.nl, 6702 AA Wageningen, The Netherlands
[3] Marjorie Chola Chonya, Participatory Ecological Land-Use Management, Lusaka, Zambia
[4] Samuel Adimado, Ghana Organic Agriculture Network, Accra, Ghana
[5] Parrott et al. (2006): Organic Farming Africa. In Willer/Yussefi (Eds.) (2006) The World of Organic Agriculture. Statistics and Emerging Trends. International Federation of Organic Agriculture Movements, Bonn, Germany

Given the difficulty of accessing external inputs, local NGOs and farmers' groups, as well as development agencies are increasingly adopting organic techniques as a method of improving productivity and addressing the pressing problems of food security and climate change. Organic farming fits in a package that addresses a number of concerns. They resonate with, and are being used in, initiatives designed to:

- maintain and enhance soil fertility,
- mitigate the effects of climate change and reverse desertification,
- promote tree-planting and agro forestry,
- maintain and improve biodiversity,
- promote the use of local seed varieties and develop strategies for combating pests based on locally available inputs,
- strengthen group formation, promote joint marketing,
- support the most vulnerable social groups such as female headed households,
- improve diets and ensure food security,
- and, ultimately, contribute to the eradication of poverty

To date there is very little research available that tracks the extent to which these approaches are being employed on the ground, or their effectiveness viz à viz other approaches. Yet there is much evidence that they are growing in appeal and often prove to be highly successful in meeting economic, social and ecological objectives. Therefore, organic agriculture appears to be a viable and sustainable development option, particularly for (groups of) smallholder farmers in Africa.

Adopting organic agriculture does not mean doing nothing, it is not the ancestor's traditional agriculture, or sticking to some backward form of agriculture; it pursues a blend of initiatives and innovations involving participatory interventions by scientists, technicians and of course farmers themselves. The organic farming system emphasises management over technology and biological relations and natural processes over, literally, foreign inputs (IFOAM, 2004).

Organic farming in Africa often starts with a motivation to export. In time, it becomes viewed as an agricultural system that better fits African farming culture. It enhances and better manages the complexity of the ecosystem, rather than reduces and simplifies the biophysical interactions on which agricultural production depends. It must be seen as deliberately integrating and taking advantage of naturally occurring, beneficial, interactions and the wealth of existing indigenous knowledge (Twarog and Kapoor, 2004). However, most importantly, organic farming in Africa must be seen as a process of learning and sharing and of encouragement in moving towards broader development objectives.

In recent years some policy makers and donors have started to recognize the potential of export oriented organic agriculture as a means of generating foreign exchange and increasing incomes. That is fine. Yet the broader benefits of organic farming and agro-ecology, in terms of enhancing food security, environmental sustainability, social inclusion and reducing exposure to toxic pesticides, often go unrecognized.

The dogma of the new (or old) Green Revolution still reign, the reductionist belief that food production is a technical problem that can be solved by making African farmers use miracle seeds (now GMOs) and free or cheap fertilizers and pesticides. These strategies appear driven by a bewildering mix of naivety, belief in technology, selective memory, genuine good intentions and powerful commercial interests. And, obviously, it is called sustainable farming. Africa is still a virgin and receptive market. Modern technologies, including GMOs, are neatly packaged and sold to African states with the aid of development funds (Paul and Steinbrecher, 2003). However, with the growth of the Organic Agriculture sub-sector, whose track record in Africa now extends to some 10 to 15 years, these types of technological fix are increasingly being scrutinized, criticized and sometimes rejected by some African policymakers.

However, it is still quite difficult to see how organic agriculture can be mainstreamed within the government extension and research systems, a process necessary for wider sharing and dissemination. At the moment, governments in Africa are still disseminating the conventional information about using hybrid seeds and fertilizers and promotion of organic agriculture is left to NGOs. The same is also true of agricultural research, where huge amounts of funds are invested in conventional agriculture and very little in organic agriculture.

Historical Development

The formal organic sector in Africa remains relatively underdeveloped and statistics are often difficult to come by. In recent years, there has been substantial growth in certified organic land in Uganda, Tanzania, Ghana, Ethiopia, Kenya and Zambia.

Certified organic farming in Africa is export oriented, with target markets in Europe, the US and a little to Japan but increasingly to regional markets; South Africa and the Gulf area. It takes two main forms: relatively large farms or plantations with or without out-growers, and smallholder groups. The smallholder groups are managed by commercial exporters. These groups collectively implement an internal control system, which involves centrally organizing extension, inspection, certification and marketing activities (IFOAM, 2005). Occasionally out-grower schemes, which are hybrids of these two forms, exist whereby plantations or commercial farms buy in additional produce from certified smallholder farmers. In some cases smallholder groups are encouraged (also by donors) to export themselves but quickly find out that this is not that easy and generally fail. Originally, projects were funded by direct investment by buyers in their own projects. Nowadays most organic projects are supported by development aid programs, like the Swedish financed Export Promotion of Organic Products from Africa (EPOPA) that is implemented in Uganda and Tanzania. Donors like the United States Agency for International Development (USID), and the Danish International Development Agency (DANIDA), often support individual projects on a cost-sharing basis. Other donors like Helvetas, GTZ, Hivos, Misereor, Brot für die Welt, Weltfriedensdienst and Oxfam support organic projects through NGOs but these are not necessarily export oriented.

Most smallholders only use part of their land for their export cash crop. Production for household consumption (subsistence) comes first together with the sale of excess food crops on local markets for petty cash. Often, quite a large part of their land is under fallow, as shifting cultivation is still practiced wherever possible.

A study due to be published by the FAO (FAO 2007) shows that even the oldest organic projects in Sub-Saharan Africa struggle with external certification, documentation requirements and their costs. The cost of certification (the internal inspection and external certification costs) usually exceeds what the farmers receive as an organic premium.

Markets

With a few exceptions (notably Egypt and South Africa), the African market for organic produce is very small. This is due to lack of awareness, low-income levels, lack of local organic standards and other infrastructure for local market certification (Kalibwani, 2004). Therefore, most certified organic production in Africa is geared towards export markets, with the large majority being exported to the EU, which is Africa's largest market for agricultural produce. The range of certified organic products currently being produced in Africa is shown below.

Overview table: Organic Produce from Africa (by type and country)

Product Group	Countries
Fresh Vegetables	Egypt, Kenya, Madagascar, Malawi, Morocco, South Africa, Tunisia, Zambia
Bananas	Cameroon, Ghana, Senegal, Uganda
Citrus Fruits, Grapes (including wine)	Egypt, Morocco, South Africa
Other tropical fresh fruits	Cameroon, Egypt, Ghana, Madagascar, Senegal, South Africa, Tanzania, Uganda
Dried Fruits	Algeria, Benin, Burkina Faso, Cameroon, Egypt, Ghana, Madagascar, Morocco, Tanzania, Togo, Tunisia, Uganda
Processed fruits incl. Juices	Ghana, Tanzania, Uganda
Coffee	Cameroon, Ethiopia, Kenya, Madagascar, Tanzania, Uganda
Tea	Kenya, Tanzania
Cocoa	Cameroon, Ghana, Madagascar, Tanzania, Uganda
Sugar	Madagascar, Mauritius,
Cotton	Benin, Burkina Faso, Egypt, Mail, Senegal, Sudan, Tanzania, Uganda
Coconut Oil	Mozambique
Palm Oil	Ghana, Madagascar
Olive Oil	Tunisia
Ground Nuts (peanuts)	Zambia, Tanzania
Tree Nuts (cashew, shea)	Ghana, Kenya, Malawi, Morocco, Tanzania, Uganda
Sesame	Burkina Faso, Uganda, Tanzania
Herbs (culinary)	Egypt, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Morocco, Mozambique, South Africa, Tunisia, Zambia, Zimbabwe
Spices (culinary)	Cameroon, Egypt, Ethiopia, Madagascar, Malawi, Mozambique, South Africa, Tanzania, Uganda, Zimbabwe
Medicinal / Therapeutic Herbs and Spices	Egypt, Morocco, Namibia, Tunisia, Zambia

Essential Oils	Ghana, Kenya, Madagascar, Tanzania, Uganda, Zimbabwe
Honey	Algeria, Malawi, Tanzania, Tunisia, Uganda, Zambia
Fish	Tanzania, Uganda
Bark cloth	Uganda
Cereals incl. Rice	Egypt, Ethiopia, Madagascar, Mozambique, Sudan

Source: Parrott et al. 2006, with some updates

The Maghreb countries and Egypt benefit from their proximity to European markets and West African countries can access fast fruit reefers to European destinations, but otherwise the potential of an export led organic strategy is constrained by high transport costs and poor infrastructure. For most sub-Saharan African countries, the best potential for organic exports undoubtedly lies in low volume – high value crops (such as herbs, spices and essential oils), and those that offer opportunities for adding value locally.

Domestic markets for organic produce are developing in Egypt and South Africa, both reasonably prosperous countries by African standards but also in Kenya and Uganda. Sekem, the pioneer of the organic movement in Egypt, has developed a substantial domestic market for a range of products, including herb teas, fruits and vegetables and organic textiles. Domestic sales account for a majority of its certified production. In other countries and particularly in the larger cities, there is demand for 'naturally' grown produce. Often, however, this is not certified and its popularity is often due to these products tasting better than their intensively grown counterparts. The potential of applying organic approaches within peri-urban farming, which provides a high proportion of fresh vegetables and protein within many African cities, is being explored in some places.

State support, standards and legislation

There is a strong NGO interest in organic farming as a means of making farming more sustainable and improve food security. There is also a commercial interest in organics as it represents an interesting niche market, with money earning potential. The interest from governments lags behind and this is unfortunate in cultures where something new is strongly frowned upon and almost appears illegal without explicit state support.

Initially, Ministries of Agriculture tend to frustrate or belittle efforts to develop organic farming. The old argument that Organic Agriculture can only be implemented on a small-scale and hence cannot contribute to national food security continues to be advanced. It is often first the Ministries of Trade or of the Environment that develop an interest. For example, the Ugandan Coffee Development Authority recognizes the commercial potential of organic coffee (they hosted the 3rd IFOAM organic coffee conference in Kampala in autumn 2004).

When governments become involved, they usually want to regulate Organic Agriculture before they feel that they can support it. If it is not regulated, they feel it does not exist. At present Tunisia is the only African country with its own organic (EU compatible) standards, certification and inspection system. Egypt and South Africa have both made significant progress in this direction, Kenya, Uganda and Tanzania are to follow soon. Those countries are well on the way to developing standards and have private certifying organizations in place. Morocco, Ghana and Zambia have made some progress in developing their own standards.

For export, most African countries are reliant upon both foreign standards and certifying bodies. When European certification bodies open branch offices in African countries, this is normally seen as an unwelcome foreign intervention, even though it does allow market access for a higher value product. The absence of government support is a major constraint on the development of the organic sector, creating a 'chicken and egg' situation, where the market does not develop because the necessary infrastructure is not in place, and the infrastructure is not there because the market is inadequately developed. The absence of local certification and inspection capacity is a critical bottleneck that needs to be overcome to develop the potential of African organic exports. In general however, the potential of organic approaches, even those geared to premium export markets, has not yet been recognized by the majority of African governments. What is worse is that its potential to make farming more sustainable, to give women a better chance to enter market agriculture, to make agriculture more resilient to climate change and to improve nutrition, is generally not appreciated.

The NGO sector

In East Africa, there have been efforts to establish national movements, such as in Uganda (the National Organic Agriculture Movement of Uganda, NOGAMU), Zambia (Organic Producers and Processors of Zambia, OPPAZ), Kenya (Kenyan Organic Agriculture Network, KOAN) and Tanzania (Tanzania Organic Agriculture Movement). NOGAMU is a prime example for the region, and beyond, of a concerted effort of all stakeholders, public and private, profit and non-profit oriented, to develop the sector for the common good. Lobbying has been done to block the re-introduction of DDT into the country, against the introduction of GMOs; and work is being done to jointly develop the local and international markets.

On the contrary, in West Africa, virtually no national movements are seen, with the exception of Ghana. The Ghana Organic Agriculture Network, GOAN, was able to create general awareness among the general farming population of the country and a number of small-scale farmers were given training in production practices using organic agriculture. However, following a good start, the network fell prey to internal feuding, which undermined national cooperation and drained energy from the genuine organic groups.

East African countries have English as the common language, but elsewhere, particularly in West Africa, language barriers have contributed to difficulties in sharing information. These countries have also seen more than their fair share of political instability over the years and partly as a consequence of this the NGO sector and civic society is still very weak.

Research, Extension and Training

Agricultural research in Africa is quite fragmented between the international research centers (often under the umbrella of CGIAR), universities, national research institutes, and formal or informal field level research. Often there is inadequate communication between these different levels, over research priorities and results. There is now a move towards regional research network initiatives, such as those organized under the Association for Strengthening Agricultural Research in Eastern, Central and Southern Africa ASARECA. There are also moves to come out of the research and experimental stations and engage in farmer driven, on-farm research. However, disciplinary boundaries often inhibit the adoption of the holistic approach often required by an organic system. The strongest trend is towards intensification based on foreign inputs. Organic Agriculture is not seen as an interesting branch at least partly because it does not have the same commercial potential for opening up new markets that exist with GMO seeds and agrochemicals.

Extension services in most African countries are understaffed, under-funded and demoralized and research-extension information flow systems are not very smooth. Most research findings do not find their way to the extension officers and the farmers. NGOs and church groups often play an important role in filling these gaps at the grass roots level, especially in terms of organic approaches.

Nonetheless, there are some outstanding examples of innovative organic research at all these levels. Pioneering research on organic farming techniques has emerged from the World Agroforestry Centre (formerly ICRAF) and the International Centre for Insect Physiology and Ecology (ICIPE). Other centers, such as the International Institute for Tropical Agriculture (IITA) and the International Livestock Research Institute (ILRI) could potentially contribute to finding solutions to the problems facing organic farmers. National initiatives, like that of Uganda Martyrs University (UMU, 2005), are also growing. However many tensions exist between mono-disciplinary based science and industry based research priorities and those of the poorest farming communities. Solutions that would satisfy organic criteria can often prove to be inappropriate or unaffordable to small-scale producers. In addition, often there is little commercial interest or funding available to meet the needs of small-scale farmers. A final further barrier to developing the potential of the organic sector is that much expertise and experience (of failures as well as successes) is in the heads of the practitioners such as farmers and field agents. This might appear in the 'grey literature' of project evaluations and consultants reports but rarely reaches the public domain through publication in scientific journals. This lack of peer-reviewed publications undermines the credibility of organic approaches within the scientific community.

Paradoxically organic and agro-ecological farming appears to thrive better in countries where the extension services have been worst affected by 'restructuring programs' as extension services were one of the main carriers of modernization. Where they have been absent or ineffective, farmers have been left to their own devices, and have often innovated with organic approaches rather than those that require expensive and often unavailable foreign inputs.

These issues are by no means unique to Africa, and despite these obstacles, there is some evidence of innovative organic related research through research institutes, universities, private sector led projects and farmers' own experimentation. Disseminating the findings of these experiences, within both the research and farming communities, as well as developing research agendas that meet real organic farming systems needs, are major obstacles for which solutions need to be found.

GMO

One wonders whether those advocating the introduction of GMOs have genuinely and seriously reflected on African agriculture. African agriculture is characterized by a general degradation of natural resources, regular droughts, sometimes sudden pest emergences, ill health among farming families, even excluding the HIV/AIDS pandemic, inadequate infrastructure, very low farm gate prices, limited market access, weak extension systems, and saving, sharing and bartering locally produced seed,(IFOAM 2004). While biotechnology has been used in African agriculture for generations, for example to preserve food and brew beer (Mzinga, 2005), it is not apparent how GMOs would meaningfully help to resolve the challenges that affect African agriculture, or whether it would mainly increase the profits of, and open up new markets for seed breeders and pesticide manufacturers (who increasingly operate under the same corporate roof).

The main argument for advancing GMOs in developing countries, that of trying to solve world hunger, is highly contested (Independent Online, August 2006). The argument of the need to produce enough food to ensure global food security appears valid on the surface. But the world already produces more than enough food for everybody. The problem is that of over consumption in some places and structural under consumption in others. The reasons for the latter are usually social and economic (although they manifest most visibly when natural disasters occur; Rundgren, 2006). Methods of food production that involve more costs and imply more risk to farmers are not a solution to these problems. Such methods will run into the same problems of non-adoption (and abandonment, once subsidized state support was withdrawn) that green revolution approaches ran into in much Africa.

In addition most GMOs developed to date are for highly commercialised crops (e.g. soya, rice, maize and cotton), not the minor crops that often sustain people in marginal areas. Although some research has been done on modifying crops to meet the stresses (e.g drought) found in areas where hunger is prevalent, few if any have come to field trials yet alone general release or commercial development. The markets for such seeds are small and people's purchasing power minimal – both acting as a disincentive to any commercial development. Moreover, it is questionable whether the factors that affect, say drought resistance will be found in a single gene or whether they lie in more complex packages of genes and genetic / environmental interactions.

Despite the good intentions of the Green Revolution, 30 to 40 years later the world's approximately 800 million people are still hungry. Technology led solutions and technology transfers do not appear to provide an answer. They may produce more food – but they do not seem to help the most needy to increase their food security or reduce poverty. It is important that efforts aimed at meeting these goals should start from the premise of developing more affordable and sustainable farming systems that will ensure food security for rural dwellers, who constitute the majority of the world's (and certainly Africa's) hungry.

The manner in which GMOs have been introduced into Africa has also been controversial. Their impact on African agriculture is still unfolding and there is much more to be uncovered. In South Africa, where GMOs have been introduced, yields have improved but costs have increased. An attempt was made to include smallholder farmers as beneficiaries but the numbers of those farmers are reducing as the 'project type support' is fading (Mzinga, 2005). The farmers are already feeling the cost implications of depending on multinationals for inputs (IFOAM 2004). Egypt has a pro GMO stance and other countries are slowly been coerced to adopt GMO production. Kenya is already doing research and trials on GMOs, Uganda is breeding GMO bananas. Some GMO crops have been imported as food aid, and some will inevitably be planted in the following years. This created a *de facto* introduction into countries that have yet to make any clear policy decision. The insistence of the Zambian government that US maize should be milled before being imported angered the US government. On the regulatory front, most African countries are in the process of producing rather weak biosafety laws (IFOAM 2004). These are usually being produced with little involvement from smallholder farmers (and often without their knowledge) who constitute the majority (often 80 to 90 percent) of farmers. They have little knowledge or understanding of the Cartagena Protocol on Biosafety and how GMO will affect their livelihoods (Mzinga, April 2005).

Nonetheless, civil society and other stakeholders are working hard to showcase and advocate more affordable and sustainable farming systems for smallholder farmers. In particular, there has been emphasis on maximising use of locally available resources for food production. Organic agriculture has been identified as one potential way in which farmers can engage produce food at less cost and improve the long-term productivity of their land and surrounding ecosystems.

Outlook

The fact that traditional African agriculture is low external input provides a potential basis for organic agriculture as a development option for Africa. Organic farming practices deliberately integrate traditional farming methods and make use of locally available resources. As such, they are highly relevant to a majority of African farmers, who have resisted the Green Revolution, finding it unsustainable, risky, costly and inaccessible.

African society has very strong ties of kinship and community and this implies a very high level of social accountability among communities (Mbithi, 1982) Organic agriculture fits with this model. For it to be widely accepted its benefits must be seen to spread beyond trade. Most organic agriculture in Africa is non-certified – and will probably remain so for a while to come. There is need to develop domestic markets as well as new or alternative forms of standardisation and verification that suit the African context.

There is undoubtedly room for a substantial increase in certified organic production in Africa, and smallholders engaged in it often derive significant benefits, improving their incomes, nutritional status and livelihoods as a result. Yet there are also significant constraints on the potential for development. In part these are external, to do with the costs of certification, problems of infrastructure, maintaining links with distant markets and the vagaries of world markets. Yet there are also internal ones. The over-riding priority for African agriculture is that of achieving sustainable food security. Organic agriculture has a huge potential in helping meet this aim, which is only just beginning to be recognized.

The formal and informal organic sectors in the different African countries share much common ground. Yet because of their different orientations and personal rivalries, the potential for knowledge sharing and pooling of resources is rarely realised. The development of networks between NGOs, development agencies and research institutes is an important step along this path.

References

FAO 2007, Increasing incomes of smallholder farmers from organic agriculture in sub-Saharan Africa, Rome, Italy (in press)

Ghana Organic Agriculture Network (GOAN) 2006. Strategic Plan 2006 to 2010.

Grolink, 2004, Training Manual

Ife, K. 2006 paper presented at the conference on Harnessing the Role of the Diaspora; Agriculture: a skills or investment option, Commonwealth Secretariat, London, UK

IFOAM, 2004 Genetic Engineering in Agriculture: A Focus on Africa, Book 2

IFOAM, 2004 IFOAM Training Manual for the Tropics

IFOAM, 2005 IFOAM Smallholder Group Certification: Training Curriculum and Guidance Manual for Producer Organizations. CD ISBN Nr. 3-934055-36-2. Compiled by IMO

Kalibwani ,F. 2004 Africa IFOAM Strategic Plan Draft (II). Outcome of the African Planning Workshop held in Nairobi, Kenya.

Mbithi, P. 1982 Rural Sociology and Rural Development. Its Application in Kenya. Kenya Literature Bureau. 218 pages.

Mzinga, J. (2005), GMOs: Beyond Fact and Fiction, New Horizon Printing Press: Lusaka, Zambia

Parrott, Nicholas and and Bo Van Elzakker (2003): Organic and like minded movements in Africa. International Federation of Organic Agriculture Movements IFOAM. Tholey-Theley, Germany. Download www.ifoam.org/igo/africa_survey.pdf

Parrott, Nicholas, Charles Ssekyewa, Chido Makunike and Samuel Muwanga Ntambi (2006): Organic Farming in Africa. In: Willer/Yussefi (Eds.) (2006): The World of Organic Agriculture. Statistics and Emerging Trends 2006. International Federation of Organic Agriculture IFOAM, Bonn, Germany, pp. 96-107. Archived at http://orgprints.org/5161/

Paul, H. and Steinbrecher, R. 2003 Hungry Corporations: Transnational Biotech Companies Colonise the Food Chain. Zed Books , London & New York. 220 pages

Pinstrup-Anderson, P. 1982. Agricultural Research and Technology in Economics Development. Long, White plan, N.Y.

Rundgren. G. (2005) Organic Agriculture and Food Security. IFOAM Dossier. IFOAM, Bonn.

Ssekyewa, C. 2004 Research, Extension and Education in Africa, Policy paper presented at the OPPAZ workshop, December 2004, Lusaka, Zambia.

Ssekyewa, C. 2005 Organic Agriculture Research in Uganda. Paper presented at the International Society for Organic Agriculture Research (ISOFAR) Scientific Conference, 20th -23rd September 2005, Adelaide, Australia. 17 pages

Twarog, S. and Kapoor, P. 2004 Protecting and Promoting Traditional Knowledge: Systems, national Experiences and International Dimensions. United Nations Publication, 2004, 383 pages

Uganda Martyrs University, 2005 University Prospectus 2005- 2006 Academic Year.

Africa: Organic farming statistics

Table 9: Organic land and farms in Africa

Country	Year	Organic land area	Share of organic land	Organic farms
Algeria	2005	887	0.00%	39
Benin	2005	500	0.01%	600
Burkina Faso	2004	30	0.00%	
Cameroon	2003	7'000	0.08%	
Egypt	2005	24'548	0.72%	500
Ghana	2005	17'261	0.12%	2'000
Kenya	2005	182'586	0.69%	15'815
Madagascar	2006	2'220	0.01%	
Malawi	2002	325	0.01%	13
Mali	2005	14'600	0.04%	3'672
Mauritius	2005	175	0.15%	5
Morocco	2003		.	12'051
	2005	20'040	0.07%	
Mozambique	2005	716	0.00%	1'904
Niger	2005	39	0.00%	
Rwanda	2005	105	0.01%	
Senegal	2004	2'500	0.03%	3'000
South Africa	2005	50'000	0.05%	0
Sudan	2005	200'000	0.15%	650
Tanzania	2005	38'875	0.08%	34'791
Togo	2005	90	0.00%	1
Tunisia	2005	143'099	1.46%	515
Uganda	2005	182'000	1.46%	40'000
Zambia	2005	2'884	0.01%	9'248
Zimbabwe	2005	25	0.00%	1
Total		890'504	0.12%	124'805

Source: SOEL-FiBL Survey 2007

Data and information sources/contacts

- Algeria: Data provided by / Source Dr. Lina Al Bitar, IAMB, Bari, Italy
- Benin: Data provided by / Source Emile Houngbo, GRAAP, Cotonou, Benin
- Burkina Faso: Data provided by/Source Helvetas Burkina Faso
- Botswana: Data provided by / Source Brigitte Schuster, The World Conservation Union, Gaborone, Botswana
- Cameroon: Data provided by / Source FAO, World Markets for Organic Fruit and Vegetables – Opportunities for Developing Countries in the Production and Export of Organic Horticultural Products, FAO Publication, Rome 2001

- Egypt: Data provided by / Source Dr. Mohamad Yousri Hashem, Center for Organic Agriculture in Egypt (COAE), Cairo, Egypt and Dr. Yousef Ali Hamdi, Egyptian Center of Organic Agriculture (ECOA), Dokki, Egypt
- Ghana: Data provided by / Source Samuel Adimado, Ghana Organic Agriculture Network, Kumasi, Ghana
- Ivory Coast: Data provided by / Source Noufou Coulibaly, Organization Professionelles Agricoles, Ivory Coast
- Kenya: Data provided by / Source Eustace Kiarii, Kenya Agriculture Organic Network, KOAN Secretariat, Nairobi, Kenya
- Madagascar: Data provided by / Source Andrianjaka Rajaonarison, Laulanié Green Association (LGA), Antananarivo, Madagascar
- Mali: Data provided by / Source Franck Merceron, Helvetas, Bamako, Mali
- Mauritius: Data provided by / Source Sunita Facknath, Faculty of Agriculture – University of Mauritius, Reduit, Mauritius
- Morocco: Data provided by / Source Dr. Lina Al Bitar, IAMB, Bari, Italy/Hassan II Institute of Agronomy and Veterinary Medicine, Agadir 8000, Morocco
- Mozambique: Data provided by / Source Michelle Carter and Amilcar Lucas, CARE, Maputo, Mozambique and Philippe Charpentier, Aurora Ltd., Montepuez, Mozambique
- Niger: Only IMO certified farms: Data provided by / Source Ines Hensler, Institute for Marketecology (IMO), Weinfelden, Switzerland
- Nigeria: Data provided by / Source Dr. Isaac Aiyelaagbe, Organic Agriculture Project in Tertiary Institutions in Nigeria, Nigeria
- Rwanda: Data provided by / Source Sixte Rutayisire, Ministry of Agriculture and Animal Resources (MINAGRI), Kigali, Rwanda
- Senegal: Data provided by / Source Organic Exchange, Grolink
- South Africa: Data provided by / Source Ernest Klokow, Organics South Africa, Johannesburg, South Africa
- Sudan: Data provided by / Source El Hag Mekki Awouda, Ministry of Agriculture and Forests, Khartoum, Sudan
- Tanzania: Data provided by / Source Marg Leijdens, EPOPA, Dar Es Salaam, Tanzania
- Togo: Data provided by / Source Ines Hensler, Institute for Marketecology (IMO), Weinfelden, Switzerland
- Tunisia: Data provided by / Source Prof. Ben Kheder, Centre Technique de l'Agriculture Biologique, Sousse, Tunisia
- Uganda: Data provided by / Source Charity Namuwoza, National Organic Agriculture Movement of Uganda (NOGAMU), Kampala, Uganda
- Zambia: Data provided by / Source Bridget O'Connor, Organic Producers & Processors Association of Zambia (OPPAZ), Lusaka, Zambia
- Zimbabwe: Data provided by / Source Michael Jack, Four Seasons Food Pvt Ltd, Harare, Zimbabwe

Background: The IFOAM African Office

The International Federation of Organic Agriculture Movements (IFOAM) established the IFOAM Africa Office in 2004 to help the growth of organic agriculture on the continent.

The Africa Office is intended to assist the many efforts all over the continent to enhance the role that organic agriculture plays in helping meet food security needs as well in helping individual African farmers, communities and local economies to generate extra incomes.

In short, the four pillars that guide the work of the Africa Office are:

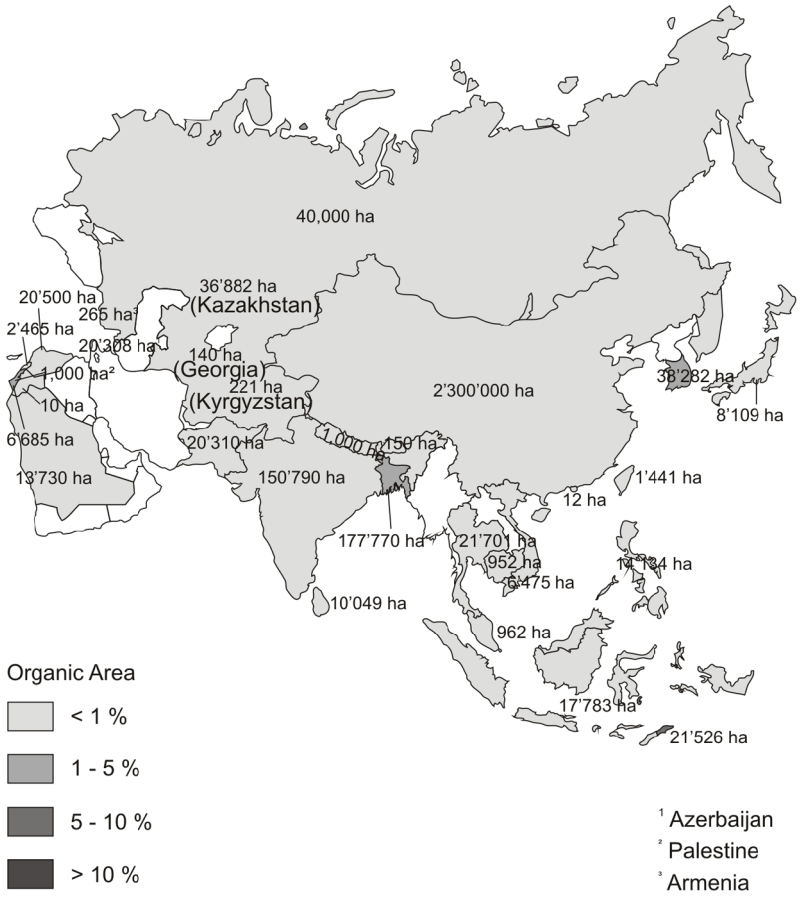
- Institutionalizing the organic sector in Africa,
- Promoting organic agriculture as a development option for Africa,
- Contributing to market and standards development in Africa, and
- Fostering a supportive policy framework for the development of organic agriculture in Africa

The Africa Office is presently based at the IFOAM Head Office in Bonn, Germany. One of the roles that it performs is facilitating the exchange of information on different experiences from various parts of Africa. The Africa Office publishes a monthly electronic newsletter, the Africa Organic News, which is published on a bi-monthly basis. The newsletters are available at the AOSC homepage at www.ifoam.org/newsletter/newsletter_africa/AOSC_Newsletter_Archive.html.

Contact

- IFOAM Africa Office, c/o IFOAM Head Office
Charles-de-Gaulle-Str. 5
53113 Bonn - Germany
E-mail aosc.coordinator @ ifoam.org
Tel. +49 228 926 50-10
Fax +49 228 926 50-99, Internet www.ifoam.org/about_ifoam/around_world/africa.html

13 Asia



Map 3: Organic Farming in Asia

Source: SOEL-FiBL Survey 2007, Graph: Minou Yussefi, SOEL

Organic Farming in Asia

ONG KUNG WAI[1]

In December 2006, Organic Monitor reported an annual sector growth between 30 to 40 percent in an article titled 'Asia's organic food industry coming of age'.

Sector growth has undoubtedly been good, but not the same all over the region. Most certified production, except in Japan as reported previously, continues to be for export. According to Organic Monitor, up to 90 percent of certified production from countries like Indonesia, Vietnam and the Philippines is exported - largely to Europe and North America. Ironically, imported processed products are fuelling domestic market growth, even in China, the number one source of organic ingredients with 85 percent of the region's organic farmland. Total sales from the region are expected to reach around 800 million US-Dollars in 2006 according to Organic Monitor, double the value of 2001. The Japanese market, accounting for about 60 percent of the region, remains the most important in the region. Two South Korean certification bodies are now IFOAM accredited (ACBs), pushing up the total from three to five ACBs in the region, reflecting the growing participation of the region in international trade.

China

China is catching on fast. Domestic market growth has attracted BioFach Messe to China (in collaboration with Green Food China), making it the third organic trade exhibition on top of the two current local annual exhibitions, Shanghai in spring and Beijing in autumn. Scheduled for April 2007 in Shanghai, BioFach-China will directly challenge the local Shanghai exhibition held since 2005.

Meanwhile, China's national regulation and accreditation system put in place in 2005 progressed to full implementation over 2006. The approval process for foreign certifiers to conduct organic inspection and certification through subcontracting or joint venture operations has been largely completed. This has enforced some measure of harmonization of organic certification in China. Total certificates issued for the year is estimated to reach 2'200 certificates including more than 700 foreign organic certificates.

Japan

The Japanese market received a boost from the upswing in ecological awareness arising from the implementation of the Kyoto Protocol and the introduction of the LOHAS (*Lifestyles of Health and Sustainability)* concept by the lifestyle magazine, Sotokoto. Organic became fashionable along with Eco lifestyle and Slow Food, receiving more media coverage in 2006 than ever before, according to a local industry observer.

[1] Ong Kung Wai, Humus Consultancy, Consultant, 7. Jalan Nunn, 10350 Penang, Malaysia

This trend continuing in 2006 has attracted a new and younger generation of people to the organic community. There is an explosion of organic related information posted through personal weblogs and numerous internet exchange communities.

Market upswing but standstill production

Big companies and major department stores have got into the action. Numerous campaigns for LOHAS related products were launched in 2006. Buoyant by the trend, organic products are now available in most retail outlets. The 'in fashion' hype, supported by a diverse younger generation, however, has not lead to a marked increase in demand of local products. There is a lot more consumption of organic 'ambience,' but not so much of organic products, according to the same local industry observer.

Unlike China, organic production in Japan, measured at 0.16 percent of total domestic agricultural production, is at a standstill, for three consecutive years. This is nevertheless good news according to the Japanese movement. Many had projected and feared a big drop from competing imports. Increase in sales has mainly been of processed foods using imported ingredients. Foreign production of JAS certified produce is approximately 30 times of the domestic production. The 2005 grading report puts the total quantity of domestic organic agricultural production at 48'172 tons and 1'440'178 tons for foreign production. Most foreign country production is processed when entering the Japanese market. The quantity of JAS certified processed organic food in 2005 was 149'811 tons for domestic production and 216'059 tons for foreign production. Local producers face competing imports even in traditional foods such as Konyaku jelly.

The number of local certification bodies since the revision of the JAS registration requirements has dropped from 64 to 52. As at December 18th 2006, a total of 57 certification organizations (52 domestic, 5 foreign) are registered under the New JAS rule. The number of certified producers is also projected to drop. As of September 30th 2006, only 1'256 operators[1] (domestic & foreign) have been newly certified or renewed their certification according to the new JAS organic rule[2]. This is about one fifth of the figure prior to the new rule. One reason for the slow and low rate of renewals of certified domestic producers, according to the Japanese movement, is that certification does not really help to boost sales. Farmers markets nevertheless remain popular. The JAS organic standards amended again on November 26, 2006 continue to reap complaints from producers.

Help is on its way and storks are flying

Help is reportedly on its way. The parliamentarians' advocacy group for organic agriculture established in 2004 managed to push through an organic agriculture promotion bill in 2006. The focus now is on how effective implementation will be. Currently, Fukushima prefecture provides free certification to farmers and Nagano prefecture subsidizes certification costs.

[1] Editors' note: According to the FiBL SOEL survey 2005 there were more producers, but our figure refers to December 31, 2005.

[2] Operators certified under the old rule are allowed to use the JAS organic label until February 28, 2009.

An interesting note is the emergence of conservation/environmental specific marketing labels, e.g. reviving the Kounotori, a once extinct bird (stork). Toyooka city of Hyogo prefecture got together with the regional industry to develop agricultural products featuring the Kounotori symbol to compliment the prefecture's strategy to encourage organic farming. The popularity of the scheme rocketed with the birth of a long awaited boy child to the imperial family, as the letter symbol of baby is similar to Kounotori. Sado Island has taken a similar path with Toki, the Nipponia Nippon bird.

Thailand

Policy and governmental support for organic agriculture has certainly improved in the region. The Thai government reportedly spent 1.2 billion baht (25'514 Euro) on the National Organic Agriculture Agenda. A National Action Plan for Organic Agriculture Development has been developed with support from the International Trade Center in August 2006. Government activism prompted private sector collaboration. After years of informal meetings, the Thai sector association, the Thai Organic Trade Association has now emerged and held its first press conference in September.

Indonesia and Malaysia

The Indonesian Ministry of Agriculture decided to procure statistical in-country data on organic farming in 2007. A directorate general on land and water management has been put in charge. It is however not clear how data will be collected and what kind of a database will be set up. Similarly, much of the Indonesian organic system remains under development or in suspension since the launch of the government's go organic 2010 program in 2001. The agreed text of a national standard worked out between the government, NGOs and private sector between December 2004 and January 2005 remains to be published, namely because the competent authority for organic agriculture was dissolved earlier. Meanwhile, the 2002 norms (SNI 01-6729-2002) issued by the national standard agency remain valid. Whilst about 16 certifiers have applied over the period of more than two years, only one certifier was recognized by KAN, the national accreditation body, before the competent authority was dissolved.

A new Indonesian Organic Competent Authority under the Ministry of Agriculture has recently been installed, and stimulation of the sector is reportedly part of the Ministry's agenda in 2007. The Indonesian Standardization Body is expected to finalize its accreditation criteria in mid of 2007 for KAN to resume accreditation of organic certification bodies.

In Indonesia, as in Malaysia, the lack of clear rules and enforcement has not deterred business interest. More players and more products have entered both markets. Just in the last quarter, four interested parties approached the Malaysian sector association for suggestions for market entry plays. There is rapid market growth in Indonesia. The top five big-scale supermarkets in Jakarta have allocated space for selling organic products (domestic and imported items). Products carrying organic marks of yet-to-be-approve certifiers are in the market. Up to five organic restaurants have opened in the city. Consumer awareness keeps growing. Many are aware about the health benefits but find prices of organic products too high compared to conventional products (BioTani survey Indonesia). According to Biocert, a local organic certification body, organic certified land reach 10'000 hectares and sales of Indonesian organic products (majority exports) top 200 million US-Dollars in 2005.

Vietnam

Not much seems to have moved on in Vietnam, particularly in the north. There has not been any major expansion in production, according to the Danish organic support project coordinator operating from Hanoi. There are some new tea areas under conversion, but not much else. The local market situation has taken a turn for the worse. Sales of organic vegetables in Hanoi have diminished and the sale of organic tea has yet to get off the ground.

Nevertheless, the Ministry of Agriculture is reportedly still keen on publishing national organic standards. It probably will happen in 2007. The government is also interested in developing an Action Plan for organic agriculture with the Danish project support.

India

Of the many developments in the region, known to the author, India surely takes the prize for achievement and innovation in 2006. The Indian authorities managed to acquire both, USDA equivalence for the NOP and the EU third country listing, in the same year. Furthermore, recognizing the difficulty smallholders face to access third party certification, the government launched a national participatory guarantee system program with the support of the FAO India office to facilitate organic assurance for the millions of farms and millions of acres.

Resumé

Chung Hsing University in Taiwan hosted a get together of participants from seven East Asian countries (North Korea, South Korea, Japan, Hong Kong, Vietnam, Philippines and Taiwan) as well as Oceania Pacific and South East Asia in November 27-30 2006. The Taichung meeting, where participants focused on learning and building understanding of each other's needs and aspirations, is probably the first regional pow-wow since the last IFOAM Asia assembly was held in Korea in 2004. Whilst there have been numerous seminars, workshops and trade fairs held throughout the region in recent years, no regional organic movement meeting has been held since the dissolution of IFOAM Asia by the IFOAM World Board in 2005 for not meeting statute requirements.

The high level of openness and degree of sharing resulted in positive outcomes and a clear will to share and assist each other in developing the Organic sector in East Asia was a powerful start, Brendan Hoare (attending IFOAM World Board member) reported. Vietnam offered to host a similar event in 2007. Highlights worthy of note include a prize winning joint karaoke performance by the North and South Korean delegations. Organic unites.

Acknowledgements

The following persons provided input to this overview summary:

Katsu Murayama and Yoko Taniguchi (Japan), Vitoon Panyakul (Thailand), Riza V. Tjahjadi and Diyan Hastarini (Indonesia), Koen den Braber (Vietnam), Brendan Hoare (New Zealand)

Asia: Organic farming statistics

Table 10: Organic land and farms in Asia

Country	Year	Organic land area	Share of organic land	Organic farms
Armenia	2005	265.00	0.02%	40
Azerbaijan	2005	20'307.75	0.43%	332
Bangladesh	2002	177'700.00	1.97%	100
Bhutan	2005	150.00	0.03%	65
Cambodia	2005	951.50	0.02%	1'421
China	2005	2'300'000.00	0.41%	1'600
Georgia	2005	129.55	0.00%	38
Hongkong	2005	12.00	.	20
India	2005	150'790.00	0.08%	5'147
Indonesia	2005	17'783.00	0.04%	15'473
Iran	2005	0.00	0.00%	
Israel	2005	6'685.00	1.17%	420
Japan	2005	8'109.00	0.16%	4'636
Jordan	2005	10.00	0.00%	1
Kazakhstan	2002	36'882.00	0.02%	1
Korea, Republic of	2005	38'282.00	2.01%	5'447
Kyrgyzstan	2005	221.00	0.00%	225
Laos	2005	0.00	0.00%	0
Lebanon	2005	2'465.00	0.75%	331
Malaysia	2005	962.50	0.01%	40
Nepal	2004	1'000.00	0.02%	1'247
Oman	2005	0.00	0.00%	
Pakistan	2004	20'310.00	0.08%	28
Palestine, Occupied Tr.	2004	1'000.00	0.29%	500
Philippines	2004	14'133.70	0.12%	34'990
Saudi Arabia	2005	13'730.00	0.01%	3

Country	Year	Organic land area	Share of organic land	Organic farms
Singapore	2005	0.00	0.00%	
Sri Lanka	2005	10'049.13	0.43%	35'000
Syria	2005	20'500.00	0.15%	
Taiwan	2005	1'441.39	.	914
Thailand	2005	21'701.49	0.12%	2'498
East Timor	2005	21'526.40	6.33%	18'388
Vietnam	2001	6'475.00	0.07%	1'022
Total		2'893'572.41	0.21%	129'927

Source: SOEL-FiBL Survey 2007

Data and information sources/contacts

- Armenia: Data provided by / Source Nune Darbinyan, Ecoglobe, Yerevan, Armenia
- Azerbaijan: Data provided by / Source Vugar Babajev, Ganja Agribusiness Bhutan, Ganja, Azerbaijan
- Bangladesh: Data provided by / Source Habib Ullah, Control Union Bangladesh, Dhaka, Bangladesh
- Bhutan: Data provided by / Source Kesang Tshomo, Ministry of Agriculture Bhutan, Thimpu, Bhutan
- Cambodia: Data provided by / Source Edwin de Korte, DED-Advisor, Royal University of Agriculture, Phnom Penh, Cambodia
- China: Data provided by / Source Dr. Wang Maohua, Department for Registration, Certification and Accreditation Administration (CNCA), Beijing, China. Land use according to Paul Kledal, University of Copenhagen, Copenhagen, Denmark
- Georgia: Data provided by / Source Tamuna Dididze, Elkana, Akhaltsikhe, Georgia
- Hong Kong: Data provided by / Source Yi-min Chi, Agriculture, Fisheries and Conservation Department, Kowloon, Hong Kong
- India: Data provided by / Source Dr. Gouri, Agricultural and Processed Food Products Export Development (APEDA), New Delhi, India
- Indonesia: Data provided by / Source Winaryo, Control Union Indonesia, Jakarta, Indonesia
- Iran: Data provided by / Source Alireza Avaz Koocheki, Ferdowsi University – Faculty of Agriculture, Mashhad, Iran and Hossein Mahmoudi, Environmental Science Research Institute, Shahid Beheshti University, Tehran, Iran
- Israel: Data provided by / Source Ilan Eshel, Israel Bio-Organic Agriculture Association (IBOOA), Ramat Efal, Israel
- Japan: Data provided by / Source Kiyotada Hayashi, National Agriculture and Food Research Organization (NARO), Ibaraki, Japan and Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF), Japan. Calculation of organic land by Kiyotada Hayashi, based on data of MAFF Japan
- Jordan: Data provided by / Source Mohammad Al-Oun, Coventry University, Coventry, United Kingdom
- Kazakstan: Data provided by / Source Lina Svenson, KRAV Kontroll AB, Uppsala, Sweden
- Korea, Republic of: Data provided by / Source Prof. Dr. Sang Mok Sohn, Research Institute of Organic Agriculture, Dankook University, Cheonan, Republic of Korea
- Kyrgyzstan: Data provided by / Source Nicolas Boll, Helvetas, Jalalabat, Kyrgyzstan

- Laos: Data provided by / Source Ruedi Luethi, Helvetas, Vientiane Capital, Laos
- Lebanon: Data provided by / Source Nada Omeira, Association for Lebanese Organic Agriculture (ALOA), Beirut, Lebanon
- Malaysia: Data provided by / Source Ong Kung Wai, Grolink, Penang, Malaysia
- Nepal: Data provided by / Source Maheswar Ghimire, Kathmandu, Nepal
- Oman: Data provided by / Source Prof. Dr. Andreas Bürkert, Department of Organic Plant Production and Agroecosystems Research in the Tropics and Subtropics, University of Kassel, Witzenhausen, Germany
- Pakistan: Data provided by / Source Ghulam Mustafa, Pakistan Organic Farms (POF), Lahore, Pakistan
- Palestine: Data provided by / Source Dr. Thameen Hijawi, Arab Agronomist Association (AAA), Palestinian Agricultural Relief Committee (PARC), Jerusalem, Palestine
- Philippines: Data provided by / Source Hazel B. Alfon, Philippine Rice Research Institute, Maligaya, Philippines
- Saudi Arabia: Data (only rice) provided by / Source Shafiq Urrahman, Watania Agriculture Establishment, Riyadh, Saudi Arabia
- Singapore: Data provided by / Source Lim Tian Soo, Green Circle Ecofarm, Singapore
- Sri Lanka: Data provided by / Source Nalika Kodikara, Sri Lanka Export Development, Colombo, Sri Lanka
- Syria: Data provided by / Source Munir Jalanbou, SOFARC, Damascus, Syria
- Taiwan: Data provided by / Source Perrine Liu, Yu-shi Co., Taipei, Taiwan
- Thailand: Data provided by / Source Vitoon Panyakul, Green Net, Bangkok
- East Timor: Data provided by / Source Winaryo, Control Union Indonesia, Jakarta, Indonesia
- Vietnam: Data provided by / Source Institute for Marketecology (IMO) 2002, Weinfelden, Switzerland

Country report: Organic food and farming in China

Paul Rye Kledal[1], Qiao Yu Hui[2], Henrik Egelyng[3], Xi Yunguan[4], Niels Halberg[5] and Li Xianjun[6]

Chinese farming is likely to remain different from Europe's. Driven by globalization, however, a worldwide trend of harmonization of agricultural market and production systems also affects China. This global trend includes growth of certified organic agriculture.

Organic production developments

From the first organic tea certified in 1990, organic farming in China has grown rapidly in terms of farm numbers, arable land and export value. Precise national level aggregated data are hard to establish, but the certified organic area in 2005 can be estimated to approximately 4.4 million hectares. Of this area 2.1 million hectares are certified for wild collection (honey, berries etc.), and the remaining 2.3 million hectares are agricultural land. Out of the 2.3 million hectares 610'000 hectares are under conversion and 998'000 hectares are used for crop production[7]. In terms of certified land, the 4.4 million represents an increase of almost 0.5 million hectares compared to year 2004[8]. The number of enterprises involved in primary production and processing is approximately 1'600, but the number of individual households growing organic is significant higher although the amount is unknown.

Organic products are sold either domestically or for export. Primary export markets are North America, Europe and Japan. The total value of Chinese organic export in 2004 was estimated to be 350 million US-Dollars (COFCC, 2006). It has not been possible to obtain the total value of domestic sales, but two certification bodies covering 33 percent of the certified area, and 37 percent of the organic export reported a domestic sale of 478 million US-Dollars (or 3.7 billion China Yuan Renminbi CYN). However, most of the organic products sold domestically are reportedly sold without an organic premium, so the primary driver of Chinese organic food and farming is still trade and export.

Out of Chinas 31 provinces, China's organic production in terms of money value and certified land is concentrated in eleven provinces. They are the five northeastern provinces of Inner Mongolia, Heilongjiang, Jilin, Liaoning and Hebei, and the six eastern and southern provinces of Jiangxi, Fujian, Jiangsu, Hubei, Shandong and Yunnan.

1 Paul Rye Kledal (corresponding author), University of Copenhagen, Denmark
2 Dr. Qiao Yu-Hui, China Agricultural University, Beijing, China
3 Henrik Egelyng, Danish Institute for International Studies DIIS, Copenhagen, Denmark
4 Xi Yunguan, Organic Food Development Center of China OFDC , Nanjing, China
5 Dr. Niels Halberg, University of Aarhus, Denmark
6 Li Xianjun, China Organic Food Certification Centre COFCC, Beijing, China, www.ofcc.org.cn
7 The cropped area is about one fifth of the total certified area, according to the Organic Food Development Center of China OFDC and the Committee for National Certification and Accreditation CNCA.
[8] Editots' note: According to the global organic survey carried out by FiBL in 2006 3.9 million hectares including wild collection were certified in China (Willer/Yussefi, 2006)

Picture: Soybeans with insect trap tests. The fields are located in the 100 percent organic villages in JiaoHu town in Wanzai County. Here the development of organic agriculture started with ginger in the late 1990s. Now the organic production includes a large number of different organic cash crops.

Picture: Niels Halberg, University of Aarhus, Denmark

Picture: Frozen soybeans in pods for export.

Picture: Niels Halberg, University of Aarhus, Denmark

Picture: Strawberries are being transplanted in a traditional rice fields. A local company purchases these at high prices and freeze dries them for breakfast products for the US market.

Picture: Niels Halberg, University of Aarhus, Denmark

As shown in the table, 'Chinese provinces concentrated with certified organic production' the organic production in the Northeast is dominated by beans, cereals and oilseeds. In the East and southern provinces organic production is dominated by various teas, a few fruits for juice and increasingly other crops such as rice, ginger, soybeans and vegetables. Bamboo shoots, herbs and other so-called non-timber forest products are collected from non-cultivated areas.

Table 11: Chinese provinces concentrated with certified organic production, major produce, arable land and value (US-Dollar) derived from domestic as well as export sales (2005)

	Province	Major crop produced	Certified organic area (1'000 hectares)	Domestic sales (Million US-Dollars)	Export sales (Million US-Dollars)
North East	Inner Mongolia	Sunflower seeds Buckwheat Flax Various beans	404	23,5	2
	Heilongjiang	Soybean Wheat Maize Pumpkin seeds Various beans Rice	126	12,9	3

	Jilin	Soybean Sunflower Melon Pumpkin seeds Beans Peanut	404	29.9	4
	Liaoning	Maize Soybean Peanut Wheat Flax seed Beans	68	66.5	39
	Hebei	Various beans Soybean Clover seed Millet	1	9.7	21
East/ Southern	Jiangsu	Tea Rice Vegetables	9	62,6	19
	Jiangxi	Green tea Oil tea seed Rice Strawberry Bamboo shoot	57	27.7	5,3
	Fujian	Ginger Oolong Green tea Mushroom	9	5.5	9.5
	Yunnan	Tea	394	12.5	3.6
	Shandong	Vegetables Fruits Rice	7.4	48	21.6
Provinces in table	11		1'481	298.8	128
Total China	31		4'400		350
Percent of total China			33		37

Source: The data from the 11 provinces is based on information from the China Organic Food Certification Centre COFCC and ECOCERT, covering 33 percent of all certified area in China and 37 percent of the total organic export value. Thus, there will be some bias in terms of the organic area in each province as well as its economic value.

The major drivers behind the organic production are international and local trading companies working directly with farmers and/or with village cooperatives or public staff in a commune. Private and public companies provide inputs, technical advice as well as marketing channels, which is especially important for the involvement of traditional farmers with only small plots, less than 0.5 hectares per household, especially in southern China.

Certification and regulation

Governmental institutions have been generally supportive towards organic agriculture and private companies. China has shifted the administration of organic inspection and certification from the Environmental Protection Administration (SEPA) in 2004 to the China National Certification and Accreditation (CNCA). By 2005, CNCA developed the first Chinese National Standards for Organic Products, and a national seal has been introduced for all organic foods sold domestically. Parallel to the rapid growth in organic production and export, there has been a dramatic increase in the number of organic certification bodies in China. In 2004, six organizations offered certification services, and the year after this number had increased to 26 (USDA, 2006). By the end of 2006, 30 certification organizations were registered (OFDC & CNCA 2006).

Picture: The Chinese Organic Seal: The owner of the Wuyuan Xitou Organic Tea Co. Ldt., Mr. Yu, proudly presents a the seal

Picture: Niels Halberg, University of Aarhus, Denmark

Certification of organic export is done by internationally accredited companies like OCIA (based in the United States), ECOCERT (French origin), BCS (based in Germany), IMO (based in Switzerland), Soil Association (base in the UK) and JONA (based in Japan) and by the local certifiers Organic Farming Development Centre OFDC and OTRDC.

The China organic Food Certification Centre (COFCC) under the China National Green Food Development Centre (CNGFDC, under the Ministry of Agriculture MOA) now certifies one third of the products for the domestic market (IFAD, 2005). Products sold to a growing number of domestic supermarkets are mainly certified by local certifiers.

The overall national policy promoting trade, upgrading rural policies to improve incomes for farmers and to curb rural migration could increase the importance of organic farming integrated as a national farm policy, focusing on property rights, taxation and credit options.

Development and market challenges

China has a history of Chinese Ecological Agriculture and Chinese Green Food, which may converge into an institutional foundation for strengthening its certified organic agriculture (Egelyng, Yu Hui and Li 2006). China has economic, institutional and scientific capacity allowing the country to become a significant player on the world market for organic foods. Yet, some short to medium term challenges remain.

Like most family farms in China, organic farmers depend on small-scale economies, with limited output and experiencing need for support networks to make logistics more efficient (Sanders, 2006). With small operations often too small to be cost effective, small farmers may not invest significantly in further development on the supply side, unless new farm policies are directed towards these issues. Indeed, ongoing reforms are already targeting reduction of agricultural taxes, for instance. On the local level, there are now examples of counties formulating strategies for the increase of organic farming and attracting new companies establishing processing facilities for export oriented organic products.

On the consumer side, strengthening integrity vis-à-vis the export markets is one challenge to remain important, particularly if recent global events such as the Cornucopia Institute - a US organic consumer group questioning credibility of US supermarket chain Wal-Mart labels - should prove to have any foundation. While the volume of highly educated and affluent Chinese consumers is increasing with growing urbanization and rising disposable incomes, it remains a challenge for the organic industry to increase the share of domestic consumers appreciating the differences between 'green food' and certified organic food, in order for organic sales in major cities to really increase.

The governmental focus on trade and export and the move towards centralizing the accreditation system could be regarded as a public policy step towards further improvements on regulation of organic standards. Public steps to elevate data reliability would also strengthen market transparency and lower market costs for the growing private sector trading organic. However, it is still not clear what the government plans to invest in promoting better logistics, increase profitability at the farm level and support organic at a local and regional level within an integrated farm policy.

References

Egelyng, Henrik, QIAO Yu Hui and Luping Li. 2006. The Institutional Environment for Certified Organic Agriculture in China: A review, some landscaping and a framework agenda for more analysis. Paper presented at the International Conference on 'Challenges Facing Chinese Agriculture and the West Development Strategy', Yangling, Shaanxi, China, July 6-7 2006.

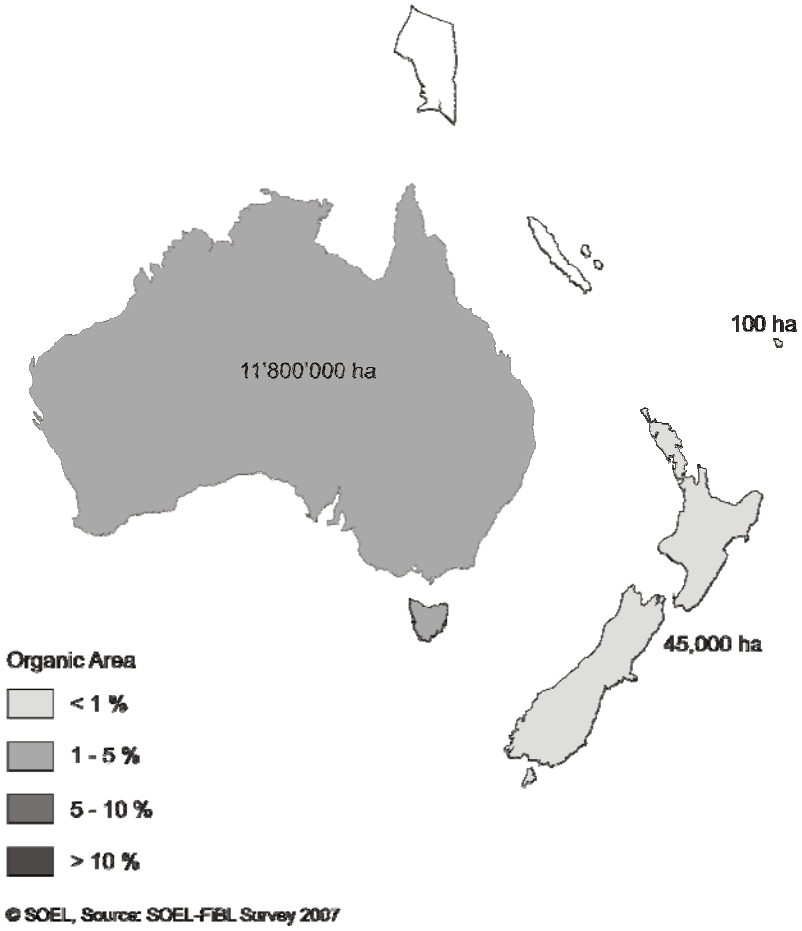
IFAD (2005): Organic Agriculture and Poverty Reduction in Asia: China and India Focus. Document of the International Fund for Agricultural Development, Report no. 1664, July 2005.

Sanders, Richard (2006): A market road to Sustainable Agriculture? Ecological Agriculture, Green Food and Organic Agriculture. Development and Change 37(1): 201-226

USDA, 2006: China, Peoples Republic of Organic products and Agriculture in China 2006. USDA Foreign Agricultural Service, GAIN report number CH6405, 21 of June 2006. Report prepared by Yaang Mei, Michael Jewison, Christina Greene. www.fas.usda.gov/gainfiles/200606/146198045.pdf

Willer, Helga & Minou Yussefi (Eds.) (2006): The World of Organic Agriculture. Statistics and Emerging Trends 2006. IFOAM, Bonn, Germany

14 Australia/Oceania



Map 4: Organic farming in Oceania/ Australia

Source: SOEL-FiBL Survey 2007, Graph: Minou Yussefi, SOEL

Organic farming Australia

Els Wynen[1]

History and Institutions

In the early 1980s organic agriculture was of interest to two main groups in Australia. The first consisted of farmers, the second of regional and state-based organic gardening-farming organizations. Many of the farmers were geographically isolated and did not know of the existence of other organic farmers. The main reasons given by broadacre farmers for converting to organic agriculture was having experienced significant problems with their own or family's health or that of their crops or livestock when farming conventionally and feeling that drastic changes were needed to solve those problems (Wynen 1990).

The gardening-farming organizations usually operated in the capital cities of the six states, also in isolation, due to the large distances between cities in Australia. Although biodynamic farming was organized early on, in the 1980s a perceived need for cooperation and for combining the efforts of all forces in organic agriculture was growing.

In 1984, the idea of an umbrella organization that combined all forces interested in organic agriculture, including producers, consumers, traders, and researchers, was put forwards. By early 1986 an agreement was reached on a constitution and a structure for the national organization, and the National Association for Sustainable Agriculture, Australia (NASAA) was formally inaugurated. It incorporated in early 1987. Its stated aims were to establish a communication network to assist organic growers in resolving common problems; to influence the direction of agricultural research and policy; to lobby government to reduce policy and marketing obstacles to organic practices; to bring organic farming to the attention of the mainstream agricultural industry; and to increase public awareness about organic growing. Although many of the objectives were producer-oriented, care was taken to involve all stakeholders, including consumers.

The first signs of a second certifying organization appeared in late 1986, and the Biological Farmers of Australia (BFA) was formed in 1987. This organization had as its main aims to provide information about organic agriculture to interested farmers and to establish a certification service, adopting the – slightly modified - NASAA standards. Since this time, a number of other organizations, mainly certifiers, have started up (see next section).

In the late 1990s, the Organic Federation of Australia (OFA) came into existence. It was set up to unite all stakeholders in organic agriculture, as NASAA was in the early 1980s. At present, the OFA consists of a Main Board and several Advisory Boards, representing producers, consumers, certifiers, processors, traders, and the research and educational sectors. It makes policy decisions, lobbies government and other bodies on behalf of the organic sector, and represents the organic sector where appropriate.

1 Dr. Els Wynen, Eco Landuse Systems, Canberra, Australia (www.elspl.com.au).

Size of industry

In the early 1990s, the area under organic management was estimated to be 150'000 hectares for 1990 (Hassall and Associates 1995). The estimate for 2005 is 11.8 million hectares (Ian Lyall, AQIS, personal communication, November 2006), representing 2.7 percent of total agricultural area of 440 million hectares in Australia (2003/2004), for which 1,869 producers were certified. This is a slight decrease of area under organic management (12.1 million hectares in 2004), and a slight increase of number of farmers (1'859 in 2004). The dramatic increase in area in the last decade is mainly due to certification of pastoral (extensive beef grazing) areas. Other important areas of production include grains (wheat, rye, barley, oats, rice and oil seeds); fruit and vegetables, which are produced all year around; wine; dairy products; sheep, both for meat and wool; and herbs.

Figures from the two largest certifiers in Australia indicate that approximately 97 percent of the total certified area was under extensive grazing management in 2005.[1] This means that, of the total of 11.8 million hectares, close to 370'000 hectares are in non-pastoral areas, which is approximately 0.7 percent of the total conventional area for those industries.[2] Although the non-pastoral certified organic area is only three percent of the total certified area, more than half of the total value of the organic sector originates from those areas.

Wynen (2003) estimated that, in 2000-2001, only 38 percent of the total farm income of 89 million Australian Dollars (ca. 53.8 million Euros; this including organically grown products sold on the conventional market) was received for beef and sheep products, with around one quarter each for grains and horticulture. That is, the broadacre (grains, oilseeds) and horticultural sector accounted for more than half of the total value of the organic production in that year. A few years later, Halpin (2004) estimated total farm gate value of organic produce in 2003 (sold in the organic and conventional market) to be 140 million Australian Dollars (ca. 85 million Euros)[3].

Of the value for the products sold on the organic market (127.9 million Australian Dollars; ca 77.4 million Euros[4]), 40 percent accounted for beef, close to the estimate of the previous study. Also in this study, fruit, vegetables and grain made up about half of the total organic sales. In summary, even though a large part of the area under organic production in Australia is used for extensive livestock production, products grown on less extensively farmed areas have always been very important in organic production in Australia, accounting for at least half of the total value of organic production.

Certification

Europe has always been a major market for Australian organic produce. The introduction of Council Regulation (EEC) 2092/91 in 1991 altered requirements for imports of organic products, which meant that official certificates must accompany imports into the EU.

---

[1] Thanks to NASAA and the BFA for providing data.
[2] The total for wheat and other crops, mixed broadacre, and dairy for 2003-4 was 60 million hectare. It does not include the horticultural sector.
[3] This figure was a rough average of 3 years, estimated by the producers in a survey including 26 per cent of all certified organic farmers.
[4] This figure was an estimate by adding all enterprises reported by the producer respondents.

To meet these requirements, government accreditation of organic certification organizations became necessary, and the Australian government (through the Australian Quarantine and Inspection Service (AQIS) became involved in the accreditation of the private certifiers, at that time the Bio Dynamic Research Institute (BDRI), NASAA and the BFA (the certification arm of which is now called Australian Certified Organic ACO) In the 1990s, more organic certifying organizations emerged: the Organic Growers Association (OGA, which is presently in the process of merging with the ACO); the Tasmanian Organic-Dynamic Producers (TOP); the Organic Food Chain (OFC); and Safe Food Production Queensland (SFPQ). The Organic Retailers and Growers Association of Australia (ORGAA) provides an industry-based certification program for retailers and wholesalers.

Of the remaining six AQIS-approved certifying organizations, four are listed under European and Swiss law, and as such can provide inspection and certification services for all Australian export consignments. Five organizations provide inspection and certification services for products exported to Japan, and two organizations have 'conformity assessment' arrangements with the USDA NOP; while other countries such, as New Zealand, Korea, Malaysia, Thailand, Singapore and Canada currently accept Australian 'certified' produce that has been issued a government organic export certificate to verify its authenticity (Jenny Barnes, AQIS, personal communication, November 2006). At present, no foreign certification bodies are operating in Australia, and no local certification bodies work in association with international certification bodies.

Organic production and processing in Australia has been prescribed by the National Standard for Organic or Biodynamic Produce since 1992; this National Standard was amended in 1998, 2002 and revised again in 2005. It stipulates the requirements for crop and landless plant production, animal husbandry, aquaculture, food processing, packaging, storage, transport and labeling, as well as complementing Australia regulatory requirements such as environmental management and animal welfare (Organic Produce Export Committee 2002). The National Standard is used for the purpose of export, and does not legally define 'organic' for the domestic market. This has been a source of two potential problems for the organic industry in Australia. Although laws existed under the State/Territory fair trading acts (which draw their legal standing from the National Trade Practices Act) under which those who sell non-certified organic produce could be legally challenged on the basis of false and misleading labeling, success under this process was not guaranteed. No other law protected the consumer of organic produce against false labeling. The second problem was that, due to WTO rules relating to national treatment, the Australian government could not prohibit imports of non-certified products labeled as organic.

Over the last 15 years, there has been little progress in the issue of legalisation of the word 'organic'. However, the OFA applied to Standards Australia (SA; an independent body recognized by the Australian government as a standard-setting body) to develop an Australian Standard for Organic and Biodynamic Produce, which SA has now decided to do (early 2007). Australian State and Federal Government regulatory authorities can recognize standards endorsed by SA and can call them up into regulation where needed. Once this occurs, those standards can be used to prosecute fraud and misrepresentation on the domestic market, and to refuse import to non-certified products. The same standards could also be used for the export market.

Market

In the late 1990s, organic products were reported to account for only 0.2 percent of food retail sales nationally (Invest Australia and KPMG 1999, p.15). Only a few consumer studies are undertaken in Australia. Results of some show that, while there appears to be some positive correlation between income and the demand for organic food, no clear delineations can be made with respect to the consumption of organic food according to gender, income, age or education (Queensland Department of Primary Industries QDPI 2002; Smith 2003). Lockie and Donaghy (2004) found, however, that consumers of organic produce were more likely to be women, educated, and have at least middle-level incomes. They also reported that '…the attitude that stands out to many consumers in relation to organic systems is the perceived opportunity they offer for improved environmental outcomes', but that the premiums were higher than many were willing to pay. Authors of earlier studies cite price as an obstacle to a more rapid expansion of the Australian market for organics, in addition to quality concerns, availability, inconsistent labeling, and product recognition (Dumaresq & Greene 1997; Invest Australia and KPMG 1999; Lyons *et al.* 2001).

Current market figures for Australian organic produce are not available, and industry figures therefore need to be treated with caution. Farm-gate values for organic products in the early 2000s were estimated to be around 100 million Australian Dollars (60 million[1]). Wynen (2003) estimated farm-gate values including organic produce sold as conventional in 2000-2001 at 89 million Australian Dollars (54 million Euros), and Halpin (2004, p.20-21) - excluding organically grown produce sold as conventional - at 127 million Australian Dollars (77 million Euros) for 2003. However, estimates of retail values differ greatly, varying from less than 100 million Australian Dollars (60 million Euros) for 2000- 2001 (Wynen 2003) to 250 million Australian Dollars (151 million Euros) (BFA 2003), and 400 million Australian Dollars (240 million Euros) at which NASAA put the retail value in 2003.

The only commodity in which some more research has been undertaken recently is beef (Wynen 2006). This market has grown considerably since the late 1990s, when the large retailers entered the market. Whereas in 2000-2001 the value of the Australian certified organic beef was only 32 million Australian Dollars (19.3 million Euros; farm-gate prices), with less than two thirds going to the organic market, by 2005 the estimated production had doubled to around 60 million Australian Dollars (36.2 million Euros; farm-gate prices), with virtually all of the produce being sold in the organic market. About three quarters was estimated to be sold in the domestic market. Dominant export markets moved from Japan and the UK in the early 2000s to the US in more recent years.

On the domestic market, organic produce receives a substantial price premium over that of conventionally grown produce. For cereals and livestock products price premiums were reported by AQIS (see FAO 2002) as ranging between 50 and 75 percent, while for fruit and vegetables the premium was said to be usually between 50 and 60 percent; though price premiums of up to 100 percent were considered not to be uncommon (Bulletin 2001).

[1] Exchange rate late November 2006: € 1 = $A 1.66.

Halpin and Brueckner (2004, p.70) report higher premiums in 2003. The weighted average price premium of all goods were calculated as being 80 percent, with several products scoring over 100 percent, such as wholemeal flour, muesli, olive oil, spaghetti (the highest at 287 percent), several vegetables (beans, zucchini, carrots), hard cheese and minced beef.

The pricing of organic food will continue to be a key determinant of consumer demand for organic produce and market growth, especially since it appears that current price premiums are set above levels many consumers accept (see for instance Pearson 2001; Queensland Department of Primary Industries QDPI 2003).

Exports of Australian organic produce have been mentioned as being 50 million Australian Dollars (30 million Euros; Austrade 2003). Europe is the key export market for Australian organic products, at least in quantities exported. Australia records its exports only in weights, not value. In 2001, Europe accounted for over 70 percent of Australian organic exports, with the main destinations being the UK, Italy, Switzerland, France, the Netherlands and Germany (Austrade 2003). More recently, though Europe is still the main market in quantity exported, the significance of the individual countries has changed somewhat. Especially France and Belgium are becoming more important, but other countries such as Japan, US, Singapore, and Hong Kong have emerged as promising future export markets for Australian produce (Halpin and Sahota 2004, p.110). The primary products for export in 2003 were, in decreasing order of importance of quantity: grains; processed products; drinks and juices; and meat products. However, in terms of value, the order may well be different, and the importance of export destinations for Australia may also be different from when only quantities are considered.

Australia also imports organic products, though the total value of imported organic produce is unknown. According to McCoy and Parlevliet (2000, p.62) imports in the late 1990s were mostly of processed grocery lines, such as coffee, pasta sauces, olive oil, soy drink, preserves and the like, primarily from the UK and the US. Crothers reported in 2003 that some commodities were imported to fill temporary shortfalls in domestic production, such as kiwi fruit and fresh produce from New Zealand. For 2003, Halpin and Sahota (2004, p.112) estimated imports valued at 13 million Australian Dollars (8 million Euros), with the main sources being New Zealand, the US and the UK. Products nowadays include not only food and drinks, of which more than half is processed, but increasingly non-edible items such as cotton and personal care products are imported.

Policy Support

As Australia's agriculture is export oriented, growth in the organic industry has been strongly influenced by rapidly growing overseas demand. There is little government support to encourage organic agriculture *per se*. Accreditation services are provided (through AQIS), although the certification organizations pay 60 percent of the cost of these services - 105,000 Australian Dollars (more than 63'000 Euros) for 2006/2007 (Ian Lyall, AQIS, personal communication, November 2006). Many possibilities exist for government assistance in the farming sector in general, to help with developing innovations, overcoming marketing problems, attending courses, etc. These are detailed in DAFF (2004, Chapter 9), but most are available to all, not specifically organic, farmers.

Australia has had national standards for organic and biodynamic products in place since 1992, and it is one of the countries on the third-country list of the European Union. While, in the past, these standards were enforceable only for the export of organic products, they have also served as an informal standard domestically. However, the term 'organic' has not been protected in the domestic market place, despite numerous efforts from the organic sector to encourage government to regulate for it in the past. The most recent developments, with Standards Australia set to adopt Australian Standards for organic or biodynamic produce that can be used to legally protect the domestic market, were encouraged by government.

Research and extension

There is one research program (part of the Rural Industries Research and Development Corporation) devoted to organic agriculture since 1996, that has made available up to 270'000 Australian Dollars (163'000 Euros) per year to research and extension. For the next five years, this amount can be increased to a maximum of 450'000 Australian Dollars (271'000 Euros) if the most favorable circumstances occur, where co-funding from other institutions happens.

Most of the six state departments of agriculture have at least one officer dedicated to organic agriculture. Two states (Tasmania and New South Wales) now have Ministerial Advisory Committees.

In recent years, several attempts were made to get a Cooperative Research Centre for organic agriculture established. This would have meant a guaranteed substantial government contribution in exchange for an agreed partnership between the public and private sector. However, this option was rejected late 2004.

Milestones

In June 2006 the OFA held a very successful organic conference entitled 'Organics – Solutions to Climate Change'. An Organic Food Fair was held simultaneously.

The Journal of Organic Systems was launched in July 2006, intended for publications about organic agriculture largely in Australia, New Zealand, Asia, and the Pacific Islands (www.organic-systems.org/). The aim is to bring together the research developments and findings from such a geographically diverse area into one publication and so enhance wider community understanding of the need for sustainably managed land-use systems.

The organic industry seems finally poised to make progress in its endeavor to establish organic standards that will protect domestic consumers, through the setting of organic standards via Standards Australia (see section on 'Certification').

References

Alvensleben, R. von (2001), 'Beliefs associated with food production' in L. Frewer, E. Risvik & H. Schifferstein (Eds.), Food, People, and Society - A European Perspective of Consumers' Food Choices, (pp. 381-400), Springer Verlag, Berlin.

Austrade (2003), 'Organics Overview - Trade Statistics'. Retrieved 4th November, 2003, from www.austrade.gov.au/australia/layout/0,0_S2-1_CLNTXID0019-2_-3_PWB1106308-4_tradestat-5_-6_-7_,00.html.

BFA (2003), The Organic Food and Farming Report 2003, Biological Farmers of Australia, Toowoomba.

Bulletin (2001), Organic Growth Industry, The Bulletin,18 April.

Crothers, L. (2003), Australia - Exporter Guide Annual 2003, USDA Foreign Agricultural Service, Canberra.

DAFF (2004), The Australian Organic Industry: A Profile, Department of Agriculture and Fisheries, Canberra.

Dumaresq, D. & Greene, R. (1997), 'Overview of the organic industry in Australia' in D. Dumaresq, R. Greene & L.van Kerkhoff (Eds.), Organic Agriculture in Australia, No. 97/14, pp. 69-80, RIRDC, Canberra.

FAO (2002), 'Organic agriculture, environment and food security', Environment and Natural Resources Series No. 4, Rome.

Halpin, D. (2004), 'A farmlevel view of the Australian organic industry' in DAFF (2004), The Australian Organic Industry: A Profile, Department of Agriculture, Fisheries and Forestry, Canberra.

Halpin, D. and Brueckner, M. (2004), 'The retail pricing, labeling and promotion of organic food in Australia' in DAFF (2004), The Australian Organic Industry: A Profile, Department of Agriculture and Fisheries, Canberra.

Halpin, D. and Sahota, A. (2004), 'Australian food exports and imports' in DAFF (2004), The Australian Organic Industry: A Profile, Department of Agriculture and Fisheries, Canberra.

Hassall & Associates (1995) The domestic market for Australian organic produce in Australia: an update. Report prepared for RIRDC, Canberra.

Invest Australia and KPMG (1999), 'Value Added Organic Food Study: Benchmarking the Competitive Strengths of Australia for Organic Products'. Unpublished report.

Lockie, S. and Donaghy, P. (2004), 'Who consumes organic food in Australia' in DAFF (2004), The Australian Organic Industry: A Profile, Department of Agriculture and Fisheries, Canberra.

Lyons, K., Lockie, S. & Lawrence, G. (2001), Consuming 'green': the symbolic construction of organic foods, Rural Sociology 11(3), 197-210.

McCoy, S. & Parlevliet, G. (2000), 'Export market potential for clean and organic agricultural products', report No. 00/76, RIRDC, Canberra.

NASAA (2003), Australian research, Technical Bulletin for NASAA Certified Operators 1(4), 11.

Organic Produce Export Committee (2002), National Standard for Organic and Biodynamic Produce, AQIS, Canberra.

Pearson, D. (2001), How to increase organic food sales: results from research based on market segmentation and product attributes, Agribusiness Review 9(8).

Pillarisetti, J. R. (2002), World trade in environmentally sustainable agriculture products: policy issues for Australia, Journal of Economic and Social Policy 7(1), 66-82.

Queensland Department of Primary Industries (QDPI) (2002), Queensland organic buyer profile. Retrieved 3rd October 2003, from www.dpi.qld.gov.au/attitude_bites/12246.html.

Queensland Department of Primary Industries (QDPI) (2003) 'Drivers of Consumer Behaviour. Organic Food'. Retrieved 2nd October 2003, from www.dpi.qld.gov.ai/businessservices/11480.html.

Smith, J. (2003), Consumer sentiment ripe for new food category, Food Week 1-2, 7 July.

Wynen, E. (1990), 'Sustainable and Conventional Agriculture in South- Eastern Australia - A Comparison'. Economics Research Report No.90.1, School of Economics and Commerce, La Trobe University, Bundoora. See www.elspl.com.au/abstracts/orgprodgen2001.HTM for a summary.

Wynen, E. (2002), 'What are the key issues faced by organic producers?' In Organic Agriculture: Sustainability, Markets and Policies. Proceedings of an OECD Workshop held in Washington DC, United States, 23-26 September 2002, Paris (www.elspl.com.au/abstracts/abstract-a18.HTM).

Wynen, E. (2003), Organic Agriculture in Australia - Levies and Expenditures. Report No. 03/002. RIRDC, Canberra (www.rirdc.gov.au/reports/org/02-45.pdf).

Wynen, E. (2006), 'Organic beef production and marketing in Australia', Journal of Organic Systems, 1(1) (www.organic-systems.org/journal/0601/pdf/wynen.pdf).

Report on Organic farming in New Zealand

SEAGER MASON[1]

Introduction

Organic agriculture and food production in New Zealand has developed steadily over the last 20 years. The most rapid growth has been since the mid 1990s, driven by various factors such as market demand for organic products, opposition to genetic engineering, and other environmental and food safety concerns. There is wide recognition in New Zealand of the important role that organics can and does play in moving agriculture and food production towards more sustainable practices, as well as recognition of the value of producing high quality certified organic products for export markets and the domestic market.

Through the development of the New Zealand Organic Sector Strategy and other Government initiatives, there is now political recognition of the commercial potential of organics, as well as recognition of the importance of organics in helping to underpin New Zealand's clean green image as a producer of high quality agricultural products and as a tourist destination, and also health and environment benefits.

Statistics

New Zealand has about 1000 certified organic producers, with about 45'000 hectares of certified organic land. Most food and beverage products are now available as certified organic.

The main types of organic primary production in New Zealand are kiwifruit, apples, blueberries, fresh and processed vegetables, arable, dairy, meat, viticulture, and aquaculture. The biggest organic sectors so far are kiwifruit and apples - organic kiwifruit production represents approximately five percent of the total production of kiwifruit in New Zealand, and organic apple production is approximately ten percent of the total production of apple.

[1] Seager Mason, Technical Director, PO Box 9693, Marion Square, Wellington 6031, Tel: +64 4 801 9741, Fax: +64 4 801 9742, www.biogro.co.nz and www.organicsnewzealand.org.nz. BioGro NZ is New Zealand's leading organic certifier and organic producers organization.

The current growth sectors for organic primary production are apples, dairy, and viticulture. The number of organic apple orchards is increasing in response to market demand and good prices. There is steady growth in the number of dairy farms converting to organics, and in the number of vineyards converting.

Some current statistics

- Certified producers: Approximately 1000 certified producers comprising approximately 820 primary producers, 120 processors and exporters, and 60 certified suppliers of inputs (fertilizers, etc).
- Certified land area: Approximately 45'000 hectares of certified land.
- Exports: Approximately 100 million New Zealand Dollars (ca. 53.4 million Euros) worth of products exported, growing at approx 15 percent annually.
- Domestic market: Approximately 110 million New Zealand Dollars (ca. 58.8 million Euros) worth of products sold on the domestic market - approximately half of this produced in New Zealand, the rest is imported. Growth is about ten percent annually.
- Kiwifruit: Organic production is approx five percent of the kiwifruit sector.
- Apples: Organic production is approx ten percent of the apple sector.
- Vegetables: Organic production is about two percent of the sector.
- Dairy and meat: Organic production is still less than one percent of the sector.
- Certifiers (approx numbers): BioGro - 530 producers, Demeter - 50 producers, Organic Farm New Zealand (small-scale producers scheme) - 200 producers, Agriquality - 220 producers.

Markets

New Zealand's domestic market grew very rapidly over the period 2000 - 2002, by more than 100 percent per annum each year. This growth was due to a variety of factors, but in particular because of:

- Rejection of genetic engineering;
- The increasing range and high quality of organic products on the market;
- Increasing number of outlets, particularly supermarkets, stocking organics;
- Many people wanting to support organics as being the best way forward for New Zealand's agriculture and food production.

Most supermarkets now stock at least some organic products, and some supermarkets are specializing in organics due to customer demand. Organic shops are increasing in number and size, with some of the successful organic shops becoming small to medium size organic supermarkets, and there are now some chains of organic shops. The domestic market continues to grow but the growth has slowed over the last two years.

New Zealand's economy is reliant on exporting and agricultural products are New Zealand's main exports. Exports of organic products have grown steadily over the last 15 years, and are currently approximately 100 million New Zealand Dollars per annum.

Growth of organic exports has started to increase again. Demand for exports of organic products in most sectors exceeds supply. The New Zealand Organic Sector Strategy has recognized the need to assist primary producers with information and help on market opportunities and conversion.

Standards and legislation

The New Zealand Standard for Organic Production was released in November 2003. This was developed with Government funding under the auspices of Standards New Zealand. At this stage, it serves as a benchmark for certifiers operating in the domestic market. It is a voluntary standard; it is not mandatory, so consumer protection is through the Fair Trading Act, with reference to the New Zealand Standard as required. There are no specific organic labeling laws in New Zealand.

Exports to EU and US are via the New Zealand Food Safety Authority (NZFSA) Official Organic Assurance Programme (OOAP). Through this program, New Zealand has Third Country Listing with EU, and USDA recognition for the USDA NOP. The certifiers such as BioGro operate as Third Party Agency certifiers for the OOAP.

Access to the Japan market is currently via Recognized Certification Organization arrangements with a Japan based certifier, but this should soon change to Recognized Foreign Certification Organization recognition with Japan MAFF.

BioGro also has recognition for access to Quebec, and access to other markets is through having IFOAM Accreditation.

There are still no controls on imports labeled 'organic' other than certifiers setting their own standards for recertification, and through the Fair Trading Act.

State Support

There is a small amount of Government support for organics in New Zealand. The main recent examples are:

- New Zealand Standard for Organic Production: see above
- New Zealand Organic Sector Strategy: A Government funded Organic Sector Strategy was released in November 2003. A key recommendation was for the formation of a peak industry body to coordinate initiatives in the organic sector. This body has been formed, it is Organics Aotearoa New Zealand, (OANZ), and it was launched in November 2005. The strategy has set an ambitious target of one billion New Zealand Dollars (0.54 billion Euros) worth of sales by 2013.

- Organic Farm New Zealand: This is a scheme for certification of small-scale producers, which was developed with Government funding. The scheme is based on 'pods' (groups) of producers, regionally based, with each pod able to operate their own certification system, but linked to a national coordinating body. Through voluntary input, this provides low cost certification for small-scale producers.
- OANZ: The New Zealand Government has funded the establishment of OANZ, and the development of an organic advisory service.

Research and Extension

Organic research in New Zealand is carried out mainly by crown research institutes, universities, and the private sector. One example is an organic research farm, which is a joint venture between a University and a food processing company. There are also some producer groups such as in the organic kiwifruit, pipfruit, dairy, viticulture, and avocado sectors, which have significant input into coordinating research and extension. In general, the view is that research funding for organics is inadequate, particularly as developments in organics typically benefit conventional production also. It is well recognized that much of the knowledge base in organics is with the experienced producers, and some of the 'research' happens on farm as successful farmers develop their production systems.

Several universities and other tertiary institutions offer courses and training in organics. There are an increasing number of agricultural advisers who offer consultancy services for organic producers. A Government funded organic advisory service is currently being developed.

Outlook

Through the launch of the New Zealand Organic Sector Strategy and the establishment of OANZ, there is Government acknowledgement of the importance of organics in New Zealand, but still only limited Government support. Genetic Engineering (GE) is a major issue in New Zealand, and was the number one issue in the general election in July 2002. There was a moratorium on commercial release of GMOs until October 2003, but in spite of majority public and industry support for it to remain, that was lifted. There is currently one field trial of a GE herbicide resistant crop in New Zealand, and application has just been made to field trial a GE Bt crop. This application, and any other applications if made, is strongly opposed by the organic sector and many other organizations and people. There is a very active movement for New Zealand to remain non-GE, and it is supported by a majority of New Zealanders. GE remains an important issue for New Zealand's organic sector. A key issue for New Zealand's organic sector is lack of production to meet growing demand, both for the export market and the domestic market. The only solution is to encourage more farmers to convert, by providing advice and research to support conversion, and the various organic organizations such as BioGro, and the sector groups, and now OANZ are working hard to facilitate this support.

Australia/Oceania: Organic farming statistics

Table 12: Organic land and farms in Australia/Oceania

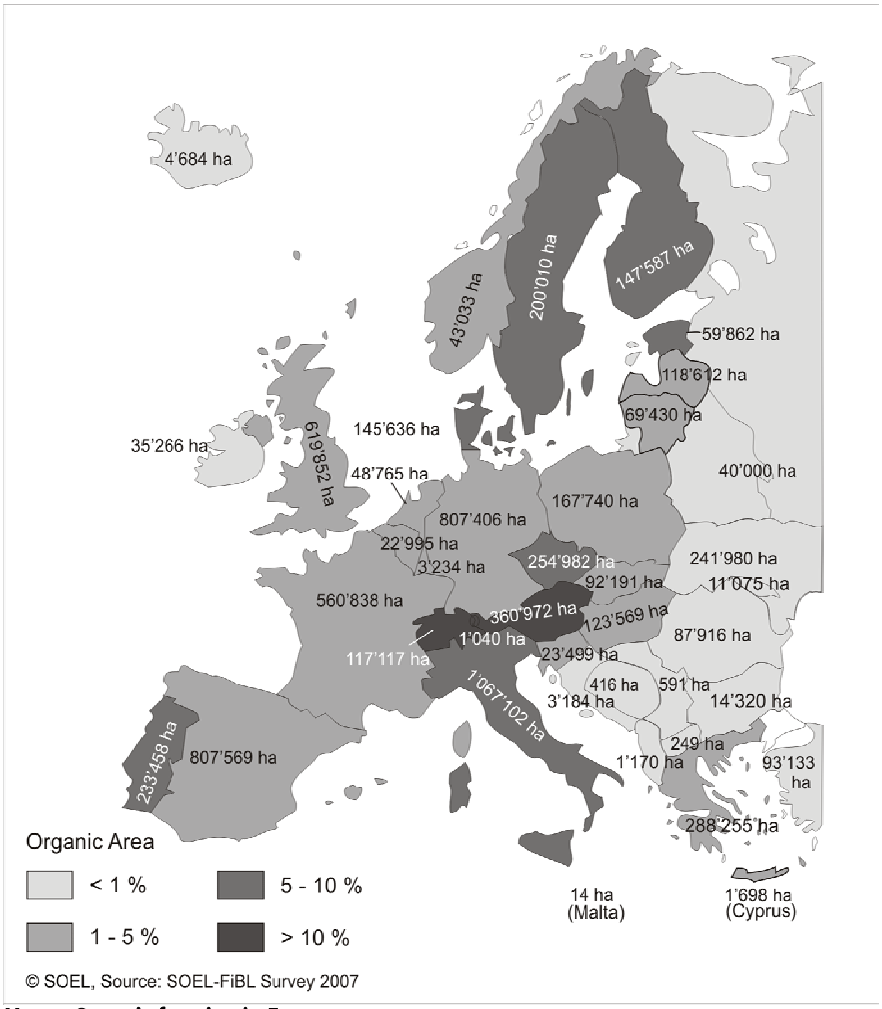
Country	Year	Organic land area	Share of organic land	Organic farms
Australia	2005	11'800'000	2.68%	1'869
Fiji	2005	100	0.02%	
New Zealand	2005	45'000	0.26%	820
Total		11'845'100	2.59%	2'689

Source: SOEL-FiBL-Survey 2007

Data and information sources/contacts

- Australia: Data provided by: Els Wynen, Eco Landuse Systems , Canberra, Australia; Data source: Ian Lyall, AQIS, Australia
- Fiji: Data provided by / Source Sant Kumar, Fiji Organic Association, Lautoka, Fiji and Gerhard Stemmler, Herbex Ltd, Lautoka, Fiji
- New Zealand: Data provided by / Source Seager Mason, BioGro New Zealand, Wellington, New Zealand

15 Europe



Map 5: Organic farming in Europe

Source: SOEL-FiBL Survey 2007, Graph: Minou Yussefi, SOEL

Statistics, support schemes and research

HELGA WILLER[1]

Statistical Development: Continued Growth

Since the beginning of the 1990s, organic farming has rapidly developed in almost all European countries. According to this survey in Europe, more than 6.9 million hectares (1.4 percent of the agricultural land) are managed organically by almost 190'000 farms.

In the European Union (EU) almost 6.3 million hectares are managed organically by almost 160'000 farms. This constitutes 3.9 percent of the agricultural area and 1.7 percent of the farms in the EU. Compared to the previous year (as of December 2004) the organic land increased by almost 510'000 hectares (+7.9 percent) in Europe and by 490'000 hectares (+ 8.5 percent) in the European Union.

The increase in the European Union compared to the previous year is due to high growth rates in the new member states (for instance Lithuania: +100 percent, Poland +60 percent) as well as substantial increases in Italy (ca. +113'000 hectares), Poland (+85'000 hectares), Spain (+74'000 hectares). There have, however been decreases of organic land, notably the UK, Sweden, and Turkey.

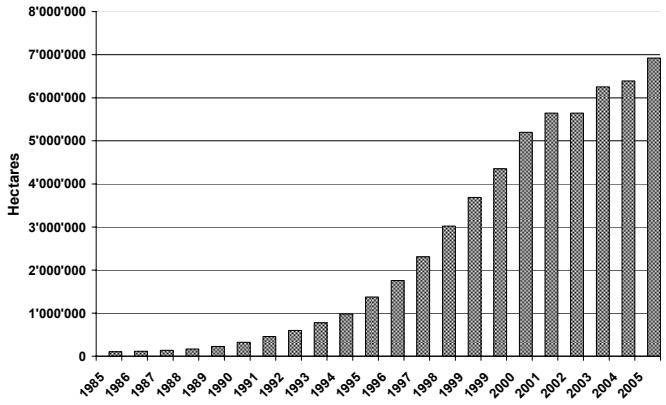


Figure 35: Development of organic land area in Europe 1985-2005

Source: Institute of Rural Sciences, University of Aberystwyth, UK and FiBL Switzerland

1 Dr. Helga Willer, Communication, Research Institute of Organic Agriculture FiBL, Ackerstrasse, 5070 Frick, Internet www.fibl.org

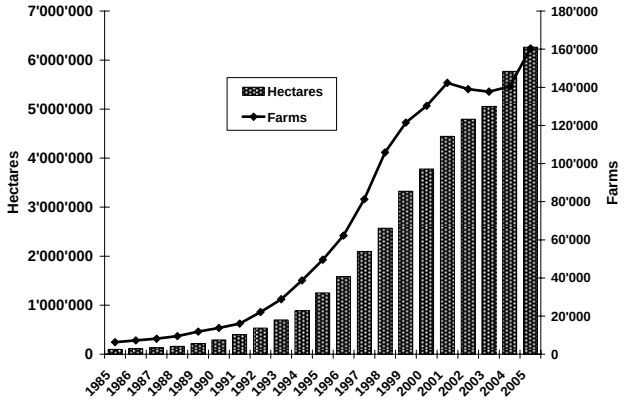


Figure 36: Development of organic farming in the European Union 1985-2005: Organic land and farms

Source: Institute of Rural Sciences, University of Aberystwyth, UK, and FiBL, Frick, Switzerland

The difference between individual countries regarding the importance of organic farming is substantial. More than 14 percent of agricultural land is organic in Austria, 11 percent in Switzerland, and around seven percent in Finland, Italy and Sweden. Some countries have yet to reach one percent. The country with the highest number of farms and the biggest organic land area is Italy.

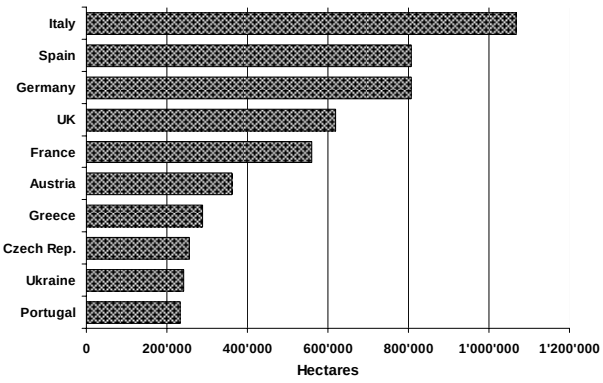


Figure 37: The ten countries with the highest area of organic farming land in Europe 2005

Source: FiBL-SOEL survey 2007

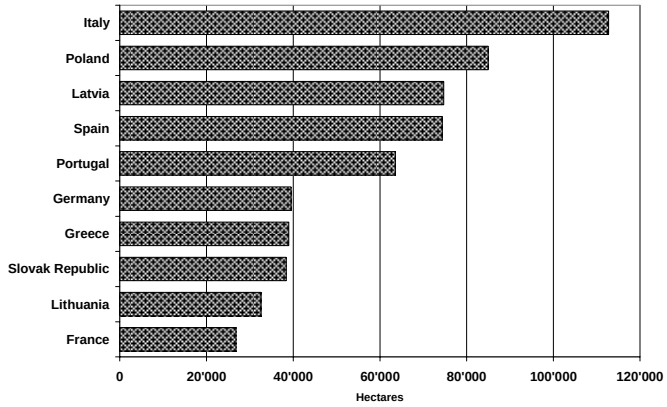


Figure 38: The ten countries with the highest increase (hectares) of organic land in Europe 2004-2005

Source: FiBL-SOEL-surveys 2006 and 2007

According to the global organic survey 2007 in Europe, the organic agricultural land (6.9 million hectares) is mainly used for arable cropping (39 percent of organic land) and for permanent pastures (42 percent). Permanent crops amount for seven percent of the land. For seven percent of the organic land no information on the main land use categories was available.

On a European level, cereals and fodder crops play the most important role in arable farming. Among the permanent crops, olives, fruits, nuts, and grapes are the most important categories. For the European Union a similar picture emerges.

Data collection and processing in Europe still suffers from a lack of standardization (Rippin et al. 2006; Recke et al. 2004), but basic production data are now available from several sources, and the situation is getting increasingly better. Eurostat, the statistical office of the European Union, is now making the data including land use information available at its homepage, and it provides extensive reports. Many of the European data provided in this book are based on the Eurostat information. The Institute of Rural Sciences at the University of Wales provides historical figures as well as detailed analyses, and a complete overview of the statistical development of the organic sector since the 1990s is available at its homepage. The Research Institute of Organic Agriculture (FiBL) makes the latest data (not consolidated) available on its homepage. A database for organic market data was set up by the Central Market and Price Reporting Bureau in Germany ZMP, a development supported by the European Commission within the framework of the concerted action EISfOM 'European Information System for Organic Markets'[1].

1 Information and links to all these information resources are available via www.organic-europe.net/europe_eu/statistics.asp

Development at a policy level

Support for organic farming in the European Union includes support under the European Union's rural development programs[1], legal protection under the recently revised EU regulation on organic faming (since 1992)[2] and the launch of the European Action Plan on Organic Food and Farming in June 2004[3].

The **Rural Development policy 2007-2013**[4]**,** as laid own in Council Regulation (EC) No 1698/2005 of 20 September 2005[5] employs targeted measures for strengthening rural development instead of a general support to the agricultural sector. Since 1992, organic farming has been supported with area payments under the rural development programs, and these payments are one reason for the high number of organic farms in the European Union and other European countries, many of which have similar schemes. The EU's future Rural Development Policy 2007-2013 will focus on three axes: 1) improving competitiveness for farming and forestry; environment and countryside; 2) improving the environment and countryside and 3) improving the quality of life in rural areas and encouraging diversification.

Along with the regulation, the 'Community strategic guidelines for Rural Development'[6] were published in February 2006. These guidelines mention organic farming several times, for instance:

Under 'Improving the competitiveness of the agricultural and forestry sector' Member States are encouraged to focus their support on the key actions in order to meet the priorities mentioned above. One of the key actions is organic farming and it is recommended that the contribution of organic farming should be consolidated. 'Organic farming represents a holistic approach to sustainable agriculture. In this respect, its contribution to environmental and animal welfare objectives could be further reinforced.'

Furthermore, it is recommended that Member States, when making their national programs, insure consistency in programming and take into account other EU-level strategies, such as the Action Plan for Organic Food and Farming.

At the time of writing this article the Member States' rural development programs were just being drawn up. It remains to be seen if the area support for organic farming will remain as in previous years or will be improved, and if further instruments for organic farming will be implemented.

---

1 A collection of links related to European agripolicy documents is available at www.organic-europe.net/europe_eu/rural-development.asp

2 Council Regulation (EEC) No 2092/91 of 24 June 1991 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs; available via www.organic-europe.net/europe_eu/eu-regulation-2092-91.asp

3 Information on the European Action plan is available at http://europa.eu.int/comm/agriculture/qual/organic/plan/index_en.htm and at www.organic-europe.net/.

[4] European Commission (2006): Rural Development policy 2007-2013 m. The European Commission's Homepage, Brussels, http://ec.europa.eu/agriculture/rurdev/index_en.htm

[5] COMMISSION REGULATION (EC) No 1320/2006 of 5 September 2006 laying down rules for the transition to the rural development support provided for in Council Regulation (EC) No 1698/2005

[6] COUNCIL DECISION of 20 February 2006 on Community strategic guidelines for rural development (programming period 2007 to 2013) (2006/144/EC)

The support of organic farming throughout national rural development programs is, however, not obligatory – a fact which is criticized by the IFOAM EU Group, as organic farming can provide more employment, the average age of organic farmers is lower in many countries. Organic farmers are more engaged in on-farm-processing and direct sales and are highly innovative. This creates added value, consumer confidence, and viable rural regions, as shown in reports from the Member States at a seminar on the current EU agri policy in November 2006. This seminar was held by the IFOAM EU Group in November 2006[1].

The whole of 2006 was characterized by the revision of EU regulation on organic farming (for details on the new regulation see the article of Beate Huber et al. book on standards and regulations). The EU's Agricultural Council decided on December 19, 2006 on a 'general approach'. This is close to a final agreement, after which only small technical changes are possible during the German Presidency (January to June 2007). According to the IFOAM EU Group,[2] the latest text has clearly progressed since the original proposal. The sector remains concerned, however, for example, about the lack of stakeholder involvement, GMO's, the mandatory use of the EU logo, the inadequately defined link to the food and feed control regulation (882/2004) and the exclusion of catering and non-food products from the scope of the regulation. According to the IFOAM EU Group, a big achievement has been that proposed restrictions on private trademarks and standards have been dropped, these private standards being essential to maintaining a dynamic and expanding organic food and farming sector.

Currently the information campaign proposed in the **European Action Plan for Organic Food and Farming** is being prepared. With this campaign, Action 1 - a multi-annual EU-wide information and promotion campaign to inform consumers, public institutions canteens, schools and other key actors - will be implemented. This campaign is funded under Council Regulation (EC) No 2826/2000 of 19 December 2000 on information and promotion actions for agricultural products on the internal market[3]. With such monies several national information campaigns have already been or are currently being co-funded, for instance the German campaign 'Bio – mir zuliebe' or the French 'Printemps Bio'.

Research

Today organic farming research is substantially funded under national research programs or national organic action plans as well as in European projects[4]. A unique overview of research currently conducted in Europe, was given at the Joint Organic Congress, which was held in May 2006 in Odense, Denmark, where 300 papers were presented[5].

---

[1] IFOAM EU Group (2006): CAP Seminar Organic Farming and Lisbon Strategy. The IFOAM Homepage, IFOAM, DE-Bonn, www.ifoam.org/about_ifoam/around_world/eu_group/positions/Brussels_seminar_CAP.html

2 IFOAM EU Group Info page - Revision of Organic Regulation. The IFOAM Homepage, IFOAM, DE-Bonn, www.ifoam.org/about_ifoam/around_world/eu_group/web_Revision/Revision_info_page.html

3 European Commission: Promotion for EU agricultural products on the Internal Market. The European Commission Homepage, http://ec.europa.eu/agriculture/prom/intern/index_en.htm

4 For a list of projects funded by the European Commission see www.organic-europe.net/europe_eu/research-euprojects.asp

[5] The papers can be downloaded at the Organic Eprints Archive at http://orgprints.org/view/projects/int_conf_joint2006.html. Organic Eprints is an internet-based archive for papers related to research in organic agriculture. The database has now more than 5000 entries.

Even though no figures for all European countries are available, it is known that the funds of the eleven countries that are part of the ERA-Net project CORE Organic[1] and of the European Union for organic farming research amount to 60 to 70 million Euros annually.

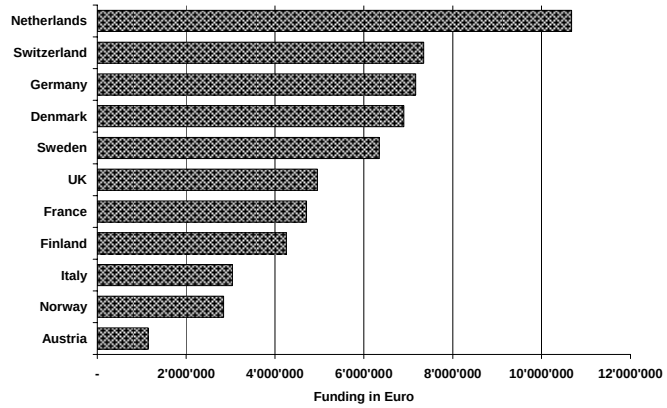


Figure 39: Funding for research in organic food and farming in 11 European countries 2004

Source: Country reports in Lange et al., also available at www.coreportal.org. Graph: FiBL, CH-Frick

In the course of the 2006, the EU's 7th framework research program, to be running 2007-2013, was drafted and the first calls were launched at the end of December 2006[2]. The IFOAM EU Group has expressed its concern that there might be less funding for organic food and farming research under the new Program. Reducing research money for organic farming in the seventh Framework Program would contradict the various EU policy strategies relating to organic farming, e.g. the European Action Plan on Organic Food and Farming. It would also hamper the further development of a dynamic organic food and farming sector and market (Newsletter No. 15 of the IFOAM EU Group, December 2006).

In 2006, the first European Call of the ERA-NET Project CORE Organic was launched. The call resulted in 37 proposals many of which came from consortia with participants from several member countries. The projects will be implemented from 2007 onwards. Furthermore, in 2006 an internet portal on European organic farming research was set up as part of the CORE Organic Project at www.coreportal.org. This portal has country reports on organic food and farming research in the eleven CORE Organic partner countries. A summary of these reports is below (see also Lange et al. 2006).

1 CORE Organic (Co-ordination of European Transnational Research in Organic Food and Farming); Internet www.coreorganic.org. CORE Organic is a three year Co-ordination Action in organic food and farming (2004 to 2007). The overall objective is to gather the critical mass and enhance quality, relevance and utilization of resources in European research in organic food and farming.
2 Cordis: 7th Research Framework Programm. The Cordis Homepage, available at http://cordis.europa.eu/fp7/home_en.html

- In **Austria**, organic farming research started in 1980, initiated by the private Ludwig-Boltzmann Institute for Organic Farming and Applied Ecology in Vienna (now Bio Forschung Austria). In 1996, the Institute for Organic Farming at the Agricultural University in Vienna (BOKU) was set up in order to intensify teaching of students and to do research. Most recently, the national Centre for Agricultural Research at Raumberg Gumpenstein set apart an institute dedicated to organic farming research. In addition, the Veterinary University in Vienna and the University of Innsbruck are involved in organic farming research. In Austria, organic farming is one topic of the national research program PFEIL 05 (2002 to 2005), which has been funded by the Federal Ministry of Agriculture, Forestry, Environment and Water Management. A new program (PFEIL 10, from 2006 to 2010) will also fund organic farming research. A network of scientists and stakeholders called 'BioEnquête' helped to set priorities and to survey the research activities.

- **Germany** was a pioneer country in organic farming research. The biodynamic research institute in Darmstadt was already funded in 1950, the first university chair dedicated only to organic food and farming started 1981 at the Kassel University in Witzenhausen, the second University chair 1987 in Bonn, followed by others since. In 1996, the entire Faculty for Agronomy at Kassel University with 20 chairs got oriented towards organic food and farming research. In 2000, the Federal Agricultural Research Centre (FAL) in Braunschweig established an institute for organic farming (in the very Northern part of Germany). In 2001, the German Ministry established - after a wide consultation with all stakeholders - the Federal scheme on organic farming that funded research activities in 2002 and 2003 with 10 million Euros annually. For the second phase from 2004 to 2007, 7 million Euros on average were allocated to research projects every each year. The program will be continued until 2009 at least. The communication of research activities is through the internet site forschung.oekolandbau.de. Research results are available at the open access archive Organic Eprints (www.orgprints.org/).

- **Italy:** In 2001, the Italian Ministry for Agriculture MIPAF launched an action plan on organic farming research. This action plan was worked out after consultations with the regions and with the national committee for organic agriculture. The first open call was published in 2002 and many research projects are still ongoing. A broader action plan focusing on research and on promotion of organic farming was launched for the period from 2005 to 2007. The main actors are the National Centres for Research (CRA) and various agricultural universities. Many universities offer Master Courses in organic farming, and the Research Centre for Mediterranean Agriculture in Bari (IAMB-CIHEAM) is an international player in organic farming training and research.

- In the **Netherlands**, the Ministry of Agriculture, Environment and Food Quality introduced a policy in favor of organic farming with the goal to convert ten percent of the agricultural land area until 2010. In parallel, the Ministry increased the funding for organic farming research from 4.6 million Euros in the year 2000 to 9.2 million in the year 2005. In order to integrate the stakeholders into priority setting and into the annual work program, a stakeholder network 'Bioconnect' funded by Ministry is in charge of consultation and supervising work. The funding goes to the Wageningen University and Research Center (WUR). There is a bilateral contract between WUR and the private Louis Bolk Institute (an early pioneer institute in organic farming research) on many research projects, so that part of the funding goes to Louis Bolk Institute as well. Commercial farmers are closely linked to the research projects. Therefore, results from research work have been very relevant to the practice, and the mutual flow of information is strong.

- In **Norway**, research activities were started in 1986 by the private Institute NORSØK at Tingvoll. 20 years later, in 2006, NORSØK was merged with two state research institutes now called Bioforsk, and organic farming is a small part of their activities. In addition to Bioforsk, several other Universities and research centers are involved in organic farming research.

- In **Sweden**, the first national research program on organic farming was launched in 1996, funded by the Forestry and Agriculture Research Board (SJFR), now Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas). Since 1996, there has been a permanent sequence of three-year programs on organic farming. The total funding for organic farming research was 34 million Euros for the years 2000 to 2005. The Center for Sustainable Agriculture (CUL) at the Swedish University of Agricultural Sciences (SLU) coordinates the programs 'Formas' and 'Ekoforsk'. The coordination is accompanied by a group of stakeholders. The research projects are mainly run by the run by the Universities of Halmstadt, Linköping, Lund, Uppsala, by SLU (main actor), and by the two private Institutes.

- **Switzerland** was an important pioneer for the development of organic farming research. Initial research projects began at the anthroposophic center Goetheanum at Dornach (Ehrenfried Pfeiffer and others) in the 1920s. Organic pioneers like Hans Mueller and Hans Peter Rusch initiated research work on commercial organic farms between 1950 and 1970. In 1973, the private Research Institute of Organic Agriculture Research (FiBL) was founded. From 1973 to 2000, FiBL successfully developed a broad research program with private and state money. Since 2000, the federal state research centers Agroscope started to become involved into organic farming research. Since 2000, the total input of human resources and funding into organic farming research has steadily increased and is currently at 7.3 million Euros per year. The funding agency for Agroscope and FiBL is the Federal Office for Agriculture (BLW). There are also other sources of funding like grants from the industry (food retailers, biocontrol companies, alternative veterinary pharmaceutical companies etc.) and from charities.

- In the UK, several private pioneer organizations and institutes carried out research work on organic farming: the Soil Association (founded in 1946), Henry Doubleday Research Association (HDRA, founded in 1954) and the Elm Farm Research Centre (EFRC, founded in 1981). Since 1991, the government (via DEFRA, The Department for Food, Environment and Rural Affairs) has been funding research; the current funding is almost 5 million Euros per year. Consequently, many universities and state research institutes have become involved in organic farming research. The main objectives of the government funding are transparency for the economic performance of different types of organic farms, evaluation of ecological impacts of organic farming, improvement of the production technique of organic farming and gaining scientific data for amending the standards of organic farming.

Literature

Commission of the European Communities (2004): European Action Plan for Organic Food and Farming (=Commission Staff working document; Annex to the Communication from the Commission {COM(2004)415 final}), Brussels, 2004. Available at http://europa.eu.int/comm/agriculture/qual/organic/plan/workdoc_en.pdf

Lampkin, Nicolas, Frank Offermann, Santiago Olmos, Jon Tuson, Raffaele Zanoli (2004): Impact of CAP Measures on Environmentally friendly farming Systems: Status quo, analysis and recommendations. The case of organic farming. Report on the study contract 'Environmentally Friendly Farming Systems and the Common Agricultural Policy', Reference:ENV.B.1/ETU/2002/0448r (Call dated 04/06/2002). Brussels,

Lange, Stefan; Williges, Ute; Saxena, Shilpi and Willer, Helga, Eds. (2006) Research in Organic Food and Farming. Reports on organization and conduction of research programs in 11 European countries. Bundesanstalt für Landwirtschaft und Ernährung (BLE) / Federal Agency for Agriculture and Food BLE, Bonn, Germany. Archived at http://orgprints.org/8798/

Häring, Anna; Stolze, Matthias; Zanoli, Raffaele; Vairo, Daniela und Dabbert, Stephan (2005): The potential of the new EU Rural Development Program in supporting Organic Farming. Further Development of Organic Farming Policy in Europe with Particular Emphasis on EU Enlargement Nr. QLK5-2002-00917, Fachhochschule Eberswalde, Eberswalde, Germany; Forschungsinstitut für biologischen Landbau (FiBL), Frick, Switzerland; Università Politecnica delle Marche, Italy; Universität Hohenheim, Germany. Archived at http://orgprints.org/6338/

Rippin, Markus, Nicolas Lampkin, Alison Vaughan, Helga Willer (Eds.): Towards a European Framework for Organic Market Information. Proceedings of the Second EISfOM European Seminar, Brussels, November 10 & 11, 2005. Research Institute of Organic Agriculture (FiBL)

Rippin, Markus; Vitulano, Susanna; Zanoli, Raffaele and Lampkin, Nicolas (2006) Synthesis and final recommendations on the development of a European Information System for Organic Markets. = Deliverable D6 of the European Project EISfOM QLK5-2002-02400. Report, Institute of Rural Sciences, University of Wales. Archived at http://orgprints.org/8961/

Slabe, Anamarija (Rapporteur, 2004): Second seminar on 'Organic Food and Farming research in Europe' - How to improve trans-national cooperation. November 26th 200. Consolidated report Prepared by Anamarija Slabe1 IFOAM EU Regional Group, based on information provided for the seminar by 27 countries. Commission of the European Communities, Brussels 2004. Available at http://europa.eu.int/comm/research/agriculture/pdf/ off_research_in_europe_consolidate_report.pdf

The European Market for Organic Food

TORALF RICHTER[1] AND SUSANNE PADEL[2]

Most of the information and statistics presented in this chapter were compiled as part of a survey among national experts of national or international organic markets. Many of these figures are based on estimates, and the methods of data collection vary from country to country as no uniform data collection system for organic market data is yet in place. In addition, national organic sales figures may vary between years depending on the information sources.

Descriptions of market trends in this chapter are the result of market observations by Toralf Richter (Bio Plus AG, Switzerland) and Susanne Padel (University of Wales). The authors would welcome any comments that may help to improve the quality of data and information about the organic market in Europe in future. Some content of this chapter was already published in the Soil Association 'Organic Market Report 2006'[3].

Developments in major organic markets in Europe in 2005 (2)[4]

The published data for individual countries are derived using disparate methods such as consumer panels or expert consultations and are collected with varying amounts of detail. Therefore, the compilation of market data presented in this chapter should be interpreted with care, and should not be used for comparisons between different countries and different years. The data are based on the currently best methods for data collection and compilation in each country, supplemented by estimates of national experts. Where reliable information was available, the trends and developments in the major markets in 2005 are described below, including information on policy, production and retail sectors.

We estimate that in 2005 the European organic market grew by 10 by 15 percent in value and was worth approximately 14.2 billion Euros[5]. However, there are considerable differences in trends between the countries. The highest growth figures can be stated for the Czech Republic (+33 percent), for the UK (+29 percent) and Spain (+20 percent). On the other hand, markets in Finland and Switzerland declined slightly.

---

[1] Dr. Toralf Richter, Bio Plus AG, Staufferstrasse 2, CH-5703 Seon, Switzerland, www.biopartner.ch/bpl/News00_461.asp
2 Dr. Susanne Padel, University of Wales Aberystwyth, Institute of Rural Sciences, Organic Farming Unit, Llanbadarn Campus, UK-SY23 3AL Aberystwyth Ceredigion, www.irs.aber.ac.uk/research/agroecology.shtml
3 The authors acknowledge gratefully the permission of the Soil Association to reproduce the material.
[4] The figures at the end of the subheadlines refer to the references at the end of the text.
[5] Please note that this figure differs from the figure given by Amarjit Sahota in the chapter on the global organic market in this volume. This is due to a difference in methodology. The data presented by Sahota are based on updates of previous data, based on growth rates communicated by retailers, producers, wholesalers, etc. The data presented by Richter/Padel are based on an expert survey but the methodology behind the individual figures may differ (see also explanation in the text).

Germany (3, 4, 5, 6)

Organic sales increased by 11 percent between 2004 and 2005, with an estimated sales value of 3.9 billion Euros. The market share is around three percent, and in Germany 47 Euros are spent per capita expenditures for organic food. Growth for certain mainly fresh food products was above average, such as for milk and dairy products (+33 percent), for vegetables (+21 percent) and for fruits (+42 percent).

41 percent of organic products are sold in traditional multiple retail chains, followed by 31 percent in specialized organic food retailers (organic food shops or health food shops). Growth has been reported across all sectors of the market. For example, the specialized organic food sector reported more than ten percent growth, largely in the area of specialized organic supermarkets.

Sales in the discounters have also grown at an above average rate. In 2005, more than half of all organic carrots were purchased in stores of the discounters (5). Lidl has signed a contract with Arla Foods to supply organic milk to the German market.

Aldi's turnover with organic food increased by 46 percent in 2005, and the remaining discounters report even higher increases of 64 percent. Aldi alone sold 58 percent of all organic carrots, 42 percent of all organic bananas and 29 percent of all organic potatoes.

Growth in Germany is driven by an increasing number of consumers who buy organic food, and the average expenditure for organic food has increased.

- 15 percent of the turnover of the conventional retail chain 'Tegut' was achieved with organic products.
- Growth is expected to have continued in 2006 at a level comparable to 2005. Because the market is growing faster than the supply, shortages in the supply of some raw materials have occurred. In addition, the future development of the national supply is uncertain due to increasing import networks of German processors, wholesalers and retailers.

Italy (2, 8)

Organic sales by value are estimated at 2.4 billion Euros, equivalent to 42 Euros per capita expenditure for organic food.

Approximately 20 million Italians consume organic food, mainly in the urban areas of Northern Italy.

While smaller organic food shops indicate a declining or stable development, bigger organic supermarkets grow.

Organic food in schools is a sector of growing importance, gradually building up over the last five years. In 2004, 920'000 organic meals were provided every day to schools, an increase of 15 percent since 2003. Also, the number of restaurants offering organic products has increased to more than 400.

Great Britain (13, 14)

Organic sales by value were estimated at 2.33 billion Euros (1.6 billion United Kingdom Pounds), equivalent to 39 Euros per capita expenditures for organic food. This represents an increase of approximately 30 percent over the 2004 estimates.

The recent growth has again mainly originated from sales in multiple retailers (31 percent) and in independent retailers (38 percent), but direct sales through producer outlets have increased (11 percent). This contrasts with trends in 2004 where growth had been particularly strong in independent retailers and in direct and alternative supply channels.

Multiple retailers continue to be the most important outlet for organic food (76 percent of all sales), and 16 percent of sales are traded through a variety of other outlets such as independent shops and eight percent are sold through outlets owned by the producers, such as farm shops, producer owned box schemes.

The share of primary produce sourced from the UK has increased in many categories - notably meat, salad crops and vegetables – to 66 percent self-sufficiency in domestic products. However, if demand continues to rise at a similar rate, future domestic supply shortages are likely in some sectors unless more land and livestock is converted. The UK currently experiences shortages in the supply of grains for organic compound feeds.

Approximately 65 percent of households knowingly buy organic food. More people identify themselves as organic consumers, and a wider range of socio-economic groups is making occasional purchases, but the committed shoppers remain important. All shoppers appear interested in the question of where their food comes from and in the story behind it. They state preference for locally grown food, sometimes more important then for organic food.

France (2, 7)

The organic market is estimated to be worth 2.2 billion Euros. This is equivalent to 37 Euros per capita expenditures for organic food

Growth in the market is related to a growing number of consumers purchasing organic food. A study by 'Agence Bio' has shown that organic products are becoming more popular in France; 47 percent of the consumers bought organic produce in 2005, compared to 44 percent in 2004. 73 percent buy organic fruits and vegetables regularly, and 61 percent buy organic eggs. Almost 90 percent of the French population believes that organic farming helps to protect the environment. As in the UK, the supermarkets and hypermarkets are the most important sales channel for organic food in France, followed by weekly markets, specialist shops and direct sales.

Denmark (2, 4, 5)

Organic sales by value were estimated at 307 million Euros in 2005, equivalent to 57 Euros per capita expenditures for organic food.

Estimates suggest that organic turnover increased by ten percent in 2005, suggesting that the period of stagnation the Danish organic market has ended.

Denmark exports ten percent of its organic production and continues to be Europe's biggest supplier of organic milk, closely followed by meat and exports some organic vegetables. However, Denmark also imports a considerable amount of organic products, such as fruit, vegetables, grain as well as tea, coffee and tropical fruit.

Austria (2, 8, 9)

Organic sales by value are estimated at 450 million Euros, equivalent to 56 Euros per capita expenditures for organic food.

Organic sales increased by twelve percent between 2005 and 2004, and they represent a market share of around three percent. Also in 2006, double-digit market growth has most likely been achieved.

64 percent of the organic food sales take place in conventional retail chains, and just 14 percent with specialized organic food retailers (organic food shops or health food shops),

The market growth in Austria is a result of the efforts of all main marketing channels to increase the sales of organic food. If growth continues at similar levels, shortages in supply are expected for several product groups.

The Netherlands (10)

In 2005, sales of organic produce grew by 1.4 percent to 467 million Euros. Retail sales growth mainly occurred in the health food chain (+5 percent) and in catering (+ 22 percent). Due to competition between Dutch retailers, the turnover of organic products in Dutch supermarkets decreased for the first time in ten years (-2.6 percent).

Several organizations have become involved in trying to stimulate consumer demand. Jan Groen, the Director of Green Organics, an international trade organization in organic vegetables, predicts that in the near future there will be a shortage of organic horticultural crops in the Netherlands. To ensure that supply follows demand, he has suggested that conversion subsidies similar to those in Germany and the UK need to be reintroduced. In the Netherlands, farmers currently only receive grants for the maintenance of organic farming and not for the conversion to organic farming.

Belgium (11)

Supermarkets have a 55 percent share of the organic retail market in Belgium. However, weekly markets are becoming more popular and are now worth eight percent of the market, compared to five percent in 2004. According to Jacques Cochez van FV Bio-Boulevard, the cooperative that organizes the organic markets near Antwerp, some markets had to be closed because there are not enough farmers, processors and salespersons. In the first quarter of 2005, the total fresh produce market decreased by 3.3 percent, but consumption of fresh organic products increased by 5.3 percent.

Spain (2, 4)

Organic sales value is estimated at 300 million Euros, equivalent to seven Euros per capita expenditures for organic food.

Organic land area continued to increase between 2004 and 2005 by ten percent to 807'569 hectares, whereas the number of producers decreased. Half of the organic area and about half of the producers are in Andalusia, whereas most processors and importers are based in Catalonia.

Switzerland (2, 9)

In 2005, for the first time in 25 years, the number of organic farms in Switzerland decreased slightly. This is attributed to the structural change in the agricultural industry that also affects the organic sector.

Organic sales decreased slightly by percent between 2004 and 2005, with an estimated sales value of 763 million Euros, representing a market share of around 4.5 percent. Swiss consumers continue to be the biggest spenders in Europe with 103 Euros per head of the population.

75 percent of the organic sales take place via conventional retail chains, and just 15 percent in specialized organic food retailers (organic food shops or health food shops).

The market decline in Switzerland is driven by price reductions in the food sector, which occurred in Switzerland as a response to the market entrance of the Aldi chain.

Sales of organic fruit, vegetables and eggs increased, but sales of organic meat and milk fell slightly.

Small growth has returned in 2006 at a level of approximately two to three percent (estimated at two percent in the conventional retail sector and six percent in the specialized organic food shop sector). Since 2006, Aldi and Mueller are new players that sell organic lines on the Swiss market.

Norway (2, 8)

Organic sales by value are estimated at 41 million Euros, equivalent to nine million Euros per capita expenditures for organic food.

The Norwegian government has set a target for 15 percent of Norwegian food production and consumption to be organic by 2015.

Turkey (4)

In 2005, there were almost 100'000 hectares of organically managed land in Turkey with on approximately 14'400 holdings. Turkish organic products are exported to more than 30 countries, but the majority of exports go to Germany, the Netherlands, the UK, Italy and France.

Central and Eastern Europe (CEE) (2, 8, 12)

In most Central and Eastern European countries (except Czech Republic), the organic sector remains focused on exports. The development of the domestic markets is difficult because of a lack of organic processors and wholesalers and, in some countries, the slow conversion rate of farms. Where markets develop, they are partly supplied by international retail chains using imported product.

In 2005, sales of organic products in the **Czech Republic** increased by 30 percent to approximately 12 million Euros. Despite of the growing number of organic farms, the retailers' demand for organic food cannot be fully met with domestic production. However, a substantial proportion of the domestic production is also exported. Presently international conventional retail chains, like Tesco or Billa/Rewe, sell 57 percent of the organic products.

In recent years, organic agriculture in **Estonia** has developed strongly. In 2005, almost 60'000 hectares on more than 1000 holdings were certified as in conversion or organic.

Organic land area in **Poland** doubled between 2004 and 2005, reaching nearly 168'700 hectares on 7200 farms, but farm size remains small. The domestic sales are estimated at 30 million Euros in 2005.

In 2005, the organically managed land area in **Romania** increased by 25 percent to almost 100'000 hectares. With Romania's entry to the EU in 2007, growth is expected to continue. The domestic market is small and large volumes of organic products are destined for export. For example, 95 percent of organic honey production is exported, mainly to Germany, Switzerland, the Netherlands and Italy.

In **Croatia,** a target has been set to increase the organic land area to 10 percent of the total agricultural area by 2010.

Most organic production of **Slovakia** is exported to Austria, Hungary and the Czech Republic. There are nearly no domestic processing facilities and there is limited demand for organic food. The share of organic products is estimated at 0.1 percent for the year 2004. Mainly fresh products (dairy products, vegetables and fruits) are lacking in the domestic market. 60 percent of the domestic sales is sold via natural food shops, 30 percent is sold by conventional retailers and 10 percent directly by farmers.

There are about 20 organic food stores in **Slovenia** today, most of them located in the capital of Ljubljana. Apart from specialist stores, organic products are increasingly also sold in approximately 300 supermarkets. Organic products (from Alnatura in Germany) also are sold via the drugstore chain 'dm'.

In the **Ukraine,** only cropping farms are completely converted to organic. The first organic farms with livestock animal production are still in conversion. The most important organic products are cereals (soft and durum wheat, barley, maize, oats, buckwheat, millet), oilseeds, essential oils (lavender, rose, rosemary) and pulses (soybeans, peas, lentils, chickpeas). The first Ukrainian companies have begun processing organic raw materials in 2006. There is almost no domestic market for organic products in Ukraine (sales of four million Euros in 2005). Market surveys from 2005 and 2006 show that some consumers would buy organic products.

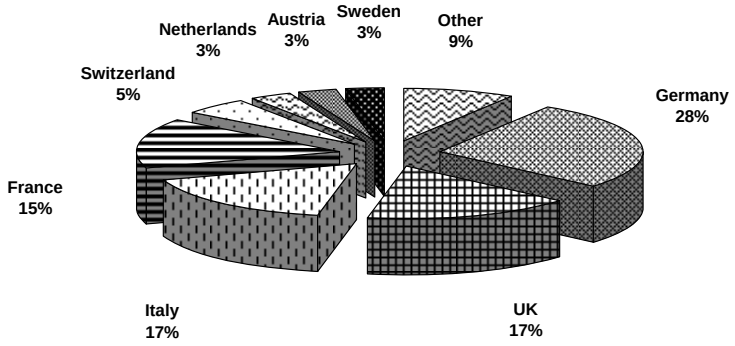


Figure 40: The European market for organic food 2005: Shares of the individual countries of the European organic market

Source: Surveys by Bio Plus AG, Seon, Switzerland, Institute of Rural Sciences, Aberystwyth, UK and Research Institute of Organic Agriculture FiBL, Frick, Switzerland

Table 13: Estimated turnover and per capita consumer expenditures for organic food in selected European countries, 2005

Germany (Source: U. Hamm)	
Turnover domestic organic food market	3'900'000'000
Population (million)	82.5
Per capita consumer expenditure for organic food	47
Italy (Source: R. Pinton)	
Turnover domestic organic food market	2'400'000'000
Population (million)	57.8
Per capita consumer expenditure for organic food	42
UK (Source; Soil Association)	
Turnover domestic organic food market	2'333'000'000
Population (million)	59.5
Per capita consumer expenditure for organic food	39
France (Source: B. Schaer, Ekozept)	
Turnover domestic organic food market	2'200'000'000
Population (million)	59.9
Per capita consumer expenditure for organic food	37
Switzerland (Source: Bio Suisse)	
Turnover domestic organic food market	763'000'000
Population (million)	7.4

Per capita consumer expenditure for organic food	103
Netherlands (Source: EkoMonitor)	
Turnover domestic organic food market	419'000'000
Population (million)	16.2
Per capita consumer expenditure for organic food	29
Austria (Source: Bio Austria)	
Turnover domestic organic food market	450'000'000
Population (million)	8.1
Per capita consumer expenditure for organic food	56
Sweden (Source: www.biomarkt.info)	
Turnover domestic organic food market	433'000'000
Population (million)	9
Per capita consumer expenditure for organic food	48
Denmark (Source: P.H. Larsen)	
Turnover domestic organic food market	306'734'500
Population (million)	5.4
Per capita consumer expenditure for organic food	57
Spain (Source: V. Gonzalvez)	
Turnover domestic organic food market	300'000'000
Population (million)	42.2
Per capita consumer expenditure for organic food	7
Finland (Sources: M. Auersalmi; A. Sahota)	
Turnover domestic organic food market	80'000'000
Population (million)	5.2
Per capita consumer expenditure for organic food	15
Ireland (Sources: E. Mc Auliffe; H. Willer)	
Turnover domestic organic food market	66'000'000
Population (million)	4
Per capita consumer expenditure for organic food	17
Portugal (Source: www.biomarkt.info)	
Turnover domestic organic food market	50'000'000
Population (million)	10.4
Per capita consumer expenditure for organic food	5
Norway (Source: E. Rosn)	
Turnover domestic organic food market	41'000'000
Population (million)	4.6
Per capita consumer expenditure for organic food	9
Poland (Sources: T. Vaclavik; A. Sahota)	
Turnover domestic organic food market	30'000'000
Population (million)	38.2
Per capita consumer expenditure for organic food	0.79
Czech Republic (Source: T. Vaclavik)	
Turnover domestic organic food market	12'000'000
Population (million)	10.2
Per capita consumer expenditure for organic food	1.2
Hungary (Sources: F. Fruehwald; T. Vaclavik)	
Turnover domestic organic food market	5'635'000

Population (million)	10.1
Per capita consumer expenditure for organic food	0.6
Ukraine (Sources: E. Milovanov; H. Willer)	
Turnover domestic organic food market	4'000'000
Population (million)	48.3
Per capita consumer expenditure for organic food	0.08
Liechtenstein (Source: E. Hug)	
Turnover domestic organic food market	2'500'000
Population (million)	0.33
Per capita consumer expenditure for organic food	8

Sources

1. Agra Europe (various issues)
2. Bio Plus / FiBL market survey: International expert survey
3. Rippin, M and Michels (2006) Beitrage zum ZMP Ökomarktworkshop, May 2006 Berlin.
4. www.biofach.de (newsletter, various issues)
5. Ökomarkt Forum of ZMP, various 2006 issues
6. Hamm, U. (2006) Viele Bioprodukte schwer zu bekommen. Meldung dpa
7. www.agencebio.org/
8. www.bio-markt.info
9. Richter, T (2006) Neue Herausforderungen jenseits der Nische. *Ökologie & Landbau,* 01/2007.
10. www.biologica.nl; www.ekoland.nl
11. Bio forum Vlaanderen
12. www.ekoconnect.org (various newsletters)
13. Williamson, S, Cleeton, J and Nettleship, T (2006) Organic Market Report. Soil Association, Bristol.
14. Lampkin, N, Measures, M and S. Padel (2006) 2007 Organic Farm Management Handbook. University of Wales, Aberystwyth.

Europe: Organic farming statistics

Table 14: Organic land and farms in Europe

Country	Year	Organic land area	Share of agricultural land	Organic farms
Albania	2006	1'170	0.10%	93
Austria	2005	360'972	14.16%	20'310
Belgium	2005	22'996	1.65%	693
Bosnia Herzegovina	2006	416	0.02%	26
Bulgaria	2005	14'320	0.27%	351
Croatia	2005	3'184	0.10%	269
Cyprus	2005	1'698	1.12%	305
Czech Rep.	2005	254'982	5.97%	829
Denmark	2005	145'636	5.62%	2'892
Estonia	2005	59'862	7.22%	1'013
Finland	2005	147'587	6.52%	4'296
France	2005	560'838	2.03%	11'402
Germany	2005	807'406	4.74%	17'020

Country	Year	Organic land area	Share of agricultural land	Organic farms
Greece	2005	288'255	3.15%	14'614
Hungary	2005	123'569	2.90%	1'553
Iceland	2005	4'684	0.21%	23
Ireland	2005	35'266	0.84%	978
Italy	2005	1'067'102	8.40%	44'733
Latvia	2005	118'612	4.78%	2'873
Liechtenstein	2005	1'040	27.90%	35
Lithuania	2005	69'430	2.49%	1'811
Luxemburg	2005	3'243	2.51%	72
Macedonia	2004		.	50
	2005	249	0.02%	
Malta	2005	14	0.13%	6
Moldova	2005	11'075	0.44%	121
Netherlands	2005	48'765	2.49%	1'377
Norway	2005	43'033	4.14%	2'496
Poland	2005	167'740	1.03%	7'183
Portugal	2005	233'458	6.34%	1'577
Romania	2005	87'916	0.60%	2'920
Russian Federation	2005	40'000	0.02%	40
Serbia/Montenegro	2005	591	0.01%	
Slovak Republic	2005	92'191	4.91%	196
Slovenia	2005	23'499	4.84%	1'718
Spain	2005	807'569	3.20%	15'693
Sweden	2005	200'010	6.27%	2'951
Switzerland	2005	117'117	10.94%	6'420
Turkey	2005	93'133	0.24%	14'401
UK	2005	619'852	3.90%	4'285
Ukraine	2005	241'980	0.59%	72
Total Europe		6'920'462	1.38%	187'697
Total European Union		6'260'553	3.84%	160'380

Source: FiBL-SOEL-Survey 2007

Data and information sources/contacts

- Albania: Data provided by: Marlene Heeb, FIBL, Frick, Switzerland; Data source: Ministry of Agriculture, Tirana, Albania and Albinspekt, Tirana, Albania
- Austria: Data provided by DI Elizabeth Klingbacher, Bio Austria, Vienna, Austria; Data source: 47. Grüner Bericht, Vienna, Austria
- Belgium: Data provided by / Source Eurostat database http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0,1136206,0_45570467&_dad=portal&_schema=PORTAL
- Bosnia Herzegovina: Data provided by / Source Amela Solak, Organskakontrola, Sarajevo, Bosnia Herzegovina
- Bulgaria: Data provided by / Source Stoilko Apostolov, Bioselena, Karlovo, Bulgaria

- Croatia: Data provided by / Source Darko Znaor, Independent Consultant, Zagreb, Croatia and Sonja Karloglan Todorovic, Ecologica, Zagreb, Croatia
- Cyprus: Data provided by / Source Ioannis Papastylianou, Department of Farming Systems of the Agricultural Research Institute, Nicosia, Cyprus
- Czech Republic: Data provided by / Source Karolina Dytrtova, Bioinstitut, Olomouc, Czech Republic, Source Ministry of Agriculture, Prague
- Denmark: Data provided by / Source Eurostat database http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0,1136206,0_45570467&_dad=portal&_schema=PORTAL, Total according to Ministry of Agriculture, Copenhagen, Denmark
- Estonia: Data provided by / Source Meritt Mikk, Centre for Ecological Engineering, Tartu, Estonia
- Finland: Data provided by / Source Sampsa Heinonen, Plant Production Inspektion Centre (KTTK), Loimaa, Finland
- France: Data provided by / Source Agence Française pour le Développement et la Promotion de l'Agriculture Biologique, L'Agriculture biologique française, chiffres 2005, France
- Germany: Data provided by / Source Diana Schaack, Zentrale Markt- und Preisberichtstelle für Erzeugnisse der Land-, Forst- und Ernährungswirtschaft GmbH (ZMP), Bonn, Germany
- Greece: Data provided by Nicolette van der Smissen, DIO, Alexandroupoli, Greece; Source Ministry of Agriculture Athens
- Hungary: Data provided by / Source Eniko Szemanik, Hungaria Oko Garancia Kft, Budapest, Hungary and Lea Bauer, Biokontroll, Budapest, Hungary
- Iceland: Data provided by / Source Gunnar Gunnarsson, Vottunarstofan Tún ehf., Reykjavik, Iceland
- Ireland: Data provided by / Source Eddie McAuliffe, The Organic Unit, Department of Agriculture and Food, Johnstown Castle Estate, Wexford, Ireland
- Italy: Source Ministry of Agriculture MIPAF, Rome, Italy
- Latvia: Eurostat database http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0,1136206,0_45570467&_dad=portal&_schema=PORTAL
- Liechtenstein: Data provided by / Source Rolf Hug, Klaus Büchel Anstalt – Ingenieurbüro für Agrar- und Umweltberatung, Mauren, Liechtenstein
- Lithaunia: Data provided by / Source Kristina Kazlauskaite, Ekoagros, Kaunas, Lithaunia
- Luxembourg: Data provided by / Source Monique Faber, Administration des services techniques de l'agriculture. Service de la protection des végétaux, Luxembourg
- Macedonia, The Fmr Yug Rep.: Data provided by / Source Gordona Pecelj, PROBIO, Skopje, Macedonia
- Malta: Source Eurostat database http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0,1136206,0_45570467&_dad=portal&_schema=PORTAL
- Moldova: Data provided by / Source Stefan Simon, EkoConnect, Dresden, Germany
- Netherlands: Data provided by / Source Jasper Vink, Biologica, EKO-Monitor Cijfers en trends, Jaarrapport 2005, Netherlands
- Norway: Data provided by / Source Kaare Johnsen, Debio, Bjorkelangen, Norway
- Poland: Data provided by / Source Dorota Metera, BIOEKSPERT, Warsaw, Poland

- Portugal: Data provided by / Source Ministry of Agriculture, Instituto de Desenvolvimento Rural e Hidráulica, Lisboa, Portugal
- Romania: Data provided by / Source Teodora Aldescu, Ministry of Agriculture, Bucarest, Romania
- Russia: Data provided by / Source Stefan Simon, EkoConnect, Dresden, Germany
- Serbia/Montenegro: Data provided by / Source Lidija Acimovic, Ministry of Agriculture, Belgrade, Serbia/Montenegro
- Slovak Republic: Data provided by / Source Zuzana Lehocka, Research Institute of Plant Production, Piestany, Slovak Republic and Eurostat database http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0,1136206,0_45570467&_dad=portal&_schema=PORTAL
- Slovenia: Data provided by / Source Anamarija Slabe, Institute for Sustainable Development, Ljubljana, Slovenia
- Spain: Data provided by Victor Gonzálvez Pérez, Sociedad Española de Agricultura Ecologica, Valencia, Spain, Source Ministry of Agriculture, Food and Fisheries MAPA, Madrid, Spain, www.mapa.es/alimentacion/pags/ecologica/pdf/2005.pdf
- Sweden: Data and translation provided by Karin Ullven, CUL, Uppsala, Sweden, Source Swedish Board of Agriculture, Jönköping, Sweden, www.sjv.se/home/amnesomraden/statistics/jany/innehpdf2006.4.52c6f10b903d78938000966.html
- Switzerland: Data provided by: Christine Rudmann, FIBL, Frick, Switzerland; Data Source: Bundesamt für Statistik, Berne, Switzerland
- Turkey: Data provided by / Source Erdal Süngü, Ministry of Agriculture, Ankara, Turkey
- United Kingdom: Data source Department for Environment, Food and Rural Affairs (DEFRA), London, United Kingdom
- Ukraine: Data provided by / Source Eugene Milovanov, Organic Federation of Ukraine, Kiev, Ukraine

16 Latin America

Map 6: Organic farming in Latin America

Source: SOEL-FiBL Survey 2007, Graph: Minou Yussefi, SOEL

Organic Farming in Latin America

PIPO LERNOUD[1]

Traditional farming

Latin America has a very ancient agricultural tradition, and for millennia organic methods were used. Rotations, variety selection, fertility management that includes composting and mulching, sophisticated irrigation systems, long term planning and community land management were all features of American agriculture two thousand years ago.

Hundreds of varieties of corn, liquid and solid cocoa, all sizes of squashes, all kinds of tomatoes, over 90 varieties of chillies - many of the foods found today in the world's tables - were seen for the first time by European eyes after Columbus arrived to the continent.

The Aztecs in Mexico had a complex and massive system of food production that involved irrigation from the mountains, elevated beds and artificial channels with fish and seaweed, and precise rotations all over the lake surrounding their gigantic capital Tenochtitlan.

In those same days, when the Spanish invasion arrived to Cuzco, in Peru, they met a culture of expert agriculturists. Learning their skills from their ancient neighbors, the Aymaras, and developing a real soil and production science, the Incas were able to farm millions of hectares distributing seeds along an empire that stretched from Central America to the North of Argentina and Chile. They developed probably over a thousand varieties of potatoes, a food that is now a staple food in countries throughout the world.

All these traditions are alive in the farmers of indigenous descent along the mountain ranges, from Mexico to Argentina. Hundreds of thousands of small farmers are now gathering in associations to redignify their knowledge within the organic movement, using the Internal Control System to certify their crops. Many of those families produce coffee, cocoa, sugar, bananas or other organic crops for export and have a small vegetable plot for food security and bartering. Others unite to reach the weekly markets around the cities, bringing their vegetables and fruits. They are striving to make a living, but organic agriculture has allowed them to plan their harvests and find a growing market for their products.

1 Pipo Lernoud, Vice President of the International Federation of Organic Agriculture Movements IFOAM, Buenos Aires, Argentina

The market

Local Markets

Some countries in Latin America have a domestic market for organic products. In Brazil, for example, some producer associations like the Eco Vida network in the southern states collect their vegetables and fruits once a week and take them in their own trucks to the markets in the big cities, selling them at open fairs or in supermarkets under the name of the farmer or the brand name of the association. A very similar but smaller situation can be seen in Ecuador through the Fundación Maquita Cushunchic - Comercializando Como Hermanos MCCH. In Costa Rica, vegetable producers have the slogan: 'From my family to your family'.

Supermarkets

Supermarkets on the continent are beginning to sell organic products. Vegetables and fruits are sold in Uruguay, Costa Rica, Honduras, Peru, Brazil and Argentina, among others. In Nicaragua, the supermarket chain 'La Colonia' sells organic products, especially vegetables. Sparser is the offer of processed products, due to the difficulty of getting big enough quantities. Argentina has a wide variety of oils, flours, honey, wine, and tea on the shelves, and some supermarket chains have developed their own organic brands or their clearly defined organic sector. 'Sol de Acuario' was a company that had a wide variety of certified products in Argentinean supermarkets, ranging from tea to breakfast cereals and corn flour, until the economic crisis. Some of those products are now sold by one supermarket brand, 'Bells Organic' owned by the Dutch corporation Albert Hejin. In Brazil, the locally owned 'Zona Sul' supermarket chain has promoted organic products within their clientele, organizing tasting events and special prize rebates, including big press & advertising campaigns. The first totally organic supermarket was opened in Brasilia. 'El Supermercado Orgánico' is owned by a producers' cooperative. It has a modern management and strives to satisfy the consumers' wishes.

Specialized stores

Most Latin American countries feature specialized stores, or health food stores, where organic farmers can take their products to sell to a trained clientele. This is where the information about organic regulations and characteristics can reach the public. At the IFOAM Local Markets Conference in Buenos Aires (2000), one of the conclusions from the Latin American participants was that the specialized stores inform the public better than supermarkets, and that the owners of the shops usually help the organic market to grow by spreading the news about recently arrived products, teaching the consumers to respect the harvest seasons and caring for the vegetables in a special way.

In Bolivia, the 'El Ceibo' cooperative is a producer association that manages 8'000 hectares, mostly cocoa, and nuts, quinoa, coffee and hibiscus. 'Irupana' has more than 15 stores, 12 of them in La Paz, where they sell breakfast cereals and snacks made from native crops like quinoa or amaranth. In Chile, there are some specialized stores like 'La Ventana Orgánica' and 'Puranatura'. In Argentina, 'El Rincón Orgánico' has been running for 17 years, providing customers in Buenos Aires with more than 200 varieties of organic products from all over the country. It received the 'Spirit of Organic International Award 2004' for its pioneering work.

A growing trend is the 'consumer cooperative shop'. In many secondary cities and towns, consumers get together and organize a cooperative, rent a place and start selling products from farmers that also belong to the organization. This is very common in the South of Brazil, through the Eco Vida Network. Sometimes, as the shop is owned by the consumers, prices are lower, but producers get a fair share.

Popular fairs

Probably the most popular form of organic trade in Latin America is the neighborhood fair or small informal market. In most towns there is a place, usually a park or sports arena, where the producers can sell their goods directly to the public on a weekly basis. This is a good opportunity for farmers to get the full price, without intervention by intermediaries. Many local governments favor this kind of transaction, helping the farmers by providing them the stalls and some advertising. Although these local fairs have only a small economic significance, they are very important for modest peasants and in total, they represent an important percentage of the organic market of the continent. Moreover, some of them are quite big, as the Porto Alegre bi-weekly fair in Coolmeia, which gathers some 300 producers and thousands of consumers.

The Peruvian NGO Red Agroecologica RAE has developed many of these small weekly fairs all over the villages of Peru, taking advantage of a millenarian tradition of local trade that comes from the indigenous communities. Something similar takes place in many areas of South and Central America.

In Uruguay, the Parque Rodó fair exists since the beginning of the ninties, and there is also a fair in Tacuarembó. APODU, the small farmers association that runs the fairs, has developed a Participatory Guararantee System (PGS) to certify the products, inspired by the already successful example of Brazil, where the system has been running for many years, and Perú, where it is already well established.

In the Dominican Republic, there is the FAMA ecological market in Santo Domingo. Mexico City has recently started an organic weekly fair. In Lima, the Bio Feria has been going with a very efficient organization for years, and they even made a video and a book on 'how to build up an organic fair', published by IFOAM (see also success story under country report Peru).

Many groups of vegetable producers in Brazil, Argentina and Perú are reaching the public with the same prices as conventional vegetables, and make it a political point: 'Let all the consumers choose freely, not only the rich.' Some of these schemes have developed a quite sophisticated system of 'participatory certification', basing their guarantee on the direct relation between the consumer and the producer.

Box schemes and home delivery

Another important organic trade system is the box scheme. In big cities, many producers organize a planned home delivery circuit with fixed boxes containing assorted vegetables and fruits, and sometimes milk products and eggs brought by other farmers. This has been, in many cases, the starting point of organic producer associations and specialized shops, which grew out of a successful home delivery system. In Argentina, it took ten years of box schemes to develop a consumer base that could allow producers to step into the more massive sale of supermarkets. Uruguay is following the same pattern, and Brazil has regional groups that have been reaching the public with organic produce through home delivery for almost twenty years.

Community Supported Agriculture (CSA)

Inspired by the Japanese Teikei system and the American Community Supported Agriculture (CSA), a movement is growing in some places of Latin America: La Comunidad Sustenta a la Agricultura. Groups of around 40 consumer families get together with a farmer and make a plan for the whole year. They decide together what to sow, develop a budget; detail the needs of the consumers and the farmer. Then the consumers advance some of the money to the farmer to start that year's production. They share the risks and fix the prices. In some areas of the south of Brazil and around Lima in Peru this is already a working reality. 'It is like a future stock market', consumers say, 'you risk the money to get good food all year round.'

Exports

Export is still the main organic activity in Latin America. From the coffee grains and bananas of Central America to the sugar in Paraguay and the cereals and meat in Argentina, the trade of organic produce has been mostly oriented towards foreign markets. This trend is typical of a southern area, with poorly developed national markets and great need of cash to pay its international debts. As most of the Third World countries, the members of the American countries south of the Rio Bravo sell their basic products without any added value, to be processed in the developed countries for their national markets.

It is very difficult for small organic producers on the continent to meet the quality standards and regulations of the demanding international markets, due to lack of information and support from governments and traders to develop capacity on quality control.

Nevertheless, you could have whole meals with what the continent exports, including coffee with sugar, honey, fruits and breakfast cereals for the morning, meat, all kinds of vegetables, oils, grains, wine and fruit juices for lunch and dinner, and maybe even some herbal teas and sweets for dessert. A big percentage of these products also reach the Fair Trade market, especially coffee, cocoa, quinoa and bananas.

In Costa Rica, around 30 percent of the territory is a protected natural area, and there are many organic export projects developing in the area, stimulated by the government. In Honduras and many other countries, multinational companies are buying land to produce organic for export. In Argentina, the well-known Italian Benetton family has bought and certified 600'000 hectares in Patagonia for organic sheep meat and wool production. More and more, European and American companies and investors' funds are buying or renting Latin American land for organic production, usually with a scale and a technology that locals cannot afford and with an already developed relation to the buying markets of their countries of origin.

Fresh fruits and vegetables

Many Latin American countries have been selling their fruit harvest to Europe and the United States. Brazil sells apples and grapes; Chile has a very good kiwi export business and also produces some fine fruits like raspberries and strawberries for export. Colombia, Honduras and Dominican Republic sell bananas, pineapples, mangoes and other tropical fruits, Argentina sells apples, pears and citrus fruits, and Mexico has apples, avocados and bananas on the world market. 70 percent of the bananas produced in the Dominican Republic are organic. 1.7 million kg of bananas are exported yearly from Costa Rica for baby food production in Europe and America. Pineapple is a growing export possibility in Central America.

Argentina, Brazil and Chile are strong vegetable exporters, both fresh and dried. In addition, Costa Rica, and other Central American countries sell smaller quantities of fresh vegetables to the external market.

Grains and cereals

Paraguay is a big soybean producer, together with Argentina, Mexico and Brazil, which produce and export corn and wheat. Organic grain farmers in the south of the continent are having a big confrontation with the genetically modified cultivars of soy (RR) and corn (Bt), that have become mainstream in the area.

Coffee

Mexico is the largest coffee producer in the world, with tens of thousands of tons of coffee beans, mostly harvested by small indigenous farmers, reaching the world's biggest supermarkets and coffee shops. It produces 40 percent of the total coffee production in Latin America. Guatemala and other Central American countries have important coffee production with much the same characteristics. It is mostly done in an ecological forest management system, thus creating a valuable alternative to the deforestation process that is taking place in the region.

In a recent study by Jorge Vieto from the Centro de Inteligencia Sobre Mercados Sostenibles (CIMS), there are around 63'000 organic coffee producers in Latin America, averaging 2 to 4 hectares of certified land. These small producers are responsible for 90 percent of the total production. There are more than 300 certified exporters, mainly cooperatives and farmers associations, but also some private companies.

A large part of Peru's coffee production is already organic. In Bolivia, the 20 percent of the total coffee production is organic. When, like in 2001, the price of the coffee is too low, farmers get more income from their diversified production, selling tropical fruits to small processing plants. In Costa Rica, this alternative is called 'Organic Integrated Farms'.

Cocoa

Most of the coffee producing countries also cultivate cocoa for chocolate, usually processed in Europe under fair trade logos and certified by European companies. It is also a very important source of income for small farmers throughout Central America and the tropical areas of South America, although it has been impossible up to now to add value locally.

Sugar

Brazil, Paraguay, Ecuador and Argentina are some of the sugar producers in the area, with small farmers in cooperatives who own or manage small sugar mills. In Brazil there is a big company that produces on tens of thousands of hectares, using advanced technologies and implementing social standards.

In Paraguay, more than half of the total sugar produced is organic. Around 1'000 producers receive a premium of 20 percent over the conventional price. In Misiones, Argentina, the San Javier organic cooperative, with its 650 farmers, processes 80'000 tons of cane annually.

Meats

Argentina was the biggest beef exporter in the region, with more than two million hectares of certified meat (beef and lamb) production until the recent crisis. There is also a strong internal market for organic meat in Argentina. Uruguay is beginning to produce organic meat, as is Brazil. In Uruguay, 99 percent of the certified land is devoted to meat, amounting to 70 percent of the total value of organic exports.

Wines

According to Viñas de Chile, the Chilean land surface of organic grapes has grown from 44 hectares in 1998 to 1914 hectares in 2004. In Argentina, there is also significant development of organic wine production for export, especially to Europe, the United States and Japan. Some European producers are investing in Argentina's central western region to take advantage of the beneficial weather conditions and the purity of groundwater. Uruguay is also exporting some organically grown wines.

Certification

Apart from Argentina and Costa Rica, which have Third Country status in the European Union, in all other Latin American countries producers need to be recertified by a European company to enter the market in Europe. American or European companies certify most of the export production in Latin America anyway, because the buyer side imposes the certification. The Organic Crop Improvement Association (OCIA) and Farm Verified Organic (FVO) from the United States, and Naturland, BCS Oeko-Garantie and the Institute fur Marktoekologie (IMO) from Europe, are very active in the area.

Some local certification bodies on the continent are very well developed, like Argencert and Organización Internacional Agropecuaria (OIA, Argentina), Instituto Biodinamico (Brazil) and Bolicert (Bolivia) - all IFOAM accredited - and Biolatina (Perú and other countries). Other working agencies are Ecológica from Costa Rica, Bio Nica from Nicaragua, Maya Cert from Guatemala and CertiMex from México. Chile has Certificadora Chile Orgánico (CCO) and PROA - Corporación de Promoción Agropecuaria, Uruguay has Urucert and Sociedad de Consumidores de Productos Biológicos (SCPB). Argentina has more than twelve certifying agencies; apart from Argencert and OIA already mentioned, there are Bio Letis (EU recognized), Food Safety, Agro Productores Organicos de Buenos Aires (APROBA), Ambiental, and Fundación Mokichi Okada (MOA), which are also important.

Recently, some countries have enacted laws at a national level, like Uruguay, Chile and Paraguay. Bolivia has dictated a decree that regulates the activity. Argentina has had a national law for many years, and its system dates back to 1992. The standards in Brazil allow Participatory Certification Systems in local and direct markets, and other countries are working in the same direction, Perú, Mexico and Uruguay among them.

The region is beginning to discuss Social Criteria for Standards. In October 2001, representatives from many countries got together for the '1st IFOAM Seminar on Social Responsibility in Organic Agriculture,' in Cochabamba, Bolivia, to discuss the details of Social Standards and Codes of Conduct. The Social Accountability in Sustainable Agriculture (SASA) project, carried out by IFOAM and others to evaluate joint social and ecological certification, has been working in the area. Many producers in Latin America (mostly coffee) have double certification, organic and fair trade, to allow for better prices and market access.

Governmental support

No Latin American country has subsidies or economic support for organic production: Costa Rica, Brazil and some others have official funding for research and teaching; official export agencies in Argentina and Chile have helped producers get to international fairs and print product catalogues; and in Mexico there is growing interest by national and state agencies, for example in the state of Jalisco. In general, the organic movement in Latin America has grown by its own forces, with some seed funding for extension and association building by international aid agencies, especially from Germany, the Netherlands and Switzerland. International trade has been stimulated by buying companies and fair trade agencies, focusing especially on some basic products like coffee, bananas, orange juice and cocoa.

In the State of Paraná, in the south of Brazil, the big bi-national organization that runs the gigantic Itaipú dam, has decided to manage the Paraná river basin ecologically, generating an enormous project involving thousands of towns and villages in recycling, resource management, environmental education and organic agriculture. They call it 'Projeto Agua Boa' (Good Water Project). Brazil is probably the only example of systematic support for organic agriculture at the national level, with a joint effort by the Social Development, Agriculture and Environment ministries, understanding the ecological and social advantages of organic production. A very big 'agroecology development' plan is managed by the Family Agriculture Secretary, involving tens of thousands of small farmers with technical and financial support.

Education and extension

Latin America has a great number of activities in education relating to organic agriculture. Many universities and agricultural organizations carry teaching courses and on farm experimenting projects. Cuba had a very developed teaching and research project carried by the Cuban Association of Organic Agriculture (ACAO), and the Brazilian Instituto Biodinamico has done systematic work on farm production. Agruco and Agrecol have done a lot of extension work over the years, leading to a strong support for food security and farmers knowledge, especially in the Andean region.

Some agricultural universities offer organic production courses, like the La Molina in Perú, Las Villas in Cuba and Chapingo in México. In October 2004, the Catholic University of Argentina started a degree course on Organic Company Management.

The Agroecological Movement of Latin America and the Caribbean MAELA, an international movement linking around 80 groups in many countries, has done for many years extension work with the small farmers of all the continent, specially focused on self sufficiency and associative skills.

The Latin American Centre of Sustainable Development (CLADES(, lead by Miguel Altieri and Andres Yurcevic, has built a thorough body of knowledge and experience around agroecology and biodiversity issues, connecting universities (especially in the United States) with farmer groups and extension agencies, publishing very complete studies and giving lectures in all countries. Miguel Altieri is probably the most articulate spokesperson of organic farming in the region, and his books, read worldwide, have been used for courses on the continent for decades.

IFOAM, representing all interests in the organic sector, has been supporting and aiding the spread of organic projects through the region, and uniting various actorsin the movement through big events, including: the Sao Paolo Scientific Conference in 1992, the Mar del Plata Scientific Conference in 1998 and the Latin American IFOAM Local Markets Conference in Buenos Aires in June 2000.

Latin America, one of the biodiversity reservoirs of the world, is just beginning to take conscience of the enormous possibilities of organic agriculture. It has the farming traditions, the fertile lands and the varied climatic zones that allow it to produce almost anything in an ecological way, helping the much-needed greening of the planet.

Latin America: Country reports

Alberto Pipo Lernoud[1] and Marcela Piovano

Argentina

Argentina had 3'192'000 certified organic hectares in 2000, and has 3'100'000 hectares in 2005. A major part of the certified land is devoted to livestock production, especially sheep production in big farms in the slopes of the southern states, in Patagonia. 64 percent of the organic land is in Patagonia, owned by only four percent of the organic farmers in the country. On the other end, around a third of the farms (548) are located in one area, Misiones Province, in the north. These are small farmers organized in associations to produce sugar and mate tea. The total number of farms in Argentina is currently 1'736.

90 percent of the organic production in Argentina is for export, mainly to the European Union and the US. The most important exports are cereals and oilseeds: corn, wheat, soy, and sunflower. Fruits are also exported in big quantities, including pears, apples, oranges and lemons. Some vegetables, especially garlic, onions, and beans are exported. There is also a growing sector of aromatic and medicinal plants.

Regarding processed products, olive oil, sugar, concentrated juices, honey and wine are quite successful in the European and US-American import markets.

Meat exporting began ten years ago with beef, and recently Patagonian lamb became the predominant export for international markets. In 2002, there were 754'000 (today 645'000) sheep and 122'000 (today 142'500) head of cattle certified in Argentina. The export of organic wool has seen a big increase, reaching 624 tons in 2005, mostly directed to Germany and the UK. All the products mentioned have been exported for years, many of them since 1992.

The domestic market has functioning in the big cities since 1990, through home deliveries, supermarkets and specialized shops, but had a downward trend during the economic crisis in 2001 and 2002. Some important companies disappeared from the market (Sol de Acuario), and others reduced their product range for the supermarkets. Home deliveries, with a more direct relation with the consumers, were able to survive and are now in the upward trend again (El Rincón Orgánico). Some deliveries have more than 200 different products, especially vegetables, fruits, oils, teas, breads, eggs and jams. There is also a big company (La Serenisima) with a massive production of organic milk on more than 10'000 hectares and many associated farms.

1 Pipo Lernoud, Vice President of the International Federation of Organic Agriculture Movements IFOAM, Buenos Aires, Argentina

Argentina was the first Third World Country to have a national regulation on organic farming, adapted to that of the European Union (1992), and was the first country to enter the third country list. There are 12 national certifiers, some of them with a strong international presence (Argencert and OIA), and two are steadily growing (Letis and Food Safety). There is no important activity of foreign certifiers.

Argentina organized the 12th IFOAM Scientific Conference in Mar del Plata, 1998, the biggest organic event in Latin América. There are several organizations in the country: Movimento Argentino Para La Produccion Organica (MAPO), which organizes programs, capacity building, research projects, conferences and meetings. There is also a new Trade Chamber, Cámara Argentina de Productores Organicos Certificados (CAPOC), a certifiers' chamber, CACERT, and many local and regional networks.

Universities are quite active in organic issues, especially the National Buenos Aires University UBA, the Catholic University and the Salvador University. The National Agrarian Research Institute (INTA) has a whole research area on organic farming, coordinated by a former IFOAM World Board Member, Pedro Gomez. INTA also carries the biggest organic family garden project in the world, PRO HUERTA. This reached almost one million families doing home organic farming in the 1990s. After a financial crisis, it has been back in action since 2003.

Bolivia

AOPEB, the Ecological Producers Association, is the umbrella of 56 organizations that unites more than 30'000 mostly small producers with around one hectare.

The most important products from Bolivia are coffee, quinoa, chestnut, cocoa, vegetables, tea, herbs and lesser volumes of amaranth, dehydrated fruits and beans. In recent years, some new products have gained importance, including banana, sesame seeds, sugar cane, soybeans, and honey.

Bolivia has chains of shops selling organic products, especially in La Paz, Cochabamba and Santa Cruz de la Sierra. The Tiendas Ecológicas and AOPEB sell only certified products, and other shops like Irupana, Eco Market, El Ceibo and Protal also sell some uncertified, 'natural' products from small farmers associations.

CABOLQUI, the Chamber of Quinoa producers, has an active presence in international fairs, and has sponsored events like the IFOAM Dinner at BioFach 2006. Around 60 percent of Bolivian organic exports is directed to European markets, and 30 or 40 percent to the United States. Bolivian exports are around 20 million US-Dollars.

The government of Bolivia issued the Supreme Decree 28558 on December 22nd 2005 on 'Promoting the development of ecological production and setting the National System of Control' (see case study on Bolivia at the end of the Latin America Chapter). AOPEB is also implementing a Participatory System for the local market and its own stores.

Some private institutions carry research programs on organic agriculture, like AOPEB, Productividad Biosfera Medio Ambiente (PROBIOMA), Promoción e Investigación de Productos Andinos (PROIMPA). In addition, the two state universities, the Agrochemical Program of the Universidad Mayor de San Simón and the Institute of Ecology are developing organic research.

Bolivia has an IFOAM accredited national certifier, Bolicert, and many foreign certifiers acting in the country.

Brazil

In 2001, Brazil had 275'576 certified hectares. Today there are 842'000 hectares, representing 0.3 percent of the total agricultural area. 170'000 hectares are used for cropping, and 672'000 hectares are in pasture.

There is also a huge quantity of informally certified or not certified organic production, especially in the southern states of Rio Grande, Parana and Sao Paulo, where there is a big movement of 'family agriculture'. The calculated number of organic producers is around 19'000. 90 percent of the farms are smallholdings. The growth of organic production is estimated to be between 30 and 50 percent annually.

Exports are mainly raw products, like coffee, banana, soybeans and corn. There is a growing export business of organic meat. Some processed products, like concentrated fruit juices, sugar, processed soy and others are beginning to find international markets. At BioFach 2005, Brazil presented organic textiles and cosmetics.

The domestic market in Brazil is, together with Argentina, the most developed in Latin America. 45 percent of the sales in the domestic market are done through supermarkets, 26 percent through fairs and 16 percent in specialized stores. Most of the products are fresh vegetables and fruits, but there are a growing number of processors, both companies and small family units, processing tea, coffee, mate tea, jams, oils, breakfast cereals and dairy products. Brasilia inaugurated the first fully organic supermarket, and there is an organic hamburger shop, selling 'organic fast food'.

There are twelve national, and about nine international, certification agencies acting in the country.

There is an intense movement around local marketing and 'participatory certification,' especially in the south, with hundreds of weekly fairs, the biggest of them being in Porto Alegre, with more than 300 farmers selling directly to the public every week.

There are many NGOs working in organic farming in Brazil, mostly with small and family farms. The Eco Vida Network and the Association of Organic Agriculture (AAO) are well-known examples. Those NGOs, together with consumer organizations, have lobbied against the permission for GMO planting, especially in the southern, agrarian states. In 2003 the government allowed GMOs.

Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA), the national agricultural research center, is developing several research projects, working in intense relationship with the producers. The Ministry of Agrarian Development is currently very involved in promoting ecological agriculture as an alternative for the millions of small farmers throughout the country. The Ministry of Agriculture has issued the 2004-2007 plans, with six activities related to the promotion of organic farming. The 'Programa de Desarrollo de Agricultura Orgánica' (Pro-Orgánico), initiated in 2005, will devote almost one million US-Dollars to stimulate the production and domestic consumption of organic products. In Brazil, organic production is regulated by the law 10.831, issued in December 2003.

Chile

It is estimated that until recently Chile had 639'200 hectares, including the final certification of Patagonian prairies destined to sheep production. Around 300 farms have been reported as certified organic. As two big 'fundos' with 600'000 hectares recently left certification, the current certified surface is considerably less.

Chile's growth in organic production is fully geared to exports (90 percent), and the main fresh products are sheep meat, apples, cherries, asparagus, blueberries, avocado, citrus, and olives. There is also a growing export of processed products, like wine, olive oil and fruit juices and concentrates. Chile has a new and interesting development in organic salmon. It is estimated that in 2004 the export value was around 12 million US-Dollars. The main market is the United States, with 70 percent of the total exports, followed by Europe, Japan and Canada. Today, there are more than 40 organic products coming from 24 export companies. Regarding wine, there are 30 producers actually exporting, the biggest producer has 500 certified hectares.

The internal market is very small, although there are some home deliveries in the cities (Santiago, Temuco, La Serena, Valdivia), carrying mainly vegetables and fruits, and a few specialized shops (Tierra Viva, Cura Natura, La Ventana Orgánica, Pura y Natural), all of them in Santiago. In supermercados, there is presence of fruits and vegetables.

The most important news for organic farming in Chile this year was the issuing of law No. 20089 for Organic Agriculture on January 17th 2006. This law creates a national system for certification and includes the possibility of alternative certification systems for the local market and direct sales.

The movement has recently united in the Agrupación de Agricultura Orgánica de Chile AAOCH.

There are three national certifiers, the most active being Certificadora Chile Orgánico (CCO), Corporación de Investigación en Agricultura Alternativa(CIAL), who also serves as an inspection background for international agencies, and the smaller Corporación de Promoción Agropecuaria(PROA) and Agroeco. Many international agencies are active in the country, some with permanent offices in Santiago

There is an efficient governmental support for exports through the official agency Pro Chile. Research is being carried out in the Research Institute of Chillan INIA and the Universidad del Mar.

Colombia

Colombia had 33'000 certified hectares in 2003, covering 0.1 percent of the total agricultural land. The number of farms is 4'500, the majority of them being smallholders.

40 percent of the organic land has coffee as a main production. Colombia also produces palm oil, sugar cane, fresh and dehydrated banana, fresh mango, medicinal plants, cocoa, and some processed fruits. There is also some production of livestock, sheep and pork.

The domestic market is very small. Some 'natural' food stores sell organic products. Supermarkets are beginning to carry some organic products, especially fruits and vegetables.

In 1995, the Colombian Ministry of Agriculture issued the first regulation (Res. 0544/1995), which was modified in 2002 (Res. 0074). Colombia has had a local certifier since the mid 1990s - Biotrópico.

The Organic Agriculture Research Center (CIAO), the National University of Colombia, the University of Santa Rosa, and others have established research programs in the field of organic production.

Colombia has several groups and associations promoting organic agriculture, predominantly the Organic Coffee Producers Association (ACOC), the Colombian Network on Biological Agriculture (RECAB), Fundación Pro Sierra, Corporación Penca de Sabila, Corporación la Ceiba and Fidar. A national institution to coordinate all organic production is currently being organized.

Costa Rica

In the 2000, Costa Rica had 8'974 certified hectares. In 2005, it has grown to almost 10'000 hectares.

The main exported products are banana puree, cocoa, coffee, sugar, spices and medicinal herbs, blackberries, orange pulp, mango, pineapple, etc.

Since 1992, the farm and training center Jugar del Valle has been selling vegetables to the Mas por Menos supermarket chain. COPROALDE organized a fair in 1994, and Comercio Alternativo reached hotels, supermarkets, restaurants and schools with organic produce. Other sales schemes are ALIMCA with home delivery, AFAORCA with coffee and APOETAR with vegetables. CEDECO is an organization that actively promotes research, local markets and training. These activities are efficient in supporting farmers markets in several regions.

Costa Rica has a National Certification System that was recognized as equivalent by the European Union in 2003, thus becoming part of the coveted third country list.

Since 1995, Costa Rica has laws regulating pesticide use, and has had a regulation on organic products created in 1997 and further modified in 2000 and 2001. There has been a National Program of Organic Agriculture, promoted by the Inter-American Institute for Co-operation on Agriculture (IICA), and today there is a draft of a law of National Promotion of Organic Production.

Costa Rica has two national certifiers, EcoLógica and the Central American Institute for the Certification of Organic Products (AIMCOPOP), and three registered international certifiers.

Cuba: Urban Agriculture - Success Story

Cuba is perhaps the best example of the possibility of feeding large populations with organic products at low cost. Due to the crisis in the Soviet Block in the 1980s, Cuba was unable to buy agrochemical inputs for its highly centralized, input dependent agriculture.

By 1990, Cuba had lost 85 percent of its imports. Therefore, the new policy was to lower the need of inputs and oil and turn the farms into self-reliant units, recycling fertility and controlling pests with organic methods. Almost fifteen years later, Cuba is probably the biggest producer of organic vegetables in the world, and most of it is done in small urban plots with a highly diversified output and a massive network of simple laboratories that develop highly sophisticated biological pest control products at very low prices.

Due to the poor quality of the soil, all urban agriculture is done in closed raised beds or containers, filled with organic matter and soil mix, usually brought from outside the city.

Many gardeners combine compost and soil, and others mix cachaza, the waste product from sugar cane. The cultivation methods are based on the principles of organic agriculture. Each organoponico has an area that is dedicated to the production of worm humus. As horses and animal power in general have had an impressive resurgence in Cuba due to the limited access to oil, there is lots of manure available.

In the municipality of Cienfuegos, there are approximately 102 organoponicos (urban plots with vegetables), 63 are semi-private and 39 are managed by state enterprises. Cienfuegos, which is considered the 'capital of urban agriculture in Cuba,' produces almost 100 grams of fresh vegetable per capita per day.

México

In the year 2000, Mexico had 85'675 certified hectares. In 2002, there were an estimated 215'843 hectares under certification, and in 2005 slightly more than 300'000 hectares. There are around 120'000 organic farms, many of them small and owned by indigenous peoples, run under the Internal Control System that allows farmers associations to be certified. There are two groups of producers: small-scale, low-income producers, primarily are peasants and indigenous people that have small land holdings (2.25 hectares on average) and are grouped together in cooperatives, using Internal Control Systems to facilitate certification and traded, and. large-scale producers, which are private enterprises that cover between 100 to 2'000 hectares and operate independently. The small-scale, low-income producers comprised 98.6 percent of the total number of producers, farming 84.1 percent of the total organic land and generating 68.8 percent of the foreign currencies earned. The remainder is represented by large-scale producers. More than half of the certified land is devoted to coffee production. Mexico is the world's biggest producer of organic coffee; 80 percent of its organic production is coffee.

Most of the organic production is for export (between 80 and 85 percent), mainly to the United States and Europe. The main products are coffee, cocoa, honey, vegetables, sesame seeds, blue maize, and maguey. There is also some production of vanilla, banana, papaya, apple, avocado, medicinal plants, soybeans, palm oil and nuts. The organic exports in 2005 were valued at around 300 million US-Dollars, and the main producer states included the Chiapas, , followed by Oaxaca, Guerrero, Michoacán, Chihuahua, Jalisco y Veracruz.

The domestic market is very small. Only coffee and some vegetables and fruits are currently available, although there is a growing production of processed products like fruit jams and chili sauces. Herbs, honey, milk and tea are also present in some stores. Less than five percent is sold in specialized stores in big cities (Mexico, Monterrey y Guadalajara), cafeterias, street markets, and in tourist areas. About ten percent of the total production that is not exported is traded on the national market, but as conventional products. An annual fair called Exporgánicos unites all producers; the federal government in conjunction with rotating state governments promotes it. In México City (Federal District) there are weekly fairs called 'Tianguis,' which are also developing Participatory Guarantee Systems.

Mexico has a growing problem with GMO contamination in corn, brought about by corn seeds imported with subsidies from the United States. It is said that all 'tortillas' in Mexico have already GMO residues. It is important to mention that the country is the world's biodiversity center for corn, which is now in danger.

Norm No. 37, which was intended to regulate organic production, is not working effectively. The movement is uniting under the Coordinadora Nacional de Agricultura Ecológica. In November 2003, a proposed regulatory framework for organic products (Iniciativa de Ley de Productos Organicos) was presented to Mexican senators for their approval.

There are several international certifiers with offices in Mexico, including OCIA México, Naturland México, Bioagricert, IMO, BCS, Oregon Tilth Certified Organic, Quality Assurance International andFVO. Certimex (ISO 65 approved) is the most important local agency.

There is active research being developed in the Chapingo University, and AECA is doing on farm research with small farmers.

The Secretary of Agriculture, in collaboration with the Bank of Mexico, has promised to finance 75 percent of certification costs in the short term.

Source: Laura Gomez Tovar y Manuel Angel Gomez Cruz, External Researches of the center for Economic, Social and Technological Research on World Agriculture and Agribusiness (CIESTAAM) Chapingo University, Mexico.

Peru

In 2005 it was estimated that there were 240'000 hectares under certification, 160'000 of this land being wild collection area. More than 23'000 farmers, most of them small and indigenous, produced coffee and cocoa using Internal Control Systems.

97 percent of the production is exported, and 94 percent of those exports are coffee and cocoa. Banana is also a growing export. The export value is around 100 million US-Dollars. Other exported products are quinoa, cotton, pecan nut, Brazil nut, onions, asparagus, sesame seeds, amaranth, and tomato.

Although it amounts to only three percent of production, there is a very well organized internal market, thanks to the work of Eco Logica Peru. There are weekly fairs in Lima and the surroundings (Bio Ferias); there are home deliveries (Bio Canasta), small shops and defined areas in the supermarkets (Isla Ecológica). These channels enable the sale products with a value of around half a million dollars annually. The main products sold on the domestic market are vegetables (43 percent), fruits (41 percent), beans (9 percent), andpotatoes and sweet potatoes (7 percent).

A local certification agency called Inka Cert is a founder of Bio Latina together with other Latin American certifiers, which has gained acceptance to the European Union. The certification bodies SKAL, IMO and SGS Peru have offices in Lima.

Since 1998, there has been a National Commission or Organic Production (CONAPO), which unites the private sector, scientists and the governmental sector. In 2003, after a very long consensus process, the national regulation was put in place.

The small farmers' movement is involved in research activities through the technologies defined as Participatory Development of Technologies (DPT), coordinated by the NGO Network of Organic Agriculture (AE), Centro IDEAS and the Peruvian Organic Producers Association (ANPEP). There is also extensive capacity building through the farmer-to-farmer system. On the formal side, the Agrarian University of La Molina has been a center of organic studies and education for a long time.

Success Story: Bioferia in Lima

The Bioferia in Miraflores, a neighborhood in Lima, Perú, started on December 4, 1999. It was organized with the help of the municipality. Since then, it takes place every Saturday in the Reducto Park from 8 am to 2 pm. It spans for almost a block (100 meters) in the quietest edge of the park.

70 percent of the fair participants are 'productores del campo' (farmers), representing more than 300 farmers from Piura, Cajamarca, Huañaco, Pasco, Junin, Huancavelco, Ico, Arequipa, Cusco, Madre de Dios and Lima. There are more than 350 food products, including fruits, vegetables, breads, jams, coffee, dairy products from cows & goats, chicken, eggs and seeds. All producers and processors are certified. Every producer must complete a document that states the offered products & prices.

The rest of the area is occupied by natural health groups, environmental organizations, alternative education programs and, of course, NGOs that promote organic production and agroecology. Various activities related to ecology and food, like conferences, workshops puppet and theatre shows for children, and adults are carried out every week. Children have many opportunities to learn and participate, and this facilitates freedom for their parents to visit the fair to ask questions and learn about organic farming.

Bioferia has been growing since its beginning, with more farmers joining constantly and more consumers getting in the habit of buying every weekend. It is already a standard in Lima for the people to 'visitor la Feria' every Saturday morning.

Recently, the first Ecological Consumers Committee was organized, and it has taken the task of spreading information about organic production and promoting the rights of consumers to the full information about food.

The fair organizing committee has published several publications, including a very educating video, which was produced in conjunction with IFOAM.

Source: Cesar de la Cruz, Ecológica Perú. More information: cesar @ ecologicaperu.com; Pipo Lernoud, personal visits & communications.

Paraguay

Although there is no general number for organic certified surface, Paraguay has 20'000 hectares devoted to sugar, 30'000 to mate tea, 3'000 to sesame, 2'500 to fruits, 2'500 to aromatic herbs, and 1'500 to soybeans - a working total of 59'500 hectares (0.2 percent of the agricultural area).

Organic sugar has been a blessing for Paraguay, as it was losing many markets due to falling prices of conventional sugar. As a result, it turned to organic, which is produced by small farmers who represent 90 percent of the production.

The domestic market for organics is very small, mostly vegetables sold in fairs, and some sugar and mate tea in supermarkets. APRO, the Organic Producers Association, together with the NGO Altervida have a shop in the metropolitan area of Asunción.

There is a cooperation agreement between the Minister of Agriculture and Arasy Organica to develop capacity building with the producers and exchange technical information. The NGO Altervida has started a project for 'Economic alternative for rural poverty in Paraguay through organic production' with the support of ICCO in the Netherlands and European Union funds.

Uruguay

Uruguay currently has 756'877 certified hectares, a stunning growth from the 1'200 reported in 2000. The organic area covers 5.1 percent of the agricultural land. There are 500 organic farms. Most of these are meat, honey and vegetable producers.

99 percent of the area is destined to meat for exports, representing a big part of the value of Uruguayan organic exports, approximately 900'000 US-Dollars in 2005. Other exports include wine (with 140'000 US-Dollars), honey (with 300'000 US-Dollars), rice, milk and citrus fruits. In 2004, the estimated export volume was 2.5 million US-Dollars, and the internal market 1.1 million US-Dollars.

The domestic market is small, sales occurring primarily through supermarkets, home deliveries, farmers markets and on-farm sales. In 2005, new specialized stores have begun offering organic products. A weekly organic fair is taking place in Montevideo. Organized by the Small Producers Association, Asociación de Productores Orgánicos del Uruguay (APODU). Other regional fairs are starting to be held in secondary cities.

Organic production in Uruguay is regulated by a decree from the Minister of Agriculture, the decree No. 360/992, modified by the decrees 434/92, 19/93 and 194/99.

Contacts/Sources of Information

- Alvarado, Fernando (Perú), Balance de la Agricultura Ecológica en el Perú 1980-2003', Centro IDEAS, Red de Agricultura Ecológica del Perú. Av. Arenales, 645 Lima, Tel +51 1 4335060, Fax +51 1 4331073
- Amador, Manuel (Costa Rica), CEDECO Corporación Educativa para el Desarrollo Costarricense, Apdo. 209-1009 Fecosa. SanJosé, Internet www.cedeco.org.cr
- Augstburger, Franz (República Dominicana)
- Barrios, Lidia (México), SENASICA/SAGARPA, Municipio Libre N 377, 7B Esquina Av. Cuauhtemoc, col Sta. Cruz, Atoyac 03310, Mexico D.F.
- Darolt, Moacir (Brasil), Instituto Agronomico do Parana, IAPAR C.P., 2031 CEP 80011/970, Curitiba Parana Brasil, Tel +55 41 551 1036 Fax +55 41 5511079
- Elola, Sebastian (Uruguay), Movimiento Uruguay Organico
- Escobar, Carlos (Colombia)
- Fernández Araya, Claudia Andrea (Chile), AAOCH Agrupación de Agricultura Orgánica de Chile/ Universidad de Chile
- Fonseca, Maria Fernanda (Brasil), PESAGRO RIO. Empresa de Pesquisa Agropecuaria do Estado do Rio de Janeiro, Alameda Sao Boaventura 770, Niteroi/Rio de Janeiro/Brasil, Tel +55 21 2627 1444
- Garcia, Jaime E. (Costa Rica), Area de Agricultura y Ambiente, Centro de Educacion Ambiental, Universidad Estatal a Distancia, San Jose, Costa Rica
- Garibay, Salvador and Zamora, Eduardo (Nicaragua) 'Producción Orgánica en Nicaragua' (2003), Research Institute of Organic Agriculture FiBL, Project Coordinator Latin America. International Cooperation Division, Ackerstrasse Postfach CH-5070 Frick, Tel + 41 62 865 7282, Fax + 41 62 865 7273, www.fibl.org
- Herrera Bernal, Sandra Marcela (Colombia), Cámara de Comercio de Bogotá, Carrera 9# 16 21 piso 9, Bogota, Colombia, Tel +571 3810321, 2847861, Fax +571 2842966
- Iñiguez, Felipe (México), EcoCuexco, Apdo. 1-1770, Guadalajara, Jalisco, Tel. +52 44 34910082
- Junovich, Analía (Ecuador), Consultora Proyecto SICA, Av.Amazonas y Eloy Alfaro Ed. MAG, Quito, Ecuador, Internet www.sica.gov.ec
- Lernoud, Alberto Pipo (Argentina), MAPO Movimiento Argentino para la Producción Orgánica, Salguero 925 (1177), Buenos Aires, Argentina, Tel. +54 11 4862-1424
- Meirelles, Laercio R. (Brasil), Centro Ecologico, Cxp 21 IPE/RS 95240 000, Tel./ Fax +55 54 504 5573
- Mendieta, Oscar (Bolivia), AOPEB Asociación de Organizaciones de Productores Ecológicos de Bolivia, Juan José Perez N° 268-A (Zona Central), 1872 La Paz, Tel / Fax +591 2 444441, E-mail info @ aopeb.org
- Parra, Patricio (Chile)

- Ramos Santalla, Nelson (Bolivia), Responsable Departamento Tecnico AOPEB, Calle Landaeta N 554, Casilla postal 1872, esq. c/ Luis Crespo, Tel +591 2 2490691/2129287, Fax +591 2 2129286
- Rodríguez, Alda (Uruguay), Movimiento Uruguay Organico
- Telleria Arias, Rafael (Uruguay), Movimiento Uruguay Organico
- Ugas, Roberto (Perú), Universidad Nacional Agraria La Molina
- Zeballos, Marta (Uruguay), Asociacion Rural del Uruguay, Av. Uruguay 864. C.P 11, 100 Montevideo Uruguay, Tel +598 2 902 0484, Internet www.aru.org.uy
- Zenteno Wodehouse, Virginia (Chile), Certificadora Chile Organico, Almirante Riveros 043, Providencia, Santiago, Tel +56 02 634 2452, Fax +56 2 665 0575

Latin America: Organic farming statistics

Table 15: Organic land and farms in Latin America

Country	Year	Organic land area	Share of organic land	Organic farms
Argentina	2005	3'099'427	2.41%	1'736
Belize	2000	1'810	1.19%	
Bolivia	2002	364'100	0.98%	6'500
Brazil	2005	842'000	0.32%	15'000
Chile	2005	45'000	0.30%	1'000
Colombia	2003	33'000	0.07%	4'500
Costa Rica	2004		0.00%	3'987
	2005	9'473	.	
Cuba	2005	15'443	0.23%	7'101
Dominican Rep.	2004		.	819
	2005	51'391	1.39%	
Ecuador	2005	44'661	0.55%	2'427
El Salvador	2005	5'256	0.31%	1'811
Guatemala	2003		.	2'830
	2005	12'110	0.26%	
Guyana	2003	109	0.01%	28
Honduras	2000		0.00%	3'000
	2003	1'823	.	
Jamaica	2005	376	0.07%	7
Mexico	2005	307'692	2.87%	83'174
Nicaragua	2005	51'057	0.73%	5'977
Panama	2005	5'244	0.24%	7
Paraguay	2002		.	2'827
	2005	59'500	0.24%	
Peru	2005	84'782	0.40%	33'474
Trinidad & Tobago	2005	67	0.05%	1
Uruguay	2004	759'000	5.08%	500
Venezuela	2004	16'000	0.07%	4
Total		5'809'320	0.93%	176'710

Source: SOEL-FiBL-Survey 2007

- Argentina: Data provided by: Alberto Pipo Lernoud, IFOAM, Buenos Aires, Argentina; Data source: SENASA (Servicio Nacional de Sanidad), Buenos Aires, Argentina
- Belize: Data provided by / Source Jaime E. Garcia, Universidad Estatal a Distancia (UNED), San Pedro de Montes de Oca, Costa Rica
- Bolivia: Data provided by / Source Alberto Pipo Lernoud, IFOAM, Buenos Aires, Argentina
- Brazil: Data provided by: Alexandre Harkaly, Instituto Biodinâmico, Botucatu, Brazil; Data source: Ministry of Agriculture, Brasilia, Brazil
- Chile: Data provided by / Source Alberto Pipo Lernoud, IFOAM, Buenos Aires, Argentina
- Colombia: Data provided by / Source Alberto Pipo Lernoud, IFOAM, Buenos Aires, Argentina
- Costa Rica: Data provided by: Miguel Hernandez, Ecomercados, Managua, Nicaragua; Data source: Ministry of Agriculture, Heredia, Costa Rica
- Cuba: Data provided by: Lukas Kilcher, FiBL, Frick, Switzerland; Data source: CAI Balino, Ministry of Agriculture, Havana, Cuba
- Dominican Republic: Data provided by / Source Rafael Marty, Coordinadora de certificadoras Organicos (CCO), Dominican Republic
- Ecuador: Data provided by / Source Sonia Lehmann, GTZ, Ecuador
- El Salvador: Data provided by: Beatriz Alegria, CLUSA El Salvador, San Salvador, El Salvador; Data source: Ministry of Agriculture, San Salvador, El Salvador
- Guatemala: Data provided by / Source Salvador Garibay, FIBL, Frick, Switzerland
- Guyana: Data provided by / Source Jaime Castro Mendivil, Control Union, Lima, Peru
- Honduras: Data provided by / Source Jaime E. Garcia, Universidad Estatal a Distancia (UNED), San Pedro de Montes de Oca, Costa Rica
- Jamaica: Data provided by / Source Dwight Robinson, Jamaican Organic Agriculture Movement (JOAM), Kingston, Jamaica
- Mexico: Data provided by: Laura Gómez Tovar, Chapingo, Mexico; Data source: Gómez Cruz, Manuel Ángel; Schwentesius Rindermann, Rita; Meraz Alvarado, Ma. del Refugio; Lobato García, Aurora Josefina y Laura Gómez Tovar. 2005. Agricultura, Apicultura y Ganadería Orgánicas de México - 2005. Situación - Retos - Tendencias, Cámara de Diputados, CONACYT, SAGARPA, CEDERSSA, UACH, CIESTAAM. México. 70 páginas.
- Nicaragua: Data provided by / Source Miguel Hernandez, Ecomercados, Managua, Nicaragua
- Panama: Eduardo Virgili
- Paraguay: Data provided by / Source Alberto Pipo Lernoud, IFOAM, Buenos Aires, Argentina
- Peru: Data provided by / Source Julia Salazar, SENASA (Servicio Nacional de Sanidad), Lima, Peru
- Trinidad & Tobago: Data provided by / Source Gia Gaspard Taylor, Network of Non Governmental Organizations Trinidad & Tobago, Trinidad & Tobago
- Uruguay: Data provided by / Source Alda Rodriguez y Sebastian Elola, Movimiento Uruguay Orgánico (MUO), Uruguay
- Venezuela: Data provided by / Source Ines Hensler, Institute for Marketecology (IMO), Weinfelden, Switzerland

Case study Bolivia: On the way to an ecological country

Luis Vildozo[1]

Bolivia's geography is characterized of a variety of agro ecological climates, a fact that has supported the livelihoods of millenarian cultures throughout the country's history.

Presently the country has high indicators of poverty and extreme poverty, occupying the 115th position in the UNDP development index (UNDP 2006).

The new government of president Evo Morales presents a perspective of great change in many aspects of the lives of Bolivians. The agricultural sector is included in this shift of thinking and constitutes a pivotal axis in the policy of the new government. President Evo Morales, government officials, key leaders of social have consistently managed a discourse in favor of organic agriculture, emphasizing the positive benefits for the Bolivians' health, the protection of the environment and the opportunity to gain access to markets in benefit of smallholder farmer's incomes. In June 2006, the government presented the 'National Plan of Development: Dignified, sovereign, productive and democratic Bolivia, to live well' and in November of the same year passed the 'Law of regulation and promotion of organic farming and non-timber forestry products' making organic production a part of the government policy. At the same time, the government has prioritized a process of land redistribution, affecting millions of hectares, which will be distributed to indigenous communities and peasants, prioritizing and supporting the ecological use of this land, as stated in the law on the agrarian reform passed in November 2006.

The aforementioned development plan emphasises the importance of agro ecological practices in creating solutions to many of the problems faced by poor Bolivian farmers, and in addition, it aims at 'the development of ecological agriculture associated with the elimination of pesticides and reduction of the use of fertilizers, replacing them with organic products '. The development plan and the new organic production law include a change in the approach to technological innovation for agricultural production, based on 'the promotion of investigation, recognizing and documenting indigenous production techniques, the appropriation of external technologies and promotion of participatory forms of knowledge sharing, focusing on learning by doing,' farmer field schools and 'farmer to farmer' knowledge exchange; primarily directed at small producers and peasants.

It is hoped that these government programs will support the adoption of ecologically sustainable technologies and that producers will be encouraged to enter the transition process. The plan contemplates the involvement of municipal and state governments in developing these programs and/or projects to support organic production, which is now considered a top priority. Government institutions that administer public resources will have to prioritize the acquisition of organic products.

[1] Luis Vildozo Ing. M.Sc, PhD candidate, Working Group 'Knowledge Systems and Innovations', Institute for Organic Farming, Department for Sustainable Agriculture Systems, University for Natural Resources and Applied Life Sciences Vienna (BOKU), Gregor Mendel Strasse 33, A-1180 Vienna, Austria, Tel. +43 6991 2355403

The Association of Organic Producer Organizations of Bolivia AOPEB, the umbrella organization supporting organic producers, plays a key role in this process. It actively accompanied the creation of a legal and normative framework, and it maintains an important presence in the institutionalization of Bolivian organic agriculture.

The Bolivian organic export market is worth around 25 million US-Dollars with more 12 thousand tons of certified products. Among them are quinoa, coffee, cacao, chestnut, amaranth and soya. The main markets are the European Union, the United States of America and Japan, but exports are on the increase to Colombia, Chile, Saudi Arabia and other new markets. Experts at AOPEB predict a market growth top the value of 450 million US-Dollars by 2016. Current production includes new products like onion, peas, broad beans, peanut and others, as well as Andean tubers, grains, fruits and other under exploited crops. The market for organic certified quinoa is growing with exports of 5'000 tons, with the perspective of reaching 30'000 tons in the next four years. The offer of processed organic products includes dehydrated llama meat, quinoa soups and ready to eat quinoa.

Background: The 'First Meeting of Organic Producers and Researchers' and the 'First Organic Producers Fair of Latin America and the Caribbean'

Salvador Garibay[1]

Since 2003, various organizations have organized meetings of producers and researchers to exchange experiences in the Mesoamerican and the Caribbean region. The first meeting in 2003 was held in Costa Rica, followed by a meeting in Cuba (2004) and in Mexico (2005). In Mexico, at the end of the conference, participants voted to open the meeting to representatives from throughout Latin American and to launch the 'First Organic Producers Fair of Latin America'.

The 'First Meeting of Organic Producers and Researchers' and the 'First Organic Producers Fair of Latin America and the Caribbean' was held in September 2006 in Managua (Nicaragua) and hosted more than 19 Nicaraguan and Latin-American organizations, as well as international development organizations. The event took place with the collaborative support of FiBL, based in Switzerland.

1 Dr. Salvador V. Garibay, Research Institute of Organic Agriculture FiBL, International Cooperation Division, CH-5070 Frick, Switzerland, Tel. +41 62 865 72 82, Fax +41 62 865 72 73, www.fibl.org

The attendance was approximately 400 participants, including 50 percent from outside of Nicaragua. Participants came from Bolivia, Chile, Costa Rica, Cuba, Ecuador, El Salvador, the United States, Guatemala, Honduras, Mexico, Nicaragua, the Dominican Republic and Europe.

Focusing on the production and marketing of organic products, the meeting brought together organic producers and researchers from the region. The primary aim was to provide and promote the exchange of knowledge and to explore what solutions are available, what improvements are still needed as well as common concerns and hurdles. Eighty percent of the participants were practitioners and twenty percent were researchers. A specific objective of the meeting was to enhance the exchange between women – who represented one third of the participants.

Picture: Farmer family from Nicaragua, collecting seed

Picture by Comite Nacional 1er Encuentro Latinoamericano y del Caribe

Throughout the meeting, a passion about organic agriculture could be felt, and important discussion points were how to nurture the soil, produce better food and provide a better life for all. Additional topics were how to promote and strengthen research and exchange of knowledge between farmers and researchers on production, processing and marketing, how to develop local organic markets and how to position organic products in the international market. In addition, the relation between organic and fair-trade products - not only for export but also for the local markets - was shown.

Certification was a hot issue during the meeting; on one hand, the certification system is needed in order to export organic products to the main markets; on the other hand, certification is seen as a big constraint for small farmers. Therefore, discussions about alternative guarantee systems were included in the meeting. The meeting consisted of a conference, round tables, panels as well as poster sessions, and covered topics such as organic crops, organic fertilization, agro ecology, organic animal production, processing organic products, organic market development, organic agriculture-climate change, biodiversity, agroecoturism, rural development through organic agriculture and women participation in the production, processing and marketing of organic products.

Five excursions were organized with the objective to show experiences of how organic agriculture promotes and enhances life quality of society, farmers' experiments and research on production, processing and marketing as well as women's' experiences with organic products.

The First Organic Producers Fair of Latin America

The First Organic Producers Fair of Latin America was launched as a platform for organic producers, not only to trade their organic and fair trade products to national, regional and export markets, but also to increase awareness of other producers, consumers and the public. Participation at the fair was possible at a very low cost for producers.

In addition, the Organic Producers Fair of Latin America may enhance and promote the exchange of experiences between producers on the commercialization of organic and fair trade products. This platform may also enable direct relationship between producers and traders and consumers to flourish, and will aid in raising awareness about diverse services and specific technologies for organic production. The idea is for farmers to have access to all the information necessary to develop and commercialize organic production.

This First Organic Producers Fair of Latin America was a big success, even though only a small number of booths were admitted. Of the exhibitors, 67 percent were producers, 18 percent were organizations offering services for organic agriculture and 15 percent were organizations involved in supporting the development of organic agriculture in Latin America. It is expected that the Organic Producer Fair of Latin America will have 200 exhibitors in 2007. In addition, for European, US and Canadian organizations the Organic Producers Fair of Latin America offers opportunities to increase their activities in the region.

The First Organic Producers-Researchers Meeting and First Organic Producers Fair of Latin America and the Caribbean also aimed at promoting the further development of organic agriculture in the host country Nicaragua. During the conference and the fair, 19 institutions from Nicaragua (from producer to governmental institution) worked together and came up with the following proposals:

- A law to promote organic agriculture should be drafted.
- An organic movement in Nicaragua should be created.
- A national organic producer researcher meeting and a national organic producers' fair should be carried out annually in Nicaragua.

At the close of the conference in Nicaragua, participants voted for the host country of the Second Organic Producers-Researchers Meeting and the Second Organic Producers Fair of Latin America and the Caribbean 2007, which will be held in Guatemala.

Further information is available from the author.

Further reading

Ochoa, Gregorio Varela; Garibay, Salvador und Weidmann, Gilles, (Eds.) (2006) 1er Encuentro latinoamericano y del caribe de productoras y productores experimentadores y de investigadores en agricultura orgánica, 26 al 29 de septiembre de 2006, Managua, Nicaragua. Memorias de resúmenes [First Latin American and Caribbean Meeting of Organic Producers and Researchers, held September 26-28, 2006 in Managua, Nicaragua. Proceedings.]. Research Institute of Organic Agriculture FiBL, Frick, Switzerland. http://orgprints.org/10373/

17 The Mediterranean Region

Organic Farming in the Mediterranean Region: Statistics and Main Trends

Lina Al Bitar[1]

Introduction

This report intends to give an overview on the state of the art of organic agriculture in the Mediterranean countries. Actually, it is not so easy to define the Mediterranean region since it is made of heterogeneous entities, differing in terms of historical, cultural, economic, demographic, agricultural, social and political importance, but having as common denominator the Mediterranean Sea. Some of them are not touched by the sea but are generally called Mediterranean countries.

The Mediterranean region includes the EU Mediterranean countries (Cyprus, France, Greece, Italy, Malta, Portugal, Slovenia and Spain), the Eastern Mediterranean countries (Albania, Bosnia and Herzegovina, Croatia, Macedonia, Montenegro and Serbia), the Middle East or Mashrek (Egypt, Jordan, Lebanon, Palestine, Syria and Turkey) and North Africa or Maghreb (Algeria, Libya, Morocco and Tunisia).

Most data given in this report are not official. They were collected by the Mediterranean Agronomic Institute of Bari (IAMB) through different projects and networks. Therefore, these data are not yet published and sources will be reported as IAMB.

Historical development of organic agriculture in the Mediterranean

Some foreign private companies looking for new investment opportunities introduced organic agriculture in the Mediterranean about 30 years ago. In fact, first pioneer experiences were made in Egypt (1977), where a biodynamic farm called Sekem with about 70 hectares was created in the desert, and where medicinal plants and aromatic herbs were grown (Abou Hadid, 2001). In the same decade, private initiatives were developed in Tunisia and in Morocco, and organic farming developed in Turkey because of the growing market in Europe (Aksoy, 2002).

In 1990, climatic similarities and common crop patterns deviating partially from the northern European countries lead to the formation of a Mediterranean group on organic agriculture called AgriBioMediterraneo. After successive annual meetings, the group established the IFOAM Mediterranean group in 1997 with its secretariat at the Mediterranean Agronomic Institute of Bari (Italy)[2].

1 Dr. Lina Al Bitar, Mediterranean Agronomic Institute of Bari, Via Ceglie, 9 - 70010 Valenzano (BA), Italy
[2] Information on the IFOAM Mediterranian group is available at the end of this chapter.

In the past decade, the organic movement has further developed and by now, it involves more or less all the Mediterranean countries.

However, one of the major weaknesses of the Mediterranean organic agriculture is the lack of statistics. In fact, it is not easy to find reliable data on the present state and spread of organic agriculture in the Mediterranean.

Statistical development and networking

In order to respond to the growing information needs on organic agriculture in the Mediterranean area and to start monitoring the growth trend of this sector, the Italian offshoot of the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM-IAMB) started a Network called MOAN in 1999. Its main objective was the further strengthening of organic agriculture in the Mediterranean. The primary activity was the collection of data on the current state of organic agriculture in 13 Mediterranean countries. Statistics monitoring the growth trend of this sector are lacking and a real need of information on the situation of organic agriculture exists.

The Euro-Mediterranean ministerial conference on agriculture held in Venice on the 26th of November 2003 identified high quality agricultural products and organic agriculture as the main factors of economic development for the countries of this region and recommended that organic agriculture be regarded as a potential tool for the strengthening of the Euro-Mediterranean partnership. Following this recommendation, IAMB decided to reorganize MOAN.

This reorganization intends to engage the active participation of the Ministries of Agriculture of each member country, in particular the units in charge of organic agriculture, and the enlargement of the network to involve all Mediterranean countries with the aim to promote the organic sector in both the EU and non-member Mediterranean countries.

Structural aspects

The development of organic agriculture and its importance differs from country to country.

Generally, the EU Mediterranean countries are much further developed and organized than the Southern and the Eastern countries. Differences also exist among the countries located on the same shore.

Currently, in the Mediterranean region there are more than three million hectares organically managed by almost 120'000 farms. Italy has the most, followed by Spain and France. However, the latest statistics show that Tunisia, Turkey, Egypt and Syria are included among the top ten countries.

In fact, the share of the non-EU countries currently represents currently 25 percent of the total Mediterranean organic area (if wild collection areas are included), demonstrating that the importance of organic farming is growing also in the Mediterranean countries outside the EU. This trend has been notable for the last five years, probably due to increased consumer awareness, market opportunities and government support.

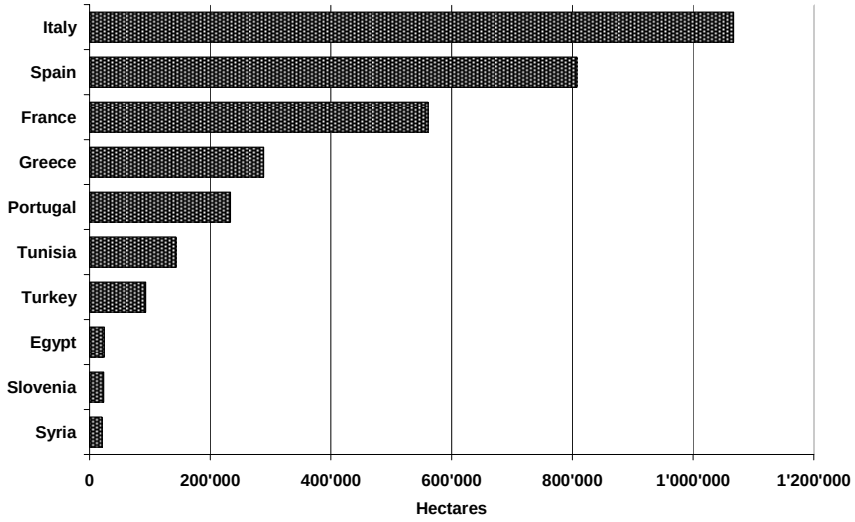


Figure 41: Organic land area in the Mediterranean countries. Top ten countries

Source: IAMB, 2006; SOEL-FiBL-Survey 2007

Legal and policy framework

The legal framework differs from one country to another and it evolved notably in the last three years. Until the year 2003, very few countries of the eastern and southern shores had a national legislation (Croatia, Cyprus, Slovenia, Tunisia and Turkey).

Today the situation has changed: of 24 Mediterranean countries, 15 have a national regulation place, mainly in the EU and the Eastern Adriatic countries, Tunisia and Turkey. Four others have a draft regulation (Algeria, Lebanon, Malta and Morocco), and only four still lack a national regulation (see overview).

Until a few years ago, certification in all Southern and Eastern Mediterranean countries was performed by foreign organizations. Now, many of the Mediterranean countries have established local certification bodies, including Albania, Algeria, Egypt, Lebanon, Malta, Turkey and most of the Eastern Adriatic countries.

Internal control systems (ICS) and smallholder certification are now present in many Mediterranean countries.

Policies supporting the organic sector are still lacking in many Southern and Eastern countries. Only Tunisia, Algeria and Cyprus subsidize organic farmers directly through financial aid.

In Turkey, Serbia and Montenegro, indirect support and incentives are given. Some countries, like Syria, are already in the process of developing support strategies. Some examples are given below:

In Cyprus (Papastylianou, 2004), the Ministry of Agriculture, Natural Resources and the Environment, since the joining of Cyprus to the EU, has promoted the Agriculture Development Scheme 2004-2006 (A.D.S.). The A.D.S foresees financial support for farmers adopting crop rotation instead of monoculture and for those converting to organic agriculture. For irrigated trees and vines, the subsidy is 93 Euro, while for rainfed crops, forage crops and trees it is 63 Euros per 1000 square meters. For organic animal production, the financial support for goats is 47 Euro, for sheep 41 Euros and farmers may also receive 115 Euros per animal to aid in the fattening of calves.

In Malta (Calleja, 2004), the government is backing the sector both through financial aid and through high-level consultations with farmers and NGOs concerning organic farming. Farmers are given 600 Euros per hectare of certified land. These funds are part of the aid given to farmers through the Rural Development Plan. However, subsidy is given only for crop husbandry; it is not available for animal husbandry and beekeeping.

The Government also set up an organic farming committee with the task of developing a strategy for organic farming in the Maltese Islands. The committee is made up of various NGOs involved in organic farming in Malta, the Consumer Affairs Division that represents the consumers' rights, the Malta Standards Authority, which represents the body responsible for certification of organic products, and the Agricultural Services and Rural Development Division, which will act as the authority responsible for regulating the EU legislation on organic farming.

In Tunisia (Ben Kheder, 2004), like other agricultural investments, organic farming benefits from different tax reductions and VAT exemption, and from direct financial benefits under the following circumstances:

- Subsidies equivalent to one percent of the investment amount and up to 1500 Tunisian Dinars (TD; ca. 885 Euros) for category B investments (below 100'000 Euros) and 5'000 TD (ca. 2950 Euros) for category C investments (more than 100'000 Euros) .
- Investment subsidies fixed at 30 percent of the value of equipment, implements and means specific to organic projects.
- Annual subsidies over a five-year period to cover the inspection and certification fees, equivalent to 70 percent of the cost, provided that the overall value of the subsidies does not exceed 5'000 TD (ca. 2950 Euros).

Socio-economic and marketing aspects

Organic products are being increasingly traded internationally. The market share is still modest, but trends indicate that there is an enormous potential for expansion.

Different from what has occurred in Europe, the development of organic farming in the Mediterranean took place mainly for market reasons, stimulated by the high demand for products from the foreign markets.

The market differs markedly from country to country in the Mediterranean; enerally, however, organic food is primarily oriented towards exports. 85 percent of the produce is destined to foreign markets such as the EU, US, Japan and the Gulf region, and is constituted by products that cannot be grown in those areas, such as spices, medicinal plants, olive oil, tropical fruits, vegetables and citrus.

However, the development of the domestic market is growing, (see overview table). In fact, in most of the countries, awareness and consciousness have been increasing, and so has the presence of organic products in supermarkets and in specialized shops. Many other innovative marketing channels gaining credence, such as Community Supported Agriculture (CSA). Various campaigns in development to promote organic food.

Overview: Institutional framework of organic agriculture in the Mediterranean

Country	National legislation	Organic policy		Certification bodies	Producers' association	Market	
		Financial support	Action Plan			local	export
Magreb							
- Algeria	Draft	Yes	No	2 foreign, 1 local	1	Yes (very limited)	Yes (very limited)
- Morocco	Draft	No	No	2 foreign		yes	Strongly export-oriented
- Tunisia	Yes	Yes	Yes	4 foreign	various + national federation	Yes	Strongly export-oriented
Mashrek							
Egypt	No	No	No		8	growing	Strongly export-oriented
Turkey	Yes	Yes	Draft	7 foreign, 3 local	5	growing	Strongly export-oriented
Lebanon	Draft	Yes	No	2 local	2	mostly local and regional	Very limited
Syria	No	No	Draft	No	-	Limited	Export-oriented
Palestine	No	-	-	1 foreign			
Jordan	No	No	Yes	1 foreign	2	Yes Limited	Export-oriented
Eastern Mediterranean countries							
Albania	Yes	No	Draft	3 Foreign, 1		Yes Limited	Export-oriented

				Local			
B&H	Yes (rep. Srpska)	No	No	Local & Foreign		Yes Limited	Export-oriented
Croatia	Yes	Yes	Draft	5 local, 1 Foreign		Yes	Yes
Macedonia	Yes	No	Draft	Foreign & Local		Yes	
Serbia	Yes	Yes	No	No	3	Yes	Yes
Montenegro	Yes	Yes	No	1 Foreign	3		
EU countries							
Portugal	Yes	Yes	Yes	2 Foreign, 1 Local		Yes	Yes
France	Yes	Yes	Yes	1 Foreign, 5 Local		mature	Yes
Greece	Yes			3 Local		emerging	Yes
Italy	Yes	Yes	Yes	11 local		mature	Yes
Spain	Yes	No	Yes			emerging	Yes
Malta	Draft	Yes	Yes	1 Local	No	yes	Limited
Cyprus	Yes	Yes	Draft	1 Local, 1 Foreign	2	Yes Limited	Yes
Slovenia	Yes	Yes	Yes	2 Local, 1 Foreign	10	Yes	Yes

Source: IAMB, 2006; Willer and Yussefi, 2006; Sinab, 2006; Cia, 2006; ITAB, 2006

In many of the countries, poverty alleviation and fair trade initiatives are being undertaken.

A country-based analysis has highlighted a flurry of interest for organics among producers who have realized the promising marketing opportunities in the leading markets. Consumer interest is also rising, and a local market boom may be expected.

Research, training and extension

Despite the market expansion, systematic research on organic agriculture is still lacking. The review of present research projects shows that organic agriculture is comparatively ignored. Those projects that are relevant for organic farming are not related to any coherent strategy or analysis of farmers' needs.

Climatic peculiarities sometimes limit the applicability of research results to a wider region or to a specific ecosystem. Taking into consideration the large share of horticultural crops in the Mediterranean and the potential of organic farming systems in securing a sustainable and environmentally friendly agriculture and ground water resources, there is an urgent need to carry out multidisciplinary applied research work.

No real organic research is being undertaken. However, many Mediterranean countries have allocated special funds, even though more or less limited, to research activities. Most of these funds are public.

In most of the countries, research is being conducted by organic associations, and it is carried out in the framework of on-farm research.

Training is mainly vocational, and is provided by associations and extension services. Academic training is offered at graduate and post-graduate level only in Morocco, Tunisia and Turkey.

A list of institutions active in organic farming research is available at the end of this chapter.

The Mediterranean Organic Agriculture Network (MOAN)

On November 23-25, 2006, the Mediterranean Organic Agriculture Network (MOAN) held its first meeting at the Mediterranean Agronomic Institute of Bari (Italy). This first meeting gathered representatives from 16 out of 24 Mediterranean countries (Maghreb: Algeria, Morocco, Tunisia; Middle East: Egypt, Jordan, Lebanon, Syria, Turkey; Eastern Countries: Albania, Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia; European Union: France, Italy)

A number of specific objectives were set for this first meeting:

- Create a common and shared knowledge of the state-of-the-art of organic agriculture
- Exchange best practice experiences
- Plant the seeds to encourage the emergence of a Mediterranean organic identity through the sharing of common problems and needs
- Generate ideas on future collective initiatives in the framework of MOAN
- Prioritize MOAN specific objectives and future thematic focuses

The following priorities were expressed by participants: International lobbying for Mediterranean organic products; data collection (including market information), analysis and dissemination; needs-oriented training; support to set up national strategies; communications (website, advertising, observatory); organization and visibility of MOAN; exchange of research results; legislation & policy analysis.

Data collection, analysis, dissemination and impact evaluation will be one of the key activities for MOAN in the near future. Participants also emphasized the need for comparative research and institutional cooperation work in order to build up a shared knowledge on organic regulatory and policy issues, to design and implement capacity building and to institutionally strengthen initiatives on such issues.

The next MOAN meeting will be held in spring of 2007 in Turkey, possibly associated to an important Turkish national event on organic agriculture. The meeting will focus on 'Methodological issues of data collection (including market data) on organic agriculture in the Mediterranean'. Other themes will include 1) organic market aspects in the Mediterranean and 2) capacity building and institutional support for the drafting of national action plans for organic food and farming. The 2008 meeting will be held in Syria.

- Info: Mediterranean Organic Agriculture Network (MOAN), Mediterranean Agronomic Institute of Bari, Via Ceglie, 9 - 70010 Valenzano (Bari)-Italy, Internet http://moan.iamb.it/

Outlook

Organic farming is not only a production method, but rather a modern development model for agriculture that integrates environmental, socio-economic and ethical aspects.

Despite its progressive development and the rising interest of the major international markets, the evolution of the organic sector in the Mediterranean region is constrained by some critical points.

There are still no coordinated measures to back up the development of Mediterranean organic farming; very few and occasional actions ranging from training and extension to experimentation are carried out. There are no national or regional policies fostering, both directly and indirectly, the conversion of farms. Therefore, contrary to what has happened in Europe, organic agriculture is growing in the Mediterranean area with poor technical support.

Moreover, the Mediterranean region is also suffering from a lack of technical and scientific knowledge about the application of organic production methods; even though techniques exist, many have been developed in areas with different soil, climatic and cultural conditions and cannot be applied in the Mediterranean context.

Finally, one of the major weaknesses of the Mediterranean organic agriculture is the lack of statistics. In fact, it is not easy to find reliable data on the present state and spread of organic agriculture in the Mediterranean.

However, there is a common trend in the entire Mediterranean region towards the conversion of the present agricultural productive systems into a more comprehensive sustainable one, aiming at the growth and overall recovery of the rural space and tackling environmental protection, animal welfare, consumer behaviour, market development, quality of food products, regulations, certification and labeling.

In addition, organic agriculture should be regarded as a potential tool for the strengthening of the Euro-Mediterranean relationships. In fact, organic farming is one of the priorities of the Euro-Med cooperation in agriculture. This is reported by article 16 of the conclusions of the Euro-Med Ministerial conference on agriculture in Venice 2003 (Lacirignola, 2004): 'the community has played a leading role in determining the legislative aspects on organic farming (...), and could share know-how and experience in this field with its Mediterranean partners'.

Within this scenario, some strategic lines should be set up for organic farming development in the Mediterranean region.

The primary task is to develop locally a culture of organic farming relating not only to the production but also to the market, to social and to land-related issues.

Secondly, the adoption of a national legislation in each State is essential to harmonize the international rules in view of the mutual recognition of the regulations of different countries (principle of equivalence).

The ultimate goal is to institutionalize the certification and inspection system. This means that a national regulatory system is defined, with the State being in charge of supervising (via planning and co-ordination activities) the whole certification and inspection system on the production, processing and marketing of organic products.

Moreover, it is also necessary to set up the rules for the application of basic standards unified at the Mediterranean level for organic products in order to define the basic guarantee requisites for consumers.

It is necessary to define a policy to support the establishment of organic producers' associations aimed at enhancing and concentrating the supply. It is therefore necessary to disseminate the technical knowledge on the organic production method in order to avoid production losses and to guarantee basic quality standards especially during the conversion period.

At the same time, the public institutions should take actions and set up programs designed to enhance the production and national consumption. This would have great benefits for the public health and for the environment.

Different actions should be undertaken such as the creation of databases for the collection and dissemination of information, institutional capacity building and activities of research and experimentation.

Acknowledgements

The author would like to encourage all listed people for their contribution to the supply of data and, therefore, to the compilation of this report:

- Albania: Irfan Tarelli, Ministry of Agriculture
- Algeria: Houria Abdellaoui, Ministry of Agriculture
- Bosnia and Herzegovina: Dimitri Markovic, University of Banjaluka
- Croatia: Zdravko Matotan
- Cyprus: Ioannis Papastylianou, Agricultural Research Institute
- Jordan: Mamoun Al-Bakri, Ministry of Agriculture
- Lebanon: Association of Lebanese Organic Agriculture
- Malta: Eman Calleja, Ministry of Agriculture
- Macedonia: Vasco Zlatkovski, National Extension Agency
- Montenegro: Natasa Mirecki, Biotechnical Institute,

- Morocco: Lahcen Kenny, University IAV-HASSAN II
- Serbia: Lidija Acimovic, Ministry of Agriculture
- Slovenia: Anamarija Slabe, Institute for Sustainable Development
- Syria, Souheil Makhoul, GCSAR
- Tunisia: Mohamed Ben Kheder, Centre technique de l'Agriculture biologique
- Turkey: Uygun Aksoy, Ege University

References

Abou Hadid, A. F. (2001). The current status of organic horticulture production and marketing in Egypt. In: Organic Agriculture in the Mediterranean Basin. Proceedings of an international symposium on Organic Agriculture, Agadir, October 7-10. Hanafi A. and Kenny L. (eds.). I.A.V. Hassan II, Agadir, pp. 73-86.

Aksoy U. (2002). Turkey. Report on Organic Agriculture in the Mediterranean Area – Mediterranean Organic Agriculture Network, Options Méditerranéennes, Series B: N°40, CIHEAM- IAMB, Bari. Al-Bitar (Ed.). p.p. 147 - 159.

Ben Kheder M. (2004). Tunisia. Report on Organic Agriculture in the Mediterranean Area – Mediterranean Organic Agriculture Network, Options Méditerranéennes, Series B: N°50, CIHEAM- IAMB, Bari. Al-Bitar (Ed.). p.p. 71 – 94.

Calleja E. (2004). Malta. Report on Organic Agriculture in the Mediterranean Area – Mediterranean Organic Agriculture Network, Options Méditerranéennes, Series B: N°50, CIHEAM- IAMB, Bari. Al-Bitar (Ed.). pp. 53 - 57.

Confederazione Italiana Agricoltori, ia, 2006. the world factbook www.cia.gov/cia/publications/factbook/index.html)

European Commission (1995). Barcelona Declaration. Adopted at the Euro-Mediterranean conference - 27-28/11/95 http://europa.eu.int/comm/external_relations/euromed/bd.htm

Institut Technique de l'Agriculture Biologique, 2006. Observatoire National de L'Agriculture Biologique (www.itab.asso.fr)

Lacirignola C. (2004). Eight years after Barcelona dialogue has begun. Greenmed, the Mediterranean fresh produce magazine. 01/2004, p. 26-31.

Sistema d'Informazione nazionale sull'Agricoltura biologica Sinab, 2006. (www.sinab.it)

Willer H. and M. Yussefi (2006): Organic Agriculture World Wide. Statistics and Future Prospects. International Federation of Organic Agriculture Movements IFOAM, Bonn, Germany

Overview: Research and training institutions operating in the Mediterranean countries[1]

Research	Training and Extension
Albania	
Lushnja and Vlora Centres of Technology Transfer Public institution SHBO: Shoqata e Bujqësisë Organike NGO, Organic Agriculture Association BioAdria NGO	Directorate of Extension, Research & Information Public institution Agricultural University of Tirana Public institution, training center ITMAS: Institut Technique Moyen Agricole, Institute of technical training in agriculture
Algeria	
ECOMERK: Eco-development of Mountainous Regions in Kabylie	Socobio: Société à Responsabilité Limitée des dates Biologique, www.socobio-sud.com Exporter of organic products ONCV: Office National de la Commercialisation DES Produits Viticoles The national marketing office for wine products
Bosnia Herzegovina	
Faculty of Agriculture Banja Luka Institution of higher education	OK: Organska Kontrola Local certification body
Croatia	
Faculty of Agriculture, University in Zagreb Faculty of Agriculture, University in Osijek	Croatian Agricultural Extention Institute
Cyprus	
Agricultural Research Institute Research	Department of Agriculture (Ministry of Agriculture, Natural Resources and Environment) Extension
France	
CNRAB: Centre de Resource de Brioude-Bonnefont, www.agribio.com National center for organic farming ITAB: Institut Technique de l'Agriculture Biologique, www.itab.asso.fr/ Research coordination and technical actions GRAB: Groupe de Recherche en Agriculture Biologique, grab.agriculturebio.org/ Scientific and technical publications, and expert reports at a national level. INRA: The French Institut National de Recherche Agronomique, www.inra.fr Public research institute	FORMABIO: Réseau des établissements de formation à l'agriculture biologique, www.educagri.fr Public Training institution CA: Chambers of Agriculture Advisory FNAB: Fédération Nationale d'Agriculture Biologique des régions de France, www.fnab.org Advisory FNCIVAM: Fédération Nationale des Centres d'Initiatives pour Valoriser l'Agriculture et le Milieu rural, www.civam.org Advisory APCA: Assemblée Permanente des Chambres d'Agriculture, **http://paris.apca.chambagri.fr/apca/default.htm** Advisory : national working-group
Greece	
N.AG.RE.F: Ethniko Instituto gia Agrotiki Erevna Various universities and governmental institutions	National Institute for Agricultural Research under EU-regulation
Italy	
MiPAF Research Centres, www.entecra.it IAMB: Mediterranean Agronomic Institute of Bari: CIHEAM, www.iamb.it International organization Training, Research and cooperation INRAN: Istituto Nazionale di Ricerca per gli Alimenti e la Nutrizione, www.inran.it National Research Institute for food and Human nutrition INEA: Istituto Nazionale di Economia Agraria, www.inea.it National Institute of Agricultural Economy	SINAB: Sistema d'Informazione Nazionale sull'Agricoltura Biologica www.sinab.it National Information System on organic farming IAMB: Mediterranean Agronomic Institute of Bari: CIHEAM www.iamb.it International organization Training, Research and cooperation ENEA: Ente per le Nuove tecnologie, l'Energia e l'Ambiente, www.enea.it

[1] Editors' note: The full addresses of many of the European insitutions listed in this table are available at the Organic Europe address database atwww.organic-europe.net/address_database/. The full addresses of many of the institutions in the other Mediterranean countries can be found in the Member Directory of the International Federation of Organic Agriculture Movements at wwww.ifoam.org/organic_world/directory/index.html

ISMEA: Istituto di Servizi per il Mercato Agricolo Alimentare, www.ismea.it Institute for study of Agricultural Market The Agricultural Science Department of Sant'Anna School of Advances Studies in Pisa, www.sssup.it CRPV: Research Centre for Fruit and Vegetable production-Emilia Romagna, www.crpv.it CRPA: Research Centre for Animal Production Emilia Romagna, www.crpa.it Laimburg, Bolzano – Alto Adige, www.laimburg.it Research Centre for agriculture and forestry,	Public National Body for New Technology, Energy and Environment ISMAA: Istituto Agrario S. Michele all'Adige Via Edmondo Mach 1, 38010 San Michele all'Adige, www.ismaa.it Agricultural Institute for Training and Research
Jordan	
	Ministry of Agriculture Department of extension Extension Jordan Agriculture Engineering Association agri @ agrieng.org.jo Extension Yarmouk Agricultural Resources Development Project Training
Lebanon	
AUB: Faculty of Agricultural & Food Sciences, American University of Beirut Biological pest control USEK: Faculty of Agriculture Université Saint Esprit de Kaslik Animal production, plant protection (in preparation) LU: Lebanese University, Faculty of Agricultural Sciences LARI: Lebanese Agriculture Research Institute (in partnership with World Vision Agro processing; Production of high-quality composting unit; Production of certified organic seeds and seedlings; Production of beneficial insects, Agriculture Alert System Litani River Authority (in partnership with World Vision Establishment of an Insectarium	AUB: American University of Beirut Undergraduate Course Healthy Basket, Hamra-Lebanon World Vision Mansourieh - Lebanon General organic techniques MECTAT: Middle East Centre for the Transfer of Appropriate Technology Bechara El Khoury Beirut – Lebanon Training workshops, consultancies, publications on organic agriculture LibanCert Inspection and certification procedures USEK Université Saint-Esprit de Kaslik Lebanon Undergraduate course
Macedonia	
JNU: Institut za juzni zemjodelski kulturi – Strumica, www.isc.ukim.edu.mk/eng/contact.htm Public research institute, Insitute on Southern crops in Strumica JNU Zemjodelski institut-Skopje, www.zeminst.edu.mk/eng/home.asp Public research institute	National Extension Agency: Agencija za pottiknuvanje na razvojot na zemjodelstvoto Ul.Kliment Ohridski bb, p.f. 18, 7000 Bitola, www.agencija.gov.mk/index.aspx Public advisory service
Malta	
Malta Organic Agriculture Movement NGO Genista Foundation NGO	Malta Organic Agriculture Movement NGO
Montenegro	
Biotechnical Institute	Biotechnical Institute
Morocco	
Institut Agronomique et Vétérinaire Hassan II	GEA NGO Institut Agronomique et Vétérinaire Hassan II
Portugal	
The Ministry of Agriculture	AGROBIO: Associação Portuguesa de Agricultura Biológica www.agrobio.pt Training
Serbia	
University of Belgrade, Faculty of Agriculture University University of Novi Sad, Faculty of Agriculture, Novi Sad Public	Terras Subotica Association, training Ministry of Agriculture Public Agro-projekt Timok, Zajecar Private, Association and training Toppas, Kursumlija NGO, Association and training

	Natura Balkanika, Dimitrovgrad NGO, Association and training 'Agroinstitut' Sombor
Slovenia	
Institute for Sustainable Development University of Maribor, Faculty for Agriculture University of Ljubljana, Institute of Dairy Farming	Agricultural and Forestry Chamber Training courses, Farm advisory (limited) Institute for inspection and certification in agriculture and in silviculture Training courses, education Institute for Sustainable Development On-farm advisory, training courses, education
Spain	
	Regional Offices of The Agricultural Administration Public Vida Sana Private association SEAE: Sociedad Española de Agricultura Ecológica Training CNCA: Confederación Nacional de Cooperativas Agrarias Training
Syria	
General Commission for Scientific Agricultural Research	
Tunisia	
IRESA: Agricultural Academic Training and research Institution and its schools and institutes: INAT, ESHE, ESAK, ESAM et. Various aspects of organic agriculture:	CTAB: Technical Center of Organic Agriculture: Applied Research Various aspects of organic agriculture: AVFA: Agricultural Training and Extension Agency Various aspects of organic agriculture: Regional Organic networks linked to Regional Agricultural Services (24) Various aspects of organic agriculture
Turkey	
Ministry of Agriculture and Rural Affairs (DG Agricultural Research), www.tarim.gov.tr/ Public TUBITAK: Turkish Technical and Scientific Research Council, www.tubitak.gov.tr Public Scientific Research Funds of Various Universities Public	

Source: IAMB Bari /MOAN

Background: AgriBioMediterraneo, the IFOAM Mediterranean Group: Uniting organic agriculture in the Mediterranean

PAOLA MIGLIORINI[1] AND FABIO PICCIOLI[2]

AgriBioMediterraneo (ABM) is a regional group of the International Federation of Organic Agricultural Movement (IFOAM). The history of AgriBioMediterraneo goes back to 1990 when it was set up. It has been an official regional group of IFOAM since 1997.

1 Dr. Paola Migliorini, Università di Firenze, Facoltà di Scienze Agrarie, University of Florence - Faculty of Agriculture, Department of Agronomy and Land, 50144 Firenze, Italy
2 Fabio Piccioli, President of the Agrobiomediterraneo Group, ICEA, St. Maggiore 29, 40125 Bologna, Italy

The IFOAM AgriBioMediterraneo Regional Group coordinates the activities of IFOAM member organizations in the Mediterranean region. It provides a forum to promote, develop and disseminate information, knowledge and expertise related to Mediterranean organic agriculture and food production. Furthermore, it promotes cooperation between various interest groups involved in the organic production chain.

Presently (2007), IFOAM-ABM gathers 153 members from 17 countries and from three continents (Africa, Asia, and Europe). The following countries are members: Albania, Bosnia, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Morocco, Palestine, Portugal, Slovenia, Spain, Serbia, Tunisia and Turkey.

ABM has working groups on the following subjects: Training, standards and certification, research and development, marketing and markets. Details are available on the ABM website, which, together with the ABM Newsletter, is an important communication instrument for ABM members.

The Regional Board of ABM - consisting of the Executive Board and the Working Group Coordinators - is active in all IFOAM issues and participates in relevant committees and groups IFOAM. It actively participates at events and conferences related to organic agriculture in the Mediterranean.

The Action Plan of AgriBioMediterraneo

Within IFOAM, ABM is responsible for specific Mediterranean organic agriculture issues. Since its constitution, the aim of AgriBioMediterraneo has been to strengthen the identity of Mediterranean organic agriculture, establishing contacts and relationships, exchanging knowledge and experiences, with the goal to create a network of the organic movement in the Mediterranean countries, with special emphasis on common roots, history and culture.

The AgriBioMediterraneo action plan for 2005 to 2008 focuses on strengthening organic agriculture as a way for sustainable rural development. However, to develop organic farming in Mediterranean many obstacles need to be removed.

Political and cultural aspects

In order to develop organic agriculture, ABM promotes a holistic view of organic agriculture, including social and ethical aspects (GMO campaign to establish GMO free regions, use of local seed varieties).

Standards & Certification

In the area of standards and certification ABM aims at the harmonization of regulatory and inspection systems in the Mediterranean context and at the dissemination and development of alternative forms of standard-setting and inspection that suit the Mediterranean context, in order to increase market access for small farmers (Internal Control Systems (ICS) and Participatory Guarantee System (PGS).

Research & Development

Research on organic farming has increased enormously in recent years but the level of activity in the Mediterranean countries is still very low, even in the EU-Mediterranean countries. The priorities for this sector are the following:

- Improve funding for research on organic farming and for specific research for the Mediterranean context
- Increase the participation of Mediterranean organic associations, research institutions and universities in European projects.
- Networking and information exchange between Mediterranean countries and in particular between IFOAM and other relevant (IFOAM) groups (IFOAM EU Group, International Society of Organic Agriculture Research ISOFAR etc.).
- Develop scientific knowledge on organic agriculture linked to specifically Mediterranean problems.
- Incorporate farmers' perspectives and experiences into organic farming research.

The next international conference of ABM will be held in 2008. The theme is 'Pest and Disease Management in Mediterranean Organic Farming Systems', and there will be a strong focus on agro ecological strategies.

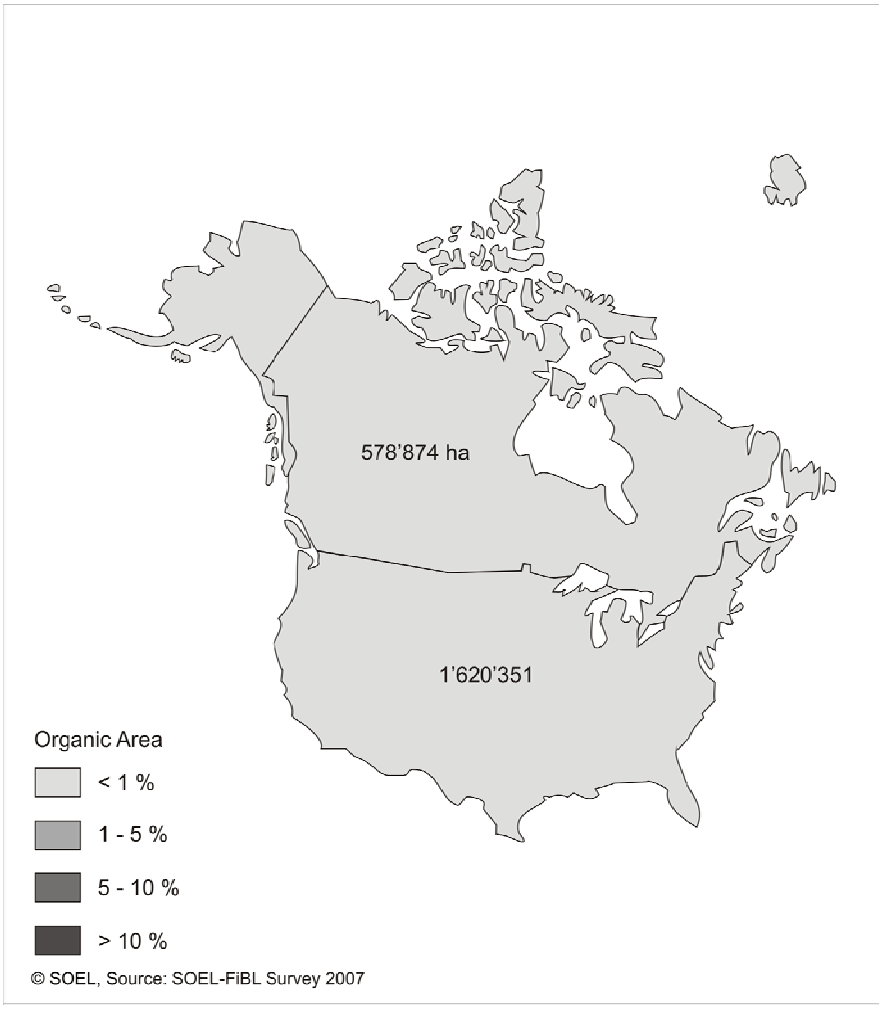
Marketing & Markets

The group's general objective is to promote the development of organic traditional Mediterranean crops and local markets. Activities include the organization of Mediterranean Organic Days, development of Fair Trade, participation at fairs and events including the BIOL AgriBioMediterraneo award – an award for organic olive oil.

Contact

- AgriBioMediterraneo (ABM), c/o Region of Crete, Department of Agricultural Development, Ikarou & Spanaki 2, 71307 Heraklion, Greece, Contact person: George Papadokostakis, abmifoam @ crete-region.gr, Internet www.ifoam-abm.com

18 North America



Map 7: Organic farming in North America

Source: SOEL-FiBL Survey 2007, Graph: Minou Yussefi, SOEL

Organic Farming in North America

BARBARA HAUMANN[1]

United States

In the United States, the buzz about organic has become a steady hum. Organic products are increasingly appearing in more and more venues, from ballparks and university cafeterias to local restaurants, mainstream supermarkets, club stores, and mass-market retailers. At the same time, U.S. college curriculums are beginning to add more courses that focus on organic agriculture.

Consumer demand continues to drive the U.S. market for organic products. The Organic Trade Association's (OTA's) 2006 Manufacturer Survey showed U.S. organic sales reached nearly 14.6 billion US-Dollars (11.1 billion Euros) in 2005, and projected that sales will continue to experience double-digit growth in the foreseeable future. Nearly 17 billion US-Dollars (12.9 billion Euros) in U.S. organic sales were predicted for 2006.

Industry watchers agree that the organic industry is at a new tipping point. Never before has it experienced the degree of acceptance and interest from mainstream supermarkets and consumers. Many supermarkets, in fact, have added private label organic lines to their offerings. Meanwhile, consumer surveys estimate that at least 56 percent of U.S. consumers, and possibly as many as 73 percent, purchase organic products on occasion.

Not only do natural food stores and all of the major mainstream retailers see organic as a growing category, but more and more mainstream manufacturers are adding organic products to their traditional brand lines. In addition, small product developers continue to create the new products of their dreams. Meanwhile, more manufacturers are now offering organic fiber products, and sales of other non-food products, such as organic flowers and pet foods, are gaining ground.

Such heightened interest in organic is driving demand for raw materials. In the OTA survey, 52 percent of respondents reported that a lack of dependable supply of organic raw materials has restricted their company from generating more sales of organic products. This highlights the need for additional measures to increase the supply of organic ingredients.

Market for Organic Products

According to findings from OTA's 2006 Manufacturer Survey, sales of organic foods totaled approximately 13.83 billion US-Dollars (10.5 billion Euros) in 2005. Meanwhile, sales of non-food organic products, such as personal care products, nutritional supplements, organic fiber, household cleaners, flowers and pet food, reached 744 million US-Dollars (564 million Euros). Organic foods' share of total retail food sales is up to 2.5 percent, from 1.9 percent in 2003.

1 Barbara Haumann, Senior Writer, Communication, Organic Trade Association, 60 Wells Street, Greenfield MA 01301, United States of America, www.ota.com

Organic food categories experiencing the greatest growth during 2005 included meat (55.4 percent), condiments (24.2 percent), and dairy products (23.5 percent). The fastest-growing non-food categories were organic flowers (50 percent), pet food (46 percent), and fiber (44 percent).

Organic foods are increasingly sold in mainstream retail establishments, which together represent roughly 46 percent of sales. Large natural food chains, along with small natural food chains or independent natural groceries and health food stores, represented about 47 percent of organic food sales.

Sixty-one percent of respondents said they display the U.S. Department of Agriculture (USDA) Organic seal on their products. Of the 39 percent not currently using the seal, 53 percent intend to use the USDA Organic seal in the future. Also, 55 percent of respondents reported that the USDA labeling and certification programs had increased their sales of organic products.

Picture: Mark Bradley, Associate Deputy Administrator for the U.S. Department of Agriculture's National Organic Program. In the background is a depiction of the USDA Organic seal

Photo: Organic Trade Association OTA

During 2006, additional mainstream companies joined the movement to introduce organic versions of their established brands. In addition, Wal-Mart upped its organic offerings substantially.

There are no up-to-date statistics available on U.S. imports or exports of organic products. The only figures are in a February 2005 USDA report, which estimated the United States imported 1 to 1.5 billion US-Dollars (0.76 to 1.14 billion Euros) in organic products in 2002, and exported somewhere between 125 and 250 million US-Dollars (95 to 190 million Euros). However, in a Miami Herald article published December 18, 2006, a spokesperson for the Center for Fair and Alternative Trade Studies at Colorado State University estimated organic exports to the United States from Latin America alone would reach approximately 250 million US-Dollars (190 million Euros) in 2006.

Consumer Acceptance

Almost three-quarters (73 percent) of the U.S. population buy organic products at least occasionally, up from 55 percent in 2000, according to The Hartman Group. Core buyers, who buy organic products at least weekly, represent 23 percent of U.S. consumers, according to the report Organic2006: Consumer Attitudes & Behavior, Five Years Later & Into the Future.

Meanwhile, The Natural Marketing Institute's (NMI's) 2005 Health and Wellness Trends study estimated 56 percent of consumers use organic products in varying frequencies across six product categories. Household penetration by category is as follows:

- Fresh fruits and vegetables: 44 percent
- Packaged foods: 28 percent
- Dairy and milk: 24 percent
- Personal care: 21 percent
- Beverages (excluding milk): 20 percent
- Clothing/linens: 7 percent.

NMI listed ‚Organic versus Natural': The balance of price and benefits' among its top ten health and wellness trends for 2006. NMI noted that although there are many new organic products being introduced by mainstream brands and private label products, finding the best balance of price, benefits and consumer understanding determines whether consumers will buy natural or organic products.

A survey entitled ‚Healthy Eating: Impact on the Consumer Packaged Goods' by Harris Interactive conducted online in January 2006 among 1'040 adults projected that half of all U.S. adults say they sometimes buy organic food. The main reasons cited were taste, environmental responsibility, freshness, social responsibility, and a belief that organic products were better for their children.

More and more consumers are trying additional categories of private label, natural and organic packaged foods, according to The Hartman Group. Consumers are seeking out these products at channels associated with middle-income shopping, such as Costco, Trader Joe's, Wal-Mart, and mainstream grocers.

Production Statistics

According to the latest available statistics for U.S. organic production released in December 2006 by USDA's Economic Research Service (ERS), there were at least 8'445 certified organic farms in the United States in 2005, up from 8'035 certified organic farms in 2003. The 2005 operations represented slightly more than four million acres (1.6 million hectares) under organic management, up from three million acres (1.2 million hectares) in 2004 and nearly 2.2 million acres (0.9 million hectares) in 2003. For the first time, all 50 U.S. states had some certified organic farmland.

ERS data for 2005 showed 1'722'565 acres (697'097 hectares) in organic cropland (about 0.51 percent of all U.S. cropland) and an additional 2'281'408 acres (923'253 hectares) in pasture and rangeland (about 0.5 percent of all U.S. pasture). Organic cropland in 2005 was up from 1'451'601 acres (587'442 hectares) in 2003, while organic pasture grew substantially from the 745'273 acres (301'601 hectares) recorded for 2003.

Livestock numbers in 2005 were up substantially from 2003, reflecting the growing demand for organic milk and meat in the United States. The number of organically raised milk cows grew from 74'435 in 2003 to 86'032 in 2005. The number of organic beef cattle grew from 27'285 in 2003 to 70'219 in 2005. In addition the number of organic hogs and pigs grew from 6'564 in 2003 to 10'018 in 2005. Total livestock (which included young stock and sheep) was up to 229'788 in 2005, from 124'346 in 2003. Total organic poultry—including layer hens, broilers and turkeys—reached 13'373' 270 in 2005, from 8'780'152 in 2003. According to ERS, nearly one percent of dairy cows and 0.6 percent of layer hens in the United States in 2005 were managed using certified organic practices.

The addition of more than one million new acres (0.4 million hectares) devoted to organic agriculture production in 2005 is ‚great news,' according to Caren Wilcox, OTA's executive director. However, the government still needs to do more to encourage farmers to switch to organic production.

'Consumers are demanding more and more organic products for their families, and farmers are working to meet that demand,' Wilcox said, explaining that the number of certified organic operations increased just slightly in 2005, with farmers facing significant challenges in making the transition from conventional to organic production.

Pointing out that farmers face a number of hurdles when considering converting to organic production, ERS cited high managerial costs and risks in shifting to a new way of farming, limited knowledge of organic farming systems, lack of marketing and infrastructure, and inability to capture marketing economies.

As of October 31, 2006, there were 95 agencies accredited by the U.S. Department of Agriculture to certify farms, processing and handling operations as meeting national organic standards. Of those, 55 were based in the United States, and the remaining 40 certifying agencies were from other parts of the world.

During 2006, USDA's Agricultural Marketing Service determined that the organic assessment program of Israel's Ministry of Agriculture and Rural Development, Plant Production, and Inspection Services conform to the organic standards overseen by USDA's National Organic Program. As a result, certification organizations recognized by the Israel Ministry do not need to be accredited directly by USDA but can certify operations as meeting NOP standards.

Organic assessment programs of other foreign governments recognized by USDA include New Zealand, the United Kingdom, Quebec, Denmark, British Columbia, India, and the Standards Council of Canada.

Much discussion during 2006 centered around U.S. organic dairy operations and the possible need to spell out more clearly pasture requirements and the process for converting a dairy herd to gain organic certification and to supply replacement animals. As a first step, the National Organic Program (NOP) during 2006 issued an advanced noticed of proposed rulemaking for pasture requirements, but this issue was still unresolved as the end of the year neared.

In addition to a proposed rule on pasture requirements and regulations concerning dairy animal replacement, NOP in October said it was focusing on a handful of other priorities. These include:

- Addressing the five-year sunset rule, requiring all materials listed on the National List of Accepted and Prohibited Materials in 2002 be reviewed in order to be retained on the list, or be removed by June 2007.
- Moving forward with 606 petition review and rule changes covering materials, including refining the definition of ‚agricultural' and ‚non-agricultural' substances.
- Renewing accreditation of certifying agents.
- Continuing to improvement its quality systems management.
- Publishing guidance on commercial availability, grower group certification and inspection issues, and identifying certifiers of final handlers on labels.

To help further organic production domestically, OTA is encouraging the US Congress to strengthen and support organic agriculture by incorporating provisions in the 2007 Farm Bill for this burgeoning sector. Currently, the sector receives only a tiny fraction of USDA's budget.

The US Farm Bill comes up for re-authorization only once every five to seven years. Yearly appropriations, in large part, are controlled by the ‚authorizations' placed into the Farm Bill by the U.S. Congress. Farm Bills give guidance on which programs should cover what sectors and commodities, and set limits on efforts that can be binding on appropriations subcommittees.

In its recommendations, OTA is seeking to ensure that organic farmers have access to all resources available to farmers through USDA. For example, there currently is little federal data or market research available about organic farms.

Specifically, OTA is recommending that Congress provide USDA with funds to:

- Foster transition to organic agriculture and trade by providing technical assistance to aid in the conversion of farmland from conventional to organic.
- Eliminate hurdles to organic agriculture and trade by creating appropriate risk management tools and developing an organic export policy and strategy.
- Initiate and fund organic agriculture and economic research as privately funded research is limited, and there is much to be learned about the fundamentals of organic production.

- Maintain and enhance current agency programs so that NOP and other parts of USDA can keep pace with the growing organic sector. Credibility of the organic standard is critical to organic farmers, handlers, and all others in the organic trade, and that credibility is tied to the capabilities and funding of NOP.

With little or no government support for being organic, it is difficult to encourage US growers to convert to organic farming, particularly with the hurdles of the three-year conversion period. For those growing organic livestock, there is the high cost of organic feed, which often costs three to four times as much as conventional grain. Some steps are being taken, however.

During 2005, officials in Woodstock County in Iowa adopted a policy to offer tax incentives to farmers who switch from conventional to organic production. Woodbury County Supervisors voted to provide property tax rebates for those converting from conventional to organic farming practices. Under its ‚Organics Conversion Policy', the county now grants property tax rebates of up to 50'000 US-Dollars (37'899 Euros) each year for five years for farms that convert from farming techniques using pesticides to organic farming practices that comply with USDA's National Organic Program.

During 2006, officials in Cherokee County, Iowa, voted to offer farmers property tax incentives to convert to organic farming practices in a policy similar to the one enacted in Woodbury County.

Meanwhile, on a national level, other programs are being undertaken to encourage more farmers to choose organic practices, and to help provide resources so that they may do so. For instance, organic-oriented programs received slightly more than two million US-Dollars (1.5 million Euros) of the 25 million US-Dollars (19 million eUROS) allocated for US Department of Agriculture's Risk Management Agency (RMA) partnership agreement funding in fiscal year 2005. This included 555'000 US-Dollars (420'687 Euros) for community outreach and assistance agreements, 19'264 US-Dollars (14'602 Euros) for small sessions programs, and 1'461'841 US-Dollars (1'108'068 EUR) for research and development agreements.

Research

Although research money for projects centering on organic agriculture still is quite limited, there are some programs available. For instance, in September 2006, USDA announced it was awarding slightly more than 4.6 million US-Dollars (3.5 million Euros) in research grants administered through its Integrated Organic Program and Cooperative State Research, Education and Extension Service (CSREES) to address organic agricultural issues and priorities, including global competitiveness.

The ten grants to universities in 12 states will focus on two areas: improving the competitiveness of organic producers, and assisting producers and processors who have already adopted organic standards to grow and market high quality organic agricultural products.

In addition, several universities have announced they are stepping up educational programs concerning organic agriculture.

For example, the University of Florida at Gainesville established a new organic agriculture undergraduate degree program, beginning with the Fall 2006 term. The new major was created as a result of growing student interest in such a program. The university has offered various organic classes since 1990, and has had a minor program of study in organic agriculture for the past two years.

Colorado State University and Washington State University both began offering similar programs during the Fall 2006 semester. In addition, Michigan State University has said it will start a one-year certificate program in organic farming in January 2007. In addition, beginning in the Spring 2007 semester, Delaware Valley College in Doylestown, PA, will offer a course entitled ‚Organic Crop Science'. The course will provide working knowledge and hands-on experience for those interested in careers in certification, production and marketing.

Meanwhile, the University of Nebraska at Lincoln has announced that one of its four plots to be used by researchers to study production challenges on organic farms has been certified by the Organic Crop Improvement Association International. The certified land at the High Plains Agricultural Lab near Sidney will be used to grow organic wheat, proso millet, peas, forage and other crops.

All Things Organic™ and North American Summit

Held for the sixth year in a row, OTA's ‚All Things Organic™ Conference and Trade Show' in May 2006 for the third time co-located with four other food-oriented food shows (Food Marketing Institute Show, the Fancy Food Show, United Produce Expo & Conference, and the U.S. Food Export Showcase) in Chicago, Illinois. Reflecting the excitement it generated, the show was named one of Trade Show Week's Top 50 fastest growing shows in North America.

More than 33'000 retail buyers and other representatives of the mainstream and natural food industry attended the three-day co-located events. Excitement on the show floor focused primarily on the increased mainstream popularity of organic products, as well as an 'Organic for Kids' product showcase and 'The Corner Store', an attractive demonstration store displaying non-food organic products from exhibitors.

The trade show itself, produced in partnership with Diversified Business Communications, drew over 10'500 attendees and featured a diverse range of products in approximately 540 booths. The accompanying conference featured a shared keynote speaker as well as two keynote speakers for All Things Organic™, five Organic 101 conference sessions, 18 conference topics, welcome party, dinner and awards ceremony, and much more.

In conjunction with All Things Organic™, OTA partnered with the National Association of State Organic Programs to host a successful three-day North American Summit on Organic Production and Marketing. The Summit provided a collaborative forum for government and industry representatives from Canada, the United States and Mexico to establish contacts and create networks that will assist in the continued and improved movement of organic products throughout North America and the world.

Picture: A view of the busy trade show floor at the ‚All Things Organic Conference and Trade Show'

Photo: Organic Trade Association OTA

Plans are now under way for OTA's 2007 All Things Organic™ Conference and Trade Show, slated for May 5-8, once again at McCormick Place in Chicago. Among the exciting offerings will be an opening keynote address by former U.S. Vice President and best-selling author Al Gore on Sunday morning, May 6.

References

Bridges, Tyler (2006): Going Organic: Latin American farmers can thank health-conscious U.S. consumers for a booming export business. In: The Miami Herald, Florida, US.

Greene, Catherine (2006): Organic Agriculture in the U.S., 1992-2005. U.S. Department of Agriculture's Economic Research Service www.ers.usda.gov/Data/Organic/index.htm.

Natural Marketing Institute (2005): The Natural Marketing Institute's 2005 Health and Wellness Trends Database . Harleysville, US.

Organic Trade Association (2006): The OTA's 2006 Manufacturer Survey. Greenfields, US.

Organic Trade Association (2006): The Organic Report. Greenfields, US.

United States Department of Agriculture (2005): U.S. Market Profile for Organic Food Products. USDA, Washington, US.

U.S. Department of Agriculture's National Organic Program web site www.ams.usda.gov/nop

The Hartman Group (2006): Organic 2006: Consumer Attitudes & Behavior Five Years Later & Into The Future. Bellevue, US.

Canada

A report prepared for the Canadian Organic Growers (COG) shows the number of certified organic farms in Canada decreased during 2005, but acreage in organic production grew by about five percent over 2004 acreage.

The 38-page report, Certified Organic Production in Canada 2005, prepared for COG by Anne Macey, found the number of certified organic farms in Canada reported by certifiers totaled 3'618, down from 3'670 reported in 2004. Primary reasons cited for the decline included a loss in the number of certified maple syrup producers in Quebec and fewer organic grain growers in Saskatchewan and Alberta due to continuing drought and low commodity prices.

Meanwhile, in 2005 there were at least 530'919 hectares (1'311'929 acres) in organic production in Canada, with an additional 47'955 hectares (118'500 acres) of land in transition.

Livestock numbers showed 30 percent growth in beef production, sheep up 19 percent, layer chickens up 20 percent, and broiler chickens up 56 percent from 2004. Acreage for growing organic grains and oilseeds was also up significantly, with hemp production jumping by 225 percent, spelt up 16 percent, oats up 22 percent, and barley production up by 70 percent.

'This is good news for the environment. Every acre under organic management decreases the chemical load in our soils and water systems, and provides better habitat for a wide variety of soil and terrestrial species that make their homes on Canada's farmlands,' said Laura Telford, COG's executive director.

Numbers of organic processors were also up. A total of 817 processors were certified in 2005, an overall increase of 10 percent, with the largest gains in Quebec (36 percent) and British Columbia (29 percent). According to Macey, these figures include value-added processing on farms. The full report is available online at www.cog.ca.

The Canadian Census of Agriculture for 2006 included questions on organic production for the first time. Statistics are expected to be available later in 2007.

Organic Trade

Organic food is the fastest growing sector of agriculture in Canada, experiencing a growth rate of 20 percent a year. Canada imports 90 percent of the organic grocery items and 80 percent of organic produce sold in the country. Meanwhile, Canada exports 80 percent of the organic goods it produces. Wheat is Canada's most valuable single organic export, valued at 18 million CAD (12 million Euros). Organic flax and soybeans are also major exports, according to Macey.

According to Stephanie Wells, Canadian liaison for OTA, Canada's organic export market is worth at least 250 million CAD (162 million EUR), with about 40 percent of exports going to Europe, 40 percent to the United States, and the remainder to Asia.

In a major development, Canada has become the first country in the world to create special designations for organic products moving across its border. Although all import and export commodities have Harmonization Series Codes (HS Codes), they only have been coded by type (for instance, tomatoes have been tracked with such designations as roma or cherry). Now, as of January 2007, HS Codes in Canada also track imported certified organic roma or cherry tomatoes.

An initial list of 41 classifications from dairy to fruits and vegetable imports are being tracked in this new program. OTA, which worked with Agriculture and Agri-Food Canada to help plan this initiative, anticipates that it will prove to be a practical planning tool for Canadian producers. See www.cbsa.gc.ca/general/publications/tariff2007/01-99/table-e.html for the HS Codes listing.

Regulatory Update

Although Canada has had a strong organic standard since 1999, it had been voluntary and not supported by regulation. Work during 2006, however, moved Canada toward implementing a mandatory national organic regulation.

On September 2, 2006, Canada issued the pre-publication of its organic regulation in the Canada Gazette (Vol. 140, No. 35, Sept. 2, 2006); this marked a major milestone toward putting a national organic regulatory system in place. That began a 75-day comment period for international and domestic stakeholders, with the government then reviewing the comments and making necessary revisions prior to final publication and enactment. Final publication was expected during December 2006.

With a final regulation in place, the Canadian Food Inspection Agency (CFIA) is establishing a Canada Organic Office (Bureau canadien du biologique).

Preliminary groundwork for equivalency negotiations has begun with the European Union.

Work on the regulation, both on the government level and with input from the organic sector, has been an immense effort over the past two years from representatives of the Organic Trade Association, the ad hoc Organic Regulatory Committee, Canadian Organic Growers, and staff from the Canadian Food Inspection Agency (CFIA).

In addition to the regulation, CFIA has drawn up a Quality Management System (QMS) Manual, which provides details of the regulation and how it will be administered. The relatively short regulation is generic, describing broad rules, and could invite differing interpretation. The QMS manual contains specific information that will affect every organic enterprise in the country. CFIA has said the manual will evolve with the realities of managing the regulation and will always be open to comment.

The Canada Organic Standard and the Permitted Substances List (PSL), a federal list of materials allowed in organic production and processing, are referenced in the regulation and managed by the Canadian General Standards Board (CGSB). Both primarily focus on agricultural production, with manufacturing and handling only touched upon.

Canada's PSL is a 'positive' list of those substances permitted in organic production. Only substances included on the list may be used. PSL includes some, but not all of the substances needed today in organic processing.

Scope of the Regulation

The initial regulation covers food for human consumption and livestock feed, but Canadian officials have said its scope can be expanded over time. CFIA will look at any certifiable product of agriculture except for personal care products and natural health products, which must be regulated by Health Canada. Other areas that could be included in the future include aquaculture, fiber and textiles, and pet food. To do so, however, the sector or industry would have to develop a standard, contact the appropriate government department, and apply to CGSB to apply for amendments to Canada Organic Standard to include these categories.

CFIA says certified organic non-food products outside the scope of this regulation will be allowed to continue to use the term 'organic' on labels. Such products may carry certification or the USDA Organic seal, but may not use the Canada Organic seal.

The proposed federal regulation is based on the accreditation and certification systems already established by the Canadian private sector in organic production, manufacturing and trade, and references Canada's Organic Standard and Permitted Substances List.

OTA in Canada

The Organic Trade Association (OTA), which has been active in Canada, is stepping up its efforts by hiring a managing director for its Canada efforts. Reporting to OTA's Executive Director, the Managing Director will be responsible for implementing all activities and operations of OTA in Canada.

Marketing

Between January and April 2006, OTA conducted its fourth consecutive organic orange promotion in the Greater Toronto, Canada, area, and added an organic citrus campaign as well to raise awareness of organic lemons, limes, and grapefruit. In addition, OTA launched the organic orange campaign for the first year in Vancouver.

The promotion included television ads and in-store point-of-purchase displays. Retailers responded by providing more display footage than in the past. In all, 34 retail sites participated in the orange promotion, and 24 of the sites took part in the organic citrus campaign as well. The results were very positive, with substantial increases in awareness and purchases of organic citrus by consumers.

References

1. Canadian Organic Growers (2006): Certified Organic Production in Canada 2005. See www.cog.ca.
2. Stephanie Wells, Organic Trade Association Canadian liaison.

North America: Organic farming statistics

Table 16: Organic land and farms in North America

Country	Year	Organic land area (hectares)	Share of organic land	Organic Farms
US	2005	1'620'351	0.50%	8'445
Canada	2005	578'874	0.86%	3'618
Total		2'199'225	0.56%	12'063

Source: FiBL SOEL Survey 2007

Data and information sources/Contacts

- Canada: Data provided by / Source Anne Macey, Canadian Organic Growers (COG), Saltspring Island, Canada, www.cog.ca/OrganicStatistics.htm
- US: Data provided by / Source USDA Economic Research Service, www.ers.usda.gov

19 Achievements Made and Challenges Ahead

Angela B. Caudle and Gabriele Holtmann

Once again, 2006 was an outstanding year for the organic agriculture movement. Its many successes and achievements, however, cannot only be measured by growth rates and statistics. More and more, organic agriculture receives recognition through awards, publications and its increasing capacity to shape the political arena. With this growing list of achievements, IFOAM is now well positioned to look back in order to understand and prepare for the challenges that may lie ahead in the future.

Achievements Made

For IFOAM, the year 2006 was characterized by networking, building platforms and developing new connections within the organic movement. IFOAM strongly believes that bringing organizations and people together to engage in constructive dialogue about key issues and opportunities is essential for organic agriculture's further development. IFOAM's mission of 'uniting' is one central pillar of the movement; not only does it create a strong and enduring foundation, but it also provides the energy and vision to accomplish our goals and overcome new challenges.

A significant gain in uniting the organic movement took place February 2006, through the founding of the Organic Certification Body Forum. One of the main aims of this type of forum is to increase cooperation and future communication between certification bodies worldwide. In turn, this will result in improving the capacity and functioning of the certification system and advancing the harmonization of trade in organic products. Also, in March 2006, IFOAM started a joint project to facilitate the development of East Africa Standards with the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Environment Program (UNEP). This joint project, based on international cooperation, will help to make organic products from East Africa more recognizable on supermarket shelves throughout the world. Another joint project implemented by IFOAM, in cooperation with Instituto per la Certificazione Etica e Ambientale (ICEA) and funded by International Fund for Agricultural Development (IFAD) is 'Building Capacities on Certification of Organic Agriculture in the Pacific'. The project, focusing on Organic Agriculture Certification, is a first step toward IFAD's long-term involvement in Organic Farming in the Pacific. The project will run in 2006 and 2007.

IFOAM organized three conferences in 2006 to offer a platform for interested and engaged people in the organic movement. The IFOAM International Conference on Organic Wild Production, which took place from May 3-4 in Bosnia and Herzegovina, addressed issues concerning diverse wild harvested products. The conference, which attracted more than 165 people from 40 countries, was organized together with the Agricultural Institute of the Republic of Srpska in Banja Luka and Grolink from Sweden. With the growing interest in 'organic' wild products it was becoming increasingly evident that urgent attention needs to be paid to current production streams entering the organic market. Particularly interested in wild products are, for example, the trade and body care sectors.

From August 23-25, over 250 of the world's leading organic livestock experts from 24 countries joined together for the 1st IFOAM International Conference on Animals in Organic Production at the University of Minnesota's Continuing Education and Conference Center. The participants of the conference collaboratively developed and issued the St. Paul Declaration, which recognizes that animals are sentient beings, expresses a commitment to the Principles of Organic Agriculture that ensure the inclusion of animal welfare and animal health management as integral components of organic food and fiber production systems, and concludes that animals should be provided with the conditions and opportunities that accord with their physiology and natural behavior.

The third IFOAM conference in 2006 was the 1st IFOAM Conference on Organic Certification and took place at the University Roma Tre, Rome, Italy. From November 15-17, the world's organic certification agencies, private and governmental accreditation bodies, and other organizations engaged in ecological and social certification forged strategies for the global design of organic certification. The realm of organic certification is one that is facing an especially intense period of change and re-visioning; the conference offered the opportunity to look into and discuss the future of this important aspect of the organic sector.

IFOAM also represented the organic movement on some key controversial issues this year. Of central interest was the development of Africa's agriculture sector. In July, the Africa Fertilizer Summit took place in Abuja, Nigeria. The event was organized by the fertilizer industry and supported by agencies and organizations like the FAO, IFAD and the World Bank. In response to the Summit, IFOAM planned an event that highlighted diverse and effective examples of how organic agriculture contributes to food security and rural development in Africa. For instance, as opposed to relying on external inputs such as fertilizers and pesticides, organic agriculture puts farmers at the center of the farming strategy, restoring the decision-making role to rural communities, guaranteeing local control over resources, and encouraging active participation in a value added food chain. Due to this event, it was possible to show and convince the Africa press and other invited dignitaries about the potential of organic agriculture.

In August, another pivotal meeting took place that required a response from IFOAM: the African Green Revolution Conference in Oslo, Norway. The Oslo Conference, which was once again organized by the fertilizer industry, resulted from a call to action made by United Nations' Secretary General Kofi Annan in 2004, and pushed for the adoption of unsustainable agricultural practices in an effort to rapidly increase farm production. This move threatens traditional farming practices throughout Africa, for, much like the original green revolution in Southeast Asia, it encourages agricultural practices that rely on the intensive use of chemical fertilizers and other fossil-fuel based farm inputs. This approach is not a solution to food security nor land-degradation; contrarily, it is proven to remove local resources and increase dependence on non-renewable resources. IFOAM, together with its members in Norway, addressed these concerns by presenting organic agriculture as a truly 'green' alternative to input-based agriculture in the hope that the conference participants would broadened their perspectives.

Various positive developments in 2006 have provided IFOAM with the confidence and energy to continue leading the organic movement. For instance, in July, the International Social and Environmental Labeling Alliance (ISEAL) declared that IFOAM is fully compliant with ISEAL's Code of Good Practice for Setting Social and Environmental Standards. IFOAM is the first ISEAL member to achieve this status. For IFOAM, which has been working hard for organic standards for thirty years, this achievement did not come as a surprise, but as a vote of confidence that IFOAM's standards are internationally respected and trusted to contribute to positive environmental and social practices.

Challenges Ahead

For the past three years, we have proudly been announcing continuous growth within the organic sector. In 2004, twenty-four million hectares were managed organically, 2005 saw twenty-six million hectares in production, and, finally, in 2006, the area of land rose to thirty-one million hectares. The global sales of organic food and drinks constantly increased over the same period between seven to nine percent. Nevertheless, for those people working in the sector, it is impossible to ignore the fact that not everyone is content with the rapid changes taking place. The discussion is heated and challenging: Are organics and mainstream compatible? Can small-scale farmers and suppliers compete against giant multinational agribusinesses and discounters? Should they?

There are several ways to see this development. One can either lament the loss of the small and well-defined organic sector or one can cope with the challenges and build on the advantages that come along with this new growth. Either way, it must be realized that the transition into the corporate mainstream was predictable for the organic and natural foods market.

The organic movement has been under the radar of mega-food producers for years but remained marginal for a long time as a minor niche market. Organic agriculture was mainly small-scale farming. Over time, however, and as the popularity and purported benefits of organic food rose, big business woke up. Today, the organic movement has become, as some would critique it, 'a victim of its own success'. On the other hand, the interest of large corporations in the organic industry can also be seen as a move in the right direction. More money and power available is a means to not only sustain, but also to expand the market. Studies show that a large-scale shift to organic farming would not only increase the world's food supply, but would also be a way to eradicate hunger, especially in poor, remote, and arid regions where hunger is most severe.

As donor agencies and governments search for solutions to increasingly impoverished populations in many developing countries, organic agriculture has been recognized as a tool for rural development - specifically for its contribution both directly and indirectly to attaining the Millennium Development Goals. Organic agriculture contributes directly to poverty alleviation and increased food security and indirectly to increased health and environmental conditions of local communities and, ultimately, an increased standard of living.

As the consumption of organic products grows in developed countries, more and more products will be sought from developing country producers. The simple fact that large-scale conventional companies are entering the organic market creates a demand that cannot be met without sourcing from developing countries; first, because the supply is simply not available and second, because these companies are committed to obtaining organic products at the lowest possible price to maintain their discount model. Meeting this growing demand affords an opportunity for farmers in developing countries with knowledge and support to become organic producers and thereby increase their income. And, this is precisely what is happening in emerging and booming markets due to the demand for export products. In the cases of the booming markets in China, India and Brazil--countries with significant middle class populations--the domestic market has also begun to surface and even thrive.

For organic agriculture to continue succeeding globally, it will be important for developed country players to find a level of comfort with big businesses, avoid internal divisions that weaken and undermine the industry and cause frustrations and uncertainty for consumers, and, in particular, support the entry of developing country producers into the market.

It should not be forgotten that, due to its holistic approach, organic agriculture provides various successful and effective alternatives to conventional agriculture. Over the years, IFOAM has witnessed challenges, which were won because everybody was pulling on one string. On many occasions this past year, IFOAM had the opportunity to experience stability, support, and flexibility of the organic movement. If all people and organizations that show interest in organic agriculture - governments, agribusiness, executives, farmers, and consumers - come together, it is possible to find solutions to the biggest of challenges.

IFOAM is a platform and it is our pleasure and duty to unite the organic movements worldwide. In this vein, IFOAM will organize a trade symposium - an annual pre-BioFach event - to discuss the implications of large-scale conventional businesses entering the organic marketplace. The dialogue will address both the challenges as well as the opportunities provided by the mainstreaming of organic.

In May 2007, the international conference on organic agriculture and food security will be held at the FAO's headquarters in Rome, Italy. IFOAM was offered by FAO to organize this conference in collaboration with the World Wildlife Fund (WWF), the Third World Network (TWN) and the Rural Advancement Foundation International (RAFI). For IFOAM, it is clear that organic agriculture is an appropriate production system to ensure food security. Farmers are central to the strategy and play important decision-making roles within local communities. First of all, each community needs to be aware of its own resources and, secondly, have the right to control these resources. Income and food security is achieved through diversity - economic, social, and ecological.

IFOAM is ready to continue its work and face the future. Solidly based on its diverse and committed membership, we are confident that the current challenges will turn out to be opportunities for new developments, from which the whole organic industry, in all its different settings and diverse localities, can profit.

20 Annex: Tables

In this annex, the tables with the basic data are presented. Should you discover any errors of have any updates, please send them to helga.willer@fibl.org. Corrections will be published at the website www.organic-world.net; updates in the next edition of 'The World of Organic Agriculture.'

Table 17: Alphabetical list of countries: Organic land, share of organic land of total agricultural area, number of organic farms

Country	Organic land (hectares)	Organic farms	Share of total agricultural land (%)
Albania	1'170	93	0.1
Algeria	887	39	0.0
Argentina	3'099'427	1'736	2.4
Armenia	265	40	0.0
Australia	11'800'000	1'869	2.7
Austria	360'972	20'310	14.2
Azerbaijan	20'308	332	0.4
Bangladesh	177'700	100	2.0
Belgium	22'996	693	1.6
Belize	1'810		1.2
Benin	500	600	0.0
Bhutan	150	65	0.0
Bolivia	364'100	6'500	1.0
Bosnia Herzegovina	416	26	0.0
Brazil	842'000	15'000	0.3
Bulgaria	14'320	351	0.3
Burkina Faso	30		0.0
Cambodia	952	1'421	0.0
Cameroon	7'000		0.1
Canada	578'874	3'618	0.9
Chile	45'000	1'000	0.3
China	2'300'000	1'600	0.4
Colombia	33'000	4'500	0.1
Costa Rica	9'473	3'987	0.3
Croatia	3'184	269	0.1
Cuba	15'443	7'101	0.2
Cyprus	1'698	305	1.1
Czech Rep.	254'982	829	6.0
Denmark	145'636	2'892	5.6
Dominican Rep.	51'391	819	1.4
Ecuador	44'661	2'427	0.6
Egypt	24'548	500	0.7
El Salvador	5'256	1'811	0.3
Estonia	59'862	1'013	7.2
Fiji	100		0.0

Country	Organic land (hectares)	Organic farms	Share of total agri-cultural land (%)
Finland	147'587	4'296	6.5
France	560'838	11'402	2.0
Georgia	130	38	0.0
Germany	807'406	17'020	4.7
Ghana	17'261	2'000	0.1
Greece	288'255	14'614	3.1
Guatemala	12'110	2'830	0.3
Guyana	109	28	0.0
Honduras	1'823	3'000	0.1
Hongkong	12	20	
Hungary	123'569	1'553	2.9
Iceland	4'684	23	0.2
India	150'790	5'147	0.1
Indonesia	17'783	15'473	0.0
Ireland	35'266	978	0.8
Israel	6'685	420	1.2
Italy	1'067'102	44'733	8.4
Jamaica	376	7	0.1
Japan	8'109	4'636	0.2
Jordan	10	1	0.0
Kazakhstan	36'882	1	0.0
Kenya	182'586	15'815	0.7
Korea, Republic of	38'282	5'447	2.0
Kyrgyzstan	221	225	0.0
Latvia	118'612	2'873	4.8
Lebanon	2'465	331	0.7
Liechtenstein	1'040	35	27.9
Lithuania	69'430	1'811	2.5
Luxemburg	3'243	72	2.5
Macedonia	249	50	0.0
Madagascar	2'220		0.0
Malawi	325	13	0.0
Malaysia	963	40	0.0
Mali	14'600	3'672	0.0
Malta	14	6	0.1
Mauritius	175	5	0.2
Mexico	307'692	83'174	2.9
Moldova	11'075	121	0.4
Morocco	20'040	12'051	0.1
Mozambique	716	1'904	0.0
Nepal	1'000	1'247	0.0
Netherlands	48'765	1'377	2.5
New Zealand	45'000	820	0.3
Nicaragua	51'057	5'977	0.7
Niger	39		0.0

Country	Organic land (hectares)	Organic farms	Share of total agricultural land (%)
Norway	43'033	2'496	4.1
Pakistan	20'310	28	0.1
Palestine, Occupied Tr.	1'000	500	0.3
Panama	5'244	7	0.2
Paraguay	59'500	2'827	0.2
Peru	84'782	33'474	0.4
Philippines	14'134	34'990	0.1
Poland	167'740	7'183	1.0
Portugal	233'458	1'577	6.3
Romania	87'916	2'920	0.6
Russian Federation	40'000	40	0.0
Rwanda	105		0.0
Saudi Arabia	13'730	3	0.0
Senegal	2'500	3'000	0.0
Serbia/Montenegro	591		0.0
Slovak Republic	92'191	196	4.9
Slovenia	23'499	1'718	4.8
South Africa	50'000	-	0.1
Spain	807'569	15'693	3.2
Sri Lanka	10'049	35'000	0.4
Sudan	200'000	650	0.1
Sweden	200'010	2'951	6.3
Switzerland	117'117	6'420	10.9
Syria	20'500		0.1
Taiwan	1'441	914	
Tanzania	38'875	34'791	0.1
Thailand	21'701	2'498	0.1
East Timor	21'526	18'388	6.3
Togo	90	1	0.0
Trinidad & Tobago	67	1	0.1
Tunisia	143'099	515	1.5
Turkey	93'133	14'401	0.2
Uganda	182'000	40'000	1.5
UK	619'852	4'285	3.9
Ukraine	241'980	72	0.6
Uruguay	759'000	500	5.1
US	1'620'351	8'445	0.5
Venezuela	16'000	4	0.1
Vietnam	6'475	1'022	0.1
Zambia	2'884	9'248	0.0
Zimbabwe	25	1	0.0
Total	30'558'183	633'891	0.7

Source: SOEL-FiBL Survey 2007.
Data providers and sources are listed under the continent tables at the end of the continent chapters.

Table 18: Organic land by country, sorted by importance

Country	Organic land (hectares)
Australia	11'800'000
Argentina	3'099'427
China	2'300'000
US	1'620'351
Italy	1'067'102
Brazil	842'000
Spain	807'569
Germany	807'406
Uruguay	759'000
UK	619'852
Canada	578'874
France	560'838
Bolivia	364'100
Austria	360'972
Mexico	307'692
Greece	288'255
Czech Rep.	254'982
Ukraine	241'980
Portugal	233'458
Sweden	200'010
Sudan	200'000
Kenya	182'586
Uganda	182'000
Bangladesh	177'700
Poland	167'740
India	150'790
Finland	147'587
Denmark	145'636
Tunisia	143'099
Hungary	123'569
Latvia	118'612
Switzerland	117'117
Turkey	93'133
Slovak Republic	92'191
Romania	87'916
Peru	84'782
Lithuania	69'430
Estonia	59'862
Paraguay	59'500
Dominican Rep.	51'391
Nicaragua	51'057
South Africa	50'000
Netherlands	48'765
Chile	45'000
New Zealand	45'000
Ecuador	44'661
Norway	43'033
Russian Federation	40'000
Tanzania	38'875
Korea, Republic of	38'282
Kazakhstan	36'882
Ireland	35'266
Colombia	33'000
Egypt	24'548
Slovenia	23'499
Belgium	22'996
Thailand	21'701
East Timor	21'526
Syria	20'500
Pakistan	20'310
Azerbaijan	20'308
Morocco	20'040
Indonesia	17'783
Ghana	17'261
Venezuela	16'000
Cuba	15'443
Mali	14'600
Bulgaria	14'320
Philippines	14'134
Saudi Arabia	13'730
Guatemala	12'110
Moldova	11'075
Sri Lanka	10'049
Costa Rica	9'473
Japan	8'109
Cameroon	7'000
Israel	6'685
Vietnam	6'475
El Salvador	5'256
Panama	5'244
Iceland	4'684
Luxemburg	3'243
Croatia	3'184
Zambia	2'884
Senegal	2'500
Lebanon	2'465
Madagascar	2'220
Honduras	1'823
Belize	1'810

Cyprus	1'698
Taiwan	1'441
Albania	1'170
Liechtenstein	1'040
Nepal	1'000
Palestine, Occupied Tr.	1'000
Malaysia	963
Cambodia	952
Algeria	887
Mozambique	716
Serbia/Montenegro	591
Benin	500
Bosnia Herzegovina	416
Jamaica	376
Malawi	325
Armenia	265
Macedonia	249
Kyrgyzstan	221
Mauritius	175
Bhutan	150
Georgia	130
Guyana	109
Rwanda	105
Fiji	100
Togo	90
Trinidad & Tobago	67
Niger	39
Burkina Faso	30
Zimbabwe	25
Malta	14
Hongkong	12
Jordan	10
Total	30'558'183

Source: SOEL-FiBL Survey 2007

Data providers and sources are listed under the continent tables at the end of the continent chapters.

Table 19: Share of organic land by country, sorted by importance

Country	Share of organic of agricultural land
Liechtenstein	27.90
Austria	14.16
Switzerland	10.94
Italy	8.40
Estonia	7.22
Finland	6.52
Portugal	6.34
East Timor	6.33
Sweden	6.27
Czech Rep.	5.97
Denmark	5.62
Uruguay	5.08
Slovak Republic	4.91
Slovenia	4.84
Latvia	4.78
Germany	4.74
Norway	4.14
UK	3.90
Spain	3.20
Greece	3.15
Hungary	2.90
Mexico	2.87
Australia	2.68
Luxemburg	2.51
Netherlands	2.49
Lithuania	2.49
Argentina	2.41
France	2.03
Korea, Republic of	2.01
Bangladesh	1.97
Belgium	1.65
Tunisia	1.46
Uganda	1.46
Dominican Rep.	1.39
Belize	1.19
Israel	1.17
Cyprus	1.12
Poland	1.03
Bolivia	0.98
Canada	0.86
Ireland	0.84
Lebanon	0.75
Nicaragua	0.73

Egypt	0.72
Kenya	0.69
Romania	0.60
Ukraine	0.59
Ecuador	0.55
US	0.50
Moldova	0.44
Azerbaijan	0.43
Sri Lanka	0.43
China	0.41
Peru	0.40
Costa Rica	0.33
Brazil	0.32
El Salvador	0.31
Chile	0.30
Palestine, Occupied Tr.	0.29
Bulgaria	0.27
New Zealand	0.26
Guatemala	0.26
Paraguay	0.24
Turkey	0.24
Panama	0.24
Cuba	0.23
Iceland	0.21
Japan	0.16
Mauritius	0.15
Syria	0.15
Sudan	0.15
Malta	0.13
Thailand	0.12
Ghana	0.12
Philippines	0.12
Albania	0.10
Croatia	0.10
India	0.08
Tanzania	0.08
Pakistan	0.08
Cameroon	0.08
Venezuela	0.07
Jamaica	0.07
Colombia	0.07
Vietnam	0.07
Morocco	0.07
Honduras	0.06
Trinidad & Tobago	0.05
South Africa	0.05
Mali	0.04
Indonesia	0.04
Senegal	0.03
Bhutan	0.03
Nepal	0.02
Fiji	0.02
Macedonia	0.02
Bosnia Herzegovina	0.02
Armenia	0.02
Russian Federation	0.02
Cambodia	0.02
Kazakhstan	0.02
Benin	0.01
Malaysia	0.01
Serbia/ Montenegro	0.01
Zambia	0.01
Madagascar	0.01
Saudi Arabia	0.01
Malawi	0.01
Guyana	0.01
Rwanda	0.01

Source: SOEL-FiBL Survey 2007.

Data providers and sources are listed under the continent tables at the end of the continent chapters.

Table 20: Number of farms by country, sorted by importance

Country	Number of farms
Mexico	83'174
Italy	44'733
Uganda	40'000
Sri Lanka	35'000
Philippines	34'990
Tanzania	34'791
Peru	33'474
Austria	20'310
East Timor	18'388
Germany	17'020
Kenya	15'815

Spain	15'693
Indonesia	15'473
Brazil	15'000
Greece	14'614
Turkey	14'401
Morocco	12'051
France	11'402
Zambia	9'248
US	8'445
Poland	7'183
Cuba	7'101
Bolivia	6'500
Switzerland	6'420
Nicaragua	5'977
Korea, Republic of	5'447
India	5'147
Japan	4'636
Colombia	4'500
Finland	4'296
UK	4'285
Costa Rica	3'987
Mali	3'672
Canada	3'618
Honduras	3'000
Senegal	3'000
Sweden	2'951
Romania	2'920
Denmark	2'892
Latvia	2'873
Guatemala	2'830
Paraguay	2'827
Thailand	2'498
Norway	2'496
Ecuador	2'427
Ghana	2'000
Mozambique	1'904
Australia	1'869
Lithuania	1'811
El Salvador	1'811
Argentina	1'736
Slovenia	1'718
China	1'600
Portugal	1'577
Hungary	1'553
Cambodia	1'421
Netherlands	1'377
Nepal	1'247

Vietnam	1'022
Estonia	1'013
Chile	1'000
Ireland	978
Taiwan	914
Czech Rep.	829
New Zealand	820
Dominican Rep.	819
Belgium	693
Sudan	650
Benin	600
Tunisia	515
Uruguay	500
Egypt	500
Palestine, Occupied Tr.	500
Israel	420
Bulgaria	351
Azerbaijan	332
Lebanon	331
Cyprus	305
Croatia	269
Kyrgyzstan	225
Slovak Republic	196
Moldova	121
Bangladesh	100
Albania	93
Luxemburg	72
Ukraine	72
Bhutan	65
Macedonia	50
Armenia	40
Russian Federation	40
Malaysia	40
Algeria	39
Georgia	38
Liechtenstein	35
Guyana	28
Pakistan	28
Bosnia Herzegovina	26
Iceland	23
Hongkong	20
Malawi	13
Jamaica	7
Panama	7
Malta	6
Mauritius	5
Venezuela	4

Saudi Arabia	3
Jordan	1
Kazakhstan	1
Togo	1

Trinidad & Tobago	1
Zimbabwe	1
Total	633'891

Source: SOEL-FiBL Survey 2007.
Data providers and sources are listed under the continent tables at the end of the continent chapters.

Table 21: Global organic land use by country

Please note that data on wild collection are not included.

Country	Main category	Crop category	Crop	Year	Hectares
Albania	No information	No information	No information	2006	1'170
Algeria	No information	No information	No information	2005	887
Argentina		Other arable crops	Other arable crops	2005	29'694
		Vegetables	Other vegetables	2005	1'745
			Industrial crops	2005	9'951
		Medicinal & aromatic plants	Medicinal & aromatic plants	2005	88
	Other crops	Unknown/mixed	Unknown/mixed	2005	38'600
	Permanent crops		Other fruits and nuts	2005	2'089
	No information	No information	No information	2005	721'137
	Permanent pastures/ grassland	Permanent pastures/grassland	Pastures and meadows	2005	2'296'123
Armenia	No information	No information	No information	2005	265
Australia	Other crops	Other crops	Other crops	2005	370'000
	Permanent pastures/ grassland	Permanent pastures/grassland	Permanent pastures/grassland	2005	11'430'000
Austria	Arable land	Cereals	Barley	2005	8'620
			Grain Maize	2005	5'404
			Oats	2005	5'226
			Other cereals	2005	3'811
			Rye	2005	10'914
			Triticale	2005	6'318
			Wheat	2005	21'717
			Spelt	2005	5'063
		Flowers and ornamental plants	Other Flowers and ornamental plants	2005	8
		Oilseeds	Other oilseeds	2005	1'018
			Pumpkin seeds	2005	1'995
			Rape seeds	2005	74
			Soya	2005	2'410
			Sunflower seed	2005	1'263
		Other arable crops	Other arable	2005	221

Country	Main category	Crop category	Crop	Year	Hectares
			crops		
		Root crops	Other root crops	2005	12
			Sugarbeets	2005	438
		Seed production	seeds and seedlings	2005	373
		Vegetables	Greenhouse cultivation	2005	3
			Other vegetables	2005	1'248
			Potatoes	2005	2'301
		Protein crops	Beans	2005	1'427
			Other protein crops	2005	1'855
			Peas	2005	8'843
		Field fodder growing	Maize for silage	2005	1'548
			Other field fodder growing	2005	19'563
			Lucerne	2005	7'303
			Temporary grassland and pastures	2005	14'653
		Set-aside/green manuring	Fallow land	2005	7'001
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	903
	Permanent crops	Special crops	hops	2005	18
		Fruits and nuts	Strawberry	2005	46
	No information	No information	No information	2005	5'162
	Permanent pastures/ grassland	Permanent pastures/grassland	Pastures and meadows	2005	214'213
Azerbaijan	Arable land	Cereals	Other cereals	2005	1'875
		Flowers and ornamental plants	Other Flowers and ornamental plants	2005	2
		Oilseeds	Sunflower seed	2005	26
		Other arable crops	Tobacco	2005	6
		Root crops	Potatoes	2005	165
			Sugarbeets	2005	6
		Vegetables	Other vegetables	2005	206
		Industrial crops	Cotton	2005	144
		Protein crops	Other protein crops	2005	3
		Field fodder growing	Other field fodder growing	2005	50
	Permanent crops	Grapes	Grapes	2005	50
		Olives	Olives	2005	5
		Tea	Tea	2005	15
		Fruits and nuts	Other fruits and nuts	2005	755
	Permanent pastures/ grassland	Permanent pastures/grassland	Permanent pastures/grassland	2005	17'000

Country	Main category	Crop category	Crop	Year	Hectares
Bangladesh	No information	No information	No information	2002	177'700
Belgium	Arable land	Cereals	Barley	2005	241
			Grain Maize	2005	68
			Oats	2005	220
			Other cereals	2005	1'011
			Rye and meslin	2005	63
			Wheat	2005	782
		Oilseeds	Rape and Turnip rape	2005	1
		Root crops	Fodder roots and brassicas	2005	10
			Potatoes	2005	195
			Sugarbeets	2005	9
		Vegetables	Other vegetables	2005	372
		Industrial crops	Other Industrial crops	2005	22
		Protein crops	Dried pulses	2005	129
		Field fodder growing	Other field fodder growing	2005	6'595
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	3
	Other	Unutilised land	Unutilised land	2005	8
	Permanent crops	Other permanent crops	Other permanent crops	2005	107
		Special crops	hops	2005	9
		Fruits and nuts	Other fruits and nuts	2005	351
	Permanent pastures/ grassland	Permanent pastures/grassland	Pastures and meadows	2005	12'800
Belize	No information	No information	No information	2000	1'810
Benin	Arable land	Industrial crops	Cotton	2005	500
Bhutan	Permanent pastures/grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	150
Bolivia	No information	No information	No information	2002	364'100
Bosnia Herzegovina	Arable land	Other arable crops	Other arable crops	2006	416
Brazil	Arable land	Other arable crops	Other arable crops	2005	170'000
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	672'000
Bulgaria	No information	No information	No information	2005	14'320
Burkina Faso	Arable land	Industrial crops	Cotton	2004	30
Cambodia	Arable land	Cereals	Rice	2005	950
	Permanent crops	Tropical fruits	sugar palm	2005	2
Cameroon	No information	No information	No information	2003	7'000
Canada	Arable land	Cereals	Barley	2005	15'493
			Grain Maize	2005	2'280
			Oats	2005	37'231
			Other cereals	2005	12'038

Country	Main category	Crop category	Crop	Year	Hectares
			Rye	2005	7'196
			Triticale	2005	636
			Wheat	2005	75'816
			Kamut	2005	3'462
		Flowers and ornamental plants	Other Flowers and ornamental plants	2005	24
		Oilseeds	Rape seeds	2005	857
		Root crops	Potatoes	2005	497
		Vegetables	Greenhouse cultivation	2005	32
			Other vegetables	2005	1'571
		Industrial crops	Flax	2005	32'754
		Protein crops	Dried pulses	2005	112
			Peas	2005	12'293
			Soya	2005	8'062
			Other protein crops (Lentils)	2005	14'942
		Field fodder growing	Other field fodder growing	2005	79'576
			Lucerne	2005	8'774
		Set-aside/green manuring	Fallow land as a part of crop rotation	2005	37'916
			Set-aside/green manuring	2005	15'564
		Medicinal & aromatic plants	Herbs for essential oil	2005	389
			Other Medicinal & aromatic plants	2005	473
	Permanent crops	Grapes	Grapes	2005	69
		Fruits and nuts	Apples	2005	606
			Apricots	2005	8
			Blueberry	2005	90
			cherries	2005	13
			hazelnut	2005	39
			Nuts	2005	18
			Other fruits and nuts	2005	127
			peach	2005	18
			pear	2005	27
			Plums	2005	6
			Raspberry	2005	17
			Strawberry	2005	13
			walnut kernel	2005	4
			Chestnuts	2005	2
	No information	No information	No information	2005	142'058
	Permanent pastures /grassland	Permanent pastures/ grassland	Pastures and meadows	2005	67'771
Chile	No information	No information	No information	2005	45'000
China	Other crops	Unknown/mixed	Unknown/mixed	2005	998'000

Country	Main category	Crop category	Crop	Year	Hectares
	No information	No information	No information	2005	610'000
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	692'000
Colombia	Permanent crops	Coffee	Coffee	2003	7'531
	No information	No information	No information	2003	25'469
Costa Rica	Arable land	Cereals	Rice	2005	102
		Medicinal & aromatic plants	sabila	2005	9
	Permanent crops	Cocoa	Cocoa	2005	263
		Tropical fruits	Banana	2005	2'021
			Coffee	2005	1'410
			Coffee asociated with Other crops	2005	439
			Sugarcane	2005	263
			Pineapples	2005	155
			Banana asscociated with other crops	2005	2'932
		Fruits and nuts	Blackberry	2005	700
			Other fruits and nuts	2005	61
		Citrus fruit	oranges	2005	1'117
Croatia	Arable land	Cereals	Barley	2005	352
			Grain Maize	2005	407
			Oats	2005	67
			Other cereals	2005	22
			Rye	2005	89
			Wheat	2005	638
		Oilseeds	Other oilseeds	2005	89
			Rape and Turnip rape	2005	16
			Soya	2005	65
		Other arable crops	Other arable crops	2005	12
		Root crops	Potatoes	2005	4
		Vegetables	Other vegetables	2005	98
		Industrial crops	Other Industrial crops	2005	27
		Field fodder growing	Other field fodder growing	2005	313
		Set-aside/green manuring	Fallow land as a part of crop rotation	2005	28
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	15
	Other	Forest	Forest	2005	60
	Permanent crops	Grapes	Grapes	2005	30
		Olives	Olives	2005	27
		Fruits and nuts	Other fruits and nuts	2005	85
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	740

Country	Main category	Crop category	Crop	Year	Hectares
Cuba	Arable land	Other arable crops	self sufficiency	2005	5'000
	Permanent crops	Cocoa	Cocoa	2005	1'369
		Coffee	Coffee	2005	490
		Sugarcane	Sugarcane	2005	5'662
		Tropical fruits	Coconut	2005	1'056
			Mango	2005	131
		Citrus fruit	Other citrus fruit	2005	1'735
Cyprus	Arable land	Cereals	Barley	2005	257
			Oats	2005	27
			Wheat	2005	23
		Root crops	Potatoes	2005	7
		Vegetables	Other vegetables	2005	15
		Protein crops	Dried pulses	2005	491
			Other protein crops	2005	4
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	31
	Other crops	Unknown/mixed	Unknown/mixed	2005	51
	Permanent crops	Grapes	Grapes	2005	93
		Olives	Olives	2005	576
		Fruits and nuts	Nuts	2005	44
			Other fruits and nuts	2005	69
		Citrus fruit	Other citrus fruit	2005	12
Czech Rep.	Arable land	Other arable crops	Other arable crops	2005	20'766
	Other	Unutilised land	Unutilised land	2005	23'440
	Permanent crops	Grapes	Grapes	2005	48
		Fruits and nuts	Fruits	2005	772
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	209'956
Denmark	Arable land	Cereals	Barley	2005	9'701
			Grain Maize	2005	26
			Oats	2005	9'587
			Other cereals	2005	6'965
			Rye and meslin	2005	2'976
			Wheat	2005	8'126
		Flowers and ornamental plants	Other Flowers and ornamental plants	2005	4
		Oilseeds	Rape and Turnip rape	2005	989
			Sunflower seed	2005	13
		Root crops	Fodder roots and brassicas	2005	19
			Potatoes	2005	892
			Sugarbeets	2005	170
		Seed production	seeds and seedlings	2005	1'298
		Vegetables	Other vegeta-	2005	1'138

Country	Main category	Crop category	Crop	Year	Hectares
			bles		
		Industrial crops	Other Industrial crops	2005	253
		Protein crops	Dried pulses	2005	5'944
			Soya	2005	2
		Field fodder growing	Other field fodder growing	2005	62'340
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	51
	Other	Unutilised land	Unutilised land	2005	1'979
	Permanent crops	Other permanent crops	Other permanent crops	2005	2'625
		Fruits and nuts	Nuts	2005	2
			Other fruits and nuts	2005	251
	No information	No information	No information	2005	11'507
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	18'778
Dominican Rep.	Arable land	Cereals	Rice	2005	38
		Other arable crops	Other arable crops	2005	17
			Tobacco	2005	14
		Root crops	Other root crops	2005	21
		Medicinal & aromatic plants	ginger	2005	68
	Other	Unutilised land	Unutilised land	2005	5'341
	Permanent crops	Cocoa	Cocoa	2005	30'902
		Coffee	Coffee	2005	2'858
		Other permanent crops	Yuca	2005	149
		Sugarcane	Sugarcane	2005	3'241
		Tropical fruits	Avocado	2005	225
			Banana	2005	4'875
			Coconut	2005	1'705
			Mango	2005	324
			Other tropical fruits	2005	10
			Papaya	2005	16
			Pineapples	2005	30
		Citrus fruit	Other citrus fruit	2005	557
			oranges	2005	1'000
Ecuador	Arable land	Cereals	Barley	2005	31
			Other cereals	2005	5
			Quinoa	2005	178
		Flowers and ornamental plants	Cartucho	2005	6
		Root crops	Other root crops	2005	2
		Vegetables	Other vegetables	2005	112
			pepper	2005	6
		Protein crops	legumes	2005	762
		Medicinal & aromatic	Aloe vera	2005	79

Country	Main category	Crop category	Crop	Year	Hectares
		plants			
			Aromatic plants	2005	92
	Other	Unknown/mixed	Unknown/mixed	2005	1'110
		aquaculture	shrimps	2005	4'080
	Permanent crops	Cocoa	Cocoa	2005	12'842
		Coffee	Coffee	2005	2'963
		Sugarcane	Sugarcane	2005	713
		Tropical fruits	Araza	2005	41
			Banana	2005	14'915
			Guava	2005	3
			Mango	2005	307
			orito	2005	2'668
			Other tropical fruits	2005	5
			Pineapples	2005	40
		Special crops	oil palm	2005	3'662
		Fruits and nuts	Blackberry	2005	37
Egypt	Arable land	Cereals	Other cereals	2005	329
			Rice	2005	41
		Other arable crops	Other arable crops	2005	8'281
		Vegetables	Other vegetables	2005	4'360
		Industrial crops	Cotton	2005	73
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	2'444
	Other crops	Unknown/mixed	Unknown/mixed	2005	4'886
	Permanent crops	Olives	Olives	2005	23
		Other permanent crops	Other permanent crops	2005	282
		Fruits and nuts	Other fruits and nuts	2005	3'450
		Citrus fruit	Other citrus fruit	2005	46
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	333
El Salvador	Arable land	Oilseeds	Sesame seeds	2005	914
	Permanent crops	Coffee	Coffee	2005	3'325
		Other permanent crops	Other permanent crops	2005	7
		Tropical fruits	Coconut	2005	893
			Marañon	2005	117
Estonia	Arable land	Cereals	Barley	2005	2'062
			Oats	2005	2'449
			Other cereals	2005	895
			Rye	2005	359
			Wheat	2005	1'076
		Oilseeds	Rape and Turnip rape	2005	71
		Root crops	Fodder roots and brassicas	2005	5
			Potatoes	2005	254
		Vegetables	Greenhouse	2005	2

Country	Main category	Crop category	Crop	Year	Hectares
			cultivation		
			Other vegetables	2005	49
		Industrial crops	Flax	2005	3
			Other Industrial crops	2005	3
		Protein crops	Other protein crops	2005	225
		Field fodder growing	Other field fodder growing	2005	15'077
			temporary grassland	2005	17'214
			Lucerne	2005	1'075
			Clover	2005	3'308
		Set-aside/green manuring	Fallow land as a part of crop rotation	2005	1'458
			Set-aside/green manuring	2005	108
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	82
	Other	Unutilised land	Unutilised land	2005	590
	Permanent crops	Other permanent crops	tree nursery	2005	2
		Fruits and nuts	Other fruits and nuts	2005	935
			Strawberry	2005	44
	No information	No information	No information	2005	119
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	11'722
			pastures	2005	675
Fiji	Permanent crops	Tropical fruits	Coconut	2005	100
Finland	Arable land	Cereals	Barley	2005	6'760
			Buckwheat	2005	185
			Oats	2005	23'134
			Other cereals	2005	3'192
			Rye	2005	4'594
			Wheat	2005	6'628
		Oilseeds	Sunflower seed	2005	21
			Turnip rape	2005	2'315
			linseed	2005	277
		Root crops	Potatoes	2005	440
		Vegetables	Greenhouse cultivation	2005	9
			Other vegetables	2005	211
		Protein crops	Beans	2005	262
			Peas	2005	1'289
		Field fodder growing	Other field fodder growing	2005	1'842
		Set-aside/green manuring	Fallow land as a part of crop rotation	2005	19'507
		Medicinal & aromatic	Leafherbs	2005	16

Country	Main category	Crop category	Crop	Year	Hectares
		plants			
	Permanent crops	Fruits and nuts	Apples	2005	53
			Other fruits and nuts	2005	95
			Raspberries	2005	28
			Strawberry	2005	172
			Currants	2005	453
	No information	No information	No information	2005	15'911
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	60'195
France	Arable land	Cereals	Cereals	2005	95'417
		Oilseeds	Other oilseeds	2005	19'187
		Vegetables	Other vegetables	2005	8'827
		Protein crops	Other protein crops	2005	11'439
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	2'338
	Other crops	Other crops	Other crops	2005	48'679
	Permanent crops	Grapes	Grapes	2005	18'133
		Fruits and nuts	Fruits	2005	8'958
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	347'860
Georgia	No information	No information	No information	2005	130
Germany	Arable land	Cereals	Other cereals	2005	185'000
		Flowers and ornamental plants	Other Flowers and ornamental plants	2005	115
		Oilseeds	Other oilseeds	2005	7'500
		Other arable crops	Other arable crops	2005	34'900
		Root crops	Other root crops	2005	7'300
		Vegetables	Other vegetables	2005	8'700
		Protein crops	Other protein crops	2005	17'800
		Field fodder growing	Other field fodder growing	2005	104'500
		Set-aside/green manuring	Set-aside/green manuring	2005	18'000
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	610
	Permanent crops	Grapes	Grapes	2005	2'600
		Other permanent crops	tree nurseries	2005	530
		Special crops	hops	2005	85
		Fruits and nuts	Fruits	2005	5'000
	No information	No information	No information	2005	4'766
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	410'000
Ghana	Arable land	Flowers and ornamental	Tagetes	2005	5

Country	Main category	Crop category	Crop	Year	Hectares
		plants			
		Medicinal & aromatic plants	cetronella	2005	35
			ginger	2005	200
	Permanent crops	Cocoa	Cocoa	2005	264
		Coffee	Coffee	2005	55
		Tropical fruits	Banana	2005	60
			Mango	2005	978
			Papaya	2005	470
			Pineapples	2005	975
		Special crops	oil palm	2005	13'924
		Fruits and nuts	pimberrien	2005	5
		Citrus fruit	Other citrus fruit	2005	240
		Medicinal & aromatic plants	Lemongrass	2005	30
			patchouri	2005	10
			vertiver	2005	10
Greece	Arable land	Cereals	Barley	2005	1'439
			Grain Maize	2005	1'345
			Oats	2005	682
			Other cereals	2005	2'001
			Rice	2005	16
			Wheat	2005	8'341
		Oilseeds	Sunflower seed	2005	322
		Other arable crops	Other arable crops	2005	29'013
			Tobacco	2005	16
		Root crops	Potatoes	2005	9
		Vegetables	Other vegetables	2005	561
		Industrial crops	Cotton	2005	430
			Other Industrial crops	2005	30
		Protein crops	Dried pulses	2005	122
			Soya	2005	12
		Field fodder growing	Other field fodder growing	2005	599
			Lucerne	2005	5'803
			Clover	2005	112
			Meadows	2005	143
			Vetches	2005	2'431
		Fruits and nuts	Strawberry	2005	1
		Set-aside/green manuring	Fallow land as a part of crop rotation	2005	1'603
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	122
		Nurseries	nurseries	2005	1
	Other crops	Other crops	Safran	2005	199
	Permanent crops	Grapes	Grapes	2005	3'758
			Currants	2005	182
			Sultanas	2005	15
		Olives	Olives	2005	39'636

Country	Main category	Crop category	Crop	Year	Hectares
		Tropical fruits	Avocado	2005	34
			Banana	2005	7
		Fruits and nuts	Almonds	2005	277
			Apples	2005	75
			Apricots	2005	107
			Blackberry	2005	8
			Carob trees	2005	98
			figs	2005	129
			Kiwi	2005	267
			Other fruits and nuts	2005	303
			Plums	2005	49
			Sour cherry	2005	2
			Pears	2005	103
			Chestnuts	2005	554
			Walnuts	2005	336
			Sweet cherry	2005	63
			Pistachios	2005	78
			Other nuts	2005	4
		Citrus fruit	Other citrus fruit	2005	1'986
			Nectarines	2005	16
	No information	No information	No information	2005	48
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	184'770
Guatemala	Arable land	Cereals	Amaranto	2005	2
		Vegetables	Other vegetables	2005	8
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	4
	Permanent crops	Cocoa	Cocoa	2005	42
		Coffee	Coffee	2005	9'870
		Other permanent crops	Yuca	2005	3
		Tea	Tea	2005	26
		Tropical fruits	Banana	2005	51
			Mango	2005	25
			Papaya	2005	11
		Fruits and nuts	Blueberry	2005	5
			macadamia	2005	163
		Citrus fruit	Other citrus fruit	2005	125
		Medicinal & aromatic plants	Vanilla	2005	1
			cardamon	2005	1'594
	No information	No information	No information	2005	183
Guyana	No information	No information	No information	2003	109
Honduras	Permanent crops	Coffee	Coffee	2003	1'823
Hongkong	Arable land	Vegetables	Other vegetables	2005	12
Hungary	Arable land	Cereals	Barley	2005	2'141
			Grain Maize	2005	4'685
			Oats	2005	2'109
			Other cereals	2005	3'821

Country	Main category	Crop category	Crop	Year	Hectares
			Rice	2005	35
			Rye	2005	883
			Wheat	2005	11'768
		Oilseeds	Other oilseeds	2005	28
			Rape and Turnip rape	2005	12
			Rape seeds	2005	1'622
			Sunflower seed	2005	3'786
		Root crops	Fodder roots and brassicas	2005	1
			Potatoes	2005	43
			Sugarbeets	2005	1
		Seed production	seeds and seedlings	2005	440
		Vegetables	Other vegetables	2005	912
		Industrial crops	Other Industrial crops	2005	2'737
		Protein crops	Other protein crops	2005	1'277
			Soya	2005	1'424
		Field fodder growing	Other field fodder growing	2005	12'974
		Set-aside/green manuring	Fallow land	2005	2'891
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	660
	Other	Unutilised land	Unutilised land	2005	33
	Permanent crops	Grapes	Grapes	2005	594
		Other permanent crops	Other permanent crops	2005	99
		Fruits and nuts	Nuts	2005	320
			Other fruits and nuts	2005	78
			Fruits	2005	1497
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	66'665
			Permanent pastures/ grassland	2005	33
Iceland	No information	No information	No information	2005	4'684
India	No information	No information	No information	2005	150'790
Indonesia	Other	Unknown/mixed	Unknown/mixed	2005	990
	Permanent crops	Coffee	Coffee	2005	10'836
		Tea	Tea	2005	97
		Tropical fruits	Coconut	2005	4'834
		various	Vanilla	2005	1'026
Ireland	Arable land	Cereals	Cereals	2005	757
		Vegetables	Other vegetables	2005	367
	No information	No information	No information	2005	1'683
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/	2005	32'459

Country	Main category	Crop category	Crop	Year	Hectares
			grassland		
Israel	Arable land	Cereals	Cereals	2005	2'110
			Wheat	2005	1'100
		Oilseeds	Sunflower seed	2005	50
		Root crops	Potatoes	2005	330
			Other root crops	2005	80
		Seed production	seeds and seedlings	2005	40
		Vegetables	Carrot	2005	200
			Garlic	2005	30
			Greenhouse cultivation	2005	230
			Onion	2005	20
			Other vegetables	2005	50
			Tomatoes	2005	700
			watermelon	2005	20
		Industrial crops	Cotton	2005	300
	Permanent crops	Grapes	Grapes	2005	100
		Oilseeds	Jojoba	2005	110
		Olives	Olives	2005	340
		Other permanent crops	hibiscus	2005	10
		Tropical fruits	Avocado	2005	250
			Banana	2005	20
			Dates	2005	230
			Mango	2005	60
			Other tropical fruits	2005	50
		Fruits and nuts	Almonds	2005	5
			Apples	2005	30
			Apricots	2005	5
			Nuts	2005	5
			Other fruits and nuts	2005	100
			peach	2005	10
			pear	2005	10
			Plums	2005	10
			pomegranate	2005	10
			Strawberry	2005	5
	No information	No information	No information	2005	65
Italy	Arable land	Cereals	Barley	2005	26'806
			Grain Maize	2005	13'907
			Oats	2005	21'025
			Other cereals	2005	7'577
			Rice	2005	11'444
			Rye	2005	249
			Wheat	2005	177'840
		Other arable crops	Other arable crops	2005	6'639
		Root crops	Other root crops	2005	2'270
		Vegetables	Other vegetables	2005	15'825

Country	Main category	Crop category	Crop	Year	Hectares
		Industrial crops	Other Industrial crops	2005	23'106
		Protein crops	Other protein crops	2005	4'344
		Field fodder growing	Other field fodder growing	2005	288'927
		Set-aside/green manuring	Fallow land as a part of crop rotation	2005	13'670
	Other	Unutilised land	Unutilised land	2005	21'222
	Permanent crops	Grapes	Grapes	2005	33'885
		Olives	Olives	2005	106'938
		Other permanent crops	Other permanent crops	2005	11'840
		Fruits and nuts	Fruits	2005	33'934
		Citrus fruit	Other citrus fruit	2005	18'044
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	227'610
Jamaica	Arable land	Other arable crops	Other arable crops	2005	1
		Vegetables	cabbage	2005	1
			Other vegetables	2005	1
			pepper	2005	60
	Permanent crops	Cocoa	Cocoa	2005	30
		Coffee	Coffee asociated with Other crops	2005	1
		Tropical fruits	Coconut	2005	120
			Banana asscociated with other crops	2005	1
		Citrus fruit	Other citrus fruit	2005	1
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	160
Japan	No information	No information	No information	2005	8'109
Jordan	Permanent crops	Olives	Olives	2005	10
Kazakhstan	No information	No information	No information	2002	36'882
Kenya	No information	No information	No information	2005	182'586
Korea, Republic of	No information	No information	No information	2005	38'282
Kyrgyzstan	Arable land	Cereals	Cereals	2005	119
		Vegetables	Other vegetables	2005	4
		Industrial crops	Cotton	2005	98
Latvia	Arable land	Cereals	Barley	2005	4'096
			Oats	2005	5'706
			Other cereals	2005	3'009
			Rye and meslin	2005	1'767
			Triticale	2005	766
			Wheat	2005	3'642

Country	Main category	Crop category	Crop	Year	Hectares
		Flowers and ornamental plants	Other Flowers and ornamental plants	2005	1
		Oilseeds	Rape and Turnip rape	2005	1'155
			linseed	2005	6
		Root crops	Fodder roots and brassicas	2005	254
			Potatoes	2005	5'358
			Sugarbeets	2005	6
		Seed production	seeds and seedlings	2005	160
		Vegetables	Other vegetables	2005	214
		Industrial crops	Other Industrial crops	2005	26
		Protein crops	Dried pulses	2005	587
		Field fodder growing	Maize for silage	2005	24
			temporary grassland	2005	63'730
		Set-aside/green manuring	Fallow land	2005	1'956
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	27
	Permanent crops	Fruits and nuts	Apples	2005	284
			cherries	2005	29
			Other fruits and nuts	2005	551
			Plums	2005	16
			Pears	2005	19
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	25'223
Lebanon	Arable land	Cereals	Other cereals	2005	123
		Flowers and ornamental plants	Other Flowers and ornamental plants	2005	122
		Oilseeds	Other oilseeds	2005	123
		Other arable crops	Other arable crops	2005	12
		Root crops	Other root crops	2005	49
		Seed production	seeds and seedlings	2005	25
		Vegetables	Other vegetables	2005	470
		Industrial crops	Other Industrial crops	2005	13
		Protein crops	Other protein crops	2005	24
		Field fodder growing	Other field fodder growing	2005	25
		Set-aside/green manuring	Set-aside and temporary pastures	2005	50
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	110
	Permanent crops	Grapes	Grapes	2005	12
		Olives	Olives	2005	475

Country	Main category	Crop category	Crop	Year	Hectares
		Other permanent crops	Kiwi	2005	13
		Fruits and nuts	Apples	2005	1
			cherries	2005	1
			Other fruits and nuts	2005	49
			Fruits	2005	593
		Citrus fruit	Other citrus fruit	2005	177
Liechtenstein	Arable land	Cereals	Wheat	2005	45
			Spelt	2005	5
		Oilseeds	Other oilseeds	2005	5
		Root crops	Other root crops	2005	5
		Vegetables	Other vegetables	2005	5
		Field fodder growing	Maize for silage	2005	80
			temporary grassland	2005	155
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	740
Lithuania	Arable land	Cereals	Other cereals	2005	39'003
		Vegetables	Other vegetables	2005	539
		Set-aside/green manuring	Fallow land	2005	3'512
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	392
	Permanent crops	Fruits and nuts	Other fruits and nuts	2005	3'666
	No information	No information	No information	2005	5'024
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	17'294
Luxemburg	Arable land	Cereals	Other cereals	2005	521
		Oilseeds	Other oilseeds	2005	15
		Root crops	Other root crops	2005	24
		Seed production	seeds and seedlings	2005	111
		Vegetables	Vegetables	2005	23
		Industrial crops	Other Industrial crops	2005	2
		Protein crops	Other protein crops	2005	67
		Field fodder growing	Other field fodder growing	2005	549
		Set-aside/green manuring	Fallow land	2005	5
			Fallow land as a part of crop rotation	2005	11
	Permanent crops	Grapes	Grapes	2005	6
		Fruits and nuts	Other fruits and nuts	2005	49
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	1'860
Macedonia	Arable land	Cereals	Barley	2005	2
			Grain Maize	2005	130

Country	Main category	Crop category	Crop	Year	Hectares
			Other cereals	2005	20
			Rice	2005	6
		Oilseeds	Peanuts	2005	1
			Sunflower seed	2005	1
		Other arable crops	Other arable crops	2005	2
		Root crops	Potatoes	2005	16
	Permanent crops	Grapes	Grapes	2005	1
		Other permanent crops	kaki	2005	20
		Fruits and nuts	Almonds	2005	28
			Apricots	2005	1
			Blackberry	2005	1
			cherries	2005	2
			peach	2005	1
			Plums	2005	1
			pomegranate	2005	1
			Raspberries	2005	7
			Sour cherry	2005	8
			Chestnuts	2005	2
Madagascar	Arable land	Medicinal & aromatic plants	Other Medicinal & aromatic plants	2006	300
	Permanent crops	Other permanent crops	geranium (essential oil)	2006	40
		Special crops	oil palm	2006	1'730
		Fruits and nuts	Apples	2006	150
Malawi	No information	No information	No information	2002	325
Malaysia	No information	No information	No information	2005	963
Mali	Arable land	Oilseeds	Sesame seeds	2005	748
		Industrial crops	Cotton	2005	1'822
	No information	No information	No information	2005	12'030
Malta	Arable land	Vegetables	Other vegetables	2005	2
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	1
	Permanent crops	Grapes	Grapes	2005	1
		Olives	Olives	2005	7
		Fruits and nuts	Other fruits and nuts	2005	2
		Citrus fruit	Other citrus fruit	2005	1
Mauritius	Permanent crops	Sugarcane	Sugarcane	2005	175
Mexico	Arable land	Cereals	Amaranto	2005	193
			Grain Maize	2005	4'530
			Rice	2005	150
		Oilseeds	Cartamo	2005	662
			Sesame seeds	2005	2'498
		Other arable crops	Chile	2005	139
			esptropajo	2005	36
			jamaica	2005	171
		Vegetables	Other vegetables	2005	33'417

Country	Main category	Crop category	Crop	Year	Hectares
			watermelon	2005	40
		Protein crops	Frijol	2005	140
			legumes	2005	156
		Medicinal & aromatic plants	Aloe vera	2005	1'888
			Aromatic plants	2005	30'119
	Permanent crops	Cocoa	Cocoa	2005	17'314
		Coffee	Coffee	2005	147'137
			Coffee asociated with Other crops	2005	2'906
		Olives	Olives	2005	1'000
		Other permanent crops	macadamia	2005	28
			neem	2005	213
			Vanilla	2005	571
			Yuca	2005	500
		Sugarcane	Sugarcane	2005	853
		Tropical fruits	Avocado	2005	2'652
			Banana	2005	153
			cactus	2005	10'982
			Coconut	2005	8'400
			Guava	2005	624
			Litchi	2005	104
			mamey	2005	17
			Mango	2005	2'132
			Marañon	2005	242
			nanche	2005	15
			Papaya	2005	12
			Passion fruit	2005	4
			Pitaya	2005	15
			Pineapples	2005	253
		Fruits and nuts	Apples	2005	254
			Blackberry	2005	229
			Nuts	2005	20
			Other fruits and nuts	2005	5'871
			peach	2005	8
			pear	2005	4
			Plums	2005	5
			Raspberry	2005	263
			Strawberry	2005	142
		Citrus fruit	Other citrus fruit	2005	1'608
	No information	No information	No information	2005	13'789
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	15'233
Moldova	Arable land	Cereals	Other cereals	2005	45
		Oilseeds	Sunflower seed	2005	121
		Vegetables	Other vegetables	2005	61
		Set-aside/green manuring	Set-aside/green manuring	2005	700

Country	Main category	Crop category	Crop	Year	Hectares
		Medicinal & aromatic plants	lavander	2005	55
	Permanent crops	Grapes	Grapes	2005	8'155
		Fruits and nuts	Other dry fruits	2005	615
			Other fruits and nuts	2005	417
			walnut kernel	2005	815
	No information	No information	No information	2005	91
Morocco	Arable land	Vegetables	Other vegetables	2005	301
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	504
	Other	Forest	Argan Oil	2005	13'228
			Essential oil	2005	5'673
	Permanent crops	Fruits and nuts	Fruits	2005	334
Mozambique	Arable land	Oilseeds	Peanuts	2005	226
			Sesame seeds	2005	476
		Medicinal & aromatic plants	Aromatic plants / eucalyptus citriodora/basil tropical	2005	2
	Permanent crops	Other permanent crops	geranium (essential oil)	2005	1
			neem	2005	1
		Tropical fruits	Mango	2005	2
			Papaya	2005	2
			Passion fruit	2005	1
			Pineapples	2005	1
		Citrus fruit	Other citrus fruit	2005	1
		Medicinal & aromatic plants	Lemongrass	2005	1
			vertiver	2005	1
			Other Medicinal & aromatic plants	2005	1
Nepal	Arable land	Medicinal & aromatic plants	Herbs for essential oil	2004	311
	Permanent crops	Coffee	Coffee	2004	100
		Tea	Tea	2004	589
Netherlands	Arable land	Cereals	Cereals	2005	5'307
		Other arable crops	Other arable crops	2005	209
		Root crops	Other root crops	2005	3'229
		Vegetables	Other vegetables	2005	2'399
		Industrial crops	Other Industrial crops	2005	139
		Protein crops	Dried pulses	2005	28
		Field fodder growing	Maize for silage	2005	1'000
			Other field fodder growing	2005	2'817

Country	Main category	Crop category	Crop	Year	Hectares
		Set-aside/green manuring	Fallow land	2005	2'792
			Fallow land as a part of crop rotation	2005	2'905
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	35
	Permanent crops	Fruits and nuts	Other fruits and nuts	2005	480
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	27'425
New Zealand	No information	No information	No information	2005	45'000
Nicaragua	Arable land	Oilseeds	Mani	2005	35
			Sesame seeds	2005	780
			Soya	2005	240
		Other arable crops	Tobacco	2005	21
		Root crops	Other root crops	2005	45
	Permanent crops	Cocoa	Cocoa	2005	400
		Coffee	Coffee	2005	8'950
		Fruits and nuts	Other fruits and nuts	2005	41
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	40'545
Niger	Arable land	Root crops	tigernuts	2005	39
Norway	Arable land	Cereals	Barley	2005	3'308
			Oats	2005	2'439
			Rye	2005	249
			Wheat	2005	1'229
		Root crops	Potatoes	2005	178
			Other root crops	2005	12
		Seed production	Seeds and seedlings	2005	418
		Vegetables	Cabbage	2005	13
			Carrot	2005	28
			Onion	2005	7
			Other vegetables	2005	58
		Protein crops	Other protein crops	2005	296
		Field fodder growing	feed legumes	2005	186
			Other field fodder growing	2005	27'251
			temporary grassland	2005	6'228
		Set-aside/green manuring	Fallow land as a part of crop rotation	2005	746
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	20
	Other crops	Other crops	Other crops	2005	231
	Permanent crops	Fruits and nuts	Apples	2005	61
			Other fruits and nuts	2005	66
			Strawberry	2005	9

Country	Main category	Crop category	Crop	Year	Hectares
Pakistan	Arable land	Cereals	Rice	2004	6'360
			Wheat	2004	3'800
		Oilseeds	Sesame seeds	2004	3'560
		Other arable crops	Other arable crops	2004	1'120
		Industrial crops	Cotton	2004	880
	Permanent crops	Tropical fruits	Other tropical fruits	2004	800
		Fruits and nuts	Other dry fruits	2004	1'600
		Citrus fruit	Other citrus fruit	2004	440
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2004	1'750
Palestine, Occupied Tr.	Arable land	Other arable crops	Other arable crops	2004	200
	Permanent crops	Other permanent crops	Other permanent crops	2004	800
Panama	Arable land	Vegetables	Other vegetables	2005	7
	Other crops	Unknown/mixed	Unknown/mixed	2005	290
	Permanent crops	Cocoa	Cocoa	2005	4'850
		Coffee	Coffee	2005	40
		Tropical fruits	Araza	2005	15
			Banana	2005	22
			Pineapples	2005	10
		Citrus fruit	Other citrus fruit	2005	10
Paraguay	Arable land	Oilseeds	Sesame seeds	2005	3'000
			Soya	2005	1'500
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	2'500
	Permanent crops	Tea	mate	2005	30'000
		Tropical fruits	Sugarcane	2005	20'000
		Fruits and nuts	Other fruits and nuts	2005	2'500
Peru	Arable land	Cereals	Quinoa	2005	4'762
	Permanent crops	Cocoa	Cocoa	2005	6'368
		Coffee	Coffee	2005	71'241
		Tropical fruits	Banana	2005	2'411
Philippines	Arable land	Cereals	Rice	2004	14'134
Poland	No information	No information	No information	2005	167'740
Portugal	Arable land	Cereals	Cereals	2005	41'996
		Vegetables	Other vegetables	2005	817
		Set-aside/green manuring	Set-aside	2005	1'260
		Medicinal & aromatic plants	Aromatic plants	2005	547
	Permanent crops	Grapes	Grapes	2005	1'308
		Olives	Olives	2005	28'152
		Fruits and nuts	Other dry fruits	2005	3'519
			Other fruits and nuts	2005	1'107

Country	Main category	Crop category	Crop	Year	Hecta-res
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	154'752
Romania	Arable land	Cereals	Barley	2005	1'750
			Grain Maize	2005	1'890
			Oats	2005	197
			Other cereals	2005	397
			Rye	2005	247
			Sorghum	2005	1'300
			Triticale	2005	551
			Wheat	2005	14'095
			Spelt	2005	1'673
		Oilseeds	Cartamo	2005	236
			Rape seeds	2005	5'313
			Soya	2005	321
			Sunflower seed	2005	8'864
		Root crops	fodder beet	2005	130
			Potatoes	2005	66
		Seed production	seeds and seedlings	2005	21
		Vegetables	cabbage	2005	30
			Carrot	2005	25
			Garlic	2005	10
			Onion	2005	20
			Other vegeta-bles	2005	43
			Parsley	2005	10
			pepper	2005	62
			Tomatoes	2005	200
			watermelon	2005	40
		Industrial crops	Flax	2005	69
			Other Indus-trial crops	2005	25
		Protein crops	Beans	2005	20
			legumes	2005	50
			Peas	2005	30
			Soya	2005	2'000
		Field fodder growing	Maize for silage	2005	20
			Other field fodder grow-ing	2005	670
			temporary grassland	2005	2'000
			Lucerne	2005	600
		Set-aside/green manuring	Fallow land	2005	1'730
		Medicinal & aromatic plants	Chamomile	2005	30
			lavander	2005	10
			Aromatic plants	2005	182
	Permanent crops	Grapes	Grapes	2005	257
		Fruits and nuts	Apples	2005	260
			Apricots	2005	10
			cherries	2005	10
			Nuts	2005	92

Country	Main category	Crop category	Crop	Year	Hectares
			Plums	2005	20
			Raspberry	2005	20
			Strawberry	2005	20
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	42'300
Russian Federation	No information	No information	No information	2005	40'000
Rwanda	Arable land	Other arable crops	Other arable crops	2005	35
	Permanent crops	Other permanent crops	geranium (essential oil)	2005	20
		Tropical fruits	Banana asscociated with other crops	2005	50
Saudi Arabia	Arable land	Cereals	Barley	2005	25
			Wheat	2005	200
		Other arable crops	Other arable crops	2005	10'500
		Root crops	Potatoes	2005	10
		Vegetables	Greenhouse cultivation	2005	245
			Onion	2005	10
			Other vegetables	2005	186
			Tomatoes	2005	100
	Permanent crops	Olives	Olives	2005	783
		Tropical fruits	Dates	2005	455
		Fruits and nuts	Other fruits and nuts	2005	1'216
Senegal	No information	No information	No information	2004	2'500
Serbia/ Montenegro	No information	No information	No information	2005	591
Slovak Republic	Arable land	Cereals	Barley	2005	1'604
			Grain Maize	2005	360
			Oats	2005	1'637
			Other cereals	2005	853
			Rye	2005	849
			Wheat	2005	4'909
		Oilseeds	Rape and Turnip rape	2005	945
			Soya	2005	187
			Sunflower seed	2005	569
		Root crops	Potatoes	2005	17
			Sugarbeets	2005	64
		Vegetables	Other vegetables	2005	204
		Industrial crops	Other Industrial crops	2005	126
		Protein crops	Other protein crops	2005	904
		Field fodder growing	Other field fodder growing	2005	8'547
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	352

Country	Main category	Crop category	Crop	Year	Hectares
	Other	Unutilised land	Unutilised land	2005	1'467
	Permanent crops	Grapes	Grapes	2005	91
		Fruits and nuts	Fruits	2005	549
	No information	No information	No information	2005	4'838
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	63'119
Slovenia	Arable land	Cereals	Barley	2005	90
			Oats	2005	134
			Other cereals	2005	144
			Rye	2005	41
			Wheat	2005	106
		Oilseeds	Rape and Turnip rape	2005	9
			Soya	2005	4
			Sunflower seed	2005	2
		Root crops	Fodder roots and brassicas	2005	10
			Potatoes	2005	76
		Vegetables	Other vegetables	2005	130
		Set-aside/green manuring	Fallow land	2005	3
			Fallow land as a part of crop rotation	2005	5
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	7
	Permanent crops	Grapes	Grapes	2005	67
		Olives	Olives	2005	7
		Fruits and nuts	Strawberry	2005	12
			Fruits	2005	359
	No information	No information	No information	2005	623
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	21'670
South Africa	No information	No information	No information	2005	50'000
Spain	Arable land	Other arable crops	Other arable crops	2005	96'314
		Seed production	seeds and seedlings	2005	2'828
		Vegetables	Other vegetables	2005	3'854
		Set-aside/green manuring	Set-aside and temporary pastures	2005	76'446
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	14'628
	Other	Forest	Forest	2005	184'807
	Other crops	Other crops	Other crops	2005	5'605
	Permanent crops	Grapes	Grapes	2005	15'991
		Olives	Olives	2005	91'485
		Tropical fruits	Banana asscociated with other	2005	635

Country	Main category	Crop category	Crop	Year	Hectares
			crops		
		Fruits and nuts	Other dry fruits	2005	41'360
			Other fruits and nuts	2005	3'566
		Citrus fruit	Other citrus fruit	2005	1'810
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	268'239
Sri Lanka	No information	No information	No information	2005	10'049
Sudan	Arable land	Cereals	Sorghum	2005	10'000
		Oilseeds	Sesame seeds	2005	16'000
		Medicinal & aromatic plants	senna pods	2005	10'000
	Permanent crops	Other permanent crops	guar gum	2005	10'000
			Gum arabic	2005	140'000
			hibiscus	2005	13'500
		Tropical fruits	Dates	2005	350
		Citrus fruit	Other citrus fruit	2005	150
Sweden	Arable land	Cereals	Other cereals	2005	52'799
		Oilseeds	Other oilseeds	2005	3'168
		Other arable crops	Other arable crops	2005	74'814
		Root crops	Other root crops	2005	1'002
		Vegetables	Other vegetables	2005	533
		Protein crops	Other protein crops	2005	7'711
		Field fodder growing	Other field fodder growing	2005	3'549
		Set-aside/green manuring	Fallow land	2005	9'917
	Permanent crops	Fruits and nuts	Other fruits and nuts	2005	271
	No information	No information	No information	2005	7'007
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	39'239
Switzerland	Arable land	Cereals	Barley	2005	791
			Grain Maize	2005	401
			Oats	2005	187
			Other cereals	2005	17
			Rye	2005	242
			Triticale	2005	308
			Wheat	2005	2'327
			Spelt	2005	761
			Emmer	2005	39
		Flowers and ornamental plants	Other Flowers and ornamental plants	2005	21
		Oilseeds	Pumpkin seeds	2005	13
			Rape seeds	2005	56
			Soya	2005	38
			Sunflower	2005	39

Country	Main category	Crop category	Crop	Year	Hectares
			seed		
		Other arable crops	Tobacco	2005	2
		Root crops	fodder beet	2005	16
			Potatoes	2005	481
			Sugarbeets	2005	10
		Vegetables	Brussels sprouts	2005	3
			Greenhouse cultivation	2005	58
			Other vegetables	2005	1'136
		Industrial crops	Flax	2005	8
		Field fodder growing	feed legumes	2005	195
			Maize for silage	2005	1'236
			temporary grassland	2005	8'367
		Set-aside/green manuring	Fallow land as a part of crop rotation	2005	134
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	26
	Permanent crops	Grapes	Grapes	2005	388
		Other permanent crops	Other permanent crops	2005	72
		Special crops	hops	2005	3
			Other Special crops	2005	1
		Fruits and nuts	Apples	2005	367
			pear	2005	62
			Fruits	2005	89
		Medicinal & aromatic plants	rhubarb	2005	8
			Other Medicinal & aromatic plants	2005	88
	No information	No information	No information	2005	1'799
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	78'588
			Permanent pastures/ grassland	2005	18'740
Syria	Arable land	Other arable crops	Cereals and legumes	2005	10'000
		Vegetables	Other vegetables	2005	1'000
	Permanent crops	Grapes	Grapes	2005	4'000
		Olives	Olives	2005	5'000
		Fruits and nuts	Apples	2005	500
	No information	No information	No information	2005	-
Taiwan	Arable land	Cereals	Rice	2005	744
		Flowers and ornamental plants	Other Flowers and ornamental plants	2005	1
		Root crops	Other root crops	2005	15
		Vegetables	Other vegeta-	2005	133

Country	Main category	Crop category	Crop	Year	Hectares
			bles		
			Tomatoes	2005	1
		Field fodder growing	Other field fodder growing	2005	14
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	3
	Other crops	Unknown/mixed	Unknown/mixed	2005	322
		Mushrooms	Mushrooms	2005	2
	Permanent crops	Grapes	Grapes	2005	1
		Tea	Tea	2005	54
		Tropical fruits	Banana	2005	3
			Guava	2005	2
			Litchi	2005	3
			Other tropical fruits	2005	16
			Pitaya	2005	1
			Pineapples	2005	5
		Fruits and nuts	Other fruits and nuts	2005	44
			peach	2005	8
			Plums	2005	30
			Strawberry	2005	3
			Other fruits	2005	6
			Fruits	2005	2
		Citrus fruit	Other citrus fruit	2005	21
			oranges	2005	4
Tanzania	No information	No information	No information	2005	38'875
Thailand	Arable land	Cereals	Other cereals	2005	1'077
			Rice	2005	17'328
		Vegetables	Other vegetables	2005	2'375
	Other crops	Other crops	Other crops	2005	122
	Permanent crops	Fruits and nuts	Other fruits and nuts	2005	799
East Timor	Permanent crops	Coffee	Coffee	2005	21'325
		Other permanent crops	Vanilla	2005	130
			cloves	2005	71
Togo	No information	No information	No information	2005	90
Trinidad & Tobago	No information	No information	No information	2005	67
Tunisia	Arable land	Cereals	Cereals	2005	1'071
		Other arable crops	Other arable crops	2005	2'739
		Vegetables	Other vegetables	2005	30
		Field fodder growing	Other field fodder growing	2005	27
		Medicinal & aromatic plants	Aromatic plants / Jojoba	2005	381
	Other	Unutilised land	Unutilised land	2005	18'495
	Permanent crops	Olives	Olives	2005	80'016

Country	Main category	Crop category	Crop	Year	Hectares
		Tropical fruits	cactus	2005	561
		Special crops	date palms	2005	875
		Fruits and nuts	Almonds	2005	2'518
			Other fruits	2005	1'003
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	35'383
Turkey	Arable land	Industrial crops	Cotton	2005	9'130
		Set-aside/green manuring	Set-aside/green manuring	2005	3'960
	Other crops	Unknown/mixed	Unknown/mixed	2005	75'419
	Permanent crops	Grapes	Grapes	2005	4'624
Uganda	Permanent crops	Cocoa	Cocoa	2004	2'082
		Coffee	Coffee	2004	18'135
	No information	No information	No information	2005	161'783
UK	Arable land	Cereals	Cereals	2005	47'694
		Other arable crops	Other arable crops	2005	10'788
		Vegetables	Other vegetables	2005	13'718
		Field fodder growing	Temporary pasture	2005	97'907
		Set-aside/green manuring	Set-aside	2005	3'743
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	812
	Other	Forest	Forest	2005	6'856
	Permanent crops	Fruits and nuts	Other fruits and nuts	2005	1'691
	No information	No information	No information	2005	8'313
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2005	428'330
Ukraine					241'980
Uruguay	Arable land	Cereals	Rice	2004	800
	Permanent crops	Other permanent crops	Other permanent crops	2004	5'500
		Citrus fruit	Other citrus fruit	2004	300
	Permanent pastures/ grassland	Permanent pastures/ grassland	Permanent pastures/ grassland	2004	752'400
US	Arable land	Cereals	Barley	2005	15'892
			Buckwheat	2005	2'575
			Grain Maize	2005	52'881
			Oats	2005	18'804
			Rice	2005	10'695
			Rye	2005	3'479
			Sorghum	2005	2'445
			Wheat	2005	112'295
			Spelt	2005	3'306
			Millet	2005	5'736
		Oilseeds	Peanuts	2005	4'832
			Sunflower seed	2005	2'463

Country	Main category	Crop category	Crop	Year	Hectares
		Root crops	Potatoes	2005	2'663
		Vegetables	Carrot	2005	2'322
			Other vegetables	2005	29'765
			Tomatoes	2005	2'693
			lettuce	2005	4'851
		Industrial crops	Cotton	2005	3'859
			Flax	2005	12'482
		Protein crops	Beans	2005	4'274
			Soya	2005	49'459
			Dry peas and lentils	2005	7'186
		Field fodder growing	Other field fodder growing	2005	166'464
		Set-aside/green manuring	Fallow land	2005	66'789
		Medicinal & aromatic plants	Other Medicinal & aromatic plants	2005	2'125
	Other crops	Other crops	trees for maple syrup	2005	4'956
	Permanent crops	Grapes	Grapes	2005	9'209
		Fruits and nuts	Apples	2005	5'168
			Nuts	2005	6'469
			Other fruits and nuts	2005	14'368
		Citrus fruit	Other citrus fruit	2005	4'107
	No information	No information	No information	2005	62'483
	Permanent pastures/ grassland	Permanent pastures/ grassland	Pastures and meadows	2005	923'253
Venezuela	No information	No information	No information	2004	16'000
Vietnam	No information	No information	No information	2001	6'475
Zambia	Other crops	Unknown/mixed	Unknown/mixed	2005	2'884
Zimbabwe	Other crops	Other crops	Other crops	2005	25
Gesamtergebnis					30'558'183

Source: SOEL-FiBL Survey 2007.
Data providers and sources are listed under the continent tables at the end of the continent chapters.

Table 22: Global organic land use by main crop categories

Main category	Crop category	Organic area (hectares)
Arable land	Cereals	1'445'462
	Flowers and ornamental plants	309
	Oilseeds	103'132
	Other arable crops	743'087
	Root crops	26'955
	Seed production	5'714

	Vegetables	152'205
	Industrial crops	99'042
	Protein crops	165'994
	Field fodder growing	1'046'362
	Set-aside/green manuring	294'410
	Medicinal & aromatic plants	74'080
	Nurseries	1
Arable land total		4'156'754
Other	Unutilised land	72'575
	Forest	210'624
	Unknown/mixed	2'100
	aquaculture	4'080
Other total		289'379
Other crops total		1'550'272
Permanent crops	Cocoa	76'726
	Coffee	309'585
	Grapes	103'667
	Oilseeds	110
	Olives	354'480
	Other permanent crops	188'414
	Sugarcane	10'644
	Tea	30'780
	Tropical fruits	93'810
	Special crops	20'307
	Fruits and nuts	168'793
	various	1'026
	Citrus fruit	33'508
	Medicinal & aromatic plants	1'744
Permanent crops total		1'393'595
No information	No information	3'228'387
Permanent pastures/ grassland total		19'939'796
Total		30'558'183

Source: SOEL-FiBL Survey 2007.; Data providers and sources are listed under the continent tables at the end of the continent chapters.

21 Contacts

BioFach/NürnbergMesse GmbH,
Messezentrum
D-90471 Nürnberg, Germany
Tel. +49 911 8606-0
Fax +49 9 11 86 06-28
biofach@nuernbergmesse.de, info@nuernbergglobalfairs.com
www.biofach.com, www.nuernbergglobalfairs.com

Forschungsinstitut für biologischen Landbau / Research Institute of Organic Agriculture (FiBL)
Ackerstrasse
CH-5070 Frick, Switzerland
Tel. +41 62 8657-272
Fax +41 62 8657-273
info.suisse@fibl.org
www.fibl.org

International Federation of Organic Agriculture Movements (IFOAM)
Charles-de-Gaulle-Str. 5
D - 53113 Bonn, Germany
Tel. +49 228 926 50-10
Fax: +49 228 926 50-99
HeadOffice@ifoam.org
http://www.ifoam.org

Stiftung Ökologie & Landbau / Foundation Ecology & Agriculture (SÖL)
Weinstr. Sued 51
D-67098 Bad Duerkheim, Germany
Tel. +49 6322 989700
Fax +49 6322 989701
info@soel.de
www.soel.de

FiBL – Professional Competence for Organic Agriculture Worldwide

More than 30 Years of Experience

Research and Development

Project and feasibility studies

Training and advice

Conversion planning

Pilot and demonstration trials

Support for import and label certification

Set-up of inspection and certification programmes

Market surveys, marketing concepts and organic produce sourcing

FiBL

Research Institute of Organic Agriculture
Forschungsinstitut für biologischen Landbau
Institut de recherche de l'agriculture biologique
Istituto di ricerche dell'agricoltura biologica
Instituto de investigaciones para la agricultura orgánica

Research Institute of Organic Agriculture (FiBL) Switzerland, Ackerstrasse, Postfach, CH-5070 Frick, Phone +41 62 865 7272, Fax +41 62 865 7273, info.suisse@fibl.org
FiBL Germany, Galvanistrasse 28, D-60486 Frankfurt, Phone +49 69 713 769 90, Fax +49 69 713 7699 9, info.deutschland@fibl.org
FiBL Austria, Theresianumgasse 11/1, A-1040 Vienna, Phone +43 1 907 6313, Fax +43 1 403 7050 191, info.oesterreich@fibl.org

www.fibl.org