



# THE WORLD OF ORGANIC AGRICULTURE

STATISTICS & EMERGING TRENDS 2006

AUSTRALIA / OCEANIA 12,2 MILLION HA

ASIA 4,1 MILLION HA

AFRICA 1,0 MILLION HA

EUROPE 6,5 MILLION HA

LATIN AMERICA 6,4 MILLION HA

NORTH AMERICA 1,4 MILLION HA





**THE  
WORLD OF  
ORGANIC AGRICULTURE**

**STATISTICS & EMERGING TRENDS 2006**

All of the statements, results etc. contained in this book have been compiled by the authors according to their best knowledge and have been scrupulously checked by the Research Institute of Organic Agriculture (FiBL), the Foundation Ecology & Agriculture (SOEL) and the International Federation of Organic Agriculture Movements (IFOAM). However, the possibility of mistakes cannot be ruled out entirely. Therefore, the editors and the authors are not subject to any obligation and make no guarantees whatsoever regarding any of the statements etc. in this work; neither do they accept responsibility or liability for any possible mistakes contained therein.

Additional information (links, graphs) is available from the internet at [www.soel.de/oekolandbau/weltweit.html](http://www.soel.de/oekolandbau/weltweit.html). Information about organic farming around the globe is provided at [www.ifoam.org](http://www.ifoam.org).

Should corrections and updates of this report become necessary, they will be published at [www.organic-europe.net](http://www.organic-europe.net).

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Download of the main chapters via the IFOAM Homepage and the FiBL Shop.

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## **1 FOREWORD**

We herewith present the 8th edition of the study “The World of Organic Agriculture” documenting current statistics, recent developments and trends in global organic farming. Statistical information and all chapters were updated for this edition. The Foundation Ecology & Agriculture (SOEL), the International Federation of Organic Agriculture Movements (IFOAM), Research Institute of Organic Agriculture (FiBL), and NürnbergMesse have been collaborating on this project for several years now, and since 2000 the latest global organic figures have been presented at the annual BioFach Fair in Nuremburg, of which IFOAM is the patron.

A major new addition to this volume is the inclusion of land use statistics, including information on major crops are made available. Feedback by readers asking for more in-depth statistical information was the primary incentive for this addition. We see the information contained in this publication – still very incomplete - only as a first step towards better organic farming statistics, and any feedback and access to further information sources will be very much appreciated. In the long run we hope to be able to make available more reliable global statistics, more information on crops as well as land use / crop information at a country level.

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 with valuable statistical information.

Particular thanks are due to Bàrbara Baraibar, who carried out the statistical survey in a deeply committed way, and without whom we would not have been able to make the land use statistics available. Thanks are also due to Hellmut von Koerber of fleXinfo, who programmed the database which was used for storing the survey data.

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 Heike Slotta from Nürnberg Messe, the organizer of BioFach, who financially supported this as well as earlier editions of this study.

Bad Duerkheim, Frick, Bonn, February 2006

**ANGELA B. CAUDLE**  
IFOAM Executive Director  
Bonn, Germany

**URS NIGGLI**  
Director FiBL  
Frick, Switzerland

**ULI ZERGER**  
Director SOEL  
Bad Duerkheim, Germany



## **2 EDITORS' NOTE**

This edition of "The World of Organic Agriculture" presents the most recent data on the number of organic farms and the land under organic management per country. Based on country specific information, the organic area per continent and for the whole world has been calculated.

Additionally, an attempt was made to compile land use statistics at a global level for the first time. Even though this type of information was available for only half of the world's organically managed land, we decided to publish some of the data in hopes of providing an incentive for actors in the organic sector to provide more data in the future, so that we will, over the course of time, be able to present more complete data on increasingly numerous crops and land use patterns by country. This year's survey has shown that a lot more information than we would have thought is available, and we are very grateful to all who provided data and information for this global overview of organic farming.

Like every year, we encountered some problems in compiling even basic data, as in some cases the information was either not available at all, the information resources were contradictory or because the information had to be compiled from several sources. We were not always able to reach the people that had provided the previous data and had to find new contacts - who in some cases provided figures that did not match those of the previous edition.

We would therefore be very grateful if the organic sector became more active in helping us to establish a worldwide network to collect these data. Reliable and permanent contacts in each country would facilitate our work a lot, and we will appreciate very much your feedback on this.

**HELGA WILLER**

FiBL, Frick, Switzerland

**MINOU YUSSEFI**

SOEL, Bad Duerkheim, Germany

## **3 CONTACTS AND DATA SOURCES**

**BÀRBARA BARAIBAR<sup>1</sup>**

### **3.1 Contacts**

This survey on organic agriculture worldwide was undertaken between October 2005 and January 2006. Experts from IFOAM member organizations, including the authors of this book, certification bodies and other institutions, were asked to contribute statistics on the organic area and number of farms (see the following chapter on data and information resources).

This year's edition includes a breakdown of the land use patterns in those countries where such information was available.

The experts and sources of information are listed in tables at the end of the continent chapters. Please note that some countries have more than one source of information for different products.

For many countries, it is still difficult to find precise and up-to-date figures, and in many countries neither contacts nor figures were available at all.

### **3.2 Data and Information Resources**

#### **3.2.1 International Federation of Organic Agriculture Movements IFOAM**

The International Federation of Organic Agriculture Movements (IFOAM), the international umbrella organization for organic movements worldwide, has about 700 Members in 108 countries, which are listed in its membership directory (IFOAM 2006). For this study, IFOAM members from all countries, including many certification organizations and other institutions, were asked to contribute data regarding area, land use and number of farms in their countries.

The regional groups of IFOAM were also asked for data and contacts in some countries. These contacts can be found at the IFOAM Homepage<sup>2</sup>.

This homepage also provides useful information about organic farming worldwide.

---

1 Bàrbara Baraibar, in charge of conducting the 2005/2006 survey; at FiBL from October 2005 to January 2006, now Barcelona, Spain. Contact via FiBL ([info.suisse@fibl.org](mailto:info.suisse@fibl.org)).

2 Homepage of the International Federation of Organic Agriculture Movements (IFOAM): [www.ifoam.org](http://www.ifoam.org)

IFOAM Asia Regional Group: [www.ifoam.org/about\\_ifoam/around\\_world/asia.html](http://www.ifoam.org/about_ifoam/around_world/asia.html)

IFOAM Africa Organic Service Center: [www.ifoam.org/about\\_ifoam/around\\_world/africa.html](http://www.ifoam.org/about_ifoam/around_world/africa.html)

IFOAM Mediterranean Regional Group - AgriBioMediterraneo: [www.ifoam.org/about\\_ifoam/around\\_world/mediterraneo.html](http://www.ifoam.org/about_ifoam/around_world/mediterraneo.html)

### 3.2.2 *The Food and Agriculture Organization of the United Nations (FAO): Organic Farming Homepage & Statistics*

The FAO offers vast information on organic agriculture on its internet site. Some FAO publications related to organic farming were consulted and used either to obtain data or to reach more contacts. These publications can be downloaded from the FAO organic farming homepage<sup>3</sup>.

In 2005, the FAO set up the Organic Agriculture Information Management System (Organic-AIMS)<sup>4</sup> with country information on organic agriculture. The following aspects are covered: legal and institutional frameworks, institutions and experts. Selected documents are made available. Thus far only a few countries are covered, but in the coming years this information system should provide extensive information on organic farming in most countries of the world.

Finally, the FAO statistical database FAOSTAT, which can be found at the FAO internet page<sup>5</sup>, provides useful statistical information about total agricultural areas worldwide.

### 3.2.3 *BioFach: Catalogue and BioFach Newsletter*

NürnbergMesse, which runs the BioFach<sup>6</sup> fair, the largest organic fair worldwide, annually publishes a catalogue<sup>7</sup> of all exhibitors. Some of these exhibitors were contacted and asked to provide the data for the book. Moreover, the BioFach Newsletters are also a great source of information<sup>8</sup>.

NürnbergMesse is also the organizer of BioFach America (Washington), BioFach Japan (Tokyo) and of BioFach América Latina (Sao Paulo, Brazil).

### 3.2.4 *Eurostat Statistics on Organic Farming*

Eurostat, the statistical Unit of the European Union, provides data about the area of organic agriculture at the commodity level for some European countries from 1997 to 2005.

Eurostat also provides several 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<sup>9</sup>.

3 FAO organic farming homepage <http://www.fao.org/organicag/>

4 Organic Agriculture Information Management System (Organic-AIMS) <http://www.fao.org/organicag/frame6-e.htm>  
5 <http://faostat.fao.org/faostat>

6 BioFach Homepage: <http://www.biofach.de>

7 BioFach: exhibitors and products <http://www.biofach.de/main/d6rvc9vi/d7blm1ss/page.html>

8 BioFach Newsletter & Archive: <http://www.biofach.de/main/d6szfm8q/d6t1gupr/page.html>

9 Links to Eurostat databases and documents: [www.organic-europe.net/europe\\_eu/statistics.asp#eurostat](http://www.organic-europe.net/europe_eu/statistics.asp#eurostat)

### 3.2.5 *International Certification Bodies and International Institutions*

Some international certification bodies such as the Institute for Market Ecology (IMO)<sup>10</sup>, Ecocert<sup>11</sup> and other organizations such as Swiss Import Promotion Program (SIPPO)<sup>12</sup> and Export Promotion of Organic Products from Africa (EPOPA)<sup>13</sup> were asked to provide information, particularly for countries without an official organic regulation and no or little governmental interest in organic agriculture.

### 3.2.6 *The 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<sup>14</sup>. 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<sup>15</sup>.

### 3.2.7 *Foreign Agricultural Service (FAS) of the United States Department of Agriculture (USDA): Reports*

The attaché reports of the staff of the Foreign Agricultural Service (FAS) of the United States Department of Agriculture (USDA) provided both figures and contacts for some countries. These reports, which offer extensive of background information, are available at the FAS Homepage<sup>16</sup>.

The attaché reports database offers search options by products, countries and by date<sup>17</sup>.

### 3.2.8 *Research Institute of Organic Agriculture FiBL*

Staff working in the International Team at FiBL provided contacts and data about the countries FiBL is working with, especially in Eastern Europe, Asia and Latin America. Information on their work is available at the FiBL Homepage<sup>18</sup>.

The internet page [www.organic-europe.net](http://www.organic-europe.net) maintained by FiBL includes an address database and reports on many European countries.

10 Homepage of the Institute of Market Ecology IMO <http://www.imo.ch>

11 Homepage of Ecocert <http://www.ecocert.com/>

12 Swiss Import Promotion Program (Sippo) <http://www.sippo.ch/>

13 Export Promotion of Organic Products from Africa (EPOPA): <http://www.grolink.se/epopa/>

14 International Fund for Agricultural Development (IFAD) <http://www.ifad.org>

15 For more information about IFAD's work related to organic farming see [www.ifad.org/evaluation/public\\_html/eksyst/doc/thematic/organic/organic.htm](http://www.ifad.org/evaluation/public_html/eksyst/doc/thematic/organic/organic.htm)

16 FAS online. Attaché Reports dealing with organic farming and related topics. <http://www.fas.usda.gov/agx/organics/attache.htm> and <http://www.fas.usda.gov/agx/organics/international.htm>

17 FAS search by date , commodities and countries <http://www.fas.usda.gov/scripts/w/attacherep/default.asp>

18 International Cooperation at FiBL <http://www.fibl.org/english/cooperation/index.php>

### 3.2.9 *International Trade Centre (ITC) and United Nations Conference on Trade and Development (UNCTAD)*

In 1999, the International Trade Centre (ITC)<sup>19</sup> 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 (International Trade Centre 1999).

In 2004 the United Nations Conference on Trade and Development (UNCTAD) published a compendium on “Marketing Organic Tropical Produce” with input from FiBL on a wide range of themes. The book covers the production, certification and conditions for market access of organically produced fruit and vegetables in the tropics. It contains information for producers and international trading companies alike, and shows how developing countries can boost their production and export capacities. The 330-page book is in English and is available for download free of charge.

At the organic farming homepage of the International Trade Centre individual aspects covered in the studies are continually expanded and updated.

### 3.2.10 *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 newsletter about organic agriculture in Central and Eastern Europe every one to two months.<sup>20</sup>

### 3.2.11 *Central Market and Price Reporting Bureau in Germany ZMP*

The monthly information Bulletin of the German ZMP<sup>21</sup> “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. The North American Organic Trade Association (OTA) originally supplied many of these by the Organic Trade Services ([www.organictrade.com](http://www.organictrade.com)) or by the North American Organic Trade Association (OTA)<sup>22</sup>.

19 International Trade Centre: [www.intracen.org/mds/sectors/organic/welcome.htm](http://www.intracen.org/mds/sectors/organic/welcome.htm) = The Organic Products Website of the International Trade Centre. Geneva, Switzerland.

20 Homepage of the International Centre for Organic Agriculture of Central and Eastern Europe EkoConnect: [www.ekoconnect.org/en\\_index.html](http://www.ekoconnect.org/en_index.html)

21 Central Market and Price Reporting Bureau in Germany ZMP: <http://www.zmp.de>

22 North American Organic Trade Association (OTA); <http://www.ota.com>

### 3.2.12 *Grolink and The Organic Standard*

In 2000 “The Organic Standard”, a magazine concerned with international certification was launched. “The Organic Standard”<sup>23</sup>, published by Grolink<sup>24</sup>, 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.

### 3.2.13 *The Directory of Development Organizations*

The Directory of Development Organizations<sup>25</sup> lists 43’500 development organizations. It facilitates international cooperation and knowledge sharing in development work, both among civil society organizations, research institutions, governments and the private sector. This directory has been a useful reference source, especially for countries with little official interest in organic farming.

## 3.3 *Internet Search*

For those countries without contacts, the procedure for obtaining figures was as follows:

- Official Government pages were visited. Mails, if available, were addressed to the Ministries of Agriculture and/or to the Statistical Division.
- If known, the certifying body/ies operating in the country were contacted and asked for information.
- Countries where either no government homepage was available or where no mails or fax were available, a search with “Google” was conducted using the key words:  
ORGANIC AGRICULTURE + NAME of the COUNTRY.  
AGRICULTURA ORGANICA (and ECOLOGICA) + NAME of the COUNTRY

The use of an internet searcher led to many producers’ organizations, institutes, certifying bodies and non-governmental organizations (NGO) that were asked to provide the data.

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23 The Organic Standard <http://www.organicstandard.com/>

24 Grolink <http://www.grolink.se>

25 Directory of Development Organizations : [www.devdir.org](http://www.devdir.org)

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## **4 DATA COLLECTION AND PROCESSING**

**BÀRBARA BARAIBAR<sup>1</sup>**

For the first time “The World of Organic Agriculture” includes not only information on total organic area but also on land use and on major crops. Collecting and processing all this new information has been a great challenge. Despite all the efforts made, this new approach to document organic production worldwide is only an initial attempt in this direction, and the information is far from being a complete.

We therefore ask the readers of this book to treat the data on land use with caution. This chapter explains how this data was collected, classified and how finally it gave rise to the graphs and tables published in some chapters of the present edition of the book.

### **4.1 Data Collection**

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, the existing systems for agricultural statistics do not include organic agriculture figures.

Many efforts, however, are currently being made – for instance by the FAO 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 project European Information System for Organic Markets (EISfOM)<sup>2</sup>, a concerted action funded by the European Commission, running from 2003 to 2006. Its main aim is to develop a framework for the collection and processing of reliable and comprehensive data on organic production and markets.

During the survey, the lack of a unified system became evident and many expected and some unexpected problems arose. The main handicaps were:

- Gathering the figures was not always easy, especially in Africa and Asia, either because statistical information does not exist or because the information is spread all over the country and it is not available in a compiled format. For other countries, the information might exist, but it might not be precise and up-to-date.
- As a result, the information for some countries refers to more than one year for different crops (for instance, the information on the organic coffee area in Cameroon is from 1998, although the total organic area is for 2003).
- In some countries it was impossible to reach the people working on organic agriculture, even when we knew that organic organizations existed and were carrying

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1 Bàrbara Baraibar, in charge of conducting the 2005/2006 survey; at FiBL from October 2005 to January 2006, now Barcelona, Spain. Contact via FiBL ([info.suisse@fibl.org](mailto:info.suisse@fibl.org)).

2 European Information System for Organic Markets (EISfOM): <http://www.eisfom.org>



out projects on organic farming. Technical problems such as non-working or changed e-mail addresses, and wrong fax and telephone numbers could have been the main causes.

- Sometimes, when trying to find a contact in a particular country, the internet pages of the government or the organic organizations were using a language not known by us (e.g. Belarus).

All these problems have shaped the quality of information collected and now published. Furthermore, the number of countries that provided the data can also give an overview of this quality.

#### 4.2 *Scope of the Survey: Countries and Land Use Information Covered*

191 countries plus a permanent observer country (Vatican City) are part of the United Nations. There are also two entities recognized by many countries as sovereign but not *de facto* as independent: Palestine and Western Sahara.

With this survey we tried to cover all these 194 countries and entities, and could finally contact 146. As a final result of the survey 96 countries provided new data, and for 25 countries we used the latest figure available. So the survey finally covered 121 countries, meaning 62 percent of the UN countries.

The table below presents the number of countries that finally provided information. This table is important, as it demonstrates how carefully the figures have to be considered on some continents.

**Table 1:** Percentage of countries by continents that answered the survey

	<b>NUMBER OF COUNTRIES THAT PROVIDED DATA</b>	<b>NUMBER OF COUNTRIES THAT PROVIDED NO DATA</b>	<b>TOTAL COUNTRIES</b>	<b>PER CENT OF COUNTRIES THAT PROVIDED DATA</b>
Africa	25	31	56	45 %
Asia	29	19	48	60 %
Australia / Oceania	3	9	12	25 %
Europe	39	4	43	91 %
Latin America	23	10	33	70 %
North America	2	0	2	100 %
Total	121	73	194	62%

The table above shows that Australia / Oceania has a low percentage of countries covered by the survey. The nine countries that did not provide data are, however, small islands, and the survey does cover the biggest country, Australia.

Hence Africa can be seen as the continent for which the least data was available. 45 percent of the countries did, however, provide figures, showing that information availability and quality improves every year on this continent.

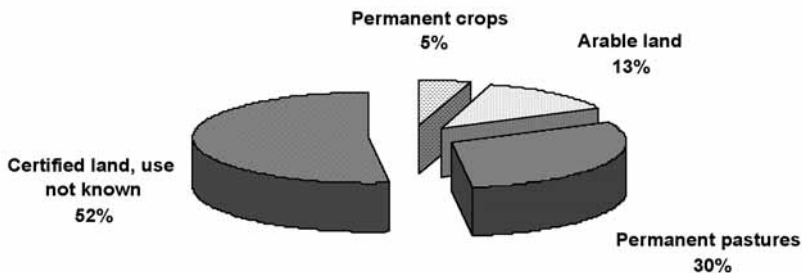
In Asia, 60 percent of the countries answered the survey, and new countries like Armenia, Palestine or Saudi Arabia have been included in the book for the first time.

The percentage rises when we take a look at the European results. The countries that did not answer were Belarus, San Marino, Andorra and Monaco (the last three being countries where agriculture is of little importance). For the first time this book provides information for countries like Macedonia and Moldova.

Finally, the survey was answered by 70 percent of the Latin American countries, including the largest countries.

It has also to be taken into account that land use information was not provided by all countries that answered the survey. We could not obtain any crop information for 52 percent of the total organic area worldwide, which accounts for almost 16.3 million hectares. Of this land almost one quarter is located in Australia. A major part of the Australian organic land is used for extensive grazing.

**Main land use categories in organic farming worldwide  
according to the data collected:  
Hectares and share (%) of the global organic agricultural area**



**Graph 1:** Main land uses in organic farming worldwide according to the data collected: share (%) of the total global organic area. FiBL-Survey October 2005– January 2006

### 4.3 *Data Processing*

When the survey began, we had not developed a classification system, resulting from the fact that it was not possible to know what kind of data would be collected, if any. The response was much higher than we anticipated, and as the data was collected a classification system was developed according to the kind of data we were receiving. This classification will be improved over the course of time, and ultimately will be brought into line with classification systems that are currently being developed for organic farming, but for this first attempt it proved to be well-suited to the data obtained.

At this stage of development, following problems were found:

- 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. For instance, grapes would go under “Other crops” in a country like the United States whereas in Spain or Italy this crop is in a category of its own.
- 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).

On the other hand, it is important to mention the improvements that are currently occurring. For the first time, Eurostat, the statistical office of the European Union, has published figures concerning organic agriculture at its homepage, including data on commodities for some countries.

Also, the project European Information System for Organic Markets EISfOM in Europe and the FAO and the OECD at a global level are working to solve the data collection and classification problems and achieve the aforementioned objectives (high quality of data, easy access and comparability between countries). Interfaces between these organizations already exist, and their combined aim is the establishment of a common and easily accessible system. As part of this project, a suggestion for a classification system for organic commodities is currently being developed, taking into account the existing classification systems for organic commodities (Recke et al. 2004; Ripplin et al. 2006).

#### *The FAO statistical system*

For this survey, the general FAO classification system for main land uses<sup>3</sup> was utilized. Five main levels were used to classify them: arable land, permanent crops, permanent pastures, forest and wild collection and other. The FAO defines them as follows:

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3 FAO classification system for main land use <http://faostat.fao.org/faostat/agricult/landuse-e.htm>

### *Arable Land*

Land under temporary crops, temporary meadows for mowing or pasture, land under market and kitchen gardens and land temporarily fallow (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 under 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).

### *Forests and wild collection*

The FAO has a category “Forest and Woodland”. This category was altered to “Forest and Wild Collection,” given that wild collection plays a major role in organic farming.

In the FiBL Survey 2005 / 2006 land under natural or planted stands of trees under this category, whether productive or not, and the areas of wild collection is included.

### *Other*

Unutilized land, bare soils and unknown land use. This last category was created to classify information not clearly detailed.

## **4.4 Data Storage and Classification**

The huge amount of information gathered was entered into a database created for this purpose. This database has been a very important tool in order to get quick and easy access to all the information, and includes other facilities for the generation of tables and graphs.

The data was entered into this database at three levels:

1. Main category (arable land, permanent crops, permanent pastures, forest and wild collection and other)
2. Crop category (main crop groups like cereals)
3. Crop (individual crops)

The main category has been already explained (see chapter on the FAO statistical system).

### *Crop category*

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.

### *Crop*

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”.

The table below shows the classification used for the data gathered in the survey. The fact that a crop is not included in this table does not mean that it is not grown organically, but that we did not get any specific data for it.

**Table 2:** Data classification

MAIN CATEGORY	CROP CATEGORY	CROP
Arable land	Cereals	Ajonjoli, amaranth, barley, buckwheat, emmer wheat, grain maize, oats, rice, rye, quinoa, sorghum, spelt wheat, triticale, wheat, other cereals
	Cereals	Straw grains (Finland)
	Field fodder growing	Feed legumes, luzern ( <i>Medicago</i> ), 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	<i>Aloe Vera</i> (Sabila), black pepper, caraway, citronella, chamomile, geranium, ginger, herbs for essential oil, lavender, leaf herbs, lemon-grass, patchouli, sienna pods, ververt
	Industrial crops	Cotton, flax, hemp, jojoba, other industrial crops
	Oilseeds	Mani ( <i>Arachis hypogaea</i> ), pumpkin seeds, rape and turnip rape, safflower seeds, sesame seeds, sunflower seeds.
	Vegetables	Brussels 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” ( <i>Luffa acutangula</i> ), jamaica, tobacco, panela, other arable crops
	Seed production	Seeds and seedlings
Set-a-side/ green manuring	Set-a-side/ green manuring	

MAIN CATEGORY	CROP CATEGORY	CROP
Permanent crops	Fruits and nuts	Almonds, apples, apricots, blackberry, blueberry, carob trees, cherries, chestnut, citrus, lemon, fig, hazelnut, nuts, peach, pear, peanuts, pecano ( <i>Carya illinoensis</i> ), pimberrien, plum, pomegranate, raspberry, sour cherry, strawberries, walnut kernel, other fruits and nuts
	Grapes	Grapes
	Olives	Olives
	Coffee	Coffee
	Cocoa	Cocoa
	Sugarcane	Sugarcane
	Tropical fruits	Araza or Amazon peach ( <i>Eugenia stipitata</i> ), avocado, banana, cactus, coconut, dates, guava, guineo, jocote ( <i>Spondia Purpurea</i> L), litchi, mamey ( <i>Mammea americana</i> L), mango, "marañon" ( <i>Anacardium occidentale</i> L), "nanche" ( <i>Byrsonima crassifolia</i> ), orito ( <i>Musa acuminata</i> ), papaya, passion fruit, pineapple, pitaya ( <i>Hilocereus undatus</i> ).
Permanent crops	Various	Hops, guar gum, gum Arabic, hibiscus, kiwi, kaki, macadamia, neem ( <i>Azadirachta indica</i> ), palm oil, palmito ( <i>Bactris gasipaes</i> Kunth), vanilla, yucca
	Other permanent crops	Other permanent crops
	Tea	Tea
Forest and wild collection	Forest and wild collection	Bamboo, forest, mushrooms, noni fruit ( <i>Morinda citrifolia</i> ), wild grapes, wild collection
Other crops	Unknown / mixed	Unknown / mixed
Permanent pastures	Permanent pastures	Permanent pastures
Other	Unutilized land	Unutilized land, no information

## 4.5 References

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## 4.6 Presentation of the Statistics in this Book

The statistics compiled under the 2005/2006 survey can be found at various places in this book.

- The general global statistics are available in chapter 5 of this book. This chapter includes information and statistics on:
  - organic land area and organic farms by continent
  - Global list of countries with information on a) land under organic management, b) share of organic of agricultural land and c) numbers of farms; sorted by global importance.
- The global land use statistics are available in chapter 6. This chapter includes:
  - The statistical information on main uses (arable crops, permanent crops, permanent pastures, other) globally and in the five continents;
  - Global statistics on the main arable and permanent crop categories;
  - Some global crop statistics (rice, olives, citrus fruit);
  - Informative chapters including statistics on four major crops: Coffee, cocoa, cotton and grapes.
- Statistical information by main land use category for countries where this information was available can be viewed in chapter 6.
- Statistical information for the continents is available in the continent chapters. Available information includes:
  - Alphabetical country list with information on land under organic management, share of organic land, numbers of farms
  - Main land use categories
- Information sources for the data are listed in the continent chapters.
- The countries that provided information on land use and on crop categories are listed in the Appendix.

# 5 ORGANIC FARMING WORLDWIDE 2006: OVERVIEW & MAIN STATISTICS

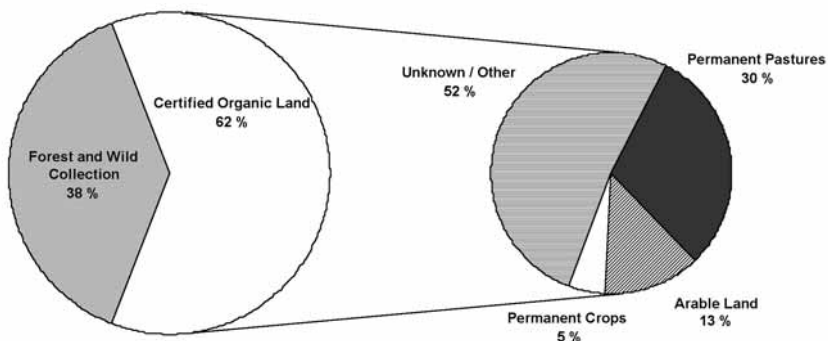
MINOU YUSSEFI<sup>1</sup>

## 5.1 Global Overview

Organic agriculture has developed rapidly worldwide during the last few years and is now practiced in approximately 120 countries of the world. Its share of agricultural land and farms continues to grow. Furthermore, it can reasonably be assumed that uncertified organic farming is practiced in even more countries.

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.

According to the latest survey, more than 31 million hectares are currently managed organically by at least 623'174 farms worldwide (see corresponding tables). The eighth edition of this study includes figures for the area of certified forest and 'wild harvested plants', which adds at least another 19.7 million hectares, summing up to more than 51 million hectares in total. The market for organic products is also growing, not only in Europe and North America (which are the major markets), but also in many other countries, including several developing countries (see chapter on the global organic market).



**Graph 2:** Land use of the certified area worldwide, Source: FiBL Survey 2005 / 2006

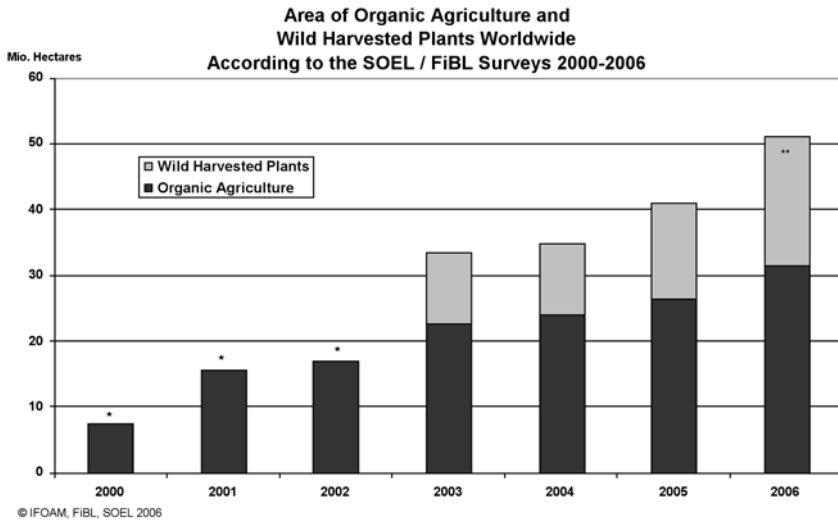
<sup>1</sup> Minou Yussefi, Foundation Ecology & Agriculture SOEL, Weinstrasse Sued 51, 67098 Bad Duerkheim, Germany, Tel. +49 6322 989700, E-mail info@soel.de, Internet www.soel.de



Currently, the countries with the greatest organic areas are Australia (12.1 million hectares), China (3.5 million hectares) and Argentina (2.8 million hectares). The percentages, however, are highest in Europe.

In total, Oceania holds 39 percent of the world’s organic land, followed by Europe (21 percent) and Latin America (20 percent). The proportion of organically compared to conventionally managed land, however, is highest in Europe. Latin America has the greatest total number of organic farms.

For detailed information about the main land use in organic agriculture see the next chapter. The continued increase in the organic land area over the last years is not just due to the ever-greater interest in organic farming, but also a result of improved access to information and data collection each time the study is updated. Despite this fact, we would like to give an overview of the last year’s results as it reflects a general development.



**Graph 3:** Area of organic agriculture and wild harvested plants worldwide 2000-2006

\* No data collection of wild harvested plants

\*\* Forest and wild harvested plants

Source: SOEL and FiBL Surveys 2000-2006

## 5.2 *Organic Agriculture by Continent*

### *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 12.1 million hectares and 2'662 farms are under organic management here. Most of this area is pastoral land for low intensity grazing in Australia (unfortunately it was not possible to get precise figures yet). Therefore, one organic hectare in Australia is not directly equivalent to one organic hectare in Denmark, for example, due to its level of productivity. That means comparing countries must be done carefully.

Important areas of production in Australia include fruit and vegetables, which are produced all year around, beef and dairy products (a rapidly growing sector) as well as grain, wool and sheep meat. In New Zealand, the biggest organic sectors so far are kiwifruit and apples. 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 is Europe - in particular the UK, Italy, Switzerland, France, the Netherlands and Germany - accounting for over 70 percent of Australian organic exports. 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. While these standards are only enforced for export products, they do act as an informal standard domestically. The term 'organic' is not protected in the domestic market place and widespread use of the term for uncertified products creates consumer confusion. In New Zealand a National Organic Standard was launched in 2003, underpinning the various certification schemes that already exist. New Zealand is also on in the EU-third country list.

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, but increasingly non-edible items such as cotton and personal care products are imported, primarily from New Zealand, the USA and the UK.

### *Latin America*

In Latin America many countries have more than 100'000 hectares of organic land, and having started from a recent low level are now experiencing extraordinary growth rates. The total organically managed and certified area is now almost 6.4 million hectares, with an additional 6 million hectares certified as forest and 'wild harvested' areas. 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, Costa Rica and Argentina. A major part of the 2.8 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. The bright

exception is Brazil, where the government recently issued an inter-ministerial Pro Organic Plan, officially stimulating organic production, research, association building, marketing and trade. 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.

### *Europe*

Since the beginning of the 1990s, organic farming has rapidly developed in almost all European countries. Growth has, however, slowed down recently. In 2004 in Europe, 6.5 million hectares were managed organically by around 167'000 farms. In the European Union more than 5.8 million hectares are under organic management, and there are almost 140'000 organic farms. This constitutes 3.4 percent of the agricultural area. The country with the highest number of farms and the largest organic area is Italy. In most countries of Europe and particularly the European Union organic farming is supported with legislation and direct payments. In the European Union the European Organic Action Plan implementation process is now getting under way.

### *North America*

In North America almost 1.4 million hectares are managed organically, representing approximately a 0.3 percent share of the total agricultural area. Currently, the number of farms is almost 12'000. 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.

The North American market for organic products is reporting the highest growth worldwide. Organic food and drink sales in the US were estimated to have totaled approximately 14.5 billion USD in 2005. Consumer demand for organic products remains buoyant and the region is expected to account for most global revenues in the foreseeable future.

## *Asia*

In Asia, the area under organic management has been comparatively small in the past years, but in China there has been a large increase of nearly three million hectares in the year 2004, which is dedicated to pastoral land that has not been certified before. The total organic area in Asia is now about 4.1 million hectares, managed by almost 130'000 farms. Additionally, 6.4 million hectares are certified as forest and 'wild harvested' areas. Among the more significant countries producing organic products are China, India and Russia. For many countries there are still no precise figures available, but a number of countries where activities were not recorded previously reported data this time.

There are 117 certification bodies operating in Asia from which 104 are placed in China, India and Japan. However, most of the exporters continue to be certified by foreign certification bodies operating in the region. The majority of activities and development in the region is happening without market regulation and certification. Organic rules are already in place 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 has attained equivalency status with the regulation of the EU.

The highest reported domestic market growth, estimated to be up to 30 percent, is in China and an organic boom seems to be taking place in Indonesia. The range of marketing channels is diverse, as are market conditions from rural India to Tokyo, including ad hoc organic bazaars, small retail shops, supermarkets, multi-level direct selling schemes and internet marketing. Exports are still largely composed of fresh produce and low-value commodity crops. Recently, aquaculture, particularly shrimp farming, is becoming popular, with projects in China, Indonesia, Thailand and Vietnam.

## *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 the southern countries. An important growth factor in Africa is the demand for organic products in the industrialized countries. Another motivation is the maintenance and building of soil fertility on land threatened by degradation and erosion. More than 1 million hectares are now managed and certified organic. Additionally, 6.8 million hectares are certified as forest and 'wild harvested' areas. 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 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, which is Africa's largest market for agricultural produce. 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; both have two certifying organizations and are well on the way to developing standards.

The data shown in the tables below includes fully converted land as well as “in conversion” land area.

**Table 3:** Area under organic management by country

<b>COUNTRY</b>	<b>ORGANIC LAND AREA (HECTARES)</b>
Australia	12'126'633
China	3'466'570
Argentina	2'800'000
Italy	954'361
USA	889'048
Brazil	887'637
Germany	767'891
Uruguay	759'000
Spain	733'182
UK	690'270
Chile	639'200
France	534'037
Canada	488'752
Bolivia	364'100
Austria	344'916
Mexico	295'046
Czech Rep.	260'120
Peru	260'000
Greece	249'488
Ukraine	241'980
Sweden	206'579
Portugal	206'524
Sudan	200'000
Zambia	187'694
Kenya	182'438
Bangla Desh	177'770
Finland	162'024
Tunisia	155'323
Denmark	154'921
Hungary	128'690
Uganda	122'000
Switzerland	121'387
India (provisional)	114'037
Turkey	108'597
Slovak Republic	93'943
Paraguay	91'414
Poland	82'730
Romania	75'000
Dominican Rep.	72'425

<b>COUNTRY</b>	<b>ORGANIC LAND AREA (HECTARES)</b>
Lithuania	64'545
Nicaragua	59'000
Tanzania	55'867
Indonesia	52'882
Netherlands	48'152
Estonia	46'016
New Zealand	45'000
South Africa	45'000
Latvia	43'902
Norway	41'035
Kazakhstan	36'882
Colombia	33'000
Ireland	30'670
Russia	30'000
Japan	29'151
Korea, Republic of	28'218
Ecuador	27'436
Egypt	24'548
Belgium	23'728
Slovenia	23'032
Serbia/Montenegro	20'542
Pakistan	20'310
Azerbaijan	20'105
Morocco	20'040
Ghana	19'132
Venezuela	16'000
Sri Lanka	15'379
Guatemala	14'746
Philippines	14'134
Costa Rica	13'945
Thailand	13'900
Saudi Arabia	13'730
Syria	12'500
Bulgaria	12'284
Moldova	11'075
Cuba	10'445
El Salvador	9'100
Croatia	7'355
Cameroon	7'000
Vietnam	6'475
Israel	5'960
Panama	5'244
Iceland	4'910
Luxemburg	3'158

<b>COUNTRY</b>	<b>ORGANIC LAND AREA (HECTARES)</b>
Senegal	2'500
Belize	1'810
Honduras	1'823
Algeria	1'400
Jamaica	1'332
Taiwan	1'092
Lebanon	1'039
Cyprus	1'018
Nepal	1'000
Palestine	1'000
Zimbabwe	1'000
Liechtenstein	984
Albania	804
Malaysia	600
Mozambique	600
Armenia	598
Benin	400
Kyrgyzstan	400
Malawi	325
Bosnia Herzegovina	310
Fiji	200
Iran,	200
Macedonia, The Fmr Yug Rep.	192
Mali	170
Mauritius	150
Madagascar	129
Guyana	109
Togo	90
Trinidad & Tobago	80
Laos	60
Rwanda	50
Georgia	48
Burkina Faso	30
Jordan	30
Malta	13
Niger	12
<b>Total organic area covered by the FiBL survey 2005 / 2006</b>	<b>31'502'786</b>

**Table 4:** Land under organic management in percent of the total agricultural area by country

<b>COUNTRY</b>	<b>ORGANIC AREA IN % OF THE TOTAL AGRICULTURAL AREA</b>
Liechtenstein	26.40
Austria	13.53
Switzerland	11.33
Finland	7.31
Sweden	6.80
Italy	6.22
Czech Rep.	6.09
Denmark	5.76
Portugal	5.42
Estonia	5.17
Uruguay	5.10
Slovenia	4.55
Germany	4.52
UK	4.39
Slovak Republic	4.19
Chile	4.19
Norway	3.95
Spain	2.87
Greece	2.72
Australia	2.71
Netherlands	2.49
Luxemburg	2.49
Hungary	2.19
Bangla Desh	1.97
Dominican Rep.	1.96
Lithuania	1.86
France	1.80
Latvia	1.77
Belgium	1.70
Tunisia	1.59
Argentina	1.58
Korea, Republic of	1.46
Belize	1.19
Israel	1.05
Uganda	0.99
Bolivia	0.99
Peru	0.85
Nicaragua	0.83
Canada	0.72
Egypt	0.72
Cyprus	0.71



<b>COUNTRY</b>	<b>ORGANIC AREA IN % OF THE TOTAL AGRICULTURAL AREA</b>
Ireland	0.70
Kenya	0.69
Guatemala	0.33
Sri Lanka	0.65
China	0.60
Ukraine	0.58
Japan	0.56
El Salvador	0.53
Zambia	0.53
Romania	0.51
Poland	0.49
Costa Rica	0.49
Moldova	0.44
Azerbaijan	0.43
Serbia/Montenegro	0.37
Ecuador	0.34
Paraguay	0.37
Brazil	0.34
Lebanon	0.32
Mexico	0.27
Palestine	0.26
Turkey	0.26
Jamaica	0.26
Panama	0.24
Croatia	0.23
New Zealand	0.26
Bulgaria	0.23
USA	0.22
Iceland	0.22
Cuba	0.16
Sudan	0.15
Tanzania	0.14
Mauritius	0.13
Ghana	0.13
Malta	0.13
Indonesia	0.12
Philippines	0.12
Syria	0.09
Cameroon	0.08
Pakistan	0.07
Venezuela	0.07
Colombia	0.07
Albania	0.07

<b>COUNTRY</b>	<b>ORGANIC AREA IN % OF THE TOTAL AGRICULTURAL AREA</b>
Thailand	0.07
Vietnam	0.07
Morocco	0.07
India (provisional)	0.06
Honduras	0.06
Trinidad & Tobago	0.06
South Africa	0.05
Fiji	0.04
Armenia	0.04
Senegal	0.03
Nepal	0.02
Kazakhstan	0.02
Macedonia, The Fmr Yug Rep.	0.02
Bosnia Herzegovina	0.01
Russia	0.01
Benin	0.01
Saudi Arabia	0.01
Malaysia	0.01
Malawi	0.01
Guyana	0.01

Source: FiBL Survey 2005/2006

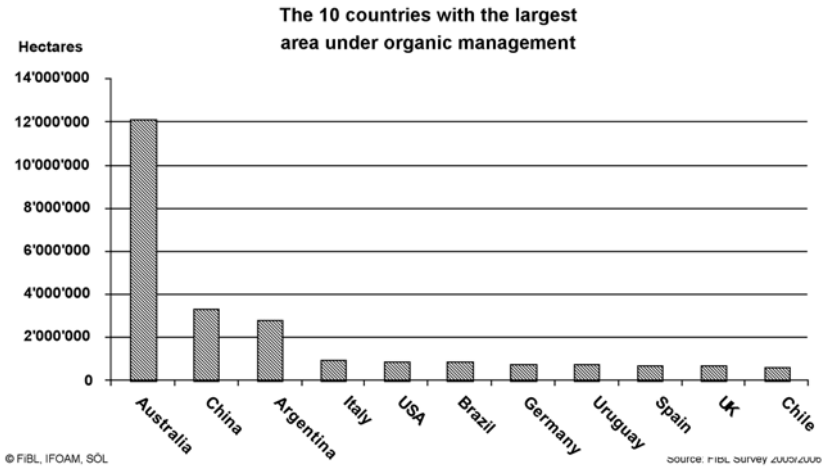
**Table 5:** Organic farms worldwide by country

<b>COUNTRY</b>	<b>NUMBER OF ORGANIC FARMS</b>
Mexico	120'000
Indonesia	45'000
Italy	36'639
Philippines	34'990
Uganda	33'900
Tanzania	30'000
Kenya	30'000
Korea, Republic of	28'951
Peru	23'400
Austria	19'826
Germany	16'603
Spain	16'013
Brazil	14'003
Turkey	12'806
Morocco	12'051
France	11'059
Greece	8'269
USA	8'035

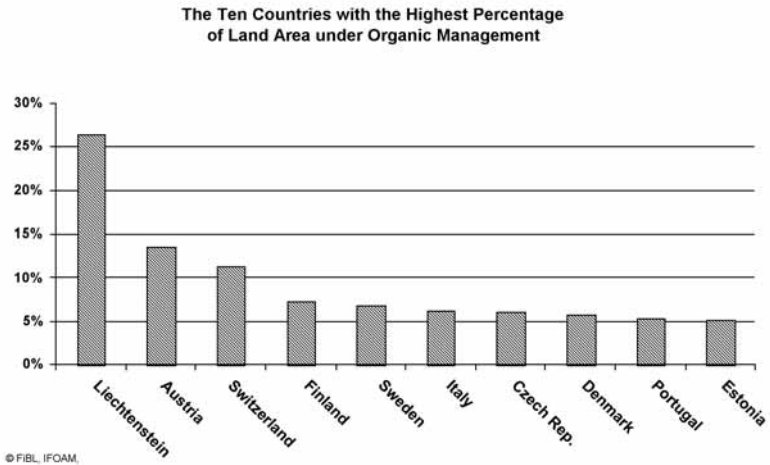
<b>COUNTRY</b>	<b>NUMBER OF ORGANIC FARMS</b>
Bolivia	6'500
Switzerland	6'373
Cuba	5'222
India (provisional)	5'147
Mozambique	5'000
Finland	4'887
Japan	4'539
Colombia	4'500
UK	4'010
Costa Rica	3'987
Poland	3'760
Canada	3'673
Sri Lanka	3'301
Denmark	3'166
Sweden	3'138
Serbia/Montenegro	3'000
Honduras	3'000
Senegal	3'000
Guatemala	2'830
Paraguay	2'827
Thailand	2'498
Norway	2'484
Ecuador	2'427
Zambia	2'425
Australia	1'832
Argentina	1'824
Lithuania	1'811
Hungary	1'583
Slovenia	1'568
Netherlands	1'469
Portugal	1'302
Nepal	1'247
Romania	1'200
China	1'560
Latvia	1'043
Vietnam	1'022
Chile	1'000
Ireland	897
Czech Rep.	836
New Zealand	820
Dominican Rep.	819
Estonia	810
Belgium	712
Sudan	650

<b>COUNTRY</b>	<b>NUMBER OF ORGANIC FARMS</b>
Benin	650
Tunisia	608
Uruguay	500
Palestine	500
Israel	400
Bulgaria	351
Azerbaijan	332
Croatia	265
South Africa	250
Kyrgyzstan	230
Cyprus	225
Slovak Republic	218
Bosnia Herzegovina	122
Moldova	121
Bangla Desh	100
Ukraine	72
Luxemburg	66
Albania	57
Macedonia, The Fmr Yug Rep.	50
Liechtenstein	42
El Salvador	37
Pakistan	28
Guyana	28
Syria	26
Iceland	25
Malta	20
Russia	15
Malawi	13
Georgia	13
Jamaica	12
Armenia	11
Rwanda	10
Fiji	10
Panama	7
Laos	5
Venezuela	4
Saudi Arabia	3
Kazakhstan	1
Jordan	1
Togo	1
Iran	1
<b>Total Farms</b>	<b>622'782</b>

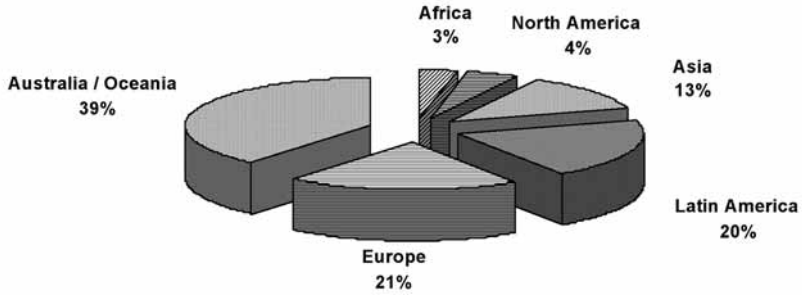
Source: FiBL-Survey 2005/ 2006



**Graph 4:** Land area under management: The 10 countries with the largest organic area  
Source: FiBL-Survey 2005/ 2006

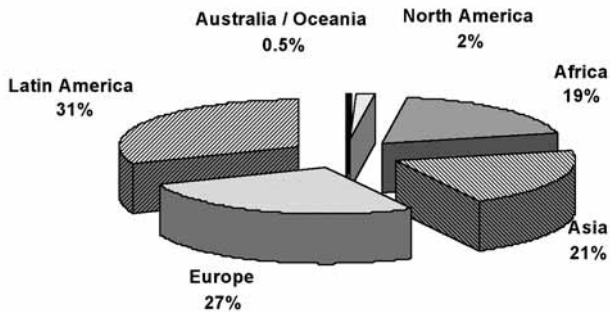


**Graph 5:** The ten countries with the highest percentage of land area under organic management  
Source: FiBL-Survey 2005/ 2006



**Graph 6:** Area under organic management – share per continent

Source: FiBL-Survey 2005/ 2006



**Graph 7:** Organic farms – share per continent

Source: FiBL-Survey 2005/ 2006

## **6 CROP STATISTICS AND INFORMATION ON FOUR MAIN CROPS**

**BÀRBARA BARAIBAR<sup>1</sup> AND HELGA WILLER<sup>2</sup>**

In this chapter we present details on land use and organic crops worldwide for the first time. In spite of a lack data and many uncertainties, we decided to publish this information – hoping that this will be an incentive for all those involved with organic statistics to provide more data in the future.

In four short chapters we look at four important crops and products – cocoa, coffee, cotton and wine – in more detail.

We hope to improve and extend this information in the coming years and would very much appreciate any feedback and more detailed information<sup>3</sup>.

### **6.1 The Results of the Land Use Survey 2005 / 2006 at a Glance**

When interpreting the following data, it should always be kept in mind that detailed information on land use was available for only half of the land area covered by this survey. This means that the information presented below is far from being complete. Varying levels of aggregation, different perceptions of crops and different levels of information depth are additional important factors as to why the information given below should be treated with caution. Please also check the chapter on data collection and processing for details.

#### **6.1.1 Main Land Use Categories: Global Overview**

The table on the main land use categories shows that more than half of the organic agricultural land for which land use information was available is used for permanent pastures. About one quarter is used for arable cropping and the rest for permanent crops.

In addition to the more than 31 million hectares of organic agricultural land, almost 20 million hectares are used for wild collection.

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1 Bàrbara Baraibar, in charge of conducting the 2005/2006 survey; at FiBL from October 2005 to January 2006, now Barcelona, Spain. Contact via FiBL ([info.suisse@fibl.org](mailto:info.suisse@fibl.org)).

2 Dr. Helga Willer, Communication, Research Institute of Organic Agriculture FiBL, Ackerstrasse, 5070 Frick, Interent <http://www.fibl.org>

3 Please send any information to [helga.willer@fibl.org](mailto:helga.willer@fibl.org)

**Table 6:** Main land use categories in organic agriculture: global overview

<b>LAND USE CATEGORY</b>	<b>HECTARES</b>	<b>% OF TOTAL ORGANIC LAND</b>
Arable land	4'116'631	13
Permanent crops	1'444'812	5
Permanent pastures	9'513'226	30
Certified land, use not known	16'528'198	52
Total land under organic management	31'502'786	100
<i>Forest and wild collection</i>	<i>19'674'311</i>	
<i>Total area, including forest and wild collection</i>	<i>51'177'097</i>	

Source: FiBL-Survey 2005/ 2006

The table on main land use categories by continent shows that the available information on land use and crops varies between continents. At the end of the continent chapters, statistics on the main arable and permanent crop categories are available.

For Africa, 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) fruit, nuts and coffee.

For most of the organic agricultural land in Asia, the land use covered by the main categories is well documented. Most of this land (75 percent) is permanent pasture, the major part of which is located in China. Permanent crops do not play a major role. Arable land is mainly used for cereals, including rice. However, for much of the arable area, land use remains unknown.

In Europe the organic land uses are known to a good degree, and the main crop categories are also well documented. Permanent pastures and arable land have approximately equal shares (more than 40 percent) of the organic agricultural area. Europe has more than half of the world's organic arable land. The main uses of the arable area include cereals, followed by field fodder and set aside land. 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.

For Latin America, about two thirds of the organic agricultural area land use information was available, the major part of this land being pastureland. Permanent crops account for about nine percent of the agricultural area. The main crops are coffee, fruits and nuts and cocoa.

In North America, crop information was available for 84 percent of the land. Half of this land is arable land, most of which is used for cereal production. About one third of the organic agricultural land is used for grassland.



**Table 7:** Main land use categories by continents

CONTINENT	ARABLE LAND (HA)	SHARE OF ARABLE CROPS OF TOTAL ORGANIC LAND PER CONTINENT	PERMANENT CROPS (HA)	SHARE OF PERMANENT CROPS OF TOTAL ORGANIC LAND PER CONTINENT	PERMANENT PASTURES (HA)	SHARE OF PERMANENT PASTURES OF TOTAL ORGANIC LAND PER CONTINENT	CERTIFIED LAND, USE NOT KNOWN (HA)	SHARE OF LAND WITH UN-KNOWN USE OF TOTAL ORGANIC LAND PER CONTINENT	TOTAL LAND UNDER ORGANIC MANAGEMENT (HA)
Africa	76'961	8 %	298'598	29 %	31'861	3 %	618'477	60 %	1'025'898
Asia	527'240	13 %	46'614	1 %	2'929'032	72 %	561'113	14 %	4'063'999
Europe	2'700'273	42 %	472'612	7 %	2'916'479	45 %	411'001	6 %	6'500'365
Latin America	127'161	2 %	593'491	9 %	3'201'716	50 %	2'440'603	38 %	6'362'891
North America	684'996	50 %	33'198	2 %	434'137	32 %	225'469	16 %	1'377'800
Australia / Oceania	-	-	299	-	-	-	12'171'534	100 %	12'171'833
<b>Total area</b>	<b>4'116'631</b>	<b>13 %</b>	<b>1'444'812</b>	<b>5 %</b>	<b>9'513'226</b>	<b>30 %</b>	<b>16'428'198</b>	<b>52 %</b>	<b>31'502'786</b>

Source: FiBL-Survey 2005/ 2006

The table on organic agricultural land and on organic wild collection shows that wild collection plays a major role, particularly in Africa, Asia and in Latin America. According to Council Regulation (EEC) 2092/91, it is possible to certify plant products that are grown in the wild as organic. The basic principles of sustainability and traceability need to also be applied for wild collection. The basic principles of organic wild collection include (information taken from the IMO-Homepage)<sup>4</sup>

4 IMO Control / Institute of Market Ecology: Sustainable collection of wild crops. Available at [http://www.imo.ch/index.php?seite=imo\\_services\\_organic\\_eu\\_wild\\_collection\\_en](http://www.imo.ch/index.php?seite=imo_services_organic_eu_wild_collection_en).

- The collected plants need to be naturally grown;
- The collection area needs to be clearly defined;
- The collection area has not been treated with any prohibited inputs (according to the organic regulation) and is free of major sources of contamination;
- The collection is sustainable;
- Full traceability of the product flow: It needs to be possible to track the products back to the area where they were grown.
- All parties involved in the collection are bound by contract to following the rules of organic collection

There is no conversion period for wild collection projects as long as the requirements for organic wild collection are met at the first inspection.

According to IFOAM, there is significant trade in “organic” wild products, including products for direct consumption, such as berries, mushrooms and a wide variety of herbs. There is also a growing interest in organic wild products by the body care medicinal herb sectors. At a conference, to take place May 3 and 4, 2006 in Bosnia, a wide range of issues related to organic wild collection<sup>5</sup> will be addressed.

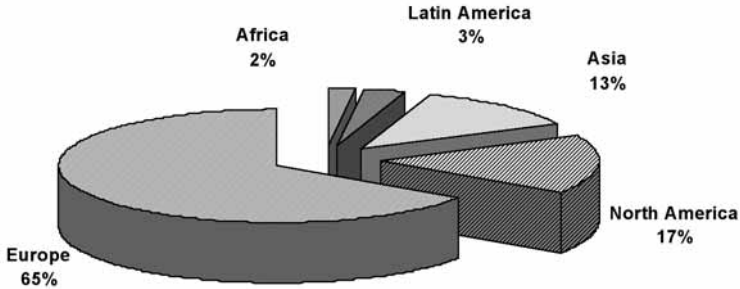
**Table 8:** Certified organic agricultural land and area with wild collection by continent

CONTINENT	TOTAL LAND UNDER ORGANIC MANAGEMENT (HA)	FOREST AND WILD COLLECTION	TOTAL AREA: CERTIFIED AGR. LAND AND WILD COLLECTION
Africa	1'025'898	6'752'630	7'778'528
Asia	4'063'999	6'420'251	10'484'250
Europe	6'500'365	550'461	7'050'826
Latin America	6'362'891	5'950'968	12'313'860
North America	1'377'800		1'377'799
Oceania	12'171'833		12'171'833
<b>Total area covered by the FiBL survey 2005/2006</b>	<b>31'502'786</b>	<b>19'674'311</b>	<b>51'177'097</b>

### 6.1.2 Arable Land by Continent and Crop Category

On a global level, arable land accounts for one quarter of the organic agricultural land for which information was available. Most of the world's organic arable land is in Europe, followed by North America and Asia. Details are not available for about one third of the arable land. Most is used for cereals, followed by field fodder crops and vegetables.

<sup>5</sup> The 1st IFOAM Conference on Organic Wild Production. May 3-4, 2006 in Bosnia and Herzegovina, see [http://www.ifoam.org/events/ifoam\\_conferences/IFOAM\\_Wild\\_Conference.html](http://www.ifoam.org/events/ifoam_conferences/IFOAM_Wild_Conference.html)



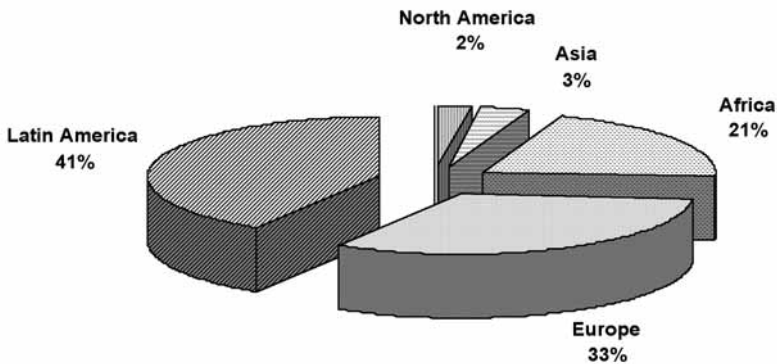
**Graph 8:** Arable land by continent (hectares)

Source: FiBL-Survey 2005/ 2006

Please note: information on land use, crop categories and crops was not available for all countries.

### 6.1.3 Permanent Crops by Continent and Crop Category

On a global level, permanent crops account for one tenth of the organic agricultural land for which information was available. Most of the world’s permanent crops are in Latin America, followed by Europe and by Africa. For most of this land, crop information is available, the most important crop being olives (almost a quarter of the permanent cropland) followed by fruits and nuts, and coffee.



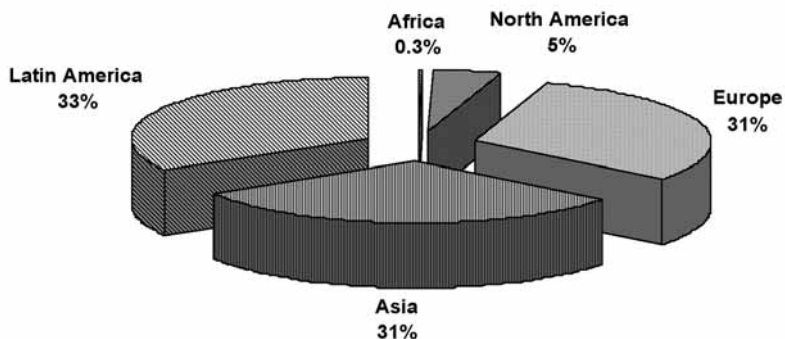
**Graph 9:** Permanent crops by continent

Source: FiBL-Survey 2005/ 2006.

Please note: information on land use, crop categories and crops was available for only half of the world’s organic agricultural land.

#### 6.1.4 Permanent Grassland by Continent

On a global level, permanent Grassland accounts for almost two thirds of the organic agricultural land for which information was available. The organic permanent pastures covered by this survey are distributed more or less evenly over the continents Latin America, Europe and Asia. No land use information was available for Australia, but it may be assumed that a major part of Australia's organic land is grassland.



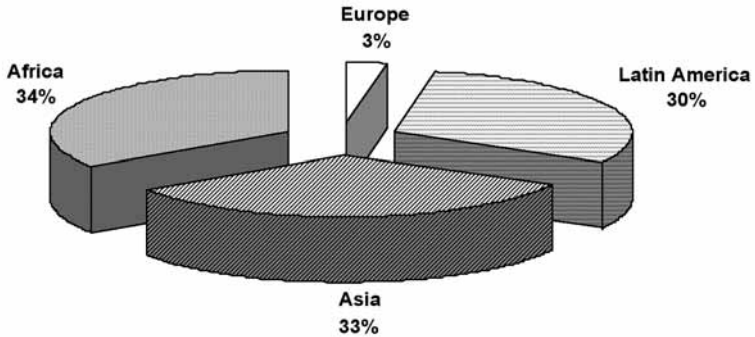
**Graph 10:** Permanent pasture by continent

Source: FiBL-Survey 2005/ 2006

Please note: information on land use, crop categories and crops was not available for all countries.

### 6.1.5 Forest and wild collection: Break-down by continent

Almost 20 million hectares of land are certified for forest wild collection. According to this survey, most of this land is in Africa (6.7 million hectares), followed by Asia (6.4 million hectares) and Latin America (5.9 million hectares). Unfortunately, no details on the specific plants gathered were available.



Graph 11: Wild collection by continent

Source: FiBL-Survey 2005/ 2006

### 6.1.6 Main Agricultural Land Use Categories by Country; Data from the 2005/2006 Survey

#### *Please note !*

If only one main use category is indicated for a country, this does not mean that this is the only use. It only shows that more data were currently not available.

In those cases where information on main land use categories is available, this does not mean that this is the total for a particular category. For example, in some cases the only crop data available were on cocoa, but this does not mean that no other permanent crops are grown.

**Table 9:** Main agricultural land use categories by country; data from 2005/2006 survey

<b>COUNTRY</b>	<b>MAIN LAND USE CATEGORIES</b>	<b>LAND UNDER ORGANIC MANAGEMENT (HA)</b>
Albania	Arable land	20
	Permanent crops	76
	Permanent pastures	708
Algeria	Total	1'400
Argentina	Arable land	29'530
	Unknown / other crops	366'199
	Permanent crops	13'268
	Permanent pastures	2'391'083
Armenia	Arable land	192
	Permanent crops	126
	Permanent pastures	280
Australia	Total	12'126'633
Austria	Arable land	130'547
	Unknown / other crops	2'561
	Permanent crops	3'401
	Permanent pastures	208'407
Azerbaijan	Arable land	2'350
	Permanent crops	755
	Permanent pastures	17'000
Bangla Desh	Total	177'700
Belgium	Arable land	8'243
	Unknown / other crops	5
	Permanent crops	355
	Permanent pastures	15'125
Belize	Total	1'810
Benin	Arable land	400
Bolivia	Unknown / other crops	359'894
	Permanent crops	4'206
Bosnia Herzegovina	Arable land	244
	Permanent crops	36
	Permanent pastures	30
Brazil	Unknown / other crops	879'271
	Permanent crops	8'366
Bulgaria	Total	12'284
Burkina Faso	Arable land	30
Cameroon	Unknown / other crops	5'696
	Permanent crops	1'304
Canada	Arable land	221'983
	Unknown / other crops	132'238
	Permanent crops	2'006

COUNTRY	MAIN LAND USE CATEGORIES	LAND UNDER ORGANIC MANAGEMENT (HA)
	Permanent pastures	132'525
Chile	Other agricultural uses	637'308
	Permanent crops	1'892
China	Arable land	419'440
	Permanent crops	6'260
	Unknown / other crops	140'870
	Permanent pastures	2'900'000
Colombia	Unknown / other crops	25'469
	Permanent crops	7'531
Costa Rica	Arable land	187
	Unknown / other crops	1'229
	Permanent crops	12'529
Croatia	Arable land	2'599
	Permanent crops	107
	Permanent pastures	4'649
Cuba	Unknown / other crops	9'076
	Permanent crops	1'369
Cyprus	Arable land	407
	Unknown / other crops	32
	Permanent crops	579
Czech Rep.	Arable land	20'956
	Unknown / other crops	3'105
	Permanent crops	680
	Permanent pastures	235'379
Denmark	Arable land	133'645
	Unknown / other crops	1'927
	Permanent crops	351
	Permanent pastures	18'998
Dominican Rep.	Arable land	82
	Unknown / other crops	12'372
	Permanent crops	59'971
Ecuador	Arable land	1'236
	Permanent crops	26'199
Egypt	Arable land	15'528
	Unknown / other crops	4'886
	Permanent crops	3'801
	Permanent pastures	333
El Salvador	Arable land	420
	Permanent crops	8'680
Estonia	Arable land	36'406
	Permanent crops	619
	Permanent pastures	8'991
Finland	Arable land	82'121

## 6 CROP STATISTICS AND INFORMATION ON FOUR MAIN CROPS

COUNTRY	MAIN LAND USE CATEGORIES	LAND UNDER ORGANIC MANAGEMENT (HA)
	Unknown / other crops	17'556
	Permanent crops	845
	Permanent pastures	61'502
France	Arable land	287'711
	Permanent crops	25'054
	Permanent pastures	221'272
Georgia	Arable land	10
	Permanent crops	37
	Permanent pastures	2
Germany	Arable land	362'115
	Unknown / other crops	12'276
	Permanent crops	7'500
	Permanent pastures	386'000
Ghana	Arable land	240
	Permanent crops	18'892
Greece	Arable land	21'302
	Permanent crops	33'040
	Permanent pastures	195'146
Guatemala	Unknown / other crops	7'892
	Permanent crops	6'854
Guyana	Total	109
Honduras	Permanent crops	1'823
Hungary	Arable land	62'202
	Unknown / other crops	4'356
	Permanent crops	2'488
	Permanent pastures	59'644
Iceland	Arable land	500
	Permanent pastures	4'410
India (provisional)	Arable land	7'533
	Unknown / other crops	106'504
Indonesia	Arable land	26'000
	Permanent crops	26'882
Iran	Total	200
Ireland	Arable land	1'107
	Unknown / other crops	1'691
	Permanent pastures	27'872
Israel	Arable land	4'250
	Unknown / other crops	210
	Permanent crops	1'500
Italy	Arable land	490'597
	Unknown / other crops	40'878
	Permanent crops	173'790
	Permanent pastures	249'096



<b>COUNTRY</b>	<b>MAIN LAND USE CATEGORIES</b>	<b>LAND UNDER ORGANIC MANAGEMENT (HA)</b>
Jamaica	Total	1'332
Japan	Total	29'151
Jordan	Permanent crops	30
Kazakhstan	Total	36'882
Kenya	Total	182'438
Korea, Republic of	Arable land	10'725
	Unknown / other crops	17'493
Kyrgyzstan	Arable land	200
	Permanent crops	200
Laos	Arable land	30
	Permanent crops	30
Latvia	Arable land	14'287
	Unknown / other crops	5'730
	Permanent crops	1'158
	Permanent pastures	22'726
Lebanon	Arable land	424
	Unknown / other crops	285
	Permanent crops	330
Liechtenstein	Total	984
Lithuania	Arable land	43'446
	Unknown / other crops	139
	Permanent crops	3'666
	Permanent pastures	17'294
Luxemburg	Arable land	1'332
	Unknown / other crops	159
	Permanent crops	50
	Permanent pastures	1'617
Macedonia, The Fmr Yug Rep.	Total	192
Madagascar	Permanent crops	129
Malawi	Total	325
Malaysia	Total	600
Mali	Arable land	170
Malta	Total	13
Mauritius	Permanent crops	150
Mexico	Arable land	74'139
	Unknown / other crops	1'143
	Permanent crops	204'530
	Permanent pastures	15'233
Moldova	Arable land	982
	Unknown / other crops	91
	Permanent crops	10'002
Morocco	Total	20'040

## 6 CROP STATISTICS AND INFORMATION ON FOUR MAIN CROPS

<b>COUNTRY</b>	<b>MAIN LAND USE CATEGORIES</b>	<b>LAND UNDER ORGANIC MANAGEMENT (HA)</b>
Mozambique	Total	600
Nepal	Arable land	311
	Permanent crops	689
Netherlands	Arable land	41'392
	Unknown / other crops	6'277
	Permanent crops	483
New Zealand	Unknown / other crops	44'701
	Permanent crops	299
Nicaragua	Unknown / other crops	5'352
	Permanent crops	10'648
	Permanent pastures	43'000
Niger	Total	12
Norway	Arable land	10'287
	Permanent crops	137
	Permanent pastures	30'611
Pakistan	Arable land	15'720
	Permanent crops	2'840
	Permanent pastures	1'750
Palestine,	Arable land	200
	Permanent crops	800
Panama	Arable land	7
	Unknown / other crops	290
	Permanent crops	4'947
Paraguay	Arable land	300
	Unknown / other crops	91'114
Peru	Arable land	20'459
	Unknown / other crops	439
	Permanent crops	214'878
Philippines	Arable land	14'134
Poland	Arable land	34'186
	Unknown / other crops	6'481
	Permanent crops	3'203
Portugal	Permanent pastures	38'860
	Arable land	61'440
	Permanent crops	26'481
Romania	Permanent pastures	118'603
	Arable land	71'400
	Unknown / other crops	2'500
	Permanent crops	1'100
Russia	Arable land	785
	Unknown / other crops	29'215
Rwanda	Arable land	30
	Permanent crops	20

<b>COUNTRY</b>	<b>MAIN LAND USE CATEGORIES</b>	<b>LAND UNDER ORGANIC MANAGEMENT (HA)</b>
Saudi Arabia	Arable land	11'276
	Permanent crops	2'454
Senegal	Arable land	53
	Unknown / other crops	2'447
Serbia/Montenegro	Arable land	245
	Permanent crops	20'296
Slovak Republic	Arable land	27'884
	Permanent crops	569
	Permanent pastures	65'490
Slovenia	Arable land	1'726
	Permanent crops	398
	Permanent pastures	20'908
South Africa	Total	45'000
Spain	Arable land	165'279
	Unknown / other crops	177'853
	Permanent crops	150'114
	Permanent pastures	239'936
Sri Lanka	Unknown / other crops	15'199
	Permanent crops	16
Sudan	Arable land	36'000
	Permanent crops	164'000
Sweden	Arable land	163'544
	Unknown / other crops	3'795
	Permanent pastures	39'240
Switzerland	Arable land	16'429
	Permanent crops	1'047
	Permanent pastures	103'911
Syria	Arable land	1'100
	Permanent crops	1'400
	Permanent pastures	10'000
Taiwan	Arable land	828
	Unknown / other crops	43
	Permanent crops	222
Tanzania	Arable land	5'793
	Unknown / other crops	50'074
Thailand	Arable land	11'732
	Unknown / other crops	123
	Permanent crops	2'044
Togo	Total	90
Trinidad & Tobago	Total	80
Tunisia	Arable land	9'515
	Unknown / other crops	24'194

COUNTRY	MAIN LAND USE CATEGORIES	LAND UNDER ORGANIC MANAGEMENT (HA)
	Permanent crops	90'086
	Permanent pastures	31'529
Turkey	Arable land	10'470
	Unknown / other crops	96'139
	Permanent crops	1'988
Uganda	Arable land	8'980
	Unknown / other crops	92'803
	Permanent crops	20'217
UK	Arable land	164'086
	Unknown / other crops	14'169
	Permanent crops	1'663
	Permanent pastures	510'352
Ukraine	Total	241'980
Uruguay	Arable land	800
	Permanent crops	5'800
	Permanent pastures	752'400
USA	Arable land	463'013
	Unknown / other crops	93'231
	Permanent crops	31'192
	Permanent pastures	301'612
Venezuela	Total	16'000
Vietnam	Total	6'475
Zambia	Arable land	222
	Unknown / other crops	187'472
Zimbabwe	Total	1'000
<b>Total organic agricultural area</b>		<b>31'502'786</b>

Source: FiBL Survey 2005 / 2006. For the information sources for the individual countries please check the continent tables in the continent chapters of this book.

Please note: information on land use, crop categories and crops was available for only half of the world's organic agricultural

## 7 CROP INFORMATION & STATISTICS

### 7.1 *Organic Cotton* BÀRBARA BARAIBAR<sup>1</sup>

Cotton cultivation has a long history, but still it is not known exactly how old this crop is. Scientists searching caves in Mexico found bits of cotton bolls and pieces of cotton cloth that proved to be at least 7'000 years old. In Pakistan, it seems that cotton was being grown, spun and woven into cloth 3'000 years BC, and at the same time natives of Egypt's Nile valley were making and wearing cotton clothing.

This crop has today become the most important fiber crop, with an estimated world production of 25 million tons of fiber (lint) in 2005/06<sup>2</sup>. Cotton belongs to the family of the Malvaceae (gender *Gossypium*), and its more important species are *Gossypium herbaceum*, *G. barbadense* and *G. hirsutum*.

The three largest producers are China, the USA and India, which has the biggest area under cotton cultivation (9 million hectares). Cotton production currently sustains the livelihood of 17 million people in India. In some African countries like Burkina Faso, Mali and Benin, cotton is playing an even more dominant role in agricultural exports.

In cotton production worldwide, more than twenty percent of total insecticides used in agriculture are applied, and in many areas, irrigated cotton cultivation has led to depletion of ground and surface water resources. Moreover, farmers' health is at stake because of these applications. Soil fertility is declining while production costs increase and the prices go down.

In this scenario, an increasing number of farmers change to organic cultivation in order to restore their soil fertility, reduce production costs, get a better price for their certified organic harvest and improve their health significantly.

Although organic cotton currently occupies only a tiny niche of less than one percent of global cotton production, its cultivation is already reported in 27 countries on five continents.<sup>3</sup> These countries are:

- Africa: Benin, Burkina Faso, Egypt, Mali, Mozambique, Senegal, Tanzania, Togo, Uganda, Zambia and Zimbabwe.
- Asia: China, India, Kyrgyzstan, Azerbaijan and Syria and Pakistan

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<sup>1</sup> Bàrbara Baraibar, in charge of conducting the 2005/2006 survey; at FiBL from October 2005 to January 2006, now Barcelona, Spain. Contact via FiBL ([info.suisse@fibl.org](mailto:info.suisse@fibl.org)).

<sup>2</sup> International Cotton Advisory Committee, World Statistics

<sup>3</sup> Eyhorn, F, Ratter, S.G. and Ramakrishnan. 2005. Organic Cotton Crop Guide. FiBL.

- South America: Argentina, Brazil, Nicaragua, Paraguay and Perú
- Mediterranean: Turkey and Israel
- EU: Greece
- United States of America
- Australia

According to a survey conducted by the Pesticide Action Network of the United Kingdom (PAN-UK) in 2000/2001, Turkey and the United States were the leading producers of organic cotton, followed by India, Perú, Uganda, Egypt, Senegal and Tanzania.

Unfortunately, the FiBL survey could not get the complete and up-to-date cotton figures for these countries, as can be seen in the table below. Organic cotton areas in these top countries have probably grown since 2001 and today, these areas are likely bigger than the figures presented here.

Please note that only 19 of the 27 countries mentioned above appear in the table (not all countries provided detailed information about land use; see also the chapter on data collection and processing). The main conventional cotton producers like the United States or China can also be found in the top organic cotton producing countries as could be expected.

**Table 10:** Organic cotton area by country

COUNTRY	DATE	ORGANIC COTTON AREA (HA)
Uganda	2001	8'980
Turkey	2003	8'000
India (provisional)	2003	7'533
Tanzania	2005	5'793
USA	2003	3'663
China	2004	2'000
Greece	2004	1'011
Pakistan	2004	880
Benin	2005	400
Paraguay	2003	300
Peru	2003	280
Israel	2004	250
Mali	2003	170
Azerbaijan	2005	144
Syria	2004	100
Kyrgyzstan	2005	98
Egypt	2005	73
Senegal	2001	53
Burkina Faso	2004	30
<b>Total cotton area covered by the FiBL Survey 2005 / 2006</b>		<b>53'314</b>

Source: FiBL Survey 2005 / 2006. For the information sources for the individual countries please check the continent tables in the continent chapters of this book.

Please note: Not for all cotton producing countries data were available

The highest demand for textiles made from organic cotton mainly exists in Europe, the USA, Canada, Japan and Australia, where some large companies have become involved with organic cotton textiles in order to improve their corporate image with respect to environmental and social accountability. Also, there are other initiatives to encourage and expand responsible consumption of this material. An example is the Organic Exchange that aims to change ten percent of the world's demand of cotton to organic cotton within ten years; or PAN-UK, which aims at the same goal at a national level.

All these initiatives have ambitious targets but it seems that the demand is growing and the need for a change is becoming unavoidable for many cotton-producing countries.

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### Websites

- Organic Exchange  
[www.organicexchange.org](http://www.organicexchange.org)
- Organic Trade Association: Organic Cotton Facts.  
[http://www.ota.com/organic/mt/organic\\_cotton.html](http://www.ota.com/organic/mt/organic_cotton.html)
- PAN Germany : Organic Cotton Circular and information about organic cotton:  
<http://www.organiccotton europe.net/>
- PAN UK: Cotton Homepage  
<http://www.pan-uk.org/Cotton/cotindex.htm>
- Research Institute of Organic Agriculture (FiBL): Organic Cotton Farming in India.  
<http://www.fibl.org/english/cooperation/projects/organiccotton2.php>

### *Organic Exchange*

Organic Exchange is a non-profit business organization focused on creating environmental and social benefits through the expansion of organic agriculture. Their first project focuses on transitioning 10 percent of the world's demand of cotton to organic production within ten years. The Organic Exchange brings together brands and retailers with their business partners and key stakeholders to learn more about the social and environmental benefits of organic agriculture, and to develop new business models and tools that support greater use of organic inputs such as organic cotton. They also work to help increase consumer awareness of the organic cotton products.

More information about Organic Exchange can be viewed at: [www.organicexchange.org](http://www.organicexchange.org)

## 7.2 *Organic Coffee*

### **BÀRBARA BARAIBAR<sup>4</sup>**

When the goat herder Kaldi discovered the strange behavior of his goats after chewing some berries from a bush in the Ethiopian high lands, little did he imagine the importance of his discovery. Those red berries that made his goats jump nervously on the field and later, converted into a beverage, helped some monks to stay awake during evening prayers, were to become one of the most important beverages in the world.

Many legends exist around the discovery of coffee, and we will probably never get to know which the true one is; but the fact is that nowadays, coffee is one of the most traded raw materials in the world and a source of foreign exchange for a lot of developing countries. Its cultivation, processing, trading, transportation and marketing provide employment for millions of people around the world. Everybody knows it and many drink it every day. Coffee has become a universal beverage that can be found in almost all parts of the world.

The coffee plant originates from the subtropical forest eco-system of the Ethiopian high lands, where it grows in the shade of a variety of trees in a summer rain region. The plant belongs to the family of Rubiaceae, *Coffea Arabica* and *Coffea canephora* being the two most important varieties in the world.

In 2004, 115'040 million bags were produced worldwide (ICO, 2004), Brazil, Vietnam and Colombia being the main producers. Coffee beans are also grown in many countries in Asia, Africa and Latin America, and in most of these countries coffee exports account for a substantial part of their foreign exchange earnings. Its cultivation produces an income for millions of small farmers and their families around the world (125 million according to ICO), and often, these farmers are totally dependent on coffee for their livelihood.

In the year 2000, coffee prices registered a tremendous drop, mainly due to an oversupply. According to ICO, the situation has been overcome since November 2004, but the four years of low prices have resulted in an increase of poverty, rural unemployment or emigration from rural areas.

Although organic coffee has been a reality for many years, it's in the current context, with an uncertain future, that many coffee producers around the world have found in organic coffee an alternative market to sell their products. As well as having price premiums for their product, organic coffee producers are ensuring a sustainable production by preventing the erosion of their soils and by reducing their dependence on external input supply.

Today approximately 20'000 metric tons of organic coffee are traded worldwide, which represents about 1.5 percent of the world's coffee. This trade is already sustaining the livelihood of half a million people. The biggest markets for this product are the United States, Europe and Japan. However, there are also other markets developing, such as Brazil and South East Asia. Fair Trade is often related to organic coffee production (80 percent of the organic coffee is sold

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<sup>4</sup> Bàrbara Baraibar, in charge of conducting the 2005/2006 survey; at FiBL from October 2005 to January 2006, now Barcelona, Spain. Contact via FiBL ([info.suisse@fibl.org](mailto:info.suisse@fibl.org)).



under fair trade labels<sup>5</sup>). Some studies have pointed out that consumers in “developed countries” are ready to pay an average of 15 to 25 percent more for organic coffee than for conventional, and this percentage reaches the 20 to 50 percent when organic coffee has also the Fair Trade guarantee. Thus, the combination organic and fair trade seems to lure both consumers and farmers.

According to the FiBL survey (although data were not available for all countries) there are about 324'000 hectares of organic coffee in the world, and the main producing countries are both in Latin America: Mexico (147'136 hectares) and Perú (75'775 hectares). In Mexico, 18.9 percent of total coffee produced is organic, and Chiapas is the leading region producing the 53.5 percent of total organic coffee of the country.

In Africa, Uganda, with more than 18'000 hectares, is the country where most organic coffee is produced, but specific data is missing for other main organic coffee producers like Ethiopia, Kenya, Tanzania and Madagascar. However, Ethiopia, Kenya and Uganda are producing between

**Table 11:** Organic coffee area by country

COUNTRY	DATE	AREA (HECTARES)
Mexico	2005	147'137
Peru	2004	75'775
Indonesia	1998	26'882
Uganda	2004	18'135
Nicaragua	2004	10'282
Colombia	2003	7'531
Guatemala	2003	6'854
Brazil	2003	6'316
Dominican Rep.	2004	6'310
El Salvador	2005	6'000
Bolivia	2003	4'206
Ecuador	2005	3'484
Costa Rica	2004	2'071
Honduras	2003	1'823
Cameroon	1998	700
China	2004	260
Nepal	2004	100
Ghana	2005	55
Panama	2005	40
Sri Lanka	1998	16
<b>Total coffee area covered by the FiBL Survey 2005 / 2006</b>		<b>323'976</b>

Source: FiBL Survey 2005 / 2006. For the information sources for the individual countries please check the continent tables in the continent chapters of this book.

Please note: data were not available for all coffee producing countries

5 Bo van Elzakker. Director of Agroeco. 3rd International IFOAM Organic Coffee Conference. Uganda, 2004.

5000 and 6000 metric tons<sup>6</sup> of organic milds; about 2'000 tons of organic natural arabica are being produced in Ethiopia, Tanzania and Uganda. The last two countries and Madagascar produce between 1000 and 1'500 tons of organic robustas.

In Asia, according to the last organic coffee conference held in Uganda in 2004, East Timor is the largest producer, with 9'000 metric tons of organic green coffee, although it only sells 2000 tons as organic. Unfortunately, data on organic certified land area was not available for this country or for other important countries like Vietnam or Papua New Guinea that produce organic milds in Asia. According to this survey, Indonesia is the world's third largest organic coffee producer, however, the figure is quite old (1998). Concerning the robustas, India is the main organic producer in Asia with an estimated 500 tons in 2004 (CIMS).

The strengths and the weaknesses of organic coffee production were discussed in the last IFOAM Organic Coffee Conference held in Uganda in October 2004. As the participants pointed out, organic coffee production has a lot of opportunities ahead. Its cultivation includes valuable environmental and social services that consumers are ready to pay for.

However, organic coffee cannot completely solve the problems of the general crises in the coffee market, and there are still a lot of problems to be solved. The most important ones were discussed in Uganda, and included amongst others, the lack of harmonization in the organic certification sector; the need for an increased share of the coffee price going to the producers; and the threat that policies promoting practices contrary to organic such as genetic engineering (GMOs) and pesticides involve.

### *Websites*

- Fair-trade Labeling Organization International. Homepage: [www.fairtrade.net/index.html](http://www.fairtrade.net/index.html)
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6 CIMS estimations, 2004. 3rd International IFOAM Organic Coffee Conference. Uganda, 2004.

### 7.3 *Organic Cocoa Production* SALVADOR GARIBAY<sup>7</sup>

The natural habitat of cocoa plants (*Theobroma cacao*) is the tropical rainforest where it predominantly occurs in alluvial forests. Cocoa is native of Central America and South America. With a height of up to ca. nine meters the cocoa is a small under story tree of the primary forest and is associated with a vast mixture of tree species providing a stratified forest structure. Three groups of cocoa can be distinguished, each with several varieties:

- Forastero: is the most widely cocoa grown (approximately 80 percent of the total area under cocoa). Its origin is in the Amazon region. Forastero qualities have high yields but weak taste.
- Criollo: Its origin is probably in Venezuela, Ecuador and Mexico (approximately 3 percent of the total area under cocoa). Criollo cacao has a strong fine flavor and highest cocoa quality, but yields are low, and therefore it is rarely cultivated. It is demanding in its habitat requirements but also susceptible to diseases.
- Trinitario: is a hybrid between the Forastero and Criollo types. It is hardier and higher yielding than Criollo. It has a share of roughly 10 to 15 percent of the total world production of Cacao.

#### *Global Cocoa Production*

The main cocoa producers are Africa (69 percent of the global production), America, Asia and Oceania (18 percent) and America (13 percent). Mainly small farmers with less than 5 hectares carry out almost 90 percent of the cacao production. The global production of cacao is about 2.7 million tons annually. The buyers of cocoa beans in the consuming countries are the processors and the chocolate manufacturers. A few multinational companies dominate both processing and chocolate manufacturing (Barry Callebaut AG, Ferrero, Altria Group, Nestle, Storck, Alfred Ritter, Mars, Krüger). The bulk of imported cocoa goes from processing firms via sellers to the organic food trade and shops. Although supermarkets have sold little organic chocolate so far, there is interest among some. In the early 1990s, small companies focusing on a niche produced certified organic chocolate, and the products were sold primarily in health-food stores or specialty shops. Today, supermarkets also sell organic chocolates, but production is still dominated by relatively small and medium-sized chocolate manufacturers with unique brands.

#### *The European Market*

In Europe, the reported imports of organic cocoa were about 14'000 tons during 2003. European traders consider the current potential demand for organic cocoa as good; even though of an oversupply exists; the reason for this being that the industry and supermarkets are interested in both organic and fair trade cacao. The supermarkets are playing an important role in the promotion of organic chocolate. Under these circumstances, some large and traditional manufacturers of well-known branded products in Europe are just starting to enter the organic

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<sup>7</sup> Dr. Salvador Garibay, Department of International Cooperation, Research Institute of Organic Agriculture FiBL, Ackerstrasse, 5070 Frick, Internet <http://www.fibl.org/english/cooperation/index.php> and <http://www.fibl.net/fibl/team/garibay-salvador.php>

market. Between 2002 and 2005 there has been an estimated growth of sales rates of 16 to 20 percent. Exporters of organic cocoa from producing countries that wish to supply the European market should pay maximum attention to offer good quality, good customer services and market oriented prices in order to reach possible customers. For example, the Dominican Republic is one of the leaders on the production of organic cocoa worldwide. It has more than 31'000 hectares and has a production of about 14'350 tons yearly. The Dominican Republic, however, exports only about 60 percent of its total organic cocoa production (8'500 tons). The reason for this is the low quality of the cocoa offered, due to not suitable drying and fermentation facilities. The trend in the European market is a demand for both organic and fair-trade products; this is also an important issue for cocoa products. Furthermore, the industry is looking to develop cocoa products with which they can associate a story; for example, the production of organic chocolate with organic wild cocoa plants. On the other side, the prices of organic cocoa vary strongly, depending on the demand and supply situation. In 2005, an indicative price for organic cocoa was of approximately of 2'250 USD<sup>8</sup>/ton CIF Rotterdam<sup>9</sup> on the EU market.

According to this survey, there are about 73'000 hectares of organic cocoa. As mentioned before Dominican Republic is one of biggest producers with 31'073 hectares. At second place appears Mexico with 17'314 hectares with a volume of almost 9'500 tons. The increase of organic cocoa production in Mexico is due to several projects that started in 2001/02. For example, the small farmers' initiatives called Integradora Organicos de Chontalpa have actually 2'336 hectares certified and 636 hectares in conversion. In their agro forestry systems, Organicos de Chontalpa are producing cacao with different varieties like the Guayaquil, Ceilan and Criollo. Its processing capacity is 2'400 tons annually, both for the national and for the export market. Ecuador reaches the third place in organic cocoa certified area (7'574 hectares), but no data was available on the production volume. Generally, it seems that during the last three years great efforts were made in different countries in order to increase the organic area with cacao production. Newcomers, such as Cuba (1'369 hectares), Venezuela, Colombia, etc. have started with the conversion of new cocoa areas. In this survey, it was not possible to obtain up-to-date data of important countries as Bolivia, Tanzania and Madagascar.

This increase of land under organic cocoa production and the volume produced means that both the European and US market can be supplied. However, the US market is supplied with organic chocolate from European manufacturers because in this country there are no certified processors yet. This means that the suppliers from producing countries have to promote sales in Europe. On the negative side there is currently the danger of Moniliasis, a disease that attacks young pods, spreading in Latin America. This new situation needs fast and practical solutions for the farmers, before all the efforts to produce organic are shattered.

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8 2'250 USD = 1'851.5 EUR (per 31.12.2005)

9 CIF (=Cost, Insurance and Freight) is an International Commercial Term (INCOTERM). In the export quotation the port of destination (discharge) is indicated after the acronym CIF. The cargo insurance and delivery of goods to the named port of destination (discharge) is at the seller's expense. The buyer is responsible for the import customs clearance and other costs and risks.

**Table 12:** Organic cocoa area by country

CONTINENT	COUNTRY	DATE	ORGANIC HECTARES (HA)	ORGANIC PRODUC- TION (T)	ORGANIC EXPORT (T)	CONVEN TIONAL PRODUC- TION (T)
Africa	Uganda	2004	2'082	600	168	
	Ghana	2005	222			
	Madagascar	2003		1'500		
	Tanzania	2003		800		
Latin America	Dominican Rep.	2005	31'073	43'000	8'500	
	Mexico	2005	17'314	9'419	659	43'975
	Ecuador	2005	7'574			
	Peru	2004	3'140	4'500	1'202	26'000
	Brazil	2005	2'050			
	Costa Rica	2004	2'028			
	Nicaragua	2004	366	98	98	
	El Salvador	2005	200			
	Panama	2005	4'850			
	Cuba	2005	1369			
	Bolivia	2003		300		
	Belize	2003		30		
	Oceania	Vanautu	2002		500	
Fiji		2002		50		
<b>Total cocoa area covered by the FiBL Survey 2005/2006</b>			<b>72'267</b>	<b>57'616</b>	<b>10'627</b>	<b>69'974</b>

Source: FiBL Survey 2005 / 2006. For the information sources for the individual countries please check the continent tables in the continent chapters of this book.

Please note: data were not available for all cocoa producing countries

### *Contacts for cacao*

#### Africa

Ghana: Bo van Elzakker. Director of Agro Eco. P.O. Box 63, 6720 AB Bennekom, the Netherlands tel +31.318.420.405, fax +31.318.414.820, Homepage: [www.agroeco.nl](http://www.agroeco.nl) and [www.epopa.info](http://www.epopa.info) and Samuel Adimado, GOAN (Ghana Organic Agriculture Network)

Uganda: Alastair Taylor. Agro Eco - Uganda Branch (Joint implementer of the EPOPA program), Box 71982. Kampala. Uganda, Tel/Fax + 256 41 268461

#### Latin America

Brazil: Alexandre Harkaly (Executive Vice President). Instituto Biodinamico (IBD). Rua Prudente de Moraes, 530. CEP 18602-060, Botucatu, SP, Brazil, Tel. +55 14 3882-5066, Homepage <http://www.ibd.com.br/>

## Costa Rica

- Gerencia Técnica de Acreditación y Registro de Agricultura Orgánica, del Servicio Fitosanitario del Estado (SFE) del Ministerio de Agricultura y Ganadería (MAG). Tel/Fax: (506) 261-0381 and (506) 260-8300. Ext. 2143-2144-2145
- Jaime E. García G., Dr.sc.agr. Área de Agricultura y Ambiente (AAA). Centro de Educación Ambiental (CEA). Universidad Estatal a Distancia (UNED). Apartado Postal 474. 2050-San Pedro de Montes de Oca. Tel. +506 527-26-45, 224-68-49
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## Ecuador

Petra Koppensteiner. GTZ-GESOREN Componente PAC (Producción Agropecuaria Sostenible y Comercialización). Tel: +593 2 2500 195. Internet: [www.gtz-proyectopac.org](http://www.gtz-proyectopac.org)

El Salvador: Beatriz Alegría. Dirección General de Agronegocios. Ministerio de Agricultura y Ganadería de El Salvador Tel: +503 22411892 / 7899-1034

## Honduras:

Sandra Elvir Sanchez. Ministry of Agriculture MAG, Tegucigalpa, Honduras

## Mexico

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- CIESTAAM/ Universidad de Chapingo. Km 38,5 carr. México – Txcoco. Apdo Postal 90. CP. 56230 Chapingo, México. Tel: +52 595 9521613. Fax: +52 595 9521613

Nicaragua: Johannes Füssel. 'The Tree Institute' Instituto para la Biodiversidad y Bienestar de los Árboles Tropicales IBBAT, Tel.: +505 279 9845, Internet [www.eco-tierra.com](http://www.eco-tierra.com)

Peru: Juan Vaccari Chávez. Director Ejecutivo IDMA. Av. Boulevard 1048, Lima 41. Telefax: 51-1-2249641 /2263761. Homepage: [www.geocities.com/idma.geo](http://www.geocities.com/idma.geo)

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## 7.4 *Organic grapes ... More Than Wine and Statistics*

**BERNWARD GEIER<sup>10</sup>**

Wine plays an outstanding role as “ambassador” of organic quality. Given the rapidly growing importance of the organic wine sector, it is appropriate and timely to devote a special chapter to this crop.

Searching for reliable organic data and statistics is quite a challenging task, which seems to be even paramount when it gets to organic grapes and wine. Helga Willer from the FiBL, the Research Institute of Organic Agriculture, supported by Bàrbara Baraibar worked hard and dedicated to get the data, which are presented in this chapter.

### *The roots and quality achievements*

Viticulture and grape growing was among the crops that were converted early to the chemical treadmill, which subsequently caused an early development of organic and biodynamic alternatives dating back to the 1950s.

Only since the 1980s public research has supported the increasing in organic grape and wine production.

A solid growth of the sector started in the nineties and continues dynamically up to today.

For the pioneers in the first decades, the focus was clearly on finding and practicing alternatives to the use of chemical-synthetic fertilizers and pesticides. The consequence of this concentration on environmental aspects – so to say from a healthy soil to healthy grapes - was that often less attention was paid to the cellar and wine quality.

Thus organic wine in its earlier days did not have the best reputation with regard to taste and sensorial quality. As a matter of fact, even today one comes occasionally across the perception or assumption that organic wine is of inferior quality.

Reality shows that organic wine has developed up to prime quality levels, winning most prestigious recognition and awards even in so called conventional competitions. The annual BioFach organic wine award, with its worldwide participation and reputation, demonstrates impressive quality achievements and shows that it is correct to consider organic wine as an ambassador of good taste and top organic quality.

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<sup>10</sup> Bernward Geier is the former IFOAM director of external affairs. Bernward Geier, Alefeld 21, 53804 Much, Germany, Tel: +49-2245-618652, Email: bub.geier@t-online.de

**Table 13:** Organic grape area by country

COUNTRY	DATE	VINEYARDS UNDER ORGANIC MANAGEMENT (HECTARES)	SHARE OF TOTAL VINEYARDS IN A COUNTRY
Italy	2004	31'170	3.4 %
France	2004	16'428	1.9 %
Spain	2004	14'928	1.2 %
Moldova	2005	8'155	
Greece	2004	3'303	2.7 %
USA (California)	2004	3'104	1.5 %
Germany	2004	2'500	2.4 %
China	2004	2'000	1.0 %
Turkey	2004	1'988	0.3 %
Chile	2003	1'892	1.7 %
Austria	2004	1'657	3.4 %
Portugal	2004	912	0.4 %
Syria	2004	600	
Hungary	2004	579	
Switzerland	2004	358	2.4 %
New Zealand	2004	299	2.0 %
Argentina	2005	273	0.1 %
Canada	2004	99	0.9 %
Israel	2004	80	
Slovak Republic	2005	78	0.4 %
Cyprus	2005	75	
Slovenia	2004	49	0.3 %
Czech Rep.	2004	48	0.3 %
Lebanon	2005	40	
Croatia	2005	32	0.1 %
Georgia	2005	31	
Serbia/Montenegro	2004	6	
Luxemburg	2004	6	
Albania	2004	5	
Macedonia, The Fmr Yug Rep.	2005	1	
<b>Total grape area covered by the FiBL Survey 2005/2006</b>		<b>90'696</b>	

Source: FiBL Survey 2005 / 2006. For the information sources for the individual countries please check the continent tables in the continent chapters of this book.

Figures for total vine area (Year 2001) (with the exception of France): Office International de la Vigne et du Vin (O.I.V.)<sup>11</sup>

Please note: data were not available for all wine / grape producing countries

11 Office International de la Vigne et du Vin (O.I.V.); General wine statistics <http://news.reseau-concept.net/images/oiv/Client/Stat%202001.pdf>



### *A reflection on the statistics*

Even though it is great that the 2006 edition of organic world statistics includes information on grape production, it has to be stated that the data presented (more than 90'000 hectares) are not a reflection of the actual area with organic grapes.

It has not been possible to get data from some important wine growing countries like Australia. In the US, organic vineyards do not only exist in California, although this figure covers the major area in the US.

It also needs to be clarified that the grape area is not always for wine production. Especially the grape areas in China, Turkey, Greece, but also in California are not solely vineyards. They also cover substantial grape production for table grapes, raisins, sultanas etc.

Considering the fact that we have “mega” viticulture countries like Italy, France and Spain, it is not a surprise that these countries are also leaders when it comes to organic viticulture. These three countries cover far more than half of the worldwide organic viticulture area.

The fact that Italy is not only leading the statistic, but also covers almost twice as many hectares as the “runner up” France, mirrors the fact that Italy also leads the total organic area statistics in Europe. We cannot (yet) present numbers on organic grape growers and farms, but in the case of Italy, there are in the range of a couple of thousand viticulturists. Considering the fact that grape and wine producing farms are fairly small in terms of hectare size in most countries, it is a safe estimate that on a global level a several ten thousand grape producers are growing organically.

Reliable marketing and economic data were not obtainable, but a short reflection on these aspects is reasonable and possible.

In some countries like Italy and France, the share of vineyards within the total organic area has reached levels of two to over three percent. This is still a small proportion, but considering the fact that making wine (and also raisins) is highly value adding, the economic importance of grape and wine production is way beyond the mere area share. This is also supported by the fact that organic wine has a high proportion of direct marketing, giving the producers a greater and fairer share of financial returns.

Although Chile has proportionally few hectares in grapes, the share of organic wine in the export statistics of the country in the range of eight percent, which supports the conclusions above.

Compiling this data is a start, and we hope that highlighting this sector inspires those with access to regional and national data information to contribute to a more extensive and comprehensive overview in next year's edition.

### *Challenges and opportunities ahead*

Despite the positive development and the achieved market importance, quite a few challenges remain.

Viticulture is “by nature” basically a monoculture, and thus in extraordinary need of adopted and tailored solutions. Especially in the context of disease and pest management, increased research efforts are needed. On top of the list is the need to achieve a reduction or better even a replacement of copper as a fungicide, as copper has quite some toxic impact on soil organisms.

Another challenge is the governmental regulations hindering grape growers to plant interspecific varieties and market wine derived from these grapes.

Labeling wine as organic is especially difficult in the USA, as the law requires organic wines to be free of sulphates! Consequently, most organic wines are not labeled as “organic wine,” but as wine “made with organically grown grapes.”

A question open for debate seems to be whether there is a need to compensate lower yields and potentially higher (labor) inputs through subsidies. In the case of wine, lower yields are closely related to higher quality. If better quality is appreciated by a corresponding demand and thus with higher prices, this allow organic wine growers to make a living from wine growing, not depending on subsidies.

For the grape and wine production in so-called developing countries with viticulture, there is an interesting potential to increase the premium price if criteria for fair trade are met. Successful examples combining organic and fair trade e.g. from South Africa give promising indications about the synergy potential for organic wine.

We can conclude that the future perspectives for the organic grape, raisin and wine sector are very good as the increase in awareness and the growing demand for high quality food matches so well with the logic that the wines along with the meals are also of organic origin and thus of best quality.

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### 7.5 Selected Crop Statistics: Citrus, Olive and Rice Production

For some selected crops, statistics are presented here.

For statistics and further information on organic coffee, cocoa, cotton and wine, please check the respective crop chapters.

**Table 14:** Organic citrus area by country

COUNTRY	YEAR	AREA WITH ORGANIC CITRUS PRODUCTION (HECTARES)	SHARE OF ORGANIC CITRUS AREA COVERED BY THE FIBL SURVEY 2005/2006
Italy	2004	15'043	60.10 %
Greece	2004	2'168	8.66 %
Mexico	2005	1'608	6.43 %
Spain	2004	1'587	6.34 %
Dominican Rep.	2004	1'217	4.86 %
Costa Rica	2004	957	3.82 %
China	2004	500	2.00 %
Israel	2004	460	1.84 %
Pakistan	2004	440	1.76 %
Uruguay	2004	300	1.20 %
Argentina	2005	273	1.09 %
Ghana	2005	160	0.64 %
Sudan	2005	150	0.60 %
Syria	2004	100	0.40 %
Egypt	2005	46	0.18 %
Panama	2005	10	0.04 %
Cyprus	2005	9	0.04 %
<b>Total citrus area covered by the FiBL Survey 2005/2006</b>		<b>25'029</b>	<b>100.00</b>

Source: FiBL Survey 2005 / 2006. For the information sources for the individual countries please check the continent tables in the continent chapters of this book.

Please note: Not for all citrus producing countries data were available

**Table 15:** Organic olive area by country

<b>COUNTRY</b>	<b>YEAR</b>	<b>AREA WITH ORGANIC OLIVE PRODUCTION (HECTARES)</b>
Spain	2004	90'042
Italy	2004	88'963
Tunisia	2004	83'792
Greece	2004	25'811
Portugal	2004	18'997
Argentina	2005	5'674
Mexico	2005	1'000
Saudi Arabia	2005	783
Syria	2004	600
Cyprus	2005	414
Israel	2004	310
Albania	2004	55
Peru	2004	44
Lebanon	2005	40
Jordan	2005	30
Egypt	2005	23
Croatia	2005	15
Slovenia	2004	4
<b>Total olive area covered by the FiBL Survey 2005/2006</b>		<b>316'596</b>

Source: FiBL Survey 2005 / 2006. For the information sources for the individual countries please check the continent tables in the continent chapters of this book.

Please note: Not for total olive producing countries data were available

**Table 16:** Organic rice area by country

<b>COUNTRY</b>	<b>YEAR</b>	<b>AREA WITH ORGANIC RICE PRODUCTION (HECTARES)</b>	<b>SHARE OF ORGANIC RICE AREA COVERED BY THE FiBL SURVEY 2005/2006</b>
China	2004	60'000	44.67 %
Indonesia	2004	26'000	19.36 %
Philippines	2004	14'134	10.52 %
Korea, Republic of	2005	10'725	7.99 %
Thailand	2004	8'349	6.22 %
Italy	2004	6'928	5.16 %
Pakistan	2004	6'360	4.74 %
Uruguay	2004	800	0.60 %
Taiwan	2003	600	0.45 %
Mexico	2005	150	0.11 %
Zambia	2004	88	0.07 %
Hungary	2004	63	0.05 %
Costa Rica	2004	44	0.03 %
Egypt	2005	41	0.03 %
Greece	2004	27	0.02 %
Macedonia, The Fmr Yug Rep.	2005	5	0.00 %
<b>Total rice area covered by the FiBL Survey 2005/2006</b>		<b>134'314</b>	<b>100.00 %</b>

Source: FiBL Survey 2005 / 2006. For the information sources for the individual countries please check the continent tables in the continent chapters of this book.

Please note: Not for all rice producing countries data were available

# 8 OVERVIEW OF THE GLOBAL MARKET FOR ORGANIC FOOD & DRINK

AMARJIT SAHOTA<sup>1</sup>

## 8.1 Introduction

Global sales of organic food & drink increased by about nine percent to 27.8 billion USD<sup>2</sup> in 2004. The highest growth was reported in North America, where organic product sales are expanding by over 1.5 billion USD<sup>3</sup> a year. With Europe, the two regions comprise 96 percent of global revenues. Although demand for organic food is concentrated in the northern hemisphere, production and sales are also increasing across the globe. Farmers are increasingly taking the organic option because of the health and environmental benefits, whereas consumers are responding by purchasing high quality and ethical products.

## 8.2 Europe

The European market for organic food & drink is the largest in the world, estimated at 13.7 billion USD<sup>4</sup>. Sales of organic products increased by about five percent in 2004 however many countries reported higher growth rates.

The German market, the largest in Europe, experienced the highest growth in 2004. Sales increased by 12 percent to about 4.2 billion USD<sup>5</sup> in 2004. Consumer demand for organic food continues to strengthen as the number of channels offering organic products expands. A growing number of conventional supermarkets are offering organic products and the number of organic supermarkets continues to increase with 40 new organic supermarkets opening in 2004 alone. The UK market continues to show healthy growth with 10 percent growth reported in 2004. The UK market, valued at about 1.9 billion USD<sup>6</sup>, is the third largest in the world. Like most European countries, the highest growth is being observed in the fruit & vegetable, meat & dairy categories. Much of the growth in the UK market is occurring in non-supermarket channels like organic food shops, box schemes, and farmers markets. A growing number of catering & food service companies are also offering organic food.

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1 Amarjit Sahota, The Organic Monitor, 79 Western Road, London W5 5DT, United Kingdom, Internet <http://www.organicmonitor.com/>

Amarjit Sahota is the director of Organic Monitor, a business research & consulting company that specializes on the international organic & related product industries.

2 27.8 billion USD = 23.5 billion EUR (per 31.12.2005)

3 1.5 billion USD = 1.3 billion EUR (per 31.12.2005)

4 13.7 billion USD = 11.6 billion EUR (per 31.12.2005)

5 4.2 billion USD = 3.6 billion EUR (per 31.12.2005)

6 1.9 billion USD = 1.6 billion EUR (per 31.12.2005)

The Italian and French markets are the next most important in Europe, however growth rates have slowed in these countries. Other important markets are in Switzerland, Austria, Sweden and the Netherlands.

There is a small market for organic food in Central & Eastern Europe (CEE) with the region comprising less than three percent of European revenues. Although the amount of organic farmland in CEE countries is rising, mostly primary products like grains, seeds and herbs are grown. There is a lack of organic food processing in the region with high volume of the organic crops exported to Western Europe. Organic food companies export some of the resultant finished goods back to the region. Demand for organic products is growing rapidly in countries like Czech Republic and Hungary, especially in the country capitals.

### **8.3 North America**

The North American market for organic products is the fastest growing in the world. Sales of organic food increased by about 14 percent to 13 billion USD<sup>7</sup> in 2004. With healthy growth rates continuing, the region is expected to overtake Europe and represent most global revenues in 2006.

The USA has the largest market for organic food, valued at about 12.2 billion USD<sup>8</sup> in 2004. Although organic fresh produce and dairy products comprise most revenues, all sectors are reporting high growth rates. American consumers cannot get enough organic products and manufacturers have launched organic versions of many popular products. For instance, organic versions of American favorites like pizza, hot dogs, and peanut butter are now available in retailers.

Increasing distribution is a major driver of market growth. The traditional retail outlets for organic food were natural food shops like Whole Food Market and Wild Oats, however mainstream grocery retailers now comprise most organic food sales. The range of organic products continues to expand in supermarkets like Safeway, Albertson's and Kroger. Even Wal-Mart, renown for its low-cost products, has jumped on the organic bandwagon.

The Canadian market is also reporting high market growth. Sales of organic food & drink were estimated to have reached 900 million USD<sup>9</sup> in 2004. As in the USA, a major driver is increasing distribution with a growing number of conventional supermarkets launching organic products.

Demand for organic products is so high in USA and Canada that many industry sectors are experiencing supply shortages. Producers are importing organic products from across the globe due to insufficient production in North America. For instance, organic seeds and grains are coming in from Europe and Asia; organic herbs & spices from Latin America and Asia; organic beef is

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7 13 billion USD = 10.9 billion EUR (per 31.12.2005)

8 12.2 billion USD = 10.3 billion EUR (per 31.12.2005)

9 900 million USD = 760.2 million EUR (per 31.12.2005)

imported from Australia and Latin America. Supply shortages have led Stonyfield Farms, the largest organic yogurt producer, to look at importing organic milk powder from New Zealand. A feature of the organic food industry in North America is that large food companies dominate almost every sector. Multinationals like Dean Food, General Mills, and Pepsi-Cola have strong market positions. Large food companies, private equity firms or organic food conglomerates like Hain Celestial and Sun Opta are acquiring prospective organic food companies.

North America is the only region in the world in which organic food companies are listed on the stock exchange. Organic food companies like Hain Celestial and Sun Opta as well as retailers like Whole Food Market and Planet Organic are publicly listed.

#### **8.4 Asia**

Although home to about 60 percent of the world population, Asia has a small market for organic products. Production of organic crops is increasing in the Asian region; however sales are largely in the most affluent countries. The Asian market for organic food was valued at about 750 million USD<sup>10</sup> in 2004 (a revision of previous years estimate as more accurate data became available).

The largest market is in Japan, which is estimated at 400 million USD<sup>11</sup>. This market size only refers to sales of organic products meeting Japanese Agricultural Standards (JAS). Sales are much higher if we include other organic products, especially those directly marketed by producers to consumers. Organic products like fruit, vegetables, rice, and green tea are mostly grown in Japan. Other products, especially processed food, are imported from countries like Australia, USA and Germany.

The highest market growth is occurring in China, which has the largest area of organic farmland in Asia. Production of organic crops has increased significantly in recent years. The growing affluence of Chinese consumers and expanding expatriate community is developing a domestic market for organic food. Foreign supermarkets like Carrefour are importing organic food from Europe to meet growing demand. The number of organic food shops, especially in the major cities, is increasing to meet burgeoning consumer demand.

Other Asian countries with large markets for organic food are South Korea, Taiwan, Singapore, and Malaysia. Asian consumers in these countries have relatively high disposable incomes and organic products are popular as they are perceived to be healthier and nutritious than non-organic food. Food scares like bird flu are making Asian consumers more aware of the production differences between organic food and non-organic food. There is also growing demand for organic food in countries like India, Thailand and the Philippines. Unlike the first-tier countries, domestic products in these countries meet much of the demand for organic food.

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10 750 million USD = 633.5 million EUR (per 31.12.2005)

11 400 million USD = 337.9 million EUR (per 31.12.2005)



## 8.5 *Oceania*

The Australasian continent comprises almost a half of global organic farmland, however the market size is a fraction of the global total. Sales of organic food & drink were estimated at about 250 million USD<sup>12</sup> in 2004.

Production of organic food in Australia and New Zealand has traditionally been export-oriented. Much of the organic crops grown in these countries are sold in different parts of the world. For instance, organic lamb from New Zealand is sold in Western Europe and North America; organic beef from Australia is marketed in Japan and the USA. Other important exports include organic seafood, apples, honey and wool.

The domestic market for organic products in New Zealand and Australia 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 conventional food retailers selling organic products is increasing, and new organic food shops continue to open.

## 8.6 *Conclusions*

With sales of organic food & drink expanding by about 2.4 billion USD<sup>13</sup> a year, the global market is predicted to top the 30 billion USD<sup>14</sup> mark in 2005. Although sales are concentrated in the two regions of North America and Europe, demand is broadening to other regions.

With organic farming now practiced across the globe, it is only a matter of time before demand for organic products follows suit. Growing consumer awareness of the differences between organic and non-conventional production methods is stimulating consumer purchases. The growth in regional markets is accentuating this development. Growers increasingly sell organic products to consumers in their region in countries like Brazil, India and Thailand.

In other regions, rapid economic development is giving to a rise to a middle-class, which is well educated and has high purchasing power. These consumers, in countries like China and Malaysia, are increasingly embracing organic products. As these developments continue, sales of organic food will be more evenly distributed across the globe.

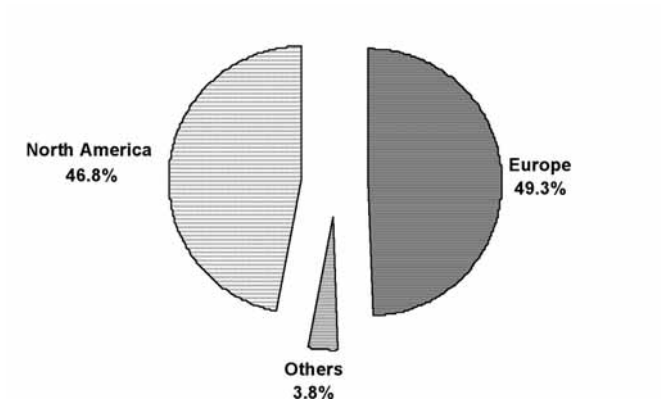
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12 250 million USD = 211.2 million EUR (per 31.12.2005)

13 2.4 billion USD = 2.0 billion EUR (per 31.12.2005)

14 30 billion USD = 25.3 billion EUR (per 31.12.2005)

**Graph 12:** Distribution of global organic food revenues, 2004



Source: Organic Monitor

Note: All figures are rounded

## 9 **STANDARDS AND REGULATIONS**

LUKAS KILCHER<sup>1</sup>, BEATE HUBER<sup>2</sup> AND OTTO SCHMID<sup>3</sup>

### 9.1 **International Standards**

#### 9.1.1 *IFOAM Standards*

The Basic Standards for Organic Production and Processing (IBS) of the International Federation of Organic Agriculture Movements (IFOAM) were first published in 1980. Since then they have been subject to biennial review and re-publication.

The IFOAM Basic Standards define how organic products are grown, produced, processed and handled. They reflect the current state of organic production and processing methods. These standards should not be seen as a final statement, but rather as a work in progress to contribute to the continued development and adoption of organic practices throughout the world.

The IFOAM Basic Standards provide a framework for certification bodies and standard-setting organizations worldwide to develop their own certification standards and cannot be used for certification on their own. Certification standards should take into account specific local conditions and provide more specific requirements than the IFOAM Basic Standards.

Producer and processors that sell organic products are expected to work within, and be certified by certification bodies, using standards that meet or exceed the requirements of the IBS. This requires a system of regular inspection and certification designed to ensure the credibility of organically certified products and build consumer trust.

The IFOAM Standards Committee in close co-operation and consultation with the IFOAM member organizations and other interested parties develops the IBS. The IFOAM Basic Standards are presented as general principles, recommendations, basic standards and derogations.

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 are published. The homepage also provides information on the IFOAM Accreditation Program (see next chapter).

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1 Lukas Kilcher, Research Institute of Organic Agriculture FiBL Ackerstrasse, CH-5070 Frick, Internet [www.fibl.org](http://www.fibl.org)

2 Beate Huber, Research Institute of Organic Agriculture FiBL Germany, Galvanistr. 28, D-60486 Frankfurt, Germany, Internet <http://www.fibl.org>

3 Otto Schmid, Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH-5070 Frick, Internet [www.fibl.org](http://www.fibl.org)

### 9.1.2 *The Codex Alimentarius*

The need for clear and harmonized rules has not only been taken up by private bodies, IFOAM and state authorities (e.g. EU Regulation 2092/91 within the European Union), but also by the UN-Organizations Food and Agriculture Organization (FAO) and World Health Organization (WHO) as well as UNCTAD (United Nations Conference on Trade and Development). FAO and WHO consider international guidelines on organically produced food products as 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.

The Codex Alimentarius Commission, a joint FAO/WHO Food Standards Program, began in 1991 (with participation of observer organizations such as IFOAM with the elaboration of Guidelines for the production, processing, labeling and marketing of organically produced food. The Codex Commission approved plant production guidelines in June 1999, and animal production guidelines in July 2001. The requirements in these Codex Guidelines are in line with the IFOAM Basic Standards and the EU Regulation for Organic Food (EU Regulations 2092/91 and 1804/99). There are, however, differences with regard to the details and the areas, which are covered by the different standards.

The trade guidelines on organic food take into account the current regulations in several countries, in particular the EU Regulation 2092/91, as well as the private standards applied by producer organizations, especially based on 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.

The plant and animal production section is already well developed in the Codex Guidelines. In the section on processing of organic food especially of animal products, there is an ongoing debate in the Codex Alimentarius Organic Working group on how far the use of food additives and processing aids should be limited, taking into account consumer expectations for minimal processing and little use of inputs on one hand, and traditional eating habits in different regions and the possibility to choose between a certain range of products on the other hand.

In the view of IFOAM, which was actively involved in the elaboration of these Guidelines, this Codex Document is an important step in the harmonization of international rules in order to build up consumer trust. They will be important for equivalence judgments under the rules of WTO. For developing the market for organically produced food, the completion of this Codex Guidelines are important in giving guidance to governments in developing national regulations for organic food.

These Codex Guidelines for organically produced food should, as originally decided, be regularly reviewed at least every four years based on given Codex procedure. However this plan has not been achieved. Regarding the list of inputs there is a possibility of an accelerated procedure, which facilitates a quicker update of amendments. Regarding the future work a clear need was identified at the meetings of the Codex Committee of Food Labeling (CCFL) in 2003 and 2004 in Canada to review the lists of substances for agricultural production as well as processing -

taking into account the technological advances of the organic food industry, the development of research for organic farming/food and the growing awareness of different consumer groups for such food. The Codex Commission has now accepted these criteria in 2003. The new criteria for agricultural inputs as well as those for additives and processing aids are used in such a way that decisions on future inputs are supported by technical submissions evaluated with these criteria. In 2005 and 2006 the main focus will be restructuring the list of additives and processing aids for organic food processing taking into account the technological functions of the additives in a more differentiated way. However it is still not finally decided what the nature of these lists will be and which degree of detail is desirable as long as these lists are seen as indicative but high-consensus lists for governments. The complete review of the full guidelines has been postponed and will start in 2007 the earliest.

Further information about Codex Alimentarius is available via the homepage [www.codexalimentarius.net](http://www.codexalimentarius.net). There is also a special homepage on organic agriculture at the FAO Homepage: [www.fao.org/organicag/](http://www.fao.org/organicag/). The Codex-Alimentarius-Guidelines on organic agriculture can be downloaded from [http://www.codexalimentarius.net/download/standards/360/CXG\\_032e.pdf](http://www.codexalimentarius.net/download/standards/360/CXG_032e.pdf).

## **9.2 National and Supranational Regulations**

### *9.2.1 The EU Regulation on Organic Production*

In the member states of the European Union (EU), the labeling of plant products as organic is governed by EU Regulation 2092/91, which came into force in 1993, while products from organically managed livestock are governed by EU Regulation 1804/99, enacted in August 2000. They protect producers from unfair competition, and they protect consumers from pseudo-organic products. Plant and animal products as well as processed agricultural goods imported into the EU, may only be labeled as organic if they conform to the provisions of EU Regulation 2092/91. The EU Regulation on organic production lays down minimum rules governing the production, processing, storage and import of organic products and feedstuff for organic husbandry, including inspection procedures, labeling and marketing, for the whole of the European Union. Each European country is responsible for enforcement and for its own monitoring and inspection system. Applications, supervision and sanctions are dealt with at regional levels. At the same time, each country has the responsibility to interpret the regulation on organic production and to implement the regulation in its national context. Currently the regulation is under revision, and the European Commission published a proposal for a new regulation in December 2005<sup>4</sup>.

#### *9.2.1.1 EU logo for organic products*

In February 2000 the European Commission introduced a logo for organic products that may be used throughout the EU by producers operating in accordance with the provisions of the EU regulation on organic production. The logo may only be used on organic products where 95

<sup>4</sup> Information on the revision of EU regulation on organic farming is available at [http://www.organic-europe.net/europe\\_eu/eu-regulation-2092-91-revision.asp](http://www.organic-europe.net/europe_eu/eu-regulation-2092-91-revision.asp)

percent of the ingredients are organic products that originate from the EU and that have been processed, packaged and labeled in the EU or on imports from countries with an equivalent inspection system. The use of the symbol is voluntary, and it may also be used in conjunction with national government or private logos for identifying organic products. So far only few companies, especially in Southern Europe, are using the EU logo, and the market impact is low.

The brochure “Organic farming – Guide to Community Rules”, published by the European Commission in 2001 and the handbook “The Organic Market in Switzerland and the European Union - Overview and market access information for producers and international trading companies” (Kilcher et al. 2004) provide extensive information about EU Regulation 2092/91 and market access regulations. 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<sup>5</sup>.

### 9.2.2 Other National Regulations

Many countries outside the European Union legally protect organic products or are in the process of development of organic regulations (see table below). All these regulations lay down minimum rules governing the production, processing and import of organic products, including inspection procedures, labeling and marketing.

Several EU countries have developed their own national regulations as well as national logos for organic products; in some cases this occurred long before the EU regulation on organic production came into force. These logos are well known and much trusted by consumers. The existence of these logos is one reason for the organic boom in these countries (see table).

**Table 17:** Countries with a fully implemented regulation (43)

REGION	COUNTRY	WEBSITE (WHERE AVAILABLE)
<b>European Union (25)</b>	<b>Austria</b>	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Belgium	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Cyprus	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Czech Republic	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Denmark	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Estonia	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Finland	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	France	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Germany	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Greece	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Hungary	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>

<sup>5</sup> 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://europa.eu.int/smartapi/cgi/sga\\_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31991R2092&model=guicheti](http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31991R2092&model=guicheti)

REGION	COUNTRY	WEBSITE (WHERE AVAILABLE)
	Ireland	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Italy	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Latvia	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Lithuania	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Luxembourg	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Malta	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Poland	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Portugal	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Slovak Republic	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Slovenia	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Spain	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	Sweden	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	The Netherlands	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
	United Kingdom	<a href="http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html">http://europa.eu.int/eur-lex/en/consleg/main/1991/en_1991R2092_index.html</a>
Others Europe (6)	Bulgaria	<a href="http://www.mzgar.government.bg/mz_eng/Begin/Eco/Bioplant.htm">http://www.mzgar.government.bg/mz_eng/Begin/Eco/Bioplant.htm</a> (plants) <a href="http://www.mzgar.government.bg/mz_eng/Begin/Eco/Bioanimal.htm">http://www.mzgar.government.bg/mz_eng/Begin/Eco/Bioanimal.htm</a> (live-stock)
	Iceland	
	Norway	
	Romania	
	Switzerland	<a href="http://www.admin.ch/ch/d/sr/c910_18.html">http://www.admin.ch/ch/d/sr/c910_18.html</a>
	Turkey	
Asia and Pacific Region (7)	Australia	<a href="http://www.affa.gov.au/corporate_docs/publications/word/quarantine/approg/nationalstandard2.doc">http://www.affa.gov.au/corporate_docs/publications/word/quarantine/approg/nationalstandard2.doc</a>
	India	<a href="http://www.apeda.com/organic/index.html">http://www.apeda.com/organic/index.html</a>
	Japan	<a href="http://www.maff.go.jp/soshiki/syokuhin/hinshitu/e_label/index.htm">http://www.maff.go.jp/soshiki/syokuhin/hinshitu/e_label/index.htm</a>
	Philippines	
	Korea	
	Taiwan	
	Thailand	<a href="http://www.acfs.go.th">http://www.acfs.go.th</a>
The Americas & Caribbean (3)	Argentina	
	Costa Rica	<a href="http://www.maggo.cr/doc_d/reg_ley_mag.html">http://www.maggo.cr/doc_d/reg_ley_mag.html</a>
	USA	<a href="http://www.ams.usda.gov/nop/indexIE.htm">http://www.ams.usda.gov/nop/indexIE.htm</a>
Africa & The Middle East (2)	Israel	
	Tunisia	

**Table 18:** Countries with a finalized regulation – not yet fully implemented (12)

REGION	COUNTRY	WEBSITE (WHERE AVAILABLE)
Europe (5)	Albania	
	Croatia	<a href="http://www.hzps.hr/infhzps/vijesti/national_strategy_croatia.htm">http://www.hzps.hr/infhzps/vijesti/national_strategy_croatia.htm</a> (draft of national strategy, October 2004)
	Macedonia	
	Serbia	
	Montenegro	
Asia and Pacific Region (1)	Malaysia	
The Americas & Caribbean (5)	Brazil	
	Chile	
	Guatemala	
	Mexico	
	Honduras	
Africa & The Middle East (1)	Egypt	

**Table 19:** Countries in the process of drafting regulations (16)

REGION	COUNTRY
Europe (1)	Ukraine
Asia and Pacific Region (5)	China
	Georgia
	Hong Kong
	Indonesia
	Vietnam
The Americas & Caribbean (7)	Bolivia
	Canada
	El Salvador
	Nicaragua
	Paraguay
	Peru
	St. Lucia
Africa (2)	Madagascar
	South Africa
Middle East (1)	Lebanon



### 9.2.3 *US and EU Import Procedures*

Since the US regulation on organic agriculture, the National Organic Program (NOP), came into effect in October 2002 there are two regulations, the US and the EU legislation, which influence strongly the standards of organic production and trade worldwide. From the perspective of the consumer one could say that production and inspection standards of US organic products, EU organic products and organic products from a lot of other parts of the world are equivalent with each other. However, farmers or traders who want to export organic products should already with application for certification know the potential final destination(s) of their products to assure that both production standards and procedures for imported products in the aimed market are met.

#### 9.2.3.1 *Importing Goods Into the EU*

Article 11 of EU Regulation 2092/91 governs market access for organic products in the countries of the EU. It stipulates that organic foods imported into the EU from third countries must have been produced, processed and certified in accordance with equivalent standards. Enforcement is the responsibility of the EU Member States. At the present time there are two ways of authorizing imports into the EU:

Access via the list of third countries (Art. 11, paragraphs 1-5): A country or certification body may apply to be added to the list of third countries via its diplomatic representatives in Brussels. In order to be added to this list, the country making the application must already have enacted organic farming legislation and a fully functional system of inspection and monitoring must be in place. In addition, it must provide an attestation of equivalence and other information on organic farming methods. The European Commission decides upon the application based on an assessment of the implemented system. To date the following countries are listed: Argentina, Australia, Costa Rica, Israel, New Zealand and Switzerland. Goods imported from these countries need to be accompanied by a consignment-specific "Certificate of Inspection for Import of Products from Organic Production".

Access via import permit (Art. 11, paragraph 6): For all countries not included on the list of third countries (i.e. the vast majority of imports into the EU). As a rule, certification bodies operating at the international level will assist exporters and importers to put together all the information and evidence needed to accompany the application for an import permit. Requirements vary from one EU country to another, but the following requirements apply generally: An importing company needs to sign an inspection contract with a European certification body. The importer applies for an import permit with the local competent authority. With the application she/he has to provide documentation to prove that the production and certification of the respective products has been equivalent with the EU requirements. Products may not be released into the EU market before an import permit has been issued. Import permits are usually issued for a limited time period. Each consignment needs to be accompanied by a "Certificate of Inspection for Import of Products from Organic Production".

Within the EU all organic products may be freely traded. However, procedures relating to the issue of import permits tend to differ between the EU countries. It is advisable to seek competent advice before trading commences.

The retroactive assessment on equivalency with the EU Regulation 2092/91 leaves more flexibility on the acceptance of imported products compared to the US-procedure (see below). However the implementation of this provision caused a lot of problems: the competent authorities have very limited resources to assess a request for import and the trade is confronted with a not-transparent system, unclear provisions and different implementations in the various Member States. The European Commission realized this problem and is seeking an alternative, which shall be implemented in 2006 on expiry of the statutory period of time of the current provision.

### *9.2.3.2 Importing goods into the US*

Similar to EU Regulation 2092/91, the US NOP requires all produce labeled as organic in the US to meet the US standards. Although there are quite some variations on the import procedures: According to the EU production standards and inspection measures of imported products have to be equivalent with the EU meaning that there might be variations in the systems if they still provide the same level of assurance and are upholding the objectives of the EU Regulation.

The US regulation is more precise in its requirements for imports and demands imported products to fully meet the NOP provisions. The US system approves certification bodies as agents to operate the US certification program published as part of the rule. Retroactive certification is not possible. Inspections have to be conducted by inspectors trained on NOP using 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 the US or outside. So far almost 100 certification bodies had been accredited by USDA according to NOP, and only produce certified by these certification bodies may be exported to the US.

### *9.2.3.3 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 legislations and leave the impression that such agreements are rather based on political negotiations than technical assessments.

According to the EU regulation 2092/91 the respective export countries have to request to be listed on the third country list. They have to supply the necessary information and might be examined on the spot by an expert group authorized by the European Commission for being listed. Based on this assessment the European Commission is deciding on the listing (see above). The US so far has accepted a few foreign governments' accreditation procedures. For example certification bodies accredited according to the US requirements by Great Britain, Denmark or New Zealand 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.

The US is negotiating in addition 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 fulfill the objectives of the NOP, and no double certification (e.g. Australian and US) would be necessary in case of imports. Although the US announced that equivalency determinations are most complex and time-consuming and that they expect that the negotiations with the EU take at least five years.

Some countries with close trade relationships to the US, e.g. Canada, Australia and Mexico are currently revising their organic legislation, and it can be assumed that NOP is taken into consideration for these revisions in order to achieve bilateral agreements in future. Although the EU Regulation and US NOP are the strongest poles to influence national standards on organic production also other countries passed already or are elaborating legislation on organic production which are not necessarily in line with the EU or US system, e.g. Japan. It is quite likely that despite the harmonization activities initiated by IFOAM, FAO and UNCTAD, trading organic products will be become even more complicated in the next years.

### **9.3 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. These quality marks or logos, for example in the UK, in Denmark, Austria, Sweden and Switzerland, are well trusted by consumers and are one of the reasons for the current boom in the market for organic products in these countries.

Originally, private standards were more a set of guiding principles rather than the detailed production and processing standards prevalent today. These private standards in some elements exceed the minimum requirements stipulated by national regulations: Private standards are more demanding in the field of agriculture and in processing, too. For imported products to be awarded the private labels, all of the foreign operators (producers, processors and traders) must fulfill not only the requirements set out in EU Regulation 2092/91 or other national regulations, but also comply with the respective private label standards. Those private labels undertake an additional verification of compliance.

Farmers' associations published all of the earliest organic standards. Standards committees and the general assembly still develop most of them in a democratic process. Along with publishing standards the associations then set up systems to verify compliance with those standards. These standards provide an identity to the farmers association and help to ensure the loyalty of the farmer.

The private standards have determined the content of the IFOAM Basic Standards, which in turn have had a major influence on the EU Regulation 2092/91 and the Codex Alimentarius. 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 are forced to compile with them and state authorities more and more make standards-decisions instead of farmers' associations.

In 2002, an International Task Force on Harmonization of UNCTAD, FAO and IFOAM initiated efforts to harmonize organic standards and regulations. 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.

#### **9.4 Relationship to Fair Trade**

Many producer associations in the emerging markets and markets in transition conform to the requirements of the Fair Trade organizations, e.g. FLO (Fair Trade Labeling Organization International), 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, since 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](http://www.flo-international.org).

#### **9.5 Literature**

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- European Commission, Directorate-General for Agriculture (2001): „Organic farming - Guide to Community rules“, Brussels, 2001, Available at [http://europa.eu.int/comm/agriculture/qual/organic/brochure/abio\\_en.pdf](http://europa.eu.int/comm/agriculture/qual/organic/brochure/abio_en.pdf)
- IFOAM Conference on Organic Guarantee Systems, Conference Conclusions, February 2002
- 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

## **10 CERTIFICATION AND ACCREDITATION**

### **10.1 Accreditation**

**GERALD A. HERRMANN<sup>1</sup>**

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

Seen in this context, certification and accreditation systems are primarily serving 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 organic 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 corresponding chapter in this book). Regulations like the EU or US law 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 60 countries have already regulated organic agriculture with national standards and further requirements regulating recognition of inspection bodies and some defining inspection procedures as well.

The major consuming and importing markets like Europe, the USA 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

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<sup>1</sup> Gerald A. Herrmann, Organic Services, Landsberger Str. 527, D - 81241 München, Internet <http://www.organic-services.com/>. Gerald A. Herrmann is the President of IFOAM.

at all levels should guarantee that all inspectors and certifiers are evaluated and accredited (accreditation means: “the evaluation of certifiers”).

In addition, several private standards and labeling schemes exist, mainly in areas of the world where the organic market is well developed. Registers count more than certification bodies certifying according to private standards and/or set regulations over the world.

But 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 is contradicting the objective of enhancing trade, market development and fostering confidence. It's the opposite. The already existing different systems are today creating a technical barrier to trade forcing producers to multiple certification 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 almost always bureaucracy without adding additional value neither for 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 are more or less resulting from minor details and different (cultural) approaches, although all systems are serving the common idea to improve 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 than struggling 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.

As a result 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 is yet to be seen whether the joint initiative of IFOAM, FAO and UNCTAD creating an international Task Force on Harmonization and Equivalence in organic systems, where the private sector and representatives of governments are participating, will achieve general consensus on harmonizing private with governments and government with government standards respectively regulations.

## 10.2 *More than 400 Certification Bodies in 70 Countries*<sup>2</sup>

**GUNNAR RUNDGREN**<sup>3</sup>

In the 2003 issue of *The Organic Certification Directory* 364 organizations were listed as offering organic certification services. In 2004, we listed 385. In 2005 the number has risen to 419 organizations.

The majority of the certification bodies are located in the EU, USA, 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 offer their certification services also in developing countries. Very few are operating in several developed countries, e.g. there is not one single EU based certification body offering its services in the USA, even when they have the required NOP accreditation. A handful works in several or all the continents. There are 70 countries that have a home-based certification organization. Most of Africa and big parts of Asia still lack local service providers. There are only seven certification bodies in Africa (in South Africa, Kenya, Uganda, Tanzania and Egypt). Asia has 117 certification bodies, but 104 of these are based in China, India or Japan.

**Table 20:** Number of certification bodies per continent 2003 - 2005

<b>NUMBER OF CERTIFICATION BODIES</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>
Africa	7	9	7
Asia	117	91	83
Europe	157	142	130
Latin America & Caribbean	43	33	33
North America	84	97	101
Oceania	11	11	10

Source: Grolink Survey 2005

The number of organizations has gone down in the USA. When the National Organic Program (NOP) was passed, there was a rush for organizations to register as certification bodies, similar to what happened in the EU in the mid-nineties. Some of them were never accredited and some of them were perhaps not really certification bodies. Others realized that there is not too much money to be made from organic certification. In Europe there has been an increase of certification bodies in Spain, Italy and some new EU member states. In Latin America, five certification bodies in Columbia have been added to the listing bringing the total to six. The most spectacular increase is in China where the number went up from six in 2004 to 26 in 2005. This is likely an effect of the introduction of legislation for organic farming in China.

2 Originally published in *The Organic Standard*, <http://www.organicstandard.com>

3 Gunnar Rundgren, Grolink, Torfolk, S- 684 Hoeje, Sweden, Internet <http://www.grolink.se/>.

**Table 21:** Number of certification bodies per country (the 10 main countries)

<b>COUNTRY</b>	<b>NUMBER OF CERTIFICATION</b>
Japan	69
USA	60
Germany	31
China P.R.	26
Spain	25
Canada	24
Brazil	18
Italy	16
United Kingdom	10

Source: GroLink Survey 2005

Of those 256 certification bodies that responded to the question concerning the starting date of their operation, only seven started before 1985, while 52 percent started after 2000. The Biodynamic Agricultural Association in the UK started to offer organic certification services in 1970, while the better-known Soil Association started in 1973.

**Table 22:** Starting year of certification bodies

<b>STARTING YEAR OF CERTIFICATION</b>	<b>SHARE OF CERTIFICATION BODIES SURVEYED (TOTAL 256)</b>
Before 1985	3 %
1985 – 1989	10 %
1990 – 1994	16 %
1996 – 1999	19 %
200 – 2005	52 %

Source: GroLink Survey 2005

The statistics on what kind of approvals individual bodies have offers interesting information. Approval for the USA has attracted 115 certification bodies, of which 60 are based outside the USA. The EU has 157 approved bodies, with only 14 non-EU based bodies recognized within its system. It should be kept in mind that 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.



**Table 23:** Number of certification bodies per accreditation system 2003 - 2005

	APPROVAL					
	TOTAL	IFOAM	JAPAN	ISO 65	EU	USA
Africa	7			3		
Asia	117	4	69	5	1	2
Europe	157	14	16	69	129	34
Latin America & Caribbean	43	4	1	13	5	10
North America	84	5	8	20	0	65
Oceania	11	4	6	3	8	4
<b>Sum 2005</b>	<b>419</b>	<b>31</b>	<b>100</b>	<b>113</b>	<b>143</b>	<b>115</b>
<b>Sum 2004</b>	<b>385</b>	<b>30</b>	<b>95</b>	<b>96</b>	<b>132</b>	<b>112</b>
<b>Sum 2003</b>	<b>364</b>	<b>26</b>	<b>81</b>	<b>74</b>	<b>112</b>	<b>106</b>

Source: Grolink

Of interest is the fact that 107 of the listed organizations do not have any of the five highlighted accreditation/approvals. Whilst the ISO 65 often is seen as a universal norm for certification just a little more than one fourth of the organizations report that they are accredited to ISO 65. The Organic Standard does not verify the claims of ISO 65 accreditation and the real number is probably lower. Only five organizations have all the five approvals.

### 10.3 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, which is an industry based global guarantee of organic integrity, unburdened by national barriers and implemented by one body that has no other interests.

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 at the IOAS website<sup>4</sup>.

4 IOAS website <http://www.ioas.org/>; information about the IFOAM Accreditation Program [http://www.ioas.org/WEB-SITE/0410\\_About\\_IOAS.htm](http://www.ioas.org/WEB-SITE/0410_About_IOAS.htm)

## IFOAM ACCREDITED CERTIFICATION BODIES

### AUSTRALIAN CERTIFIED ORGANIC (ACO)

PO Box 530, Level 1, 766 Gympie Rd (Brisbane) Chermside  
Queensland, 4032, Australia  
**TEL:** +61 7 3350 5716  
**FAX:** +61 7 3350 5996  
**EMAIL:** info@australianorganic.com.au  
Countries of Operation: Australia, Fiji, New Zealand, Papua New Guinea,  
Thailand

### ORGANIC AGRICULTURE CERTIFICATION THAILAND (ACT)

629/43 Kiatngamwong Building, Ngamwongwan Road  
Tambon Bangkokhen Mueang, Nonthaburi 11000, Thailand  
**TEL:** +66 2 952 6677  
**FAX:** +66 2 580 0934  
**EMAIL:** info@actorganic.org  
Countries of Operation: Thailand, Vietnam, Myanmar

### AGRIOR LTD

121 Hachashmona'im St.  
Tel Aviv 67011, Israel  
**TEL:** +972 3 561 4898  
**FAX:** +972 3 624 1897  
**EMAIL:** agrior@netvision.net.il  
Countries of Operation: Israel

### AGRIQUALITY LTD

PO Box 4127, Mount Maunganui  
South Hamilton, New Zealand  
**TEL:** +64 7 572 0814  
**FAX:** +64 7 572 0839  
**EMAIL:** schofieldh@certenz.co.nz  
Countries of Operation: New Zealand, Vanuatu, Cook Islands, Malaysia

### ARGENCERT S.R.L.

Bernado de Irigoyen 972, 4 "B"  
1072 Buenos Aires, Argentina  
**TEL:** +54 11 4363 0033  
**FAX:** +54 11 4363 0202  
**EMAIL:** argencert@argencert.com.ar  
Countries of Operation: Argentina, Chile, Paraguay

### BIOAGRICERT SRL

Via del Macabracchia 8  
40033 Casalecchio di Reno (BO), Italy  
Tel: +39 051 562 158  
**FAX:** +39 051 562 294  
**EMAIL:** info@bioagricert.org  
Countries of Operation: Italy, Mexico, Thailand

### BIO-GRO NEW ZEALAND

PO Box 9693 Marion Square  
Wellington 6031, New Zealand  
**TEL:** + 64 4 801 9741  
**FAX:** +64 4 801 9742  
**EMAIL:** info@bio-gro.co.nz  
Countries of Operation: New Zealand, Cook Islands, Niue

### BIOKONTROLL HUNGARIA KHT

H 1535 Budapest PF 800 PostalH 1027 Budapest  
Margit KRT 1, Hungary  
**TEL:** +36 1 336 1122  
**FAX:** +36 1 315 1123  
**EMAIL:** info@biokontroll.hu  
Countries of Operation: Hungary

### BIOLAND E.V.

Kaiserstrasse 18  
55116 Mainz, Germany  
**TEL:** +49 613 1239 7924  
**FAX:** +49 613 1239 79-27  
**EMAIL:** info@bioland.de  
Countries of Operation: Germany, Belgium, Italy, Netherlands

### BIOPARK E.V.

Rövertannen 13  
18273 Gustrow, Germany  
**TEL:** +49 387 38 70309  
**FAX:** +49 387 38 70024  
**EMAIL:** info@biopark.de  
Countries of Operation: Germany

### BIOS S.R.L.

Via M. Grappa, 37/C  
Marostica, VI, 36063, Italy  
**TEL:** +39 0424 471 125  
**FAX:** +39 0424 476 947  
**EMAIL:** info@certbios.it  
Countries of Operation: Italy, Romania

### BOLICERT

Casilla 13030, General Gonzáles  
1317, La Paz, Bolivia  
**TEL:** + 59 122 490 747  
**FAX:** + 59 122 490 747  
**EMAIL:** bolicert@mail.megalink.com  
Countries of Operation: Bolivia

### CALIFORNIA CERTIFIED ORGANIC FARMERS CERTIFICATION SERVICES LLC

1115 Mission Street, Santa Cruz  
CA 95060, USA  
**TEL:** +1 831 423 2263  
**FAX:** +1 831 423 4528  
**EMAIL:** ccof@ccof.org  
Countries of Operation: USA, Canada, Mexico

### CONSORZIO PER IL CONTROLLO DEI PRODOTTI BIOLOGICI (CCPB)

Via Jacopo Barozzi N 8  
40126 Bologna, Italy  
**TEL:** +39 0 51 608 9811  
**FAX:** +39 0 51 254 842  
**EMAIL:** ccpb@ccpb.it  
Countries of Operation: Italy

### EKOAGROS

K. Donelaičio str. 33  
LT – 3000, Kaunas, Lithuania  
**TEL:** + 37 037 203 181  
**FAX:** + 37 037 203 182  
**EMAIL:** ekoagros@ekoagros.lt  
Countries of Operation: Lithuania

### GÄA E.V. VEREINIGUNG ÖKOLOGISCHER LANDBAU BUNDESVERBAND

Gää e.v Bundesverband, Am Beutlerpark 2  
01217 Dresden, Germany  
**TEL:** +49 351 401 2389  
**FAX:** +49 351 401 5519  
**EMAIL:** Christian.Pein@gaea.de  
Countries of Operation: Germany, Italy

### INSTITUTO BIODINAMICO

Rua Prudente de Moraes, 530  
1862002-060, Botucatu SP, Brazil  
**TEL:** + 55 14 3822 5066  
**FAX:** +55 14 3822 5066  
**EMAIL:** ibd@ibd.com.br  
Countries of Operation: Brazil, Uruguay, Paraguay, Bolivia

### INTERNATIONAL CERTIFICATION SERVICES INC.

301 5th Ave. SE, Medina  
ND 58467, USA  
**TEL:** +1 701 486 3578  
**FAX:** +1 701 486 3580  
**EMAIL:** Info@ics-intl.com  
Countries of Operation: USA, Argentina, Canada, China, Mexico, Tahiti, Brazil,  
Guatemala, Paraguay

### ISTITUTO MEDITERRANEO DI CERTIFICAZIONE S.R.L. (IMC)

Via Carlo Pisacane, 32  
60019 Senigallia, Ancona, Italy  
**TEL:** +39 34 785 31664  
**FAX:** +39 71 791 0043  
**EMAIL:** imcert@imcert.it  
Countries of Operation: Italy

### ISTITUTO PER LA CERTIFICAZIONE ETICA E AMBIENTALE (ICEA)

Strada Maggiore 29  
40125, Bologna, Italy  
**TEL:** +39 0 51 272 986  
**FAX:** +39 0 51 232 011  
**EMAIL:** icea@icea.info  
Countries of Operation: Italy, Lebanon, Turkey

**JAPAN ORGANIC & NATURAL FOODS ASSOCIATION**

Takegashi Bldg. 3F, 3-5-3, Kyobashi, Chuo-Ku  
Tokyo, 104-0031, Japan  
**TEL:** +81 3 3538 1851  
**FAX:** +81 3 3538 1852  
**EMAIL:** inquiry@jona-japan.org  
Countries of Operation: Japan, China

**KEZ O.P.S**

Poděbradova 909  
537 01 Chrudim, Czech Republic  
**TEL:** +42 0 455 622 249  
**FAX:** +42 0 455 622 249  
**EMAIL:** kez@kez.cz  
Countries of Operation: Czech Republic

**KRAV-EKONOMISK FÖRENING**

49, SE  
751 49 Uppsala, Sweden  
**TEL:** +46 181 00290  
**FAX:** +46 181 00366  
**EMAIL:** info@krav.se  
Countries of Operation: Sweden, Bosnia & Herzegovina, Finland, Poland, Serbia, Tanzania, Thailand, Uganda

**LETIS S.A.**

Urquiza 1564 (S2000 ANR) Rosario  
Santa Fe, Argentina  
**TEL:** +54 341 426 4244  
**FAX:** +54 341 426 4244  
**EMAIL:** letis@letis.com.ar  
Countries of Operation: Argentina, Paraguay, Canada

**NATIONAL ASSOCIATION FOR SUSTAINABLE AGRICULTURE AUSTRALIA (NASAA)**

PO Box 768, Stirling  
5152, South Australia, Australia  
**TEL:** + 61 88 370 8455  
**FAX:** +61 88 370 8381  
**EMAIL:** enquiries@nasaa.com.au  
Countries of Operation: Australia, East Timor, Indonesia, Malaysia, Nepal, New Zealand, Papua New Guinea, Samoa, Solomon Islands, Sri Lanka

**NATURLAND - VERBAND FÜR NATURGEMESSEN LANDBAU E.V.**

Kleinhaderner Weg 1  
82166 Grafelfing, Germany  
**TEL:** +49 89 898 08232  
**FAX:** +49 89 898 08290  
**EMAIL:** naturland@naturland.de  
Countries of Operation: Germany, Australia, Austria, Belgium, Bolivia, Brazil, Chile, Denmark, Ecuador, Egypt, France, Greece, Guatemala, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan

**ORGANIC CERTIFIERS**

6500 Casitas Pass Road Ventura  
CA 93001 USA  
**TEL:** +1 805 684 6494  
**FAX:** +1 805 684 2767  
**EMAIL:** organic@west.net  
Countries of Operation: USA, French Polynesia, Cambodia, Philippines, Mexico

**ORGANIC CROP IMPROVEMENT ASSOCIATION (OCIA)**

6400 Cornhusker, Suite 125, Lincoln  
NE 68507, USA  
**TEL:** +1 402 477 2323  
**FAX:** +1 402 477 4325  
**EMAIL:** info@ocia.org  
Countries of Operation: USA, Brazil, Canada, China, Columbia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Germany, Guatemala, Honduras, Japan, Mexico, Paraguay, Peru

**ORGANIC FOOD DEVELOPMENT & CERTIFICATION CENTER OF CHINA**

8 Jiangwangmiao Street, P.O. Box 4202, Nanjing  
210042, China  
**TEL:** +86 25 542 5370  
**FAX:** +86 25 542 0606  
**EMAIL:** info@ofdc.org.cn  
Countries of Operation: China

**ORGANIZACION INTERNACIONAL AGROPECUARIA S.A.**

AV. Santa Fe 830, 1641 Acassuso  
Buenos Aires, Argentina  
**TEL:** +54 11 4793 4340  
**FAX:** +54 11 4793 4340  
**EMAIL:** oia@oia.com.ar  
Countries of Operation: Argentina

**QUALITY ASSURANCE INTERNATIONAL**

9191 Towne Centre Drive, Suite 510, San Diego  
CA, 92122, USA  
**TEL:** +1 858 792 3531  
**FAX:** +1 858 792 8665  
**EMAIL:** qa@qa-inc.com  
Countries of Operation: USA, Paraguay, Canada

**SOIL ASSOCIATION CERTIFICATION LTD.**

Bristol House, 40-56 Victoria Street  
Bristol BS 1 6BY United Kingdom  
**TEL:** +44 117 987 4576  
**FAX:** +44 117 925 2504  
**EMAIL:** info@soilassociation.org  
Countries of Operation: Belgium, Belize, Bulgaria, Channel Islands, Dominica, Egypt, France, Germany Ghana, Granada, Iran, Kenya, Namibia, Pakistan, South Africa, Spain, Syria, Thailand

**WASHINGTON STATE DEPT. OF AGRICULTURE ORGANIC FOOD PROGRAM**

PO Box 42560, 1111 Washington Street Olympia  
Washington 98504-2560 USA  
**TEL:** +1 360 902 3924  
**Fax:** +1 360 902 2087  
**Email:** mmcevoy@agr.wa.gov  
Countries of Operation: USA

**Applicant Certification Bodies**

- DEBIO, NORWAY**
- ECOLAND E.V., GERMANY**
- GOAA, SOUTH KOREA**

# 11 THE CONTRIBUTION OF ORGANIC FARMING TO SUSTAINABLE DEVELOPMENT

LUKAS KILCHER<sup>1</sup>

Organic agriculture can, especially in poorer countries, contribute to meaningful socio-economical and ecologically sustainable development. On the one hand, this is due to the organic practice, which means management of local resources (e.g. local seed varieties, dung, etc.) and therefore cost effectiveness. On the other hand, the market for organic products – at local and international level – has tremendous prospects for growth and offers to creative producers and exporters from the south some excellent opportunities to improve their incomes and living conditions. As to whether organic agriculture is a viable alternative for a particular holding, is something that can only be clarified case by case.

What are the potentials of organic agriculture for the solution of the hunger and poverty problems? What can organic agriculture contribute to socially and ecologically sustainable development in poor countries?

## *Organic agriculture is sustainable and diverse*

At the core of organic agriculture are the promotion of soil fertility, biodiversity (e.g. native flora and fauna), locally adapted production methods and the renouncement of chemical inputs. Such methods and the cultivation of diverse crops stabilize the delicate eco-systems in the tropics and reduce drought sensitivity or pest infestations. Organic production lowers the risk of yield failure, stabilizes returns and therefore enhances food security of small farmer's families.

**Picture 1:** Agroforestry is a heartpiece of organic agriculture in the tropics. The cooperative “El Jobo” in Cuba applies this system with success: Besides the cash crops coffee, cocoa and grapefruit, the farmers of El Jobo plant a large number of shading trees (Inga, Erythrina, Leucaena etc.) and self-sufficiency crops (banana, beans, potatoes etc.). Agroforestry systems reach a higher stability of the agro-ecological system, improve the soil fertility, add nitrogen to the soil (N-fixation), protect the soils against erosion and weeds, add large amounts of organic matter by distributing leaf litter and keep the soil humid by shadowing the area and covering it with mulch. Agroforestry creates a diversity of micro-climatic effects and a diversity of plants; it is therefore a very sustainable production system. Photograph Lukas Kilcher, FiBL



<sup>1</sup> Lukas Kilcher, Research Institute of Organic Agriculture FiBL, Head of the International Cooperation Department, Ackerstrasse, 5070 Frick, Switzerland, Internet <http://www.fibl.org>

### *Organic farmers conserve resources*

Closed nutrient cycles and an efficient use of local resources – for example compost, dung or seeds – are especially important for subsistence farmers depending on few, limited assets. To these farmers, organic agriculture means adapted technologies, more independence and a way out of the debt trap.



**Picture 2:** Cameroonian farmer describing her observations in the field. The FiBL network of long-term system comparisons in the Tropics aims at examining the contribution of organic agriculture to food security, poverty alleviation and environmental conservation. It covers cash crop oriented systems as well as subsistence crop based systems, both under a wide range of agro-ecological and socio-economic conditions. Photograph Urs Scheidegger, SHL CH-Zollikofen

### *Organic farms produce more*

Organic agriculture is based on a combination of traditional, indigenous knowledge and insights of modern agro-ecological research. In traditional farming systems organic agriculture often enables a direct increase in production. In the long run this is even possible for the conversion of high-input farming systems. Additionally, organic farms harvest more products on the same area, thus providing more food for the farmers' families and reducing the dependency on one product in the market.

**Picture 3:** The farmers of the organic coconut cooperative in Baracoa (Cuba) produce more than just coconut: intercropping of different fruit (coconut, mango, citrus, banana, avocado etc.) and vegetables (beans, maize, lettuce, yams, sweet potatoes etc.) enables them to harvest more products on the same area and to sell organic products on the local and international market at the same time. Photograph Lukas Kilcher, FiBL



### *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, thanks to long-term contracts, income is generated more continuously than in conventional trade. In order to guarantee a fair share of the international organic trade 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 according to fair trade labels such as “Max Havelaar” or “Transfair”.



**Picture 4:** Packing organic cherries for sales in Beirut. In the northern part of Lebanon mountain farmers produce high quality “baladi” (local) cherries and apples. These products find ready markets in Lebanon and contribute significantly to the farmers' income. With increasing demand from abroad, organic certification becomes an important issue. The Swiss State Secretary of Economic Affairs (SECO) funds a FiBL-project to set up organic certification structures in Lebanon and to improve market opportunities for Lebanese organic products. Photograph: Paul van den Berge, FiBL

### *Organic agriculture raises self-confidence and autonomy*

Conventional agriculture robs farmers of their responsibility. Organic agriculture highly respects indigenous knowledge, women's knowledge and local solutions. Thus the producers gain control over the production cycle and gain more self-confidence. Locally and internationally organic producers play an active role in advancing their production methods and in developing standards.



**Picture 5:** A group of Kaki producers in the region of Valandovo, south Macedonia, has converted their production into organic and formed an association. This allows them to access better and bigger markets for their products, which may positively influence their economic conditions. They receive consultancy on production techniques and marketing opportunities. The consultants have been trained in the frame of a FiBL project in Macedonia, which aims at developing organic agriculture in the country as a whole. It is financed by SDC (Swiss Development Cooperation Agency). The project offers knowledge transfer to the government, teaching institutions as well as to farmers' organizations and market partners.

Photograph Marlene Heeb, FiBL

### *The organic movement mobilizes new forces and partnerships*

Developing organic farmers' organizations, standards, certification systems, extension services, education, research and markets brings producers together in a new manner. Such communities and partnerships are in a stronger position to demand and assert their rights and to maintain or improve their economic position.



**Picture 6:** India is already exporting a range of organic products like tea, spices, cotton, rice etc. And the Indian domestic market is promising, even though it is still very small. In order 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 – in co-operation with FiBL and the inspection body bio.inspecta – the Indian Organic Certification Agency INDOCERT. It became an important element of

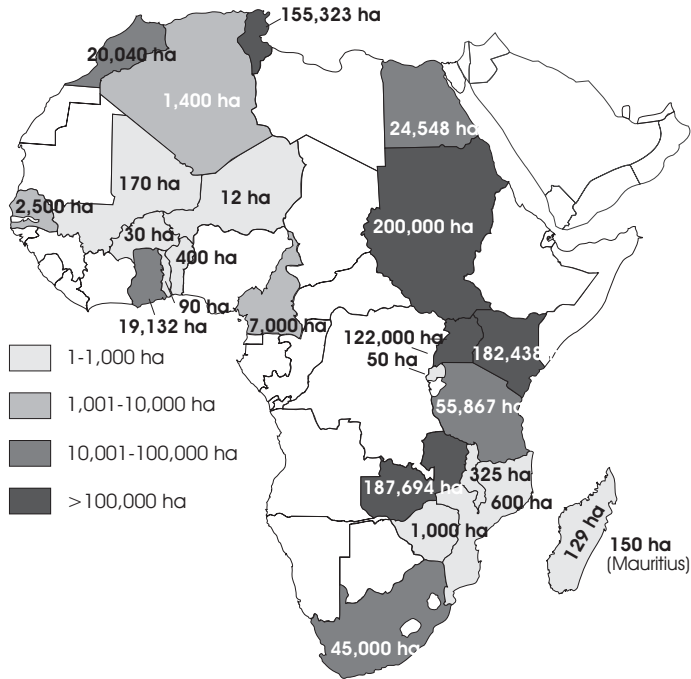
the organic movement in India and mobilises new forces and partnerships. INDOCERT is now fully accredited to certify based on EU regulation 2092/01, Eurepgap<sup>2</sup> and private label standards. Photograph Samuel Moser, FiBL

<sup>2</sup> EurepGAP started in 1997 as an initiative of retailers belonging to the Euro-Retailer Produce Working Group (EUREP). It has subsequently evolved into an equal partnership of agricultural producers and their retail customers. Their mission is to develop widely accepted standards and procedures for the global certification of Good Agricultural Practices (GAP). Technically speaking EurepGAP is a set of normative documents suitable to be accredited to internationally recognized certification criteria such as ISO Guide 65. Representatives from around the globe and all stages of the food chain have been involved in the development of these documents. Through wide consultation an achievable protocol, which farmers around the world can use to demonstrate compliance with Good Agricultural Practices, was produced. It is possible for producer organizations to seek an independent and transparent recognition of equivalence with the EurepGAP standards and procedures. Information is available from the EuroGAP homepage at <http://www.eurepgap.org/>



## 12 ORGANIC FARMING IN AFRICA

NICHOLAS PARROTT<sup>1</sup>, CHARLES SSEKYEWA<sup>2</sup>, CHIDO MAKUNIKE<sup>3</sup>,  
SAMUEL MUWANGA NTAMBI<sup>4</sup>



**Map 1:** Organic farming in Africa.

Source: FiBL Survey 2005 / 2006. © Stiftung Oekologie & Landbau (SOEL) and Research Institute of Organic Agriculture FiBL

This chapter draws upon a recent IFOAM Publication “Organic and like minded movements in Africa” by Nicholas Parrott and Bo Van Elzakker (2003), and has been supplemented with updated information.

1 Dr. Nicholas Parrott, E-mail Nick.parrott@wur.nl.

2 Charles SSekyewa, Uganda Martyrs University, Faculty of Agriculture, P.O.Box 5498, UG- Kampala, Uganda

3 Chido Makunike, Coordinator, Africa Organic Service Centre of the International Federation of Organic Agriculture Movements (IFOAM), Dakar, Senegal

4 Dr. Samuel Muwanga Ntambi, Faculty of Agriculture, Makerere University, PO Box 7062, Kampala, Uganda

## 12.1 Introduction

There are two levels of organic farming in Africa, certified organic production and non-certified or agro-ecological farming. Certified 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, Kenya and Tanzania. Statistics for certified production are provided in table 8. Although these are probably incomplete, (most countries do not have data collection systems for organic farming) they indicate that with, few exceptions (notably Uganda), certified organic farming is relatively underdeveloped, even in comparison to other low-income continents. Organic certification is mainly organized under participatory guarantee systems, in this case an Internal Control System operated by a farmers' group linked to an exporter, who holds the organic certificate.

However, certified organic production only represents a tip of the iceberg of organic farming in Africa, and evidence is emerging of a far larger agro-ecological movement in parts of Africa. Local NGOs and farmers' groups, as well as development agencies are increasingly adopting organic techniques as a method of improving productivity and addressing the very pressing problems of food security faced by all too many Africans. Agro-ecological approaches also address a number of other priority concerns. They resonate with and are being used in initiatives designed to:

- ensure food security
- eradicate poverty
- maintain and enhance soil fertility
- combat desertification
- promote tree-planting and agro forestry
- develop low and no input means of combating pests
- promote the use of local seed varieties
- maintain and enhance biodiversity
- support the most vulnerable social groups (often particularly women and households headed by women) and
- combat global warming

To date research to track the extent to which these approaches are being employed on the ground, or their effectiveness, viz a viz other approaches, in meeting economic, social and environmental objectives, is very limited. Yet there is growing evidence that their appeal is increasing and often proving highly successful in meeting these aims.

African agriculture is characterized by very low level of input use and the low take up of Green Revolution technologies. Hence, it is sometimes claimed that most farming in Africa is already de facto organic. Because of the unsustainable way in which traditional agriculture, which is predominantly subsistence, becomes partially commercialized, the system evidently fails to meet food security needs or to protect fragile environments. However, where conversion to organic farming has been fully achieved, economic and viable yields are attained. This is in stark contrast to the experience in the Northern Hemisphere where conversion to organic farming usually leads to a loss in yields (at least in the first years).

Organic agriculture is showing itself to be a viable sustainable development option for Africa. Adopting organic agriculture does not mean a return to some form of low technology, backward

or traditional agriculture – but involves pursuing a blend of innovations originating from a participatory intervention involving scientists and farmers. The organic farming system emphasizes management (M) over technology (T) and biological relations (BR) and natural processes (NP) over chemically intensive methods (CIM) (IFOAM, 2004). Organic farming in Africa must be viewed beyond the perspective of providing commodities for the global market. Rather it should be seen as an agricultural system that “enhances” and “manages” the complexity of the ecosystem rather than reducing and simplifying the biophysical interactions on which agricultural production depends. It consciously integrates and takes advantage of naturally occurring beneficial interactions and the rich layers of indigenous knowledge (Twarog and Kapoor, 2004). But most importantly, organic farming in Africa must be seen as a process of learning and adaptation, which results in meeting household objectives, for sustainable and adequate food production, increasing environmental resilience and social capacity.

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. Yet the broader benefits of organic farming and agro-ecology (in terms of enhancing food security, environmental sustainability and social inclusion and reducing exposure to toxic pesticides) often go unrecognized or are simply ignored.

Furthermore, promoters of modern technologies, such as GMOs, view Africa as a virgin and receptive market. These technologies are being enticingly packaged and sold to African States as modernizing agricultural development programs (Paul and Steinbrecher, 2003). However, with the growth of the Organic Agriculture sub-sector, these packages are being more carefully scrutinized by some African states, some of who are rejecting them.

## **12.2 Statistics / Historical Development**

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

Certified organic farming in Africa takes two main forms: relatively large farms or plantations under single ownership, like SEKEM (Egypt), and smallholder groups. These latter groups collectively implement an internal control system that involves organizing extension, inspection, certification and marketing activities, and have strong links with export companies (operators) (IFOAM, 2005). Many of the smallholder groups are technically supported through development aid programs, such as the Swedish financed Export Promotion of Organic Products from Africa (EPOPA), and the EU supported COLEACP-PIP programs, which have stimulated the development of the organic sector in a number of countries, including, Cameroon, Egypt, Ghana, Kenya, Madagascar, Senegal, Sudan, South Africa, Tanzania, Tunisia, Uganda and Zambia, Zimbabwe. Most smallholders in these programs will only use part of their land for their export cash crop, using the remainder for household consumption and local markets. Occasionally out grower schemes, which are hybrids of these two forms, exist whereby large plantations buy in additional produce from these certified smallholder farmers.

### 12.3 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 (and the world's largest organic market). The range of certified organic products currently being produced in Africa is shown in the table below.

**Table 24:** Organic produce from Africa (by type and country) Organic produce from Africa (by type and country)

PRODUCT GROUP	COUNTRIES
Fresh Vegetables	Egypt, Kenya, Madagascar, Malawi, Morocco, South Africa, Tunisia, Uganda, Zambia
Bananas	Cameroon, Ghana, Senegal, Uganda
Citrus Fruits, Grapes (including wine)	Egypt, Morocco, South Africa
Tropical fruits (fresh) Avocados, mangoes, pineapples, papaya etc.	Cameroon, Egypt, Ghana, Madagascar, Senegal, South Africa, Tanzania, Uganda
Dried Fruits	Algeria, Burkina Faso, Egypt, Madagascar, Morocco, Tanzania, Tunisia, Uganda
Coffee	Cameroon, Ethiopia, Kenya, Madagascar, Tanzania, Uganda
Tea	Tanzania, Uganda
Cocoa	Cameroon, Ghana, Madagascar, Tanzania, Uganda
Sugar	Madagascar, Mauritius,
Cotton	Benin, Egypt, Senegal, Tanzania, Uganda
Coconut Oil	Mozambique
Palm Oil	Ghana, Madagascar Tanzania
Olive Oil	Tunisia
Ground Nuts (peanuts)	Zambia
Tree Nuts (cashew, shea)	Kenya, Malawi, Morocco, Tanzania
Sesame	Burkina Faso, Uganda, Zambia, Zimbabwe
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	Madagascar, Tanzania
Honey	Algeria, Malawi, Tanzania, Tunisia, Zambia
Other Forest Products	Uganda, Zambia, Zimbabwe
Cereals	Egypt

With the exception of the Maghreb countries and Egypt, which benefit from their proximity to European markets, 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 coffee, herbs, spices, medicinal and beauty products), non-perishable items and those which offer opportunities for adding value locally, such as tropical fruits (which can be dried or juiced).

Domestic markets for organic produce are developing in Egypt and South Africa, both reasonably prosperous countries by African standards. Sekem, the pioneer of the organic movement in Egypt, has developed a substantial domestic market for a range of products, including herb teas, fruit and vegetables and organic cotton. Domestic sales now account for more than half of its certified production. In other countries and particularly in the larger cities, there are reports of some 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 urban farming, which provides a high proportion of fresh vegetables and protein within many African cities, is being explored in some places.

#### **12.4 State Support, Standards and Legislation**

At present Tunisia is the only African country with its own organic (EU compatible) standards, certification and inspection systems. Egypt and South Africa have both made significant progress in this direction. Both have two certifying organizations and are well on the way to developing standards. Morocco and Zambia have made some progress to developing their own standards. The Namibian government has expressed an interest in developing an organic sector and the Ugandan Coffee Development Authority recognizes the commercial potential of organic coffee (Kampala recently hosted the 3rd IFOAM organic coffee conference).

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. In consequence the organic sector in most African countries is reliant upon both foreign standards and certifying bodies. This 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 Swedish Development Agency, SIDA, is currently funding a program to develop local certification and inspection capacity in South and Eastern Africa (covering Uganda, Tanzania, Zambia and Kenya). The absence of local certification and inspection capacity is a critical bottleneck that needs to be overcome in order to develop the potential of African organic exports.

#### **12.5 Innovations in Agroecology**

In many countries improved organic farming methods are being developed and disseminated as part of broader packages for sustaining livelihoods. This process is mainly led by the civic sector. Indigenous NGOs, and farmers’ groups are particularly active in this field in Ghana, Kenya,

Senegal, South Africa, Uganda and Zimbabwe, and have got to the point of forming national organic networks that provide effective lobbying and advocacy bodies for the organic movement. These are most developed in Uganda (NOGAMU), Tanzania (TOAN) and Kenya (KOAN). In addition, PELUM in Zimbabwe, KULIKA in Uganda and SACRED Africa in Kenya are further examples of networks that are, often very effectively, integrating the organic message into more general development efforts. There are also pro-organic NGOs active in training, support, and advocacy in Togo, Benin, Zambia, Ethiopia and Madagascar. In Uganda, the privately owned Uganda Martyrs University (UMU) offers short courses in organic agriculture in collaboration with EPOPA, and also offers a distance learning degree program in organic agriculture (Ssekya, 2005). The emphasis of these training activities varies significantly according to local market demands and circumstances. For example,

- In Kenya groups are successful experimenting with using the virulent Water Hyacinth as a basis for making silage, compost and its stems for furniture making.
- In South Africa traditional healers are being encouraged to switch from collecting to organically cultivating those medicinal herbs that have come under pressure, partly as a result of the HIV/AIDS pandemic.
- In Madagascar an innovative system of rice cultivation under organic management is giving higher yields than those obtained on demonstration farms run by the agro-industrial sector. This system is now being widely experimented with in Asia and tested by the International Rice Research Institute (IRRI).
- In Uganda, UMU has come up with three tomato varieties that can be economically produced under an organic farming system, employing enhanced indigenous knowledge/pest control and locally adapted cultural practices for soil fertility improvement

Elsewhere international development agencies are recognizing the potential of organic farming as a central plank in developing sustainable livelihoods for the rural poor. Helvetas and GTZ (the Swiss and German development agencies) explicitly support (non-certified) organic approaches to agriculture, as do HIVOS, Misereor and Weltfriedensdienst (the first a Dutch donor agency, the second two German NGOs). Elsewhere in Africa international support for organic approaches can be found amongst agencies with remits as varied as the Save the Children Fund UK and the Biodiversity Institute for Sustainable Development of the Global Environment Facility.

## **12.6 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 field level research. Often there is inadequate communication between these different levels, particularly over research priorities. However, there is increasing development towards regional research network initiatives, such as those organized under the Association for Strengthening Agricultural Research in Eastern, Central and Southern Africa (ASARECA). However, there is generally not a very strong focus on Organic Agriculture, and disciplinary boundaries often inhibit the adoption of the holistic approach required within an organic system. In addition the extension services in many countries are often understaffed, under-funded and demoralized. NGOs and church

groups often play an important role in filling these gaps at the grass roots level, often advocating organic (or near 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 Center (formerly ICRAF) and the International Center 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 also potentially contribute to finding solutions to the problems facing organic farmers. National initiatives, like that of Uganda Martyrs University (UMU, 2005), are increasingly becoming of importance in developing organic research capacity. Another example is the Agricultural Research Institute –Kabanyolo - (MUARIK) at Makerere University in Uganda, which has embarked on organic research, starting a long-term soil fertility experiment in 1993 to compare organic soil fertility with conventional soil fertility. 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 often prove to be inappropriate, or unaffordable, to small-scale producers. Often there is little commercial interest or available funding to address and 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 locked away in the “gray literature” of project evaluations and consultants reports and rarely reaches the public domain.

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 have traditionally been the 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) artificial inputs.

These issues are by no means unique to Africa, and despite these obstacles, there is abundant evidence of innovative organic research within research institutes, universities, private sector led projects and farmers own experimentation. Finding ways to disseminate the findings of these experiences, within both the research and farming communities, and to develop research agendas that meet real organic farming systems needs, are two major obstacles that need to be addressed.

## **12.7 Outlook**

The fact that traditional African agriculture is low external input agriculture, although not necessarily organic, provides a potential basis for organic agriculture becoming a viable development option for Africa. Organic farming practices deliberately integrate traditional farming practices and make use of locally available resources. As such they are highly relevant to a majority of African farmers, who have often resisted Green Revolution, seeing them as unsustainable, risky and inaccessible.

African society is highly socially accountable and there are strong social fibers within and between communities. Given these social ties (Mbithi, 1982), the link between organic agriculture and

social accountability must be emphasized. The benefits of organic agriculture must be seen to be more than just trade related. 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 standardization 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 as a result. Yet there are also significant constraints on the potential for developing. 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 also they are internal. 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 Africa share much common ground. Yet because of their different orientations and the different actors involved, the potential for knowledge sharing and pooling of resources, which undoubtedly exist is rarely realized. The development of networks between NGOs, development agencies and research institutes will be a necessary step along this path.

## **12.8 IFOAM Relocates Africa Office to Dakar**

The International Federation of Organic Agriculture Movements (IFOAM) established the Africa Organic Service Centre (AOSC) in 2004 to help the growth of organic agriculture on the continent. Africa's special challenges includes food security deficiencies that are far more critical than on other continents, conditions that have inhibited the take off of a "green revolution" and a lack of infrastructure.

The AOSC 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 income. The AOSC was initially located in Kampala, Uganda. In 2005 the IFOAM World Board made the decision to relocate the AOSC to Dakar, Senegal. Among many considerations, it was felt that Dakar would be a good base from which to give more encouragement and a higher profile to the organic movement in West and French-speaking Africa. This was seen as a priority as the organic movement is comparatively more developed in Eastern and Southern Africa.

One of the roles that the AOSC will perform is facilitating the exchange of information on different experiences from various parts of Africa. Working together with many other organizations promoting organic agriculture and sustainable development in general, IFOAM, through its member network, is involved in various projects for the development of local and export markets for organic produce. There are also initiatives in several countries where cohesive national movements have come to lobby their governments on issues such as formally incorporating organic agriculture within agricultural planning, and adopting organic standards. IFOAM has the know-how and the networks to provide assistance to these efforts.



A key role for AOSC in the coming years will be to build up a database on the general state of organic agriculture in Africa. Through networking with IFOAMs members in different African countries, it is intended to build up a more accurate picture of the extent of organic agriculture within Africa. While this will not be achieved overnight, it is intended that the process of regular and close communication with IFOAM members and with sister organizations will help substantially close the information gap that presently exists. These efforts will rely substantially on internet communication and the active support and goodwill of IFOM members and sister organizations, as IFOAM (and the AOSC) do not have the resources to undertake a full scale survey of the state of organic farming in such a vast, and often poorly, interlinked continent.

The AOSC will therefore work closely with the member organizations in the various countries to get information on developments in those countries, and then provide a platform for that information to be shared with others in Africa and beyond. The methods that will be employed to do this will include a new Africa page on IFOAMs website and a monthly internet-based newsletter, as well as periodic electronic discussions on issues of interest to members. In addition, other ad hoc opportunities will include IFOAMs participation in various shows and other events.

The resources available to the AOSC are but a drop in the ocean compared to the challenges and needs of organic agriculture in Africa. But “a journey of a thousand miles begins with one small step,” and the AOSC will strive to use information technology, IFOAMs broad knowledge base and the dynamism of its members all over Africa to further develop the organic movement on the continent. One result of this will be an increase in the availability of information (including in this publication) about the status of organic farming in Africa and its relevance to addressing the needs of farmers and helping meeting Africa’s development challenges. Contact: Chido Makunike, AOSC Coordinator, Dakar, Senegal, [http://www.ifoam.org/about\\_ifoam/around\\_world/africa.html](http://www.ifoam.org/about_ifoam/around_world/africa.html)

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### 12.10 Statistics & Information Resources for Africa

**Table 25:** Africa: Land under organic management and organic farms

COUNTRY	YEAR	AREA UNDER ORGANIC MANAGEMENT (HECTARES)	SHARE OF TOTAL AGRICULTURAL AREA	NUMBER OF FARMS
Algeria	2004	1'400	0.003 %	
Benin	2005	400	0.01%	650
Burkina Faso	2004	30	-	
Cameroon	2003	7'000	0.1%	
Egypt	2005	24'548	-	500
Ghana	2005	19'132	0.13%	
Ivory Coast	2005	0	-	
Kenya	2005	182'438	0.69%	30'000
Madagascar	2000	129	-	
Malawi	2002	325	0.01%	13
Mali	2003	170	.	
Mauritius	2004	150	0.13%	
Morocco	2003	20'040	0.14%	12'051
Mozambique	2004	600	-	5'000
Niger	2004	12	-	
Rwanda	2005	50	-	10
Senegal	2004	2'500	0.03%	3'000
South Africa	2001	45'000	0.05%	250
Sudan	2005	200'000	0.15%	650
Tanzania	2003	55'867	0.14%	30'000
Togo	2004	90	-	1
Tunisia	2004	155'323	1.59%	608
Uganda	2004	122'000	0.99%	33'900
Zambia	2004	187'694	0.53%	
Zimbabwe	2004	1'000	-	2'425
<b>Total organic area/farms in Africa covered by the FiBL survey 2005 / 2006</b>		<b>1.025.898</b>	<b>0.2%</b>	<b>119'140</b>

Source: FiBL-Survey 2005/ 2006

**Table 26:** Africa: Main land use categories in organic farming, Source: FiBL-Survey 2005/ 2006

ARABLE LAND (HA)	SHARE OF ARABLE CROPS OF TOTAL ORGANIC LAND	PERMANENT CROPS (HA)	SHARE OF PERMANENT CROPS OF TOTAL ORGANIC LAND	PERMANENT PASTURES(HA)	SHARE OF PERMANENT PASTURES OF TOTAL ORGANIC LAND	CERTIFIED LAND, USE NOT KNOWN(HA)	SHARE OF LAND WITH UNKNOWN USE OF TOTAL ORGANIC LAND	TOTAL LAND UNDER ORGANIC MANAGEMENT (HA)
76'961	8 %	298'598	29%	31'861	3 %	618'477	60 %	1'025'898

### Information Sources

Algeria: Lina Al-Bitar, Coordination Committee, Organic Agriculture Sector, Mediterranean Agronomic Institute of Bari, Via Ceglie 9, 70010 Valenzano Bari, Italy

Benin: Emile Hougbo, 05 Bp 774 Cotonou (Republic of Benin), Tel. +229 90943976. Botswana: Brigitte Schuster. IUCN Botswana - The World Conservation Union. Kgale Siding (after St. Joseph College). P/Bag 00300. Gaborone. Botswana. Tel/Fax (gen.): + 267 3971584. Tel/Fax (dir): +267 3931883. Internet [http://www.helvetas.ch/wDeutsch/topic\\_themes/biobaumwolle/info\\_burkina\\_faso.asp?navtext=Helvetas%20Projekte](http://www.helvetas.ch/wDeutsch/topic_themes/biobaumwolle/info_burkina_faso.asp?navtext=Helvetas%20Projekte)

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Côte d'Ivoire : Noufou Coulibaly. Organisation Professionnelles Agricoles. Côte d'Ivoire

Egypt :

- Dr. Mohamad Yousri Hashem. Center for Organic Agriculture in Egypt (COAE). 14 Ibrahim El-Shawarby Street. P.O.Box 1535. Alf-Maskan. 11777 Cairo. Tel/Fax : +202 6248819

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Kenya: Eustace Kiarrii. KOAN Secretariat. P.O Box 7246. 00200 Nairobi. Tel: +254 20876119/4 Fax: +254 20876125, Homepage: [www.koan.co.ke](http://www.koan.co.ke)

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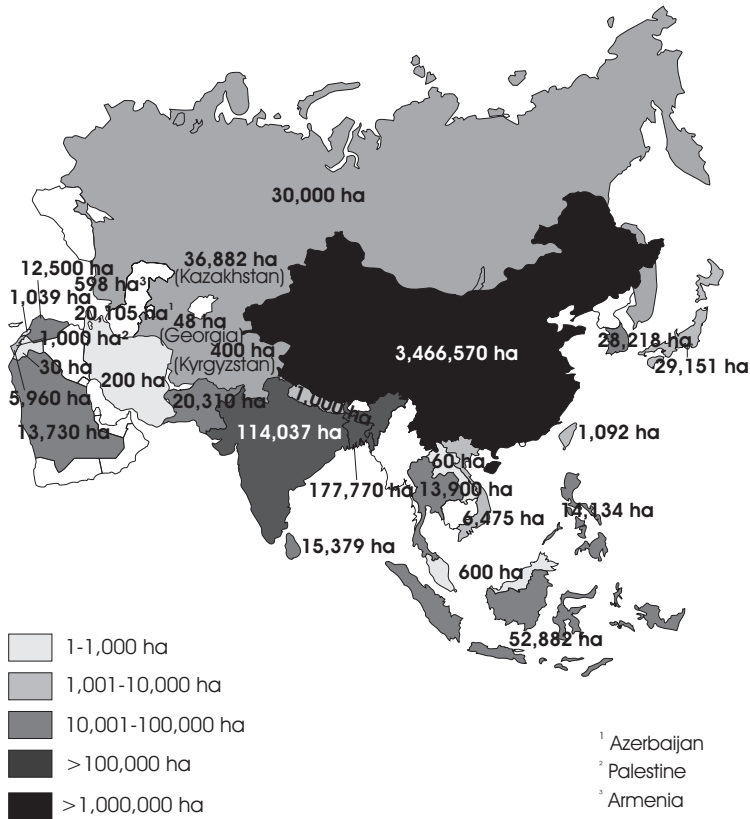
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Morocco: Lina Al-Bitar, Coordination Committee, Organic Agriculture Sector, Mediterranean Agronomic Institute of Bari, Via Ceglie 9, 70010 Valenzano, Bari, Italy. Tel: +39 080 4606254. Fax: +39 080 4606206

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# 13 ORGANIC FARMING IN ASIA

ONG KUNG WAI



**Map 2:** Organic Farming in Asia.

Source: FiBL Survey 2005/2006; © SOEL / FiBL

## 13.1 General

Organic agriculture and the organic sector in the Asia region continued to grow over 2005. There were, however, regional differences, depending on the different stages of development in the individual countries, geographically spread between Russia to the North, Japan to the East, Indonesia to the South and Israel to the West.

Local markets continue to flower from the rooftop of the region in Nepal to the flat steppes of Mongolia. Money, Health and Safety, i.e. high income consumers interested in healthier diets and concern about food safety are driving factors for domestic markets in major cities. Reported for the first time and at an early stage of development, with production mostly at the family gardening level (no figures available), a domestic market is emerging in Mongolia, especially amongst higher income consumers interested in healthier diets.

Imports play an increasing support role to market development. According to the Ministry of Forestry and Fisheries (MAFF), the increase from 2002 to 2003 of Japan's volume of organic products was mainly fuelled by imports. Foreign organic products are twice or more the quantity of domestic products and a cause of concern for the Japanese organic movement. 84 percent of increase however came from non-rival commodities such as coffee, black tea, nuts and buckwheat categorized by MAFF as "other products".

Whilst imports defined market growth in Japan, export defines sector growth in the region, where foreign market access and competition grow more acute each year.

### **13.2 Production**

A number of countries where activities were not recorded previously reported data this time. Development agencies appear to have been busy implementing projects in emerging countries in the Northeast, e.g. a Swiss sponsored bio-cotton project in Kyrgyzstan includes 230 farms, with a total area of 200 hectares. Half of this area is cotton production, the rest is cereals. An extension service in Georgia reported covering 3'000 hectares (432 farms) with 48 hectares (13 Farms) under inspection by a certification body established through the support of the Swiss Agency for Development and Cooperation DEZA/SDC<sup>1</sup> (coordination by the NGO EPER, Switzerland) and the German Development Agency GTZ<sup>2</sup>. There are at least 11 certified farms with a total area of 475 hectares and more unaccounted territories of wild collection in Armenia.

The sandy lands of the Middle East, Palestine and Saudi Arabia<sup>3</sup> also reported for the first time. The three farms under Watania Agriculture Establishment, Saudi Arabia cover a total of 3'052 hectares of certified production comprising of vegetable and fruits. 500 hectares of cereals are under conversion. The company says it has up to 10'000 hectares of arable land available for conversion in coming years. Watania also processes fruit juices, jam, fruit concentrates, and other fruit related products. They have about 2'000 hectares under conventional livestock due to the lack of organic feed. There are 500 organic farms in Palestine with a total area of 1'000 hectares mainly under fruit, almond, olives and dates. According to the Palestinian Agricultural Relief Committee, there are no organic pasturelands because they are under Israeli control.

1 Swiss Agency for Development and Cooperation DEZA/SDC; Internet <http://www.deza.admin.ch>

2 German Development Agency GTZ; Internet <http://www.gtz.de/en/>

3 Watania Agriculture Establishment, Saudi Arabia ([www.watania-agri.com](http://www.watania-agri.com))

There is still plenty of production potential to be tapped. A good proportion of land managed traditionally in the region comply with organic standards, e.g. PROFIL, an NGO working on promotion of organic farming and marketing in Laos, estimates a total area of 505'790 hectares (200'000 farms) in the country are under organic management by tradition. But only five farms (65 hectares) have applied for certification.

### 13.3 Markets

The highest reported domestic market growth, estimated to be up to 30 percent, is in China, mainly in the eastern part. The main products are vegetables, rice and fruits. Reasons include government promotion; growth of local certification bodies; increased public concern on food safety; increasing demand from high-income earners and increased public knowledge about organic agriculture and food. Chinese export growth is estimated at about 10 percent. Along with on-going increasing demand there is also increasing quantity and varieties of certified products available worldwide.

Competition is noted in a number of other reports, e.g. Sri Lanka, where export growth is estimated at about 10 to 15 percent in terms of volume but less in terms of value. This is mainly because Sri Lanka's main export is tea, and there is over production of organic tea plus competition from India. Unfortunately, unlike China, there is no significant domestic market growth in Sri Lanka. Organic products are available only in three or four supermarkets/department stores in Colombo, and there are no signs of imports.

Market development in the countries of the Association of Southeast Asian Nations (ASEAN)<sup>4</sup> is mixed. A study conducted in 2003, in the Philippines estimates annual demand for organic rice at about 9'000 tons<sup>5</sup> and available supply throughout the country at 21'286 tons per year. More than enough to go around one may think, yet Metro Manila distributors reportedly face a supply shortage of at least 70 percent of actual requirement.

Imported products, increasingly noticeable in Thai supermarkets, add to the product range and varieties available. Nevertheless, domestic market growth is slow. Export growth is also slow, pushing Thai exporters to shift the focus from traditional EU markets to the US market, noticeable from the additional US National Organic Program (NOP) certification asked for by Thai operators.

An organic boom seems to be taking place in Indonesia, including sales of imported products in major cities, e.g. Jakarta. Door-to-door promotion and sales of non-certified organic rice near Medan, North Sumatera, now reach around 15 tons per month. This was developed by an NGO, set up by three medicinal doctors as a marketing channel in 2002.

4 Association of Southeast Asian Nations (ASEAN); Internet <http://www.aseansec.org/>

5 Palomo, Marlon (2003): Five Year Business Development Plan for Kooperatibang Likas ng Nueva Ecija. A small farmer based integrated social enterprise." Asian Institute of Management

### **13.4 Standards, Certification & Regulation**

While in 2004 91 certification bodies were identified in Asia, in the Organic Certification Directory 2005, published by in The Organic Standard by Grolink, 117 were listed. 104 of these are based in just three countries: China, India, and Japan. Most of Asia still lacks local service certification providers. The majority of activities and development in the region are happening without market regulation and certification. Most of the exporters continue to be certified by foreign certification bodies operating in the region.

Development in regulations and certification grows apace from the mountaintop to the steppes. Speaking at the inaugural function of a three-day National Workshop on Organic Agriculture and Food Security, held in December 2005, the Secretary of the Ministry of Agriculture and Cooperatives (MoAC) of Nepal announced that guidelines for certification of organic agriculture products have been drafted and will soon be circulated among stakeholders for comments and input. The Mongolian Ministry of Food and Agriculture is drafting regulations for „Ecologically clean products“ including organic farming and organic products. Meanwhile, the draft national standards, prepared in English and submitted to government officials by the Lanka Organic Agriculture Movement (LOAM), have to be translated into Sinhalese and re-submitted before further consideration. The task is pending completion.

Organic legislation in Russia moves one step forward. The draft law has reportedly passed the first approval step. The process in Georgia takes two steps back. Political crisis and then the Rose revolution in Georgia stalled law making on organic farming and certification. The law, which passed first reading in parliament in 2002, has to be revised due to changes since then. Before that the re-organization of the Ministry of Agriculture has to be completed. Restructuring and re-organization of government departments and officers also stalled implementation of the Indonesian accreditation scheme for organic certification and the Malaysian government organic certification scheme, launched in 2003.

Government intervention need not be bureaucratic swamps. Hong Kong has no legislation on organic. Nevertheless the government supports the development of a local organic certification system through its agriculture development fund. The certification program, launched in January 2005 and operated by an NGO, the Hong Kong Organic Resource Center, has certified 19 farms and one processor by November 2005.

Two regulatory changes of global impact in the region are those of Japan and China. Japan revised its registration of certification bodies, in the second half of 2005, effective March 2006, opening its system to allow certification bodies worldwide to register with the Japanese Ministry of Agriculture MAFF without a government-to-government equivalency agreement. Requirements however are more stringent and a number of Japanese certification bodies are expected to drop off.

Access to the Middle Kingdom however will be toughest of all. In the effort to meet all major market regulatory requirements, the Chinese government set the Chinese national standards to



comply with the EU, NOP<sup>6</sup> and JAS<sup>7</sup> organic requirements, making the Chinese national standards the most stringent set of organic requirements in the world. The Chinese rules, effective since June 2005, require imports to comply with Chinese national standards and foreign certification bodies to have a local Chinese partner to operate in the country.

### 13.5 Government Support

Governments in the region are bullish about organic market prospects. Under the 9th Malaysia Plan (2006-2010), the government expects organic consumption to grow by 20 percent per year and the organic industry to be worth 210 million USD<sup>8</sup> in five years' time. The Ministry of Agriculture plans to add 20'000 hectares under organic farming by year 2010, increasing local production by 4'000 hectares per year. Allocation for organic farming is expected to increase substantially from the 500'000 Malaysian Ringgit MYR<sup>9</sup> allocated under the 8th Malaysian Plan.

The Thai cabinet reportedly approved 26.6 million USD<sup>10</sup> for organic agriculture development. It was big news. Implementation is however still pending. In the 2005 budget the Sri Lanka President, who is also the finance minister, announced that 4'150'000 USD<sup>11</sup> will be available for agriculture projects including organic projects. How much would be allocated for organic agriculture is not known. In the 2004 budget 100'000 USD<sup>12</sup> was allocated for setting up model organic farms and assistance towards inspection and certification. According to one information source, so far no money has been disbursed.

Whilst announcing the development of draft standards, the Nepal Secretary of the Ministry of Agriculture and Cooperatives also said that the government was committed to adopt measures to help resource-scarce farmers of the country to compete with larger producers across the globe.

Chinese local governments offer different levels of support in different localities. Operators in some places can receive financial support of about 4'000 USD to 6'000 USD<sup>13</sup>. The Hong Kong government assists in development of the marketing network by providing technical support through existing vegetable marketing associations, including experimental farms and certification as well as public education programs on organic food.

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6 US National Organic Program (NOP)

7 Japan Agricultural Standard (JAS)

8 210 million USD = 177.4 million EUR (per 31.12.2005)

9 500'000 Malaysian Ringgit MYR = 132'701 USD = 109'811 EUR (per 31.12.2005)

10 26.6 million USD = 22.5 million EUR (per 31.12.2005)

11 4'150'000 USD = 3'509'882 EUR (per 31.12.2005)

12 100'000 USD = 84'594 EUR (per 31.12.2005)

13 4'000 to 6'000 USD = 3'383 - 5'0745 EUR (per 31.12.2005)

### **13.6 Development Challenges**

All reports received lodged a positive overall outlook. The critical challenge for Asian organic agriculture as mentioned in the review of the 2005 edition of this book is how to sustain expansion. The question remains.

More public and private organizations, including policy makers, are undoubtedly interested. Expectations, benchmarking growth rates of developed markets, are high. Infrastructure and competencies to support organic conversion in developing countries, in the region, are however lacking. Many, influenced by export market requirements, believe regulation is important for development. Greater attention is still directed to standards, regulations and certification development and not to organizing the production and proper handling of market supply chains to meet with increasingly demanding food quality and standards requirements.

Downstream processing of organic products remains weak. Whilst new organic projects are coming up, the Sri Lanka report noted that most are contract growing projects with final product processing taking place elsewhere. A condition that reflects limited participation of local food processing industry, also volume of domestic markets whilst growing have yet to be interesting enough for local food processors to take the challenge.

Government announcements of wider support for local and export development in many countries are encouraging. Government involvement is growing. How the organic sector will further develop and whether development will be smooth or twist and turn will depend on the intervention of national governments in the region.

Well intended, but ad hoc and unevenly implemented support in the case of the Chinese local governments will precipitate criticism. Improvement of institutional services in general, as implemented by the Hong Kong authorities, will be well received. What is lacking from all reports is investment in research in production and marketing. Reliable production and market data is generally not available in the region. Data collection of production and market statistics for this publication over the years remain a challenge. Hong Kong is exemplary in having conducted four surveys in 2005.

With competition sliming export margins, a critical issue to monitor from local enthusiasm in setting regulations is the cost of regulatory compliance. Such costs/fees will hurt producers as well make organic products ever more expensive than conventional products. Governments do need to consider the full implication to market development when setting organic regulations, particularly with respect to facilitating exports and recognition of imports. Whether the Chinese newly found stringent rules will support or retard growth remains to be seen. Going slow with regulations would be advisable as the regulatory framework is fluid. Revisions of the EU regulation, the NOP and IFOAM system are expected in the coming years.

The appropriate role of government needs further discussion. Public-private partnership where government intervention strengthens private sector competencies to grow the organic sector is needed. On the private sector level, building consensus and national organic trade associations is

critical towards making private sector collaboration possible.

Last but not least, NGOs are key partners in the game. Many however do not embrace a market model of development and resist it as degenerate commercialization of sustainable/organic agriculture principles. Private sector actors also need to develop dialogue and develop constructive collaboration over this schism with skeptical NGOs to reach the thousands and millions of farming families in the region.

### **13.7 *BioFach China and Japan***

BioFach China, a two-year public-private partnership between Nürnberg Global Fairs and the German Development and Investment Society (DEG), will take place for the first time at the end of November 2006 in Shanghai. Organic agriculture is receiving increasing political recognition for its role in protecting the environment in China, and therefore, the BioFach China projects has developed a partnership with two government entities: the Greenfood Development Center (Ministry of Agriculture) and the Center for Environmental Education and Communication (Environmental Ministry). More than 2000 certified producers are concentrating on the export of products like squash, sunflower seeds, soy products, diverse mushrooms and medicinal plants. In addition, internal production and consumption of high-value organic products. According to Udo Censkowsky of Organic Services who is implementing the project on behalf of Nürnberg Global Fairs, numerous independent initiatives, growing local markets and the development of regional distribution structures are facilitating dynamic market development in China. Furthermore, organic products are increasingly being imported, signaling a growth in visibility of organic products by Chinese consumers.

BioFach Japan will take place for the fifth time in Tokyo from September 21-23 2006. BioFach Japan 2005, with nearly 170 exhibitors and 13'500 trade visitors,, was a great success and is poised to grow. Half of the visitors came from the organic wholesale and trade, and 20 percent were producers.

## 13.8 Organic Farming Statistics in Asia: Statistical Data and Information Sources

### 13.8.1 Statistics

**Table 27:** Asia: Land under organic management and organic farms

COUNTRY	YEAR	LAND UNDER ORGANIC MANAGEMENT	SHARE OF TOTAL AGRICULTURAL LAND	NUMBER OF ORGANIC FARMS
Armenia	2004	598	0.04%	11
Azerbaijan	2005	20'105	0.43%	332
Bangla Desh	2002	177'700	1.97%	100
China	2004	3'466'570	0.60%	1'560
Georgia	2005	48	0.00%	13
India (provisional)	2003	114'037	0.06%	5'147
Indonesia	2004	52'882	0.12%	45'000
Iran, Islamic Republic	2003	100		1
Israel	2004	5'960	1.05%	400
Japan	2004	29'151	0.56%	4'539
Jordan	2005	30	0.00%	1
Kazakhstan	2002	36'882	0.02%	1
Korea, Republic of	2005	28'218	1.46%	28'951
Kyrgyzstan	2005	400	0.00%	230
Laos	2005	60	0.00%	5
Lebanon	2005	1'039	0.32%	
Malaysia	2003	600	0.01%	
Nepal	2004	1'000	0.02%	1'247
Oman	2002	0	0.00%	
Pakistan	2004	20'310	0.07%	28
Palestine, Occupied Tr.	2004	1'000	0.26%	500
Philippines	2004	14'134	0.12%	34'990
Russia	2005	30'000	0.01%	15
Saudi Arabia	2005	13'730	0.01%	3
Sri Lanka	2004	15'215	0.65%	3'301
Syria	2004	15'379	0.09%	26
Taiwan	2003	1'092	-	-
Thailand	2004	13'900	0.07%	2'498
Vietnam	2001	6'475	0.07%	1'022
<b>Total area</b>		<b>4'063'999</b>	<b>0.24%</b>	<b>129'921</b>

**Table 28:** Asia: Main land use categories

CONTINENT	ARABLE LAND (HA)	SHARE OF ARABLE CROPS OF TOTAL ORGANIC LAND	PERMANENT CROPS (HA)	SHARE OF PERMANENT CROPS OF TOTAL ORGANIC LAND	PERMANENT PASTURES(HA)	SHARE OF PERMANENT PASTRES OF TOTAL ORGANIC LAND	CERTIFIED LAND, USE NOT KNOWN(HA)	SHARE OF LAND WITH UN-KNOWN USE OF TOTAL ORGANIC LAND	TOTAL LAND UNDER ORGANIC MANAGEMENT(HA)
Asia	527'240	13 %	46'614	1 %	2'929'032	72 %	561'113	14%	4'063'999

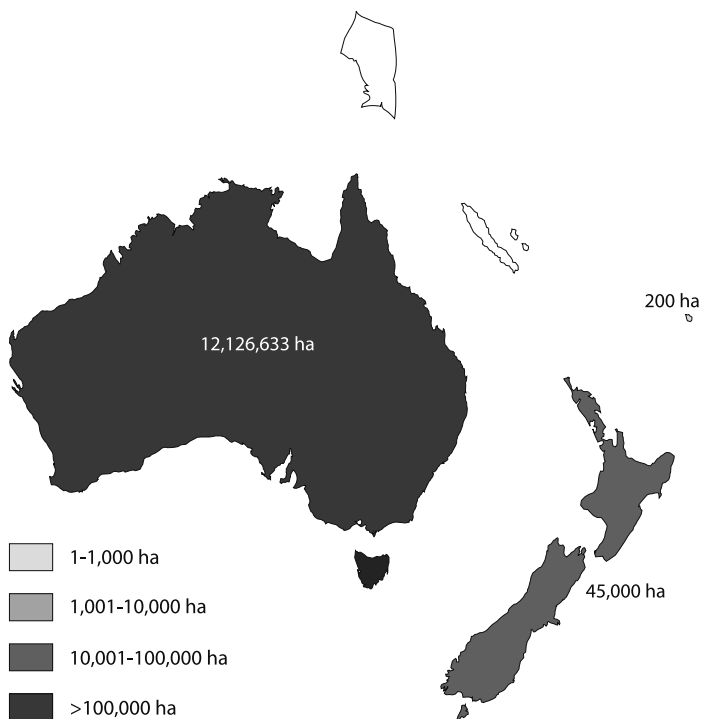
### 13.8.2 Information Sources

- Armenia: ECOGLOBE –organic control and certification body. Director: Dr. Nune Darbinyan. Address legal (for mailing): Mkhitar Heratsi Street 18/3. 375025 Yerevan. Republic of Armenia. Tel/Fax: +37410 22 12 95. Mobile: +37491 41 83 11. Fax (alternative): +37410 57 55 27. Internet <http://www.spyur.am/eng/4929.htm>
- Azerbaijan: Vugar Babayev. Ganja Agribusiness Association. 19, Ganja street. AZ 2000 Ganja, Azerbaijan. Tel: +99422 569400. Fax: +99422 560178
- Bangladesh: Habib Ullah, SKAL Internantional Bangladesh, Control Union Ltd
- China: ZHOU Zejiang, Senior Advisor, OFDC, SEPA 8 Jiang-Wang-Miao Street, Nanjing 210042, China  
-BioFach China Project: Udo Censkowsky, Organic Services GmbH, Landsberger Str. 527, 81241 München, Germany. Tel: +49 (0) 89.820.759-02. Email: [u.censkowsky@organic-services.com](mailto:u.censkowsky@organic-services.com). Homepage: [www.organic-services.com](http://www.organic-services.com).
- Georgia: Mariam Jorjadze Elkana. Regional Office. Shalva Akhalsikheli str., # 9, 0800. Akhalsikhe, Georgia. Tel: +995 26520246, Homepage: <http://www.elkana.org.ge/>
- India (Provisional data): Dr. P.V.S.M. Gouri. Advisor. Agricultural and Processed Food Products. Export Development Authority. Ministry of Commerce and Industry, Govt. of India). 3rd Floor, NCUI Building, 3 Siri Institutional Area, August Kranti Marg, New Delhi 110 016. Tel: +91 26514525. Fax: +91 26519259
- Indonesia: 2004. Riza V. Tjahjadi. BioTani Indonesian Foundation. Jl. Persada Raya no.1. Menteng Dalam, 12870 Jakarta. Tel/fax: +62 21 8296545.  
Coffee data: Rice, 1998
- Iran: IMO, Institute for Marketecology, Weststr. 51, CH-8570 Weinfelden, Phone: +41-71-626 0 626, Fax +41-71-626 0 623  
For wild collection: Alireza Avaz Koocheki. Ferdowsi University- Faculty of Agriculture. P.O. Box 91775-1163. Mashhad  
COAE: Dr. Mohamad Youssi Hashem. Center for Organic Agriculture in Egypt (COAE). 14 Ibrahim El-Shawarby Street. P.O.Box 1535. Alf-Maskan. 11777 Cairo. Tel/Fax : +202 6248819
- Israel: Ilan Eshel. IBOOA (Israel Bio-Organic Agriculture Association). 1 Hayasmin st'. Ramat Efal 52960. Tel: +972 3 5610538. Fax: +972 3 5618633
- Japan: The figures apply to farms managed without use of chemical pesticides + no use of chemical fertilizers + compost use (=organic)  
\* Farms: Agricultural Census, Feb 1, 2000  
\* Hectares: Ministry of Agriculture, Forestry and Fisheries, Dec 1, 2001  
Figures supplied by Daichi KOHMOTO, Department of Geography, Hiroshima University, <http://home.hiroshima-u.ac.jp/daichi/>  
-BioFach Japan: Till Ahnert. Nürnberg Global Fairs Messezentrum, 90471 Nuremberg, Germany. Tel: +49 (0) 9 11. 86 06-86 92. Email: [Till.Ahnert@nuernbergglobalfairs.com](mailto:Till.Ahnert@nuernbergglobalfairs.com). Homepage: [www.biofach.de](http://www.biofach.de)
- Jordan: Mohammad Al-Oun. Organic Farming & Sustainable development. Coventry University. Tel: +44 24 76887010./ +962 2 6272168 (Jordan)
- Kazakhstan: Lina Svenson, KRAV Kontroll AB, Box 1940, 75149 Uppsala, tel: +46 18 138040. Fax: +46 18 138041

- Korea, Republic of: Prof. Dr. Sang Mok Sohn. Research Institute of Organic Agriculture. Dankook University. 330-714 Cheonan. Republic of Korea. Tel: +82 41 5503633, Fax: +82 41 5683633, Mobile: +82 16 4282939.  
Homepage: <http://www.rioa.or.kr>
- Kyrgyzstan: Nicolas Boll. HELVETAS Swiss Association for International Cooperation. Nicolas Boll Project Manager „Organic Cotton Production & Trade Promotion“. 10 Abdurahmanova Str., Jalalabat, Kyrgyzstan. Tel: +996 (0)3722 - 55223. Mobile: +996 (0)312 - 983676. Fax: +996 (0)3722 - 52012  
- Data for wild collection: Institute for Marketecology (IMO). Ines Hensler, Public Relations. Weststr. 51. 8570 Weinfelden. Switzerland. Tel: 0041-71-626 0 626 (general). Tel: 0041-71-626 0 633 (direct). Fax: 0041-71-626 0 623
- Laos: PROFIL- The Promotion of organic farming in Marketing in Laos, 193 Phonexay Rd, Phonexay Village, Saysetha District, Vientiane Capital, Laos
- Lebanon : Paul van den Berge. Beratung und Bildung Internationale Zusammenarbeit. Forschungsinstitut für biologischen Landbau (FiBL). Ackerstrasse. CH-5070 Frick. Tel: +41 91 7301-510. Fax: +41 91 7301-513.
- Malaysia: Jumat Majid, Organic Alliance Malaysia BHD
- Nepal:  
- Mr. S.P. Yadav. CWDS (Community Welfare & Development Society). P. O. Box 7923 Kathmandu-Nepal. Tel: +977-1-4350196. Fax: +977-1-4350038  
- Maheswar Ghimire. GPO 14345 Goswara Hulak. Kathmandu, Nepal. Tel: +977-1-4423122. Fax: +977-1-4220807 (attn Maheswar Ghimire)
- Oman: Fawzi A. Taher and Yousif A. Hamdi. Organic Agriculture in the NENA (Near East and North Africa) Region. From the Arab Conference on Organic Agriculture, Tunisia, September 2003.
- Pakistan: Ghulam Mustafa. POF (Pakistan Organic Farms). Block 26, 1st. Fl., Mian Chambers, 3 Temple Road. Lahore. Tel: +92 42 6302778. Fax: +92 42 6361530, Homepage: [www.pakof.com](http://www.pakof.com)
- Palestine: Dr. Thameen Hijawi. Director of Arab Agronomist Association (AAA) / Palestinian Agricultural Relief Committee (PARC). P.O.Box 25128 Shu'fat, Jerusalem. Tel: +970 2 2963840. Fax: +970 2 2963850. Mobil: 00972 522 216241
- Philippines: Hazel B. Alfon. Philippine Rice Research Institute. Maligaya, Science City of Munoz, Nueva Ecija 3119.  
- Farms are only rice farms.
- Russia: Mr. Yuri Vasyukov. EkoNiva, P.O. Box 1, Nemchinovka -1, Moscow Region, Russia 143013  
Wild collection data: Eko Connect. Newsletter no.5. November 2005. Homepage: [http://www.ekoconnect.org/pdf/Infobrief\\_5/Infobrief-5-Englisch.pdf](http://www.ekoconnect.org/pdf/Infobrief_5/Infobrief-5-Englisch.pdf)
- Saudi Arabia: Shafiq Urrahman. Total Quality Manager of Watania Agriculture Establishment. PO Box 51764, Riyadh 11553, Kingdom of Saudi Arabia. Tel: +966 1 4727293. Fax: +966 1 4727301. Mobile: +966 507 477484 (Shafiq), Homepage: [www.watania-agri.com](http://www.watania-agri.com) Director General: Dr. Kahlid Al Malahy. Director General (Acting): Engr. Ibrahim Aboabat
- Sri Lanka : S. Vaheesan. Program Officer/ NRM. Helvetas Sri Lanka, No. 07, Glen Aber place, Bambalapitiya, Colombo 04, Sri Lanka  
- Data for farms is from 2001.
- Syria: Munir Jalanbou. The president Syrian Organic Food & Agriculture Research Center (SOFARC, SY). Hosh Blass, Front ind Zone. Tel: 00963 11 635 2 332 / 888 3 580 / Fax: 00963 11 333 2 888 / 6350 254. P O Box : 33262 Damascus
- Taiwan: USDA Foreign Agricultural Service. 2003. GAIN Report (Global Agriculture Information Network). Taiwan Organic Products. Homepage: <http://www.fas.usda.gov/gainfiles/200402/146105363.pdf>
- Thailand: Vitoon Payankul. Green Net. 6 Soi Piboonupatam-Wattana Nivej 7, Suthesarn Road, Huay-Kwang, Bangkok 10310. Tel: +66 (0)2 2779380 - 1. Fax: +66 (0) 2 2779654, Homepage: [www.greennetorganic.com](http://www.greennetorganic.com)
- Vietnam : Institute for Marketecology (IMO) 2002. Weststr. 51. 8570 Weinfelden. Switzerland. Tel: 0041-71-626 0 626 (general). Tel: 0041-71-626 0 633 (direct). Fax: 0041-71-626 0 623, Homepage: [www.imo.ch](http://www.imo.ch)

## 14 ORGANIC FARMING IN AUSTRALIA/OCEANIA

Australia/Oceania includes Australia and New Zealand as well as smaller countries such as Papua New Guinea, Fiji, Tonga and Vanuatu. Australia has more land under organic production than any other country in the world. Most of the land is dedicated to extensive beef enterprises, though other enterprises make up much more of the total returns from organic farming. The region's growth in organic trade is heavily influenced by the increasing demand for organic food and fiber products in Europe, Asia (especially Japan) and Northern America. There are three IFOAM-accredited certifiers – The National Association for Sustainable Agriculture Australia Limited (NASAA) and Biological Farmers of Australia (BFA) as well as BIO-GRO (New Zealand).



**Map 3:** Organic farming in Australia / Oceania. Source: FiBL Survey 2005/2006; © SOEL / FiBL

## 14.1 *Organic Farming in Australia* ELS WYNEN<sup>1</sup>

### 14.1.1 *History*

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 didn't know of the existence of other organic farmers. The main reasons given by broad acre 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. In the 1980s, there was a growing perceived need for cooperation and for combining the efforts of all forces in organic agriculture, though biodynamic farming was organized under the leadership of Bob Williams and Alex de Podolinski well before the 1980s.

In 1984, the idea of an umbrella organization that combined all forces interested in organic agriculture, including producers, consumers, traders, and researchers, was presented by Sandy Fritz at several state and national events. By early 1986 an agreement was reached on a constitution and a structure for the national organization, and NASAA was formally inaugurated, and 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, when one of the cereal-livestock farmers – Gavin Dunn - proposed to set up another organization, which resulted in the formation of the Biological Farmers of Australia (BFA) 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.

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 2004 is 12.1 million hectares (Ian Lyall, AQIS, personal communication, November 2005), representing 2.6 percent of all agricultural area of 460 million hectares in Australia, for which 1832 producers were certified. However, the total number is somewhat lower, as some are double or triple certified. 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 (a rapidly growing sector); sheep, both for meat and wool; and herbs.

1 Eco Landuse Systems, Canberra, Australia, Internet [www.elspl.com.au](http://www.elspl.com.au)



Although no figures are available for areas under the different products, Wynen (2003) estimated that, in 2000-2001, only 38 percent of the total farm income of 89 million AUD<sup>2</sup> (including organically grown products sold on the conventional market) was received for beef and sheep products, with around one quarter for grains and horticulture. Halpin (2004) surveyed 26 percent of all certified organic farmers for 2003, and estimated the total farm gate value of organic produce (sold in the organic and conventional market) to be 140 million AUD<sup>3,4</sup> for that year. Of the 127.9 million AUD<sup>5</sup> for the products sold on the organic market, 40 percent was paid for beef, close to the estimate of the previous study. However, although fruit, vegetables and grain still made up about half of the total organic sales, fruit and vegetables now accounted for about two thirds of this, over 35 percentage points. In a drought-affected year, dryland grain may suffer more than horticultural crops, which are – at least partly – irrigated. In summary, even though a large part of the area under organic production in Australia is used for extensive livestock production, products other than beef and sheep (many of them grown on mixed farms anyway) have always been very important in organic production, accounting for more than half of the total value on organic farms.



Wine plays an important role in Australian organic production and some major enterprises – like the Pensfold's estate – have converted all or part of their enterprises to organic production. Photograph Helga Willer, FiBL

#### 14.1.2 Certification

Europe has always been a major market for Australian organic produce. The introduction of EC Reg. 2092/91 in 1991 altered requirements for imports of organic products, which meant that official certificates must accompany imports into the EU. 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. In the 1990s, more organic certifying organizations than the Bio Dynamic Research Institute (BDRI), NASAA and the BFA (the certification arm of which is now called Australian Certified Organic) emerged, including

2 89 million AUD = 55 million EUR = 65.1 million USD (per 31.12.2005)

3 This figure was an average of 3 years, estimated by the respondents.

4 140 million AUD = 86.5 EUR = 102.5 USD (per 31.12.2005)

5 127.9 million AUD = 79.1 million EUR = 93.6 million USD (per 31.12.2005)

the Organic Growers Association (OGA, previously the Organic Herb Growers' Association); 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 seven approved certifying organizations, five are listed under European and Swiss law, and as such can provide inspection and certification services for all Australian export consignments; six organizations provide inspection and certification services for products exported to Japan; 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 which has been issued a government organic export certificate to verify its authenticity (Ian Lyall, AQIS, personal communication, November 2005). 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 Bio-Dynamic 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, food safety, 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 is a source of two potential problems for the organic industry in Australia. Although laws exist under the State/Territory Food Acts (which draw their legal standing from the National Trade Practices Act) under which those who sell uncertified produce could be legally challenged on the basis of false and misleading labeling, success under this process is not guaranteed. No other law protects the consumer of organic produce against false labeling. The second problem is that, due to WTO rules relating to national treatment, the Australian government can't prohibit imports of non-certified products labeled as organic.

### 14.1.3 *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 AUD<sup>6</sup>. Wynen (2003) estimated farm-gate values including organic produce sold as conventional in 2000-2001 89 million AUD<sup>7</sup> and Halpin (2004, p.20-21) - excluding organically grown produce sold as conventional - at 127 million AUD<sup>8</sup> for 2003. However, estimates of retail values differ greatly, varying from less than 100 million AUD<sup>9</sup>. for 2000 to 2001 (Wynen 2003) to 250 million AUD<sup>10</sup> (BFA 2003), and 400 million AUD<sup>11</sup> at which NASAA put the retail value in 2003.

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). 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 AUD<sup>12</sup> (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, USA, 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.

6 100 million AUD = 61.8 million EUR = 73.2 million USD (per 31.12.2005)

7 89 million AUD = 55 million EUR = 65.1 million USD (per 31.12.2005)

8 127 million AUD = 78.5 million EUR = 93 million USD (per 31.12.2005)

9 100 million AUD = 61.8 million EUR = 73.2 million USD (per 31.12.2005)

10 250 million AUD = 154.5 million EUR = 183 million USD (per 31.12.2005)

11 400 million AUD = 247.3 million EUR = 292.8 million USD (per 31.12.2005)

12 50 million AUD = 31 million EUR = 36.6 million USD (per 31.12.2005)

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 USA. 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 AUD<sup>13</sup>, with the main sources being New Zealand, the USA 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.

#### 14.1.4 *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, although the certification organizations have to pay for these services. 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 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 these standards are enforced only for the export of organic products, they also act as an informal standard domestically. However, the term 'organic' is not protected in the domestic market place, despite numerous efforts from the organic sector to encourage government to regulate for it.

#### 14.1.5 *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 AUD<sup>14</sup> per year to research and extension, with an increase to 335'000 AUD<sup>15</sup> for the year 2004-2005.

Most of the six state departments of agriculture have at least one officer dedicated to organic agriculture.

In recent years, several attempts were made to get a Cooperative Research Center for organic agriculture established. This would mean a guaranteed substantial government contribution in exchange for an agreed partnership between the public and private sector. Though this option has been rejected late 2004, present signs of government interest in increased research funding for organic agriculture are encouraging.

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13 13 million AUD = 8 million EUR = 9.5 million USD

14 270'000 AUD = 166'895.3 EUR = 197'628.5 USD (per 31.12.2005)

15 335'000 AUD = 207'073.7 EUR = 245'206 USD (per 31.12.2005)

### 14.1.6 Milestones

In 2005, two events stood out in the Australian organic world. The first was very public, the second less so, but equally significant for organic agriculture in Australia.

In September, NASAA was host to the 15th IFOAM Organic World Congress in Adelaide, at which over 1000 registered delegates represented 74 countries. In addition, a Go Organic Festival took place to showcase Australia's organic industry, which was also a huge success.

Sometime earlier in the year, the umbrella organization for organic agriculture, the Organic Federation of Australia (OFA), had undergone a restructure to facilitate grass root input through Advisory Boards in many fields, such as production, certification, consumption, marketing, research and education. Recent funding for this organization (1'259'000 AUD<sup>16</sup> for 2006) should make developments in organic agriculture considerably easier to encourage.

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16 1'259'000 AUD = 778'226.4 EUR = 921'534.2 USD (per 31.12.2005)

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## **14.2 Organic Farming in New Zealand** **SEAGER MASON<sup>17</sup>**

### *14.2.17 Introduction*

Organic agriculture 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 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.

### *14.2.2 Statistics*

New Zealand has about 1000 certified organic producers. 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 process vegetables, arable, dairy, meat, viticulture, and aquaculture. The biggest organic sectors so far are kiwifruit and apples - organic kiwifruit production represents about five percent of the total production of kiwifruit in New Zealand, and organic apple production is close to ten percent of the total production of apples in the New Zealand.

The current growth sectors for organic primary production are apples, dairy, and viticulture. The number of organic apple orchards is increasing in response to the low prices being received for conventional apples at the moment. There is steady growth in the number of dairy farms converting to organics, and in the number of vineyards converting.

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17 Seager Mason, Technical Director, BioGro New Zealand, PO Box 9693, Marion Square, Wellington 6031, New Zealand, Internet <http://www.bio-gro.co.nz> and [www.organicnewzealand.org.nz](http://www.organicnewzealand.org.nz). BioGro NZ is New Zealand's leading organic certifier and organic producers organization.

Some current statistics:

- Certified producers: Approx 1000 certified producers comprising approximately 820 primary producers, 120 processors and exporters, and 60 certified suppliers of inputs (fertilizers etc).
- Certified land area: Approx 45 000 hectares certified land.
- Exports: Approx 85 million NZD<sup>18</sup> worth of products exported, growing at approximately 10 percent per year.
- Domestic market: Approximately 100 million NZD<sup>19</sup> worth of products sold on the domestic market - approx half of this produced in New Zealand, the rest is imported. Growth of about 20 percent per annum in the domestic market.
- Kiwifruit: Organic production is about five percent of the kiwifruit sector.
- Apples: Organic production is close to ten percent of the apple sector.
- Vegetables / cropping: Organic production is about two percent of the sector.
- Dairy and meat: Organic production is still less than one percent of the sector.
- Certifiers (approximate numbers): BioGro 500 producers, Demeter 50 producers, Organic Farm NZ (new small scale producers scheme) 200 producers, Agriquality 250 producers.

### 14.2.3 Markets

#### *The Domestic Market*

New Zealand's domestic market grew very rapidly over the period 2000 to 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.

#### *Exports*

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

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18 85 million New Zealand Dollars (NZD) = 58.8 million USD = 48.4 million EUR (per 31.12.2005)

19 100 million NZD = 56.9 million EUR = 69.1 million USD (per 31.12.2005)

currently more than 85 million NZD<sup>20</sup> per annum.

Growth of organic exports has slowed over the last three years due to a slowdown in growth of properties converting to organics, and the increase in demand on the domestic market. 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 on market opportunities and conversion.

#### *14.2.4 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 NZ. 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*

Exports to EU and USA are via the New Zealand Food Safety Authority (NZFSA) Official Organic Assurance Program (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 it is planned that that this will change in future 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.

#### *Imports*

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

#### *14.2.5 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.

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20 85 million NZD = 58.8 million USD = 48.4 million EUR (per 31.12.2005)



### *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 1 billion NZD<sup>21</sup> 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.

### *Other*

There is no direct Government financial support for primary producers converting to organics.

#### *14.2.6 Research and Extension*

Mainly crown research institutes, universities, and the private sector carry out organic research in New Zealand. One example is an organic research farm that 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.

#### *14.2.7 Outlook*

##### *Political*

Through the launch of the New Zealand Organic Sector Strategy, there is Government acknowledgement of the importance of organics in New Zealand, but still only limited Government support.

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21 1 billion NZD = 0.57 billion EUR = 0.69 billion USD (per 31.12.2005)

### Genetic Engineering

Genetic Engineering 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. Because of the strong opposition to GE no applications for commercial release have been made at this stage, and any that are made will meet fierce resistance. 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.

### Other

A key issue for New Zealand's organic sector is lack of production, 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 are doing the best they can within their resources to facilitate this support. It is expected that OANZ will increasingly coordinate this effort.

## 14.3 Organic Farming Statistics and Information Sources

**Table 29:** Australia / Oceania: Land under organic management and organic farms

COUNTRY	YEAR	LAND AREA UNDER ORGANIC MANAGEMENT (HECTARES)	SHARE OF AGRICULTURAL AREA	NUMBER OF FARMS
Australia	2004	12'126'633	2.71%	1'832
Fiji	2004	200	0.04%	10
New Zealand	2003	45'000	0.26%	820
<b>Total</b>		<b>12'171'833</b>	<b>2.62%</b>	<b>2'662</b>

Source: FiBL-Survey 2005/ 2006

### Information Sources

Australia: Ian Lyall. Manager of the Organic and Biodynamic Program. Tel: +61 2 6271 6638. Fax: +61 2 6272 3238.

E-mail: Ian.Lyall@aqis.gov.au Homepage: [www.aqis.gov.au/organic](http://www.aqis.gov.au/organic)

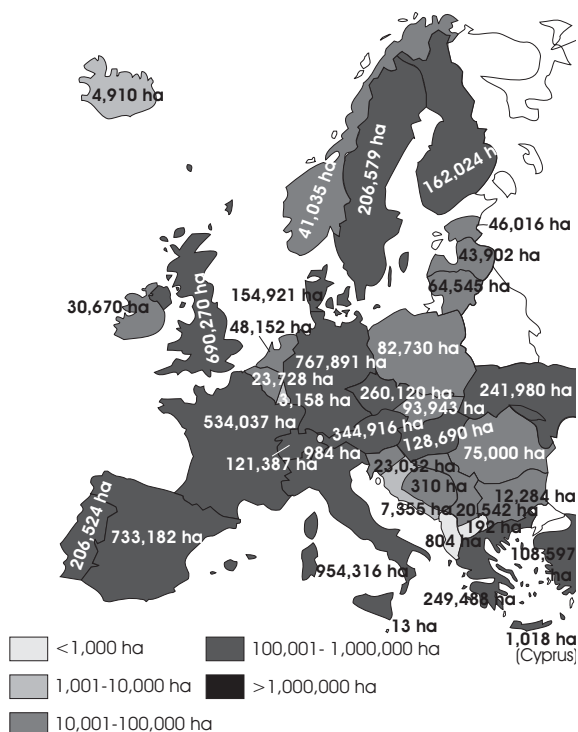
New Zealand: Seager Mason, Technical Director, BioGro New Zealand, PO Box 9693, Marion Square, Wellington 6031, New Zealand, Internet <http://www.bio-gro.co.nz> and [www.organicnewzealand.org.nz](http://www.organicnewzealand.org.nz).

Fiji Islands: Gerhard Stemmler, Mr. Director, Herbex Ltd. Tel: +679 9925221 & 6660387. P.O. Box 516. Fax: +679 6640200. Lautoka, Fiji – Islands. E-mail: [gks@connect.com.fj](mailto:gks@connect.com.fj) Homepage: [www.herbex.com](http://www.herbex.com)

- Cocoa data from: SIPPO. 2002. Organic Coffee, Cocoa and Tea. Market, certification and production information for producers and international trading companies. SIPPO Study, CH-Zurich

Vanautu: Cocoa data from: SIPPO. 2002. Organic Coffee, Cocoa and Tea. Market, certification and production information for producers and international trading companies. SIPPO Study, ZH-Zurich

## 15 ORGANIC FARMING IN EUROPE



**Map 4:** Organic farming in Europe.

Source: FiBL Survey 2005/2006; © SOEL / FiBL

### 15.1 Europe: Statistics, Support Schemes and Research HELGA WILLER<sup>1</sup>

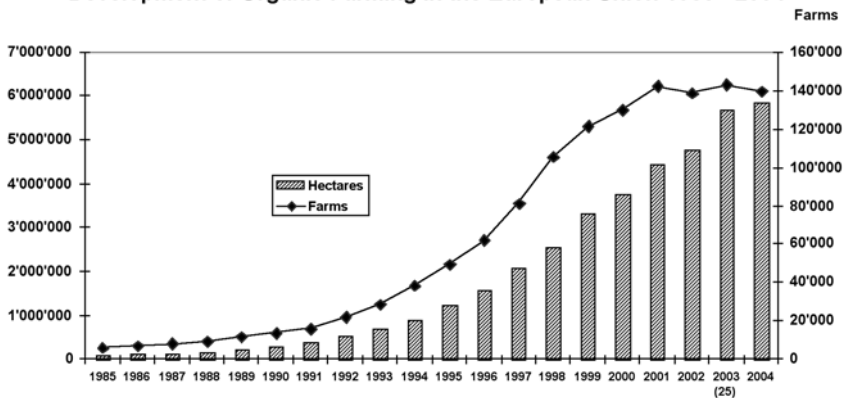
#### 15.1.1 Statistical Development: Continued Growth

Since the beginning of the 1990s, organic farming has rapidly developed in almost all European countries. Growth has, however, slowed down recently. According to this survey in Europe more than 6.5 million hectares are managed organically by almost 167'000 farms.

<sup>1</sup> Dr. Helga Willer, Communication, Research Institute of Organic Agriculture FiBL, Ackerstrasse, 5070 Frick, Internet <http://www.fibl.org>

In the European Union (EU) more than 5.8 million hectares are managed organically by almost 140'000 farms. This constitutes 3.4 percent of the agricultural area and 1.5 percent of the farms in the EU. The increase in the European Union compared to the previous year is mainly due to high growth rates in the new member states (for instance Lithuania: + 100 percent, Poland + 60 percent). The area under organic management is in most cases, however, not as high as in the countries of the "old" European Union. The Czech Republic, though, has converted more than six percent of its agricultural land, which is a higher percentage than Germany has. But also in other countries like Portugal, Austria Germany, Greece the organic land area increased. Compared to the previous year in the EU there has been a drop in the number of organic farms, due to the decrease of the number of farms and land under organic management in Italy.

**Development of Organic Farming in the European Union 1985 - 2004**



Source: Welsh Institute of Rural Sciences, SÖL, FiBL

**Graph 13:** Development of organic farming in the European Union 1985-2004. From 2003 the New Member States are included (accession May 2004)

Sources: Welsh Institute of Rural Sciences, UK-Aberystwyth, SOEL, D-Bad Dürkheim, FiBL, CH-Frick

The difference between individual countries regarding the importance of organic farming is substantial. More than 13 percent of agricultural land is organic in Austria, more than 11 percent in Switzerland, 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. Almost one fifth of the EU's organic land and almost a quarter of its organic farms are located here.

According to the FiBL survey 2005 /2006 in Europe the organic agricultural land (6.5 million hectares) is mainly used for arable cropping (42 percent of organic land) and for permanent pastures (45 percent). Permanent crops amount for seven percent of the land. Only for six percent of the organic land no information on the main land use categories was available.

**Table 30:** Europe: Main land use categories

ARABLE LAND (HA)	SHARE OF ARABLE CROPS OF TOTAL ORGANIC LAND	PERMANENT CROPS (HA)	SHARE OF PERMANENT CROPS OF TOTAL ORGANIC LAND	PERMANENT PASTURES (HA)	SHARE OF PERMANENT PASTURES OF TOTAL ORGANIC LAND	CERTIFIED LAND, USE NOT KNOWN (HA)	SHARE OF LAND WITH UNKNOWN USE OF TOTAL ORGANIC LAND	TOTAL LAND UNDER ORGANIC MANAGEMENT (HA)
2'700'273	42 %	472'612	7 %	2'916'479	45 %	411'001	6 %	6'500'365

Source: FiBL-Survey 2005/ 2006

On a European level, crops are not known for a large part of the arable land. Cereals and fodder crops play the most important role, however. Among the permanent crops olives, fruits and 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 collected from the organic inspection bodies including land use information available at its homepage via a database, and it provides extensive reports. A lot of the European data provided here are based in 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 at its homepage<sup>1</sup>.

### 15.1.2 Policy Support

Support for organic farming in the European Union includes support under the European Union's rural development program<sup>2</sup>, the introduction of the EU regulation on organic farming since 1992<sup>3</sup> and the launch of the European Action Plan on Organic Food and Farming in June 2004<sup>4</sup>. Information on recent developments on the EU regulation 2092/91 and the Action Plan is available at the market section of this chapter.

1 Information and links to all these information resources are available via [http://www.organic-europe.net/europe\\_eu/statistics.asp](http://www.organic-europe.net/europe_eu/statistics.asp)

2 Council Regulation (EC) No 1257/1999 of 17 May 1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF) and amending and repealing certain Regulations; available at [http://europa.eu.int/comm/agriculture/rur/leg/index\\_en.htm](http://europa.eu.int/comm/agriculture/rur/leg/index_en.htm)

3 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 [http://www.organic-europe.net/europe\\_eu/default.asp#2092](http://www.organic-europe.net/europe_eu/default.asp#2092)

4 Information on the European Action plan is available at [http://europa.eu.int/comm/agriculture/qual/organic/plan/index\\_en.htm](http://europa.eu.int/comm/agriculture/qual/organic/plan/index_en.htm) and at <http://www.organic-europe.net/>.



The Bioacademy is annually held in Lednice in the Czech Republic. The exchange of information and contacts have become a major purpose of this conference, and ministers, politicians, representatives of government administration, associations and research institutes participate at this event.

Photograph: Pro-Bio

The current reform of the Common Agricultural Policy (CAP) in the European Union will change the way the EU supports its farm sector. The new Council Regulation on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) for the programming period 2007 – 2013 was agreed upon in June 2005<sup>5</sup>, and rural development policy will be strengthened.

This new proposal was commented upon by a group of scientists (Haering et al. 2005a). Their overall conclusion is that the new Rural Development Program represents a more stringent and consistent program than its predecessor and that the Commission's attempt to structure rural development programs around key objectives, in the form of "priority axes" can be broadly welcomed. The authors find, however, that reference to organic farming is insufficient, and that the link to the European Action Plan for Organic Food and Farming is not strong enough. The scientists therefore recommend that the organic sector should actively develop strategies to achieve specific mention of organic farming in the national implementation of the Rural Development Programs, and propose measures for support of organic farming by linking regional and national organic Action Plans to the national and regional rural development strategies.

Another study published in 2005 as part of the EU project "Further development of Organic Farming Policy in Europe, with Particular Emphasis on EU Enlargement" (EU CEEOPF)<sup>6</sup> summarizes the results of several national workshops with stakeholders of the organic sector. At these workshops a number of recommendations were made (Zerger et al. 2005). Suggestions include:

- Change the tax system to tax polluting inputs, to reduce or exempt taxes for consumers of organic products and organic producers, and to tax GMO-products.
- Support communication with consumers with e.g. public information and promotion campaigns, addressing environmental issues; health, wellness and food quality.
- Improve the inspection and certification system through e.g.: simplification and harmonization.
- Improve standards and the organic farming regulation to develop a manual including the updated regulation with clear interpretations and examples for farmers,

5 Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD); Available at [http://europa.eu.int/comm/agriculture/rur/index\\_en.htm](http://europa.eu.int/comm/agriculture/rur/index_en.htm)

6 Further development of Organic Farming Policy in Europe, with Particular Emphasis on EU Enlargement" (EU CEEOPF), Internet <http://www.irs.aber.ac.uk/EUCEOPF/>

processors and inspectors.

- Support capacity building through technical education and training for advisors.
- Enhance networking through the development of a national organic farming committee or an organic umbrella organization.
- Support organic farming research through sufficiently high budgets. Topics to be addressed were benefits of organic farming, quality and processing, plants/ animals and nature/ environment.
- Define a strict sets of rules on GMO and on coexistence, strict liability rules, designation of GMO-free zones, and ban on GMO. In order to address these issues, it was proposed that the EU regulation should define the same zero-point thresholds in all European countries at a low level.
- Support organic market development through the support of local initiatives (local markets, on-farm-selling etc) and change the legislation on public procurement giving priority to organic products.

### 15.1.3 Research

Organic farming research is organized differently in the European countries. Until the 1980s it was mainly carried out by private research institutes, which have been the driving force for the development of organic farming research since the 1920s. In the 1980s the first universities took organic farming on their curricula, in the 1990s the first EU-funded projects on organic farming contributed to a better collaboration of researchers on organic farming on a European level, and the first state research institutes became active. Today organic farming research is substantially funded under national research programs or national organic action plans as well as in European projects<sup>7</sup>. A good overview of the current situation is given in a recent report from the European Commission (Slabe 2004).

A major initiative to improve information exchange among those interested in organic farming research is the international database Organic Eprints ([www.orgprints.org](http://www.orgprints.org))<sup>8</sup>. Organic Eprints is an internet-based archive for papers related to research in organic agriculture. The database has now more than 2000 entries. It was set up by the Danish Research Center for Organic Farming, and it is part of a project under the German Federal Organic Farming Scheme, and all scientific reports released under that scheme are archived. The European ERA-net Project CORE Organic (Co-ordination of European Transnational Research in Organic Food and Farming)<sup>9</sup> 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. In order to document the current status of organic farming research in Europe the Organic Eprints database is used. The final goal of the project is to establish a joint European research program. Currently a European Organic Research Portal is built as part of the project, and it should be online by spring 2006.

<sup>7</sup> For a list of projects funded by the European Commission see [http://www.organic-europe.net/europe\\_eu/research-eu-projects.asp](http://www.organic-europe.net/europe_eu/research-eu-projects.asp)

<sup>8</sup> Organic Eprints ([www.orgprints.org](http://www.orgprints.org))

<sup>9</sup> CORE Organic (Co-ordination of European Transnational Research in Organic Food and Farming); Internet [www.coreorganic.org](http://www.coreorganic.org)

## 15.2 *The European Market for Organic Food 2004/2005* **TORALF RICHTER<sup>10</sup>, SUSANNE PADEL<sup>11</sup>, STEVE LOWMAN<sup>12</sup>, BERNHARD JANSEN<sup>13</sup>**

As in the previous year, most of the information and statistics presented here were compiled as part of a survey among national experts of the organic sector in 2005. Most of the information was published in the Soil Association's organic market report 2005<sup>14</sup>. Many of the figures presented are based on estimates, and the methods of data collection behind these figures varies from country to country as no uniform data collection system for organic market data is yet in place. This also means that national organic sales figures may vary between years depending on the information sources. Descriptions of market trends and other information in this chapter are the result of market observations by Toralf Richter (FiBL), Susanne Padel and Steve Lowman (University of Wales) and of Bernhard Jansen (EkoConnect – the International Center for Organic Agriculture of Central and Eastern Europe). The authors would welcome any comments that may help to improve the quality of data and information about the organic market in Europe in the future.

The chapter starts with recent developments in the European organic market environment, continues with descriptions from each country, and finishes with quantitative data on the 2004 organic food turnover for those countries where estimates are available.

### 15.2.1 *General Developments in the Organic Market Environment 2005: EU-Regulation on Organic Farming and Action Plans*

#### *EU regulation for organic farming: New EU regulation for organic farming in pipeline*

Amendments to the EU regulation for organic farming during 2004 extended the coverage of the regulation to wholesaling, retailing and food storage, and to the new member states. Further changes were made to the permitted sausage casings, as well as to when non-organic animals may be brought onto organic livestock farms. There was extensive debate on how quickly to end the derogation that allows some non-organic feed to supplement the diets of organic livestock. The new legislation on feeding organic livestock became law in August 2005 and sets out to decrease gradually the proportions of non-organic feeds, with different periods for herbivores and monogastric animals, before moving to fully organic diets for all animals in 2011.

10 Dr. Toralf Richter, Research Institute of Organic Agriculture FiBL, Ackerstrasse, CH/5070 Frick, Switzerland, Internet <http://www.fibl.org/fibl/team/richter-toralf.php>

11 Dr. Susanne Padel, University of Wales, Institute of Rural Sciences, Organic Farming Unit, Llanbardarn Campus, Aberystwyth SY23 3 AL Ceredigion, United Kingdom, Internet <http://www.irs.aber.ac.uk/profile/sxp.shtml>

12 Steve Lowman, University of Wales, Institute of Rural Sciences, Organic Farming Unit, Llanbardarn Campus, Aberystwyth SY23 3 AL Ceredigion, United Kingdom

13 Bernhard Jansen, President of EkoConnect - International Centre for Organic Agriculture of Central and Eastern Europe e.V., Arndtstr. 11, D - 01099 Dresden, Germany, Internet [http://www.ekoconnect.org/en\\_index.html](http://www.ekoconnect.org/en_index.html)

14 The authors acknowledge gratefully the permission of the Soil Association to reproduce the material.



In December 2005, the European Commission adopted a proposal for a new regulation on organic production, which aims to improve clarity for both consumers and farmers. The new rules will be simpler and will allow EU member states a certain amount of flexibility to take account of regional differences in climate and conditions. To communicate efficiently to all operators in the production chain and to the consumer that a product conforms to a single EU standards all organic produce in Europe will have to be labeled with the EU logo or with the words 'EU-ORGANIC'. To qualify, at least 95 percent of ingredients in the final product must be organic. Products containing GMOs will not qualify to be labeled as organic, except those containing up to 0.9 percent of GMO content through accidental contamination. Imports of organic products will continue to be allowed as long as they comply with EU standards or come with equivalent guarantees from the country of origin. Imports that comply with the EU regulation will be able to carry the EU logo.

### *EU and national Organic Action Plans*

The European Organic Action Plan implementation process is well under way. The first action point of its 21 concrete policy measures relates to establishing an EU-wide information and promotion campaign. A new Europe-wide campaign will start in 2006 and probably last three years. It aims to facilitate the development of organic farming in the EU and to stimulate the development of the organic sector. The campaign further aims to provide information on the merits of organic farming, with special emphasis on its environmental benefits, and to increase consumer awareness and recognition of organic products, including recognition of the EU organic logo.

Individual countries are implementing their organic farming support policies under the EU Rural Development Program, and some countries such as Germany and The Netherlands have their own national organic action and support schemes.

### *15.2.2 Organic Food Market Statistics*

Unfortunately, in most European countries no official statistics exist yet on the domestic turnover of organic food, and available data are presented in various formats. Published data for individual countries are derived using disparate methods such as consumer panels or expert consultations and are carried out at various levels of the organic sector, and with varying amounts of detail. Some countries include data on exports; others report only on sales in multiple retailers, and in some countries the data collection methods have changed from one year to the next (Richter, 2005). It could be misleading to use existing data to compare retail sales in different countries, and there are major inconsistencies for measuring market trends. The compilation of market data that we present in this chapter should be interpreted carefully and should not be used for comparisons between different countries.

Since 2003, the European Information System for Organic Markets (EISfOM) has been working to improve market information for the organic farming sector in all European countries. This EU-funded project aimed to develop a framework on how to collect reliable data to assist policy makers, farmers, traders, and others involved in organic markets. The project includes experienced

researchers in Austria, Denmark, Germany, Italy, the Netherlands, Poland, Switzerland, the UK, and Switzerland and is co-coordinated by the University of Wales in Aberystwyth. In spring 2006, EISfOM will be publishing a final set of recommendations on how to improve the data collection and achieve Europe-wide harmonization, but the project itself is not collecting any data.

### *15.2.3 Developments in Major Organic Markets in Europe in 2004*

Where reliable information was available, the trends and developments in the major markets in 2004 are described below, including information on policy, production and retail sectors. We estimate that the European organic market by value grew in 2004 by five to seven percent to be worth approx. 12 to 12.5 billion EUR<sup>15</sup>. However, there are considerable differences in trends between the countries.

#### *Germany*

Organic food sales in 2004 are estimated at 3.5 billion EUR<sup>16</sup>. This amounts to around 2.5 percent of the total turnover of the food market and a growth of 13 percent. The organic fruit & vegetable market showed strong growth with sales increasing by 14 percent in 2004. Germany remains the biggest market for organic products in Europe, and all supply channels showed significant growth. The highest increase was in the drug stores, which increased organic sales by 25 percent, but the majority of sales still go through conventional food retailers and specialist organic shops.

Recently, conventional supermarkets have become the dominant distribution channel for organic products in Germany market with sales of 36 percent of all organic products. However, health-food shops still play an important role (accounting for 34 percent of all sales of organic products). A further 16 percent were sold via direct sales. This stands in contrast to most Scandinavian countries, as well as the UK, Switzerland and Austria, where more than two-thirds of all organic products were sold via conventional retail channels.

Nearly every conventional supermarket or discounter in Germany now provides at least a basic organic range of 20 to 50 items, primarily easy-to-handle organic staple goods. A number of retail chains have developed their own private label brands of organic products. Among the market-leading conventional retail chains in Germany, REWE (retailer trademark Füllhorn) and EDEKA (retailer trademark 'Bio Wertkost') provide the biggest ranges of organic food (300 to 500 items). They also offer a wide range of fresh products. Furthermore, REWE has started to convert traditional stores into organic super markets. However, there are some regional players, such as the company TEGUT in Hesse and Thuringia and FENEBERG in Bavaria, which successfully provide organic ranges of up to 1'500 items. Recently, conventional discounters like ALDI, LIDL and PLUS started to launch or enhance their own organic ranges with some success. It is assumed that many consumers who buy organic food at discounters were previously non-buyers of organic food but now accept these products as discounters offer them at low prices. ROSSMANN as one of the biggest German drug store chains also promotes its organic range with vigor.

15 12.0 to 12.5 billion EUR = 14.5 to 15.2 billion USD (per 31.12.2005)

16 3.5 billion EUR = 4.3 billion USD (per 31.12.2005)

The tremendous growth of the German organic market in 2004 continued in the first half of 2005. In the conventional retail chains, sales of fresh milk, yogurt and muesli grew by 22 percent, UHT-milk by 25 percent, fruit juice by 19 percent, and butter by 8 percent.

About 3'000 specialized organic stores sell organic products in Germany. The most important products for these stores are fruits, vegetables, cheese and other fresh products, but also a wide range of grocery products. Growth rates in this independent organic retailing sector remain high (approximately ten percent annually) despite the growing number of conventional retailing competitors.

In fact, Germany is the country with the largest number of specialized organic supermarkets in the whole of Europe. The specialized organic supermarkets that opened in the late 1990s form an attractive sub-group of the specialist organic shops that has mushroomed in the last decade. Today there are 250 specialized organic supermarkets all over Germany with a strong growth trend. Recently, the retail business intelligence provider 'Biovista' established a retailer panel specifically for organic retailers, which provides excellent data on sales trends for brands and product categories.

For customers of health-food stores, healthier food is the only motive to buy organic food. An increase in sales through this market channel is not anticipated.

There is a growing demand for organic food in the catering sector. Many public and private canteens and restaurants provide at least single items or combinations of organic foods on their menus. Direct selling by farmers consists primarily of farmers' markets. This form of retailing is of considerable importance for the sales of fruits, vegetables, potatoes, meat and poultry. An increase in this marketing channel is, however, relatively unlikely.

In Germany the organic fruit & vegetable market showed strong growth with sales increasing by 14 percent in 2004. The picture is a display of organic lemons and oranges in a shop of the retailer chain tegut. Photograph: Toralf Richter, FiBL



In **France**, the 2004 organic retail market was reported to be growing at about seven percent, and the number of organic food processing businesses also rose slightly<sup>17</sup> although this may not be long-term trend. A number of large multiple retailers extended their presence in the organic sector but still carry a limited range compared with neighboring countries. Some companies have

17 Agence Bio (in ZMP Ökomarktforum, 27/05, S. 15-16)

introduced their own brands, but none has yet developed a specialist marketing concept for their organic range. Since 2005, imports from outside the EU - crucial for continuity of supply through the year especially for fruit and vegetables - can carry the "AB" organic logo, reducing consumer confusion. France, like the UK, is a net importer of organic food, with a discrepancy caused by the positive development of demand combined with a more hesitant uptake of organic farming by producers<sup>18</sup>.

There has been speculation about possible market saturation in **Switzerland**, but the overall trend in organic sales remains positive despite a decline in general consumer spending and the arrival of food discount stores, driving down consumer prices.. The organic market grew in 2004 by about 3 percent and reached a total value of €778 million<sup>19</sup>. Over 80 percent of produce sold is of Swiss origin. The organic sales per capita increased in 2004, and Switzerland remains the European leader with average spending of 105 EUR<sup>20</sup> per head. About 75 percent of sales pass through two major retailers and 15 percent through specialist organic shops, with the remainder retailing either direct from the producers or through family butchers and bakery shops (Richter 2005). The two leading retail chains Co-op and MIGROS follow different strategies in their organic assortments. While Co-op (397 million EUR<sup>21</sup> retail sales in organic food in 2004) continuously broadens the number of organic lines, MIGROS (193 million EUR<sup>22</sup> retail sales in organic food in 2004) has slightly reduced its organic commitment. With the market entrance of the German discounters ALDI Co-op and Migros increased their communication efforts for their discount segments.

In the **United Kingdom** in 2004, retail sales of organic produce rose to an estimated 1.213 billion GBP<sup>23</sup>, corresponding to an annual growth rate of approximately 11 percent<sup>24</sup>. Retail sales made through box schemes (12 percent market share), farm shops and farmers' markets increased by one third, and sales through independent retailers (13 percent market share) increased by over 40 percent. Supermarket sales continued to grow but at a much slower rate (1.5 percent) than in previous years. However, supermarket chains in UK remain with 75 percent of the whole retail sales of organic food an important sales channel.

While consumer demand for local food continues to grow, 2004 saw a one percent increase in the proportion of organic food and drink imported by supermarkets in the UK. The key factor in this was a switch away from UK-produced organic pork, beef and lettuce by some of the leading multiple retailers.

In **Italy**, despite wider availability, the growth in the organic retail market appears to have leveled out during last years, mainly due to the general economic crisis. In a survey of Italian supermarket chains conducted by ISMEA, 56 percent reported stagnation in organic food sales, 29 percent reported growth, and 15 percent reported a decline. However, despite the economic crisis, some

18 News about France <http://www.bio-markt.info>

19 778 million EUR = 938.3 million USD (per 31.12.2005)

20 105 EUR = 126.7 USD (per 31.12.2005)

21 397 million EUR 479 USD (per 31.12.2005)

22 193 million EUR = 232.9 USD (per 31.12.2005)

23 1.213 billion GBP = 2.14 USD = 1.774 EUR (per 31.12.2005)

24 Soil Association Organic Market Report 2005

companies grew more steadily. 'NaturaSi', the largest Italian organic supermarket chain, with 42 outlets, reports 13 percent growth in 2004 and in the first half of 2005.

Organic food is supplied through a number of different channels, including public procurement, specialist shops, traditional supermarkets, restaurants and farm holidays. More school canteens are offering organic meals because of promotional campaigns and new local regulations. The region of Emilia-Romagna passed a new law, supported by the Green regional deputy, which approved the development of organic canteens for local schools. Most of the wholefood and organic food shops are concentrated in Northern Italy, among them approximately 100 organic supermarkets of over 200m<sup>2</sup> retail area. Many supermarket chains in Italy are marketing their own label organic products. One chain, Serramarina, has opened a new concept store in Padua, featuring 25 percent organic products compared with their usual 8 to 9 percent. They are hoping to expand this idea by opening such stores around other regions of Italy and throughout Europe.

The market for organic products in **Denmark** continues to grow slowly in the most important sales channel of multiple retailers. Statistics for other supply channels are patchy, but it seems that overall organic sales are being sustained without substantial decreases. The recent political emphasis on promoting organic farming through the market, along with recent slower growth in the retail market, has led to continued reductions in the Danish organic land area and numbers of producers. This "standstill" phase in the development of Danish organic farming follows a sustained period of growth throughout more than a decade, and the organic sector continues to be an important influence in Danish farming<sup>25</sup>.

In **Austria**, the organic sector has been strengthened by the foundation, in January 2005, of a single membership organization for organic farmers, called Bio Austria. The idea was first discussed in 1993, followed by intensive consultations between the 19 former organic farmers' associations. Now representing over 14'000 organic farmers, Bio Austria aims not only to become the main communication and information network for the whole Austrian organic sector but also to help increase the number of farms and organic land area by ten percent each year<sup>26</sup>. Despite this positive development in the production sector, the Austrian retail market showed slow growth in the last year, remaining at between twelve percent of sales for milk and potatoes, and two percent for sausages. A national Bio Austria advertising campaign, promoting the fact that organic products are free of GMOs, was taken off the air by the Austrian Agricultural Market Agency (AMA) because of intensive protests from the conventional food and farming lobby, but organic farmers are now trying to reverse that decision. Austria is also the home of Bio-Hotels, a recently formed association of independent hotels offering holidays based around natural products with organic and local food. Apart from Austria, the association also has members in Germany, Switzerland, Italy, Ireland and Spain<sup>27</sup>.

In the **Netherlands**, the retail market has developed confidently with growth rates of approximately five percent. This may be a result of the government focus on improving marketing

25 [http://www.lr.dk/oekologi/diverse/org\\_agri.htm](http://www.lr.dk/oekologi/diverse/org_agri.htm)

26 [www.bio-austria.at](http://www.bio-austria.at)

27 <http://www.biohotels.info>

structures over the last few years. The Dutch government is conducting experiments to find out if state-funded retail discounting can stimulate consumer demand. If successful, the intention is to increase organic sales by 30 percent each year with funding of 61 million EUR up to 2007<sup>28</sup>. The government hopes that stimulating demand may help increase the Dutch organic land area to ten percent of farmland<sup>29</sup>. Currently, Dutch organic trading companies are aiming to expand their operations abroad, and the Netherlands remains very important for European trade in organic products. EOSTA, a large organic fruit and vegetable trader plans to increase transparency in labeling through a scoring evaluation system for products on a range of ecological, social and nutritional criteria.

The domestic market in **Spain** is developing slowly. Only a few shops offer a full organic range to consumers. Most organic processors are concentrated in two regions (Catalonia and Andalusia), but there is no well-developed network of processors and wholesalers, so the shops face supply problems. The majority of Spanish organic fruit and vegetables go for export, and it remains difficult to buy them in Spain. In contrast, imports make up about 75 percent of organic products sold. It is likely that high prices remain a barrier to increasing organic sales, but there is growing commitment from a number of companies to develop the domestic market, and specialist retailers and wholesalers have recently established a marketing network<sup>30</sup>. A 2004 national conference agreed that organic sector development requires continuous, strong governmental support for production and processing, promotion of domestic demand, and strengthening of Spanish organic networks and institutions<sup>31</sup>. Production and processing were seen as especially important because of their contribution to rural development.

Canary Islands Organic Agriculture Association (Federación Canaria de Agricultura y Ganadería Ecológica - FECAGE) - a new organization to promote organic farming on the Canary Islands - will take on the work of the various associations in promoting the cultivation and consumption of organic products<sup>32</sup>.

In **Ireland**, the Organic Centre Ireland and the Super Value retail chain are joining forces to educate consumers about the value of organic food, hoping to improve sales opportunities for local organic products and to encourage Irish producers to increase their range, especially in the horticultural sector. They aim to reduce the reliance on the imports that currently make up about 70 percent of organic sales, most of which are sold through about 130 wholefood and health food shops<sup>33</sup>.

Demonstrating the growing popularity of organic ingredients, the successful **Swedish** retailer IKEA plans to replace standard foods with organic varieties. The group is the single largest Swedish food exporter. The project launched with organic coffee, followed by strawberry/orange jam and blue cheese, reports Öresund Food Excellence. This winter, IKEA will launch organic schnapps,

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28 ZMP Ökomarkt Forum 14:8, p.16

29 Agra Europe Nov 26th 2004, p.N/4.

30 News about Spain at <http://www.bio-markt.info>

31 Biofach newsletters 1/07/2005 and 3/6/2005

32 Biofach newsletter 20/05/2005.

33 (ZMP 14:24, P.13). Bio-markt.info, Ireland)

and the meat sauce served at IKEA restaurants will be certified organic<sup>34</sup>.

In most **CEE countries**, the domestic organic markets are not developing as quickly as their production sectors, but there are some encouraging signs.

In **Hungary**, for example, the first specialist organic shops have opened in Budapest. In other shops, organic food is gaining a higher profile, and there is also more wholesale marketing.

The availability of organic lines continues to improve in the **Czech Republic**<sup>35</sup>. Consequently the domestic organic market volume grew to 9 million EUR<sup>36, 37</sup>.

In **Slovenia**, organic land area increased substantially to make up almost 5 percent of farmland area. However, only 15 to 20 percent of the certified farms sell their products as organic, and the country is lacking the infrastructure to process organic raw materials; there is, for example, no dairy able to process organic milk. However, many organic products are imported into the country to supply a growing market. Most of the farmers offer their products directly on-farm and others have regular stalls on weekly markets<sup>38</sup>. Organic food is sold also through health and wholefood shops and increasingly in supermarkets<sup>39</sup>. Bio Alpe Adria is a well-established network linking organic sector organizations across borders between Austria, Slovenia and Italy and developing co-operation in production and marketing projects among the three countries<sup>40</sup>.

In **Poland**, the volume of organic food processing and trade is still quite small but constantly growing. The majority of actors are involved in trade and deep-freezing operations. Most companies are processing fruit and berries (frozen berries, jam and juice), followed by vegetables and grains. Only a few companies are processing herbs, meat or milk, or producing organic feedstuffs. Due to the small-scale farm structure and the lack of processors, a significant part of the organic agricultural production is still sold on the conventional market or used for home consumption. Larger farms are producing directly for the export market. Organic food in Poland is mainly sold in specialist stores together with other health food, regional products, handcrafted, or dietetic food. A big share of organic products on the Polish market is still imported, mostly from the neighboring countries Germany and the Czech Republic. Further growth of the organic sector in Poland is expected because the national and the regional governments and many companies are trying hard to push the development of organic agriculture<sup>41</sup>.

In **Lithuania**, organic food is sold mainly by the supermarket chains "IKI" und "MAXIMA", which have stores all over the country, as well as a number of 'Tatulos' shops in the North. They market

34 foodnavigator.com news July 2007

35 [http://www.bio-markt.info/index.php?action=,35,51,46,,32,67\\_n268\\_\\_](http://www.bio-markt.info/index.php?action=,35,51,46,,32,67_n268__).

36 9 million EUR = 10.9 million USD (per 31.12.2005)

37 Tom Vaclavik (Green Marketing)

38 eco-connect newsletter 3

39 Kreuzer at [http://www.bio-markt.info/index.php?action=,35,51,46,,32,67\\_n266\\_\\_](http://www.bio-markt.info/index.php?action=,35,51,46,,32,67_n266__)

40 <http://www.bioalpeadria.info/>

41 IJHARS 2005 and EkoConnect research

local organic products (mostly vegetables, bread, honey and herbs) and a wider range of foreign organic food. There is a demand for a wider variety of organic products. Due to the cool Baltic climate, the market is not fully supplied with organic fruit, vegetables and good quality wheat<sup>42</sup>.

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**Table 31:** Estimated turnover and per capita consumer expenditures for organic food in selected European countries, 2004

COUNTRY	MARKET DATA
Germany	
• Turnover domestic organic food market	3.5 billion EUR <sup>43</sup>
• Population (million)	82.5
• Per capita consumer expenditure for organic food	42 EUR
Italy	
• Turnover domestic organic food market	2.4 billion EUR
• Population (million)	57.8
• Per capita consumer expenditure for organic food	42 EUR
France	
• Turnover domestic organic food market	1.9 billion EUR
• Population (million)	59.9
• Per capita consumer expenditure for organic food	32 EUR
UK	
• Turnover domestic organic food market	1.213 billion GBP
• Population (million)	59.5
• Per capita consumer expenditure for organic food	30 EUR
Switzerland	
• Turnover domestic organic food market	778 million EUR
• Population (million)	7.4
• Per capita consumer expenditure for organic food	105 EUR
Sweden	
• Turnover domestic organic food market	421 million EUR
• Population (million)	9
• Per capita consumer expenditure for organic food	47 EUR
Netherlands	
• Turnover domestic organic food market	419 million EUR
• Population (million)	16.2
• Per capita consumer expenditure for organic food	26 EUR
Denmark	
• Turnover domestic organic food market	274 million EUR
• Population (million)	5.4
• Per capita consumer expenditure for organic food	51 EUR

42 EkoConnect research 2005

43 1 EUR = 1.19811 USD (per 6.2.2006)



COUNTRY	MARKET DATA
Austria	
• Turnover domestic organic food market	280 million EUR
• Population (million)	8.1
• Per capita consumer expenditure for organic food	35 EUR
Spain	
• Turnover domestic organic food market	250 million EUR
• Population (million)	42.2
• Per capita consumer expenditure for organic food	6 EUR
Finland	
• Turnover domestic organic food market	200 million EUR
• Population (million)	5.2
• Per capita consumer expenditure for organic food	38 EUR
Greece	
• Turnover domestic organic food market	22 million EUR
• Population (million)	11.0
• Per capita consumer expenditure for organic food	2 EUR
Norway	
• Turnover domestic organic food market	20 million EUR
• Population (million)	4.6
• Per capita consumer expenditure for organic food	4 EUR
Czech Republic	
• Turnover domestic organic food market	9 million EUR
• Population (million)	10.2
• Per capita consumer expenditure for organic food	0.9 EUR
Hungary	
• Turnover domestic organic food market	3.3 million EUR
• Population (million)	10.1
• Per capita consumer expenditure for organic food	0.3 EUR
Poland	
• Turnover domestic organic food market	1.58 million EUR
• Population (million)	38.2
• Per capita consumer expenditure for organic food	0.04 EUR

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## 15.4 Organic Farming in Europe: Organic Farming Statistics and Information Sources

### 15.4.1 Statistics

**Table 32:** Europe: Land under organic management and organic farms

COUNTRY	YEAR	LAND UNDER ORGANIC MANAGEMENT (HECTARES)	SHARE OF AGRI-CULTURAL LAND	NUMBER OF ORGANIC FARMS
Albania	2004	803.95	0.07%	57
Austria	2004	344'916.00	13.53%	19'826
Belgium	2004	23'728.00	1.70%	712
Bosnia Herzegovina	2004	310.00	0.01%	122
Bulgaria	2004	12'284.00	0.23%	351
Croatia	2005	7'355.00	0.23%	265
Cyprus	2005	1'017.96	0.71%	225
Czech Rep.	2004	260'120.00	6.09%	836
Denmark	2004	154'921.00	5.76%	3'166
Estonia	2004	46'016.00	5.17%	810
Finland	2004	162'024.00	7.31%	4'887
France	2004	534'037.00	1.80%	11'059
Germany	2004	767'891.00	4.52%	16'603
Greece	2004	249'488.00	2.72%	8'269
Hungary	2004	128'690.02	2.19%	1'583
Iceland	2004	4'910.00	0.22%	25
Ireland	2004	30'670.00	0.70%	897
Italy	2004	954'361.00	6.22%	36'639
Latvia	2005	43'901.99	1.77%	1'043
Liechtenstein	2004	984.00	26.40%	42
Lithuania	2005	64'545.00	1.86%	1'811
Luxemburg	2004	3'158.03	2.49%	66
Macedonia, The Fmr Yug Rep.	2005	192.46	0.02%	50
Malta	2004	13.00	0.13%	20
Moldova	2005	11'075.00	0.44%	121
Netherlands	2004	48'152.00	2.49%	1'469
Norway	2004	41'035.00	3.95%	2'484
Poland	2004	82'730.00	0.49%	3'760
Portugal	2004	206'524.00	5.42%	1'302
Romania	2004	75'000.00	0.51%	1'200
Serbia/Montenegro	2004	20'541.52	0.37%	3'000
Slovak Republic	2005	93'943.00	4.19%	218
Slovenia	2004	23'032.00	4.55%	1'568
Spain	2004	733'182.37	2.87%	16'013
Sweden	2005	206'579.00	6.80%	3'138

COUNTRY	YEAR	LAND UNDER ORGANIC MANAGEMENT (HECTARES)	SHARE OF AGRI-CULTURAL LAND	NUMBER OF ORGANIC FARMS
Switzerland	2004	121'387.00	11.33%	6'373
Turkey	2004	108'597.00	0.26%	12'806
UK	2005	690'270.00	4.39%	4'010
Ukraine	2005	241'980.00	0.58%	72
<b>Total</b>		<b>6'500'365.30</b>	<b>2.21%</b>	<b>166'898</b>
European Union		5'853'910.37	3.42	139'930

Source: FiBL-Survey 2005/ 200

**Table 33:** Europe: Arable land by crop category

CROP CATEGORY	HECTARES
Other arable crops/ no details available	1'009'547
Cereals	758'205
Field fodder growing	597'286
Set-a-side/green manuring	118'029
Oilseeds	59'922
Vegetables	53'436
Protein crops	48'356
Root crops	17'198
Industrial crops	16'254
Medicinal and aromatic plants; spices	11'305
Seed production	7'233
Set-a-side/ green manuring	2'470
Flowers and ornamental plants	783
fruits and nuts	241
Special crops	9
<b>Total arable crops in Europe covered by the FiBL Survey 2005 / 2006</b>	<b>2'700'273</b>

Source: FiBL-Survey 2005/ 2006

Please note: information on land use, crop categories and crops was not available for all countries.

**Table 34:** Europe: Permanent cropland by crop category

<b>CROP CATEGORY</b>	<b>HECTARES</b>
Olives	224'301
Fruits and nuts	159'098
Grapes	82'279
Other permanent crops / no details available	6'251
Tropical fruits	666
Various	9
Medicinal and aromatic plants and spices	7
Special crops	1
<b>Total permanent crops in Europe covered by the FiBL Survey 2005/2006</b>	<b>472'612</b>

Source: FiBL-Survey 2005/ 2006

Please note: information on land use, crop categories and crops was not available for all countries.

**Table 35:** European Union: Main land use categories and main crop categories 2004 / 2005

<b>ARABLE CROPS</b>		<b>LAND UNDER ORGANIC MANAGEMENT (HECTARES)</b>	<b>SHARE OF ORGANIC ARABLE LAND (%)</b>
	Other arable crops / no details available	772'590.95	32.80
	Cereals	719'062.87	30.52
	field fodder growing	564'753.51	23.97
	Set-a-side/green manuring	117'329.06	4.98
	Vegetables	51'771.52	2.20
	protein crops	48'040.14	2.04
	Oilseeds	37'485.00	1.59
	root crops	17'164.67	0.73
	medical and aromatic plants and spices	11'244.95	0.48
	industrial crops	8'253.72	0.35
	seed production	7'232.59	0.31
	flowers and ornamental plants	783.48	0.03
	<b>Total arable crops</b>	<b>2'355'721.46</b>	<b>100</b>
<b>PERMANENT CROPS AND MAIN CROP CATEGORIES</b>		<b>LAND UNDER ORGANIC MANAGEMENT (HECTARES)</b>	<b>SHARE OF ORGANIC PERMANENT CROPS (%)</b>
	Olives	224'230.45	51.37
	fruits and nuts	136'023.82	31.16
	Grapes	71'733.36	16.43

	other permanent crops / no details available	3'833.02	0.88
	tropical fruits	665.95	0.15
	<b>Total permanent crops</b>	<b>436'486.60</b>	<b>100'000</b>
<b>PERMANENT PASTURE AND UNKNOWN USE</b>		<b>LAND UNDER ORGANIC MANAGEMENT (HECTARES)</b>	
Permanent pastures		2'762'458.33	
Unknown		299'216.98	
<b>Total</b>		<b>5'853'883.37</b>	

Source: FiBL-Survey 2005/ 2006

Please note: information on land use, crop categories and crops was not available for all countries.

### 15.4.2 Information Sources

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Austria

DI Elisabeth Klingbacher BIO AUSTRIA Konsumenteninformation

Alexandra Pohl BIO AUSTRIA Lobbying, Theresianumgasse 11/1 - 1040 Vienna,

Tel : +43 1 4037050, Fax +43 1 4037050-190

Eurostat database: [http://epp.eurostat.cec.eu.int/portal/page?\\_pageid=1073,46870091&\\_dad=portal&\\_schema=PORTAL&p\\_product\\_code=food\\_organicfarm1](http://epp.eurostat.cec.eu.int/portal/page?_pageid=1073,46870091&_dad=portal&_schema=PORTAL&p_product_code=food_organicfarm1)

Belgium: Carine Heuschen, Jerome Geels, Ecocert Belgium, Chemin de la Haute Baudecet 1, B-1457 Walhein. Tel : +32-81-600377, Fax +32-81-600313

Bosnia Herzegovina: Maida Had\_jomerovi\_., Director. Organska Kontrola (OK). Butmirska Cesta 40. 71000 Sarajevo. Bosnia & Herzegovina. Tel/Fax: +387-33-636 768. Tel: +387-33-637 301

Bulgaria: Stoilko Apostolov, Manager Foundation for organic agriculture BIOSELENA. 4300 Karlovo, 36, Vassil Karaivanov str. Tel: +359 335 92038; tel/fax:+359 335 91642. Web page: [www.bioselena.com](http://www.bioselena.com)

Croatia:

- Darko Znaor. Independent Consultant. Tuskanac 56B. 10000 Zagreb.

Tel: + 385 1 46 36 958.

- Sonja Karoglan. Ecologica. Vlaska 64. 10000 Zagreb. Tel: + 385 1 46 36 959

Cyprus: Ioannis Papastylanou. Department of Farming Systems of the Agricultural Research Institute. P.O. Box 22016. 1516 Nicosia. Tel: +357 2 2403208. Fax: +357 2 2316770. Homepage: [www.ari.gov.cy](http://www.ari.gov.cy)

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Finland: Finfood. <http://www.finfood.fi/finfood/ff.nsf/1/F30704E57B25241FC22570530026BEC2?opendocument>

France: Nathalie Rison Alabert. Agence BIO. 6 rue Lavoisier 93100 MONTREUIL.

Tel: 01 48704840. Fax : 01 48704845. Homepage: [www.agencebio.org](http://www.agencebio.org)

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- Iceland: Dr. Ólafur R. Dyrmondsson, National Adviser on Organic Farming and Land Use, The Farmers Association of Iceland, Hagatorg, 107 Reykjavík, Iceland, Tel. +354-563-0300/0317, Fax +354-562-3058  
Wild collection data: Vottunarfstofan Tún ehf. Organic Inspection and certification. Laugavegur 7, IS-101 Reykjavík, Iceland. Tel +354 511 1330. Fax +354 511 1331
- Ireland: EddieMc Auliffe. Department of Agriculture and Food, Organic Unit, Johnstown Castle Estate, Johnstown, Co. Wexford, Ireland
- Italy: Ministero delle Politiche Agroalimentari, Via XX settembre 20, I-00187 Roma [http://www.politicheagricole.it/PRODUZIONE/AGRIBIO/italia\\_2004.pdf](http://www.politicheagricole.it/PRODUZIONE/AGRIBIO/italia_2004.pdf); see also country report Italy
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- Latvia: Livija Zarina Head of Agrotechnics Department Priekuli Plant Breeding Station Zinatnes Street 1a Priekuli LV-4126, Cesis Latvia. Tel: +371 41 30162, mob. 8377052 Fax +371 41 07217
- Liechtenstein: BioSuisse, Margarethenstrasse 87, CH- 4053 Basel. See: [www.biosuisse.ch/media/fr/pdf2004/grafiken\\_medienkonf\\_sw\\_f.pdf](http://www.biosuisse.ch/media/fr/pdf2004/grafiken_medienkonf_sw_f.pdf)
- Lithuania: Kristina Kazlauskaitė. Certification body Ekoagros. K.Donelaicio str. 33/ A.Mickeviciaus str. 48. LT-44240 Kaunas, Lithuania. Tel. +370 37 20 31 81. Tel./fax. +370 37 20 31 82
- Luxemburg: Monique Faber. Administration des services techniques de l'agriculture. Service de la protection des végétaux. 16, route d'Esch / L-1470 Luxembourg. Tel: +352/ 45 71 72-353. Fax: +352 / 45 71 72-340. B.P. 1904 / L-1019 Luxembourg, Homepage: [www.asta.etat.lu](http://www.asta.etat.lu)
- Macedonia: Gordana Pecelj. Manager of PROBIO – consultancy company for project coordination. Dame Gruev 7/3-19. 1 000 Skopje Macedonia. Tel. +389 (2) 3217-313 ext. 1. Fax. + 389 (2) 3217-313 ext. 6.
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- Moldova: Mr. Iurie Senic. Organic Farmers Association NGO „EcoProdus“, 85, Alexandru cel Bun, str., MD-2012, Chisinau, Moldova, Tel: +373 22 21-02-97, Fax: +373 22 21-25-04
- Netherlands: Eurostat database  
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- Portugal: Prof. Dr. Ana Firmino, Universidade Nova de Lisboa, Faculdade de Ciencias Sociais e Humanas, Avenida Berna 26 C, P-1069 Lisboa, Tel: +351-21-793 35 19, Fax: +351-21-7977759
- Romania: Romania: Ministry of Agriculture. <http://www.mapam.ro/pages/page.php?self=01&sub=0101&tz=010104&lang=2>
- Serbia and Montenegro: Lidija A. imovi. Head of Division for Organic Production. Ministry of Agriculture, Forestry, and Water Management. Belgrade. Serbia and Montenegro
- Slovak republic: Zuzana Lehocká and Marta Klimekova. Department of Alternative Plant Production. Research Institute of Plant Production. Bratislavská cesta 122. 921 68 Piestany. Slovak Republic
- Slovenia: Anamarija Slabe. Institut za trajnostni razvoj. Institute for Sustainable Development. Metelkova 6. 1000 Ljubljana. Slovenia. Tel. 00.386.1.4397 465. Fax: 00.386.1.4397 465. Mobile: 00.386.41.725.991, Homepage: [www.itr.si](http://www.itr.si)
- Spain: Ministry of Agriculture, Food and Fisheries MAPA, Paeso Infanta Isabel 1, ES- 28071, Madrid, see [www.mapya.es/es/alimentacion/pags/ecologica/info.htm](http://www.mapya.es/es/alimentacion/pags/ecologica/info.htm)
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- Switzerland: Bfs, Berne, provided by Christine Rudmann. Forschungsinstitut für biologischen Landbau (FiBL). Ackerstrasse. CH-5070 Frick. Tel: +41 (0)62 865 72 15. Fax: +41 (0)62 865 72 73, Homepage: [www.fibl.org](http://www.fibl.org)  
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Turkey

Victor Ananias. Bugday Association for Supporting Ecological Living IFOAM & EEB member/ ECEAT Turkey / WWOOF Turkey. Lüleci Hendek Caddesi No 120/1 Aslan Han Karaköy \_stanbul, Türkiye. Tel: +90 212 2525255. Fax: +90 212 2525256, Homepage: [www.bugday.org/eng](http://www.bugday.org/eng) and <http://www.bugday.org/tatuta/index.php?lang=EN>

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(2). (1) International Federation of Organic Agriculture Movements (IFOAM), Charles-de-Gaule-Str. 5, D-53113 Bonn, <http://www.ifoam.org> (2) Research Institute of Organic Agriculture (FiBL), Ackerstrasse, CH-5070 Frick, <http://www.fibl.org>

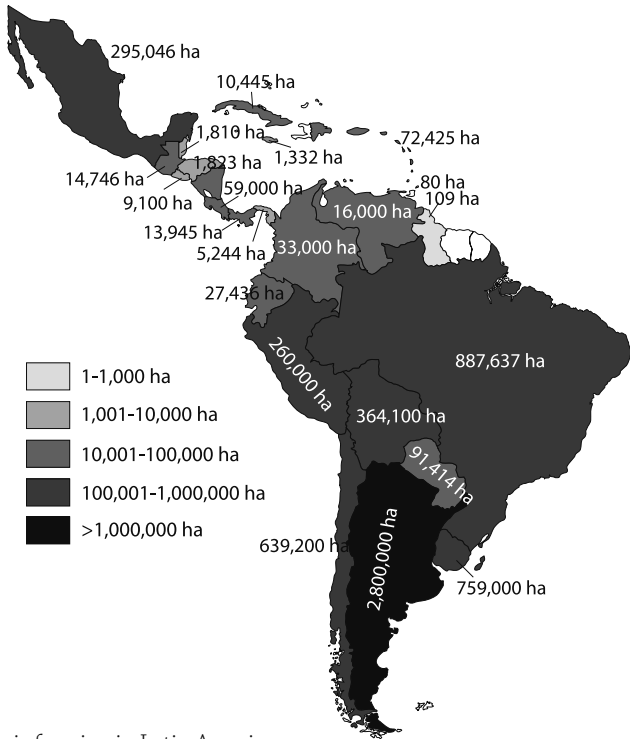
United Kingdom: Department for Environment Food and Rural Affairs (DEFRA), 17 Smith Square, UK- London SW1P 3JR; <http://statistics.defra.gov.uk/esg/statnot/orguk.pdf>

Ukraine: Eugene Milovanov. Organic Federation of Ukraine. 12 Hospitalna Str., Office 412. 01023 Kiev. Tel: +380 44 2340054. Fax: +380 44 4620363



# 16 ORGANIC FARMING IN LATIN AMERICA

ALBERTO PIPO LERNOUD



**Map 5:** Organic farming in Latin America.

Source: FiBL Survey 2005/2006; © SOEL / FiBL

## 16.1 Traditional Farming

Latin America has a very ancient agricultural tradition. And for millennia it used organic methods. Rotations, variety selection, fertility management that include 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 chilies, 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 fishes and seaweeds, 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 potato, a food that is now a staple food in countries throughout the world, but through industrial farming, is suffering enormous genetic erosion, as only a few varieties are used.

All these traditions are alive in the farmers of indigenous descent along the mountain ranges, from Mexico to Patagonia. 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.

## **16.2 The Market**

### *16.2.1 Local Markets*

Some countries in Latin America have an internal market of organic products. In Brazil, for example, some producer associations like the Eco Vida network in the southern states get their vegetables and fruits together once a week and take them in their own trucks to the markets in the big cities, selling in open fairs or 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".

### *16.2.2 Supermarkets*

Supermarkets in 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”, in a supermarket chain formerly owned by the Dutch corporation Albert Heijn. 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. A very complex operation is carried out around Rio de Janeiro by Sitio do Moinho, that distributes vegetables, fruits and processed foods to supermarkets, and is beginning to import from Argentina jams, honey, wines and other products.

### 16.2.3 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. In the IFOAM Local Markets Conference in Buenos Aires (2000), one of the conclusions from the Latin American participants was that the specialized stores prepare 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 co-operative is a producer association that manages 8'000 hectares, mostly cocoa, and nuts, quinoa, coffee and hibiscus. And 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, and has recently received the “Spirit of Organic International Award 2004” in Washington DC for its pioneering work.

A growing trend is the “consumer co-operative shop”. In many secondary cities and towns, consumers get together and organize a co-operatives, 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 consumers own the shop, prices are lower, but producers get a fair share.



Shop of the health food cooperative COOLMEIA  
in Porto Algere, Brazil. Photograph: Pipo Alberto  
Lernoud

#### 16.2.4 *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 having to give intervention to middlemen. Many local governments favor this kind of transaction, helping the farmers by providing them the stalls and some advertising. Although these local fairs have 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. And 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 nineties, and there is also a fair in Tacuarembó. 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

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 in the direct relation between the consumer and the producer. Participatory Guarantee Systems are being researched by a special IFOAM Working Group<sup>1</sup>.

#### 16.2.5 *Box Schemes and Home Delivery*

An 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 consumers' 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. There are some examples of sophisticated systems in the continent, like the Bio Canasta in Lima; El Rincon Organico in Buenos Aires and Sitio do Moinho in Rio de Janeiro, who reach hundreds of families weekly.

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<sup>1</sup> IFOAM working group on Participatory Guarantee Systems for Organic Agriculture, Internet [http://www.ifoam.org/about\\_ifoam/standards/pgs.html](http://www.ifoam.org/about_ifoam/standards/pgs.html)

### **16.2.6 Community Supported Agriculture (CSA)**

Inspired by the Japanese system Teikei 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".

### **16.3 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 in 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.

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 investor's funds are buying or renting Latin American land for organic production, usually with a scale and a technology that locals cannot afford and a developed relation to the buying markets of their countries of origin.

#### **16.3.1 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 organized, and some fine fruits like raspberries and strawberries exports. Colombia, Honduras and Dominican Republic sell bananas, pineapples, mangoes and other tropical fruits, Argentina sells apples, pears

and citrus fruits, Mexico also 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. But also Costa Rica, and other Central American countries sell smaller quantities of fresh vegetables to the external market.

### *16.3.2 Grains and Cereals*

Paraguay is a big soybean producer, together with Argentina, Mexico and Brazil, which also 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.

### *16.3.3 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 taking place in the region.

In a recent study by Jorge Vieto, from 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 co-operatives 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".

### *16.3.4 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.

### 16.3.5 Sugar

Brazil, Paraguay, Ecuador and Argentina are some of the sugar producers in the area. Small farmers in co-operatives who own or manage small sugar mills. In Brazil there is a big company producing with high quality technologies and social standards on tens of thousands of hectares. 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 co-operative with its 650 farmers processes 80'000 tons of cane annually.

### 16.3.6 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 that sums up to the 70 percent of the total value of organic. Brazil is exporting organic meat from herds kept in the ecological parks of El Pantanal, the source of the rivers Uruguay and Parana.

## 16.4 Certification

Excepting those from Argentina and Costa Rica, which have Third Country status in the European Union, all other Latin American producers need to be re-certified 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. Organic Crop Improvement Association (OCIA) and Farm Verified Organic (FVO) from USA and Naturland, BCS Oeko-Garantie and the Institute für Marktoekologie (IMO) from Europe are very active in the area.

Some local certification bodies in the continent are very well developed, like Argencert and Internacional Agropecuaria, (OIA, Argentina), Instituto Biodinamico (Brazil) and Bolicert (Bolivia) - all IFOAM accredited- and Biolatina (Perú and other). 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 12 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.

Costa Rica has its own national standards, Paraguay and Chile are working on the process, and Argentina has a national law, and its standards date back to 1992. The standards in Brazil, approved but not put in practice, will allow for more participatory certification systems in local and direct markets.

The region is beginning to discuss Social Criteria for Standards. In October 2001, representatives

from many countries got together in 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.

### **16.5 Governmental Support**

No Latin American country has subsidies or economic support for organic production. The bright exception is Brazil, where the government recently issued an inter-ministerial Pro Organico (Programa de Agricultura Organica) plan, officially stimulating organic production, research, association building, marketing and trade.

Costa Rica and some others have official funding for research and teaching, Argentina and Chile have had official export agencies helping producers get to the international fairs and printing product catalogues, and in Mexico there is growing interest by national and state agencies, for example in the state of Jalisco. But 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. Buying companies and fair trade agencies, focusing especially on some basic products like coffee, bananas, orange juice and cocoa has stimulated international trade.

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 Parana 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).

### **16.6 Education and Extension**

Latin America has a great deal of activity 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 a very 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 carry 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 Center of Sustainable Development CLADES, lead by Miguel Altieri and Andres Yurcevic, has built a very thorough body of knowledge and experience around agroecology and biodiversity issues, connecting universities (specially 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 spokesman of organic farming in the region, and his books, read worldwide, have been used for courses in the continent for decades.

IFOAM, representing all, has been supporting and aiding all this spreading of organic projects through the region, and bonding different sides of the movement through big events like the Sao Pablo Scientific Conference in 1992 and the Mar del Plata Scientific Conference in 1998, both big international gatherings taking place in the area, and the Latin American IFOAM Local Markets Conference in Buenos Aires, 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.

## **16.7 Latin America: Country Reports**

**ALBERTO PIPO LERNOUD AND MARCELA PIOVANO**

### **16.7.1 Argentina**

Argentina had 3'192'000 certified hectares in 2000, and has 2.8 million hectares in 2005, a decrease caused by the de-certification of big livestock certified areas, due to changes in the organic meat market. A high percentage of the certified land is devoted to livestock production, especially sheep production in big farms in the slopes of the southern states, in Patagonia. Arable and permanent crop production uses 255'000 hectares, and the rest is for wild collection. 72 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 (606) are located in one area, the Misiones Province in the north. These are small farmers organized in associations, producing sugar and mate tea. The total number of farms in Argentina 2005 is 1'824.

90 percent of the organic production in Argentina is for export, mainly to the European Union and USA. The biggest exports are cereals and oilseeds: corn, wheat, soy, and sunflower. Fruits are also exported in big quantities: pears, apples, oranges and lemons. Some vegetables, especially garlic, onions, and beans are also exported. There is also a growing sector of aromatic and medicinal plants.

On the processed side, 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 2005 there were 656'000 sheep and 112'870 heads of cattle certified in Argentina.

All the products mentioned have been exported for years, many of them since 1992.

The domestic market has been working 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 diminished their participation in the supermarket shelves. 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 carry 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.

Argentina was the first Third World Country to have a national regulation adapted to the European Union (1992) and the first 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 has a strong umbrella organization, Movimiento Argentino Para La Produccion Organica (MAPO), which organizes programs, capacity building, research projects, conferences and meetings. MAPO organized the 12th IFOAM Scientific Conference in Mar del Plata, 1998. There is also a new Trade Chamber, Cámara Argentina de Productores Organicos Certificados (CAPOC), a certifier's chamber, CACERT, and many local and regional networks. Recently, all these organizations gathered into an umbrella organization, S.O.A., the Argentine Organic Sector.

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 area on organic farming, co-coordinated by a former IFOAM World Board Member, Pedro Gomez. INTA also carries the biggest organic family garden project in the world, PRO HUERTA, that reached almost one million families doing home organic farming in the 1990's, suffered a financial crisis, and has been back in action since 2003.

### 16.7.2 *Bolivia*

Bolivia has grown from 31'025 certified hectares in 2000 to 364'100 in 2002. In the same period, the number of farms has gone from 5'240 to 6'500.

The most important products from Bolivia are coffee, quinoa, chestnut, cocoa, vegetables, tea, herbs and lesser volumes of amaranth, dehydrated fruits and beans.

Bolivia has chains of shops selling organic products, especially in La Paz, Cochabamba and Santa Cruz de la Sierra. The Tiendas Ecológicas AOPEB sell only certified products, and other shops like Irupana, Eco Market, El Ceibo and Protal sell also some uncertified, “natural” products from small farmers associations.

In January 2000 the Basic Norm for Ecological Agriculture in Bolivia, presented by AOPEB (Association of Organizations of Ecological Producers of Bolivia), universities and the Bolivian Standardizing Institute, was approved under the ministerial resolution NB 907/001/2000. In 2003 a national law presented by the movement is being discussed in the legislative.

The Technical Co-ordination Committee within the Ministry of Agriculture is working on a National Policy for Ecological Production.

Some private institutions carry research programs on organic agriculture, like AOPEB, Productividad Biosfera Medio Ambiente (PROBIOMA), Promoción e Investigación de Productos Andinos (PROIMPA). Also 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.

### 16.7.3 Brazil

In 2001 Brazil had 275'576 certified hectares. In 2003, there were 803'180. Today, the total land under organic management is 6'587'637 hectares, now including big areas of wild collection amounting to 5'700'000 hectares, especially in the Amazon jungle, called “agroextrativismo”. Agriculture amounts for 887'637 hectares.

There is also a huge quantity of informally certified or non-certified organic production, especially in the southern states of Rio Grande, Parana and Sao Paulo. The calculated number of organic producers is around 14'000. The total formally certified production reached 200 million USD<sup>2</sup> in 2003. 90 percent of the farms are smallholdings. The growth of organic production is calculated in between 40 and 50 percent annual, growing more in 2005.

Exports are mainly raw products, like coffee, banana, soybeans, corn, etc. 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.

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 is a growing number of processors, both companies and small family units, processing tea, coffee, mate tea, jams, oils, breakfast cereals, dairy products.

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2 200 million USD = 165.2 million EUR (per 31.12.2005)

There are 12 national, and about 9 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 actually very involved in promoting ecological agriculture as an alternative for the millions of small farmers throughout the country.

#### 16.7.4 Chile

In 2002, the number of certified hectares in Chile was 285'268. But it is estimated that in 2005 Chile has 639'200 including the final certification of Patagonian prairies destined to sheep production (600'000). Around 450 farms have been reported as certified organic and 550 are in conversion.

Chile's growth in organic production is fully geared to exports, and the main fresh products are: sheep meat (51 percent of the total exports), apples (28 percent), kiwis (14 percent), cherries, asparagus, blueberries, avocado, citrus, and olives. There is also a growing export of processed products, like wine (eight percent of total exports), olive oil and fruit juices and concentrates. Chile has a new and interesting development in organic salmon. According to the excellent export agency Prochile and the umbrella organization AAOCH, from the year 2002 to 2004, exports have grown by 154 percent in two years, reaching a total of 12.700 million USD<sup>3</sup>. Today more than 40 organic products from 24 exporting companies (empresas exportadoras) are reaching the world markets. USA receives 58 percent of the exports, followed by Europe with 29 percent.

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 few specialized shops (La Ventana Orgánica, Pura y Natural, etc.). Most of the products are sold through supermarkets. JUMBO Alto Las Condes concentrates the biggest offer in the capital, Santiago. Most use the label “producto ecológico”, that sounds “greener” to consumers not familiarized with the organic concept.

The Norm No. 2439 regulates the production, and recently the Norm No. 2079 was established to define the functioning of certifying agencies in the country. There is a new Organic Agriculture

3 12.700 million USD = 10.5 million EUR (per 31.12.2005)

Law being processed in the Parliament.

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, and many international agencies acting in the country, some with permanent offices in Santiago (Argencert, IMO and BCS).

Several NGOs have been active for many years: Centro de Educación y Tecnología (CET), la Corporación de Investigación en Agricultura Alternativa (CIAL) and the Movimiento Agroecológico Chileno (MACH) are the main ones.

There is an efficient governmental support for exports through the official agency Pro Chile, and research being done in the Research Institute of Chilean INIA and the Universidad del Mar.

#### *16.7.5 Colombia*

The number of organic certified hectares was 33'000 in 2003. 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 pigs.

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 Colombian Ministry of Agriculture issued the first regulation (Res. 0544/1995), which was modified in 2002 (Res. 0074). Colombia has a local certifier since the middle 90's: Biotrópico. The Organic Agriculture Research Center CIAO, the National University of Colombia, the University of Santa Rosa, and others are carrying programs of research into organic production.

Colombia has several groups and associations promoting organic agriculture, predominantly the Organic Coffee Producers Association ACOC and the Colombian Network on Biological Agriculture RECAB, Fundación Pro Sierra, Corporación Penca de Sabila, Corporación la Ceiba, Fidar, etc. Currently the establishment of a national co-coordinating institution for all organic production is underway.

#### *16.7.6 Costa Rica*

In the year 2000, Costa Rica had 8'974 certified hectares. In 2003, it has grown to 13'945 with 3'987 producers.

The main exported products are banana puree, cocoa, coffee, 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. Corporalde organized a fair in 1994, and Comercio Alternativo reached hotels, supermarkets, restaurants and schools with organic produce. Other selling schemes are ALIMCA with home delivery, AFAORCA with coffee and APOETAR with vegetables. There is a very active organization, CEDECO, promoting research, local markets and training, which has been efficient in supporting farmers markets in several regions.

Costa Rica has a National Certification System that has been recognized as equivalent by the European Union (2003), thus becoming part of the coveted third country list.

Since 1995 it 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 Cooperation 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.

### 16.7.7 México

In the year 2000, Mexico had 85'675 certified hectares. In 2002, there were an estimated 215'843 hectares under certification. According to the FiBL survey 2005/2006 there were almost 300'000 hectares of organic land in 2005. There are around 120'000 organic certified 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: the small-scale, low-income producers, who are peasants and indigenous people that have small land holdings (2.25 hectares on average) and are grouped together in co-operatives, using Internal Control Systems, which facilitate certification and trading; 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 generated 68.8 percent of the foreign currencies earned; large-scale producers represented the rest of the figure. Around half of the certified land is destined to coffee production. Mexico is the world's biggest producer of organic coffee (see also chapter on organic coffee in this book).

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, vegetables, sesame seeds, blue maize, and maguey. There is also some production of vanilla, banana, papaya, apple, avocado, honey, and medicinal plants, soybeans, cocoa, oil palm, nuts. The organic export is valued in around 280 million USD<sup>4</sup>, which sums up to 8.5 percent of the total agricultural income.

4 280 million USD = 231.4 million EUR (per 31.12.2005)

The domestic market is very small. Only coffee, 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 tourist areas. About ten percent of the total production, which is not exported, is traded on the national market, but as conventional products. There is a big annual exhibition, Expoorgánicos, backed by the federal and regional governments. There are also open organic farmers markets in Mexico City, called "Trianguis".

Mexico has a growing problem with GMO contamination in corn, brought about by corn seeds imported from the U.S. It is said that all "tortillas" in Mexico have already GMO residues. It is important to mention that the country was the world's biodiversity center for corn, which is now in danger.

There is a Norm No. 37 that was supposed to regulate organic production, but is not effectively working. 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 approved by the Parliament and is waiting to be implemented.

There are several international certifiers with offices in Mexico: OCIA México, Naturland México, Bioagricert, IMO, BCS, Oregon Tilth Certified Organic, Quality Assurance International, FVO and others. 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.

### 16.7.8 Peru

In 2001 Peru had 84'908 certified hectares. For 2003 it was estimated that there are 260'000 hectares under certification (117'966 hectares of wild nuts; 75'775 of coffee, 20'075 aromatic and medicinal plants). There are more than 30'000 certified producers. 5'000 are in conversion. Most of the farmers are small and indigenous and belong to the small farmers association ANPEP. They produce coffee and cocoa under the internal control system.

97 percent of the production is exported, and 94 percent of those exports are coffee and cocoa. Banana is also a growing export crop. The exported value is around 30 million USD<sup>5</sup>. Other exported products are quinoa, cotton, pecan nut, Brazil nut, onions, asparagus, sesame seeds, amaranths, and tomato.

Although it amounts to only three percent of the production, there is a very well organized internal market, thanks to the work of Eco Logica Peru. There are weekly fairs in Lima and surroundings (Bio Ferias), there are home deliveries (Bio Canasta), small shops and defined

5 30 million USD = 24.8 million EUR (per 31.12.2005)

areas in the supermarkets (Isla Ecológica). This channels move around 0.5 million USD<sup>6</sup> yearly. There is a growing tendency to sell through the supermarkets. The main products sold on the domestic market are: Vegetables (43 percent), fruits (41 percent), beans (9 percent) and roots crops: potatoes and sweet potatoes (seven percent).

There is a local certification agency, Inka Cert, which together with other Latin American certifiers formed Bio Latina, accepted by the EU. The inspection bodies SKAL, IMO and SGS Peru have offices in Lima.

Since 1998 there has been a National Commission on Organic Production, CONAPO, which unites private sector, scientists and the governmental sector. In 2003, after a very long consensus process, the National Regulation was put in place.

In research, there is a lot of activity in the small farmers' movement, through the technologies defined as DPT (Participatory Development of Technologies), co-coordinated by the NGO's Network of Organic Agriculture RAE, Centro IDEAS and the Peruvian Organic Producers Association ANPEP. There is also a widely extended capacity building through the farmer-to-farmer system. On the formal side, the Agrarian University of La Molina has for long been a center of organic studies and education.

### 16.7.9 Uruguay

Uruguay had 760'000 certified hectares in 2004, a stunning growth from the 1'200 reported in 2000. There are 500 organic farms.

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 USD<sup>7</sup> in 2004. Other exports are wines, (with 140'000 USD<sup>8</sup>), honey (with 300'000 USD<sup>9</sup>), rice, milk and citrus fruits. During 2004, the estimated export volume was 2.5 million USD<sup>10</sup>, and the internal market 1.1 million USD<sup>11</sup>.

The domestic market is small, happening mainly through supermarkets (58 percent), home deliveries (25 percent), farmers markets (10 percent) and on-farm sales (7 percent). A weekly organic fair is taking place in Montevideo, organized by the Small Producers Association APODU (Asociación de Productores Orgánicos del Uruguay).

Organic production in Uruguay is regulated by a decree from the Minister of Agriculture No. 360/992. The newly founded umbrella organization, the Uruguayan Organic Movement MUO (Movimiento Uruguay Orgánico), is working with the government in the details of a future legal

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6 0.5 million USD = 0.4million EUR (per 31.12.2005)

7 900'000 USD = 743'846 EUR (per 31.12.2005)

8 140'000 USD = 115'709 EUR (per 31.12.2005)

9 300'000 USD = 247'903 EUR (per 31.12.2005)

10 2.5 million USD = 2.1 million EUR (per 31.12.2005)

11 1.1 million USD = 0.9 million EUR (per 31.12.2005)



structure. The National Institute of Agrarian Research INIA, is carrying a research in organic meat.

## **16.8 Success Stories**

**ALBERTO PIPO LERNOUD AND MARCELA PIOVANO**

### *16.8.1 Cuba: Urban Agriculture in Cuba*

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. So 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.

### *16.8.2 Bioferia in Lima, Perú*

The Bioferia in Miraflores, a neighborhood in Lima, Perú, started on December the 4th 1999. It was organized with the help of the municipality. Since then, it is carried every Saturday in Reducto Park from 8 a.m. to 2 p.m. 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, milk products from cows & goats, chicken, eggs, seeds, etc. All producers and processors are certified. Every producer must fill a document that states the offered products & prices.

Natural health groups, environmental organizations, alternative education programs and, of course, NGOs that promote organic production and agroecology, occupy the rest of the area. Various activities related with ecology and food, like conferences, workshops, puppet & theatre shows for children and adults are carried out every week. Children have many opportunities to learn and participate, and this also facilitates their parents' freedom for visiting the fair relaxed, ask questions and learn about organic farming.

The Bioferia has been growing since its beginning, with more farmers joining constantly and more consumers having the habit of buying every weekend. It is already a standard in Lima, for the people to "visit la Feria" every Saturday morning.

Recently, the first Ecological Consumers Committee was organized, and 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 made several publications, including a very educating video, in conjunction with IFOAM.

Source: Cesar de la Cruz, Ecológica Perú; Pipo Lernoud, personal visits & communications.

### 16.8.3 *The Eco Vida Agroecology Network in Brazil*

The Eco Vida Network was born in the state of Santa Catarina, in the South of Brazil, in 1998. It is the result of a long development of local markets and small farmers that started, twenty years ago, around a health food cooperative, COOLMEIA, in the city of Porto Alegre, in the neighboring state of Rio Grande do Sul. Today, the Network encompasses a great area including the three big states, including Paraná.

In all these regions of fertile land with slopes and moderate climate, most of the farms are small family operations that were somehow being left aside by the growth of agribusiness, great patches of monoculture of conventional soy, maize and cattle. Small farmers were being marginalized by the big scale export oriented production in the richest agricultural areas of Brazil.

So farmers and NGOs started to organize small markets in the cities, to channel the family scale production of vegetables, fruits and some processed foods like preserves and cheeses.



Farmers Market of the Eco Vida Agroecology Network in Brazil  
Foto: Pipo Alberto Lernoud

Today, the network is composed of farmers, consumer's organizations, small agro industries, NGOs giving technical advice and some civil organizations like churches, schools, etc. It is organized in 21 regional "nucleus", that are the space for debate and consensus, and where network projects like the Participatory Certification are carried on. With the involvement of all the members, common criteria on organization and marketing are developed.

The network has developed a complex system of local organic guarantee, called Participatory Guarantee that is now studied as an example by other countries in the Southern Hemisphere<sup>12</sup>. The Network uses a seal labeling each product that can circulate thousands of kilometers from one state to the other. Consumers thus know that the product agrees with the Standards of the Network.

Around 2'100 farmer families are connected through the Eco Vida Network, and they exchange experiences, visit each other, organize events and celebrations. More than 100 farmers' markets (some of them very huge, like in Porto Alegre, with 300 farmers present weekly) are spread across all the south of Brazil. The annual turnover of the network participants is near 20 million USD<sup>13</sup>, total in organic products.

#### *16.8.4 BioFach América Latina in Brazil*

In 2005, the third annual BioFach América Latina took place in Rio de Janeiro attracted 3193 visitors from 23 countries and 156 exhibitors, 35 of which were international, a 70% growth in trade visitors and 40% growth in exhibitors. The rapid development of BioFach América Latina will be able to continue at its new location in São Paulo from October 25-27 2006. São Paulo, was deemed to be an excellent location for the further international development of the organic agriculture sector. The conference program will give market actors the possibility to become more informed about international developments and to develop market profiles. Substantive issues to be discussed include the further development of the regulatory framework in Latin America, above all the models for cooperation between multinational retailers and small producer organizations, as with the growth in value-added production through the processing of raw organic materials, regional marketing models in a Latin American context and consumer relationships. Brazilian and Latin American markets for organic products hold great potential for further development, and BioFach América Latina is playing a key role in providing an international platform in a Latin American context.

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<sup>13</sup> 20 million USD = 16.5 million EUR (per 31.12.2005)

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## 16.10 Statistics

### 16.10.1 Statistical information

**Table 36:** Latin America: Land under organic management and organic farms

COUNTRY	DATE	ORGANIC HECTARES	SHARE OF THE ORGA- NIC AREA OF TOTAL AGRICULTURAL LAND	ORGANIC FARMS
Argentina	2005	2'800'000	1.58%	1'824
Belize	2000	1'810	1.19%	
Bolivia	2002	364'100	0.99%	6'500
Brazil	2005	887'637	0.34%	14'003
Chile	2005	639'200	4.19%	1'000
Colombia	2003	33'000	0.07%	4'500
Costa Rica	2004	13'945	0.49%	3'987
Cuba	2005	10'445	0.16%	5'222
Dominican Rep.	2004	72'425	1.96%	819
Ecuador	2005	27'436	0.34%	2'427
El Salvador	2005	9'100	0.53%	37
Guatemala	2003	14'746	0.33%	2'830
Guyana	2003	109	0.01%	28
Honduras	2003	1'823	-	3'000
Jamaica	2002	1'332	0.26%	12
Mexico	2005	295'046	0.27%	120'000
Nicaragua	2004	59'000	0.83%	-
Panama	2005	5'244	0.24%	7
Paraguay	2002	91'414	0.37 %	2'827
Peru	2004	260'000	0.83%	23'400
Trinidad & Tobago	1999	80	0.06%	
Uruguay	2004	759'000	5.10%	500
Venezuela	2004	16'000	0.07%	4
<b>Total</b>		<b>6'362'891</b>	<b>0.8 %</b>	<b>192'927</b>

**Table 37:** Latin America: Main land use categories

ARABLE LAND (HA)	SHARE OF ARABLE CROPS OF TOTAL ORGANIC LAND	PERMANENT CROPS (HA)	SHARE OF PERMANENT CROPS OF TOTAL ORGANIC LAND	PERMANENT PASTURES(HA)	SHARE OF PERMANENT PASTURES OF TOTAL ORGANIC LAND	CERTIFIED LAND, USE NOT KNOWN (HA)	SHARE OF LAND WITH UN-KNOWN USE OF TOTAL ORGANIC LAND	TOTAL LAND UNDER ORGANIC MANAGEMENT (HA)
127'161	2 %	593'491	9 %	3'201'716	50 %	2'440'603	38 %	6'362'891

**Table 38:** Latin America: Arable land by crop category

CROP CATEGORY	HECTARES
Medicinal and aromatic plants and spices	52'482
Vegetables	34'937
Cereals	20'760
Protein crops	7'349
Industrial crops	6'973
Oilseeds	3'610
Other arable crops	1'046
Flowers and ornamental plants	3
<b>Total arable land in Latin America covered by the FiBL Survey 2005 / 2006</b>	<b>127'161</b>

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# 17 ORGANIC FARMING IN THE MEDITERRANEAN REGION

LINA AL-BITAR<sup>1</sup>

## 17.1 Introduction

Recently, agricultural practices are being re-evaluated due to the awareness for environmental degradation, human health, animal welfare and scarcity of fossil fuel, and organic agriculture is receiving special attention worldwide and is getting a bigger share on the market. Nevertheless, the force of attraction has been always centralized in the north despite the high production potential in the South.

From time immemorial, the Mediterranean diet and traditional products have always been very appreciated and were introduced in different diets giving them a highly value added. This might probably be an opportunity to be explored for organic products that could become an important tool for the economic development of the region. Organic production could be competitive at the international market, at least in countries where these products cannot be found or where off-season products are requested.

In fact, the conclusions of the first Euro-Mediterranean ministerial conference on agriculture that took place in Venice on the 26th of November 2003, identified the high quality of agricultural products and organic agriculture as the main factors of the economic development for the countries of this region (Lacirignola, 2004).

As envisaged by the Barcelona Declaration of 28th November 1995 (European Commission, 1995), the Euro-Mediterranean shared prosperity will be reached by the year 2010, through the establishment of the “free trade” zone between the EU and the Partner countries<sup>2</sup>. In fact, the latter have known in the last years a radical change in their production and agricultural development system, like the market opening and the constant amelioration of relations between the public and private sectors.

The Mediterranean basin has always been an agricultural center known for its widely diverse nature due to its microclimates. In fact, the Mediterranean region is made of different heterogeneous realities, not only between the north and the south but also within the Southern shore itself. This region has a great variation in agro-ecosystems, economies, politics, cultures and languages, but the common denominator is the Mediterranean Sea. Some of the countries are not even touched by the sea but are conventionally called Mediterranean countries. The

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1 Dr. Lina Al Bitar, Mediterranean Agronomic Institute of Bari (CIHEAM-IAMB), Via Ceglie, 9, IT-70010 Valenzano (BA), Italy, Internet [www.iamb.it](http://www.iamb.it)

2 The Mediterranean countries Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Morocco, the Palestinian Authority, Syria, Tunisia and Turkey have entered a Euro-Mediterranean partnership with the European Union. Further info see “Barcelona Declaration and Euro-Mediterranean partnership” at <http://europa.eu.int/scadplus/leg/en/lvb/r15001.htm>

Mediterranean region includes the countries and territories bordering the Mediterranean Sea like Portugal, Jordan and Macedonia. For the purpose of analysis continents will occasionally bring the countries together: the northern Mediterranean countries (NMC) in Europe, and the southern and eastern countries (SEMC) of Africa and Asia. Other groupings will be used if necessary. For example Malta and Cyprus will be called Islands in order to differentiate them from the riparian countries of the EU before its enlargement in 2004.

### 17.2 *Historical Development and Statistics*

Some foreign private companies looking for new investment opportunities introduced organic agriculture in the Mediterranean more than 20 years ago.

In fact, first pioneer experiences were made in Egypt (1977) where a biodynamic farm called Sekem of about 70 hectares was created in the desert where medicinal plants and aromatic herbs are grown (Abou Hadid, 2001).

In the 1980s, the Israeli Bio Organic Agriculture Association (IBOAA) was established by some organic farmers after ten years of unsuccessful attempts and was behind the development of the sector in Israel (Eshel and Rilov, 2004).

In the same decade, private initiatives were developed in Tunisia and in Morocco and organic farming developed in Turkey as a consequence 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).

In the last decade the organic movement has further developed, and by now it involves quite all the Mediterranean countries.

However, one of the major weaknesses of the Mediterranean organic agriculture is still 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.

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 Center for Advanced Mediterranean Agronomic Studies (CIHEAM-IAMB)<sup>3</sup> started up in 1999 a Network (MOAN). Its main objective is the further strengthening of organic agriculture in the Mediterranean, the primary activity being the collection of data on the current state of organic agriculture in all the Mediterranean countries where statistics monitoring the growth trend of this sector are lacking and where a real need for information on the situation of organic agriculture really exists. A two-yearly report is published. The last edition is downloadable at the

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3 International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM-IAMB) [www.iamb.it](http://www.iamb.it)

IAMB homepage<sup>4</sup>. In the Mediterranean region there are about 3.2 million hectares organically managed by almost 100'000 farms (Al-Bitar 2004).

Apart from the EU-Mediterranean countries that occupy almost the 83 percent of the total area with Italy at the first place, Serbia and Montenegro, Tunisia and Turkey are the most advanced among the other countries with respectively the 36.5, 29 and 18.5 percent.

### **17.3 Market**

Organic products are being increasingly traded internationally. The market share is still modest but trends indicate that there is an enormous potential for expansion.

The market differs markedly from country to country in the Mediterranean, but, generally, in the absence of local markets and of national labeling systems in most of the southern and eastern Mediterranean countries (SEMC), organic food is primarily oriented towards export. 85 percent of the produce is destined to foreign markets such as the European Union, USA, Japan and the Gulf area. Exports include mainly products which cannot be grown locally, such as spices, medicinal plants, olive oil, tropical fruits, vegetables and citrus.

Other than what has occurred in most parts of Europe, the development of organic farming in the Mediterranean is taking place primarily for market reasons, stimulated by the high demand for products from the foreign markets.

In fact, the major organic holdings are owned or "controlled" by large firms or foreign multinationals that, of course, produce to export without triggering local development.

However, the development of the domestic market is developing, though at a decidedly staggering pace. In fact, in many of the Mediterranean countries health or specialized shops are being opened, and some supermarkets started to introduce organic shelves. Furthermore, local fairs where organic farmers may sell directly their products are increasing in number. Nevertheless, in many other cases, organic products are sold as conventional or as typical products because of difficulty of marketing.

A country-based analysis highlighted a flurry of interest for organics among producers who have realized the promising marketing opportunities on the leading markets. An increasing interest in organic products is also sweeping among consumers across the Mediterranean countries where it is safe to expect a local market boom.

In Egypt, organic certification schemes were first introduced twenty years ago to meet the requirements of foreign importers of medicinal plants. The lack of a national regulation has not hampered marketing as foreign certifying bodies from the importing countries issue certificates.

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4 Report on Organic Farming in the Mediterranean Countries; available at [http://www.iamb.it/publications/organic\\_agriculture/oa\\_studies\\_and\\_research/options%20B50.pdf](http://www.iamb.it/publications/organic_agriculture/oa_studies_and_research/options%20B50.pdf)

In the future, following the completion of the free trade zone and the expansion of the local market, this regulatory gap may become a stumbling block. Many efforts are being undertaken to improve local markets (El Araby, 2004).

In Israel (Eshel and Rilov, 2004), the total organic sector is worth 180 million USD<sup>5</sup>, 30 percent of which are marketed locally, whereas the remainder is exported. There are 17 authorized organic shops, 50 points of sale in supermarkets and also a few hundred health food shops that sell organic products. There are 12 companies dealing with organic export. The total volume of organic export is around 35 million USD<sup>6</sup> per year (2003) of fresh products. The local market covers around 10 million USD<sup>7</sup>.

In Lebanon (Khoury, 2004), export is being done by BioCoop and by local businessmen mainly to the Gulf area. The value of the Lebanese production of fresh organic produce (vegetables and fruits) for the year 2003 is estimated around 875'000 USD<sup>8</sup>. There are 23 between Health shops, hypermarkets and restaurants. No data are available yet on organic produce in terms of quantity or value on Import/Export.

In Malta (Calleja, 2004), about half of the organic producers sell their products at the farmers' market. The other half sell them door to door or directly to a store or shop. Exportation is as yet non-existent. Data on domestic consumption is still not available, both for local and imported organic products. Imported organic products are available at supermarkets. The main countries of import are Italy, the UK and Germany.

In the absence of local market and national labeling systems, organic food produced in Morocco is oriented primarily towards exports (Kenny, 2004). Vegetables (especially tomatoes and cucumbers) and citrus account for 95 percent of the goods that are exported to France, the UK and Germany. For fruits and vegetables, 20 to 30 percent of the national production is excluded from export and is sold in local markets as conventional products. There is, however, an exception for this regarding argan oil<sup>9</sup>, which is sold as organic even in local markets. Fruits, vegetables and other horticultural commodities are exported exclusively to the European markets while essential and argan oils are exported to Europe and northern American markets (Canada and USA).

In Tunisia (Ben Kheder, 2004), most of the production is directed to the export market and sold as typical Tunisian products. The main products are: olive oil and dates. The production of other crops is still low and is marketed mainly in the local market, but no real local market for organic products does exist as yet. A strategy is being prepared to encourage local consumption and marketing of organic products. Recently, some companies started to export organic products.

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5 180 million USD = 148.1 million EUR (per 31.12.2005)

6 35 million USD = 28.8 million EUR (per 31.12.2005)

7 10 million USD = 8.2 million EUR (per 31.12.2005)

8 875'000 USD = 739'051.5 EUR (per 31.12.2005)

9 Argan oil comes from the nuts of the Argan tree (*Argania spinosa*). This tree grows only in the South Western part of Morocco in an area covering 700'000-800'000 hectares (Source: <http://www.dietobio.com/aliments/en/argan.html>)

Turkey is one of the few countries in the world that has exceeded the food self-sufficiency threshold and is a leading exporter of agricultural products (Aksoy and Can, 2004). The bulk of the domestic production is exported to the European Union (80 percent), especially to Germany (60 percent), and to the USA (15 percent). The Undersecretary for Foreign Trade<sup>10</sup>, the Aegean Exporters Union<sup>11</sup> and the Export Promotion Center<sup>12</sup> deal with the exportation of organic and conventional products. All the companies involved in the production and marketing of organic goods are Turkish.

The domestic market started to operate in 1999, mostly in the main towns. Marketing is generally confined to healthy food shops and supermarkets. Currently, more organic products are being displayed on shelves of supermarket chains. A few companies started to prepare fresh fruit and vegetables for the domestic market. All the stakeholders including the Ministry of Agriculture accept the development of the domestic market as a priority. Organic foods of animal origin were expected to reach the shelves in 2005.

In the Eastern Adriatic countries most of production is sold locally.

#### **17.4 Standards and Legislation**

The legal framework differs from one country to another. Until the year 2003, very few countries had a national legislation (Croatia, Cyprus, Slovenia, Tunisia and Turkey), but since the situation has improved considerably.

Even though many years have passed since the beginning of the organic movement in Egypt, Israel and Morocco, these countries have not yet developed a national legislation. Only very recently, a draft regulation in Morocco has been prepared which is still waiting for the final approval. In Israel, a law was newly accepted.

An opposite situation is found in Albania, Malta and Lebanon where organic agriculture is almost new, but national regulations have been already approved.

Certification in all southern and eastern Mediterranean countries (SEMC) is done mainly by foreign organizations (except Israel where all are local). Some local certification bodies are operating in Albania, Turkey, Egypt and Malta and very newly in Lebanon.

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10 Turkish Undersecretary for Foreign Trade [www.dtm.gov.tr](http://www.dtm.gov.tr)

11 Aegean Exporters Union [www.egebirlik.org](http://www.egebirlik.org)

12 Export Promotion Centre [www.igeme.org.tr](http://www.igeme.org.tr)

### **17.5 State Support (Marketing, Promotion, Area Based Payments, Action Plans)**

Policies supporting the organic sector are still lacking in many countries. Only Tunisia, Malta and Cyprus subsidize organic farmers directly through financial aids.

In Turkey and Israel indirect support and incentives are given; reduced loan interest (Turkey), support for training and data collection (Israel). Some new-entry countries like Syria are already elaborating some support strategies.

In Cyprus (Papastylianou, 2004), the Ministry of Agriculture, Natural Resources and the Environment, since the joining of Cyprus with 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 joining the Organic Farming Scheme. In the case of irrigated trees and vines grown organically, the subsidy is 93 Euro, while for rain fed crops, forages and trees is 63 Euro per 1000 m<sup>2</sup>. For Organic Animal Production the financial support for goats is 47 Euro, for sheep 41 Euro and for fattening calves, 115 Euro per animal, respectively.

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 EUR<sup>13</sup> 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 whose aim is the setting up of 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 which 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 in the following cases:

- Subsidies, related to project study fees, equivalent to one percent of investment amount and up to 1500 Tunisian Dinars (TD)<sup>14</sup> for B category investment and 5'000 TD<sup>15</sup> for C category investment.
- Investment subsidies fixed at 30 percent of the value of equipment, implements and means specific to organic projects.

13 600 EUR= 725.2 USD (per 31.12.2005)

14 1'500 Tunisia Dinars = 932.949 EUR = 1'104.57 USD (per 31.12.2005)

15 5'000 Tunisia Dinars = 3'109.83 EUR = 3'681.89 USD (per 31.12.2005)

- 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<sup>16</sup>.

## **17.6 Research, Training and Extension**

### **17.6.1 Research**

Despite the market expansion, systematic research on organic agriculture is still lacking. The review of present research projects put forth that organic agriculture is comparatively ignored and the ones that can be compatible are not related to any coherent strategy or analysis of farmers' need. 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, except in Turkey, Tunisia and Israel where the Ministries of agriculture also support research. In most of the countries, research is being conducted by the organic associations and is carried out on-farms.

In Morocco (Kenny, 2004), research in organic farming and related aspects is currently undertaken by farmers themselves as well as at some public institutes. At the academic level, two programs of applied research are currently undertaken at the Hassan II Institute of Agronomy and Veterinary Medicine (IAV) and the National Institute of Agronomic Research (INRA).

In Tunisia (Ben Kheder, 2004), many national and international research results were adapted to organic agriculture and are being applied at experimental stations and in organic farm trials (i.e.: fertilization, plant protection etc.). Some research projects dealing only with organic agriculture and related to plant and animal production are under way at the university and research institutions. The major lines of testing are:

- variety testing (e.g. vegetables),
- compost quality, use of various organic matters (farm by-products and manure),
- cultural practices (e.g. grafting),
- disease and pest control (e.g. olives, date palms, vegetables),
- animal production techniques.

In Turkey (Aksoy and Can, 2004), since 2001 the Turkish Ministry of Agriculture MARA promotes and funds research projects on organic farming in many of its NARs (National Agricultural Research Institutes) through a framework project supported by SPO. A number of research projects focus on a crop or on optimization of a technique, mainly on maintaining soil fertility through organic fertilizers and manure. The agencies that fund research proposals on organic agriculture based on competition are the State Planning Organization, the Turkish

16 5'000 Tunisia Dinars = 3'109.83 EUR = 3'681.89 USD (per 31.12.2005)

Scientific and Technical Research Council, and University Research Funds. To a limited extent, partial funding comes from the general budget of the institutions.

The Mediterranean Agronomic Institute of Bari (IAMB) promotes comparative research in different Mediterranean countries through its Master mobility program and its network MOAN.

### 17.6.2 Training

Training is mainly vocational provided by associations and extension services. Only in Morocco, Tunisia and Turkey academic training is given at graduate and post-graduate level.

In Morocco (Kenny, 2004), a training program exists for post-graduate students in Horticulture and Agronomy. The only academic courses are taught at the Complex of Horticulture in Agadir, which is an offshoot of the Hassan II Institute of Agronomy and Veterinary Medicine (IAV). Conferences on specific topics related to organic agriculture were conducted by some IAV faculty members in different regions of Morocco to promote organic agriculture in the mountain areas. Private companies are also seeking advices and technical assistance from national and international experts, particularly in organic horticulture.

In Tunisia (Ben Kheder, 2004), some modules on organic agriculture are being offered to students (agricultural technicians and engineers) at different agronomic institutes. A sort of specialization is being planned for engineer students at one of these institutes. Two Masters of Science are being offered in sustainable agriculture and protection in organic agriculture.

Many days of training, short sessions and short courses on various topics of organic agriculture were offered to technicians, engineers and farmers. This training led to the set-up of regional networks. Each region has:

- three technicians / engineers representing the regional agricultural service, the regional agricultural training center and the regional union of agricultural farmers which are in charge of information extension and training of the professionals.
- the professionals involved in organic agriculture: production, processing, marketing etc.

In Turkey (Aksoy and Can, 2004), at every faculty of agriculture there is at least one course on organic agriculture taught at graduate level, and a few electives. Also vocational schools (2 to 4 years after high school to train technicians) started programs on organic agriculture. Training activities are being handled by the Ministry of agriculture MARA and by ETO on a yearly basis. The extension agents at a provincial level are handling farmers' training programs. In order to promote farmers in the protection zones of the selected 6 dams, MARA organized 39 training programs and trained 990 farmers.

IAMB grants scholarships to citizens coming from Mediterranean countries to attend the post-graduate and Master course in Mediterranean organic agriculture, which it has run since 1999, and organizes special sessions of short training in some of these countries (Fig. 1 and 2).



## 17.7 *Mediterranean Events*

From April 12th to 17th 2005, the NGO EkoAgroOhrid, FYR of Macedonia and Eko Liburnia, Croatia, supported by the Ministry of Agriculture, Forestry and Water Management of FYR of Macedonia organized a conference on Soil Fertility and Diversity in Mediterranean Agroecosystems.

The conference reported on the progress in soil fertility and diversity in the Mediterranean agroecosystems and the related soil amendments and farming operations. The goal of the conference was to provide a forum for interaction, discussion, and information exchange among scientists, agriculturists and farmers on the role of soil fertility in developing sustainable organic farming systems in the Mediterranean.

The topics included the following subjects:

1. Soil management and amendments
2. Green manures and cover crops
3. Soil physical conditions
4. Soil erosion prevention techniques
5. Soil fauna and flora
6. Nutrient cycling
7. Nutrient budgets in Mediterranean organic farming systems.

A parallel session entitled ORGANIC WORLD was also organized. This session was an opportunity for participants from different countries to present various aspects of global organic sector, including: Country presentations, regional cooperation, presentations of projects and companies (production, inspection & certification, marketing, research & development, training).

On this occasion the IFOAM Mediterranean Group held its General Assembly. Gunnar Rundgren, IFOAM president was present. A new executive board was elected:

- Fabio Piccioli, Italy – President
- Yousri Hashem, Egypt – Vice president
- Guy Rilov, Israel – Vice president

The working group coordinators are:

- Karen Hoberg, Spain - Market
- Aktham Badran, Palestine - Training
- Drazen Lusic, Croatia - Standards & Certification
- Paola Migliorini, Italy - Research & Development

The permanent secretariat is located at:

- Region of Crete, Department of Agricultural Development  
Ikarou & Spanaki 2,  
71 307 Heraklion, Greece

Contact person:

Kaliopi (Popi) Markaki

Tel. +30 2810 278689; Fax. +30 2810 278683

Internet <http://www.ifoam-abm.com/>

- November 9 to 11, 2005, the Institute of Olive Tree and Subtropical Plants of Chania

(NAGREF) organized an International Symposium on „Organic Agriculture in the Mediterranean: Problems and Perspectives „, held at Chania, Crete (Fig. 3).

The necessity for the organization of a Mediterranean conference comes from the need for exchanging knowledge on issues of organic agriculture, formulating proposals and determining the priorities for the further development of this sustainable agro-dietary system.

This conference was an opportunity for presenting the practical and socio-economic problems of organic agriculture in the Mediterranean region and provides ideas for their solution, based on the experience of the representatives of organizations involved to organic agriculture and the latest advances in agricultural research.

The general topics of the Symposium included the following:

- The present situation of organic agriculture in the Mediterranean (country reports)
- Research advances related to organic agriculture
- Scientific reports on socio-economic aspects of organic agriculture for the Mediterranean countries.

## **17.8 Outlook**

Organic farming supplies the Mediterranean countries with a production system that focuses on strategic interests, not only for the single farm but also for the whole land system. It is not only a production method but also rather an actual development model that integrates environmental, socio-economic and ethical aspects.

Despite the progressive development of organic farming 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.

First of all, different countries still lack a regulatory framework. There are no reference national laws regulating the certification and inspection systems and, when existing, legislation necessitates an adjustment to the regulations in force at European and international levels.

There are still no co-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 a poor technical support, sometimes financed by the institutions.

Moreover, the Mediterranean region is also suffering for the great gap in the technical and scientific knowledge about the application of organic production method, which includes techniques developed in areas characterized by greatly different soil, climatic and cultural conditions. An additional constraint is the great difficulty to find out the technical means to be

used or, where these are available, the poor technical knowledge on their use.

Finally, one of the major weaknesses of the Mediterranean organic agriculture is still 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 whole Mediterranean region towards the reconversion 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 the aspects bearing a reference to environmental protection, animal welfare, consumers' behavior, market development, quality of food products, regulations, certification and labeling.

Moreover, organic agriculture should be regarded as a potential tool for the strengthening of the Euro-Mediterranean relationships; in fact, it is one of the priorities of the Euro-Med cooperation in agriculture, as reported by art 16 of the conclusions of the Euro-Med Ministerial conference on agriculture of 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, social and 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 and to define a national regulatory system, with the governments in charge of supervising (via planning and coordination activities) the whole certification and inspection system on the production, processing and marketing of organic products.

Moreover, it is also necessary to set out the rules for the application of basic standards unified at the Mediterranean level for organic products in order to define the basic guarantee requirements 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 start 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 diffusion of information, Institutional capacity building and activities of research and experimentation.

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## **18 ORGANIC FARMING IN NORTH AMERICA**

**BARBARA HAUMANN<sup>1</sup>**

### **18.1 United States**

Three years after full implementation of U.S. national organic standards, interest in organic products continues to grow in the United States, both for the categories of product offered and venues for selling these products.

Although still representing a small percentage of the market, foodservice is a growing outlet for organic products. Additional manufacturers are offering organic products designed for foodservice outlets, and organic products are starting to show up in more and more school and university cafeterias, restaurants, and eateries at national and state parks, museums, corporate offices, and hospitals.

Efforts are under way to increase the sales of products made from such organic fiber as cotton and wool. Meanwhile, organic milk and meat have been in the news during the year, as consumer demand continues to outstrip supply.

#### **18.1.1 Production statistics**

According to the latest available statistics for U.S. organic production released in November 2005 by the U.S. Department of Agriculture's Economic Research Service (ERS), there were 8'035 certified organic farms in 2003 representing nearly 2.2 million acres<sup>2</sup> under organic management. A previous survey by ERS had found there were 6'949 certified organic farming operations in 2001, totaling slightly more than 2 million acres<sup>3</sup> farmed organically.

The 8'035 farm total for 2003 is much lower than the 11'998 farms reporting organic production in data collected by the U.S. Department of Agriculture's (USDA's) National Agricultural Service (NASS) in its 2002 Census of Agriculture. However, published results from the census included a cautionary statement that its count of farms producing certified organic crops may differ from other sources because the information was self-reported by respondents, and no attempt was made to verify reports with certifying agencies.

ERS data for 2003 showed 1.45 million acres<sup>4</sup> in organic cropland (about 0.4 percent of all U.S.

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1 Barbara Haumann, Senior Writer, Communication, Organic Trade Association, 60 Wells Street, Greenfield MA 01301, Internet <http://www.ota.com>

2 2.2 million acres = 0.890 million hectares

3 2 million acres = 0.809 million hectares

4 1.45 million acres = 0.59 hectares

cropland) and an additional 745'273 acres<sup>5</sup> in organic pasture and rangeland (about 0.1 percent of all U.S. pasture). Organic cropland in 2003 was up from the 1.3 million acres<sup>6</sup> recorded in 2001. Meanwhile, organic pasture declined substantially between 2001 and 2002, from 789'505 acres<sup>7</sup> in 2001 to down to 625'902<sup>8</sup> acres in 2002, and then started to regain ground in 2003, to reach 745'273 acres<sup>9</sup>. However, that total is still below 2001 levels.

Livestock numbers in 2003 were up substantially from 2001, reflecting the growing demand for organic milk and meat in the United States. The number of organically raised milk cows grew from 48'677 recorded for 2001 to 74'435 in 2003. The number of organic beef cattle grew from 15'197 in 2001 to 27'285 in 2003.

Meanwhile, other ERS statistics show that there were over 3'000 facilities that process and distribute organic products certified to USDA standards in 2004. These are heavily concentrated on the Pacific Coast, where 41 percent of the total are located. In fact, nearly 800 were in California. In contrast, over half of the states had 30 or fewer facilities.

As of November, there were 99 agencies accredited by the U.S. Department of Agriculture to certify farms, processing and handling operations as meeting national organic standards. Of those, 56 were based in the United States, and the remaining 43 certifying agencies were from other parts of the world.

### 18.1.2 Market for organic products

U.S. organic food and non-food sales are estimated to have reached 15 billion USD<sup>10</sup> during 2005, according to projections from the Organic Trade Association (OTA).

Sales of organic foods are estimated to have totaled approximately 14.5 billion USD<sup>11</sup> in 2005. Meanwhile, sales of non-food organic products, such as personal care products, nutritional supplements, organic fiber, household cleaners, flowers and pet food, were estimated to have reached a half billion dollars.

Organic food is increasingly appearing in many foodservice venues throughout the nation. From state and national parks such as Yosemite National Park, Sequoia National Park, and Niagara Falls State Park to the Kennedy Space Center Visitor Complex, visitors can now purchase organic products as part of their meals. Even ballparks, such as Comerica Park in Detroit, have begun selling such offerings as organic Polish sausages and organic hamburgers served on organic buns, topped off with organic condiments.

This is occurring as foodservice concessionaires make a concerted effort to offer sustainable and

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5 745'273 acres = 301'603 hectares

6 1.3 million acres = 0.53 million hectares

7 789'505 acres = 319'503 hectares

8 625'902 acres = 253'295 hectares

9 745'273 acres = 301'603 hectares

10 15 billion USD = 12.3 billion EUR (per 31.12.2005)

11 14.5 billion USD = 11.9 billion EUR (per 31.12.2005)

organic options as part of their corporate philosophy.

Interest in eating organic products is also booming on campuses. A July 5, 2005, article on Brandweek.com entitled “A Natural Way to Lure Students” reported that touting that their campus offers organic and natural food brands in their dining halls is a new tool for college administrators as they lure students to choose their university for their higher learning. According to the article, this gives students “an opportunity to support companies and brands that are socially responsible, environmentally friendly and support sustainable agriculture.”

Meanwhile, some hospitals around the nation are starting to offer fresh, healthy food including organic options, according to the Institute for Agriculture and Trade Policy’s (IATP) report, *Healthy Food, Healthy Hospitals, Healthy Communities: Stories of Health Care Leaders Bringing Fresher, Healthier Food Choices to their Patients, Staff and Communities.*

The National Restaurant Association (NRA) has confirmed that more and more organic and natural products are finding their way onto restaurant menus. NRA’s 2005 Restaurant Industry Forecast shows that 46 percent of family-dining restaurant operators, 39 percent of casual dining operators, and 48 percent of fine dining operators report more orders for organic items now than they had two years ago. As a result, restaurants are responding to consumer demand by offering them more organic food choices.



Organic beef is starting to appear at ballpark club restaurants in the United States. (Photo courtesy of Delaware North Companies)

In another trend, large companies are beginning to introduce organic versions of their established brands. This is a relatively new breakthrough. Previously, established corporations chose to enter the organic marketplace by buying an organic brand and continuing to market that product under the original organic brand.

Speaking at the Organic Trade Association’s 2005 All Things Organic™ Conference and Trade Show in May, a representative from Campbell Soup Co. explained that the implementation of national organic standards in October 2002 gave his company the impetus to enter the organic marketplace. After determining that consumers were interested in established product brands going organic, the company first introduced organic tomato juice, and has followed with a variety of organic products under its recognized brand names. He predicted that this trend would continue, driving more mainstream consumer interest in organic products.

Meanwhile, an article in the Des Moines Register in October pointed out that more and more U.S. organic companies are importing organic food products to meet their needs or to

cut costs. Imports include not only items that one would expect, such as bananas and coffee, given geographic and climatic conditions in the United States, but also soybeans (for use in organic soymilk), beef (to help meet the rising demand for organic meat), and many fruits and vegetables.

There are no up-to-date statistics available on U.S. imports or exports of organic products. However, a USDA study estimated that the United States imported 1 billion USD<sup>12</sup> to 1.5 billion USD in organic products in 2002, and exported somewhere between 125 million USD<sup>13</sup> and 250 million USD<sup>14</sup>.

### 18.1.3 Consumer acceptance

A survey conducted in August 2005 for Whole Foods Market found 65 percent of Americans saying they had tried organic foods and beverages, up from 54 percent in similar surveys conducted in 2003 and 2004. Of those polled, 27 percent reported consuming more organic foods and beverages now than a year ago, and ten percent consume organic foods several times per week, up from seven percent a year ago.

According to the 2005 Whole Foods Market, Organic Foods Trend Tracker survey, the top reasons for buying organic foods and beverages were: to avoid pesticides (70.3 percent), freshness (68.3 percent) and health and nutrition (67.1 percent). More than half (55 percent) said they buy organic to avoid genetically modified foods. More than half of all respondents agreed that organic foods are better for their personal health and better for the environment.

Similarly, Natural Marketing Institute's (NMI's) latest Health & Wellness Trends Database<sup>15</sup> has found that consumers are extending the concept of health and wellness from personal health to that of planetary health and wellness. "Almost one in four American consumers state that when given the choice to buy a product or service, they make decisions with an understanding of the effect the purchase will have on the health and sustainability of the world, its environment and people," according to NMI managing partner Steve French.

Overall, more mainstream consumers are being exposed to organic products as club stores and such supermarkets as Food Lion, Supervalu Inc., and Giant Super Food Store expand their offerings of organic products. Even McDonald's restaurants in the United States have promoted organic sales by offering organic coffee.

The National Association of Convenience Stores' (NACS) 2005 show included an organic section featuring new organic product options for convenience store retailers to encourage consumers to shop in their stores. According to NACS, as consumers' eating habits change to include more healthy choices, many convenience retailers are looking for organic solutions to satisfy customer demand. Convenience stores represent more than 130'000 outlets nationwide, NACS said.

12 1 billion USD to 1.5 billion USD = 0.8 billion EUR to 1.2 billion EUR (per 31.12.2005)

13 125 million USD = 102.9 billion EUR(per 31.12.2005)

14 250 million USD = 205.7 billion EUR (per 31.12.2005)



Even so, there is more room for growth, according to experts speaking at the Institute of Food Technologists' annual meeting in July.

Meanwhile, OTA has successfully been able to encourage organic choices at venues when it holds events. The foodservice concessionaire serving McCormick Place in Chicago, IL, reported that OTA was its first client to request organic products at that venue. The result was an array of organic sandwiches and salads in McCormick Place's restaurants and concessions stands, and even organic Starbucks Coffee during OTA's All Things Organic™ Conference and Trade Show in May. In another breakthrough, OTA worked with Haute on the Hill, caterer at the U.S. House of Representatives, to provide an organic luncheon at the Rayburn House Office Building during OTA's annual Congressional Education Day event in September. It was the caterer's first organic event at the U.S. House of Representatives.

Participants in Organic Trade Association's Congressional Education Day stand on the U.S. Capitol steps in Washington, D.C. (Photo courtesy of the Organic Trade Association).



Congressman John Olver of Massachusetts, shown with Beth Fraser of OTA staff, examines organic tomatoes during his visit to OTA's headquarters during OTA's Bring Your Legislator to Work Month event. (Photo courtesy of the Organic Trade Association).



#### *18.1.4 Standards and legislation*

One of the biggest issues during 2005 for the U.S. organic industry was a June 2005 court ruling that declared that there were technical inconsistencies between the Organic Foods Production Act (OFPA), passed as part of the 1990 U.S. Farm Bill, and the National Organic Program standards, implemented in October 2002 after more than a decade of public input.

Without any action by Congress, the ruling among other things would have prevented the use of 38 synthetic materials in post-harvest handling and processing that had previously been approved by the National Organic Standards Board for products in the “Organic” category (containing at least 95 percent organically produced ingredients). In late October, at the prompting of OTA, the U.S. Congress took action to help restore this and other key provisions of U.S. national organic standards by adopting language OTA submitted to amend OFPA.

As a result of this legislative action, the majority of processed, multi-ingredient organic products currently in the marketplace can continue to carry the “USDA Organic” seal provided they meet or exceed stringent federal standards. According to OTA, Congress’ action effectively retained the national organic regulations that were fully implemented in October 2002. Under these standards, no new synthetic substances, including ingredients, may be allowed in organic production without the review and approval of the National Organic Standards Board.

A second outcome of the court ruling invalidated the rules relied upon by small dairy farms transitioning to organic management, which allowed cows to receive up to 20 percent non-organic feed until three months prior to selling their milk as organic. OTA’s amendment, which inserted language that allows transitioning dairy herds to consume farm-grown feed from land that is in its third year of transition to organic, has generally been supported.

The approved language also included a request to the Secretary of Agriculture to develop emergency procedures for designating agricultural products as commercially unavailable in organic form and used as minor ingredients. These would be placed on the National List on a temporary basis (not to exceed 12 months) in the event of an emergency, such as a natural disaster.

In a major development during 2005, USDA’s National Organic Program (NOP) in late August posted a memo to certifiers saying that any product meeting the NOP final rule may be certified, and if it meets the requirements for “100 percent organic” or “organic”, it may use the “USDA Organic” seal. This clears the way for such non-food products such as personal care items and pet food products to become certified and use the seal if they meet the standards.

Subsequently, in October, USDA published a final rule to allow synthetic methionine in poultry production until Oct. 21, 2008. This will allow more time for research into possible alternative practices for organic poultry producers to use.

In gearing up for 2006 and 2007, OTA is proposing that an organic title be included in the 2007 Farm Bill that will be developed by USDA and presented for approval by Congress. USDA has already begun accepting comments and ideas for shaping the next farm bill, even though its

adoption will not be until 2007.

In its efforts, OTA is advocating that the 2007 Farm Bill:

- create a national organic initiative
- establish an organic production office
- support and enhance existing organic legislation, and
- create and enhance agency cooperative programs for organic.

OTA members attending OTA's 2005 Congressional Education Day in September helped to deliver OTA's draft organic title for the 2007 Farm Bill to every member of Congress serving on the Senate and House Agriculture Committees. OTA members and staff met directly with at least ten members of Congress and presented offices with "leave behind" packages that highlighted OTA's plans for the 2007 Farm Bill, organic appropriations, OTA's twenty years of service, charts showing the number of U.S. farms by congressional district, maps of organic production and handling in the country, and a list of current OTA members.

OTA's organic luncheon for Congress was another huge success, feeding an organic lunch to between 600-800 members of Congress and their staff.

#### *18.1.5 Support*

U.S. organic farmers continue to receive little or no government support for being organic. With a lack of support, it is difficult to encourage U.S. 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.

"Many EU countries have 'green payments' available for transitioning and continuing organic farmers, as well as a variety of other supply and demand policies aimed at promoting growth of the organic sector. The U.S. government, in contrast, has largely taken a free-market approach to the organic sector, and policy is aimed at facilitating market development," according to Carolyn Dimitri and Lydia Oberholtzer in the USDA Economic Research Service report, *Market-Led Versus Government Facilitated Growth: Development of the U.S. and EU Organic Agricultural Sectors*, published in August 2005.

According to the report, nine USDA agencies have started or expanded programs on organic agriculture during the past several years, and the 2002 Farm Bill contained several first-time research and technical assistance provisions to assist organic crop and livestock producers.

The U.S. national organic certification cost-share program administered by USDA's Agricultural Marketing Service, for instance, received an allocation of 5 million USD<sup>15</sup> in the 2002 fiscal year. Funds under the program were to be made available to all interested states to reimburse organic producers or handlers in their state for up to 75 percent of their certification costs, to a

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15 5 million USD = 4.1 million EUR (per 31.12.2005)

maximum of 500 USD<sup>16</sup> per year. Of the 50 U.S. states, 45 originally signed up for the program. Currently, only 42 states are taking part. As of early 2005, 2.9 million USD of the 5 million USD had been dispersed. This program will continue until all of the 5 million USD<sup>17</sup> is spent.

There is an additional cost-share program to help reimburse farmers and handlers in 15 states for a portion of their certification costs. This program has been allocated 1 million USD each year since 2001, with the money channeled through the specific states to farmers and handlers who apply for the reimbursement. For most of the program, only 13 of the 15 states have taken part, and only about 43 percent of the funds have been used each year. In the participating states, each certified production operation is eligible for reimbursement of up to 70 percent of its certification costs, but not to exceed 500 USD.

Farmers in one county in the state of Iowa, however, have gotten a boost in a different way. In a unique move, Woodstock County in Iowa during 2005 adopted a policy to offer tax incentives to farmers who switch from conventional to organic production. In late June, 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 will grant property tax rebates of up to 50'000 USD 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.

The new policy is designed to provide tax relief to offset costs associated with the three-year conversion period and organic certification. It also recognizes the possible reduction or loss of federal subsidies to farmers due to the conversion.

Meanwhile, various companies are encouraging farmers to transition to organic production.

For one, Organic Valley Family of Farms has set up a fund to provide financial assistance to dairy farmers who are transitioning to organic. Prompting this step is increasing demand for organic milk in the United States that exceeds supply. The transition premiums have been made possible through a partnership between Organic Valley and Stonyfield Farm. The fund has a three-tier structure to meet the needs of each phase of transition through the first three months of marketing milk as organic.

In a separate effort, California Certified Organic Farmers (CCOF) is expanding its Going Organic farmer training, education, and mentoring program. Using renewed funding from the California State Water Board, the Going Organic program aims to train 40 new organic growers through educational meetings and one-on-one mentoring with experienced farmers. CCOF estimates this will increase regional organic acreage by nearly five percent through converting 40 conventional farms in California's Central Valley, San Joaquin Valley, and the Napa and Sonoma regions.

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16 500 USD = 411 EUR (per 31.12.2005)

17 5 million USD = 4.1 million EUR (per 31.12.2005)

### 18.1.6 Research

Concerning research, The Organic Center (formerly named The Organic Center for Education and Promotion), established in 2002 by OTA as an independent, charitable non-profit organization, continues to produce state-of-the-science reviews to provide consumers, health care professionals, educators, public officials, and government agencies with credible scientific information about the benefits linked to organic agriculture and products.

During the past year, it produced the following:

- A report entitled *Elevating Antioxidant Levels in Food Through Organic Farming and Food Processing*, released in January 2005 concluded that organic farming methods have the potential to elevate average antioxidant levels, especially in fresh produce. On average, antioxidant levels were about 30 percent higher in organic food compared to conventional food grown under the same conditions. In addition, the report found, there is considerable potential to increase the retention of antioxidants in organic processed foods through using non-chemical, low-temperature, low-pressure food processing methods.
- A report, *Breaking the Mold—Impacts of Organic and Conventional Farming Systems on Mycotoxins in Food and Livestock Feed*, released in September 2005 shows that organic farming practices can lessen the risk of dangerous mycotoxin contamination in foods, especially grain-based products. The report found that organic agricultural practices often reduce the prevalence of serious fungal infections, and hence mycotoxin risks in the food supply, by promoting diversity in the microorganisms colonizing plant tissues and living in the soil and by reducing the supply of nitrogen that is readily available to support pathogen growth.

In other research, a study funded by the U.S. Environmental Protection Agency, showed that children who switch to eating organic foods get “dramatic and immediate” reduced exposure to pesticides used on a variety of crops.

In the study, environmental health scientists from the University of Washington, Emory University and the Centers for Disease Control and Prevention tested the urine of 23 children ages 3 to 11 in the Seattle area for 15 days. During the first three days and last seven, children ate their normal diets. During the middle five days, they were given organic items, including fruits, vegetables, juices and wheat-and corn-based processed items including cereal and pasta. Average levels of malathion and chlorpyrifos—two organophosphate pesticides—in the children’s urine decreased to nondetectable levels immediately after the introduction of organic diets and remained nondetectable until the conventional diets were reintroduced, researchers reported in the Sept. 1, 2005, online version of *Environmental Health Perspectives*.

In November 2005, USDA announced 4.5 million USD<sup>18</sup> in research grants administered through its Integrated Organic Program and the Cooperative State Research, Education and Extension Service to address organic agricultural issues and priorities. These include projects for the Organic Transitions Program and the Organic Agriculture Research and Extension Initiative.

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18 4.5 million USD = 3.7 million EUR (per 31.12.2005)

Grants were awarded to the following:

- Montana State University, 471'111 USD<sup>19</sup>, “Organic Production in the Challenging Environment of the Northern Great Plains: from Transition to Sustainability.”
- Oregon State University, 435'020 USD<sup>20</sup>, “Ecological Soil Community Management for Enhanced Nutrient Cycling in Organic Sweet Cherry Orchards.”
- University of Maine and University of New Hampshire, 827'058 USD<sup>21</sup>, “Reducing Off-farm Grain Inputs on Northeast Organic Dairy Farms.”
- Fort Valley State University, Louisiana State University, and Texas Agriculture Experiment Station, 299'632 USD<sup>22</sup>, “Development of Sustainable Gastrointestinal Nematode Control in Organic Small Ruminant Production.”
- Auburn University and Alabama A&M University, 561'828 USD<sup>23</sup>, “Integration of Organic Production Systems for Summer Production of Tomato and Pepper in Alabama.”
- Iowa State University, Michigan State University, the University of Florida and the Rodale Institute 483'542 USD<sup>24</sup>, “Evaluation of Strategies for Management of Soybean Rust in Organic Systems.”
- University of Nebraska, 762'949 USD<sup>25</sup>, “Improving Organic Farming Systems Across Nebraska Agro-eco-regions,” and
- Michigan State University, 754'442 USD<sup>26</sup>, “Partnering to Cultivate Organic Agriculture in Michigan and the Midwest.”

### 18.1.7 All Things Organic

Held for the fifth year in a row, OTA's All Things Organic™ Conference and Trade Show for the second 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 May 2005 in Chicago, IL.

More than 33'000 retail buyers and other representatives of the mainstream and natural food industry attended the three-day co-located events. The main excitement on the show floor focused primarily on the increased mainstream popularity of organic products.

The trade show itself, produced in partnership with Diversified Business Communications, drew over 10'000 attendees and featured a diverse range of products, in approximately 450 booths. The accompanying conference featured two keynote speakers, a showing of the film *The Future of Food*, and 19 conference sessions, an organic fiber fashion show, welcome party, urban organic

19 471'111 USD = 387'666 EUR (per 31.12.2005)

20 435'020 USD = 357'967 EUR (per 31.12.2005)

21 827'058 USD = 680'565 EUR (per 31.12.2005)

22 299'632 USD = 246'560 EUR (per 31.12.2005)

23 561'828 USD = 462'314 EUR (per 31.12.2005)

24 483'542 USD = 397'895 EUR (per 31.12.2005)

25 762'949 USD = 627'812 EUR (per 31.12.2005)

26 754'442 USD = 620'812 EUR (per 31.12.2005)

and organic fiber tours, dinner and awards ceremony, and much more.

Plans are now under way for OTA's 2006 All Things Organic™ Conference and Trade Show, slated for May 6-9, once again at McCormick Place in Chicago.

### *18.1.8 BioFach America*

In September 2005, BioFach America in Washington D.C. attracted around 24'000 visitors and 180 exhibitors from 17 countries. Based upon the positive market developments, Nürnberg Global Fairs, who organizes the together with New Hope Natural Media - A Division of Penton Media Inc., expects even more interest in 2006.

The Spirit of Organic Awards, an annual event held in conjunction with BioFach America, honored the next generation of organic leaders for. A special recognition for leadership was given to Scott Silverman of Jungle products, Inc. Other honorees included Matt McLean of Uncle Matt's Organic, Wende Elliott of Wholesome Harvest, Victor Ananias from Bugday, and Frederick Schilling, Dagoba Organic Chocolate.

BioFach America will change location to Baltimore, Maryland in 2006, reflecting buyer preferences and attendee needs. The show, set for October 4-7, 2006, will switch from a Thursday–Sunday format to a Wednesday–Saturday format.

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## **18.2 Canada**

### *18.2.1 Statistics*

The latest figures from Canadian Organic Growers (COG) show there were 3'673 certified organic farms in Canada at the end of 2004. This is up from the 3'317 certified organic producers and 250 producers in transition in 2003 measured in an earlier study conducted by Anne Macey.

Total area under organic management in 2004, excluding maple trees and wild rice lakes, numbered 488'752 hectares. There were at least 224'000 hectares of cropland in organic production, according to Macey who conducted the latest survey for COG. Cropland included approximately 217'560 hectares for growing cereals and pulses, 4'423 hectares for vegetables and herbs, 1'907 hectares for fruits and nuts, and 99 hectares for organic vineyards. An additional 132'525 hectares devoted to pasture, hay and forage were certified organic as well.

Looking ahead, the 2006 Agriculture Census has been designed to include four detailed questions about organic agriculture. This, hopefully, will help give a clear picture of how many farms are managed organically in Canada.

Food products which are labeled or identified as "organic" are expected, as a minimum, to comply with the production, processing, packaging, labeling, storing and distribution requirements of Canada's National Standard for Organic Agriculture, ratified by the Standards Council of Canada in 1999.

According to the standard, a food product may be labeled "organic" if it consists of at least 95 percent organic ingredients. Products containing a minimum of 70 percent organic ingredients may make a claim on the principal display panel saying what percentage it contains. Products containing less than 70 percent organic ingredients may carry a claim only within the ingredient list.

Currently, certification of organic products is voluntary in all provinces except Quebec. The province of Quebec has an organic regulation that requires certification by a certifying body accredited by the Conseil des appellations agroalimentaires du Quebec (CAAQ).

For a farm to become certified, at least three years must pass following the last use of a non-permitted substance.

Canada has approximately 40 organic certification agencies to inspect and audit farms and processing facilities using organic methods. Quebec's accreditation board, the Standards Council of Canada, accredits some and six are accredited by the U.S. Department of Agriculture's (USDA's) National Organic Program.

### *18.2.2 Organic trade*

Organic food is the fastest growing sector of agriculture in Canada, experiencing a growth rate of twenty 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<sup>27</sup>. Organic flax and soybean exports are also major exports, Macey's report showed.

The Prairie region specializes in the production of organic grains, mostly for export. Prairie organic grain sales top 98 million CAD<sup>28</sup> annually and demand continues to rise. Quebec and Ontario sell some 32 million CAD<sup>29</sup> worth of organic grains every year. Quebec's largest single organic export is maple syrup, which brings in annual sales of 10 million CAD<sup>30</sup>.

According to Laura Telford of COG and Stephanie Wells, Canadian Council liaison for the Organic Trade Association (OTA), Canada's organic export market is worth at least 150 million CAD<sup>31</sup>, with about 40 percent of exports going to Europe, 40 percent to the United States, and the remainder to Asia.

### 18.2.3 Marketing

During early 2005, the Organic Trade Association (OTA) conducted its third consecutive organic orange promotion in the Greater Toronto, Canada, area, where approximately five million people live. During the seven-week campaign, sales of organic oranges increased 104 percent among participating retailers who tracked sales data.

The campaign, coordinated by INFORMA Market Research Co., Ltd., included a 30-second television advertisement and in-store, point-of-purchase signs touting organic oranges provide "up to 30 percent more vitamin C." Twenty-six retailers, representing mainly single and small chains of health and natural food stores, participated. In addition, large mainstream retailer Loblaw's took part in the television campaign.

In a random sampling of women living in the Greater Toronto area, eight percent claimed they were aware of the campaign theme that organic oranges have at least thirty percent more vitamin C than the average orange. In addition, 16 percent of those questioned had purchased organic oranges at some point.

Retailers taking part in the 2005 campaign devoted more store footage to displaying organic oranges than previously. Sales were slow at the beginning due to a shortage of oranges. Thus, it was recommended for 2006, the promotion should start in February rather than the end of January.

### 18.2.4 Regulatory update

Although Canada has a strong organic standard, it remains voluntary and is not supported by

27 18 million Canadian Dollars (CAD) = 15.4 million USD = 12.7 million EUR (per 31.12.2005)

28 98 million CAD = 84.1 million USD = 69.2 billion EUR (per 31.12.2005)

29 32 million CAD = 27.5 million USD = 22.6 million EUR (per 31.12.2005)

30 10 million CAD = 8.6 million USD = 7.1 million EUR (per 31.12.2005)

31 150 million CAD = 128.7 million USD = 105.9 million EUR (per 31.12.2005)

regulation. Work is under way, however, toward implementation of a mandatory national organic regulation.

OTA and COG, as well as other industry groups on the Organic Regulatory Committee (ORC), continued to work diligently during 2005 toward achieving a federal regulation to ensure consumer confidence in organic products sold in Canada and to keep international markets open to Canadian organic exports. The organic sector has worked cooperatively with Agriculture and Agri-Food Canada (AAFC) and the Canadian Food Inspection Agency (CFIA) for the past three years on this process.

The proposed regulation developed by CFIA's Organic Task Force includes a revised Canadian Organic Standard, a Guidance Document, and Permitted Substances List.

In September 2005, a delegation of Canadian members of OTA met with Agriculture Counselor Ron Krystynak at the Embassy of Canada in Washington, D.C., to convey appreciation to the Canadian government for directing major resources to CFIA in the past year to develop a federal organic regulation. The group urged the government to negotiate organic equivalency with the United States, the European Union, Japan, China and other countries that buy Canadian organic exports as soon as the regulation is implemented. OTA also asked that CFIA continue to work closely with the organic sector on monitoring the implementation of the regulation.

In mid-October 2005, Joe Southall, then director of CFIA's Organic Task Force (OTF), told OTA and COG that the organic file has become "one of the most important on the government's 'to-do' list." CFIA in mid-November 2005 announced that OTF was moving into the next phase toward the national regulation. After a year of intensive consultation with the organic sector under the direction of Joe Southall, OTF now is to be headed by Dr. Bashir Manji, the Acting Director of CFIA's Food of Plant Origin Division.

In early November 2005, the 40 members of the Canadian General Standards Board (CGSB) organic standard committee voted on the revised Canada Organic Standard. The next steps will be to draft proposed resolutions to any negative ballots and comments, and then send the ballot results, comments and proposed resolutions back to the committee for consideration.

Once consensus is reached and the committee approves the drafted standard, it will return to CGSB for second-level approval, be submitted to the Standards Council of Canada for ratification and, finally, be edited and published.

CFIA has engaged a full-time lawyer to review all details of the drafted regulation to ensure clarity and full accordance with existing laws. Once the legal green light is given, there will be a period of consultation with the provinces. The regulation was to be pre-published in the Canada Gazette by March 31, 2006. It will then be open for 90 days of public comment. Barring any major snags, it will become law one month later.

Equivalency negotiations are planned to begin as soon as the regulation is pre-published in the Canada Gazette. Preliminary groundwork for those negotiations has already begun in the European Union.

### 18.2.5 *Research and support*

A number of developments have occurred to bolster support for organic agriculture in Canada. For instance, Alfred College, Ontario's only French-language agricultural college, is in the process of transitioning its 40 head of Holsteins and 250 acres<sup>32</sup> of food crops from conventional to organic management, and has announced it would offer programming devoted to organic research. It recently was awarded nearly 600'000 CAD<sup>33</sup> for its new organic dairy initiative, with most of the funds coming from CanAdvance in Ontario.

Meanwhile, earlier this year, the government of Saskatchewan announced it would contribute 250'000 CAD<sup>34</sup> to support the Organic Agriculture Center of Canada's (OACC) prairie office at the University of Saskatchewan. The office's role at the university is to identify and fund research projects, increase awareness of current research, and act as a source of information for producers.

OACC, which is headquartered at the Nova Scotia Agricultural College, provides organic research and education and initiates outreach programs for organic agricultural producers across Canada. In recent years, OACC has established a western base, and has received financial support for the project from the three prairie governments, Agriculture and Agri-Food Canada, the University of Saskatchewan, and the Canadian Wheat Board.

Separately, in November, Manitoba's organic growers were given a financial boost when the Agriculture and Agri-Food Minister and Manitoba Agriculture, Food and Rural Initiatives Minister announced 225'000 CAD<sup>35</sup> in new funding to Organic Producers of Manitoba (OPAM). The funding is designed to help OPAM expand its infrastructure to better serve the province's organic producers.

### 18.2.6 *References*

Canadian Organic Growers, personal communication from Anne Macey

Anne Macey, "Organic Statistics 2003," Fall 2004 issue, The Canadian Organic Grower.

"Overview, Facts and Figures on Canada's Organic Sector," prepared by Laura Telford of Canadian Organic Growers and Stephanie Wells, liaison to the Organic Trade Association's Canadian Council.

Stephanie Wells, liaison to the Organic Trade Association's Canadian Council, in articles provided to the Organic Trade Association's quarterly newsmagazine, The Organic Report.

„Organic producers receive \$225'000," The Brandon Sun: Online, by Matt Goerzen, Nov. 5, 2005.

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32 250 acres = 101.2 hectares

33 600'000 CAD = 514'800 USD = 423'615 EUR (per 31.12.2005)

34 250'000 CAD = 214'500 USD = 176'507 EUR (per 31.12.2005)

35 \$225'000 CAD = 193'050 USD = 158'856 EUR (per 31.12.2005)

### 18.3 Organic farming statistics and information sources

**Table 39:** North America: Land under organic management and organic farms

COUNTRY	YEAR	LAND UNDER ORGANIC MANAGEMENT (HECTARES)	SHARE OF TOTAL AGRICULTURAL LAND	NUMBER OF ORGANIC FARMS
USA	2004	889'048	0.22%	8'035
Canada	2004	488'752	0.72%	3'673
<b>Total land under organic management</b>		<b>1'377'800</b>	<b>0.29%</b>	<b>11'708</b>

Source: FiBL-Survey 2005/ 2006

**Table 40:** North America: Main land use categories

CONTINENT	ARABLE LAND (HA)	SHARE OF ARABLE CROPS OF TOTAL ORGANIC LAND	PERMANENT CROPS (HA)	SHARE OF PERMANENT CROPS OF TOTAL ORGANIC LAND	PERMANENT PASTURES (HA)	SHARE OF PERMANENT PASTURES OF TOTAL ORGANIC LAND	CERTIFIED LAND, USE NOT KNOWN(HA)	SHARE OF LAND WITH UNKNOWN USE OF TOTAL ORGANIC LAND	TOTAL LAND UNDER ORGANIC MANAGEMENT (HA)
North America	684'996	50 %	33'198	2 %	434'137	32 %	225'469	16 %	1'377'800

Source: FiBL-Survey 2005/ 2006

**Table 41:** North America: Arable land by crop category

CROP CATEGORY	HECTARES
cereals	221'666
oilseeds	11'379
Other arable crops / no details available	217'560
Vegetables	36'352
Industrial crops	3'662.8
Protein crops	61'821
Field fodder growing	132'555
<b>Total arable land North America covered under the FiBL Survey 2005/ 2006</b>	<b>684'996</b>

Source: FiBL-Survey 2005/ 2006

Please note: Not for all land information on the land use and crop categories was available

### *Information sources*

- United States of America: Barbara Haumann. Senior Writer, Organic Trade Association P.O. Box 547, Greenfield, MA 01302 Street address: 60 Wells St., Greenfield, MA 01301. Tel: 413-774-7511, Ext. 20. Fax: 413-774-6432. Homepage: [www.ota.com](http://www.ota.com)
- Cotton data: Organic Exchange [www.organicexchange.org](http://www.organicexchange.org)
  - Grape data: 2004. Organic Viticulture in Europe and Worldwide. Bernward Geier (1) and Helga Willer (2). (1) International Federation of Organic Agriculture Movements (IFOAM), Charles-de-Gaulle-Str. 5, D-53113 Bonn, <http://www.ifoam.org> (2) Research Institute of Organic Agriculture (FiBL), Ackerstrasse, CH-5070 Frick, <http://www.fibl.org>
- Canada: Anne Macey. 106 Old Scott Road. Saltspring Island. BC V8K 2L6. Tel: +1 250 537 5511  
Canadian Organic Growers (CGO) National Office: 323 Chapel Street. Ottawa, Ontario. K1N 7Z2 Tel: 613-216-0741. Toll-free phone: 1-888-375-7383. Fax: 613-236-0743
- BioFach Globally 2006: Till Ahnert. Nürnberg Global Fairs Messezentrum, 90471 Nuremberg, Germany. Tel: +49 (0) 9 11. 86 06-86 92. Email: [Till.Ahnert@nuernbergglobalfairs.com](mailto:Till.Ahnert@nuernbergglobalfairs.com). Homepage: [www.biofach](http://www.biofach)

## 19 **ACHIEVEMENTS MADE AND CHALLENGES AHEAD** ANGELA B. CAUDLE<sup>1</sup> AND GABRIELE HOLTSMANN<sup>2</sup>

Since long it is recognized that humankind has overstretched the elasticity of global ecological systems. There is still a lack of knowledge about and thus a continuing deterioration of the ecosystem on which we depend. We are confronted with perpetuation of disparities between and within nations. We see worsening of poverty, hunger and illness. At the 1992 Earth Summit in Rio de Janeiro, world leaders recognized these concerns and pledged to give greater attention to them. The results of the strong action coming out the 1992 Earth Summit should lead to the fulfillment of basic needs and improve living standards for all. Ecosystems should be protected and managed better. The future should become safer and more prosperous. It is evident that no nation can achieve this alone. Due to this, several programs have arisen to help motivate change and to work on the obvious deficits. Examples of these programs are the Agenda 21, the Millennium Development Goals, the European Program 2005-2008 and the Countdown 2010.

### *Achievements*

The organic agriculture movement (meaning people/organizations involved in organic agriculture) is aware of the worldwide problems and is trying to find solutions to the problems that inspired the goals. The basic ideas of organic farming have evolved from different sources but all these sources had and have one central idea in common: Organic Agriculture is a holistic system and relies largely on locally available resources. It is dependent upon maintaining ecological balance and developing biological processes to their optimum. Since the BioFach/Oekowelt GmbH commissioned Foundation Ecology & Agriculture SOEL to compile statistical data and general information on organic agriculture in 1999, it is visible how much the organic sector is constantly growing. For three years there has been growth of over two million of organically managed hectares per year. Twenty-two million hectares were recorded in the year 2003. Last year 26 million hectares were recognized, and in 2005 the area grew to more than 30 million hectares. Organic agriculture is practiced now in almost all countries of the world.

Today organic agriculture is no longer a niche. Organic products have finally broken out and entered the massive mainstream markets. Organic products are now commonly available. Nearly every bigger supermarket consistently offers a smaller or wider product range. Cosmetics, clothes, wine, tropical fruits, up to frozen food can be bought. Every item of consumption can be found as a product linked to organic standards. The complexity and sophistication of organic has gone a long way from its original basic beginning.

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1 Angela B. Caudle, Executive Director, International Federation of Organic Agriculture Movements IFOAM, Head Office, Charles-de-Gaulle-Str. 5, 53113 Bonn, Germany, Internet <http://www.ifoam.org>

2 Gabriele Holtmann, International Federation of Organic Agriculture Movements IFOAM, Head Office Charles-de-Gaulle-Str. 5, 53113 Bonn, Germany, Internet <http://www.ifoam.org>

The rapid growth in the organic sector of agriculture comes with challenges for the organic movement. That constant growth is raising concerns in regard to the basic values, which have always been part of organic agriculture. There is reluctance when it comes to the growing involvement of the global industry, the international globalization and market expenditures in organics. Through all of this, the organic movement grew with this complexity and was able to react in different kinds of ways.

### *International recognition*

Confronted with the degradation of the environment and the growing societal problems and with the necessity to solve the problems in whole regions, governments and international institutions have started to recognize the value of organic production as a solution. Organic agriculture is now on the agenda of major institutions. FAO, IFAD, UNCTAD and UNESCO are working with the scientific, technical and practical solutions that organic agriculture offers.

### *Principles of Organic Agriculture:*

Already three years ago the organic agriculture movement asked to review the basic values, the principles regarding organic agriculture. The revised and in 2005 approved IFOAM Principles of Organic Agriculture consist of four principles upon which organic agriculture is based: The principle of health, the principle of ecology, the principle of fairness and the principle of care. These principles are universal but can be applied regionally and are as such presenting a coherent identity in the entire organic world. With the principles the organic movement is lead and united.

### *Growing involvement of the organic industry:*

Worldwide there is growing attention in regard to globalization of organic agriculture and the influence of multinational companies. In the year 2005 our focus was drawn to the Case of the Neem Tree. Neem patents are resulting in major financial gains for a few multinational companies. The Neem Tree case is a landmark victory against agribusiness interest that is trying to encroach on and use for profit the accumulated knowledge of traditional farming communities. In a landmark decision, the European Patent Office upheld a decision to revoke in its entirety a patent on a fungicidal product derived from seeds of the Neem.

### *Harmonization of standards:*

Already in the 1990's with the view to help streamline organic trade, the IFOAM Organic Guarantee System (OGS) was created as a platform to achieve this. It was developed with the knowledge of and the view towards the rapid growth of all organic sectors including the number of certifiers. In the last two years, the OGS has been under review. Since 2005, it has been made possible to support the concept of regional variation in organic standards, while at the same time facilitating international harmonization of regional standards. The present situation regarding varying standards in organic agriculture with accompanying certification systems causes problems for different players in the organic market. Harmonization of standards and certification could

alleviate some of these problems by reducing direct costs. The IFOAM Accreditation Program has already achieved a great deal in this respect. A first significant step towards harmonization has been made with the IFOAM/FAO/UNCTAD Task Force on Harmonization and Equivalence in Organic Agriculture.

### *Quality*

A growing number of consumers want to know where food comes from. Consumer awareness of the quality of organic products matters more than price. To that end, so-called Trace- & Tell-Systems, which give customers information about organic products, are already on the way. Systems are created that trace organic products from their origin and rank the quality of them.

### *Challenges and solutions*

The continuous growth of organic agriculture shows how important and reliable organic agriculture is and will be in future. The challenge for organic agriculture in the next years will be to define its position and to be a serious and credible partner for governments when it comes to realizing the goals, which were set in 1992 at the Earth Summit in Rio. It is the challenge of organic agriculture to show that this system, being holistic in itself, is one of the solutions. As it was realized in Rio, not everything can be reached alone, but together we can reach these goals with a global partnership for sustainable development. All programs, Agenda 21, the Millennium Development Goals, the European Program 2005-2008 and the Countdown 2010, reflect a global consensus and political commitment to development and environment cooperation at the highest level. In their agendas international, regional and sub regional organizations are called upon to contribute to this effort. This is the point where it becomes fundamental for both sides to get together. Organic agriculture provides substantive, measurable and tangible benefits towards achieving this mandate, but is barely mentioned in the 850 million USD<sup>3</sup> program budget of the FAO. In the following listing only a few are recorded. They are not at all new but should underline once again what organic agriculture can contribute to.

By picking out two goals from the Rio declaration, the solutions through organic agriculture are manifold.

1. Governments are looking for solutions regarding poverty, hunger and ill health. The results should lead to the fulfillment of basic needs and improve living standards for all. The future should become safer and more prosperous.

Organic agriculture:

is based on the Principle of Fairness. With this, organic agriculture is built on relationships that ensure fairness with regard to the common environment and life opportunities. In 2006 the Internal Control System (ICS) will be extensively further developed with a focus on standards which must allow local equivalence and certification systems for smallholders' situation worldwide;

is based on the Principle of Health. With this organic agriculture sustains and enhances the health of soil, plant, animal and humankind as one indivisible entity. It is necessary

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3 850 million USD = 699.4 million EUR (per 31.12.2005)



to further promote the role of organic agriculture and food security.  
 is based on the Principle of Care. With this organic agriculture is managed in a precautionary and responsible manner to protect the health and well being of current and future generations and the environment;  
 supports the treaty initiative to share the genetic commons. It is a support when it comes to patents on seeds and genetic resources for food that threaten sustainable farming practices, farmers' livelihoods and food security;  
 promotes organic agriculture in developing countries, where organic farming can play a wide-ranging role in regard to food security;  
 works with food security. A majority of agriculture practitioner's worldwide are smallholders. It is imperative that small farmers are not marginalized and unduly excluded from the organic sector due to factors beyond their control. It shows the possibility to look after the production for their own consumption and the local market instead to fixing their views towards the world market.

2. Governments are looking for solutions regarding protection of ecosystems. At the Earth Summit it was quoted that ecosystems should be protected and managed better.

Organic agriculture:

is based on the Principle of Ecology. With this, organic agriculture relies on living ecological systems and cycles, working with them and helping to sustain them;  
 starts in higher agro-ecosystems such as watersheds, biotopes and landscapes in which a farm exists. The vision of organic, and its application in standards and certification, embraces the whole;  
 contributes to the preservation of biodiversity inter alia by the protection of ground water from nitrates and pesticides;  
 provides adequate animal housing and welfare, preserves soil fertility as well as air and energy resources.

### *Call for action*

The Congress Declaration of the 15th Organic World Congress of the International Federation of Organic Agriculture Movements (IFOAM) called upon governments worldwide to actively endorse and support organic agriculture. It also called on individual governments to allocate budgetary funds for investment into organic agriculture; the minimum must be proportionate to the organic sector's production in their countries. Governments are asked to internalize social and environmental costs in the prices of agricultural products and to remunerate organic farmers for the ecosystem services they provide.

As all the world's countries and all the world's leading development institutions already agreed, pledges should be kept. Skeptics to organics often say: "But where is the proof?" It is agreed that more research into organics is needed; however, if we sit and wait for this without taking action, then we are simply ignoring the results we have already witnessed through the practices of organic agriculture!

## 20 CONTACT

### **BioFach,**

organized by NürnbergMesse GmbH  
Messezentrum  
D-90471 Nürnberg, Germany  
Tel. +49 911 8606-0  
Fax +49 9 11 86 06-28  
biofach@nuernbergmesse.de  
www.biofach.com

### **BioFach America, BioFach America Latina, BioFach China,**

organized by Nürnberg Global Fairs GmbH  
Messezentrum  
D-90471 Nürnberg, Germany  
Tel +49 911 86 06-8699  
Fax +49 911 86 06-8694  
info@nuernbergglobalfairs.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

## **APPENDIX: COUNTRIES THAT PROVIDED INFORMATION ON LAND USE AND CROP CATEGORIES**

This appendix is a supplement to the land use and crop tables in the various chapters of this book and it shows from which countries information on the main land use and crop categories was available.

### **Main land use categories**

*Arable Land (general):* Albania, Argentina, Armenia, Austria, Azerbaijan, Belgium, Benin, Bosnia Herzegovina, Burkina Faso, Canada, China, Costa Rica, Croatia, Cyprus, Czech Rep., Denmark, Dominican Rep., Ecuador, Egypt, El Salvador, Estonia, Finland, France, Georgia, Germany, Ghana, Greece, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Korea, Kyrgyzstan, Laos, Latvia, Lebanon, Lithuania, Luxembourg, Macedonia, Mali, Mexico, Moldova, Nepal, Netherlands, Norway, Pakistan, Palestine, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Republic of, Romania, Russia, Rwanda, Saudi Arabia, Senegal, Serbia/Montenegro, Slovak Republic, Slovenia, Spain, Sudan, Sweden, Switzerland, Syria, Taiwan, Tanzania, Thailand, Tunisia, Turkey, Uganda, UK, Ukraine, Uruguay, USA, Zambia

*Permanent Crops (general):* Albania, Algeria, Argentina, Armenia, Austria, Azerbaijan, Belgium, Bolivia, Bosnia Herzegovina, Brazil, Cameroon, Canada, Chile, China, Colombia, Costa Rica, Croatia, Cuba, Cyprus, Czech Rep., Denmark, Dominican Rep., Ecuador, Egypt, El Salvador, Estonia, Finland, France, Georgia, Germany, Ghana, Greece, Guatemala, Honduras, Hungary, Indonesia, Israel, Italy, Jordan, Kyrgyzstan, Laos, Latvia, Lebanon, Lithuania, Luxembourg, Macedonia, Madagascar, Mauritius, Mexico, Moldova, Nepal, Netherlands, Nicaragua, Norway, Pakistan, Palestine, Panama, Peru, Poland, Portugal, Romania, Rwanda, Saudi Arabia, Serbia/Montenegro, Slovak Republic, Slovenia, Spain, Sri Lanka, Sudan, Switzerland, Syria, Taiwan, Thailand, Tunisia, Turkey, Uganda, UK, Ukraine, Uruguay, USA

*Permanent pastures:* Albania, Argentina, Armenia, Austria, Azerbaijan, Belgium, Bosnia Herzegovina, Canada, China, Croatia, Czech Rep., Denmark, Egypt, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Mexico, Nicaragua, Norway, Pakistan, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Syria, Tunisia, UK, Ukraine, Uruguay, USA

*Forest and wild collection:* Albania, Argentina, Azerbaijan, Brazil, Bulgaria, China, Costa Rica, Croatia, Ecuador, Iceland, India, Iran, Kenya, Kyrgyzstan, Lithuania, Macedonia, Mexico, Peru, Romania, Russia, Serbia/Montenegro, Syria, Tunisia, Turkey, Zambia

### **Arable land: Crop categories**

*Cereals:* Albania, Argentina, Austria, Belgium, China, Costa Rica, Croatia, Cyprus, Czech Rep., Denmark, Ecuador, Egypt, Finland, France, Georgia, Greece, Hungary, Indonesia, Ireland, Israel, Italy, Korea, Kyrgyzstan, Latvia, Lebanon, Lithuania, Luxembourg, Macedonia, Mexico, Moldova, Netherlands, Norway, Pakistan, Philippines, Portugal, Republic of, Romania, Saudi Arabia, Serbia/Montenegro, Slovenia, Sudan, Sweden, Switzerland, Syria, Taiwan, Thailand, Tunisia, UK, Uruguay, USA, Zambia

*Field Fodder Growing:* Albania, Belgium, Czech Rep., Denmark, France, Greece, Hungary, Italy, Latvia, Macedonia, Netherlands, Romania, Slovenia, Sweden, Switzerland, Thailand, Tunisia, UK, USA

*Vegetables:* Albania, Argentina, Austria, Azerbaijan, Belgium, Canada, China, Costa Rica, Croatia, Cyprus, Czech Rep., Denmark, Dominican Rep., Ecuador, Egypt, El Salvador, Finland, France, Georgia, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lebanon, Lithuania, Luxembourg, Mexico, Moldova, Netherlands, Norway, Panama, Peru, Poland, Portugal, Saudi Arabia, Serbia/Montenegro, Slovenia, Spain, Sweden, Switzerland, Syria, Taiwan, Thailand, Tunisia, UK, Ukraine, USA, Zambia

*Other Arable crops:* Armenia, Austria, Azerbaijan, Belgium, Bosnia Herzegovina, Canada, China, Croatia, Czech Rep., Denmark, Ecuador, Egypt, Estonia, Finland, France, Germany, Greece, Iceland, Italy, Laos, Luxembourg, Mexico, Netherlands, Norway, Pakistan, Palestine, Poland, Rwanda, Saudi Arabia, Slovak Republic, Spain, Sweden, Switzerland, Tunisia, UK, Ukraine

*Protein Crops:* Argentina, Austria, Belgium, Cyprus, Czech Rep., Denmark, Finland, France, Greece, Hungary, Italy, Latvia, Macedonia, Mexico, Netherlands, Romania, Russia, Serbia/Montenegro, Slovenia, Sweden, USA

*Set aside / Green manuring:* Belgium, Czech Rep., Denmark, Estonia, Finland, Greece, Hungary, Latvia, Lithuania,

Moldova, Portugal, Slovenia, Spain, Sweden, UK

*Oil Seeds:* Sudan, Israel, Pakistan, Austria, Belgium, Czech Rep., Denmark, Finland, France, Greece, Hungary, Italy, Macedonia, Moldova, Romania, Serbia/Montenegro, Slovenia, Sweden, Ecuador, El Salvador, Mexico, USA

Medicinal and aromatic plants and spices: Egypt, Ghana, Sudan, Tunisia, Zambia, Nepal, Belgium, Cyprus, Czech Rep., Denmark, Finland, France, Greece, Hungary, Italy, Lithuania, Moldova, Portugal, Serbia/Montenegro, Slovenia, Spain, Costa Rica, Dominican Rep., Ecuador, Mexico, Peru

*Industrial crops:* Argentina, Azerbaijan, Belgium, Benin, Burkina Faso, China, Czech Rep., Denmark, Egypt, Finland, Greece, Hungary, India (provisional), Israel, Italy, Kyrgyzstan, Latvia, Mali, Pakistan, Paraguay, Peru, Senegal, Slovenia, Sweden, Syria, Tanzania, Turkey, Uganda, USA

*Root crops:* Austria, Belgium, Cyprus, Czech Rep., Denmark, Finland, Greece, Hungary, Italy, Latvia, Macedonia, Netherlands, Saudi Arabia, Slovenia, Sweden

*Seed production:* Belgium, Denmark, Greece, Hungary, Latvia, Spain

Flowers and ornamental plants: Belgium, Denmark, Ecuador, Germany, Ghana, Greece, Hungary, Italy, Latvia, Lebanon, Netherlands, Spain, UK

### **Permanent crop categories**

*Olives:* Albania, Argentina, Croatia, Cyprus, Egypt, Greece, Israel, Italy, Jordan, Lebanon, Mexico, Peru, Portugal, Saudi Arabia, Slovenia, Spain, Syria, Tunisia

*Fruits and Nuts:* Egypt, Ghana, Sudan, Tunisia, China, Georgia, Israel, Lebanon, Pakistan, Saudi Arabia, Syria, Taiwan, Thailand, Albania, Austria, Belgium, Croatia, Cyprus, Czech Rep., Denmark, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Moldova, Netherlands, Norway, Portugal, Romania, Serbia/Montenegro, Slovenia, Spain, Switzerland, UK, Slovak Republic, Argentina, Costa Rica, Dominican Rep., Ecuador, Mexico, Panama, Peru, Uruguay, Canada, USA

*Cocoa:* Brazil, Costa Rica, Cuba, Dominican Rep., Ecuador, El Salvador, Ghana, Mexico, Nicaragua, Panama, Peru, Uganda

*Coffee:* Bolivia, Brazil, Cameroon, China, Colombia, Costa Rica, Dominican Rep., Ecuador, El Salvador, Ghana, Guatemala, Honduras, Indonesia, Mexico, Nepal, Nicaragua, Panama, Peru, Sri Lanka, Uganda

*Grapes:* China, Georgia, Israel, Lebanon, Syria, Albania, Austria, Croatia, Cyprus, Czech Rep., France, Germany, Greece, Hungary, Italy, Luxemburg, Macedonia, Moldova, Portugal, Serbia/Montenegro, Slovenia, Spain, Switzerland, Turkey, Slovak Republic, Argentina, Chile, Canada, USA

*Permanent crops, various:* Ecuador, Macedonia, Mexico, Peru, Rwanda, Sudan

*Tropical fruits:* Algeria, Cameroon, Costa Rica, Cyprus, Dominican Rep., Ecuador, El Salvador, Ghana, Israel, Madagascar, Mexico, Pakistan, Panama, Peru, Rwanda, Saudi Arabia, Spain, Sudan, Tunisia

*Other permanent crops:* Armenia, Azerbaijan, Bosnia Herzegovina, Ecuador, Egypt, Estonia, Hungary, Kyrgyzstan, Laos, Palestine, Poland, Romania, Slovenia, Switzerland, Ukraine, Uruguay

*Special Crops:* Ghana, Switzerland, Tunisia

*Sugar cane:* Argentina, Costa Rica, Ecuador, Mauritius, Mexico

*Other fruit:* China, Tunisia

*Tea:* Georgia, Nepal, Taiwan

*Oil seeds:* Israel (Jojoba)

*Medicinal and aromatic plants:* Ghana, Switzerland

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