Seventh International
Conference on
Agricultural Statistics

Modernization of
Agricultural Statistics
in Support
of the Sustainable
Development
Agenda

Rome
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2016

THEMATIC SET E
CLIMATE CHANGE AND ENVIRONMENTAL ISSUES: THE ROLE OF AGRICULTURE

SUSTAINABLE DEVELOPMENT FRAMEWORKS AND AGRO-ENVIRONMENTAL INDICATORS

The challenge of collecting and publishing data on organic agriculture worldwide

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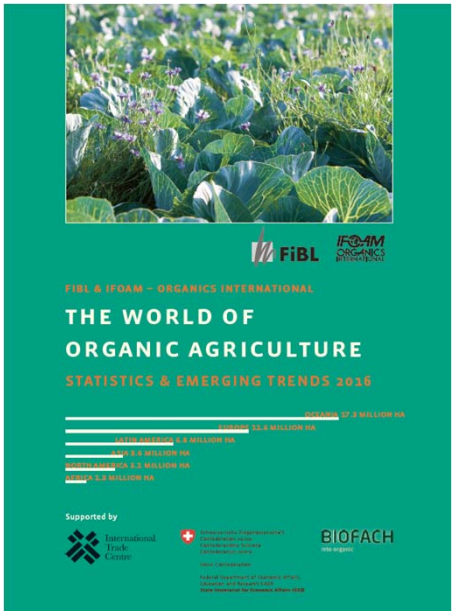
Contents

- FiBL data collection on organic agriculture worldwide
- Organic agricultural land as an agri-environmental indicator
- Current status of organic farming worldwide
- Challenges & recommendations

Annual data collection on organic agruculture

- The 17th edition of «The World of Organic Agriculture» was published by FiBL and IFOAM-Organics International in February 2016.
- Contents:
  - Data tables and graphs showing the results of the 17th annual survey on organic agriculture worldwide;
  - Organic agriculture in the regions and country information

Willer, H., Lernoud, J., (2016) The World of Organic Agriculture. Statistics and Emerging Trends 2016. FiBL, Frick, and, IFOAM – Organics International, Bonn



Data collection on organic farming worldwide

- The Swiss State Secretariat of Economic Affairs SECO, Berne
- International Trade Centre ITC
- Nürnberg Messe, the organizers of the BioFach World Organic Trade Fair
- 200 experts from all parts of the world contributed to the FiBL survey 2016.

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Departement of Economic Affairs,
Education and Research EAER
State Secretariat for Economic Affairs SECO

International Trade Centre

BIOFACH
into organic

European Union: 28 agri-environmental indicators (AEI)

- Commission Communication COM final 0508/2006 includes 28 agri-environmental indicators (AEI) to monitor the integration of environmental concerns into the European Union´s common agricultural policy (CAP)
- They are used by policy makers, agricultural and environmental researchers, observers of climate change and other environmental issues linked to agriculture.

Eurostat 2016

First set of AEIs	DPSIR
AEI 5 Mineral fertiliser consumption	D
AEI 6 Consumption of pesticides	D
AEI 7 Irrigation	D
AEI 8 Energy use	D
AEI 11.1 Soil cover	D
AEI 11.2 Tillage practices	D
AEI 11.3 Manure storage	D
AEI 12 Intensification/extensification	D
AEI 15 Gross nitrogen balance	P
AEI 16 Risk of pollution by phosphorus	P
AEI 18 Ammonia emissions	P
AEI 19 Greenhouse gas emissions	P
AEI 26 Soil quality	S

Second set of AEIs	DPSIR
AEI 1 Agri-env commitment	R
AEI 2 Agricultural areas under Natura 2000	R
AEI 3 Farmers' training level	R
AEI 4 Area under organic farming	R
AEI 9 Land use change	D
AEI 10.1 Cropping patterns	D
AEI 10.2 Livestock patterns	D
AEI 13 Specialisation	D
AEI 14 Risk of land abandonment	D
AEI 17 Pesticide risk	P
AEI 20 Water abstraction	P
AEI 21 Soil erosion	P
AEI 22 Genetic diversity	P
AEI 23 High Nature Value farmland	P
AEI 24 Renewable energy	P
AEI 25 Farmland birds	S
AEI 27.1 Water quality – Nitrate	S
AEI 27.2 Water quality – Pesticide	S
AEI 28 Landscape - State and diversity	S

AEI 4 - Area under organic farming: 1. Definition

- The main indicator is defined as**: Share of areas under organic farming/total UAA**
- The supporting indicator is defined as: **Area under organic farming**
- Environmental Concerns:
  - Organic farming uses organic production methods and places **high emphasis on environmental and wildlife protection** and, with regard to livestock production, on **animal welfare considerations**.
  - Organic production involves **holistic production management systems for crops and livestock**, emphasizing on-farm management practices over off-farm inputs.
  - This is accomplished by **avoiding, or largely reducing, the use of synthetic chemicals** such as fertilizers, pesticides, (fungicides, herbicides, insecticides), additives and veterinary medicinal products, replacing them, wherever possible, with cultural, biological and mechanical methods.
  - Organic producers develop a **healthy, fertile soil** by growing and rotating a mixture of crops and using clover to fix nitrogen from the atmosphere.
  - The production of genetically-modified (GM) crops and their use in animal feed is avoided.
  - Organic farms often have limited access to organic manure and since mineral fertilisers are not allowed, organic farming must rely on input of nitrogen through fixation by leguminous crops.
  - Organic farms produce animal products primarily based on home grown feed, and the farms are generally more diverse.
  - The **environmental pollutant load from organic farms is generally lower** than from conventional farms due to lower stocking rates and lower inputs. Biodiversity is often higher on organic farms due to absence of pesticide use.

Source: Eurostat 2011

AEI 4 - Area under organic farming:
2. Policy needs

- Council Regulation (EC) No. 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No. 2092/91 establishes **the legal framework for all levels of production, distribution, control and labelling of organic products** which may be offered and traded in the EU.
- This regulation **includes an article (Art. 36) on the statistical information** to be collected through the normal statistical frameworks.
- Member States are required to provide the Commission with the statistical information necessary for the implementation this Regulation.
- This Indicator has data requirements that are directly relevant to the **Rural Development Programmes** as well as further policies.

Source: Eurostat 2011

Further organic-related indicators

Further indicators

- Growth of organic agricultural land
- Retail sales
  - Totals
  - Shares
  - Growth rates
  - Per capita

Indicator consumer demand

- The significant and continuing expansion of consumer demand for organic products in many countries has influenced farming practices in the world.
- The indicator “organic farming” shows that the area under organic farming is increasing, suggesting farmers are responding to increased consumer demand for organic products.

17th survey on organic agriculture worldwide

- The 17th survey on organic agriculture worldwide was carried out by the Research Institute of Organic Agriculture FiBL in cooperation with partners from all around the world. The results were published jointly by FiBL and IFOAM – Organics International.
- The survey was carried out between July 2015 and February 2016; data per 31.12.2014.
- Data were received from 172 countries.
- New countries included: Kiribati, Puerto Rico, Suriname, and the US Virgin Islands.
- Updated data on area and producers were available for 135 countries.
- Data was provided by almost 200 country experts (representatives from NGOs, certification bodies, governments, researchers).
- The following data was collected: area data (including land use and crop details); producers, other operator types; domestic market values; export and import data; and livestock data (animal heads and production in metric tons).
- The results are published in the yearbook “The World of Organic Agriculture 2016” and at www.organic-world.net.

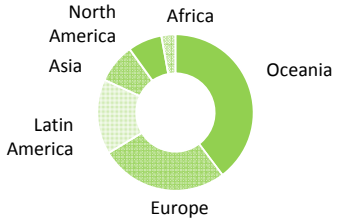
Key data on global organic agriculture 2014

- 172 countries have data on organic agriculture.
- 43.7 million hectares of agricultural land are organic
- Almost 1 % of the global farmland is organic; in 11 countries more than ten percent of the farmland is organic.
- The global market for organic food amounted to 80 billion US Dollars *Source: FiBL 2016*

WORLD: ORGANIC FARMLAND 2014

43.7 Mio ha

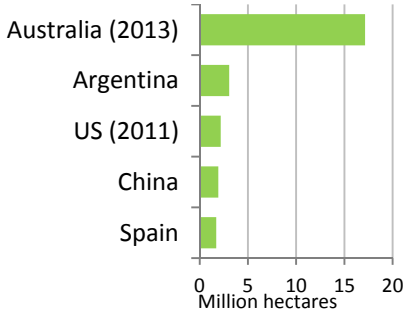
In Oceania there were 17.3 Mio ha, in Europe 11.6 Mio ha, and in Latin America 6.8 Mio ha.



Distribution of organic agricultural land by region 2014

Australia 17.2 Mio ha

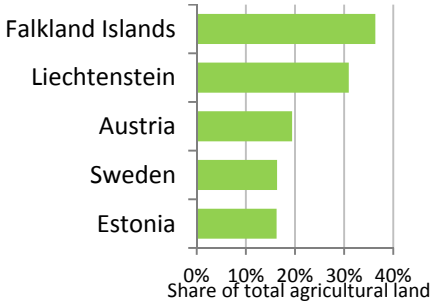
The ten countries with the largest organic agricultural areas have combined 73% of the world's organic farmland.



The 5 countries with the largest areas of organic farmland 2014

Approx. 1% of the world's farmland is organic

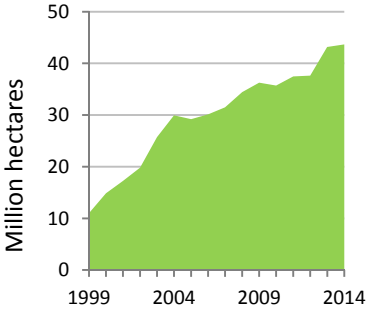
11 countries have more than 10% of their agricultural land under organic management.



Countries top five with> 10 percent of organic farmland 2014

+300% since 1999

In 2014, almost 500'000 hectares more were reported compared with 2013.



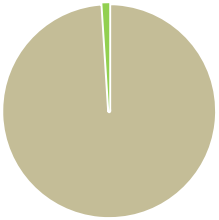
Growth of the organic agricultural land 1999-2014

FiBL

Source: FiBL survey 2016 www.organic-world.net

Organic shares of total agricultural area

World



Non-organic Organic

European Union

Non-organic Organic

Austria

Non-organic Organic

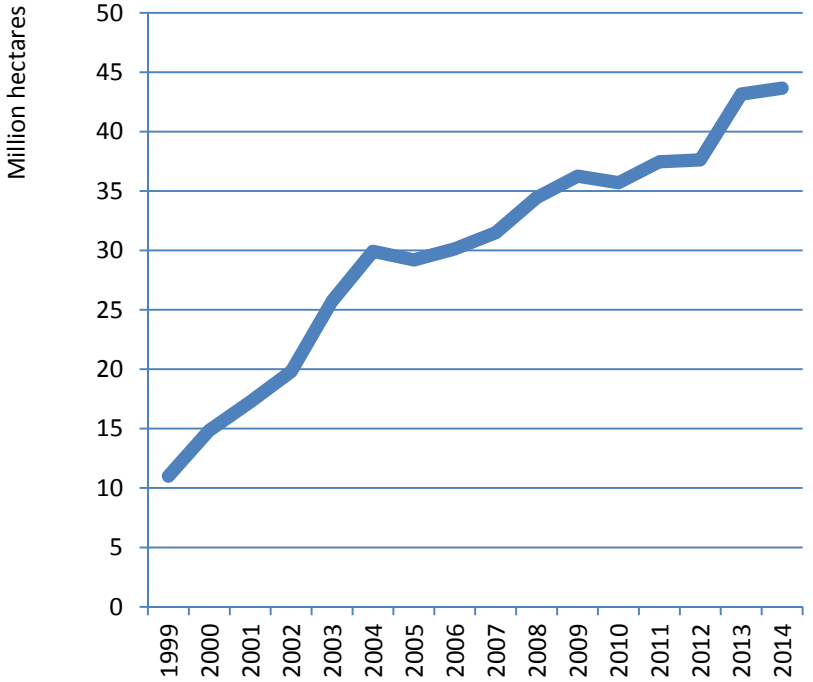
Canton of Grisons in Switzerland

Non-organic Organic

Growth of the organic agricultural land

Growth rates

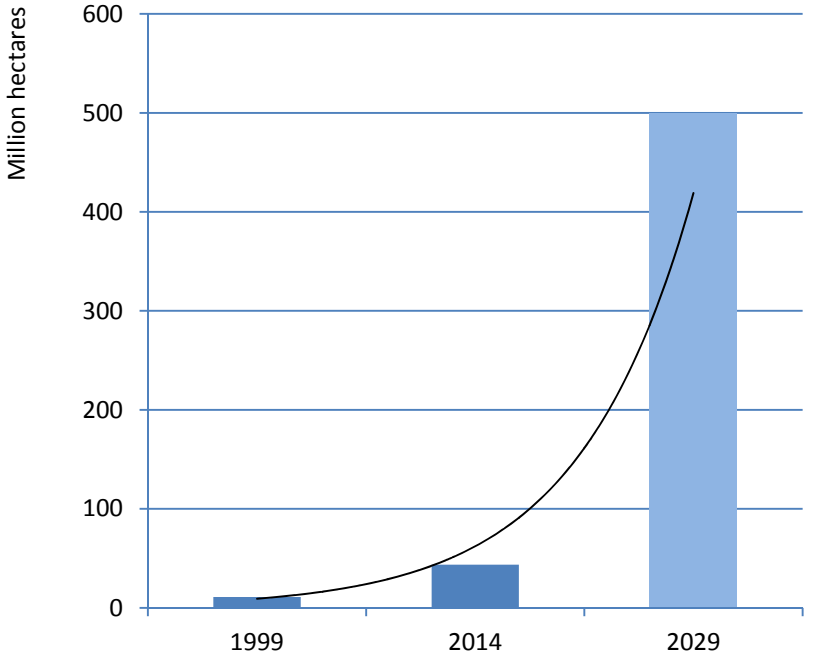
- Compared with the revised data from 2013, the organic agricultural land has **increased by almost 0.5 million hectares in 2014.**
- Compared with 1999, when data on organic agriculture worldwide were available for the first time, the organic agricultural land has **almost quadrupled.**



10% of farmland organic by 2030?

Growth rates

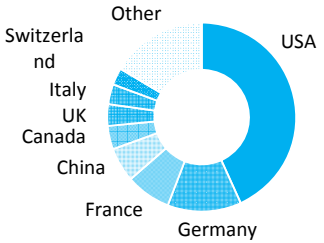
- Share of organic land: Globally only 1 % of the farmland is organic, but countries show that a lot more is possible – e.g. Austria has an organic share of 20 %.
- Growth: In most countries organic is growing, but growth of area is slower in many countries than that of the market (in 2015 many countries hat double digit market growth)
- In order to reach a share of 10 % of the organic farmland globally, area growth will need to increase substantially in the future.



WORLD: ORGANIC RETAIL SALES 2014

Over
60 billion €

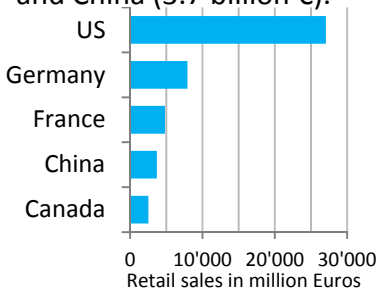
The largest single market is the US followed by the EU (23.9 billion €) and China. North America has the lead (29.6 billion €), followed by Europe (26.2 billion €).



Distribution of retail sales value by country 2014

North America
almost
30 billion €

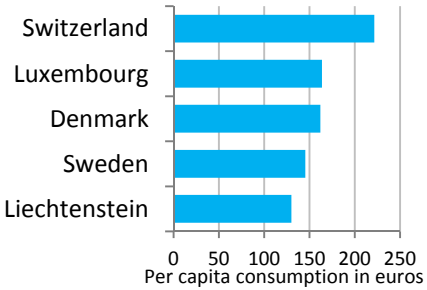
The countries with the largest market: United States (27.1 billion €), followed by Germany (7.9 billion €), France (4.8 billion €) and China (3.7 billion €).



The five countries with the largest markets for organic food 2014

221€
are spent per person in Switzerland

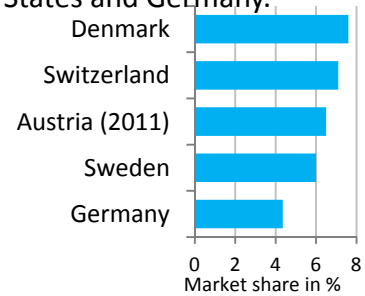
Switzerland has the highest per capita consumption worldwide, followed by Luxembourg, and Denmark.



The five countries with the highest per capita consumption 2014

7.6%
of the food market in Denmark is organic

The highest shares the organic market of the total market is in Denmark, followed by Switzerland, Austria, Sweden, the United States and Germany.

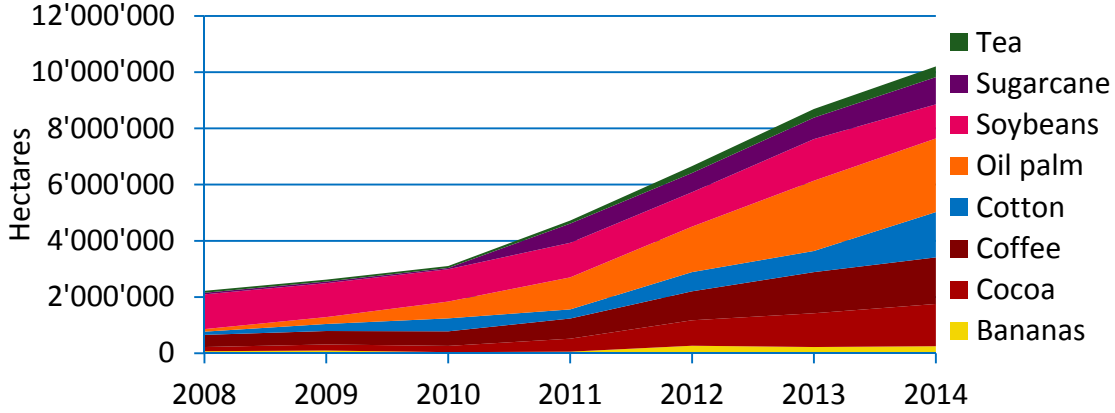


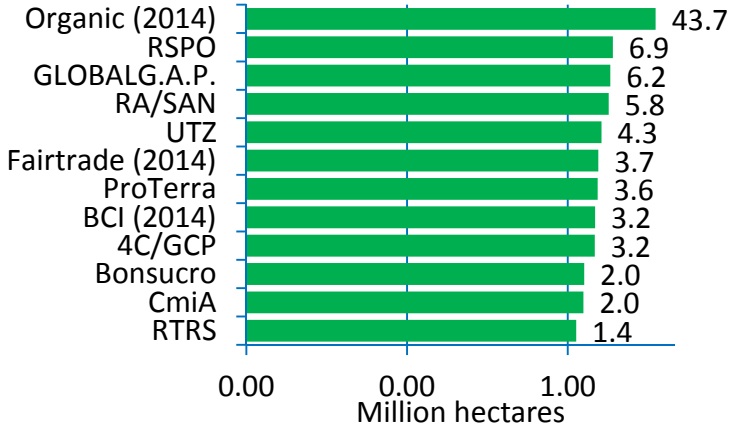
The five countries with the highest organic shares of the total market 2014

FiBL

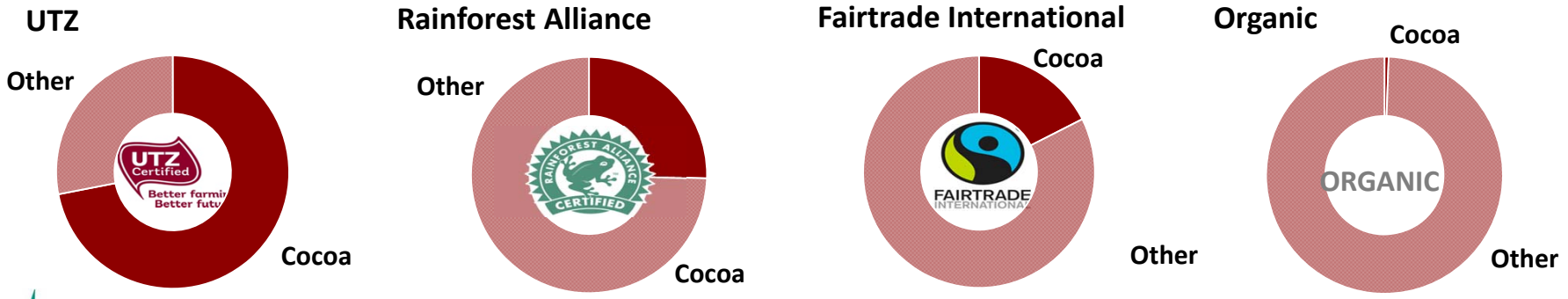
Source: FiBL survey 2016 www.organic-world.net

Voluntary Sustainability Standars: Compliant area worldwide: Growth of selected crops 2008-2014 (minimum possible) and status 2015 (Source: FiBL)





Cocoa: Area Share of Total VSS Area 2015



Source: FiBL-IISD-ITC survey 2016: 4C Association/Global Coffee Platform; Better Cotton Initiative; Bonsucro; Cotton Made in Africa; Fairtrade International; Global Gap; FiBL-IFOAM survey; ProTerra Foundation; Rainforest Alliance/SAN; Roundtable of Sustainable Palm Oil; Round Table for Responsible Soy; UTZ.

Organic data: Challenges

From the experience of FiBL's long-standing data collection, there are a number of challenges related to organic data collection that need to be tackled. These include

- Lack of data and incomplete data
- Lack of common classifications/aggregation rules across countries
- Lack of common definitions
- Inconsistent data

Recommendations based on the OrganicDataNetwork´s OrMaCode

- The European OrganicDataNetwork project, funded under the 7th Framework programme for research and technological development in the European Union, has developed recommendations from the project results (Zanoli 2014).
- These have been elaborated in the OrMaCode, the ORganic market data MAnual and CODE of Practice (Zanoli et al. 2014) based on the European Statistical Code of Practice (Eurostat, 2011).

Recommendations

- Recommendation 1: Extend the mandate for statistical data collection (more institutions, more indicators, mandatory data collection)
- Recommendation 2: Develop better statistical processes to increase accuracy of data collection on the organic market (improve sampling procedures; check estimates against other sources).
- Recommendation 3: Harmonise national definitions, nomenclature, classifications, aggregations to increase coherence and comparability
- Recommendation 4: Establish a system of routine quality checks
- Recommendation 5: Strengthen the institutional framework and increase collaboration in organic data collection
- www.organicdatanetworknet

Conclusions

- The organic sector is developing positively in response to the expectations of policymakers and the demands of consumers for high-quality food production, however, in order to reach higher levels more efforts are needed.
- On a global level, availability of data on organic agriculture has improved considerably in the past years, in particular for data on organic agricultural land.
- Challenges include data gaps and incomplete data, issues related to definitions, classifications, data quality, and data access.
- Better support for data collection from governments and international institutions as well as better international collaboration could help to improve the situation.

Thank you very much for your attention!

More information

- More information (PDF, data sources, graphs) at
  - www.organic-world.net/yearbook/yearbook-2016.html
  - www.twitter.com/fiblstatistics
- Contact

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