

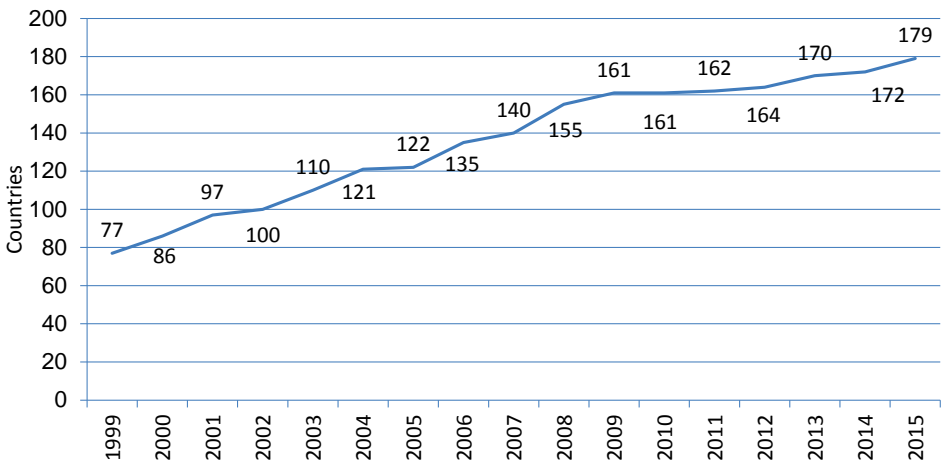
# FiBL Survey on Organic Agriculture Worldwide – Metadata

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For the 18th FiBL survey on organic agriculture worldwide, data on organic agriculture were available for 179 countries. Since 1999, when the data collection started, at that time carried out by the German-based Foundation Ecology and Agriculture (SÖL), the number of countries included has more than doubled. The survey is funded by the Swiss State Secretariat of Economic Affairs (SECO), the International Trade Centre (ITC), and NürnbergMesse, the organizers of the Biofach trade fair. In the following article, the data collection, processing, and publication process are described. This description follows the structure of the reference metadata provided by Eurostat for its data collection on organic agriculture covering the European Union, the EFTA countries and the EU candidate countries (Eurostat 2016). We see our paper as a work in progress, and we are aiming to provide more details, including details by indicator, in the future.

## Development of the number of countries with data on organic agriculture 1999-2015

Source: FiBL-IFOAM-SOEL-Surveys 1999-2017



**Figure 108: Development of the number of countries with data on organic agriculture 1999-2015**

Source: FiBL-IFOAM-SOEL surveys 1999-2017

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## 2 Metadata update

The metadata on the global survey on organic agriculture were first compiled in January 2017, and it is planned to include more details and update them regularly. They will be made available at [www.organic-world.net/statistics.html](http://www.organic-world.net/statistics.html).

## 3 Statistical presentation

### 3.1 Data description

The purpose of the data collection on organic agriculture worldwide is to display an overview of the uptake of organic farming globally.

Data is collected on the following indicators:

- Area: country totals, land use, crops, including level of conversion
- Livestock: by animal type
- Production: value and volume
- Operators: by operator type: in numbers
- Retail sales: country totals and by product, value and volume
- International trade: country totals and by product, value and volume

As for some of the indicators, data is incomplete or not comparable over the years, not all data that are collected by FiBL are published.

### 3.2 Classification system

For area, livestock, and primary production data, a classification similar to that which Eurostat uses in its questionnaire for organic farming and in its organic farming database is applied (Eurostat 2017). This classification has been expanded to cover tropical and other crops that are not grown in Europe.

Classification for data on area and crop production:

- Arable land crops: Cereals, dry pulses and protein crops, oilseeds, root crops, flowers and ornamental plants, vegetables and strawberries, textile crops, medicinal and aromatic plants, mushrooms, plants harvested green, sugarcane, other arable land crops, and fallow land as part of the crop rotation;
- Permanent crops: Berries, citrus fruit, cocoa, coconuts, coffee, grapes, medicinal and aromatic plants, nuts, olives, temperate fruit, tropical and subtropical fruit, tea, and other permanent crops;
- Permanent grassland (pastures and meadows);
- Other areas such as fallow land, hedges, and ponds.

Classification for livestock:

- Bovine animals: Bovine animals for meat production; bovine animals not for meat production, dairy cows, suckler cows
- Pigs: Breeding sows, fattening pigs, other pigs
- Sheep: Ewes, breeding females, other sheep
- Goats: Breeding females, other goats
- Poultry: Broilers, laying hens, other poultry
- Horses
- Bees
- Other livestock

For retail sales and international trade data, the classification is based on Eurostat's CPA (Statistical Classification of Products by Activity in the European Economic Community). However, several modifications were made to cover the needs of the organic data. This classification was used in the framework of the European funded OrganicDataNetwork project ([www.organicdatanetwork.net](http://www.organicdatanetwork.net)) and is being developed further.

Classification for manufactured food products:

- Bakery and farinaceous products
- Beverages
- Dairy products
- Grain mill products, starches, and starch products
- Preserved meat and meat products
- Processed and preserved fish, crustaceans, and molluscs
- Processed and preserved fruit and vegetables
- Vegetable and animal oils and fats

For non-manufactured plant products, the same classification as for primary products is used (see above).

Many data suppliers provide the data only in an aggregated way, and the groupings of data differ from country to country, thus hindering data comparisons. This is particularly the case for retail sales data.

### **3.3 Coverage – sector**

- Area: Area of agricultural holdings certified organic by certification/inspection bodies or Participatory Guarantee Systems
- Livestock: Livestock on agricultural holdings certified organic by certification/inspection bodies or Participatory Guarantee Systems
- Production: Production of agricultural holdings certified organic by certification/inspection bodies or Participatory Guarantee Systems
- Operators: The data collected covers all different types of operators certified organic by certification/inspection bodies or Participatory Guarantee Systems involved in the organic sector (production, processing, import, export, wild collection, others)

- Retail sales and international trade: Retail sales and international trade products with organic certification.

### **3.4 Statistical concepts and definitions**

For the FiBL survey on organic agriculture worldwide, data on certified organic production and trade according to international and national organic regulations or laws are used (Huber & Schmid 2017). Most of these regulations are covered by the IFOAM Family of Standards (IFOAM - Organics International 2017).

### **3.5 Statistical unit**

Statistical units are certified agricultural holdings, producers, processors, importers, and exporters as well as production, retail sales, exports and imports of certified organic products.

### **3.6 Statistical population**

For all indicators, FiBL aims to cover all organic area, livestock numbers, production, aquaculture products, retail sales, exports and imports.

### **3.7 Reference area**

The FiBL survey aims to cover all countries of the world. Currently, 179 countries and territories are covered. For countries and territories, the FAO country list is used (FAOSTAT 2017), and the designation "country" is used to cover countries or territories. As to the country grouping by region, the Standard Country and Area Classification, as defined by the United Nations Statistics Division (2014) is used in most cases. However, other than the UN classification, Cyprus and Turkey have been allocated to Europe, as Cyprus is a member of the European Union (EU), and Turkey is an EU candidate country. Furthermore, Kosovo is included.

### **3.8 Coverage - Time**

Data is available from 1999 onwards.

## **4 Unit of measure**

### **4.1 Unit of measure**

- Area: Hectares
- Livestock: In heads (definitions pending for non-ruminants – if average stock or animals slaughtered is used).
- Bees: In number of hives
- Aquaculture products: In metric tons
- Volume of production, retail sales, imports, exports: Metric tons
- Value of production, retail sales, imports, exports: Million euros
- Operators: Number

Values are often reported to FiBL in currencies other than the euro; in such cases, they are converted to euros according to the average exchange rate for the year in question as communicated by the European Central Bank ([www.ecb.europa.eu](http://www.ecb.europa.eu)).

### 5 Reference Period

The data refers to December 31 of the respective year. However, it is not possible for all countries or certifiers to provide data per that date. If new data is not received, data of the previous year or older data is used. Explanations and details referring to the reference period can be found on the Organic-World.net website at [www.organic-world.net/statistics/statistics-data-tables/ow-statistics-data-key-data.html](http://www.organic-world.net/statistics/statistics-data-tables/ow-statistics-data-key-data.html).

### 6 Institutional Mandate

#### *6.1 Institutional Mandate - legal acts and other agreements*

There is no institutional mandate to deliver data on organic agriculture to FiBL.

A cooperation agreement with the member countries of the Interamerican Commission of Organic Agriculture (CIAO), aiming at intensifying collaboration in the area of organic data collection, is underway.

### 7 Confidentiality

#### *7.1 Confidentiality - policy*

Whenever requested by the data suppliers, some of the data is kept confidential and is made available only in aggregated form. This is particularly the case for data provided by international certifiers.

If there are less than three operators in a country, their number is not shown.

#### *7.2 Confidentiality - data treatment*

In general, however, the number of statistical units is big enough, even in smaller countries, that treatment of confidentiality is not relevant.

### 8 Release policy

#### *8.1 Release calendar*

The publication date – every year at the first day of the Biofach Organic Trade Fair in Nuremberg, Germany – is announced on the Organic-World.net website and on FiBL.org. The release is also announced in the annual publication, “The World of Organic Agriculture”.

#### *8.2 Release calendar access*

The release date (annual event at Biofach in February) is publically available at the calendar of events at [www.organic-world.net](http://www.organic-world.net) and [www.fibl.org](http://www.fibl.org).

#### *8.3 Release policy - user access*

Most data is publically available without cost (online). The printed version can be obtained at the FiBL online shop.

### 9 Frequency of dissemination

Data is released each February (print and online).

## 10 Accessibility and clarity

The statistics are disseminated via a number of dissemination channels maintained by the Research Institute of Organic Agriculture and in collaboration with the IFOAM - Organics International.

### 10.1 Dissemination format - News release

The publication of the data is announced with a press release, which is sent to media worldwide. The press release is published on the websites of FiBL and IFOAM - Organics International and on FiBL's [www.organic-world.net](http://www.organic-world.net) website, FiBL's social media channels, and [Twitter.com/FiBLStatistics](https://twitter.com/FiBLStatistics).

### 10.2 Dissemination format - Publications

The data is published in the yearbook "The World of Organic Agriculture", which is available in hard copy (published by FiBL and IFOAM - Organics International) and as a PDF document online (at [www.organic-world.net/yearbook.html](http://www.organic-world.net/yearbook.html)).

### 10.3 Dissemination format - online database

Furthermore, the data is made available in online data tables (interactive tables, MS Excel files, and interactive map) at [www.organic-world.net/statistics/statistics-data-tables.html](http://www.organic-world.net/statistics/statistics-data-tables.html).

### 10.4 Dissemination format - microdata access

Data other than the published figures is usually not made available; however, upon special request, certain data sets may be released.

### 10.5 Dissemination format - other

Data on organic agriculture in Europe is made available in the form of interactive infographics on the website of IFOAM EU at [www.ifoam-eu.org/en/what-we-do/organic-europe](http://www.ifoam-eu.org/en/what-we-do/organic-europe).

### 10.6 Documentation on methodology

The preparation of the documentation of methodology is in progress.

### 10.7 Quality management - documentation

A data management handbook is under development.

## 11 Quality management

### 11.1 Quality assurance

While entering data into the FiBL questionnaire, totals and subtotals are automatically generated, thus providing a first basic quality check for the data providers.

The questionnaire was programmed by flexinfo ([www.flexinfo.ch](http://www.flexinfo.ch)) for automatic data entering into the FiBL Bioglobal database, thus avoiding mistakes that could otherwise happen when entering data from the questionnaire manually.

Systematic data validation, including comparisons with data from other sources, is described under 18.4 – data validation.

### 12 Relevance

#### 12.1 Relevance - User Needs

Users are stakeholders of the organic industry, government bodies, development agencies, policy makers, researchers, and the media.

FAOSTAT uses the data for its land use database (FAO 2017), and Agence Bio uses the data for its annual compilation of the global statistics in French (Agence Bio 2016).

#### 12.2 Relevance - User Satisfaction

User requirements are not systematically surveyed. However, the use of the data is monitored and documented on [www.organic-world.net](http://www.organic-world.net), [twitter.com/FiBLStatistics](https://twitter.com/FiBLStatistics), and the FiBL Facebook page.

#### 12.3 Completeness

Completeness depends on the indicator. Almost all countries have data on area. Most have data on operators, but less on livestock, production, retail sales, and international trade. This means that there are many data gaps, but in addition, data that exists on certain indicators, is often not complete.

- For some countries, the data provided on areas, operators and production are not complete, as the data collection system does not have access to the data from all certifiers. Therefore, it can be assumed that the extent of organic agriculture is larger than documented by the FiBL survey.
- Data on conversion level is not available from all countries. Furthermore, for some countries, data is collated from several certifiers, some of which provide information on the conversion status while others do not. Therefore, the sum of land under conversion and the fully converted land is not necessarily the same as the total land under organic agricultural management.
- Reporting precise figures on the number of organic producers remains difficult, as some countries report only the numbers of companies, projects, or grower groups, which may each comprise a number of individual producers.
- Not all countries reported the number of processors, exporters, importers, hence the global number on these operator types remains incomplete.
- Retail sales by product are often based on samples and therefore not always complete.

Not all countries provide annual updates. In these cases, FiBL uses the data from the previous year in order to produce plausible data on organic agriculture worldwide. In a specific document, FiBL reports the data year.

### 13 Accuracy

#### 13.1 Accuracy - overall

For area, production, and livestock data, usually, the organic regulations foresee the annual control of every operator, and, therefore, no sample is required for area, production, livestock, and operator data, even though some countries base these data on surveys using samples (e.g., the Certified Organic Survey of the National Agricultural

Statistics Service of the United States Department of Agriculture 2016). Also, retail sales data (for breakdown by product) is often based on samples.

## **14 Timeliness and punctuality**

### ***14.1 Timeliness***

In general, data needs to be submitted in October at the latest for inclusion in the following edition of “The World of Organic Agriculture.”

### ***14.2 Punctuality***

Data that is not received in time is included into FiBL’s database and published at a later stage.

## **15 Coherence and comparability**

### ***15.1 Comparability - geographical***

The harmonised questionnaire intends to guarantee a certain geographical comparability between countries and territories. However, not all data providers use the questionnaire and there are differences in definitions (e.g. in the case of livestock); therefore comparability is somewhat limited.

### ***15.2 Comparability - over time***

With each survey data from additional countries and territories is found, for half of the countries, data dating back to the early 2000s is available. Whenever historical data becomes available, it is included in the database.

Occasionally, data sources and data providers are changing or more complete data was received, which limits the comparability over time in some cases.

### ***15.3 Coherence - cross domain***

The figures can be compared with data from other sources within FAOSTAT, Eurostat, or national databases. This is mainly done in order to calculate organic shares of totals and to validate data.

### ***15.4 Coherence - internal***

Coherence amongst the various tables and within the tables is checked.

## **16 Cost and burden**

The data collected by FiBL is based on national data sources, data from certifiers, and market research companies. The FiBL effort for the annual data collection and related activities (media work, publication, enquiries, database development, data revisions) amounts to at least eight months annually.

## **17 Data revision**

### ***17.1 Data revision - policy***

There is no systematic revision of the data. Data are revised whenever better and more accurate figures are provided.



### 17.2 Data revision - practice

The FiBL database is updated when revised data are received.

Major data revisions are communicated on the Organic-World.net website at [www.organic-world.net/statistics/statistics-data-revisions.html](http://www.organic-world.net/statistics/statistics-data-revisions.html), and corrigenda (including corrections of data) for “The World of Organic Agriculture” are posted at [www.organic-world.net/yearbook.html](http://www.organic-world.net/yearbook.html).

## 18 Statistical processing

### 18.1 Source data

The survey aims to include all organic actors with data on operators, areas, livestock, production, retail sales, and international trade.

The data on the different indicators are collected among multiple data sources and from many data providers, varying from country to country.

As regards data on area, livestock numbers, production, and operators, which are usually based on certifier data, FiBL collects the data from government sources (published sources or e-mail contact). This data is mostly complete; however, some countries do not have access to the data from foreign certifiers that are not registered under the country's accreditation system. In other cases, the private sector collates this data from the certifiers or among the organic operators. However, often, the private sector does not have full access to the data. Finally, there are countries that have no data collection system in place. For these countries, FiBL receives the data from major international certifiers. Again, this data is often not complete, or there is a problem with continuity over the years.

The data on the various indicators can be based on the following sources:

Area, production, livestock, and operator data:

- Data from the certifiers/control bodies: often compiled by control authorities, local experts or national organic movements;
- Statistical offices (agricultural census/farm structure survey);
- Survey among enterprises producing organic products: usually compiled by the private sector;
- Estimations (only for production volume): for example, for some purposes, FiBL calculates/estimates the production data (e.g. Lernoud et al. 2016) based on the organic area data, using standard yields as provided by FAO and adapting them according to FiBL assumptions on organic yields.

Retail sales data:

- Market research companies based on household or trade panel data;
- Statistical offices: surveys among all retailers;
- Surveys of the private sector among retailers;
- Expert estimations: for example, some countries use the available production volume data and multiply it by the retail price of each product.

International trade data:

- Statistical offices;
- Market research companies: using multiple sources including customs data;
- Government agencies: for example, export promotion companies;
- Control authorities: based on data from certifiers/control bodies;
- Surveys of the private sector among exporters and importers.

Details for each data source are provided in the annex of the annual publication of “The World of Organic Agriculture” (Willer & Lernoud 2017).

In the case of the European Union, data on area, production, livestock and operators is collated by Eurostat, the statistical office of the European Union, based on official national data. For many European countries, Eurostat data is used for the global survey.

### ***18.2 Frequency of data collection***

Data has been collected annually since 2000.

### ***18.3 Data collection***

Data is collected from a wide range of data providers with an MS Excel-based questionnaire, consisting of several sheets (an overview sheet for the country totals for each indicator, one for area and primary production, one for livestock and livestock products, one for operators, and one for retail sales and international trade).

In some cases, Internet sources are used (e.g. the Eurostat organic farming database).

### ***18.4 Data validation***

The first step of validation is the carried out while entering data into the FiBL questionnaire, an MS Excel file with several sheets for the individual indicators, allowing for a first quality check by generating totals and subtotals.

Subsequently, data is entered into the FiBL database, and once stored, data is checked using pivot tables linked to the database. Basic checks such as a comparison with the previous year and the overall total, are carried out. After data validation, data providers are asked to check incoherent figures or/and outliers and possibly to revise their data when no satisfying explanation is provided.

In a specific document (available online), FiBL provides explanation and further information on data.

### ***18.5 Data compilation***

Validated data is the basis for the compilation of subtotals and totals at regional and global level, the calculation of organic shares (shares of total area, livestock, production, and retail sales), of the per capita consumption, and of growth rates.

### ***18.6 Adjustment***

If data suppliers provide updates or corrections at a later stage, these are included in the database.

## 19 Comment

For all additional information on the single indicators (operators, area and production, livestock, and products of animal origin), please consult our website at [www.organic-world.net/statistics/statistics-data-tables.html](http://www.organic-world.net/statistics/statistics-data-tables.html) and go to "About".

## 20 Other

### *Global Survey on Voluntary Sustainability Standards (VSS)*

The Research Institute of Organic Agriculture FiBL has recently expanded its data collection activities to further standards. The project "Global Survey on Voluntary Sustainability Standards (VSS)," which started in 2014, aims to set up a system to collect, process, and disseminate market data on Voluntary Sustainability Standards (VSS) across all geographic region. Data collection is carried out by FiBL; the results are published jointly with the International Trade Centre (ITC) and the International Institute of Sustainable Development (IISD). The next edition of this report will be published in June 2017 (Lernoud et al. 2017).

### Further reading

- Agence Bio (2016): La Bio dans le monde. Agence Bio Montreuil. Available at [www.agencebio.org/sites/default/files/upload/documents/4\\_Chiffres/BrochureCC/carnet\\_monde\\_2016.pdf](http://www.agencebio.org/sites/default/files/upload/documents/4_Chiffres/BrochureCC/carnet_monde_2016.pdf)
- Eurostat (2008): Statistical Classification of Products by Activity in the European Economic Community, 2008 version. The website of Eurostat, Luxembourg. Available at <http://ec.europa.eu/eurostat/ramon/index.cfm>
- Eurostat (2016): Organic farming (org). Reference Metadata in Euro SDMX Metadata Structure (ESMS). Compiling agency: Eurostat, the statistical office of the European Union. Available at the website of Eurostat, Luxembourg at [http://ec.europa.eu/eurostat/cache/metadata/en/org\\_esms.htm](http://ec.europa.eu/eurostat/cache/metadata/en/org_esms.htm)
- Eurostat (2017): Database organic farming. The website of Eurostat, Luxembourg. Available at <http://ec.europa.eu/eurostat/web/agriculture/data/database>
- FAO (2017): Land use data. The FAOSTAT website, Food and Agriculture Organisation of the United Nations, Rome. Available at <http://www.fao.org/faostat/en/#data/RL>
- FiBL and IFOAM: The World of Organic Agriculture, editions 2000-2017. Research Institute of Organic Agriculture (FiBL) and IFOAM - Organics International. Frick and Bonn. Available <http://www.organic-world.net/yearbook.html>
- Huber, B. and Schmid, O. (2017): Standards and Regulations. Willer, H. and Lernoud J., (2017): The World of Organic Agriculture. Research Institute of Organic Agriculture (FiBL) and IFOAM - Organics International. Frick and Bonn. Available at Available <http://www.organic-world.net/yearbook.html>
- IFOAM - Organics International (2017): IFOAM Family of Standards. The website of IFOAM - Organics International, Bonn. Available at <http://www.ifoam.bio/en/ifoam-family-standards-0>
- Lernoud, J. and Willer, H. (2017): Data providers and data sources. In: Willer, H. and Lernoud J., (2017): The World of Organic Agriculture. Research Institute of Organic Agriculture (FiBL) and IFOAM - Organics International. Frick and Bonn. Available at Available <http://www.organic-world.net/yearbook.html>
- Lernoud, J., Potts, j., Sampson, G., Voora, ., Willer, H. and Wozniak, J. (2016): The State of Sustainable Markets: Statistics and Emerging Trends 2015. FiBL-IIS-ITC Report, International Trade Centre, Geneva. Available at <http://orgprints.org/29694/>
- National Agricultural Statistics Service (NASS) of the United States Department of Agriculture (USDA) (2016): 2015 Certified Organic Survey. The website of NASS, Washington D.C. Available at [https://www.nass.usda.gov/Surveys/Guide\\_to\\_NASS\\_Surveys/Organic\\_Production/index.php](https://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/Organic_Production/index.php)
- OrganicDataNetwork (Ed.) (2014a) OrMaCode – ORganic Market data MAnual and CODE of Practice - Manual and Code of Practice for the initiation and maintenance of good organic market data collection and publication procedures. Università Politecnica delle Marche, Ancona, Italy.
- OrganicDataNetwork (2014b) D7.1 Data Network for better European Organic Market Information - Recommendations. Università Politecnica delle Marche, Ancona, Italy.
- United Nations Statistics Division (2014) (Composition of macro geographical (continental) regions, geographical sub-regions, and selected economic and other groupings. The UNSTAT website of the United Nations Statistics Division, New York. Available at <http://unstats.un.org/unsd/methods/m49/m49regin.htm>